Mount Washington State Park Assessment & Recommendations for Improvements

March 2026
Final Report - Review Copy

Submitted To

New Hampshire Department of Natural & Cultural Resources

Prepared By

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Final Report – Review Copy

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March 2026

Mount Washington State Park Assessment & Recommendations for Improvements

Sargent's Purchase, New Hampshire

Prepared For

New Hampshire Department of Natural and Cultural Resources

Prepared By

Tighe & Bond

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Natural Resources and Environmental Assessment
Site and Building Infrastructure Assessment
Visitor Experience Assessment

With

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University of New Hampshire - The Survey Center
Visitor and Public Opinion Survey

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PART ONE
Executive Summary

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Section 1
Executive Summary

1.1 Introduction, Purpose, and Goals

Mount Washington State Park occupies the highest summit in the northeastern United States and is one of New Hampshire's most significant natural and cultural destinations. The summit environment is characterized by extreme weather conditions, rare alpine ecosystems, historic structures, and complex operational demands associated with visitor services, telecommunications infrastructure, and transportation access via the historic Mt. Washington Auto Road, Mount Washington Cog Railway, and hiking trails.

The New Hampshire Department of Natural and Cultural Resources (DNCR) retained a multidisciplinary consultant team led by Tighe & Bond, working in collaboration with Biohabitats, LDa Architecture & Interiors, and the University of New Hampshire Survey Center to conduct a comprehensive assessment of summit facilities, infrastructure, natural resources, and visitor experience. The combined expertise of the team allowed the project to evaluate the summit from environmental, engineering, architectural, planning, and visitor experience perspectives.

Tighe & Bond served as the prime consultant and coordinated the overall assessment, including civil, environmental, utility, and site infrastructure evaluations. Biohabitats supported the ecological and natural resources assessments, focusing on alpine vegetation communities and ecological integrity. LDa conducted building and facility assessments, evaluating the condition and functionality of summit structures and identifying opportunities for long-term improvements. The University of New Hampshire Survey Center designed and administered visitor and public opinion surveys to better understand user perspectives and priorities for summit improvements.

This assessment documents existing conditions, identifies operational and environmental constraints, and presents recommendations to support long-term stewardship and improvements at Mount Washington State Park.

The project builds upon the goals established in the 2022 Mt. Washington Master Plan, prepared by the Mount Washington Commission, which emphasizes balancing public access with protection of the summit's unique natural and historic resources. The assessment evaluates conditions related to natural resources, environmental considerations, buildings and infrastructure, utilities and fuel systems, stormwater management, visitor circulation, and financial sustainability at the summit.

Key goals of this study include:

- Documenting the current physical condition of summit facilities and infrastructure.
- Evaluating environmental conditions that may affect future planning, design, or construction activities.
- Identifying opportunities to enhance visitor experience and accessibility while maintaining the summit's historic and scenic character.
- Protecting the alpine ecosystem through improved management of visitor use and site infrastructure.

- Providing strategic recommendations that support long-term operational, environmental, and financial sustainability for Mount Washington State Park.

The results of this work provide DNCR and the Mount Washington Commission with a framework for prioritizing improvements and coordinating future investments at Mount Washington State Park.

The following sections summarize the project's collaboration process, assessment methodology, and key recommendations for future improvements at the summit.

1.2 Collaboration and Public Engagement

This section summarizes the collaboration and engagement activities that informed the assessment and recommendations.

1.2.1 Collaboration between DNCR and the Consultant Team

The Mount Washington project was shaped through close coordination among DNCR, Mount Washington State Park staff, and the consultant team through regular meetings, site visits, and topic-focused workshops. DNCR and State Park personnel provided operational insight, historical documentation, and technical input that informed the assessment.

Key coordination activities included:

- Environmental scientists from Tighe & Bond and Biohabitats conducted a three-day natural resources field assessment (August 26–28, 2024) to document alpine plant communities, ecological conditions, and habitat areas.
- Tighe & Bond's electrical, plumbing, HVAC, civil engineering, and landscape architecture staff met onsite with DNCR and State Park personnel on August 29 and September 6, 2024.
- LDa's architecture team, along with structural and code specialists, visited summit facilities on August 18 and September 6, 2024, to evaluate building conditions, code compliance, and operational challenges.

These site visits were supplemented by interviews with State Park staff and reviews of historic records, engineering documents, and previous assessments. This collaborative process supported the development of recommendations that reflect both technical findings and the operational realities of managing facilities in one of the most extreme climates in North America.

1.2.2 Mount Washington Commission and Public Meetings

The Mount Washington Commission (MWC), the principal stakeholder group for this project, consults and advises DNCR in the management of the summit property owned by the State of New Hampshire. MWC includes appointed members from the New Hampshire House of Representatives and Senate, public representatives, the Mt. Washington Auto Road, Mount Washington Observatory, Townsquare Media, the Mount Washington Cog Railway, the White Mountain National Forest, the Appalachian Mountain Club, and the DNCR Commissioner or designee.

The Commission was actively engaged throughout the project and provided meaningful feedback on assessment findings and recommended improvements. Tighe & Bond delivered three public presentations during regularly scheduled MWC meetings:

- October 18, 2024 – Project introduction, scope review, and progress update
- March 14, 2025 – Presentation of draft assessment findings
- November 20, 2025 – Presentation of draft recommendations

In addition, the Chairman of the MWC participated in coordination meetings with DNCR and the consultant team and helped facilitate an interview session with individuals who had previously been actively involved with summit operations.

1.2.3 Stakeholder Workshop

The consultant team engaged technical staff from several state agencies and summit partner organizations to review findings and discuss recommendations.

On June 19, 2025, Tighe & Bond led a full-day workshop including representatives from:

- DNCR
- New Hampshire Natural Heritage Bureau (NHB)
- New Hampshire Department of Environmental Services (NHDES)
- New Hampshire Fish & Game Department
- Appalachian Mountain Club (AMC)
- U.S. Forest Service – White Mountain National Forest (USFS WMNF)
- Mount Washington Cog Railway
- Mt. Washington Auto Road
- Mount Washington Commission

The morning session focused on natural resource conditions and environmental considerations, while the afternoon session addressed buildings, infrastructure, and site facilities.

The expertise of participants and the collaborative dialogue during this workshop helped refine recommendations that are aligned with operational needs, regulatory requirements, and long-term stewardship goals for the summit.

1.2.4 Visitor Survey and Public Opinion Survey

To better understand visitor priorities and public perspectives on summit improvements, Tighe & Bond and DNCR collaborated with the University of New Hampshire (UNH) Survey Center in the development and administration of two survey instruments.

Survey results, included in Appendix D, provide insights into visitors' expectations, public support for potential improvements, and attitudes toward funding strategies for the park.

- Visitor Survey – Distributed at the summit in September 2024 and throughout the 2025 visitor season (late May through mid-October) gathered feedback from recent visitors to Mount Washington State Park.

- Public Opinion Survey – Administered in December 2025 to New Hampshire residents through the Granite State Panel, a probability-based online research group operated by the UNH Survey Center.

Survey responses indicate strong public interest in protecting the summit's natural resources while improving visitor amenities and accessibility. Respondents also expressed support for investments in facility improvements and moderate interest in potential funding mechanisms such as small entry fees or shared investment with summit partners.

1.3 Methodology of Site Assessment

This section summarizes the methodology used to complete the multidisciplinary assessment. The assessment combined field investigations, technical analysis, records review, and stakeholder consultation. Given the multidisciplinary nature of the study, each discipline applied best practices relevant to its scope of work. The following summarizes the general approach used across the study; detailed methodologies are described in Part Two: Assessment.

In general, the assessment process included:

- Reviewing existing records and historic documentation from DNCR archives and regulatory databases
- Conducting site inventories and engineering inspections of buildings, infrastructure, and utilities
- Performing natural resource surveys and vegetation inventories
- Completing an Environmental Site Assessment consistent with ASTM Phase I procedures
- Interviewing knowledgeable individuals and operational staff
- Conducting field reconnaissance and documentation of site conditions

In 2025, the New Hampshire Natural Heritage Bureau conducted supplemental vegetation surveys across the summit assessment areas to capture additional seasonal variability in alpine plant communities and to further document rare plant populations and sensitive habitats. These data were integrated with the 2024 field results to update the Floristic Quality Assessment (FQA) and strengthen the ecological integrity baseline used to guide natural resource management recommendations.

Preliminary findings were discussed with DNCR and State Park staff during a series of coordination meetings. These discussions helped identify key opportunities and constraints that informed development of recommendations.

Draft recommendations were evaluated during the June 19, 2025, stakeholder workshop and subsequently presented to the Mount Washington Commission and the public on November 20, 2025, before finalization in this report.

1.4 Summary of Recommendations

The recommendations presented in this section reflect the combined findings of the environmental, natural resources, facilities, infrastructure, and visitor experience assessments. Each subsection summarizes the key recommendations developed for the major topic areas evaluated in this study.

1.4.1 Natural Resources Recommendations *(See Section 8 for details)*

Natural resource recommendations focus on protecting the summit's globally significant alpine tundra ecosystem while accommodating continued visitor use and improving long-term ecological stewardship.

To guide implementation, natural resource recommendations are organized into near-term actions that address current ecological stressors and long-term strategies that support ongoing protection and monitoring of the summit's alpine ecosystem.

Near-Term Priorities:

- Manage off-trail encroachment to reduce trampling of alpine vegetation and soil disturbance.
- Expand monitoring and targeted removal of invasive and non-native plant species.
- Stabilize disturbed soils and vegetation in priority restoration areas where trampling or erosion has occurred.
- Integrate natural resource protection considerations into near-term maintenance and infrastructure projects.

Long-Term Priorities:

- Establish long-term monitoring programs to track alpine vegetation condition, disturbance patterns, and restoration success.
- Implement adaptive management strategies to guide future restoration and visitor use management.
- Incorporate ecological protection measures into future summit planning and development projects.
- Continue collaboration with the NHB and other resource partners to support protection of rare alpine plant communities and habitats.

These actions support preservation of the summit's unique alpine environment while helping maintain compatibility between visitor use and long-term ecological stewardship.

1.4.2 Environmental Site Assessment Recommendations (*See Section 9 for details)*

Environmental Site Assessment recommendations focus on evaluating several conditions associated with historical activities at the summit that warrant additional review.

Recommended actions include:

- Further investigation of the inactive Yankee Building well.
- Additional research into historical operations associated with the Formerly Used Defense Site (FUDS), including consideration of the site's cultural and historical significance related to wartime-era research activities.
- Evaluation of soil and debris in areas affected by historic fires prior to construction or significant ground disturbance.
- Preparation of a Sampling and Analysis Plan (SAP) for future site investigation activities.

These measures will help characterize potential environmental conditions and support future development or construction activities in accordance with applicable environmental regulations.

1.4.3 Building and Facilities Recommendations (*See Section 10 for details)*

Building and facility recommendations focus on addressing maintenance needs and long-term improvement opportunities for key summit facilities, including the Sherman Adams Visitor Center, Tip Top House, and Yankee Building.

Key recommendations include:

- Repairing and upgrading the Sherman Adams Building envelope, including roof waterproofing, masonry repairs, and window replacement.
- Improving visitor circulation, signage, and interior space organization to reduce congestion during peak visitation.
- Reorganizing the interior and consideration of an expansion onto the roof deck to facilitate expansion of the food preparation, food service, retail, and associated storage functions.
- Replacing aging mechanical, electrical, and plumbing systems as needed.
- Renovating the Park staff living areas.
- Completing restoration work at the historic Tip Top House and improving accessibility.
- Evaluating long-term options for renovation or replacement of the deteriorated Yankee Building.

These improvements are intended to help maintain summit facilities as functional, safe, and capable of supporting increasing visitation while preserving the historic character of the site.

1.4.4 Fuel Tanks Recommendations (*See Section 11 for details)*

Fuel tank recommendations focus on operations, maintenance, and regulatory compliance for systems located within the Sherman Adams Building, Tip Top House, and Yankee Building.

However, the 1940s-era Tank Farm, consisting of five 20,000-gallon aboveground storage tanks, has exceeded its expected service life and exhibits significant deterioration.

Recommended action includes:

- Replace the entire Tank Farm with a modern fuel storage system designed to operate reliably under extreme summit conditions and capable of supporting emergency generator operation during prolonged power outages.

1.4.5 Site Stormwater Recommendations (*See Section 12 for details)*

Stormwater recommendations focus on addressing drainage deficiencies and improving long-term site resilience. Stormwater management at the summit is complicated by extreme weather conditions, shallow soils, and freeze–thaw cycles. Existing drainage infrastructure is limited, and several deficiencies were observed, including clogged permeable pavers, localized ponding, and erosion affecting alpine habitats.

To guide implementation, stormwater recommendations are organized into near-term actions that address current drainage deficiencies and longer-term strategies that improve site resilience to extreme weather conditions at the summit.

Near-Term Priorities:

- Maintain existing stormwater infrastructure and restore infiltration capacity of permeable pavers.
- Mitigate gravel erosion affecting nearby alpine vegetation.

Long-Term Priorities:

- Reconstruct drainage systems surrounding the Sherman Adams Building.
- Regrade parking areas and install improved drainage swales and stormwater controls.
- Design stormwater infrastructure for extreme precipitation events using permeable materials and nature-based drainage approaches.

1.4.6 Visitor Experience and Circulation Recommendations (*See Section 13 for details)*

Visitor experience recommendations focus on enhancing safety, accessibility, and circulation while preserving the summit's scenic and historic character. To guide implementation, recommendations are organized into near-term actions that address immediate needs and longer-term strategies that support future improvements.

Near-Term Priorities:

- Establish the maintenance road as the primary route to accessible parking and designate the existing connector road as pedestrian and emergency use only.
- Improve pedestrian crossings and stair safety through lighting, striping, and handrails.
- Address safety at noted hazard areas at the exposed foundations and the tour van parking area.
- Provide accessible routes to major destinations including the Sherman Adams Visitor Center and Tip Top House.
- Improve signage and wayfinding to enhance visitor orientation.

Long-Term Priorities:

- Study reorganization of summit parking and vehicle circulation to reduce pedestrian conflicts.
- Improve accessibility to the observation deck and summit viewpoints.
- Reconstruct the primary stair system connecting parking areas to the summit plateau in a more user-friendly configuration.
- Provide a covered waiting area for Cog Railway passengers.

These improvements will help accommodate increasing visitation while improving safety, accessibility, and overall visitor experience.

1.4.7 Financial Summary Recommendations (*See Section 14 for details)*

Financial recommendations focus on strengthening long-term operational sustainability and implementation of recommendations for preservation and facility improvements for Mount Washington State Park. Achieving this will require a combination of strategic investments, diversified funding sources, and operational improvements.

Key recommendations include:

- Strengthening partnerships with summit stakeholders such as the Mt. Washington Auto Road and Cog Railway to pursue shared investment in facility improvements.
- Exploring alternative funding mechanisms including joint funding agreements, sponsorships, and grant opportunities.
- Investing in improved retail and food service facilities to increase revenue generation and support park operations.

These strategies will help improve ongoing operations, support enhanced environmental stewardship, and expedite the implementation of facility improvements recommended in this study.

1.5 Closing Summary

Mount Washington State Park represents one of New Hampshire's most iconic and environmentally significant landscapes and occupies a place of national prominence as the highest summit in the northeastern United States. The summit surrounded with Northern Appalachian Alpine Tundra, a globally vulnerable ecosystem that is considered critically imperiled in New Hampshire. This high-elevation environment supports rare species and specialized alpine plant communities. At the same time, the summit features an extraordinary concentration of historic and cultural resources, including the Tip Top House, the Mount Washington Observatory, and historic transportation systems such as the Mt. Washington Auto Road and Mount Washington Cog Railway, which collectively reflect more than 150 years of scientific research, tourism, and mountain heritage.

The assessment documented the condition of summit facilities, infrastructure, and natural resources while identifying opportunities to enhance visitor experience and strengthen long-term operational resilience. Through collaboration with DNCR, the Mount Washington Commission, summit partners, and the public, the study establishes a coordinated framework for balancing environmental protection, visitor access, and infrastructure investment in one of the most challenging operating environments in North America.

Recent discussions at Mount Washington Commission meetings have highlighted the broader significance of the summit landscape and the possibility that Mount Washington and associated historic resources could eventually be considered for nomination as a UNESCO World Heritage Site. Staff from the Office of U.S. Senator Jeanne Shaheen presented information to the Commission in 2025 regarding the World Heritage nomination process and the potential for elements of the Mount Washington landscape, including both natural and historic features, to meet international criteria for cultural and natural heritage significance. Such recognition would underscore the national and global importance of the summit while reinforcing the need for careful stewardship of its natural and historic resources.

The recommendations presented in this report provide a strategic framework for guiding that stewardship. Through coordinated planning, partnership with summit stakeholders, and phased capital investment, these actions support Mount Washington State Park as a safe, accessible, and well-managed destination while preserving the summit's extraordinary natural, historic, and cultural character for future generations.

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PART TWO
Assessment

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Section 2
Natural Resources Assessment

2.1 Purpose and Scope of Natural Resources Assessment

The objective of the Natural Resources Assessment is to document the current ecological conditions at Mount Washington State Park and provide a baseline for due diligence and long-term planning. This will enable the New Hampshire Division of Parks and Recreation (NH State Parks) and the Mount Washington Commission to fulfill their mission to restore, protect, and preserve the alpine environment of the summit while maintaining an iconic visitor experience, per the 2022 Mt. Washington Master Plan.[1] The assessment area encompasses the ±60-acre Mt. Washington State Park (Figure 2-1).

2.2 Methodology of Natural Resources Assessment

Two collaborative sessions were held with the New Hampshire Division of Natural and Cultural Resources (DNCR), the New Hampshire Fish & Game Department (NHFG), the Appalachian Mountain Club, and the Tighe & Bond project team including Biohabitats, our alpine ecology consultant. These sessions focused on establishing study objectives and methodology, using the environmental goals outlined in the 2022 Mt. Washington Master Plan for guidance.

The following Natural Resources Assessment study objectives were identified:

1. Collect field data on the composition, diversity, and extent of the natural communities within the Study Area to establish a baseline condition.
2. Assess the integrity of existing natural communities to determine the range of natural (undisturbed) and disturbed variability across the Study Area.
3. Assess the threat to and vulnerability of alpine natural communities and habitat to environmental and anthropogenic stressors identified within the Study Area.

With the guidance of the study objectives, a team of qualified professional botanists and ecologists embarked on the Mt. Washington Natural Resources Assessment study. Desktop reconnaissance provided the foundation for the field data collection effort.

2.2.1 Desktop Reconnaissance

Desktop reconnaissance and planning included review of technical reports and peer-reviewed publications, plant and community records provided by the NH Natural Heritage Bureau (NHB), long term invasive and non-native species management records, and publicly available spatial data.

Based on this research, the team compiled a list of rare, native, and non-native species potentially present on the summit; and developed a dynamic field map for GPS data collection. Datasets incorporated onto the basemap include geology and soils, hiking trails,

[1] Mt. Washington Master Plan; October 2022; https://www.nhstateparks.org/about-nh-parks/park-administration-legislation/commissions-and-committees/mount-washington-commission/mtwashmasterplan-attachments-11-2022.aspx

the NH Wildlife Action Plan, property boundaries, buildings, roads and infrastructure, elevation, and aerial imagery.

2.2.2 Field Data Collection and Analyses – 2024

On August 26 through 28, 2024, the Tighe & Bond and Biohabitats team conducted vegetation surveys and ecological data collection within the Study Area. Weather during the field data collection effort ranged from 46–59°F with trace snowfall and 16.1 – 44.8 mph winds, with gusts up to 84 mph from the west-northwest.[2]

The Study Area was divided into nine Assessment Areas (AA) based on proximity to development or human activity (as an indicator of disturbance), aspect, landform, and natural community composition. Assessment Area 1 (AA 1) was further divided into two sub-units based on a steep break in topography, aspect, and community composition (AA 1-A and AA 1-B); therefore, ten AA units were evaluated (Figure 1). Notably, the outer margins of all AAs except AA 9 are bound by the property outline of Mt. Washington State Park; i.e., the outer margins do not coincide with a natural habitat edge or ecological transition.

Vegetation surveys were conducted using a meander approach, whereby field teams traversed each AA to document estimated vascular plant species composition and abundance. The abundance of each species was estimated as absolute percent cover within each AA. Field estimates of percent cover within each AA included felsenmeer (or "bare ground" in developed areas) and were later adjusted to evaluate species abundance relative to vegetated areas only. Species dominance within each vegetation layer (e.g., shrub and herb) was determined using the *50/20 Rule*, whereby species are considered dominant if they collectively account for at least 50 percent of the vegetative cover within each layer or individually comprise 20 percent or more of that layer.[3] Point locations of individual populations of rare plant occurrences and non-native species were GPS-located as they were encountered throughout the Study Area. Wildlife species were documented with direct and indirect observations of scat, tracks, and bird calls. Three trail cameras were deployed for 12 days (locations depicted in Figure 1). Images were manually reviewed following retrieval.

The alpine tundra system and the natural communities within the Study Area were classified in accordance with *Natural Community Systems of New Hampshire* and *Natural Communities of New Hampshire,*[4,5] which documents factors such as elevation, morphology, vegetation composition, species dominance, and habitat structure. Vegetation data were further analyzed using a Floristic Quality Assessment (FQA), in which each species was assigned an ecoregional Coefficient of Conservatism (C-value) to evaluate community composition, relative integrity, and sensitivity to disturbance. Cover-

[2] Mount Washington Observatory, Mount Washington Weather Archives – Month F6 Report; August 2024.

[3] Environmental Laboratory. (1987). "Corps of Engineers Wetlands Delineation Manual," Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, Miss.

[4] Sperduto, Daniel D., New Hampshire Natural Heritage Bureau. June 2011. Natural Community Systems of New Hampshire; second edition.

[5] Sperduto, D.D. and William F. Nichols. 2011. Natural Communities of New Hampshire. 2nd Ed. NH Natural Heritage Bureau, Concord, NH. Pub. UNH Cooperative Extension, Durham, NH.

weighted mean C-values and Floristic Quality Index (FQI) metrics were calculated for each AA and for the Study Area as a whole.

Baseline ecological condition and integrity of the Study Area were assessed by analyzing land use, FQA metrics, soil condition, recreation-related disturbance, and climate stressors. Ecological Integrity Assessments (EIA) can be conducted at varying degrees of resolution and intensity. This EIA is considered a *Level 2 Rapid Field Assessment*, which utilizes a combination of desktop reconnaissance, field data collection, analyses of a variety of simple metrics, and experienced ecological judgment. Metrics and analyses were based on the *NatureServe Upland Ecological Integrity Assessment: Protocols for Rapid Field Assessment*, the *Stressor Protocol*, and the *Supplementary Metric Documentation* manuals.[6, 7, 8] Where necessary due to the limitations of the study, and as identified in Section 2.6 Ecological Integrity, the *NatureServe Upland Ecological Integrity Assessment* methodology was modified for several of the metrics assessed.

2.2.3 Supplemental Field Data Collection and Analysis - 2025

In order to deepen the baseline ecological assessment completed in August 2024, the New Hampshire Department of Natural and Cultural Resources (DNCR) Natural Heritage Bureau (NHB) conducted supplemental vegetation surveys during the 2025 growing season. The purpose of this additional effort was to capture alpine plant community composition during an earlier phenological window and thereby strengthen the depth and seasonal representativeness of the Floristic Quality Assessment (FQA).

NHB conducted vegetation surveys within each of the nine Assessment Areas (AAs) previously delineated by Tighe & Bond. Surveys were conducted July 2 through September 30, 2025, and included documentation of observed native and non-native vascular species, estimation of percent cover, identification and mapping of rare plant populations, refinement and verification of natural community classifications within each AA, and documentation of degraded areas, soil stability, and vegetation condition to supplement the 2024 EIA and overall condition evaluation.

Field methods incorporated both relevé-style vegetation plots within representative natural communities and broader meander surveys to capture additional species presence, particularly those occurring at low abundance outside defined plots. GPS point and track shapefiles, annotated field forms, and photo documentation were provided to Tighe & Bond for integration into the updated analysis.

Following receipt of the 2025 dataset, Tighe & Bond incorporated the new species occurrence, cover, and community classification information into an updated Floristic Quality Assessment and Ecological Integrity Assessment. The 2025 plot-based data were

[6] Faber-Langendoen, D., W. Nichols, J. Bouchard, J. Rocchio, and T. Ramm-Granberg. 2024. NatureServe Upland Ecological Integrity Assessment: Protocols for Rapid Field Assessment. Version 1. NatureServe, Arlington, VA.

[7] Faber-Langendoen, D., W. Nichols, J. Bouchard, J. Rocchio, and T. Ramm-Granberg. 2024. NatureServe Upland Ecological Integrity Assessment: Stressor Protocol. Version 1. NatureServe, Arlington, VA.

[8] Faber-Langendoen, D., W. Nichols, J. Bouchard, J. Rocchio, and T. Ramm-Granberg. 2024. NatureServe Upland Ecological Integrity Assessment: Supplementary Metric Documentation. Version 1. NatureServe, Arlington, VA.

used to extrapolate species cover at the AA scale, compare FQA results to the 2024 metrics, and then combine the 2024 and 2025 FQA results to establish a refined baseline condition for each AA.

For purposes of this assessment, the combined 2024 - 2025 dataset is treated as a single, comprehensive baseline representation of existing conditions at Mount Washington State Park. This approach assumes that differences in species composition observed between 2024 and 2025 are influenced more by seasonal timing (i.e., whether surveys occurred early or late in the growing season) than by true ecological change occurring between years. In alpine systems, many species have narrow windows of detectability tied to snowmelt and temperature, whereas overall community structure typically changes slowly from year to year absent major disturbance. Therefore, integrating both survey periods provides the most accurate depiction of current alpine community composition for long-term comparison.

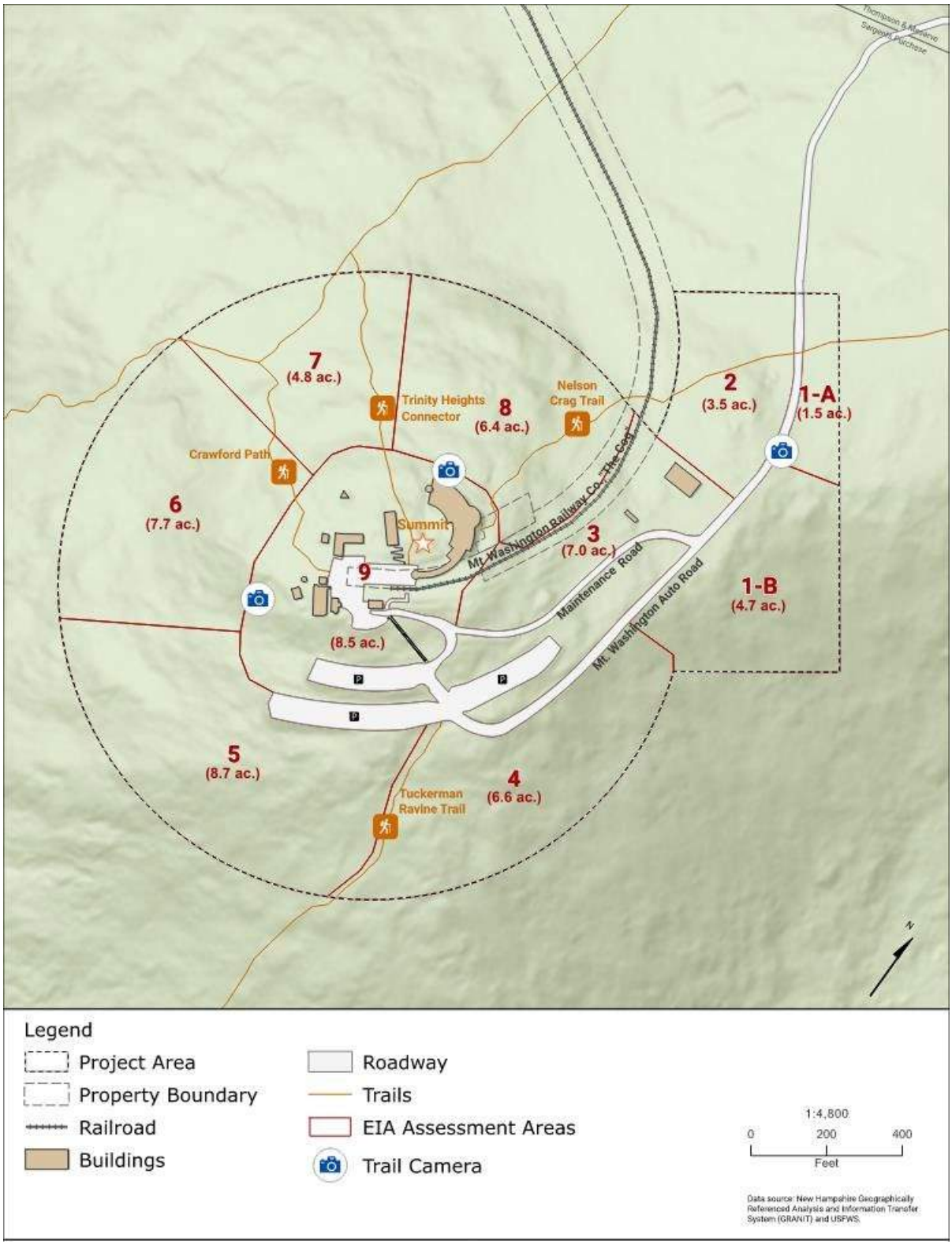

Figure 2-1
Map of the Study Area, divided into ten Assessment Areas (AA).

2.3 Physical Resources

2.3.1 Topography and Elevation

The summit of Mt. Washington, near the Tip Top House in Mt. Washington State Park, is at an elevation of 6,288 feet (Figure 2-1). The lowest elevation within the Study Area is ±5,874 feet at the eastern-pointing right angle of the "panhandle" (AA 1-B). Generally, this easternmost point rises to ±5,980 feet along the southern arc of the Study Area. Continuing clockwise, the western boundary rises to ±6,100 feet along the northern arc. The blunt edge of the panhandle is at an elevation of ±6,070 feet. The eastern side of the Study Area exhibits the steepest grades, whereas the gentlest grades are along the auto road in the panhandle.

2.3.2 Soils and Geology

Before the creation of the Presidential Range, two prehistoric oceans known as the Kronos Ocean and Rheic Ocean existed in this part of the world. The Kronos Ocean separated the Laurentia, Shelburne Falls, and Broson Hill plates from the Avalon plate; the Rheic Ocean separated the Avalon plate from the Gondwana plate. At the end of the Silurian and beginning of the Devonian geologic time periods (approximately 430 to 410 million years ago), large volumes of sediment were shed into the Kronos and Rheic Oceans from adjacent mountains.[9]

The Presidential Range formed during the Acadian Orogeny (approximately 420 million years ago) when the Laurentia, Shelburne Falls, and Broson Hill plates collided with the Avalon plate. As the plates collided, intense heat and pressure transformed the sedimentary rocks into the existing metamorphic rocks that primarily make up the Presidential Range today.[9] During the Triassic geologic period (252-201 million years ago) a large amount of volcanic activity occurred as the Atlantic Ocean was forming. Most igneous material created during that era has eroded from Mt. Washington; however, some basalt dikes are still visible within the Tuckerman and Huntington Ravines.[9]

The northeast region of the United States was shaped into its current form approximately 50,000 years ago, during the Wisconsin Glaciation. The Laurentide Ice Sheet retreated in a northwest to southeast direction 30,000 years ago; and evidence was left across the landscape (e.g., glacial erratic boulders, unsorted till, sand, gravel, and glacial lacustrine deposits). The New Hampshire Geological Survey's (NHGS) surficial geology map of Mt. Washington and the Presidential Range indicates persistent glacial abrasion markings on the cone of Mt. Washington, within the Study Area.

[9] Eusden, J. "The Presidential Range: Its Geologic and Tectonic History" Department of Geology, Bates College. 2010 and Eusden, J. & Anderson, Brigit & Castro, Carlos & Gardner, Patrick & Guiterman, Christopher & Higgins, Stephanie & Kugel, Kelley & Reid, Adam & Rodda, Charles & Tamposi, Caitlin. (2017). Bedrock Geology of Mt. Washington, Presidential Range, NH. 177-196. 10.26780/2017.001.0011. 2017 as reported in https://mountwashington.org/no-granite-on-the-top-of-the-granite-state/

Freeze-thaw cycles above the tree line produce an array of angular, heavily weathered, fractured bedrock.[10] Freeze-thaw cycles continue to move frost-cracked boulders outward and downward (evolving and eroding), producing the fields of rock observed at the summit, known as felsenmeer. The primary surficial geologic unit mapped by the NHGS is Upper-Slope Diamict (Qdu), suggesting very poorly sorted glacial deposits, with localized pockets of Redeposited Diamict (Qdr), which typically contain finer grain sediment, developing soils, and organic material.[11]

Soil, where present, is generally shallow, acidic, well-drained organic and/or coarse mineral over bedrock. Two soil unit complexes are mapped on Mt. Washington, the Saddleback-Glebe-Ricker complex and the Ricker-Rock outcrop complex (Figure 2-2):

- **Saddleback-Glebe-Ricker complex, 8 to 15 percent slopes, very stony**. At Mt. Washington these soils are associated with gentler slopes than the Ricker soils. The named soil components decrease in proportion: Saddleback soils comprise ±40%, Glebe ±30%, and Ricker soils ±15%. These soils occur on mountain side slopes and have an organic ("O") horizon (i.e., slightly decomposed plant material) of 0-3 inches. Underlying bedrock is encountered at 10-20 inches.[12]
- **Ricker-Rock outcrop complex, 25 to 35 percent slopes**. These soils are associated with steeper slopes within the Study Area. Ricker soils are approximately half of the soil composition and rock outcrop is ±30% (minor components make up the remaining 20%). Like Saddleback soils, these occur on mountain side slopes. The O horizon is described as 0-12 inches but direct observations within the Study Area indicate that the O-horizon thickness is on the shallow end of the reported range. The underlying bedrock is 2-26 inches deep.[12]

2.3.3 Terrain Alteration

The Study Area includes land that was altered to accommodate development, starting in 1819 with the layout of the first hiking trail and the subsequent development of various buildings, the Mount Washington Cog Railway, the Mount Washington Auto Road and parking areas. A Formerly Used Defense Site (FUDS) was operated by the United States Air Force from approximately 1932 to 1964. The facility was closed and demolished by the Army Corps of Engineers between 1965 and 1967; however, remnants of structures and demolition debris remain partially buried in the vicinity of the FUDS. Human activities such as off-trail foot traffic cause accelerated erosion in some areas with associated ecological impacts.

This Natural Resources Assessment will reference past alteration and current land uses as they relate to ecological conditions but does not include a detailed history of development at and around the summit.

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[10] Billings, Marland P., Fowler-Billings, Katherine, Chapman, Carleton A., Chapman, Randolf W., and Goldthwait, Richard P. The Geology of the Mt. Washington Quadrangle, New Hampshire. 1946. New Hampshire Planning and Development Commission.

[11] USGS National Geologic Map Database; New Hampshire Geological Survey, Map Publication Order Number: Geo-NHX-024000-SMAP; www.ngmdb.usgs.gov/Prodesc/proddesc_100759.htm

[12] Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online. Accessed January 21, 2024.

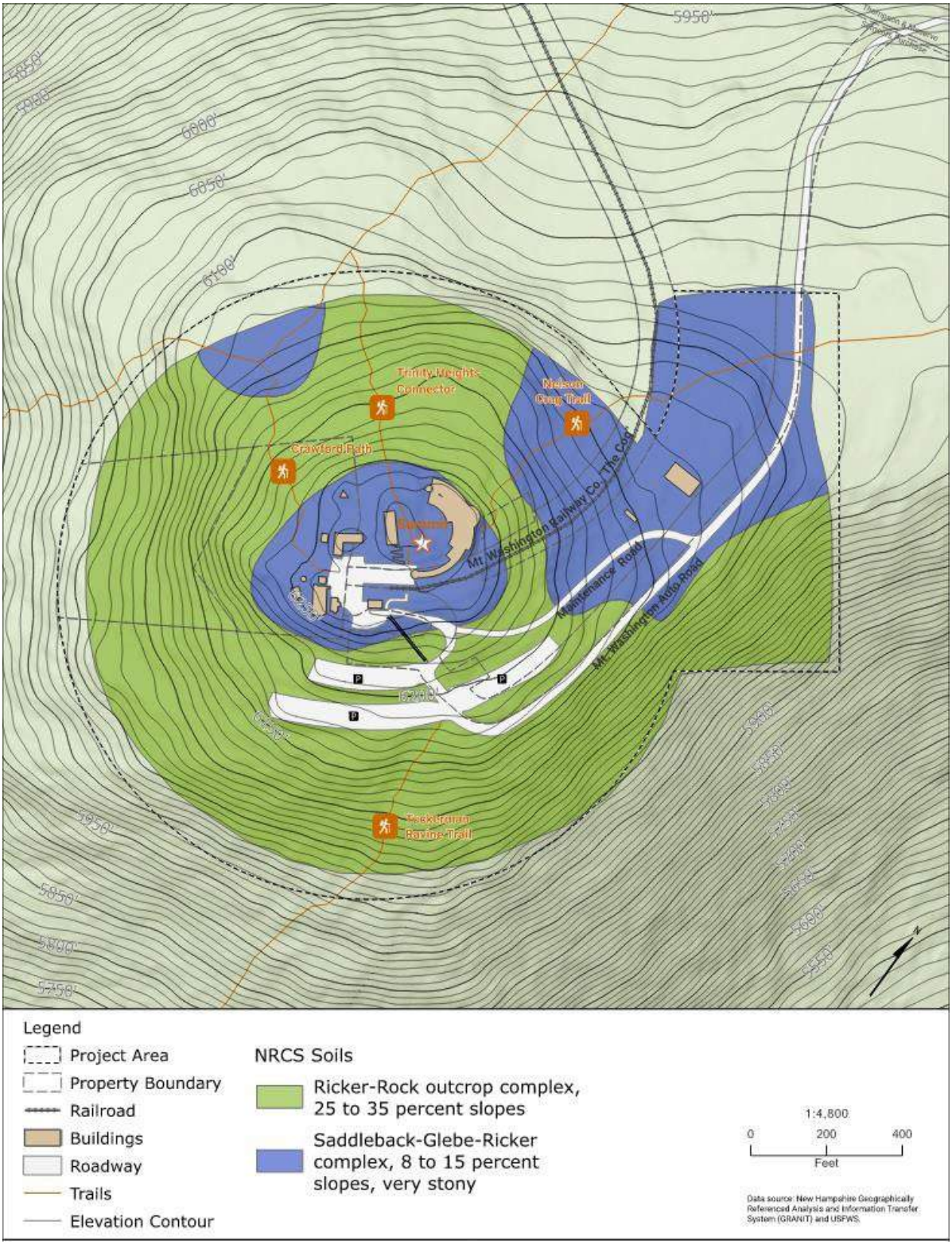


Figure 2-2
Map of the soils and topography within the Study Area

2.4 Alpine Tundra System and Natural Communities

Ecological Systems are classified based on landscape-scale influences such as landform, hydrology, and geology. Natural Communities are further classified by plant species composition, vegetation structure, and combinations of physical conditions (e.g., elevation, moisture, exposure, nutrient levels, and climatic conditions).[4,5]

The summit of Mt. Washington is classified as an Alpine Tundra System. This system is located above treeline, which, in New Hampshire, is ±4,900 feet above sea level.[5] Wind is highly influential in this high-elevation environment and, in combination with topography, controls water availability via accumulation and duration of snow cover; which controls soil moisture, soil development, plant growth (i.e., the growing season), and plant community composition.[40] The Alpine Tundra of the Mt. Washington summit has shallow, well-drained soil over bedrock and sporadic, sparsely vegetated, plant communities supported by pockets of accumulated soil and organic matter.

Five natural community types were documented within the Study Area: Felsenmeer Barrens (dominant), Sedge-Rush-Heath Meadows, Alpine Herbaceous Snowbank, Diapensia Shrubland, and Bigelow's Sedge Meadow. Table 2-1 provides the primary and secondary natural communities documented within each AA.

Table 2-1 Natural community classification (primary and secondary) and substrate characterization of each AA.

AA-ID	Natural Community System	Primary Natural Community	Primary Substrate Characterization	Secondary Natural Community	Secondary Substrate Characterization
1-A	Alpine Tundra	Diapensia Shrubland	Organic-Rich Coarse Mineral; Shallow, Coarse Mineral	Sedge-Rush-Heath Meadow	Felsenmeer
1-B	Alpine Tundra	Felsenmeer Barren	Felsenmeer	Sedge-Rush-Heath Meadow	Organic-Rich Coarse Mineral
2	Alpine Tundra	Felsenmeer Barren	Felsenmeer	Bigelow's Sedge Meadow	Organic-Rich Coarse Mineral
3	Alpine Tundra	Felsenmeer Barren	Felsenmeer	Bigelow's Sedge Meadow	Shallow, Organic-Rich Coarse Mineral
4	Alpine Tundra	Felsenmeer Barren	Felsenmeer	Sedge-Rush-Heath Meadow	Organic-Rich Coarse Mineral
5	Alpine Tundra	Felsenmeer Barren	Felsenmeer	Bigelow's Sedge Meadow	Organic-Rich Coarse Mineral
6	Alpine Tundra	Felsenmeer Barren	Felsenmeer	Bigelow's Sedge Meadow	Organic-Rich Coarse Mineral

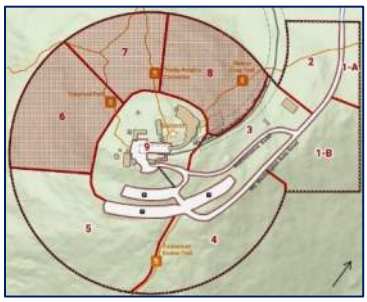
AA-ID	Natural Community System	Primary Natural Community	Primary Substrate Characterization	Secondary Natural Community	Secondary Substrate Characterization
7	Alpine Tundra	Felsenmeer Barren	Felsenmeer	Bigelow's Sedge Meadow	Shallow, Organic-Rich Coarse Mineral
8	Alpine Tundra	Felsenmeer Barren	Felsenmeer	Bigelow's Sedge Meadow	Shallow, Coarse Mineral
9	Alpine Tundra	Developed Area	Shallow, Coarse Mineral	Sedge-Rush-Heath Meadow	Shallow, Coarse Mineral

2.4.1 Felsenmeer Barren Natural Community

Felsenmeer Barren is the dominant natural community type within the Study Area (±65% cover over 60-acres). Felsenmeer is comprised of fields of angular boulders generated by the freeze-thaw cycles which fracture and displace large blocks of bedrock. Felsenmeer Barren is considered a state-imperiled community (S2). Sporadic pockets of soil occur within the felsenmeer, supporting minor inclusions of vascular plant communities. Eighty to ninety percent (80%-90%) coverage of felsenmeer was documented in AA 1-B, AA 4, AA 5, and AA 6.

2.4.2 Bigelow's Sedge Meadow

Bigelow's Sedge Meadow natural communities typically occur in moist alpine settings where shallow, organic-rich coarse mineral soils accumulate between areas of exposed bedrock and felsenmeer. On Mt. Washington, this community is typically found on gently sloping upper slopes, benches, and areas that receive persistent fog and cloud cover, particularly on north- and west-facing aspects. Moss cover may be substantial in these areas, contributing to soil moisture retention, surface stability, and organic matter development. It is an S1 community, considered critically imperiled in the state, reflecting both limited distribution and sensitivity to disturbance.[5]



Locus: AA 6, 7, and 8

Six of the ten AAs evaluated within the Study Area contained Bigelow's Sedge Meadow communities, secondary to the dominant Felsenmeer Barrens. AA 6, AA 7, and AA 8 are on the north and northwest slopes of the Mt. Washington summit cone, where prevailing westerly winds[13] and weather bring near constant fog and cloud cover, providing consistent moisture in pockets of organic-rich, moist, mineral soils. Bigelow's sedge ranged from 54 – 75% cover (within vegetated areas, excluding felsenmeer or bare ground) in these AAs. Co-dominant species included highland rush (*Juncus trifidus*), cushion plant (*Diapensia lapponica*), and alpine blueberry (*Vaccinium uliginosum*).

[13] Mount Washington Observatory, Mount Washington Weather Archives; Normals, Means, and Extremes over the period of 1991-2020; www.mountwashington.org/weather/mount-washington-weather-archives/normals-means-and-extremes/.

2.4.3 Sedge-Rush-Heath Meadow Natural Community

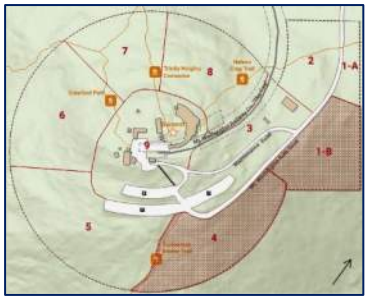
Sedge–Rush–Heath Meadows are one of the most common vegetated natural communities found in the alpine zone of New Hampshire's Presidential Range; typically found in moderately exposed, well drained, areas. Soil generally consists of organic-rich coarse mineral and shallow, coarse mineral with dry to moist (mesic) moisture regimes. Despite its prevalence in New Hampshire's alpine zones, Sedge–Rush–Heath Meadows are ranked as S1 communities; considered critically imperiled in the state.[5]

Four of the ten AAs evaluated within the Study Area contained Sedge–Rush–Heath Meadow communities secondary to the dominant Felsenmeer Barrens or otherwise developed areas. Dominant species included Bigelow's sedge (*Carex bigelowii*), highland rush (*Juncus trifidus*), large-leaf goldenrod (*Solidago macrophylla*), cushion plant (*Diapensia lapponica*), and alpine blueberry (*Vaccinium uliginosum*).

Figure 2-3
Typical view of a Sedge-Rush-Heath Meadow within the Study Area.

2.4.4 Alpine Herbaceous Snowbank / Rill Natural Community

The Alpine Herbaceous Snowbank / Rill community is present in areas where deep, late-melting snowbanks are persistent enough to further abbreviate an already short growing season. These may be small in area, occurring in concave, leeward positions, such as on the south and east aspects of the Mt. Washington summit.[14,25] Species composition is diverse and variable, containing some species not found in other alpine communities, therefore contributing greatly to the overall biodiversity of alpine habitat in the northeast region.[25] It is an S1 community; considered critically imperiled in the state.[5]



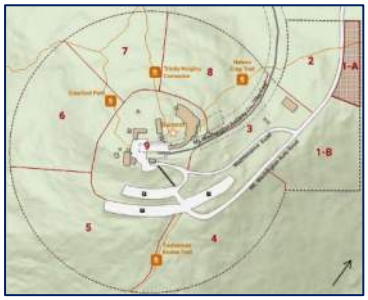
Locus: AA 1-B and 4

Minor components of Alpine Herbaceous Snowbank / Rill communities were documented in AA 1-B and AA 4. This portion of the Study Area undulates with ridges and ravines, generally oriented towards Huntington Ravine to the southeast. AA 1-B drops steeply (up to 55%) from the southwestern edge of AA 1-A and into AA 4. The soil moisture regime is moist (mesic), and soil consists of organic-rich coarse mineral material accumulated in topographic depressions. No water courses or flowing water were observed at the time of the 2024 field investigation.

Dominant species included highland rush, Bigelow's sedge, large-leaf goldenrod, three-toothed cinquefoil (*Sibbaldiopsis tridentata*), and alpine blueberry. Other non-dominant species documented include spiked wood-rush (*Luzula spicata*), thread rush (*Juncus filiformis*), black crowberry (*Empetrum nigrum*), and false hellebore (*Veratrum viride*).

2.4.5 Diapensia Shrubland Natural Community

Diapensia (cushion plant) Shrubland communities are typically found on convex landforms, subject to strong winds and low snow accumulation.[14] The plant community is dominated by dwarf shrubs instead of herbaceous grasses or forbs. Soils are generally well drained, coarse, and predominantly mineral. It is also an S1 community; considered critically imperiled in the state.[5]



Locus: AA 1-A

AA 1-A is on the northerly extent of the Study Area (in the "panhandle") with a northerly aspect, relatively flat slope (5-10%), and little to no microtopographic relief or leeward shelter. This area is exposed to strong winds from the north and west, limiting the amount of snow that accumulates. Cushion plant is the dominant species (67% coverage within vegetated areas, excluding felsenmeer or bare ground). Co-dominant herbaceous species included Bigelow's sedge and highland rush.

2.5 Biological and Aquatic Resources

Alpine habitat is uncommon in the eastern United States. The majority of alpine habitat east of the Mississippi River is located on New Hampshire's Presidential Range and the Katahdin Range in Maine.[14] According to the NHB, the flora in New Hampshire's alpine zone is more similar to the eastern Canadian arctic than it is to the nearby lower elevation plant communities in the White Mountains, and several species are endemic to the northeast alpine or limited to the White Mountains.[5]

2.5.1 Vegetation

Felsenmeer Barrens (i.e., fields of rock) is the dominant natural community type within the Study Area (accounting for ±65% cover). By cover and likely diversity, lichens are the dominant biota within the Study Area. However, sporadic pockets of soil occur within the felsenmeer, supporting minor inclusions of vascular plant communities. The scope of this assessment does not include identification or assessment of the lichen community.

Alpine vegetation is uniquely adapted to the short growing season, cryic (cold) soil temperature regime, and other climatic stressors of the high elevation exposed summits and ridges. Common adaptations include low stature which conserves energy and minimizes moisture loss; dark, evergreen, pigmentation which absorbs more ultraviolet radiation, allowing the plant to retain heat to melt the snow around it and expose it to sunlight to conduct photosynthesis at lower ambient temperatures; deep roots that allow access to water in an often rocky landscape; and reproductive strategies such as mat-forming (rhizomatous) clones and *vivipary* (seed germination while still attached to a fruit) which shortens the duration of a plant growth cycle. [5, 15]

[14] Kimball, Kenneth D.; Weihrauch, Douglas M. 2000. Alpine vegetation communities and the alpine-treeline ecotone boundary in New England as biomonitors for climate change. 2000. Wilderness science in a time of change conference—Volume 3: Wilderness as a place for scientific inquiry; 1999 May 23–27; Missoula, MT. Ogden, UT: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station.

[15] Slack, Nancy G., and Allison W. Bell. Field Guide to the New England Alpine Summits: Mountaintop Flora and Fauna in Maine, New Hampshire, and Vermont. Appalachian Mountain Club Books, 2013.

Figure 2-4
Typical view of a felsenmeer dominated landscape with pockets of vascular plant communities within the Study Area.

2.5.1.1 Species Composition, Richness, and Abundance

A total of eighty-two (82) species were documented in the Study Area. To analyze the vascular plant community composition, percent coverage estimates were adjusted relative to the total percentage of vegetation coverage in each AA (excluding felsenmeer or bare ground). Vegetation metrics were calculated for the overall Study Area and for each AA respectively. For the purposes of analyzing vegetation metrics, species that were documented during the 2024 field study with "trace" coverage in an AA were assigned a cover value of 0.5%.

Vegetation which was unidentifiable to the species or sub-species level during the 2024 field study included trace amounts of willow (*Salix sp.*) and raspberry (*Rubus sp.*) in AA ID 8 and 1-2% coverage of bluegrasses (*Poa palustris* and/or *Poa pratensis*) in AA ID 3. These occurrences were documented but not included in the Floristic Quality Assessment nor the species composition, richness, or abundance metrics. Vegetation which was unidentifiable to the species or sub-species level during the 2025 field study included trace amounts of willow (*Salix sp.*) in AA 8, as well as goldenrod (*Solidago sp.*) and Kentucky bluegrass (*Poa pratensis, subspecies unknown*) in AA 9. Reasonable assumptions were made to include these species in the 2025 Floristic Quality Assessment metrics.

Within vegetated areas across the entire Study Area, the dominant species were Bigelow's sedge, highland rush, cushion plant, and alpine blueberry. Dominant and non-dominant species composition and relative abundance are outlined in Table 2-2, below.

Table 2-2 Species composition and relative abundance of vascular plants documented within the Study Area.

Scientific Name	Common Name	Relative Percent Cover (%) Excluding Felsenmeer
Carex bigelowii	Bigelow's sedge	26
Juncus trifidus	Highland rush	12.8
Diapensia lapponica	Cushion plant	12.3
Vaccinium uliginosum	Alpine blueberry	9.9
Luzula spicata	Spiked wood rush	5.6
Sibbaldiopsis tridentata	Three-toothed-cinquefoil	3.9
Deschampsia flexuosa	Wavy hair grass	3.7
Globally Rare Plant		3.4
Stellaria borealis	Boreal starwort	2.9
Solidago macrophylla	Large-leaf goldenrod	2.8
Minuartia groenlandica	Greenland stitchwort	1.9
Vaccinium vitis-idaea	Mountain cranberry	1.9
Globally Rare Plant		1.8
Vaccinium cespitosum	Dwarf blueberry	1.3
Huperzia appressa	Mountain firmoss	0.8
Agrostis mertensii	Northern bentgrass	0.6
Veratrum viride	American false hellebore	0.6
Betula cordifolia	Heart-leaved paper birch	0.5
State Rare Plant		0.5
Empetrum nigrum	Black crowberry	0.4
Juncus filiformis‡	Thread rush	0.4
Phyllodoce caerulea‡	Purple mountain-heath	0.4
Globally Rare Plant		0.3
*Hieracium aurantiacum**	Orange hawkweed	0.3
Rhododendron groenlandicum	Labrador-tea	0.3
Carex canescens‡	Hoary sedge	0.2
Chamaepericlymenum canadense‡	Bunchberry	0.2
Houstonia caerulea	Little bluet	0.2
*Phleum pratense**†	Common Timothy	0.2

Scientific Name	Common Name	Relative Percent Cover (%) Excluding Felsenmeer
Salix uva-ursi‡	Bearberry willow	0.2
Spinulum canadense‡	Northern interrupted-clubmoss	0.2
State Rare Plant		0.2
Taraxacum officinale	Common dandelion	0.2
Abies balsamea‡	Balsam fir	0.1
Achillea millefolium	Common yarrow	0.1
Athyrium angustum	Northern lady fern	0.1
Calamagrostis canadensis	Bluejoint	0.1
Chamerion angustifolium	Narrow-leaved fireweed	0.1
Clintonia borealis‡	Yellow blue-bead lily	0.1
Coptis trifolia‡	Three-leaved goldthread	0.1
Diphasiastrum stitchense†	Sitka ground cedar	0.1
Epilobium palustre	Marsh willow-herb	0.1
*Euphrasia stricta**†	Strict eyebright	0.1
Festuca prolifera	Proliferous fescue	0.1
Geum sp.†		0.1
Globally Rare Plant‡		0.1
Harrimanella hypnoides‡	Moss-plant	0.1
*Hieracium pilosella**‡	Mouse-ear hawkweed	0.1
Maianthemum canadense	Canada-mayflower	0.1
Nabalus trifoliolatus	Three-leaved rattlesnake-root	0.1
Picea mariana	Black spruce	0.1
Picea rubens	Red spruce	0.1
*Plantago major**	Common plantain	0.1
Ranunculus acris†	Tall crowfoot	0.1
Rumex acetosella†	Common sheep sorrel	0.1
Saxifraga rivularis‡	Alpine-brook saxifrage	0.1
Sorbus americana†	American mountain-ash	0.1
Sorbus decora	Showy mountain-ash	0.1
Spiraea alba	White meadowsweet	0.1
State Rare Plant		0.1
Streptopus lanceolatus‡	Lance-leaved twistedstalk	0.1
Trichophorum cespitosum	Tufted clubsedge	0.1

Scientific Name	Common Name	Relative Percent Cover (%) Excluding Felsenmeer
Trifolium repens	White clover	0.1
Vaccinium boreale‡	Northern blueberry	0.1
*Cerastium fontanum**‡	Mouse-ear chickweed	Trace
Dryopteris campyloptera‡	Mountain wood fern	Trace
Epilobium hornemannii‡	Hornemann's willow-herb	Trace
Fragaria virginiana‡	Common strawberry	Trace
Globally Rare Plant ‡		Trace
Lysimachia borealis‡	Starflower	Trace
Phegopteris connectilis‡	Long beech fern	Trace
*Poa pratensis**‡	Kentucky bluegrass; subspecies unknown	Trace
Ranunculus repens‡	Creeping crowfoot	Trace
Rumex acetosa‡	Common dock	Trace
Salix bebbiana‡	Long-beaked willow	Trace
Salix sp.‡	Willow sp.	Trace
Solidago canadensis‡	Canada goldenrod	Trace
Solidago sp.‡	Goldenrod sp.	Trace
Stellaria media‡	Common starwort	Trace
Tanacetum vulgare‡	Common tansy	Trace
Tussilago farfara‡	Coltsfoot	Trace
Vahlodea atropurpurea‡	Arctic hair grass	Trace

* Non-native species

† Species only observed during 2024 survey, abundance estimate from 2024 study only

‡ Species only observed during 2025 survey, abundance estimate from 2025 study only

Plant species composition and abundance varied between AAs. To help characterize the variation across the Study Area, dominant species within each AA were identified. Table 2-3 outlines the dominant species per stratum within each AA.

Table 2-3 Dominant vegetation species per stratum within each Assessment Area.

Dominant Species per Stratum	Wetland Indicator Status±	Assessment Area ID (AA)									
		1-A	1-B	2	3	4	5	6	7	8	9
Herb Strata											
Bigelow sedge	FACW	X		X	X	X	X	X	X	X	X
Highland rush	FACU	X	X		X	X					
Spiked wood-rush	UPL										X
Large-leaf goldenrod	UPL		X			X					
Three-toothed cinquefoil	FACU		X								
Wavy bluegrass	NC										X
Shrub Strata											
Alpine blueberry	FAC		X		X	X	X	X	X	X	X
Cushion plant	UPL	X		X					X	X	
Mountain cranberry	FAC			X						X	X

± Upland (UPL); Facultative upland (FACU); Facultative (FAC); Facultative wetland (FACW); Not classified (NC; assumed UPL)

2.5.1.2 Rare and Vulnerable Species

Conservation rankings indicate how rare or vulnerable a species or natural community may be, and guide conservation and management priorities. Ranks are assigned by NatureServe and the NHB. Factors such as population size, restricted range, population decline, and threats influence the assignment of state and global ranks.[16] In this system, "S" denotes State-level status and "G" denotes Global-level status.

Northern Appalachian Alpine Tundra is considered globally vulnerable (G3).[17] NHB also considers this system to be Critically Imperiled in New Hampshire (S1). Alpine tundra in the Presidential Range is also considered an Exemplary Natural Community by the NHB and NatureServe, based primarily on its rarity.[18] Thirty-six percent (36%) of the native species documented in this study are state-listed as critically imperiled (S1), imperiled (S2), or vulnerable (S3).[17,19]

Figure 2-5
Typical view of the alpine tundra within the Study Area.

[16] Master, L. L., D. Faber-Langendoen, R. Bittman, G. A. Hammerson, B. Heidel, L. Ramsay, K. Snow, A. Teucher, and A. Tomaino. 2012. NatureServe Conservation Status Assessments: Factors for Evaluating Species and Ecosystem Risk. NatureServe, Arlington, VA.

[17] NatureServe. 2026. NatureServe Explorer [web application]. NatureServe, Arlington, Virginia. Available https://explorer.natureserve.org/pro/

[18] New Hampshire Division of Natural and Cultural Resources, New Hampshire Forests & Lands; Natural Communities website; https://www.nhdfl.dncr.nh.gov/natural-heritage/natural-communities.

[19] Mt. Washington State Park, Rare plants/animals and exemplary natural communities/systems (Element Occurrences); NH Natural Heritage Bureau; March 18, 2022.

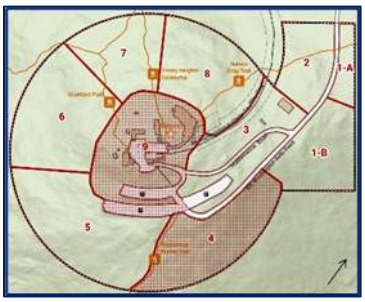
2.5.1.3 Non-Native Plant Species and Range Expanders

Non-native plant species are present throughout the Study Area. Sixteen species (approximately 20% of the 82 species documented) documented in the Study Area are non-native to New Hampshire. These species may provide limited habitat, forage, and/or biodiversity value; however, their abundance threatens the integrity of the native alpine plant community. Not all non-native species are considered invasive. Invasive plant species possess high dispersal abilities, enabling them to out-compete native vegetation, especially in disturbed habitats or those affected by climate change. The alpine tundra is also affected by range-expanding species from lower elevations, such as common dandelion (*Taraxacum officinale*), whose upward movement is facilitated by human transport and a warming climate and has the potential to displace native alpine communities. Species that are expanding their range from lower elevations may also be native to New Hampshire but have not historically inhabited the alpine tundra. Native range expanders invading a new habitat should be considered for management as "non-native" species. Non-native species documented within the Study Area are listed in Table 2-4.

Table 2-4 Non-native plant species documented within the Study Area.

Scientific Name	Common Name
Cerastium fontanum	mouse-ear chickweed
Euphrasia stricta	strict eyebright
Hieracium aurantiacum	orange hawkweed
Hieracium pilosella	mouse-ear hawkweed
Phleum pratense	common Timothy
Plantago major	common plantain
Ranunculus acris	tall crowfoot
Ranunculus repens	creeping crowfoot
Rumex acetosa	common dock
Rumex acetosella	common sheep sorrel
Stellaria media	common starwort
Tanacetum vulgare	common tansy
Taraxacum officinale	common dandelion
Trifolium repens	white clover
Tussilago farfara	coltsfoot

Non-native species richness was highest in AAs 4 and 9, coinciding with the most developed and disturbed areas on the summit. AA 4 is downslope and downwind (prevailing westerly wind) of the summit parking areas and the Tuckerman Ravine Trail, a popular area for spring skiers, and it had the second highest non-native species richness. These findings show that higher non-native species richness and abundance correspond with the areas of most human activity on the summit. Substantial stands of orange hawkweed were observed along the downslope areas of AAs 4 and 1-B.



Locus: AA 3 and 9

The United States Forest Service (USFS) and NHB undertake regular efforts to remove invasive species populations at the summit. Notably, in the summer of 2024 just prior to the field investigation, a significant effort was made to physically remove all dandelion plants within Mt. Washington State Park. Viable fragments or individuals may have remained and would have been undetected at the time of the field investigation; potentially affecting the analysis of dandelion species abundance in this study.

2.5.2 Aquatic Resources

Water availability in the alpine tundra is largely controlled by wind, cloud cover, precipitation, topography, and accumulation and duration of snow cover. The following sections describe aquatic resources within the Study Area.

2.5.2.1 Groundwater

Considering the shallow depth to bedrock, no (or limited) overburden aquifer is anticipated within or immediately surrounding the Study Area. Groundwater beneath the Study Area is primarily sourced from the bedrock aquifer; and the direction of groundwater flow in bedrock aquifers depends on flow through fractures in the rock. Based on referenced maps, and information in the report provided by Environmental Data Resources (EDR®; dated July 26, 2024), regional bedrock groundwater flow direction is expected to flow from the Mt. Washington summit, generally easterly or westerly, towards the Cutler River or the Ammonoosuc River, respectively.

According to the NHDES OneStop Data Mapper, the Study Area is not located within a mapped groundwater classification area; therefore, groundwater classification GB is applicable to the site. Groundwater classification GB is applicable to all groundwater in New Hampshire that has not been assigned to a higher class and is appropriate for areas with no land use prohibitions and no active management.[20] Bedrock groundwater has historically been used as a drinking water source at Mt. Washington State Park. Therefore, the Study Area is located within a Drinking Water Source Protection Area and is the location of a Community Public Drinking Water Supply for groundwater.

[20] New Hampshire Department of Environmental Services, Groundwater Reclassification Fact Sheet DWGB-22-3; 2020; https://www.des.nh.gov/sites/g/files/ehbemt341/files/documents/2020-01/dwgb-22-3.pdf

2.5.2.2 Surface Waters

No streams or surface waters were documented within the Study Area. The summit of Mt. Washington represents the high point of three watersheds, the Upper Ammonoosuc River, the Peabody River-Androscoggin River, and the Headwaters Saco River.[21] Most precipitation at Mt. Washington infiltrates the felsenmeer-dominated natural landscape or sheet-flows off-site with minimal stormwater controls or treatment. The only observed stormwater drainage infrastructure is adjacent to the Sherman Adams building.

2.5.2.3 Wetlands

To inform potential future assessment of wetlands within Mt. Washington State Park, the study considered the predominance of hydrophytic vegetation, general soil characteristics, moisture regime, and indicators of hydrology across each AA. To make a jurisdictional wetland determination, all three parameters must be present (wetland vegetation, hydric soil, and indicators of wetland hydrology).[3,22] However, to avoid disturbing the incipient alpine soils, soil pits were not excavated for documentation of soil profiles during this field investigation. The conditions in the Study Area, including rare plants, a short growing season, and shallow soils, pose challenges to the use of standard wetland delineation practices and should be carefully considered in future investigations to minimize disturbance.

Hydrophytic Vegetation

To assess the hydrophytic vegetation and indication of wetland plant communities throughout the Study Area, the wetland indicator status of dominant species were referenced based on the *United States Department of Agriculture (USDA) National Wetland Plant List for the Northcentral and Northeast Region*.[23] Bigelow's sedge was dominant in all but one AA, and is a FACW species, meaning it typically occurs in wetlands, but can occasionally be found in upland areas. Other dominant wetland species documented included alpine blueberry (FAC) and mountain cranberry (FAC). Table 2-3 includes the wetland indicator status of dominant species per stratum within each AA.

Hydric Soils

Characteristics of hydric soils such as redoximorphic features including iron reduction, translocation, and accumulation, and organic matter accumulation, result from prolonged saturation combined with soil microbial processes.[22] In the alpine zone, accumulation of poorly-decomposed soil organic material (e.g., peat) is also related to cold and wet conditions that limit microbial decomposition.[4]

Soil at Mt. Washington is well drained organic and coarse mineral over bedrock (Section 2.3.2 Soils & Geology). Soils in the Study Area are classified as folists which are considered a Problem Hydric Soil type in the manual *Field Indicators for Identifying Hydric Soils in New England*. Folistic epipedons consist of a thick organic surface and typically

[21] U.S. Geological Survey, National Geospatial Technical Operations Center, 2023, Watershed Boundary Dataset (WBD) - USGS National Map Downloadable Data Collection: U.S. Geological Survey.

[22] Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, (Version 2.0) January 2012, U.S. Army Corps of Engineers

[23] USDA, NRCS. 2020. The PLANTS Database (http://plants.usda.gov, 10/01/2024). National Plant Data Team, Greensboro, NC USA.

form under cool and moist conditions but are by definition saturated less than 30 cumulative days during normal years.[24] Minor inclusions within Ricker and Saddleback-Glebe-Ricker complex soils may be considered hydric; however, these are typically found at toes of slopes and ground moraines, geomorphic features that do not occur within the Study Area.

Indicators of Wetland Hydrology

Indicators of wetland hydrology include observable surface water, saturated soils, signs of recent inundation, or other physical indicators showing that water is present at or near the soil surface for a sufficient period during the growing season. Hydrology indicators are classified as either primary or secondary. The presence of one primary indicator, or at least two secondary indicators, such as oxidized root channels, a thin muck layer at the soil surface, or the presence of reduced iron, is typically required to confirm wetland hydrology.[22]

Factors that may support wetland hydrology in this environment include:

- Greater depth and prolonged duration of snowpack in leeward areas and topographic depressions. Prevailing winds are from the west on Mt. Washington; therefore, snow accumulates mostly on the east and southeast sides of the summit (AA 1-B and AA 4).[25]
- Concentrated runoff in areas determined by topography and geomorphology, e.g., AA 9.
- Near-constant fog and cloud cover (>55% of the time) from prevailing westerly winds, e.g., AAs 6 and 7.[14]

Based on field observations and mapped soil conditions, hydric soil indicators and jurisdictional wetlands are unlikely to occur extensively within the Study Area. However, due to the long recovery times of alpine disturbance, we recommend that soil profile excavation associated with standard wetland delineation practices is not recommended. If wetland identification is deemed necessary, then it should be based on indicators of hydrology and a predominance of hydrophytic vegetation. The duration of soil saturation could potentially be monitored by using redox electrodes as a non-invasive method for evaluating the degree and duration of saturation while avoiding unnecessary disturbance to alpine soils and plant communities.

[24] New England Hydric Soils Technical Committee. 2019 Version 4, Field Indicators for Identifying Hydric Soils in New England. New England Interstate Water Pollution Control Commission, Lowell, MA.

[25] Capers, Robert S., and Nancy G. Slack. "A baseline study of alpine snowbed and rill communities on Mount Washington, NH." *Rhodora* 118.976 (2016): 345-381.

2.5.3 Wildlife and Habitat

New Hampshire contains an estimated 4,158 acres of alpine habitat, less than 0.1% of the total area of the State. Alpine wildlife habitat is characterized by a low average species richness of rare animals, high winds, high precipitation, low annual temperature, and a short growing season.[32] As such, sources of food and water for wildlife are limited. Many wildlife species use the alpine seasonally and several species survive the harsh conditions year-round.

Bird species are partial-year residents, staying only to breed and/or to feed during the warm months, or while passing through during migration. Small amphibians such as spring peepers (*Pseudacris crucifer*) can overwinter in alpine habitats by producing glucose, a cellular antifreeze. Some endemic butterfly species are also uniquely adapted to survive harsh winter conditions at the summit.

The majority of the summit is mapped as "Highest Ranked Habitat in the State" by the New Hampshire Wildlife Action Plan with the exception of the Mount Washington Auto Road, the summit buildings and infrastructure, and the areas immediately surrounding these features.[32] Some of the land bordering along the Mount Washington Auto Road is also mapped as "Highest Ranked Wildlife Habitat in the Biological Region".

Felsenmeer Barrens provide habitat for birds and small animals on Mt. Washington. Cavities and leeward formations within the rock fields provide valuable refuge from the harsh alpine environment and from predators and can also provide areas for breeding and nesting. Sedge–Rush–Heath Meadows and Alpine Herbaceous Snowbank / Rill communities support the most diverse vegetation composition and wildlife value, including production of food sources such as blueberries and cranberries for birds and small mammals. They also provide nectar for butterflies and other insects.

Figure 2-6
Typical view from the south side of the Study Area, facing west.

2.5.2.1 Insects

Two species of butterfly are endemic to the Presidential Range and Mt. Washington: the White Mountain arctic (*Oeneis melissa semidea*) and White Mountain fritillary (*Boloria titania montinus*). Unlike most other species of butterfly, these species complete their life cycles across several years and are specially adapted to survive the alpine climate.

The White Mountain arctic is a subspecies of the Melissa arctic butterfly, and survives winter in a larval caterpillar stage, burrowing under loose rock and freezing solid until spring. Adults primarily inhabit Bigelow's Sedge Meadows and feed on moss campion (*Silene acaulis*), mountain sandwort (*Arenaria groenlandica*), and *Vaccinium* species; and fly from late June to late July. They are only active on sunny days with wind below ±40 mph and temperature >45°F. The White Mountain arctic is considered imperiled and is highly susceptible to climate change and population decline due to its natural rarity, isolated vulnerable habitat, and larval host plant specificity (i.e., Bigelow's sedge).[32]

The White Mountain fritillary is a subspecies of the purple fritillary and spends winters as larvae or pupae buried in snowbank microhabitats. Habitat suitability for this species depends on the abundance of host plants as well as ground temperature, moisture, and winter snow cover, as it inhabits wet alpine meadows, streams, and snowbank

communities. Adults primarily feed on Cutler's goldenrod (*Solidago leiocarpa*) and fly from mid-July to mid-September. The White Mountain fritillary is considered imperiled and is highly susceptible to climate change.[32] The Presidential Range represents the southernmost extent of the ringed emerald dragonfly's (*Somatochlora albicincta*) habitat, making local populations especially vulnerable to climate change and invasive species.

Insects and arachnids observed during the field investigation included a species of admiral butterfly (*Limenitis sp.*), a moth, and one spider. These individuals were photographed but they were not collected for positive identification.

Figure 2-7
Insects and arachnids observed in the Study Area.

2.5.2.2 Birds & Mammals

A variety of bird species may visit the summit of Mt. Washington throughout the year, during the warmer months and during migration. Typical alpine birds include snow bunting (*Plectrophenax nivalis*), white-throated sparrow (*Zonotrichia albicollis*), magnolia warbler (*Setophaga magnolia*), and yellow-rumped warbler (*Setophaga coronata*).[32] Two species of bird were directly observed during the field investigation: dark-eyed junco (*Junco hyemalis*) and common raven (*Corvus corax*). Both appeared well situated, scavenging from the human visitors.

According to the New Hampshire Wildlife Action Plan, the American pipit (*Anthus rubescens*) is widespread across the northern and western arctic regions of North America but only breeds on isolated mountaintops in the northeastern United States (e.g., Mt. Washington and Mt. Katahdin). On Mt. Washington it utilizes alpine sedge meadow communities; and it is a ground nesting bird that uses eroded turf, tussocks, and rock cavities that provide snow-free nest sites protected from predation and wind in early spring.[32] The New Hampshire Audubon society conducted American pipit surveys on Mt. Washington from June 2018 through August 2020 and found that all of the nests and flight displays observed occurred on north-facing slopes, and that the pipits were most active in the areas to the north and northwest of the summit, at the 6,000-foot parking area and along the Cog Railway.[26] The threats posed to this species are primarily from disturbance

[26] Martin, Christian J. "American Pipit (*Anthus rubescens*) Surveys on Mount Washington, June 2018 through August 2020, Final Report to the Robert F. Schumann Foundation." NH Audubon (2021). https://www.nhaudubon.org/wp-content/uploads/R.F.-Schumann-Foundation-Final-Rept-Jan-2021.pdf

by visitors and hikers, and habitat degradation due to a diminishing alpine zone in response to climate change.[32] Periodic surveys suggest that the Mt. Washington population remains stable at 10-20 nesting pairs.[32] No American pipit individuals or nests were observed during the field assessment, which occurred outside of the breeding season.

Like birds, a variety of mammal species may visit the summit of Mt. Washington, and a few may be year-round residents. One species of mammal was directly observed during the field investigation, red squirrel (*Sciurus vulgaris*). Several individuals were seen, which appeared to be desensitized to human visitors. Feeding by visitors and hikers was also observed.

Other common mammal species may include deer mouse (*Peromyscus maniculatus*), pine vole (*Microtus pinetorum*), rock vole (*Microtus chrotorrhinus*), eastern chipmunk (*Tamias striatus*), gray squirrel (*Sciurus carolinensis*), and northern flying squirrel (*Glaucomys sabrinus*). Larger mammal species have been reported but are not common. These include red fox (*Vulpes vulpes*), American black bear (*Ursus americanus*), raccoon (*Procyon lotor*), American pine marten (*Martes americana*), moose (*Alces alces*), bobcat (*Lynx rufus*), North American porcupine (*Erethizon dorsatum*), and striped skunk (*Mephitis mephitis*). Three trail cameras were deployed for 12 days within the Study Area (Figure 1). No wildlife was photographed, only human visitors walking off-trail.

2.6 Ecological Integrity

Ecological integrity assessment (EIA) establishes baseline ecological conditions and assesses environmental and anthropogenic stressors across the Study Area. An EIA provides objective metrics to inform conservation actions for planning and decision making, natural resource management, and long-term monitoring at the summit.

Ecological integrity is a measure of an ecosystem's:

> …ability to support and maintain a community of organisms that has species composition, diversity, and functional organization comparable to those of natural habitats within a region. An ecological system or species has integrity or is viable when its dominant ecological characteristics (e.g., elements of composition, structure, function, and ecological processes) occur within their natural ranges of variation and can withstand and recover from most perturbations imposed by natural environmental dynamics or human disruptions.[27]

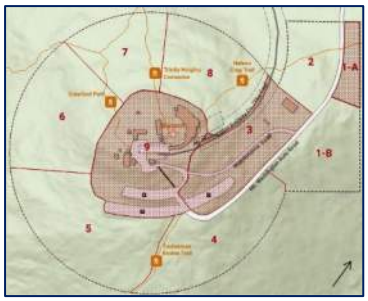
This EIA is considered a *Level 2 Rapid Field Assessment*. Metrics selected to assess ecological integrity include land use, floristic quality, soil or substrate characterization, and an analysis of ecosystem stressors. Emphasis should not be placed on the numerical EIA scores. The score values are used to integrate each metric into an overall whole EIA rating.[6] The *NatureServe Upland Ecological Integrity Assessment* methodology also includes supplementary procedures to quantify the scope and severity of anthropogenic stressors.[7]

The most recent version of this method was published shortly before the August 2024 field investigation and was therefore not explicitly incorporated into the original study design. However, the project team reviewed and applied the framework to the extent practicable within the scope and spatial limits of the Study Area. Where direct application of certain metrics was not feasible, equivalent indicators and professional ecological judgment were used to maintain consistency and rigor. For example, the individual edge effect metric was not applied in its standard protocol because AAs were delineated to collectively encompass the entire State Park rather than represent discrete ecological transitions. Instead, edge influence was evaluated qualitatively and incorporated into the integrated EIA scoring framework. Similarly, the methodology typically evaluates land use impacts within a 500-meter buffer surrounding each assessment unit. Because this study focused specifically on land within Mt. Washington State Park, land use impacts were evaluated within and between AAs rather than beyond the State Park boundary. These modifications represent reasonable and site-appropriate adaptations of the NatureServe framework, and they preserve the intent and comparative utility of the EIA methodology.

[27] Parrish, J.D., Braun, D.P., and UNNASCH, R.S. (2003). Are we conserving what we say we are? Measuring ecological integrity within protected areas. Bioscience 53, 851–860. https://doi.org/10.1641/0006-3568(2003)053[0851:awcwws]2.0.co.

2.6.1 Land Use

Human activity and land use impacts can directly or indirectly affect natural ecological processes. The land use index (uLAN1) evaluates the proportion different land use categories within each AA and applies a weight coefficient to each category based on its relative impact on ecological integrity.[6]



Locus: AA 1-A, 3, and 9

As shown in Table 2-5, AA 9, 3, and 1-A received the lowest land use scores due to a higher proportion of developed surfaces, including roads, parking areas, and facilities, and the relative intensity of associated stressors. AA 5 and 6 are the least developed and existing land use is limited to moderate recreational activity at hiking trails.

Table 2-5 Land use categories on the summit and overall score per AA.

		Proportion of AA (%)									
Land Use Category	**Weight Coefficient**	**1-A**	**1-B**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Roads and parking lots	0	16%	3%	8%	33%	3%	0%	0%	0%	0%	41%
Buildings and facilities	0	0%	0%	0%	8%	0%	0%	0%	0%	0%	5%
Moderate Recreation (high-use trails)	4	1%	0%	1%	0%	1%	0%	1%	4%	1%	0%
Natural Area	10	83%	97%	90%	59%	96%	100%	99%	96%	99%	53%
	Score	8.3	9.7	9.1	5.9	9.6	10.0	10.0	9.8	9.9	5.4
	Rating	**B-**	**A-**	**B+**	**C-**	**A-**	**A**	**A**	**A-**	**A-**	**C-**

Figure 2-8
Typical view of a developed area in AA 3, including the railway, wastewater treatment system and fuels tanks.

2.6.2 Size

Size is an EIA metric (uSIZ1) to evaluate the AA or natural community occurrence relative to the expected patch-type and size across the ecosystem's range. Sporadic vegetated plant communities occur within the expansive felsenmeer. The extent of these small patches is limited by the physical and biological conditions on the summit; and no documented occurrence exceeds 1-acre within the Study Area. Small patch ecosystems of this comparative size rank poorly (score: 1.5; rank: D) due to relative vulnerability to stressors and lack of buffering capacity compared to larger occurrences.

2.6.3 Floristic Quality Assessment

A Floristic Quality Assessment (FQA) analyzes ecological integrity by evaluating the plant species composition within an AA (uVEG3). Each species is assigned a Coefficient of Conservatism (C-Value, ranging from 0-10) based on its tolerance to disturbance and degree of habitat specificity.[28] Higher C-values indicate species more closely associated with stable, undisturbed environments. Utilizing the species list and abundance estimates for each AA, the ecoregional C-Values were applied to each species and several Floristic Quality metrics were calculated. A summary of the C-Value ranges and their interpretation is provided in Table 2-6.

Table 2-6 Floristic Quality Assessment Coefficients of Conservatism (C-Values) ranges with corresponding interpretations. [28]

Coefficient of Conservatism (C-Value)	Meaning and interpretation
0	Non-native with a wide range of ecological tolerances. Often these are opportunistic of intact undisturbed habitats.
1-2	Native invasive or widespread native that is not typical of (or only marginally typical of) a particular plant community; tolerant of anthropogenic disturbance.
3-5	Native with an intermediate range of ecological tolerances and may typify a stable native community but may also persist under some anthropogenic disturbance.
6-8	Native with a narrow range of ecological tolerances and typically associated with a stable community.
9-10	Native with a narrow range of ecological tolerances, high fidelity to particular habitat conditions, and sensitive to anthropogenic disturbance.

Using the 2024 vegetation survey data, cover-weighted mean C-values were calculated for each AA and for the Study Area as a whole. By incorporating relative abundance, the cover-weighted metric puts more emphasis on the dominant species in each community. The Floristic Quality Index (FQI) was calculated using the cover-weighted mean C-Value and native species richness. Adjusted FQI scores were also calculated to reduce bias towards sites with greater native species richness.[29]

The 2025 vegetation dataset was processed using the same FQA methodology. Species composition and abundance recorded within relevé plots and meander surveys were combined by natural community type within each AA. Cover-weighted mean C-values, FQI, and Adjusted FQI were first calculated for each community type and then aggregated to the AA scale based on the estimated proportional coverage of each community within the AA. The 2024 and 2025 AA-level FQA results were averaged, providing a baseline representation of floristic quality across the Study Area.

[28] Faber-Langendoen, D. 2018. Northeast Regional Floristic Quality Assessment Tools for Wetland Assessments. NatureServe, Arlington VA. (C-Value source).

[29] Miller, Sarah J., and Denice H. Wardrop. "Adapting the floristic quality assessment index to indicate anthropogenic disturbance in central Pennsylvania wetlands." *Ecological indicators* 6.2 (2006): 313-326.

Cover-weighted Mean C-Value

$$\sum_{i=1}^{n} X_i C_i \div \sum_{i=1}^{n} X_i$$

Floristic Quality Index (FQI)

$$\left[\sum_{i=1}^{n} C_i \div N_a\right] x \sqrt{N_a}$$

Cover-weighted FQI

$$\left[\sum_{i=1}^{n} X_i C_i \div \sum_{i=1}^{n} X_i\right] x \sqrt{N_a}$$

Adjusted Cover-weighted FQI

$$\frac{(\sum_{i=1}^{n} X_i C_i \div \sum_{i=1}^{n} X_i)}{10} x \frac{\sqrt{N_n}}{\sqrt{N_a}} x (100)$$

N_n=count of native species, N_a=count of all species, C_i=C-value for the i^{th} species, X_i=percent cover for the i^{th} species.[6]

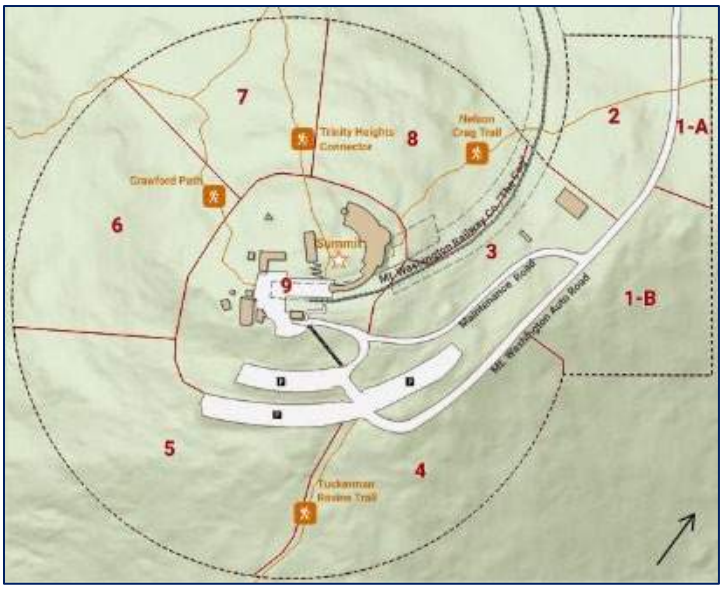
Table 2-7 presents the final FQA metrics for each AA and for the entire Study Area based on the combined 2024–2025 baseline dataset. Because statewide calibration thresholds for upland ecosystems in New Hampshire are still under development, the A–D rankings shown in Table 2-7 are intended for relative comparison among AAs within this Study Area rather than for comparison to other sites.

Table 2-7 Species richness, cover-weighted mean C-Values, FQI, Adjusted FQI, and overall ranking for each AA.

AA	Species Richness, Native	Species Richness, Non-Native	Cover-Weighted Mean C-Value (All)	Cover-Weighted Mean C-Value (Native)	Cover-Weighted FQI (Native)	Adjusted Cover-Weighted FQI	Rank
1-A	16	0	8.7	8.7	29	87	**B+**
1-B	44	2	7.7	7.8	32	76	**C**
2	18	1	8.0	8.0	29	79	**C+**
3	27	2	8.0	8.0	37	79	**C+**
4	40	3	7.4	7.6	35	74	**C**
5	38	1	7.7	7.7	29	77	**C+**
6	22	1	8.1	8.1	26	81	**B-**
7	12	0	7.6	7.6	24	76	**C+**
8	23	0	7.8	7.8	32	78	**C+**
9	27	16	7.4	8.2	31	73	**C**
Entire Study Area	66	16	7.9	8.1	65	72	**C**

Based on the sum of the abundance estimates for each species across each AA, the cover-weighted mean C-Value of all 82 species documented within the entire Study Area was 7.9, and 8.1 when considering native species only. An adjusted cover-weighted FQI value of 72 reflects a moderately intact alpine plant community characterized by a predominance of native species with moderate to high habitat specificity, while also indicating the presence of measurable stressors or influences of disturbance within the Study Area. The

overall plant community composition and abundance indicate a relatively stable, native community with a narrow range of ecological tolerances. This characterization is consistent with field observations across the Study Area, including the extent of developed areas, the presence of non-native species, habitat fragmentation, and documented anthropogenic disturbances. Evaluating these metrics within each AA enables comparison of floristic quality and ecological integrity relative to physical conditions across the Study Area.



Locus: All AAs within Study Area

The highest adjusted cover-weighted FQI values were observed in AAs 1-A (87) and 6 (81), which also exhibited the highest cover-weighted mean C-values and little to no non-native species presence. AA 6 is characterized by minimal disturbance, supporting relatively high ecological integrity. Conversely, AA 9 exhibited the lowest adjusted cover-weighted FQI (73) and the highest non-native species richness (16 species), coinciding with the most developed and disturbed area on the summit. AA 4 also showed a low adjusted FQI (74), corresponding with moderate non-native richness and proximity to summit parking areas and the Tuckerman Ravine Trail.

Despite a history of disturbance associated with the Formerly Used Defense Site (FUDS), AA 1-A exhibits the highest cover-weighted mean C-Value and highest adjusted cover-weighted FQI within the Study Area. No non-native species were documented in AA 1-A during either the 2024 or the 2025 field investigations. The dominant species present (cushion plant) has a C-Value of 10, reflecting its association with intact alpine habitats and high sensitivity to disturbance. However, its hardiness in a stressful environment apparently supersedes its sensitivity, and/or it is a hardier alpine species than most. In comparison, AA 1-B supports a relatively diverse native alpine plant community (44 native species) with moderate ecological integrity. Its moderately high cover-weighted mean C-value and predominance of characteristic alpine species indicate a stable native community; however, the presence of non-native species and exposure to recreational disturbance (e.g., hiking and backcountry skiing) contribute to lower FQA metrics.

Figure 2-9
Typical view of AA 1-A, facing west.

2.6.4 Native and Non-Native Species Coverage

Approximately twenty percent (20%) of the species documented in the study, sixteen (16) individual species, are non-native. Across the entire study, within vegetated areas (i.e., excluding felsenmeer or bare ground), there was 1.4% coverage of non-native species. Table 2-8 includes the relative coverage of native and non-native species, with EIA ranking per AA (uVEG1, uVEG2). Figure 2-10 depicts native and non-native species richness with the cover-weighted mean C-Values for all species (native and non-native) per AA.

Table 2-8 Native and non-native species cover, excluding felsenmeer or bare ground, and overall score per AA.

	Relative Cover of Native and Non-Native Species (%)									
AA	**1-A**	**1-B**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Native Species	100	96	95	93	93	97	96	100	100	63
Non-Native Species	0	4	5	7	7	3	4	0	0	37
Ranking	**A+**	**A+**	**A**	**A**	**A**	**A+**	**A+**	**A+**	**A+**	**D-**

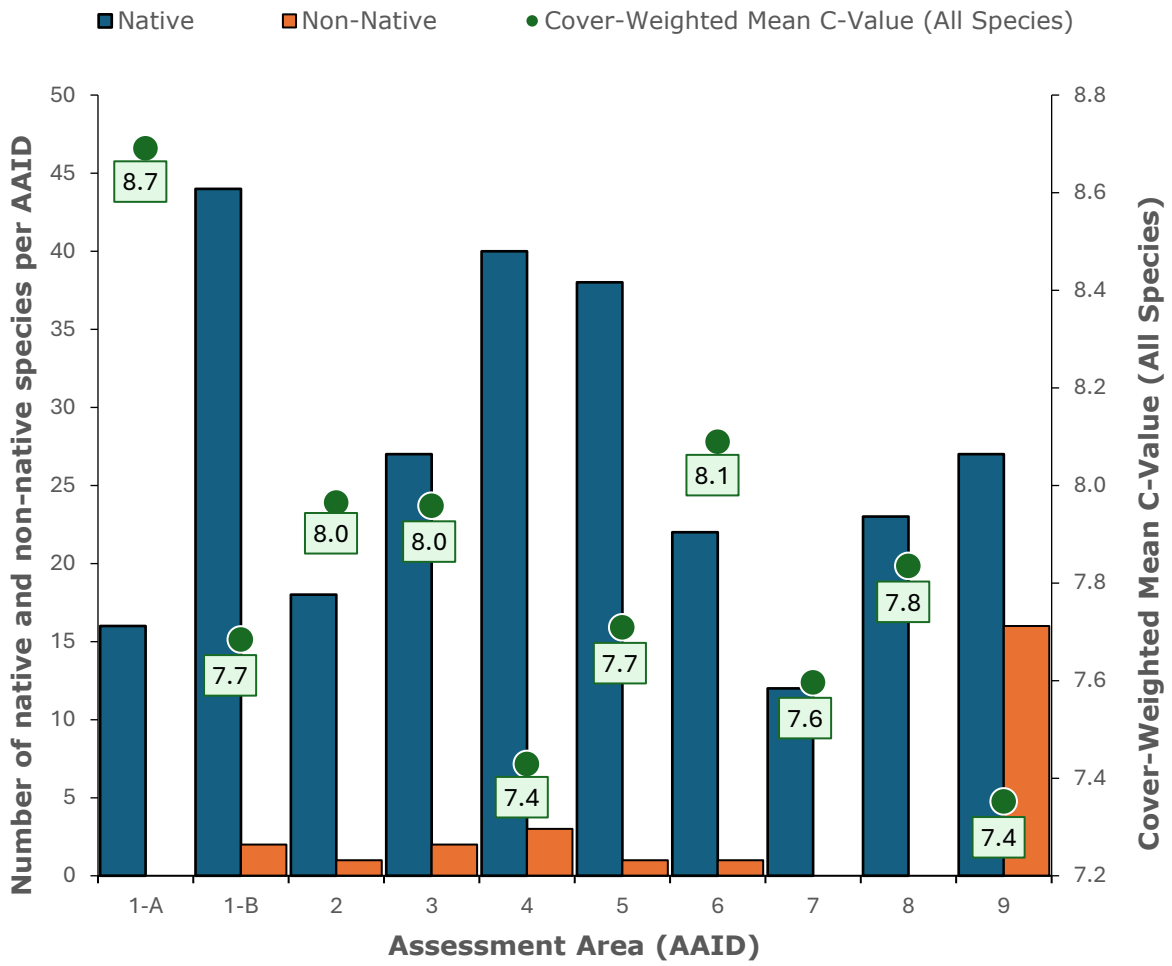


Figure 2-10
Percent native versus non-native species per assessment area with cover-weighted mean C-Values for all species (native and non-native).

AA 4 had the second-highest native species richness but the second-lowest adjusted cover-weighted FQI value (74). Approximately seven percent (7%) of vegetated cover in AA 4 was comprised of non-native species, contributing to the lowest cover-weighted mean C-value (7.4; tied with AA 9). Three non-native species were documented in AA 4, and their relative abundance influenced the overall floristic quality metrics, demonstrating the influence of non-native species cover on ecological integrity. A similar pattern is observed in AA 9. Although non-native species richness is highest in AA 9, the relatively high native cover-weighted mean C-value (8.2) indicates the predominance of characteristic alpine species. Dominant native species with high C-values partially buffer the influence of non-native species richness; however, the combined effects of disturbance and non-native presence are reflected in the lowest adjusted FQI observed in the Study Area (73).

AA 6 exhibits a relatively high proportion of native species (96%) and a high cover-weighted mean C-value (8.1), indicating a plant community dominated by conservative

alpine species. These metrics reflect relatively high ecological integrity and correspond with an area of the summit characterized by low levels of disturbance or human activity.

Overall, native species dominate most of the Study Area. However, areas with greater disturbance or human activity tend to have higher non-native species cover and lower floristic quality scores. These patterns suggest that while much of the alpine plant community remains intact, localized disturbance and non-native species presence are influencing ecological conditions in certain areas.

2.6.5 Soil and Substrate

The soil/substrate EIA metric (uSOI1) is evaluated based on visible evidence of human impact on soil or substrate within each AA, including erosion, sedimentation, displacement, rutting, compaction, and altered stormwater flow patterns. Note: in accordance with the *NatureServe Upland Ecological Integrity Assessment* methodology, alpine soil metric ratings start at "B" due to extrinsic atmospheric factors such as ozone, mercury, and acid deposition.[6] Table 2-9 describes the documented soil or substrate condition, EIA metric rating, and overall score per AA.

Table 2-9 Soil or substrate condition, EIA metric rating, and overall score per AA.

AA	Soil or Substrate Condition	Score	Ranking
1-A	Moderate amount of bare soil and visible erosion and sedimentation caused by vehicular activity and foot traffic.	2	**C**
1-B	Moderate amount of bare soil and visible erosion and sedimentation caused by vehicular activity.	2	**C**
2	Moderate amount of bare soil and visible erosion and sedimentation caused by vehicular activity and foot traffic.	2	**C**
3	Substantial amount of bare soil from vehicular activity in/around the existing tank farm and alongside the Cog Railway.	1	**D**
4	Moderate amount of bare soil and visible erosion and sedimentation caused by foot traffic.	2	**C**
5	Small to no visible disturbance from anthropogenic activities; where present, soil is generally intact.	3	**B**
6	Small to no visible disturbance from anthropogenic activities; where present, soil is generally intact.	3	**B**
7	Moderate amount of bare soil and visible erosion and sedimentation caused by foot traffic.	2	**C**
8	Small to no visible disturbance from anthropogenic activities; where present, soil is generally intact.	3	**B**
9	Substantial amounts of bare soil from trampling, compaction, sedimentation, observed pedestals and terracettes due to heavy foot traffic on off-trail routes, and altered hydrology caused by human activity.	0.5	**D**

The summit of Mt. Washington is characterized by exposed bedrock, boulders, and loose gravel; which promotes infiltration and dissipation of concentrated runoff from impervious surfaces such as the parking areas, pedestrian paths, and buildings. Developed soil is scarce in the alpine tundra. Wind and water drive soil deposition and accumulation in

pockets of topographic relief; and soil development and nutrient availability are limited by slow organic decomposition and weathering. Soil and substrate condition affect natural community composition and biological function. Several erosional features were documented, where gravel from parking areas and pedestrian paths is migrating into adjacent natural areas.

2.6.6 Ecosystem Stressors and Recovery

Native alpine biota specializes in surviving amidst low temperatures, high wind, and typically low soil nutrients, low soil volume, and low soil moisture. Because the alpine tundra is characteristically resource-limited, ecosystem functions, including rates of plant growth and soil development, are slow compared to those in less limited environments. Alpine ecosystems are slow to recover from disturbance and other degradation and thus they are more vulnerable to climatic and anthropogenic stressors.

According to the New Hampshire Wildlife Action Plan, higher-ranking threats to the alpine tundra include degradation due to ozone, mercury deposition, acid deposition, and contamination around the Cog Railway.[32] Air pollutants deposit disproportionally in the alpine zone compared to lower elevations.[38] Lower-ranking threats include degradation due to snow compaction from recreation, habitat conversion, the presence of the buildings and other development at the summit, hikers and visitors that walk off trail, and climate change.[32]

The rate of recovery of alpine vegetation is proportionate to the intensity and duration of the disturbance and, in some cases, could take more than a century to restore.[30,31] Recovery is generally stronger when surficial soil containing a persistent seedbank remains intact, versus when the disturbance results in greater soil loss (e.g., landslides or excavation). To a lesser extent, seedlings may re-establish by seeds dispersed from nearby plants or encroach vegetatively from the margins of the disturbed area.[30] In a 2014 study of alpine plant community recovery on Mount Washington, researchers found that the three most successful colonizing plants were those with abundant small seeds such as Bigelow's sedge, highland rush, and Greenland stitchwort. The absence of woody species such as alpine blueberry in disturbed plots, where otherwise abundant in undisturbed plots, was attributed to limited seed production and dispersal.[30]

[30] Capers, Robert S., and David W. Taylor. "Slow recovery in a Mount Washington, New Hampshire, alpine plant community four years after disturbance." Rhodora 116.965 (2014): 1-24.

[31] Willard, Beatrice E., David J. Cooper, and Bruce C. Forbes. 2007. "Natural Regeneration of Alpine Tundra Vegetation after Human Trampling: A 42-Year Data Set from Rocky Mountain National Park, Colorado, U.S.A." *Arctic, Antarctic, and Alpine Research* 39 (1): 177–83. doi:10.1657/1523-0430(2007)39[177:NROATV]2.0.CO;2.

2.6.6.1 Recreation & Tourism Stressors

The summit has become a must-see destination for hundreds of thousands of visitors each year via hiking trails, the Mount Washington Auto Road, or the historic Cog Railway. Increased recreation and tourism at Mt. Washington State Park place inevitable tension between the enjoyment of all visitors and the integrity of the ecosystem. Even passive recreational activities could have significant long-term consequences.

Four major hiking trails: Nelson's Crag Trail, Tuckerman's Ravine Trail, Crawford Path, and the Trinity Heights Connector (i.e., the Gulfside Trail), plus the Mount Washington Auto Road, and the Cog Railway converge at the summit. The Trinity Heights Connector is also the route of the Appalachian National Scenic Trail over the summit (Figure 2-13). Trails, roads, and rail infrastructure contribute to habitat fragmentation and localized disturbance. The Nelson Crag Trail bisects portions of AA 1-A and AA 8, while the Crawford Path and Tuckerman Ravine Trail intersect AAs 6, 4, and 5, increasing edge exposure and corridor-of-influence effects. The Mount Washington Auto Road borders AA 1-A and lies upslope of AAs 4 and 5, where runoff and foot traffic contribute to soil instability. Along the western edge of AA 3, structures and operations associated with the Cog Railway have resulted in coal deposition and substantial substrate disturbance. The proximity of infrastructure and human activity corresponds with documented indicators of vegetation stress, soil erosion, and reduced floristic quality. Further, publicly available recreation data (e.g., Strava Global Heatmap) indicates concentrated use along certain corridors and informal routes. These user-generated activity data reflect relative spatial patterns of recreational intensity and generally correspond with areas where vegetation trampling, soil disturbance, and lower floristic quality metrics were documented.

Alpine communities are particularly susceptible to physical damage by pedestrian trampling, which can result in soil erosion, soil compaction, direct damage to vegetation, and alterations to local hydrology.[31,32] Loss of vegetative cover further accelerates erosion and limits the ability of native plants to re-establish.[32] Figure 2-11 illustrates concentrated hiking activity near the summit, including visible deviations from the main trail network and visitor areas. These off-trail routes are pronounced to the north and south of the summit facilities and appear to correspond with travel toward scenic viewpoints, including the Lakes of the Clouds Hut to the southeast.

Backcountry skiers flock to Tuckerman's Ravine each spring to traverse its wide bowl and steep slopes, with some continuing higher to descend from the summit. The Mount Washington Auto Road is also commonly used by skiers in spring to access snowfields east of the summit (Figure 2-12). While these snowfields may retain adequate snow cover, adjacent exposed areas often do not, increasing the potential for trampling as skiers travel between the Auto Road and snow-covered terrain.

[32] New Hampshire Fish & Game Department, "New Hampshire Wildlife Action Plan, 2015 Revised Edition" (2015): https://www.wildlife.nh.gov/wildlife-and-habitat/nh-wildlife-action-plan.

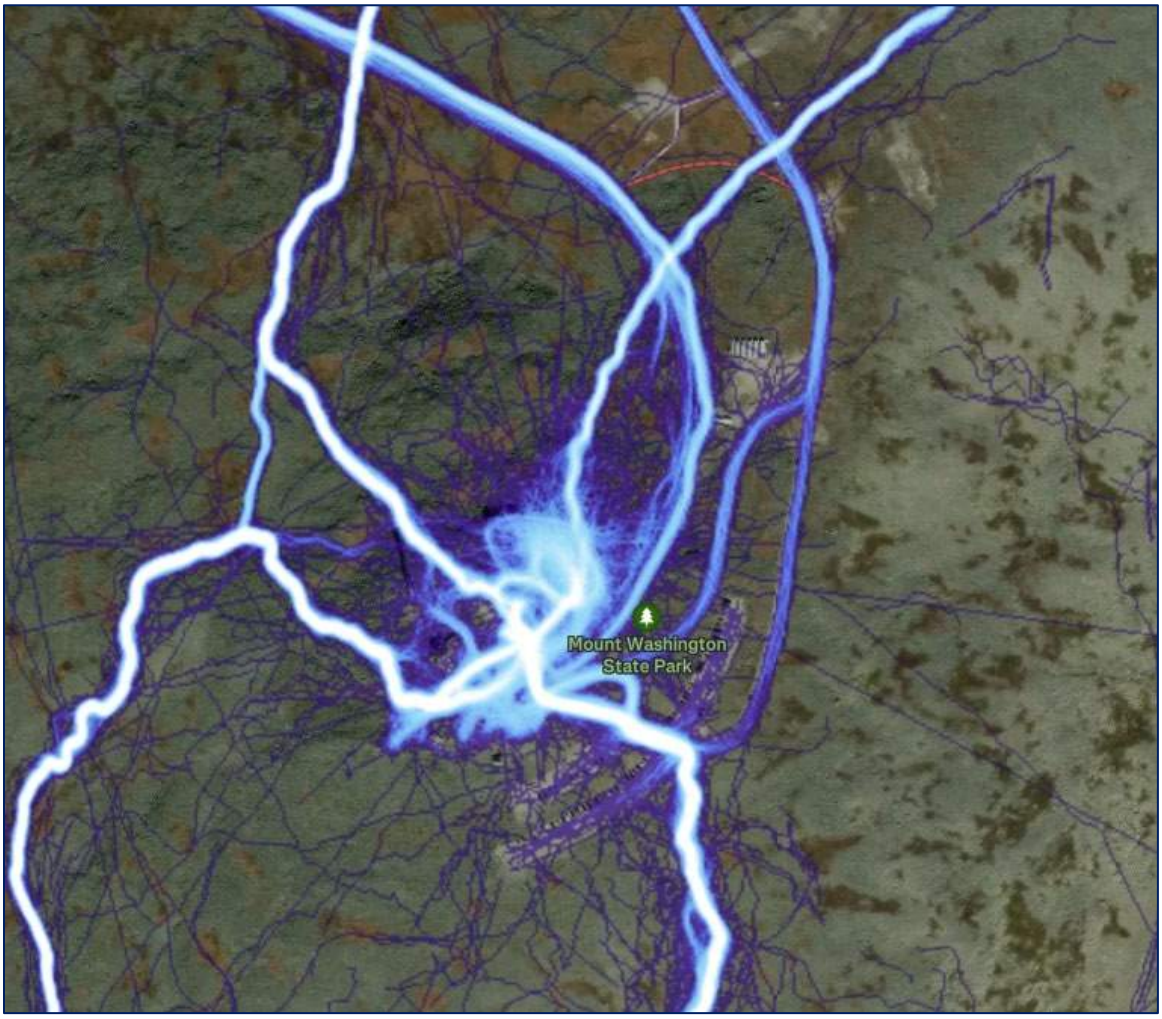


Figure 2-11
Strava Global Heatmap (aggregated user-generated activity data) illustrating hiking patterns near the summit.[33]

[33] Strava, Inc. Strava Global Heatmap. https://www.strava.com/maps/global-heatmap

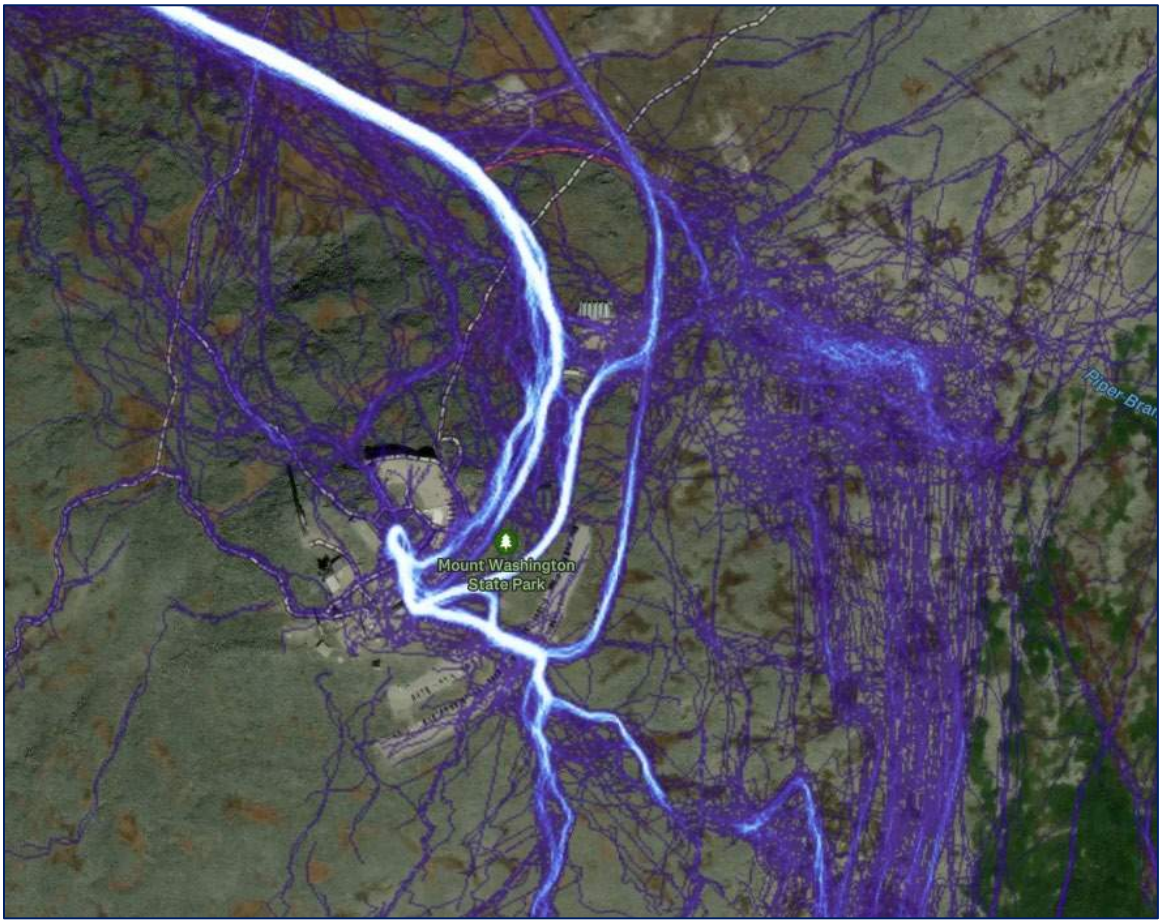
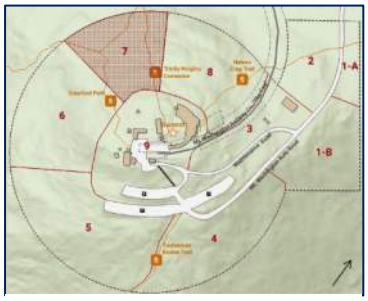


Figure 2-12
Strava Global Heatmap (aggregated user-generated activity data) illustrating backcountry skiing use patterns near the summit.[34]

Often unbeknownst to the individual carrying them, viable seeds or fragments of non-native species may be translocated and dispersed, exacerbating the spread of non-native species at the summit.[32] AA 7 contains three intersecting trail segments (and moderately low FQA metrics). Richness of non-native vascular plant species was greatest in areas with the most human activity; suggesting a correlation between human vectors (e.g., hikers, vehicles) transporting and spreading non-native species, and/or by causing ground disturbances that invites non-native species colonization.



Locus: AA 7

[34] Strava, Inc. Strava Global Heatmap. https://www.strava.com/maps/global-heatmap

In response to human presence, wildlife may experience physiological stress and behavior change that compromise survivorship or reproductive success. According to the NH Fish & Game Department, the average *corridor of influence* on either side of a trail varies by species and surrounding habitat. Birds and mammals flee at an average distance of 150 and 400 feet, respectively.[35] There are at least 3,000 linear feet of hiking trails entering and leaving Mt. Washington State Park, plus the existing roadways and railroad. Applying a 400-foot corridor of influence on both sides of this network results in ±57 acres of wildlife habitat impact, almost the entire Mt. Washington State Park (Figure 2-14). Deviation and off-trail encroachment effectively widens the corridor of influence.

Trail cameras stationed around the summit during the study period captured daily instances of visitors wandering off-trail. Vegetated alpine natural communities are especially vulnerable, as the soft vegetation is relatively easy to navigate compared to the abundant (rocky) Felsenmeer Barrens. Factors that influence off-trail walking may vary depending on visitors' attitude and behavior. A 2023 study on walking off-trail in national parks found that other visitors' off-trail walking had a strong influence on individuals' motivation to veer off trail (i.e., "monkey see, monkey do").[36] Visitors' perception of barriers or regulations also influence off-trail walking; particularly where signage to guide the visitor is lacking, unclear, or less noticeable. Interestingly, researchers found that visitors' pro-environmental values had no influence over off-trail walking behavior; those individuals did not view off-trail walking as a violation of their ecological principles.[36] Thus, even individual visitors embody conflict between stewardship and habitat stress.

The scope and severity of ecosystem impacts within the Study Area due to recreation and tourism are most visible in existing disturbed areas (i.e., trails, paved areas, and buildings; ±13% of the Study Area) and are likely to seriously degrade or reduce much of the existing habitat within those areas.

[35] Trails for People and Wildlife: A Guide to Planning Trails the allow People to Enjoy Nature and Wildlife to Thrive. NH Fish & Game Department; www.wildlife.nh.gov

[36] Edmund Goh (2023) Walking Off-Trail in National Parks: Monkey See Monkey Do, Leisure Sciences, 45:1, 1-23, DOI: 10.1080/01490400.2020.1755750; https://doi.org/10.1080/01490400.2020.1755750

Figure 2-13
Evidence of soil loss and impacted vegetation caused by off-trail foot traffic.

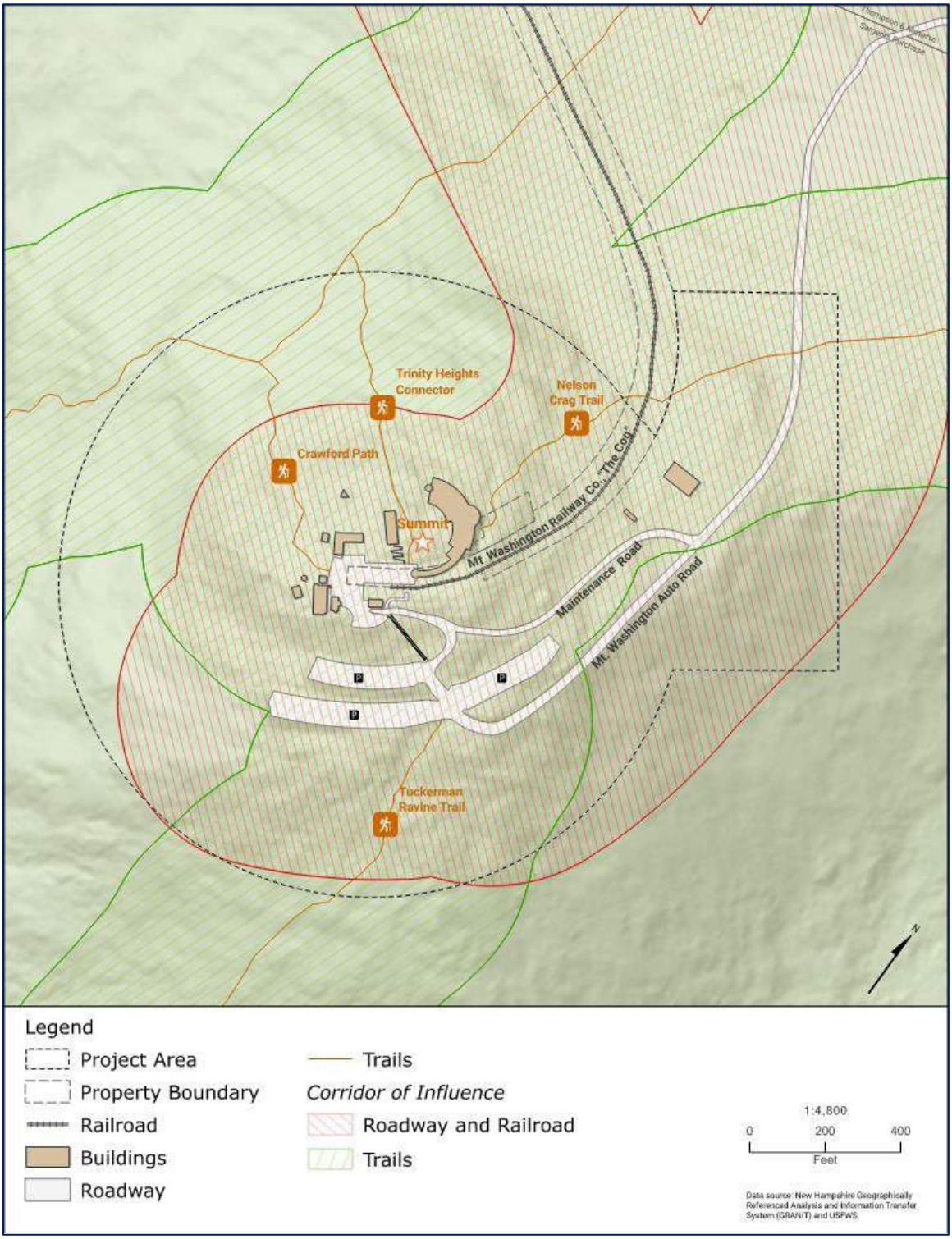


Figure 2-14
Corridors of influence by existing trails, railroad, parking areas, and roadways within the Study Area.

2.6.6.2 Climate Change

The northeastern United States, specifically New England, is warming faster and experiencing greater increases in extreme precipitation than most other regions across the world.[37] Winter is the season that is experiencing the strongest warming trend across the northeast, though climate data analyzed by the Mount Washington Observatory reveals a slower rate of warming at the summit of Mt. Washington than at lower elevations.[37, 38] The effects of climate change in the alpine tundra are complex and require caution when interpreting or extrapolating lower-elevation meteorological data.

At the summit of Mt. Washington the mean annual temperature increase and mean winter temperature increase was found to be 0.10°C and 0.14°C per decade, respectively, between the period of 1935 – 2018.[37] There is an observed increase in the duration and magnitude of days above freezing when there is no snow on the ground (i.e., mud days), potentially contributing to the number of soil freeze-thaw cycles, frost heaving, and degraded soil integrity at the summit.[37] According to on-going research at the Mount Washington Observatory, periods of exceedingly warm winter weather combined with intense rainfall are resulting in more frequent, and sometimes detrimental, rain on snow (ROS) events in the northeast. ROS events cause excessive and rapid snowmelt leading to increased snowmelt-related runoff and flood events, and high avalanche danger due to weakened snowpack. State Park staff have also reported increasing maintenance challenges associated with ROS events, including destabilized trails, saturated soils, and erosion along pedestrian and vehicle corridors following rapid snowmelt. They are most prevalent in early winter and mid- to late-spring. In the last decade (2011-2020) there were ±41% more ROS days compared to 1981-1990.[39]

Alpine plant communities are temperature-limited and therefore sensitive to a warming climate.[14] Extremely slow rates of response and recovery, and lack of precise historical abundance or distribution information, make climate-related vegetation community trends challenging to analyze.[25,38] Due to warming temperatures, the growing season is lengthening at the summit of Mt. Washington; however, earlier snowmelt is advancing faster than budburst (-1.7 and -1.0 days per decade, respectively; 1980-2005).[37] Although higher temperatures associated with a warming climate may alleviate key resource constraints (e.g., nutrient availability), the species that are adapted to this singular biome may be outcompeted by other species with greater resource use potential. This presumably is already exhibited by the pronounced occurrences of dandelion at Mt. Washington, a species non-native to New Hampshire that is expanding beyond its common, lower elevation range, into the alpine. Snowbank communities may be

[37] Murray, G. L., Colgan, A. M., Nelson, S. J., Kelsey, E. P., & Kimball, K. D. (2021). Climate trends on the highest peak of the Northeast: Mount Washington, NH. Northeastern Naturalist, 28(sp11), 64-82.

[38] Kimball, Kenneth D., Douglas M. Weihrauch, and Georgia L. Murray. "Understanding northeastern US alpine mountains: Context, causal agents of treeline, and meteorology to approximate their response to climate change." *Northeastern Naturalist* 28 (2021): 83-107.

[39] Mount Washington Observatory, Rain-on-Snow Research; Synoptic Rain-on-Snow Manuscript (2024); https://mountwashington.org/wp-content/uploads/2024/10/2023_Synoptic_Rain-on-Snow-Manuscript.pdf.

particularly vulnerable to reduced snow depth and duration of snow cover, exposing plants to damaging springtime frost and/or late-season drought stress.[25]

The changing climate is expected to affect the global extent of the alpine tundra, alpine community composition, and ecological integrity.[14] The alpine treeline boundary in the northeast is likely influenced by exposure and physical damage caused by abrasive blowing snow and mechanical ice loading (rime ice), in addition to the short growing season (compared to lower elevations).[14,38] Models predict not only contraction of existing alpine tundra but a decrease in the overall distribution of alpine habitat.[14] Globally, alpine tundra is expected to shrink with climate change due to an increase in treeline elevation.[14,40,41] Under a modest global warming scenario, model results predicted 44 – 48% contraction (loss) of existing European alpine tundra.[41] Notably, European regions typically contain perennial snow zones, which may reserve upward migration capacity for alpine habitat that is unavailable on Mt. Washington.

The scope and severity of ecosystem impacts to the alpine tundra due to a changing climate are pervasive and likely to seriously degrade or reduce most or all of the existing habitat over time. They include direct and indirect impacts such as changes in soil chemistry and nutrient availability, plant phenology, habitat degradation, loss of biodiversity or extinction of alpine species, and vulnerability to natural hazards. The projected severity of impacts due to climate change depends on the concentration of greenhouse gases and rate of global warming. A changing climate, driving changes to the ecosystem, may have "significant negative effects in recreational ecosystem services" and the winter tourism economy of New England. [38,41] The effectiveness of human intervention and conservation actions to mitigate adverse ecological impacts caused by climate change is poorly understood.[41]

[40] W.E. Grant, N.R. French, 1990. Response of alpine tundra to a changing climate: A hierarchical simulation model. Ecological Modelling 49: 205-227. https://doi.org/10.1016/0304-3800(90)90028-F.

[41] Barredo, J.I., A. Mauri, and G. Caudullo. 2020. Alpine tundra contraction under future warming scenarios in Europe. Atmosphere 11:698. https://joint-research-centre.ec.europa.eu/system/files/2020-10/02_pesetaiv_atmosphere_report_sept2020_en.pdf

2.6.7 Summary of Ecosystem Condition

The EIA is designed to evaluate the structure, composition, processes, and connectivity of the alpine tundra and natural communities on the summit. Where necessary, and as described above, due to the limitations of the study, the *NatureServe Upland Ecological Integrity Assessment* methodology was modified for some of the metrics assessed.

A 0 – 4 point-based approach and A–D rating scale are used to integrate individual metrics for each major ecological factor (i.e., landscape, vegetation, soil, and ecosystem size) and an overall EIA score per AA. Combining the major ecological factors evaluated results in a single EIA score and ranking that characterizes ecological integrity between AAs. Table 2-10 provides the overall EIA score and rating for each AA.

Table 2-10 Overall EIA score and rating for each AA.

		Overall EIA Score and Rating per AA									
	AA	**1-A**	**1-B**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Overall EIA	**Score**	2.6	2.6	2.5	2.2	2.6	2.8	2.8	2.6	2.7	1.9
	Ranking	**B-**	**B-**	**B-**	**C+**	**B-**	**B-**	**B-**	**B-**	**B-**	**C-**

The individual metric and overall EIA scores are objective measures of ecological integrity and relative resilience to climatic and anthropogenic stressors based on a combination of desktop reconnaissance, field data collection, and experienced ecological judgment. The overall EIA score factors landscape context, site-specific conditions, and comparative size of the small-patch distribution of alpine tundra natural communities.[6] Individual metric analyses may provide measures of success or long-term monitoring objectives for specific ecological factors (e.g., soil, vegetation); whereas the overall EIA score for each AA may inform management decisions, prioritization of restoration or preservation sites, and avoidance and minimization for alternative site plan analyses.[6]

2.7 Summary of the Natural Resources Assessment

The Mt. Washington State Park Natural Resources Assessment establishes a baseline ecological condition of the ±60-acre summit to inform long-term management. The study was guided by the goals of the 2022 Mt. Washington Master Plan and conducted in collaboration with the NH Division of Natural and Cultural Resources. Through desktop review and field investigations, ten Assessment Areas (AAs) were delineated to capture variability in landform, vegetation, and disturbance patterns. The assessment identified five principal alpine natural community types: Felsenmeer Barrens, Sedge-Rush-Heath Meadows, Alpine Herbaceous Snowbank/Rill, Diapensia Shrubland, and Bigelow's Sedge Meadow; each representing rare or imperiled ecological communities within New Hampshire's alpine tundra system.

Vegetation surveys documented 82 vascular plant species, of which 36% are state ranked as critically imperiled (S1), imperiled (S2), or vulnerable (S3). Non-native species comprised 20% of the species documented and were concentrated near developed and high-use areas, including the Sherman Adams Building and summit parking areas. Soils across the summit are generally shallow, poorly developed, and well-drained. Wildlife observations and literature review indicate that Mt. Washington supports a small but ecologically significant assemblage of alpine-adapted species, including the endemic White

Mountain Arctic and White Mountain Fritillary butterflies, and the state-listed American Pipit.

Between July 2 and September 30, 2025, the NH Natural Heritage Bureau (NHB) conducted supplemental vegetation surveys within the Study Area to capture additional phenological variability. Tighe & Bond incorporated the findings into the assessment, updating the Floristic Quality Assessment (FQA) metrics and related ecological integrity analyses to reflect the expanded species inventory and refined baseline condition.

An Ecological Integrity Assessment (EIA), based on the *NatureServe Upland Ecological Integrity Assessment* protocols, evaluated land use, vegetation quality, and ecosystem stressors. While certain metrics were adapted to reflect site-specific conditions and study scope, results indicate that many alpine communities retain moderate ecological integrity (overall grades B–C) despite historic disturbance and heavy visitation. More developed areas (e.g., AAs 3 and 9) scored lowest. Key stressors include recreational pressure, trail erosion, non-native species presence, and climate-related impacts. While the alpine tundra at Mt. Washington remains ecologically valuable and globally rare, its resilience will depend on continued monitoring, adaptive management, and efforts to minimize disturbance under increasing recreational use and climate change.

Section 3
Environmental Site Assessment

Tighe & Bond completed an Environmental Site Assessment (ESA) for the Mount Washington State Park located in Sargent's Purchase, New Hampshire, herein referred to as the Site, for the New Hampshire Department of Natural and Cultural Resources (NH DNCR). The Site consists of Summit areas within the Mount Washington State Park bounded as shown on Figure 3-1, and does not include easements or rights-of-way (ROWs) associated with the Cog Railway or Mount Washington Auto Road.

3.1 Purpose, Scope, and Methodology

The objective of this ESA was to identify environmental conditions that may affect, restrict, or impact master planning and facilities considerations for the Site. Since the property is not being sold or acquired, a comprehensive ASTM E1527-21 Phase I ESA Report was not required. However, tasks generally consistent with ASTM E1527-21 Phase I ESA procedures (e.g., state and local research, historical and aerial map reviews, environmental database searches, visual site reconnaissance, etc.) were completed to identify existing and/or potential environmental conditions of concern and to provide recommendations for additional assessment.

The findings of this ESA identify existing or potential Recognized Environmental Conditions (RECs) associated with current or past activities at the Site.[1] Supporting figures are incorporated within the body of this Section, and additional documentation is provided in Appendix A of this report. Appendix A.1 includes the photographic log from the August 2024 Site reconnaissance; Appendix A.2 contains relevant historical records and supporting background documents reviewed as part of this assessment; and Appendix A.3 contains the EDR® environmental records search report, including the EDR® Radius Map with GeoCheck® Report, environmental database search results, and supporting historical research documentation.

The tasks performed to evaluate the Site included:

- An environmental database search, site history review, and review of available local, state and/or federal records, technical memoranda, and reports pertaining to the use, storage, and release of petroleum products and hazardous substances at the Site, including water supply documentation relevant to the Sherman Adams Well and Yankee Well.
- A review of publicly available information on the New Hampshire Department of Environmental Services (NHDES) OneStop Database (2024).

[1] Recognized Environmental Conditions (RECs) including any Historical or Controlled RECs (HRECs or CRECs) and associated with a current or past release of hazardous substances or petroleum products in connection with the Site. The terms REC, HREC, and CREC are as defined in the ASTM E1527-21 Phase I ESA Standard. RECs, HRECs, and CRECs exclude *de minimis conditions* that generally do not present a threat to human health or the environment and that would not be the subject of an enforcement action by a local, state or federal governmental agency.

- A search of available historical records from online and archival sources.
- Visual site reconnaissance completed by Michael Trovato and Suzanne Courtemanche of Tighe & Bond on August 26, 2024.
- On-site interviews with Mr. Nathaniel Camille, Mount Washington State Park Maintenance Supervisor, and personnel at the Mount Washington State Park Information Desk.
- An inquiry to Mr. Peter Crane, Mount Washington Observatory Curator, regarding historical records, documents, and/or reports pertaining to environmental conditions at the Site.
- A virtual interview conducted on June 19, 2025, with the Summit Managers Group, consisting of current and former personnel associated with Mount Washington State Park operations.

This ESA did not include evaluation of services or other considerations that fall outside the scope defined in the agreement between DNCR and Tighe & Bond, dated June 19, 2024.

3.1.1 Information Obtained from Site Representatives

The User Questionnaire, a standard form used as part of the ASTM Phase I ESA process, was sent to NH DNCR on August 21, 2024. At the time of this report, a complete questionnaire was not returned for review. However, during the visual site reconnaissance on August 26, 2024, staff at the Mount Washington State Park Visitor's Information Desk provided Tighe & Bond with a binder containing historical photographs, newspaper articles and similar documents for review. They answered questions and elaborated on some of the photographs and articles in the binder. That information, as appropriate, is incorporated into this report.

During site reconnaissance, information was also obtained from Mr. Nathaniel Camille, Mount Washington State Park Maintenance Supervisor, and is incorporated throughout this report, where applicable.

On June 19, 2025, Tighe & Bond participated in a virtual discussion with several personnel associated with former and current operations at the Mount Washington State Park. These personnel included, but were not limited to, former summit operations managers, auto road supervisors, and maintenance managers (hereinafter the Summit Managers Group) gathered by the DNCR and the Mount Washington Commission. The period covered by these former personnel spanned approximately from the 1950s to the 2020s. Information obtained from the June 2025 virtual interview is incorporated herein.

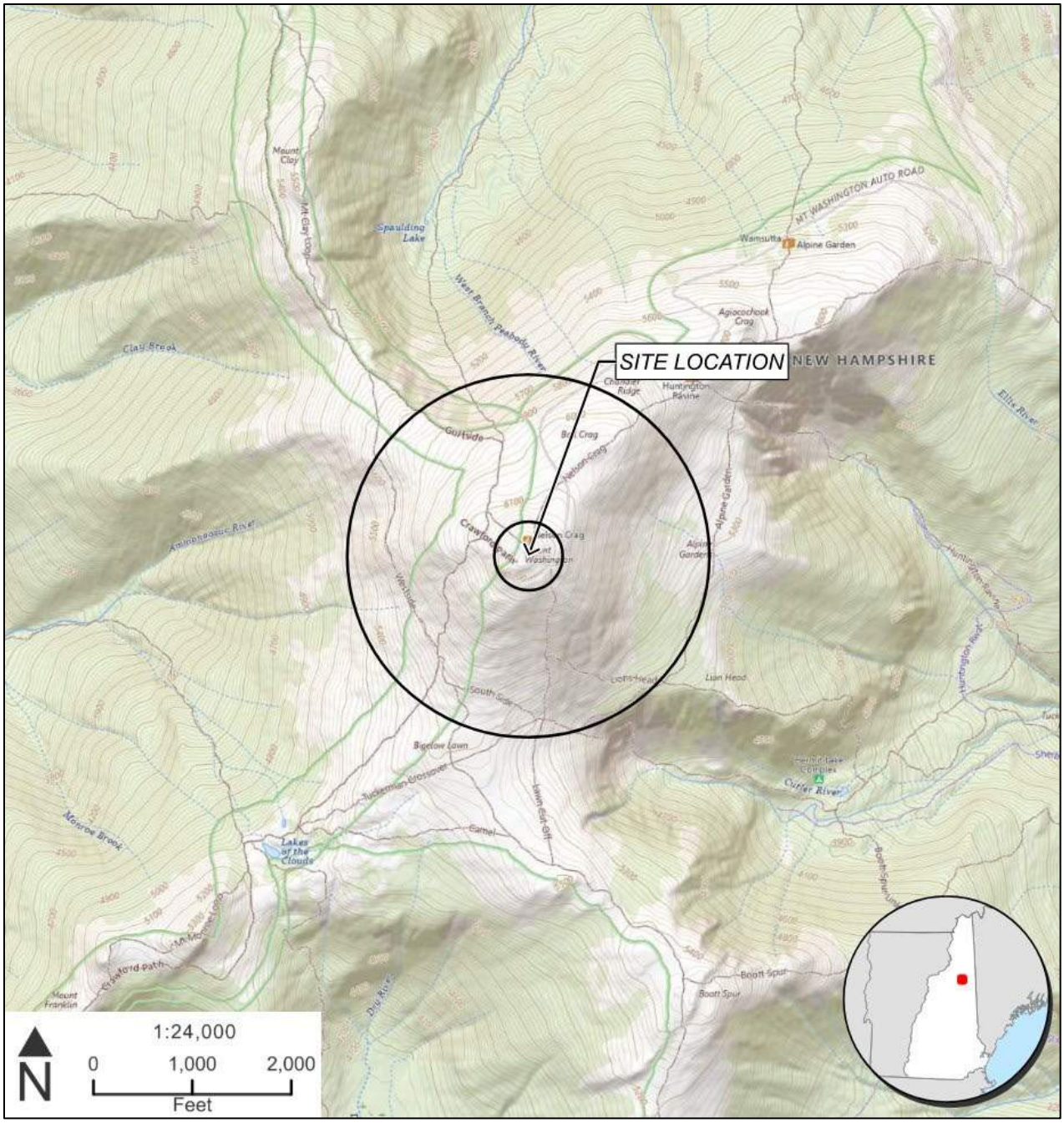


FIGURE 3-1
Site Location Map

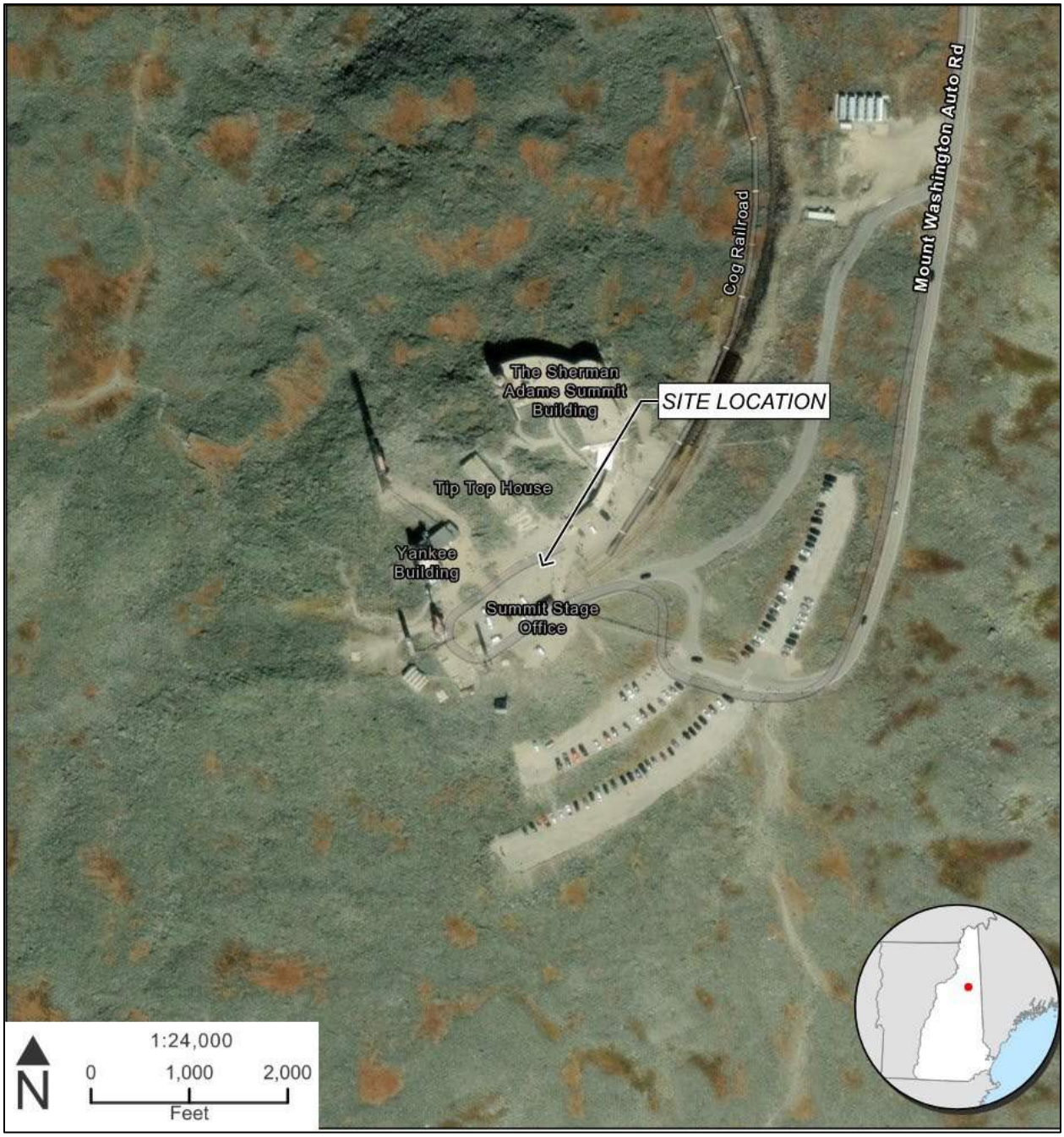


Figure 3-2
Aerial Image of the Site

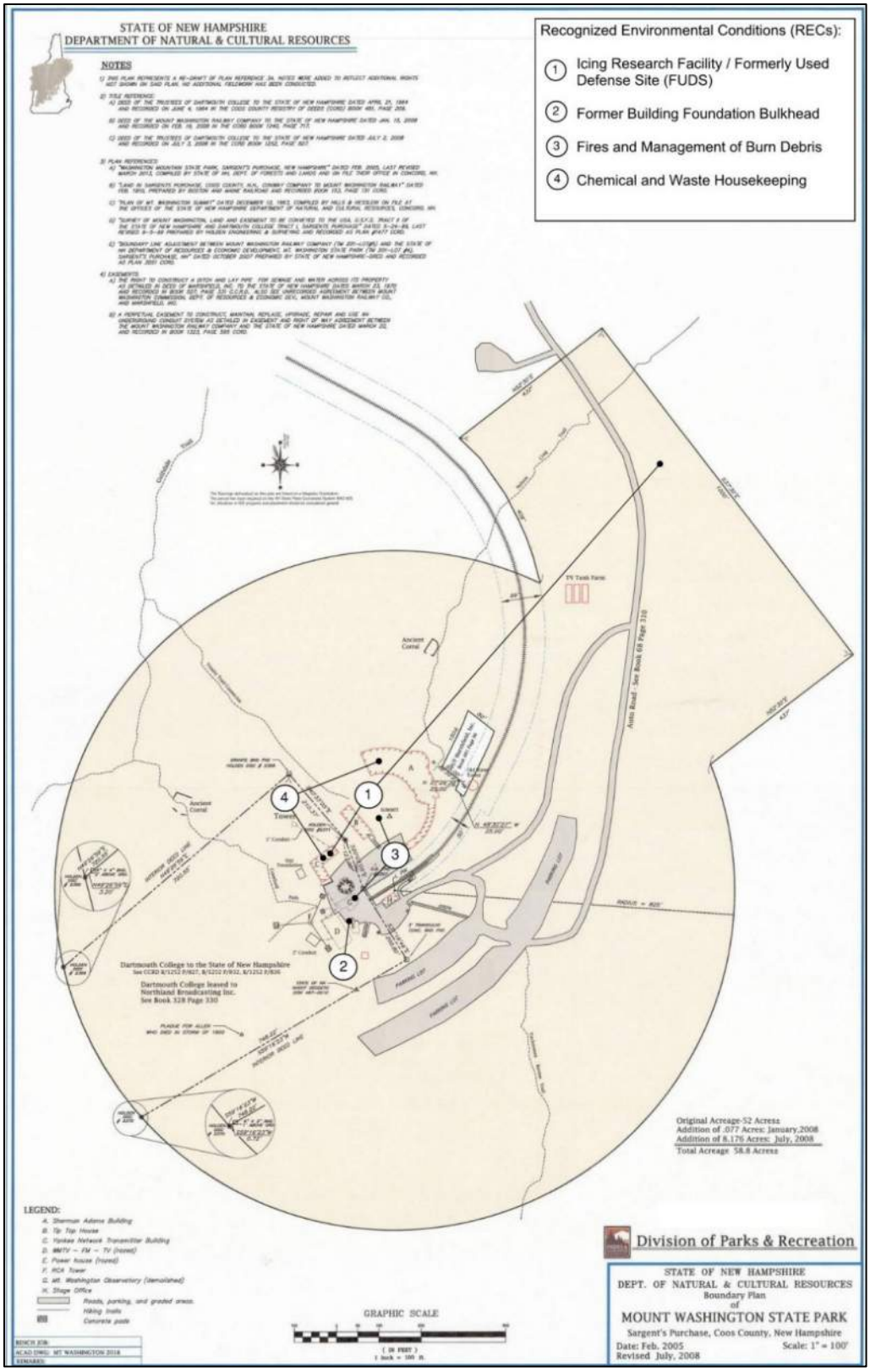


Figure 3-3
State of New Hampshire Boundary Plan of Mount Washington State Park and Recognized Environmental Conditions (RECs)

3.2 General Site Description

Existing conditions at the Site and in the surrounding area were evaluated through a visual site reconnaissance conducted on August 26, 2024, and a review of relevant state and federal records, and an environmental records search report provided by Environmental Data Resources (EDR®) of Milford, Connecticut (dated July 26, 2024). Sargent's Purchase, New Hampshire, is categorized as an unincorporated community and as such does not include municipal offices. Therefore, a local review of municipal records was not completed. Tighe & Bond submitted an information request to the Mount Washington Observatory's Research Library/Archives Office (the Archives Office) on August 16, 2024. Mr. Peter Crane, Curator of the Mount Washington Observatory, replied to our request on August 16, 2024, and September 18, 2024, indicating he had not identified historical documents, information, or other materials related to environmental conditions or impacts for the State Park at the Archives Office.

The geographical location of the Summit is 44.269477° north latitude and -71.301442° west longitude. The Universal Transverse Mercator (UTM) coordinates for the Site are 316319.81 meters East (mE) and 4904379.55 meters North (mN). The area surrounding the Site consists primarily of rocky landscape and undeveloped high-elevation and alpine habitat. Two access ROWs to the Summit exist for the Cog Railway and the Mount Washington Auto Road (the Auto Road).

Mapping reviewed as part of this assessment included United States Geological Survey (USGS) topographic, surficial geology, and bedrock geology maps, and New Hampshire Geographic Information System (GIS) mapping as referenced herein and/or provided by EDR.

3.2.1 Topography

The Site is located at approximate elevation 6,288 feet above mean sea level (MSL). Site topography of the developed area of the Summit is relatively flat, and topography in the immediate surrounding area slopes moderately to significantly in all directions from the Summit peak.

3.2.2 Hydrology

No mapped surface water bodies were identified at the Site. Sheet flow from precipitation and/or snowmelt follows area topography and drains into either the Ammonoosuc or Cutler watersheds surrounding Mount Washington to the west and east, respectively. According to the Federal Emergency Management Agency (FEMA), the Site is not located in a Special Flood Hazard Area.[2]

Interpretation of the groundwater flow direction at the Site and surrounding area was based upon review of topographic maps and EDR® Report data. The approximate depth to bedrock is less than 10 feet, therefore no (or limited) overburden aquifer is anticipated within the Site or the immediately surrounding area. Groundwater underlying the Site is considered to be predominantly associated with the bedrock aquifer. The direction of

[2] Federal Emergency Management Flood Insurance Rate Map, Community-Panel Number 33007C1125D, dated February 20, 2013

groundwater flow in a bedrock aquifer depends on flow through fractures in the rock and cannot be determined based solely on topography.

According to the New Hampshire Rivers and Lakes Management Programs, both the Ammonoosuc River and Cutler River are designated as Class B waters.[3] Class B waters are defined as the second highest quality, and are considered acceptable for fishing, swimming, and other recreational purposes.[4] According to the NHDES OneStop Data Mapper, the Site is not located within a groundwater classification area (GA1, GA2, or GAA); therefore, groundwater classification GB is applicable to the Site.[5] According to NHDES, groundwater classification GB is applicable to all groundwater in New Hampshire that has not been assigned a higher class and is appropriate for areas with no land use prohibitions and no active management.[6] It should be noted that bedrock groundwater has historically been used as a drinking water source at the Summit. Potable water is occasionally brought by tanker truck to the Summit where it is stored in aboveground storage tanks (ASTs).

According to the New Hampshire Priority Resource Areas Map (Figure 3-4), the Site is located within a Drinking Water Source Protection Area and is the location of a Community Public Drinking Water Supply.

3.2.3 Geology

According to the U.S. Department of Agriculture's (USDA) Natural Resource Conservation Service (NRCS), soil at the Site is mapped as "Saddleback-Glebe-Ricker complex" (8 to 15 percent slopes, very stony) and "Ricker-Rock outcrop complex" (25 to 35 percent slopes). Soil, where present, is generally shallow, acidic, well drained organic and/or coarse mineral over bedrock. Additional soil information is provided on Page A-4 of the EDR® Report which is included in Appendix A.3.

According to the Bedrock Geologic Map of New Hampshire dated 1997, bedrock beneath the Site is categorized as the Littleton Formation, consisting of gray metapelite and metawacke and subordinate metavolcanic rock.[7] Typical rock formation compositions include black to gray aluminous mica, schist, quartzose schist and aluminous phyllite.

[3] Comprehensive Surface Water Resource Management, NH Rivers and Lakes Management Advisory Committees – January 23, 2013

[4] 2020/2022 Section 305(b) Surface Water Quality Report, NHDES – August 19, 2022

[5] NHDES OneStop Data Mapper - https://experience.arcgis.com/experience/c67c8c7dab844987852c9c4b3283b041

[6] NHDES 2020 Groundwater Reclassification Fact Sheet DWGB-22-3

[7] Bedrock Geologic Map of New Hampshire, Lyons et al, 1997

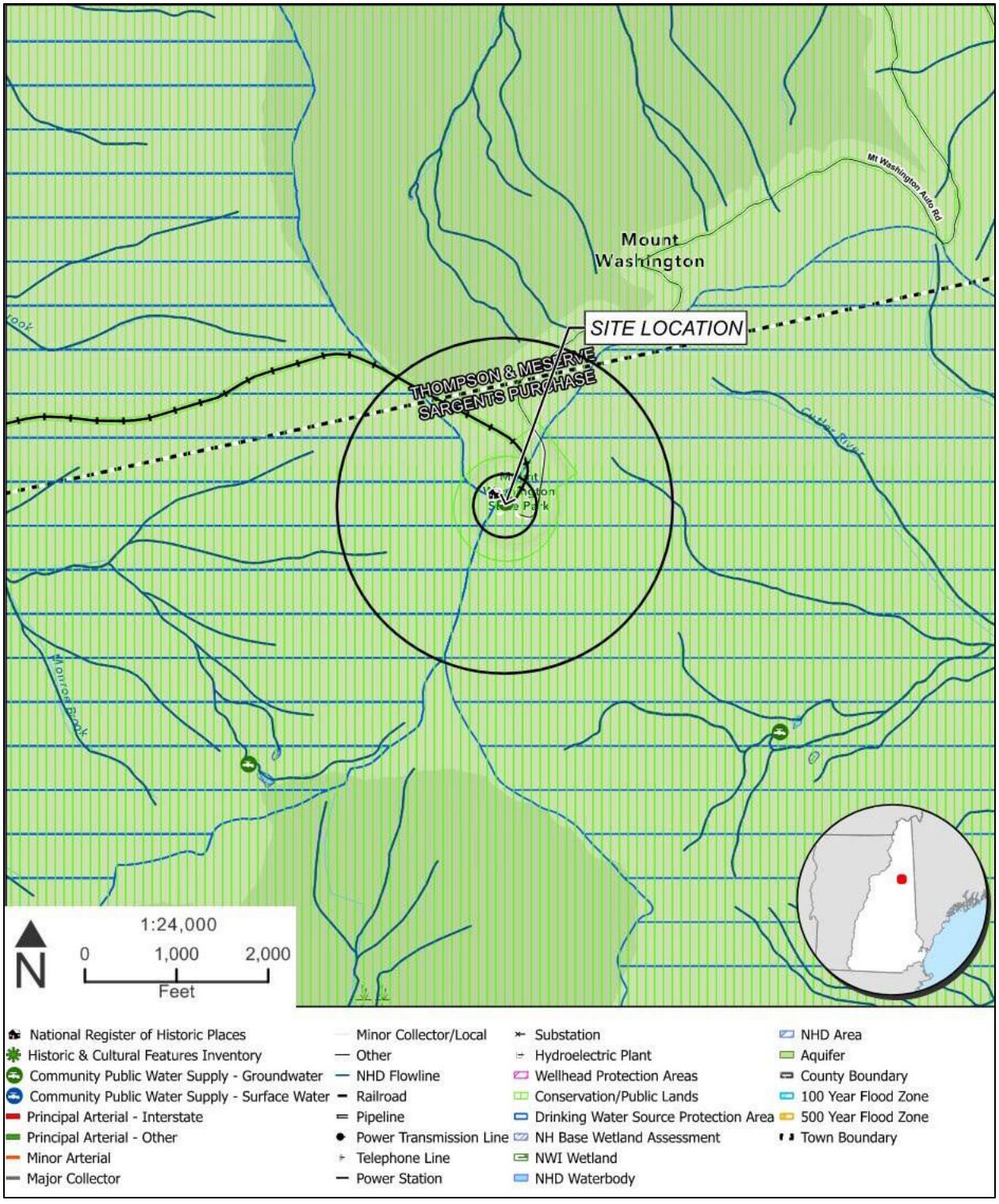


Figure 3-4
Priority Resource Areas Map

3.3 Site History

The following sections summarize the available historical information reviewed for the Site, including ownership history, historical mapping, aerial imagery, and documented fire events. Copies of the available EDR® City Directory Report, Certified Sanborn® Map Report, Historical Topographic Map Report, and Aerial Photo Decade Package are included in Appendix A.3. A search was conducted by EDR® of Sanborn Fire Insurance Maps (Sanborn Maps), historical topographic maps, and aerial photographs. According to the EDR® Report, the Site location is a "No Coverage" area for Sanborn Maps.

3.3.1 Ownership History

A State of New Hampshire Inter-Department Communication document prepared by the (NH) Department of Justice, Environmental Protection Bureau (dated July 23, 2018; provided in Appendix A.2) includes detailed information regarding the ownership history of the Mount Washington Summit dating from the mid-1800s.

In 1915, the federal government acquired much of the land in and around Mount Washington; and in 1918, the White Mountain National Forest was created. In 1939, the Mount Washington Club, Inc. (later the Mount Washington Summit House [MWSH]) acquired the land owned by the Mount Washington Railway Co., which included the rail corridor from the base to the summit of Mount Washington. In 1962, the land obtained by MWSH was transferred to Dartmouth College. Shortly after, Dartmouth College began to partition portions of the land to various parties, including Marshfield, Inc. and the State of New Hampshire. According to the EDR® City Directory Image Report, no data was available from Cole Information for the street listing of 1598 Mount Washington Auto Road, Sargent's Purchase, New Hampshire, for years 2005, 2010, 2014, 2017, and 2020.

Today, the Summit is operated by the State of New Hampshire Department of Natural and Cultural Resources (NH DNCR), in partnership with other landowners and stakeholders.

3.3.2 Historical Aerial Photographs

EDR® provided historical aerial photographs for the Summit area for the years 1960, 1977, 1986, 1994, 2008, 2011, 2014 and 2018. According to the EDR® Report, the Site location is a "No Coverage" area for Sanborn Fire Insurance Maps (Sanborn Maps). Based on a review of available historical aerials, the Site appears similar to the current day configuration since at least 1960. Changes to the overall footprint of the Summit were observed between 1960 and 1977 and appeared to include improvements to the Auto Road and construction of additional parking areas. Building footprints and locations at the Summit appear unchanged between the 1960 and 1977 aerial photographs.

The 1960 aerial photograph depicts various buildings and infrastructure north of the Site limits, associated with a Formerly Used Defense Site (FUDS). A former AST farm associated with the FUDS is visible east of the Auto Road in the 1960 aerial photograph. The 1977 aerial photograph no longer shows the buildings and infrastructure associated with the FUDS. This coincides with a memorandum from the USDA Forest Service to the U.S. Army Corps of Engineers (ACOE), dated September 8, 1967, indicating that the ACOE decommissioned the FUDS operations between 1965 and 1967 and removed buildings and infrastructure "to the satisfaction of USDA" (as cited in the NHDES, 2005 Limited Site Assessment provided in Appendix A.2). In addition, various parking areas associated with the Auto Road appear to have been constructed between the 1960 and 1977 aerial photographs.

Site features are not discernable on the 1986 aerial photograph. The 1994 aerial photograph shows a change in existing buildings at the Summit. The Sherman Adams Building (constructed in 1979) is visible in the location of the former Mount Washington Summit Hotel. The 2008, 2011, 2014 and 2018 aerial photographs remain largely unchanged and generally depict current (2024) site conditions.

3.3.3 Historical Topographic Maps

Topographic maps were provided by EDR® dating back to 1893. The topographic maps from 1893, 1895 and 1896 are generally identical, showing several buildings the Auto Road, and a railroad to the Summit identified as the Cog Railway.

Topographic maps from 1935 and 1938 show a benchmark set at an elevation of 6,288 feet; however, outlines of existing buildings and structures are poorly defined. The 1982 topographic map provides greater detail, with several radio/communication towers in addition to prominent drainage patterns associated with major waterways. The topographic maps from 1995 through 2021 are largely identical, showing topography and trail networks with little detail regarding roadways, the railroad, or buildings.

3.3.4 Historical Fires

Historical records describe several fires at the Summit dating back to 1908. An online article, titled "Fire on the Summit: 101 Years Ago" written by Rick Russack, describes a June 18, 1908 fire that destroyed several buildings including the Summit House Hotel, printing office and printing press for the publication *Among the Clouds*, a cottage, a stage office, a signal station, and a train shed including a portion of the Cog Railway track.[8] It was reported that the only building to withstand the fire was the original Tip Top House. The cause of the fire was unknown, and according to the article, the fire reportedly burned itself out. No information was available regarding disposition of burn debris after the fire.

According to information obtained from the Summit Managers Group, a fire also occurred at the Tip Top House in 1914, however no other information regarding the 1914 fire was available for review during this ESA.

On February 9, 2003, a fire destroyed the former WMTV Building at the Summit and the adjacent Yankee Power House Building. This fire reportedly started because of carbon build-up between a generator exhaust stack and a wall of the WMTV Building. No information was found regarding how the fire stopped burning, however according to the Summit Managers Group, fires on the Summit were left to burn out and no chemicals were reportedly used to extinguish the fires. According to an article posted in the Conway Daily Sun, cleanup and removal of waste and debris from the fire was reportedly completed by Ricci Construction.[9] No additional detail was provided.

[8] Fire on the Summit: 101 Years Ago, Rick Russack https://www.whitemountainhistory.org/fire-on-mt-washington updated November 24, 2023.

[9] Clean up of Mount Washington summit almost complete; state looks to future, Barbara Tetreault – August 30, 2003, https://www.conwaydailysun.com/news/clean-up-of-mount-washington-summit-almost-complete-state-looks-to-future/article_5609b03d-8332-5844-af82-0134778c73d4.html

The Summit Managers Group also stated that the "old summit house and observatory" were razed and burned in 1980. Tighe & Bond was further informed that burn debris and solid waste from demolition was sometimes buried, and there is the potential to encounter this material during construction activities.

3.4 Environmental Document Review

Tighe & Bond completed a database search of available federal and state records to evaluate the potential presence of environmental hazards at, or in proximity to, the Site. The information summarized herein was derived from the EDR® environmental records search documentation (Appendix A.3), a review of available records maintained online at the NHDES OneStop Database, and other relevant documents included in Appendix A.2, including the September 2005 NHDES Limited Site Assessment for the Mount Washington Icing Research Facility, the July 23, 2018 ownership history memorandum, and the April 7, 2022 well assessment letter prepared by Emery & Garrett Groundwater Investigations.

3.4.1 EDR® Database File Search Report

A summary of the federal and state listings of properties and locations with current or previous oil and hazardous material (OHM) usage, storage, reported releases or potential contamination sources retrieved by the database search is provided in Table 3-1**.** The date of the most recent update by the regulatory agency maintaining each database is listed at the end of the EDR® Report provided in Appendix A.3. The search radii listed in the table conforms to the minimum requirements of the current ASTM and *All Appropriate Inquiry (AAI)* site assessment standards.

Table 3-1 EDR® Database File Search Summary
1598 Mount Washington Auto Road, Sargent's Purchase, New Hampshire

Database Searched	Search Radius (miles)	Sites Listed
National Priority List (NPL)	1.0	0
Resource Conservation and Recovery Act (RCRA) Corrective Action (COR) Facilities	1.0	0
State Identified Hazardous Waste Sites [1]	1.0	0
Federal CERCLIS[2] List	0.5	0
State Listed Landfills and Solid Waste Facilities	0.5	0
RCRA Treatment, Storage, and Disposal Facilities	0.5	0
RCRA Generators - Large and Small Quantity	0.25	0
State Registered UST/AST	0.25	0
Local Brownfields	0.5	0
Emergency Response Notification System (ERNS)	Site	0
Facility Index System (FINDS)	Site	0
Non-ASTM Standard E1527-13 Requirements[3], High Risk Historical Sites		
EDR® Manufactured Gas Plant Sites	1.0	0
Emergency Release/Spills	Target Property	0
Emergency Release/Spills	Target Property	0
Regulated Dry Cleaning Facilities	0.25	0
EDR® US Historical Cleaners (Potential Dry Cleaners)	0.125	0
EDR® US Historical Auto Stations	0.125	0

[1] Includes New Hampshire Department of Environmental Services (NHDES) OneStop Leaking Underground Storage Tanks (LUST) and Leaking Aboveground Storage Tanks (LAST) listings

[2] Comprehensive Response Compensation and Liability Information System

[3] Not all-inclusive; see EDR® Report in Appendix A.3 for further details

The Site was not listed in the databases maintained by EDR® and no federal or state listed hazardous waste sites were identified within the specified search distance of one mile.

Sites with adequate address information are plotted on maps provided within the EDR® Report. Sites with minimal address information ("orphans") are listed separately and were reviewed separately for environmental significance.

3.4.1.1 Orphan Site Review

The EDR® Report identified three orphan sites associated with the Summit.

Wastewater Treatment Facility (WWTF), Summit, Mount Washington (NHDES Site #199007007)

The Summit WWTF was identified under the NHDES ALLSITES and Polyfluoroalkyl Substances (PFAS) Databases. The ALLSITES Database is a listing of sites in New Hampshire with activities that have resulted in groundwater contamination, or which pose a potential hazard to groundwater supplies.

- The Summit WWTF listing is associated with historical discharge of wastewater effluent to the ground surface that is now discharged under an NHDES Groundwater Management Permit (GMP). This discharge is also identified in the EDR® Report under a separate listing.
- According to the PFAS Database, the nearest PFAS location is a Public Water Supply (PWS NH1897020) identified as AMC Pinkham Notch Camp, located in Pinkham's Grant township approximately 2.5 miles east of the Site. This appears to be an error, as the listing is not associated with the Summit in the PFAS database.

Mount Washington State Park/Summit of Mount Washington
(NHDES Site #199807070)

Mount Washington State Park/Summit of Mount Washington is listed under the Underground Storage Tank (UST) and AST databases for registration data and information on Summit petroleum storage systems. Records of USTs and ASTs contained in the EDR® Report differ from those listed on the NHDES OneStop Database.

- A total of 21 USTs were listed in the EDR® Report, each installed in either 1936 or 1944, and all were reportedly closed by 1989. This information aligns with that contained on the NHDES OneStop Database.
- Information in the EDR® Report only identifies seven "active" ASTs, with other ASTs listed as permanently closed between 2003 and 2024. The NHDES OneStop Database identified a total of 21 ASTs, 10 of which are listed as active.

Mount Washington Auto Road

Mount Washington Auto Road is listed under the Facility Index System (FINDS) and Aerometric Information Retrieval System (AIRS) Databases. The FINDS Database is a central and common inventory of facilities monitored or regulated by the U.S. Environmental Protection Agency (EPA).

- The Site's listing on the AIRS Database is related to permitted discharges of regulated air pollutants including carbon monoxide (CO), nitrogen dioxide (NO2) particulate matter (PM10 and PM2.5), and volatile organic compounds (VOCs) from point sources.

3.4.2 NHDES OneStop File Review

A review of the NHDES OneStop Database for the Site revealed two state-listed hazardous waste sites in addition to other listed programs under NHDES as summarized below.

3.4.2.1 Formerly Used Defense Site (FUDS), Mount Washington Icing Research Facility (NHDES Site #200106016)

The Summit was used by the United States military as an icing and research facility. Per a Life Magazine article online (undated):

> *"In March 1953, LIFE magazine published a feature, with pictures by the intrepid Peter Stackpole, chronicling the work of a military and civilian team atop the "windiest spot in the U.S." a team that, in winter, turned "the 6,288-foot mountain into a gigantic laboratory for defense department experiments into jet age techniques of warfare and survival*."

The photographs in the Life Magazine article show activities at various locations at the Summit.[10]

Tighe & Bond also reviewed a September 2005 Limited Site Assessment Report for the Mount Washington Icing Research Facility prepared by NHDES, which describes decommissioning activities associated with portions of the FUDS located north of the existing AST fuel oil tank farm on the east and west sides of the Auto Road as shown on Figure 3 in that report (hereinafter FUDS Figure 3; 2005 NHDES LSA; Appendix A.2), but did not provide detail regarding decommissioning conducted at or proximate to existing Summit buildings/areas (Figure 3-3).[11] The following relevant information was identified in this record:

- On July 25, 2001, NHDES, accompanied by Mr. Howie Wemyss, Mount Washington Auto Road Manager, conducted a site visit to the FUDS.
- Mr. Wemyss indicated that the ACOE had conducted previous removal activities at the FUDS, including demolition of existing buildings and structures, and removal of ASTs, USTs, and associated piping.
- The Icing Research Facility/FUDS comprised approximately 37-acres of land along the Auto Road and north of the existing AST fuel oil tank farm, in addition to buildings at, and proximate to, the Summit (Figure 3-3).
    - According to the Summit Managers Group, activities associated with the FUDS also extended to areas along the southern portion of the Mount Washington State Park, in the vicinity of the existing parking areas, identified as the "Navy Hanger", a jet engine testing building. Based on information from the Summit Managers Group and the Life Magazine photographs, the Navy Hanger was likely located within the footprint of the current lower parking lot.
- The Icing Research Facility/FUDS was operated by the United States Air Force (USAF) from approximately 1932 to 1964. Infrastructure used to support those operations included a climactic laboratory, light storage building, helicopter test stand, helicopter pad, radome (sic) pad, an AST fuel tank farm with pump houses, USTs containing fuel, and fuel dispenser islands.
- Research included, but was not limited to, testing and development of deicing equipment, and gathering data on the liquid water content, drop size distribution, and the structure and physical properties of rime and ice.
- FUDS Figure 3, titled "Site Plan Prior to Demolition by ACOE", appears to show only the layout of the northern Icing Research Facility (2005 NHDES LSA, Appendix A.2). The ACOE in conjunction with the USAF conducted demolition and removal of buildings and infrastructure, including the tank farms and associated pipelines, and site restoration "to the satisfaction of the USDA", per a September 8, 1967 memorandum from the USDA to the ACOE (as cited in the NHDES, 2005 LSA; Appendix A.2).

[10] LIFE Magazine Online, "The World's Worst Weather: Photos From Mt. Washington", https://www.life.com/nature/the-worlds-worst-weather-photos-from-mount-washington/

[11] Limited Site Assessment Report for the Mount Washington Icing Research Facility, New Hampshire Department of Environmental Services – September 2005; Appendix A.2

- NHDES reported that access to archived ACOE files and documentation related to prior investigation and/or remediation activities was limited, in part due to the age of the project.
- Potential hazards referenced in a "[Defense Environmental Restoration Program (DERP)] DERP-FUDS Project Summary Sheet" provided by the ACOE included:

  > "…danger of impalement or serious injury from loss of footing on rocky, uneven terrain and falling on metal reinforcement bars, scrap metal, exposed rebar in the remains of building foundations and debris from demolished buildings and unstable concrete piers."

  This observation was confirmed by Tighe & Bond during the site reconnaissance conducted on August 26, 2024.
- On July 25, 2001, NHDES collected a drinking water sample from the Mount Washington Summit bedrock drinking water supply well (PWS ID: 0927020; Sample ID A27310-1). The sample was analyzed for VOCs via USEPA Method 524.2. No VOCs were reported above laboratory method detection limits.
- No soil samples were collected due to ground surface conditions at the summit being "comprised primarily of rock." NHDES did not observe stained rocks or soil in the vicinity of the former tank farm area.
- Based on the data available to them, NHDES concluded that the site "does not pose a significant risk to public health and the environment and does not recommend that the site be placed into CERCLIS."
- The NHDES LSA Report did not include the following referenced documents:
  - Project Summary Sheet for DERP-FUDS BD/DR Project No. D01NH030802, Mount Washington Icing Research Facility, Sargent's Purchase, New Hampshire, 7 February 1992; and
  - Defense Environmental Restoration Program (DERP) for Formerly Used Defense Sites, Findings and Determination of Eligibility, Mount Washington Icing Research Facility, Sargent's Purchase, New Hampshire.

3.4.2.2 Mount Washington State Park Wastewater Treatment Facility (WWTF; NHDES Site #199007007)

The Mount Washington State Park WWTF is listed on the NHDES OneStop Database as a subsurface wastewater disposal system (septic). The facility has an active Groundwater Management Permit for discharge of treated wastewater to the ground surface from the WWTF (GWP-199007007-S-005; effective 8/25/2021 through 8/24/2026). The WWTF reportedly services only the Sherman Adams Building. The following summary is based on a review of available documents on the NHDES OneStop Database:

- Historical failures of the former WWTF resulting in untreated effluent discharges to the ground surface exceeding NHDES Ambient Groundwater Quality Standards (AGQS) prompted discussions with NHDES. The Mount Washington State Park Maintenance Supervisor noted that the location of the historical releases of untreated effluent were in the vicinity of the inactive sand filter beds, located north of the Mount Washington State Park boundary limits.
- Minutes from a January 2008 meeting describe upgrades to the WWTF, including influent-fines screening, an anoxic tank for denitrification, a membrane bioreactor

(MBR), surge tank, tubular membranes, and ultra-violet disinfection encased by an arctic enclosure to minimize issues and/or failures during freezing temperatures.[12]

The treatment capacity was proposed to be 5,000 gallons per day (gpd). Two 5,000-gallon storage tanks were also proposed to prevent release caused by an overflow failure.

- To reduce water consumption and discharge volume, effluent recycling was implemented during WWTF upgrades.
- Weekly influent/effluent sampling is required by the permit, with results compared to the AGQS.

3.4.2.3 Aboveground and Underground Storage Tank Program

The Mount Washington State Park is also listed under the Aboveground and Underground Storage Tank Program (Facility IDs: 980770A and 0110731, respectively). Twenty-one AST records are listed on the NHDES OneStop Database, several of which are indicated as "active." A total of 21 UST records are listed on the NHDES OneStop Database, none of which are listed as active. Table 3-2 summarizes the ASTs observed during the visual reconnaissance.

The AST systems included in Table 3-2 were located within buildings at the Summit, except for Tanks 1 through 5, which are part of the kerosene fuel oil tank farm located in the central portion of the Site. The fuel oil tank farm features a concrete secondary containment structure which was observed to be in overall good condition at the time of the site reconnaissance.

In addition to the petroleum-containing ASTs there are also three approximate 2,500-gallon gray water AST holding tanks and three approximate 2,500-gallon potable water AST holding tanks located in the Sherman Adams Building. An approximate 4,000-gallon wastewater collection pit for blackwater, gray water, and floor and sink drains, is located beneath the ground floor of the Sherman Adams Building.

[12] Mount Washington Observation WWTF – meeting of Jan 24, 2008

Table 3-2 AST petroleum-containing systems observed during Site reconnaissance

Tank Number	Size (gal)	Contents	Status	Location
Tank 1	20,000	Kerosene	Active	Tank Farm
Tank 2	20,000	Kerosene	Active	Tank Farm
Tank 3	20,000	Kerosene	Active	Tank Farm
Tank 4	20,000	Kerosene	Active	Tank Farm
Tank 5	20,000	Kerosene	Active	Tank Farm
Day Tank	55	Diesel	Active	Tank Farm Pump House
Day Tank	800	Kerosene	Active	Sherman Adams Building Annex
Tank 10	500	Kerosene	Out of Service	Yankee Building
Tank 15	275	Kerosene	Active	Sherman Adams Building
Tank 17	275	Kerosene	Active	Yankee Building
Tank 18A	165	Kerosene	Out of Service	Tip Top House
Tank 18B	165	Kerosene	Out of Service	Tip Top House
Tank 20	275	Kerosene	Inactive	Sherman Adams Building Annex
Tank 21	275	Kerosene	Inactive	Sherman Adams Building Annex

3.4.2.4 Hazardous Waste Generator Status

Mount Washington State Park is also listed as an inactive Federal Small Quantity Generator (FQG2), hazardous waste generator, as of 2014 (EPA ID: NHD510214711). The database contained no additional information regarding the types or quantities of hazardous waste managed from the Site.

3.4.2.5 Public Water Supply and Water Well Record

Two drinking water wells were previously in use at the Mount Washington State Park Summit. The active public water supply well is an approximately 800-foot deep, bedrock well located south of the Sherman Adams Building and is classified as a Transient Non-Community Public Water System (NHDES PWS ID: 0927020).

The inactive well is located in the Yankee Building (Well ID: 213.0001). It is an approximately 1,200-foot-deep potable water well and was taken out of service in 2012. The well was reportedly affected by the release of an unknown quantity of jet fuel associated with the military operations at the Summit. No information or analytical data regarding the water quality of the inactive Yankee Building well were identified during this ESA. However, an April 7, 2022 well assessment letter prepared by Emery & Garrett Groundwater Investigations (Emery & Garrett) for NH DNCR (Appendix A.2) indicates that the well was believed to have been impaired by aviation fuels historically stored near the Summit and recommended additional sampling, and installation of a replacement well.

3.4.3 Local File Review

Given that the Site is located within the unincorporated township of Sargent's Purchase and no municipal utility connections (e.g., water, sewer, or electricity) serve the Mount Washington State Park, a review of local files was not conducted as part of this assessment.

3.4.4 Mount Washington State Park Visitor Information Desk

A binder containing historic photographs and documents was provided for review at the Visitor's Desk during site reconnaissance. Historic photographs included portions of the developed areas of the Summit, former site operations (including the northern FUDS area), and former site buildings such as the Summit House Hotel, original Tip Top House, Power House Building, and WMTV Building. Tighe & Bond interviewed Visitor's Desk personnel to discuss the contents of the documents provided. Information obtained during these discussions has been incorporated into the appropriate sections of this report.

3.4.5 Virtual Interview with Summit Managers Group

On June 19, 2025, NH DNCR, the Mount Washington Commission, and Tighe & Bond coordinated a virtual interview with several personnel associated with current and former operations at Mount Washington State Park (the Summit Managers Group). The group included former summit operations managers, Auto Road supervisors, and maintenance managers. The period covered by the group spanned approximately from the 1950s to the 2020s.

Information obtained during the interview with the Summit Managers Group helped address historical data gaps that would not have been resolved through records review alone, and their time and thoughtful input added meaningful value to this assessment.

3.5 Site Reconnaissance

On August 26, 2024, Tighe & Bond, accompanied by the Mount Washington State Park Maintenance Supervisor, conducted visual Site reconnaissance to document active and historical locations where OHM and hazardous waste may exist, or may have been stored, treated, handled, or disposed. Weather conditions during Site reconnaissance were windy and overcast, with intermittent rain. Low lying clouds affected visibility in some portions of the Site.

Visual observations started at the northernmost limits of the Summit and progressed south, toward the developed portion of the Summit. Primary visual inspection areas included, but were not necessarily limited to, the following locations which were reviewed generally in the following order, except for the Cog Railway and the Auto Road, which were documented as they were encountered throughout the day:

1. Cog Railway
2. Former Icing Research Facility/FUDS Area
3. Wastewater Treatment Facility (WWTF)
4. Aboveground Petroleum Tank Farm and Pump House
5. Former WMTV Building, Power House Building, and Mount Washington Observatory
6. Yankee Building
7. WHOM TV Building
8. Tip Top House
9. Sherman Adams Building; and
10. Stage Office.

3.5.1 Exterior Observations

Tighe & Bond conducted visual observations to the extent practicable, considering site safety, the terrain, and weather conditions on the day of reconnaissance. General conditions observed include a predominantly felsenmeer landscape and undeveloped alpine habitat intersected by hiking trails, the Auto Road and Cog Railway, parking areas, Summit facilities, and appurtenant infrastructure. Table 3-3 identifies whether specific ASTM conditions of concern were documented during the exterior site reconnaissance.

Table 3-3 Documented exterior ASTM conditions of concern

ASTM Conditions of Concern	Observed		Location
	Yes	No	
Hazardous Substances or Petroleum Products in Containers	X		Tank Farm
Unidentified Substances in Containers		X	N/A
Storage Tanks	X		Tank Farm and Pump House

ASTM Conditions of Concern	Observed		Location
	Yes	No	
Wastewater/Storm Water Discharges	X		WWTF, FUDS, Yankee Building, WMTV Building
Manholes/Catch Basins	X		Fuel Line Sump and WWTF
Septic Systems/Cesspools	X		FUDS, Yankee Building, WMTV Building
Wells (Drinking Water, Monitoring, Etc.)	X		Sherman Adams Building, Yankee Building
Odors (strong, pungent, noxious)	X		Pump House, former Power House Crawlspace
Pools of Liquid		X	N/A
Potential PCB Containing Equipment	X		Sherman Adams Building, Yankee Building, and WWTF
Pits, Ponds, Lagoons		X	N/A
Stained Soil or Pavement	X		Coal/Ash/Staining along Cog Railway
Stressed Vegetation		X	N/A
Solid Waste/Debris	X		FUDS, Yankee Building, and former Power House Building
Other			N/A

Exterior observations related to specific areas of the Summit are summarized below.

3.5.1.1 Cog Railway Corridor

A platform for the boarding and disembarking of Cog Railway passengers is located between the Auto Road and the Sherman Adams Building. The Cog Railway has operated since at least 1869 and currently utilizes both coal-generated steam and biodiesel powered locomotives to transport visitors to the Summit. Locomotives were historically powered by wood fired furnaces from approximately 1869 to 1910, and coal was the primary fuel source from approximately 1910 to 2008, when biodiesel trains were introduced. According to the Mount Washington State Park Maintenance Supervisor, no fuel storage areas associated with the Cog Railway are located at the Summit, and all fueling and maintenance activities for locomotives are conducted at the base of Mount Washington.

Based on review of historical records associated with the Cog Railway, no documented incidents, fires, or derailments of locomotives have been reported at the Summit. The ground surface proximate to the Cog Railway tracks and boarding and disembarking area appeared visually impacted by coal/coal ash. This is particularly evident on the track slope proximate to the WWTF.

Photograph 3 in Appendix A.1 shows the Cog Railway corridor at the Summit.

3.5.1.2 Northern Icing Research Facility / FUDS

The northern Icing Research Facility/FUDS area, described as decommissioned in the September 2005 NHDES LSA Report, is located on the northern Site boundary, on both sides of the Auto Road. Apparent remains of former buildings and infrastructure associated with FUDS activities (Figure 3-3) were observed in areas where historical mapping and the Visitor Center's photographs depict buildings, tank farms, fuel transfer piping, helicopter pads, and related facilities. Tighe & Bond's exterior observations were consistent with the NHDES LSA Report summary which described potential hazards associated with the area in the form of "*….rocky, uneven terrain and falling on metal reinforcement bars, scrap metal, exposed rebar in the remains of building foundations, and debris from demolished buildings and unstable concrete piers*."

Tighe & Bond also observed:

- Former building foundations and/or pits which appeared to be filled or partially filled in with rock, concrete, metal and other miscellaneous debris.
- A former concrete helicopter pad and adjacent ancillary pad.
- Pipe sections crossing the Auto Road.
- A cleared area in the general vicinity of the former AST tank farm on the eastern side of the Auto Road; and
- Miscellaneous debris on the ground surface including segments of metal and clay pipe, concrete, rebar, asphalt, wood, and other miscellaneous building materials.

According to the Summit Managers Group, there is potential for fuel spills to have occurred within the limits of the Icing Research Facility/FUDS area during historical site operations, including a release from a 20,000-gallon tank which was located near the barracks/dormitory of the Icing Research Facility. No overt visual evidence of ground surface staining or stressed vegetation was noted by Tighe & Bond in the FUDS area on the day of the Site visit.

In addition, the Summit Managers Group indicated that "one or two" former drinking water wells may have serviced the FUDS. No record of drinking water well(s) were identified within the EDR® Report or as part of the state database file review for the Mount Washington State Park. In addition, no visual indication of current or former drinking water wells were observed within areas reviewed by Tighe & Bond on August 26, 2024. These areas may be located outside the Mount Washington State Park boundary.

The Mount Washington State Park Maintenance Supervisor described two former sand filters located northwest of the northern FUDS area, on the west side of the Auto Road. According to him, the sand filters were previously utilized to treat wastewater from the Sherman Adams Building. Though currently inactive, he stated they could potentially be used in case of emergency. The construction dates of the sand filters are unknown. The former sand filters are located outside the Mount Washington State Park boundary. Photographs 1, 2, and 4-7 in Appendix A.1 show the FUDS area.

3.5.1.3 Wastewater Treatment Facility (WWTF)

The current WWTF services the Sherman Adams Building and is located between the Auto Road and the Cog Railway. A pad-mounted, oil-filled electrical transformer, appearing to be in good condition, was observed east of the treatment system building.

A sign was posted at the treated effluent outfall indicating "non-potable water". Vegetation immediately surrounding the treated effluent outfall was vibrant green. A green polyvinyl chloride (PVC) pipe outfall was observed near the treated effluent outfall. The Mount Washington State Park Maintenance Supervisor described that the PVC pipe diverts stormwater around the WWTF and discharges near the treated effluent outfall. Photographs 9-12 in Appendix A.1 show the WWTF.

3.5.1.4 Petroleum Aboveground Storage Tank (AST) Farm

The petroleum tank farm is located immediately north of the WWTF building on the western side of the Auto Road. There are five 20,000-gallon ASTs in the tank farm that contain fuel oil for the Sherman Adams Building heating system and backup generators. Each steel tank is of single-walled construction and was reportedly installed in 1954. The ASTs were observed to be in fair condition at the time of the site reconnaissance. The ASTs are situated within a concrete secondary containment structure which appeared to be in good condition. The containment structure slopes to a low point in the northeast corner that contains a sump pump to remove oil or accumulated stormwater.

A concrete truck fueling pad abuts the containment structure to the south. The fueling pad slopes to a low area where stormwater, or releases of fuel oil during loading, are directed into the containment structure. Tank fill port connections are also situated inside the containment structure to prevent release to the environment. Photographs 13-16 in Appendix A.1 show the tank farm.

3.5.1.5 Former WMTV Building, Power House Building and Mount Washington Observatory

Tighe & Bond observed the former footprints and remains of the WMTV Building, Power House Building, and Mount Washington Observatory. The former location of the Mount Washington Observatory is in the southwestern portion of the developed area. It was destroyed by a fire in February 2003. The former building foundation appeared to have been backfilled with crushed stone.

The concrete foundation walls of the former WMTV and Power House Buildings were present, however interior portions of the building footprints appeared to have been filled in. The Mount Washington State Park Maintenance Supervisor described that the former WMTV Building had a dedicated septic system which discharged to the ground surface. No evidence of the former septic system or discharge point was observed by Tighe & Bond during the site reconnaissance.

A small, unlocked, bulkhead door leading to a partial basement was observed in the former Power House Building foundation. The door opened to an unlit, below ground crawlspace with an apparent earthen floor. A petroleum odor emanated from the crawlspace. Tighe & Bond observed what appeared to be abandoned fuel and electric lines, piping, and other miscellaneous debris in the crawlspace. The Mount Washington State Park Maintenance Supervisor was unsure if a tank or other fuel containing equipment was present in the crawlspace. Tighe & Bond did not enter the crawlspace.

According to the Summit Managers Group, an approximately 500-gallon AST was located within the former Power House Building at the time of the February 2003 fire. It is possible that the tank was damaged during the fire and released its contents, which may account for the odor noted in the bulkhead during the site reconnaissance. Photographs 17-20 in Appendix A.1 show the former WMTV Building, Power House Building, and Mount Washington Observatory.

3.5.1.6 Sherman Adams Building

The exterior of the Sherman Adams building featured areas of concrete and rock walkways, trails, sitting areas for visitors, and a covered potable well on the south side of the building. Two electrical transformers were observed, one on either side of the Sherman Adams building, which supply electricity to other Summit buildings. A propane tank was observed on the north exterior of the building. Stormwater drainage pipes and conveyances were also observed, directing stormwater around the building. Surficial debris (e.g., pipe remnants, cables, wood, brick, and similar materials) were observed on the ground surface near the Sherman Adams Building and Cog Railway boarding/deboarding areas. Photographs 51-72 in Appendix A.1 show the Sherman Adams Building.

3.5.1.7 Yankee Building Former Septic System/Sand Filter

The Yankee Building was previously serviced by a septic system (including a sand filter) located off the southwest side of the building. This system was reportedly connected to an aboveground concrete block septic tank located inside the Yankee Building basement. According to the *Assessment and Recommendations for Improvements of the Communications Facilities Report* prepared by The H.L. Turner Group Inc. (the Turner Report; dated October 2017), when approximately three-quarters full, the liquid near the top of the tank would flow by gravity to an approximately 20-foot by 10-foot sand filter bed septic system located outside of the southwest wall of the Yankee Building.[13] The Mount Washington State Park Maintenance Supervisor described that the connection pipe between the septic tank and sand filter bed was broken and had been plugged. Photograph 24 in Appendix A.1 shows the inactive sand filter bed.

The interview with the Summit Managers Group confirmed that only domestic waste was routed to the former septic system and sand filter adjacent to the Yankee Building.

3.5.1.8 Tip Top House

Mount Washington Visitor Center personnel described that the westerly exterior of the Tip Top House may have been used for jet engine testing by the USAF. The Visitor Center's binder of articles and photographs included a copy of a freehand sketch depicting jet engine testing activities. Based on comparison with the Life Magazine photographs, the sketch appears to show an area on the southern side of the Summit, near the base of the staircases leading down from the Summit. Following discussion with the Visitor Center staff, Tighe & Bond conducted additional visual exterior observations of the northwest side of the Tip Top House. No observable evidence of jet engine testing activities was observed. Photographs 46-49 in Appendix A.1 show the Tip Top House.

3.5.1.9 WHOM TV Building

The WHOM TV Building is located near the southwest boundary of the Summit, proximate to the former Power House and WMTV building foundations. The building is surrounded by rock, and the topography slopes steeply from the west side of the building. Photographs 21-22 in Appendix A.1 show the WHOM TV Building.

[13] Assessment and Recommendations for Improvements of the Communications Facilities Report, H.L. Turner Group Inc. – October 2017

3.5.1.10 Stage Office

The Stage Office is an approximately 700-square foot building that is currently utilized as the Gift Shop for Summit visitors. Two (2) approximately 125-gallon propane tanks, used for heating, were observed along the exterior of the building. Area surrounding the building is generally comprised of crushed stone and rocky terrain. Photographs 73-74 in Appendix A.1 show the Stage Office.

3.5.2 Interior Observations

There are seven (7) existing buildings at the Summit. The following section documents observed interior conditions based on Tighe & Bond's visual inspection of on-site buildings, as guided by the Mount Washington State Park Maintenance Supervisor during the site reconnaissance on August 26, 2024. Table 3-4 identifies whether specific ASTM conditions of concern were documented during the interior site reconnaissance.

Table 3-4 Documented interior ASTM conditions of concern

ASTM Conditions of Concern	Observed		Location
	Yes	No	
Hazardous Substances/Petroleum Products in Containers	X		AST Tank Farm Pump, Sherman Adams Building, Yankee Building, and WHOM-TV Building
Unidentified Substances in Containers		X	
Storage Tanks	X		AST Tank Farm Pump House, Sherman Adams Building, Tip Top House, and Yankee Building
Drains, Trenches or Sumps	X		AST Tank Farm Pump House, Sherman Adams Building, and Yankee Building
Wastewater Discharge	X		WWTF Building, Sherman Adams Building, and Yankee Building
Wells	X		Sherman Adams Building and Yankee Building
Odors (strong, pungent, noxious)		X	
Pools of Liquid		X	
Potential PCB Containing Equipment	X		Yankee Building
Stains or Corrosion		X	
Other			

Interior observations related to specific buildings on the Summit are summarized below.

3.5.2.1 WWTF Building

The WWTF building is situated on a concrete pad, and an electrical transformer is located east of the building. The system features two identical wastewater treatment units for redundancy, which are located inside the building, in insulated steel containers to prevent freezing. According to the Mount Washington State Park Maintenance Supervisor, wastewater enters the system through a series of underground settling tanks and is pumped into the treatment system. Treatment consists of membrane filtration and biological treatment prior to discharging to the ground surface via an outfall located outside the northwest corner of the building.

3.5.2.2 Petroleum AST Farm, Pump House

A pump house that transfers fuel oil to the Summit buildings is located on the southwest side of the existing AST fuel oil tank farm. Transfers pass through a large fuel line sump (manhole) located near the former WMTV building foundation. The pump house is a small wooden building situated on a concrete pad. There is a 55-gallon "day tank" and two pumps inside the building that are situated above a spill collection sump, along with distribution hoses and several containers of oil absorbent materials. The day tank is transported via pickup truck to refuel equipment and vehicles throughout the Summit. A strong petroleum odor was noted inside the pump house; however, no visual staining or pools of liquid were observed. A smaller pump house, located west of the tank farm containment area, is reportedly not in use.

3.5.2.3 Sherman Adams Building

The Sherman Adams Building is an approximately 6,000 square foot, two-story, reinforced concrete structure located in the main developed area of the Summit. It is in the location of the former Mount Washington Summit House Hotel, which was destroyed by fire in 1908. Photographs 53-69 in Appendix A.1 show the interior of the Sherman Adams Building.

First Floor - Sherman Adams Building

The majority of the first floor of the Sherman Adams Building is accessible to the public and includes the Visitor Center and Information Desk, sanitary facilities, and a large room featuring a cafeteria, kitchen, seating area, and gift shop. The kitchen includes several freezers and refrigerators, a gas stove and oven with exhaust fans, and areas of storage for food and beverage items. According to the Mount Washington State Park Maintenance Supervisor, all sink drains and floor drains discharge to a wastewater holding tank in the ground floor of the building, prior to being pumped to the WWTF.

The western portion of the main floor houses the Mount Washington meteorology laboratory and observation tower, and contains various computers, electronics, and weather instruments used for continuous ambient and atmospheric monitoring at the Summit.

The "annex" is located on the southern curved extension of the Sherman Adams Building and contains two backup generator sets (GenSet, a combination unit consisting of a generator and double walled tank), maintenance supplies, and equipment for use by the Maintenance Department staff, small quantities of OHM in containers, batteries used with the generator, and several gasoline cans that are used to transfer fuel from an 800-gallon aboveground "day tank" (no numeric tank label observed) to the two GenSet ASTs. The tank gauges do not reflect the actual storage capacity of the tanks. For example, the 800-

gallon tank is equipped with a gauge that reads to 550 gallons, and posted signage instructs staff to add 250 gallons to the gauge reading to determine the approximate tank volume. The two backup GenSet tanks are numbered as Tanks #20 and #21 and were generally observed to be in good condition. They each were reported to contain 275 gallons of diesel fuel and were not currently in use but can be operational in the event of an emergency.

There is a fuel distribution room located in the southernmost portion of the annex. Tighe & Bond observed an approximately 550-gallon double-walled steel day tank containing kerosene used for fueling equipment. Numerous 55-gallon plastic drums of waste oil and one- to five-gallon fuel containers of gasoline, diesel fuel, kerosene, and other petroleum products were observed on the floor of the fuel distribution room. Other equipment observed in the fuel distribution room included two portable heating units, several propane tanks, fire extinguishers, and spill prevention supplies including oil-absorbent material, absorbent booms, and pads. The concrete floor of the annex portion of the building was observed to be in good condition with no apparent holes, cracks, or penetrations; and no floor or trench drains were observed.

Ground Floor – Sherman Adams Building

The ground floor of the Sherman Adams Building is generally divided into the following areas:

- Mount Washington Observatory Museum
- Park staff residences; and
- Maintenance / utility areas.

The Museum is open to visitors, while other areas are accessible only to staff.

A hydraulic elevator exists in the Sherman Adams Building. The associated aboveground hydraulic oil storage tank was not marked with its volume, or designation number; however, it generally appeared to be in good condition at the time of inspection.

Fuel storage tanks observed in the maintenance / utility areas included two (2) approximately 275-gallon kerosene tanks (Tank #15 and Tank #19), six (6) approximately 2,500-gallon water tanks, of which three (3) are used to store gray water and 3 are used to store potable water from an exterior supply well, and several 55-gallon drums and 5-gallon containers used to store waste kerosene. The gray water and potable water storage tanks were in a separate ground floor room.

A small maintenance area, near the gray water and potable water storage tank room, contains equipment, tools, paint, cleaners, and other building maintenance supplies. This is also the location of an in-floor wastewater collection pit (WW Collection Pit), influent/effluent piping, sumps, and associated monitoring/metering devices.

The Mount Washington State Park Maintenance Supervisor described that the approximately 4,000-gallon WW Collection Pit receives all wastewater from the Sherman Adams Building including blackwater, washing machines, floor drains, and sinks. The WW Collection Pit discharges to the WWTF located between the Auto Road and the Cog Railway. Details of the WW Collection Pit are shown on the Foundation Plan Set Drawings dated January 5, 1978, prepared by Dudley, Walsh & Moyer. These drawings appear to show a 500-gallon toilet system tank inside the WW Collection Pit which has concrete sidewalls and a concrete base.

Tighe & Bond also observed an aboveground grease trap near the WW Collection Pit. The Mount Washington State Park Maintenance Supervisor described that the grease trap is manually decanted into 5-gallon buckets and removed by a solid waste contractor as needed. Tighe & Bond did not observe decanted buckets of grease during our site reconnaissance. Several shelves containing household cleaners, paints, and other maintenance supplies were also observed throughout the ground floor of the Sherman Adams Building. Two floor drains were observed in the boiler rooms (one per room), which were described as connected to the WWTF.

3.5.2.4 Yankee Building

The Yankee Building is an approximately 2,695 square-foot, multi-level structure that was constructed in 1941 with a concrete foundation, for use as a communications and broadcast station. According to the Turner Report, in 1948 the Yankee Building was leased to the USAF to conduct jet engine deicing research and aircraft engine development (Jet Engine Deicing Program). The building currently contains multiple tenant spaces housing telecommunication equipment along with a workshop, storage of mechanical equipment and maintenance materials, and a laboratory for testing WWTF effluent.

A potable water well, reportedly out of service since approximately 2012, is located in the basement of the Yankee Building. According to the Turner Report and information provided by the Summit Managers Group, the well was reportedly impacted by kerosene associated with an overfill of the former 500-gallon AST (Tank #10).

Basement – Yankee Building

The basement of the Yankee Building is primarily used for materials storage. At the time of inspection, it contained several fuel storage containers, a cinderblock septic tank, and an emergency generator. The basement of the Yankee Building is generally divided into three areas. Observations from Tighe & Bond's site reconnaissance in each area of the Yankee Building basement are summarized below:

Area 1: The southern portion, used for fuel storage and generators.

- One (1) 275-gallon kerosene AST (Tank #17) which fuels the furnace and an emergency backup generator (Kohler 30R0ZJ)
    - The tank was not provided with secondary containment; though the tank was observed to be in good condition, and no staining to the concrete basement floor was observed in the vicinity of the backup generator tank.
- One (1) generator with an approximately 50-gallon tank
- Several small containers (1 liter to 5 gallons) of chemicals and products including sealant, hydraulic cement, glazing compound, and primer were observed throughout the room; and,
- One (1) small sump on the southern wall of the room used for rain-water collection which is pumped to the building exterior.

Area 2: The western portion, used for a septic tank and general storage.

- One (1) 500-gallon kerosene AST (Tank #10) which is marked as being "out of service", consistent with NHDES OneStop Database records.
    - It was reportedly taken out of service in 2009. The AST was observed to be constructed of steel and was in overall good condition at the time

of site reconnaissance. No apparent staining was observed underneath or in the immediate vicinity of the tank.

- One (1) 1,000-gallon cinderblock septic tank. Waste in the tank is currently pumped out by a waste services contractor for off-site disposal as necessary;
- One (1) sealed, inactive 1,200-foot drinking water well (Well ID: 213.0001) located in the central portion of Area 2, near the septic tank. This well was reportedly impacted by the release of kerosene in the 1950s caused by a tank overfill.
- Several plastic 55-gallon containers of MicroC® 1000 wastewater treatment flocculation additive.

Not all portions of the basement floors within Area 2 were visible due to the presence/storage of various materials and equipment that could not be moved.

Area 3: The northern portion, used for storage and the earthen floor annex.

- One (1) 250-gallon used oil AST/furnace unit (Tank #11), which appeared to be in good condition though was labeled as "out of service."
    - No staining was observed in the immediate vicinity of the AST/furnace at the time of site reconnaissance.
- One (1) 55-gallon steel drum observed to be in fair condition and labeled as containing waste motor oil; and
- One (1) small annex room with an earthen floor in the northern-most section. According to the Mount Washington State Park Maintenance Supervisor, portions of the earthen floor were covered in polyethylene sheeting for moisture control.

The remainder of Area 3 was primarily being used for material and equipment storage. No equipment or materials were stored in the annex room of the basement, except for an air intake which is used to cool the communications equipment that is housed on the first floor of the Yankee Building. Photographs 25-35 in Appendix A.1 show the basement of the Yankee Building.

First Floor – Yankee Building

The first floor of the Yankee building contains a workshop, communications room and wastewater testing laboratory. The workshop is used primarily for woodworking, welding, and similar maintenance activities. It was observed to be orderly, clean, and in good condition, with a concrete floor. Equipment in the workshop included sanders, grinders and planers. Tighe & Bond observed numerous small containers of paint, paint thinner, lubricating oils, welding gas canisters, aerosol cans, and cleaning supplies. These items were neatly organized on shelving and were generally observed to be in good condition.

The wastewater testing laboratory contained laboratory equipment and machinery, sample vials, chemical preservatives, and decontamination supplies. Limited ammonia and nitrate wastewater screening is conducted on-site. Full post-test vials and one-gallon plastic water containers holding wastewater and chemical preservative are collected in open cardboard boxes, pending pickup by or delivery to the NHDES for proper disposal. On the day of the inspection, Tighe & Bond observed three (3) open boxes of vials and one (1) open one-gallon container of wastewater/chemical preservative atop one of the boxes. Excess wastewater from some of the testing is reportedly disposed of in an adjacent bathroom

sink and toilet which discharge to the concrete block septic tank in the basement of the Yankee Building (Area 2).

The communications room contained various communications equipment towers and several storage closets. The communication equipment towers contained battery packs and appeared to be in good condition. Photographs 36-43 in Appendix A.1 show the first floor of the Yankee Building.

Second and Third Floor – Yankee Building

The second and third floors of the Yankee Building contained several small rooms predominantly used for storage of miscellaneous cables, computers, electronics, and communication equipment towers, which contained batteries. Tighe & Bond observed fluorescent lights and damaged 9-inch x 9-inch floor tiles.

Inoperable electronic equipment, fluorescent lights, and used lead-acid batteries are regulated as Universal Wastes by the USEPA and NHDES when no longer in use. Tighe & Bond did not observe a Universal Waste Storage Area at the Site. Photographs 44-45 in Appendix A.1 show the second and third floors of the Yankee Building.

3.5.2.5 Tip Top House

The Tip Top House is a historic building situated in the central portion of the developed area of the Summit. It was built in 1853 and is not currently in use. The single-story structure features exterior walls constructed of rock blasted from the mountain and a reconstructed flat roof. According to a 2010 article from the New Hampshire Division of Parks and Recreation, the Tip Top House served as the first printing office for the summit newspaper *Among the Clouds* from 1877 to 1884.[14] The Tip Top House is partitioned with a great room occupying the eastern portion, a kitchen in the west-central portion, and sleeping quarters (bunk bed structures) along the southern perimeter of the building.

Two (2) approximately 200-gallon, double-walled kerosene ASTs (Tank #18A and #18B) were observed in the rear of the building and are reportedly out of service. No evidence of a potential release of oil or kerosene was observed by Tighe & Bond in the vicinity of Tanks #18A and #18B.

Visitor Center personnel described how jet engine testing may have occurred in the Tip Top House, associated with the USAF's Icing Research Facility. Tighe & Bond did not observe any overt evidence or indication of jet engine testing activities inside the Tip Top House on the day of the observations. The Mount Washington State Park Maintenance Supervisor was not aware of historic jet engine testing activities associated with the Tip Top House. Photographs 46-49 in Appendix A.1 show the Tip Top House.

3.5.2.6 WHOM TV Building

The WHOM TV Building is on the southwest perimeter of the developed portion of the Summit and is not owned or operated by the NH DNCR. On the day of the observations, the building housed various pieces of communications equipment. Two (2) oil-filled electrical transformers were observed in the central portion of the building, and the interior space is heated via an electric heater. Other materials observed included several five-gallon containers of roof sealant, compressed nitrogen and other gases, and various

[14] NH Division of Parks and Recreation, Mount Washington State Park – Tip Top House (2010)

household cleaning products. No evidence or indication of potential release of petroleum products and/or hazardous substances were observed by Tighe & Bond inside the building. Photographs 21-22 in Appendix A.1 show the WHOM TV Building.

3.5.2.7 Stage Office

The Stage Office / Gift Shop is owned and operated by the Mount Washington Auto Road. The single-story building is heated via propane tanks situated on the exterior of the building. No visual evidence or indication of a potential release of petroleum products and/or hazardous substances was observed by Tighe & Bond in the interior or exterior portions of the building. Photographs 73-74 in Appendix A.1 show the Stage Office.

3.6 Summary of Findings

Based on the records review, interviews, and site reconnaissance conducted as part of this Environmental Site Assessment (ESA), several environmental conditions were identified that warrant consideration in future planning and management of the Site. Recognized Environmental Conditions (RECs), as defined by ASTM, refer to the presence or likely presence of hazardous substances or petroleum products in, on, or at a property due to a release, a past release, or a material threat of release to the environment.

The findings summarized below reflect documented historical activities and site observations made during this assessment and form the basis for the RECs, Historical RECs (HRECs), and potential areas of concern identified herein.

3.6.1 Icing Research Facility and FUDS

Research conducted as part of this ESA identified that the Summit was used by the United States military (USAF) as an icing research facility from approximately 1932 to 1964. A September 2005 Limited Site Assessment (LSA) Report prepared by NHDES summarized decommissioning activities associated with portions of the Icing Research Facility/FUDS located north of the existing fuel AST farm on both sides of the Auto Road (FUDS Figure 3, 2005 NHDES LSA; Appendix A.2). Closure of these northern operations was reportedly completed by the ACOE between 1965 and 1967, with removal activities conducted to the satisfaction of the USDA (as cited in the NHDES, 2005 LSA; Appendix A.2). However, the LSA Report did not provide detailed information regarding decommissioning activities conducted at or in proximity to existing Summit buildings or other developed areas nor did it include documentation sufficient to confirm the extent of removal of petroleum storage systems or associated piping.

The FUDS is listed in the NHDES OneStop Database (Site #200106016). Reported activities included testing of deicing technologies and meteorological research. Available information indicates that jet fuel was used in icing research activities, and that gasoline and other petroleum products were stored in ASTs and USTs in portions of the Summit located north of the existing WWTF building.

Based on Tighe & Bond's observations during site reconnaissance, remnants of former structures and associated infrastructure were observed to be partially buried within the northern FUDS area. Observed features included concrete slabs and partial building foundations filled with rock and demolition debris (e.g., concrete, metal, wood, and abandoned utility piping [metal and clay]).

During the virtual interview with the Summit Managers Group, reference was made to a historical report from the 1990s prepared following decommissioning of FUDS operations at the Summit. Tighe & Bond did not identify or obtain any additional reports or documentation regarding FUDS operations or decommissioning activities. The Summit Managers Group also described an additional FUDS-associated structure (the "Navy Hanger") reportedly located along the southern boundary of Mount Washington State Park, within the footprint of the current lower parking area. Based on information provided by the Summit Managers Group and Life Magazine photographs, this structure was reportedly used for jet engine testing; however, no additional documentation or reports referencing this structure or the associated activities were identified.

3.6.2 History of OHM Usage and Releases

3.6.2.1 Petroleum Storage Systems (ASTs and USTs)

According to records maintained by NHDES and observations made during site reconnaissance, numerous ASTs have been utilized at the Site including those listed in Table 3-2. At least 14 existing ASTs, primarily housed within existing buildings at the Summit, are used for heating and/or vehicle refueling. In addition, NHDES records indicate that 21 USTs were installed between 1936 and 1944, all of which were reportedly permanently closed in 1989. Limited information was available regarding removal and assessment of closed or removed AST and UST systems.

Existing tank systems observed by Tighe & Bond at the Site were generally in good to fair condition, and no visual or olfactory indications of a release were noted (e.g., large surface staining, stressed vegetation, or floor staining within buildings).

During the virtual interview with the Summit Managers Group, it was reported that several undocumented ASTs of varying sizes were used to support FUDS operations, some of which were described as having been placed within natural rock depressions and crevices at the Summit. Tighe & Bond did not identify documentation, registration records, or other information regarding the installation, use, or closure of these tanks as part of this ESA.

3.6.2.2 Wastewater Management and Treatment System

The WWTF is managed under an NHDES GMP for discharge of treated effluent to the ground surface. According to available records reviewed from the NHDES OneStop Database, previous failure of the WWTF has resulted in historical discharges of untreated wastewater to the ground surface in the location of the former WWTF.

Weekly influent and effluent samples are collected from the WWTF for analysis, and analytical results are available on the NHDES OneStop Database. Based on Tighe & Bond's review of available effluent results from the WWTF, subsequent to implementation of upgrades, no exceedances of applicable NHDES AGQS for required sampling parameters were identified.

3.6.2.3 Inactive Yankee Building Well

According to the Turner Report (October 2017) and information shared by the Summit Managers Group during the June 2025 virtual interview, a release of an unknown quantity of kerosene reportedly impacted the inactive drinking water well in the basement of the Yankee Building. The release was reportedly due to an overfill of a 500-gallon AST located immediately adjacent to the well. Tighe & Bond did not identify recent analytical data regarding the current water quality of the well or documentation of remedial actions associated with the historical kerosene release as part of this ESA.

3.6.2.4 Cog Railway

Based on observations during site reconnaissance, the ground surface adjacent to the Cog Railway tracks and loading/unloading area appears visually impacted by coal and/or coal ash, particularly along the track slope near the WWTF. No documented releases of OHM have been reported for the Cog Railway or the Mount Washington Auto Road within the State Park limits; however, the potential exists for incidental releases from vehicles and/or locomotives operating within these areas.

3.6.2.5 Historic Fires

According to published historical records, fire events occurred at the Summit in 1908 and 2003. Based on information obtained during the June 2025 virtual interview with the Summit Managers Group, an additional fire reportedly occurred at the Tip Top House in 1914. It was also reported that in 1980, the Old Summit House was razed and the associated wreckage and debris were burned on site.

Limited information was available regarding fire suppression methods; however, information provided by the Summit Managers Group indicated that fires at the Summit were typically allowed to burn out naturally and that chemical suppression agents were not reportedly used.

Burn debris from historical fires was reportedly used as fill material to extend portions of the Auto Road parking areas. As a result, there is potential for combustion byproducts (e.g., ash, dioxins, or other residual materials) to be present in soil and/or groundwater in areas where debris may have been placed.

Records indicate that cleanup and removal of waste and debris from the 2003 fire was completed by Ricci Construction; however, no information was identified regarding the disposition of debris from the 1908 or 1914 fires. No burn debris was observed during site reconnaissance; however, areas associated with historical fire locations are currently covered by crushed stone and/or asphalt parking surfaces.

3.6.3 Recognized Environmental Conditions (RECs)

Based on the information obtained during this ESA, the following RECs have been identified for the Site.

3.6.3.1 Icing Research Facility and FUDS

Based on the collective findings of historical records review, regulatory file review, aerial photograph interpretation, interviews with the Summit Managers Group, and site reconnaissance observations, Icing Research Facility/FUDS activities warrant further evaluation. Visual observations made by Tighe & Bond during the August 2024 site reconnaissance were consistent with NHDES' September 2005 LSA Report description of "potential hazards" within the FUDS area, including rocky and uneven terrain, exposed reinforcement bars, scrap metal, remnants of building foundations, and demolition debris.

Given the documented use of petroleum products, the limited detail regarding decommissioning activities, the reported presence of undocumented ASTs, and the observed building demolition debris and the potential for buried petroleum storage infrastructure, the potential for residual impacts associated with former FUDS operations constitutes a REC.

3.6.3.2 Inactive Yankee Building Well

The inactive drinking water well in the basement of the Yankee Building, reportedly impacted by a historical release of kerosene associated with a tank overfill, constitutes a REC.

3.6.3.3 Former Power House Building Foundation, Bulkhead

A petroleum odor and residual infrastructure and debris were observed within the below-ground crawlspace, beneath the former Power House Building foundation. Given the reported historical presence of a 500-gallon AST at the time of the 2003 fire and the potential for a release of petroleum products associated with the former AST and/or fuel

lines, the presence or likely presence of petroleum products in the subsurface cannot be ruled out. Accordingly, this condition constitutes a REC.

3.6.3.4 Fires and Management of Burn Debris

Historical documentation indicates that fires occurred at the Summit in 1908, 1914, and 2003. Limited information is available regarding fire suppression methods and the management or final disposition of burn debris. Burn debris from historical fires was reportedly used as fill material in portions of the Auto Road parking areas.

Given the potential for residual ash, combustion byproducts, or other hazardous constituents to remain in soil and/or groundwater in areas where debris was placed, the presence or likely presence of hazardous substances cannot be ruled out. Accordingly, this condition constitutes a REC.

3.6.3.5 Chemical and Waste Housekeeping

During the August 2024 site reconnaissance, instances of inconsistent oil, chemical, and waste management practices were observed, including improper labeling and storage of laboratory chemicals and preservatives in the Yankee Building wastewater laboratory, and inconsistent labeling and storage of oils, fuels, and other chemical products (OHM) in the Sherman Adams Building Annex. Such conditions represented a potential for release to the environment at the time of observation.

As confirmed during the June 19, 2025 virtual interview with Site personnel, corrective actions have reportedly been implemented, including installation of a new gauge on the 800-gallon fuel oil tank, removal and proper management of spent wastewater sample vials, and consolidation, labeling, and appropriate containment of chemical and petroleum product containers. Based on the reported corrective measures, this condition no longer represents a REC.

3.6.4 Historical RECs

Historical Recognized Environmental Conditions (HREC) represent past releases of hazardous substances or petroleum products that have been addressed and no longer represent a current threat to human health or the environment. The following condition has been determined to be an HREC.

3.6.4.1 Former Wastewater Discharges

Information reviewed as part of this ESA indicates that historical discharges of untreated wastewater to the ground surface occurred at the inactive sand filter area immediately north of the State Park boundary due to past WWTF failures, with reported exceedances of NHDES AGQS and/or effluent discharge limits. In response, WWTF system upgrades were implemented, and routine influent and effluent monitoring is conducted to demonstrate compliance with regulatory standards. Based on the corrective measures and ongoing oversight, these historical wastewater discharges are considered an HREC.

In addition, information obtained during the June 19, 2025 virtual interview indicates that, prior to installation of a formal wastewater treatment system, sanitary waste generated at the Summit was occasionally discharged to the ground surface. Given the age of these practices and the subsequent implementation of engineered wastewater management systems, this condition is considered historical in nature and does not represent a current REC.

3.6.5 Potential Areas of Concern

3.6.5.1 Cog Railway Corridor Coal and Coal Ash

Observed coal and coal ash impacts to surface soils along the Cog Railway corridor, particularly near the WWTF track slope, indicate the potential for associated constituents to have affected underlying soil and groundwater. Accordingly, this area is identified as a Potential Area of Concern.

3.6.5.2 Vapor Intrusion Evaluation

No indications of releases of hazardous substances and/or petroleum products were observed during Tighe & Bond's August 2024 site reconnaissance. In addition, the EDR® Report and state and local file reviews did not identify environmental conditions at the Site or in the immediate vicinity that would suggest a likely vapor intrusion pathway. However, review of the Turner Report for the Yankee Building indicates that a historical release of an unknown quantity of jet fuel reportedly impacted the inactive potable well located in the basement of the building. Although the Yankee Building is not considered an actively occupied structure and is primarily used for equipment and storage, the inactive well has not reportedly been tested for petroleum hydrocarbons, volatile organic compounds (VOCs), or related parameters as recommended in the 2022 Site Review prepared by Emery & Garrett Groundwater Investigations.

While Vapor Encroachment Screening (VES) was not conducted as part of this ESA, the reported historical groundwater impact suggests that a potential vapor intrusion pathway cannot be fully ruled out. Accordingly, this condition is identified as a Potential Area of Concern.

3.6.6 Data Gaps

Limited historical documentation was available regarding AST and UST removals associated with the FUDS; therefore, it could not be determined whether releases to soil occurred from former tank systems. This condition constitutes a data gap. However, based on the information obtained through review of historical maps, regulatory records, aerial imagery, and interviews, this data gap does not affect the ability to identify RECs at the Site.

3.6.7 Conclusions

Overall, this ESA compiled available regulatory records, historical documentation, interviews, and field observations to evaluate the potential presence or likely presence of hazardous substances and/or petroleum products that could affect future planning and management of the Site. Based on the information obtained, RECs were identified related to historical Icing Research Facility/FUDS activities, the reported kerosene-impacted inactive Yankee Building well, petroleum-related conditions at the former Power House Building crawlspace, and historical fires and reported management of burn debris. An HREC was identified related to historical wastewater discharges that have been addressed through system upgrades and ongoing monitoring, and additional Potential Areas of Concern were noted where conditions warrant further consideration. Recommendations and suggested next steps are provided in Part 2, Section 9.

3.7 Limitations

Each report and any and all work product provided in connection with the performance of each environmental site assessment is subject to the following conditions:

1. This report is prepared on behalf of and for the exclusive use of NH DNCR (Client) and stakeholders of Mount Washington State Park and is subject to, and issued in accordance with, the Agreement and the provisions thereof. The report and any findings contained therein shall not, in whole or in part, be provided to or used by any other person, firm, entity, or governmental agency, in whole or in part, without the prior written consent of Client and Tighe & Bond. However, Tighe & Bond acknowledges and agrees that, subject to the Limitations set forth herein and prior written approval by Tighe & Bond, a report may be provided to specific financial institutions, attorneys, title insurers, lessees, or governmental agencies identified by Client at or about the time of issuance of a report in connection with the conveyance, mortgaging, leasing, or similar transaction involving the real property that is the subject matter of a report and any work product. Use of a report for any purpose by any person, firm, entity, or governmental agency shall be deemed acceptance of the restrictions and conditions contained therein, these Limitations, and the provisions of Tighe & Bond's Agreement with Client. No warranty, express or implied, is made by way of Tighe & Bond's performance of services or provision of an environmental site assessment, including but not limited to any warranty with respect to the contents of a report or any and all work product.

2. In preparing a report, Tighe & Bond, Inc. may rely on certain information provided by governmental agencies or personnel, as well as information or representations provided by other persons, firms, or entities, and on information in the files of governmental agencies made available to Tighe & Bond at the time of the Site assessment. To the extent that such information, representations, or files may be inaccurate, missing, incomplete, or not provided to Tighe & Bond, Tighe & Bond is not responsible. Although there may be some degree of overlap in the information provided by these various sources, Tighe & Bond does not assume responsibility for independently verifying the accuracy, authenticity, or completeness of any and all information reviewed by or received from others during the course of the Site assessment.

3. Unless otherwise noted, a survey (which includes observations, sampling, and analysis) for the presence of asbestos-containing materials, mold, or lead-based paint is not conducted as part of an assessment.

4. No attempt is made to assess the compliance status of any past or present Owner or Operator of a site with any federal, state, or local laws or regulations, unless specifically indicated otherwise in writing.

5. Findings, observations, and conclusions presented in each report, including but not limited to the extent of any subsurface explorations or other tests performed by Tighe & Bond, are limited by the scope of services outlined in the Agreement, which may establish schedule or budgetary constraints for an environmental assessment or phase thereof. Furthermore, while it is anticipated that each assessment will be performed in accordance with generally accepted professional practices and applicable standards (such as ASTM, AAI, etc.) and then-applicable state and federal regulations, as may be further described in the report or the Agreement, Tighe & Bond does not assume

responsibility for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of its services.

6. The assessment presented in each report is based solely upon information obtained or received prior to issuance of the report, including a limited number of subsurface explorations (if performed) made on the dates indicated. If additional environmental or other relevant information is developed at a later date, Client agrees to bring such information to the attention of Tighe & Bond promptly. Upon evaluation of such information, Tighe & Bond reserves the right to recommend modification of this report and its conclusions.

7. If groundwater samples are collected for analysis or water level measurements are made in monitoring wells, such results/observations are provided as representative of conditions at the times stated in this report. Fluctuations in groundwater elevation may occur due to variations in the precipitation cycle and multiple other factors, which may influence the concentrations of constituents present in the groundwater. Should additional data become available in the future, such data should be provided to Tighe & Bond for review, and Tighe & Bond reserves the right to recommend modification of this report and its conclusions.

8. Except as may be noted specifically within the text of a report, no laboratory testing is performed as part of a site assessment. If such analyses have been conducted by an outside laboratory, Tighe & Bond may rely upon the analyses or data provided, and makes no representation that an independent evaluation of the reliability of such testing has been conducted, with the exception of review of standard quality assurance/quality control data that may have been provided with the test results.

9. Although chemical analyses may be performed for specific parameters at specific locations during the course of a site assessment, as described in a report, the results are not definitive regarding the presence of the parameters at other concentrations or the absence of the parameters at other locations on the Site. Additional chemical constituents not included in the list of analyzed parameters for a study may be present in soil or groundwater at a site, and Tighe & Bond assumes no responsibility for chemical constituents or parameters not analyzed.

10. If included, any database search is conducted under the Notice of Disclaimer/Waiver of Liability included in the database search report.

Section 4
Building Assessment

The facilities and structures that were studied at Mount Washington State Park Summit included the Sherman Adams Summit Building & Mount Washington Observatory, the Historic Tip Top House, the Yankee Building Communications & Maintenance Facility, and the foundations of the former Power House and the former WMTV Building. In this section, the architects from LDa Architecture & Interiors Inc., the building envelope engineers from Simpson Gumpertz & Heger Inc. (SGH), the structural engineer from RSE Associates Inc., and the code consultants from Code Red Consultants (CRC), provide a comprehensive assessment of each facility's current physical condition. This team's evaluation included surveying: building code and accessibility, building envelope, structural systems, and interior features of the three buildings, as well as the characteristics of the existing foundations. The findings in this assessment will establish a foundation for future planning and will serve as the basis for recommendations for improving the stability, function, and comfort of each facility so they can be maintained and enjoyed for many years to come.

FIGURE 4-1
Arrival View of the Summit & The Sherman Adams Building

4.1 Sherman Adams Summit Building and Mount Washington Observatory

4.1.1 Overall Conditions

The Sherman Adams Summit Building is the State Park's visitor center and houses State Park staff offices, sleeping rooms and support spaces. The Mount Washington Observatory is a primary tenant in the building where they lease space dedicated to the observatory itself, a museum and gift shop, and staff offices and sleeping rooms.

This concrete and steel two-story building was constructed in 1980. It was located so that the southwest side of the building was nestled into the mountain to protect it from some of the harshest winds on site, leaving the northeast portion of the building above grade. This location also allows for sweeping views from inside the building and from the building's roof deck. While the building must withstand very extreme conditions, it appears to perform well in this unique environment. The characteristics which make the building durable also create challenges when trying to adapt to changing needs, increased space

demands, and a growing volume of visitors over time. While the Sherman Adams Building currently meets many operational requirements, addressing the items outlined below will help ensure the building remains functional, accessible and welcoming for all visitors.

As described in the following sections, the primary conditions that were identified for the Sherman Adams Building include:

- Code compliance upgrades, associated with other future work:
  - Areas of non-conforming combustible construction,
  - Unprotected penetrations at fire/smoke resistive assemblies,
  - Fire alarm system coverage,
  - Accessibility deficiencies.
- Exterior conditions:
  - Roof and window water leaks,
  - Deteriorated waterproofing and loose pavers on the observation deck,
  - Corroded observation deck railings,
  - Structurally unstable chimneys leading to leaks in these locations,
  - Observation tower door leaks,
  - Lower level original windows in poor condition and lacking egress,
  - Spalled concrete and cracks with efflorescence on the exterior building finish.
- Interior conditions:
  - Restroom capacity at peak volumes
  - Size and location of storage spaces for food service and retail
  - Clarity and consistency of building signage
  - Finishes and fixtures in the staff quarters

4.1.2 Sherman Adams Building Code Summary

The following are the findings by Code Red Consultants based on their survey of the building at the time of their site visit on September 12, 2024.

Code Summary Table 4-1: Existing Building Summary	
Occupancy:	Group A-2 – Assembly, Group B – Business, Group M – Mercantile, Group R-1 – Lodging or Rooming House, Group S-2 – Storage. Nonseparated, mixed-use occupancies.
Construction Type:	The building construction includes concrete encased steel structure, concrete slab, and concrete exterior walls. The code analysis prepared as part of the 2014 vehicle addition classified the building as Type IA/ Type I (332).
Height & Area:	Building Height: 2 stories above grade Maximum Footprint: 15,200 sf Aggregate Area: 26,100 sf
Vertical Openings:	The building contains two enclosed convenience stairways and two unenclosed convenience stairways.
Fire Protection Systems:	Sprinkler coverage is provided within the residential observatory wing at the Ground Floor. The building is not equipped with a standpipe system but is provided with an occupant hose on the Ground Floor.

Fire Alarm System:	The building is provided with a fire alarm and detection system. Manual pull stations are provided at exits and audio/visual notification devices were observed at select locations. Heat and smoke detectors were also observed in select locations, but coverage is not provided throughout. The fire alarm system is cross connected to the Yankee building fire alarm system.
Means of Egress:	The Ground and First Floor are served by exits providing access directly to the exterior. Based on the 2021 Egress Analysis and exit sign layout, it is our understanding that the stairways in the building are not used for egress and are for convenience only.

4.1.2.1 Applicable Codes

The following is a list of applicable codes currently adopted in the State:

Building Code	New Hampshire State Building Code (NHSBC) which amends the 2021 International Building Code (IBC) and the 2021 International Existing Building Code (IEBC).
Fire Safety Code	Saf-C 6000 - The New Hampshire State Fire Code, which includes, but is not limited to: Saf-C 6008.02 - Fire Prevention Code: An amended version of the 2021 NFPA 1, Fire Code. Saf-C 6008.04 - Life Safety Code: An amended version of the 2021 NFPA 101, Life Safety Code.
Plumbing Code	The 2021 International Plumbing Code (IPC) as amended by the State of New Hampshire.
Electrical Code	2020 Edition of NFPA 70, National Electrical Code as amended by the State of New Hampshire.
Mechanical Code	2021 International Mechanical Code as amended by the State of New Hampshire.
Energy Code	2018 International Energy Conservation Code (IECC) as amended by the State of New Hampshire.
Accessibility	2017 Edition of ICC/ANSI A 117.1, Accessible and Usable Buildings and Facilities. 2010 ADA Standards for Accessible Design.
Other	Various National Fire Protection Association (NFPA) codes and standards as referenced by the codes listed above, including the following: - 2021 NFPA 10: *Standard for Portable Fire Extinguishers* - 2019 NFPA 13: *Standard for the Installation of Sprinkler Systems* - 2019 NFPA 14: *Standard for the Installation of Standpipe and Hose Systems* - 2019 NFPA 72: *National Fire Alarm and Signaling Code*

4.1.2.2 Existing Building Code Compliance Scoping

Existing buildings are required to comply with the applicable existing occupancy chapters of NFPA 101, regardless of whether any work is planned (NFPA 101, 1.3.1). In addition, portions of an existing building undergoing repair, renovation, modification, reconstruction, addition, or a change of use or occupancy classification are required to comply with the requirements of the applicable existing occupancy chapters, the requirements of the applicable section of NFPA 101 Chapter 43, and the NHEBC.

Fire Protection/ Life Safety

The following sections document the existing conditions of the building and outline major code considerations.

4.1.2.3 Use and Occupancy Classifications

Primary Occupancies

The following table summarizes the primary occupancies within the building (NHBC 302.1; NFPA 101, 6.1):

Code Summary Table 1: Primary Occupancy Classifications		
NHBC Classification	**NFPA 101 Classification**	**Description**
Group A-2, Assembly	Assembly	Snack Bar & Seating Area
Group A-3, Assembly	Assembly	Museum
Group B, Business	Business	Offices & Observatory
Group M, Mercantile	Mercantile	Gift Store
Group R-1, Residential	Lodging or Rooming Houses	Park Staff and Observatory Sleeping Rooms
Group S-2, Storage	Storage	Misc. Storage

Based on the allowable height and area limitations for the building, it is permitted to be designed as a nonseparated, mixed-use occupancy (NHSBC 508.3). However, the 2014 vehicular addition was constructed with a 2-hour occupancy separation from the remainder of the building. Although occupancy separations are not required based on height and area of the building, it is expected that this separation was provided based on the separation requirements for garages per NFPA 88A. Other fire/smoke resistive assemblies throughout the building required due to the level of sprinkler coverage in the building are noted in the "Special Use and Occupancy" and "Interior Walls" Sections.

FIGURE 4-2
Snack Bar

FIGURE 4-3
Observatory Museum

If the building undergoes a change of occupancy as part of future renovation work, the following include major building features that would need to be reviewed to confirm compliance (NHEBC 1011): Sprinkler coverage, Fire alarm and detection coverage, building height and area, interior finishes, exterior walls, and means of egress.

Special Use and Occupancy

Residential

The building contains a residential wing on the Ground Floor for park and observatory staff. It is our understanding that tickets are sold to the public to stay in the observatory wing. For the purposes of this evaluation, the residential wing is classified as Group R-1, Lodging or Rooming House based on the transient use of these sleeping rooms and the number of available rooms. Depending on the number of total beds in the residential wing, this space could be classified as a Dormitory and/or Hotel (NFPA 101, 6.1.8.1.3 & 6.1.8.1.4). Residential occupancies in this building are subject to specific occupancy requirements out of NHSBC Section 420 and NFPA 101 Chapter 26 based on this classification.

Sleeping unit separations are a major consideration for the design of residential occupancies. The walls separating sleeping rooms in the building include 6-8" concrete block assemblies and walls consisting of metal studs and 2 layers of ½" gypsum on both sides per the 1978 drawings. These walls minimally provide the required 1-hour rating, but the existing doors in these separation walls did not bear fire door labels and were not equipped with closers, and in some instances latches (NHSBC 420.2 & 716.2.6). Consideration should be given to evaluating existing corridors and sleeping unit opening protectives if work takes place within these residential wings in the future.

Fuel Oil Storage

The building includes a fuel oil storage room and two generator rooms. Each room is enclosed with concrete block construction and provided with 90-minute rated opening protectives. If changes are made to these rooms as part of future work, additional requirements detailed in NFPA 37 would be required to be evaluated.

4.1.2.4 Construction Type

The building consists of substantial concrete construction including concrete exterior walls, steel structure encased in concrete, and concrete slab. The building was previously classified as Type IA construction as part of the 2014 addition project. The 1978 drawings indicate concrete slab with a thickness that ranges from 4"-6". Depending on the type of concrete, the rating of the concrete slab could range from 1-hour to 2-hour (NHSBC Table 721.1(3). For the purposes of this review, the building is considered Type IA/ Type I (332) construction based on the prior classification as part of the 2014 project. If a change of occupancy took place in the building necessitating a review of building height and area limitations or an addition was constructed, further review would be necessary to confirm the rating of building elements aligns with the minimum required ratings for Type IA/ Type I(332).

FIGURE 4-4
Building Exterior

FIGURE 4-5
Concrete Slab

The following table indicates the minimum fire-resistance ratings required for Type IA construction (NHSBC 601, NFPA 101, 8.2.1).

Code Summary Table 2: Fire Resistance Ratings	
Building Element	**Type IA**
Columns	3 Hours
Primary Structural Frame other than columns	3 Hours
Interior Bearing Walls	3 Hours
Exterior Bearing Walls	3 Hours
Exterior Nonbearing Walls	See Exterior Walls Section
Floor construction and secondary members	2 Hours
Roof construction and secondary members	1-1/2 Hours

Combustible construction was observed at the IT Closet on the Ground Floor, the First Floor gift shop, and the exit access corridor from the museum at the Ground Floor. Combustible materials in Type I or II buildings are not permitted unless they meet one of the criteria outlines in NHSBC Section 603. It is assumed that this construction was previously approved, but it is recommended that this Section of the building code be reviewed if combustible construction is proposed as part of future work.

FIGURE 4-6
Corridor Behind Ground Floor Gift Shop

FIGURE 4-7
Ground Floor IT Closet

4.1.2.5 Building Height and Area

Based on the sloped site, the Ground Floor is considered the first story above grade and as a result the existing building is 2 stories in height. The maximum footprint and aggregate area of the building are approximately 15,200 sf and 26,100 gsf, respectively.

Existing buildings are required to be evaluated per the height and area limitations applicable to new construction where an addition is constructed or a change of occupancy to a higher hazard category takes place (NHEBC 1102 & 1011.6).

Type IA/ Type I(223) buildings are permitted to be unlimited in height and area (NHSBC 504 & 506). Therefore, the building complies with the height and area limitations applicable to Type IA/ Type I(223) construction.

If the fire resistance rating of building elements was evaluated further and resulted in a Type IIA/ Type II (111) construction type classification (1-hour structure), the building would still comply with the most restrictive height and area limitations based on a nonseparated, mixed-use approach.

4.1.2.6 Exterior Walls

The exterior walls of the building are constructed with concrete and include openings at each elevation. An evaluation of exterior wall construction and openings is only necessary if the walls are altered, or a renovation triggers them to be upgraded.

The rating and opening limitations are based on the fire separation distance for each wall. Fire separation distance is defined as the distance measured from the building face to the closest interior lot line, the centerline of a street, alley, or public way, or to an imaginary lot line between two buildings (NHSBC 202 – Fire Separation Distance definition). The distance is required to be measured at right angles from the face of the wall. The following table indicates the fire-resistance ratings and opening limitations required for the exterior walls (NHSBC 705.5 & 705.8).

Code Summary Table 3: Nonbearing Exterior Wall Fire Rating and Opening Limitations		
Fire Separation Distance (ft.)	**Fire Resistance Rating**	**Allowable Area**
0 ≤ X < 3	1 Hour	Not Permitted
3 ≤ X < 5	1 Hour	Not Permitted
5 ≤ X < 10	1 Hour	10%
10 ≤ X < 15	1 Hour	15%
15 ≤ X < 20	1 Hour	25%
20 ≤ X < 25	0 Hours	45%
25 ≤ X < 30	0 Hours	70%
X ≥ 30	0 Hours	No Limit

The building is provided with sufficient separation distance from other structures at the summit permitting nonrated non-bearing exterior walls and unlimited openings.

4.1.2.7 Interior Walls

The following table summarizes the existing interior walls and partitions throughout the building that are required to be provided maintained as fire/smoke resistive assemblies:

Code Summary Table 4: Fire/Smoke Resistive Assemblies		
Type of Assembly	**Construction**	**Code Reference**
Corridors	1-hour fire partition	NHSBC 1020.1 NFPA 101 26.1.3.3
Dry Type Transformer Room > 112.5 kVA	1-hour fire barrier	NFPA 70, 450.21(B)
Rooms containing high-pressure boilers, refrigerating machinery of other than the domestic refrigerator type, large transformers, or other service equipment subject to explosion	1-hour fire barrier	NHSBC 509, NFPA 101, 13.3.2.1.1
Maintenance Shops	1-hour fire barrier	NFPA 101, 13.3.2.1.2
Boiler and Furnace Rooms	1-hour fire barrier	NHSBC 509, NFPA 101, 13.3.2.1.2
Rooms used for storage of combustible supplies deemed hazardous by the AHJ	1-hour fire barrier	NHSBC 509, NFPA 101, 13.3.2.1.2
Sleeping Unit Separations	1-hour fire barrier	NHSBC 420.2 NFPA 101, 26.1.3.2.2
Elevator machine room/controls room	1-hour fire barrier	NHSBC 3005.4
Shafts Connecting 3 Stories or Less	1-hour fire barrier	NHSBC 713.4
Emergency Generator Room	2-hour fire barrier	NFPA 110, 7.2.1.1

Corridor walls primarily consist of concrete block construction. Unprotected penetrations and nonrated doors were observed at select locations within corridor walls. Consideration should be given to repairing damaged fire/ smoke resistive assemblies and unprotected penetrations through the assemblies noted in the table above. Making upgrades and repairing existing fire/ smoke resistive assemblies enhances the passive fire protection systems serving the building.

FIGURE 4-8
Corridor Penetration

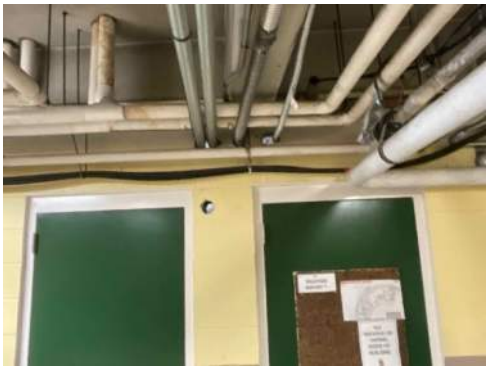


FIGURE 4-9 MEP
Closet Penetrations

Two stairs in the building are enclosed and were observed to be provided with 1-hour-rated doors at openings; one is located near the food service area and the other is in the observatory. Doors to the food service stair include manual hold open devices. Note that fire door assemblies are required to be self-closing and latching without manual hold open devices (NHSBC 716.2.6).

FIGURE 4-10
Manual Hold Open Device

FIGURE 4-11
90-Minute Stair Door

4.1.2.8 Vertical Openings

The existing building contains floor openings as follows:

- **Food Service Stair** – An enclosed stair connecting the Ground and First Floors. This stair includes openings to a storage room and maintenance shop at the Ground Floor and was observed to contain storage at each landing. Based on the openings into the stair and the exit discharge arrangement, the stair is not permitted to be used for egress. The existing enclosure should be maintained since two-story openings created by convenience stairs are not permitted in buildings that are not protected with a sprinkler system throughout (NFPA 101, 8.6.9.2 & NHSBC 712.1.9(5)).
- **Observatory Stair** – An enclosed, spiral stairway serving the observatory wing. The stair enclosure is minimally 1-hour rated and is required to be maintained.
- **Open Stairs** –Two unenclosed stairs connecting the Ground and First Floors.

Two-story openings created by stairs are not permitted in buildings that are not sprinklered throughout (NFPA 101, 8.6.9.2 & NHSBC 712.1.9(5)). This arrangement was previously approved but could be raised as an issue as part of a future inspection. If these vertical openings are located within the work area of a future renovation, they could be required to be enclosed at one or both Floors.

- **Elevator hoistway** – The elevator hoistway connects the Ground and First Floors and is enclosed with at least 1-hour rated construction.

FIGURE 4-12
Museum Open Stair

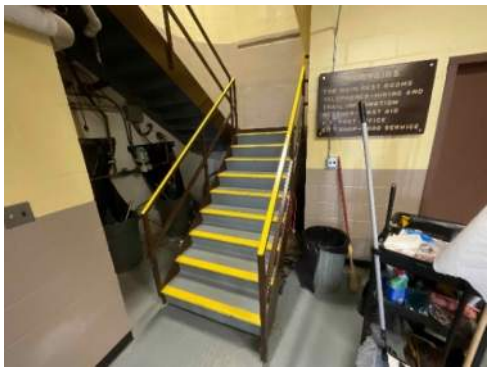


FIGURE 4-13
Service Lobby Stair

4.1.2.9 Fire Protection Systems

Automatic Sprinkler and Standpipe System

The existing building is not protected by an automatic sprinkler system throughout. The sprinkler system only serves the residential observatory wing. An occupant hose is also located within the park staff common area at the Ground Floor.

FIGURE 4-14
Observatory Sprinkler

FIGURE 4-15
Occupant Fire Hose

The building is not required to be sprinklered throughout based on the existing occupancy chapters of NFPA 101. Sprinkler thresholds applicable to new construction are required to be evaluated as part of future projects including an addition and/ or change of occupancy (NHEBC 1011.2 & 1011.1). Renovations throughout the building could also require these thresholds to be evaluated depending on the extent of the work area.

Fire Alarm and Detection System

The building is provided with a fire alarm and detection system consisting of manual pull stations at exits, smoke and heat detectors at select locations, and audio/visual notification devices at select locations. The fire alarm control unit (FACU) is located within the electrical room on the Ground Floor. The Yankee building FACU is connected to two A/V devices in the Sherman Adams building. Coverage of the existing fire alarm and detection system varies depending on the space within the building.

Coverage of the existing system is required to be maintained as part of future renovations (NHEBC 701.2). Where the fire alarm system is altered or reconfigured, this scope of work is required to be in accordance with the NHSBC and NFPA 72.

4.1.2.10 Means of Egress

The building is served by exits directly to the exterior at both the Ground and First Floor Levels. The stairs in the building are not permitted to be used for egress based on the exit discharge arrangement and level of sprinkler coverage. The Egress Plans developed in 2021 indicate the exits serving the building, which align with the exit signage observed on site. The following table summarizes the overall occupant load calculations and egress capacities prepared as part of the 2021 evaluation.

Code Summary Table 5: Occupant Load and Egress Capacity		
Floor	**Calculated Occupant Load**	**Egress Capacity**
Ground Floor	298	495
First Floor	495	495

On site, several doors were observed to be equipped with locking hardware. Doors are not generally permitted to be locked in the direction of egress (NHSBC 1010.2 & NFPA 101, 7.2.1.5.2). Although these locking mechanisms provide security based on the different uses in the buildings, it is recommended that locks be removed from doors along the exit access highlighted in the figures below. An option to maintain a sense of security at a door that would otherwise be provided with a locking device is a local alarm that initiates when any of these doors are opened. With this approach, the door can be opened in the direction of egress and the alarm provides notification to building staff when it is opened.

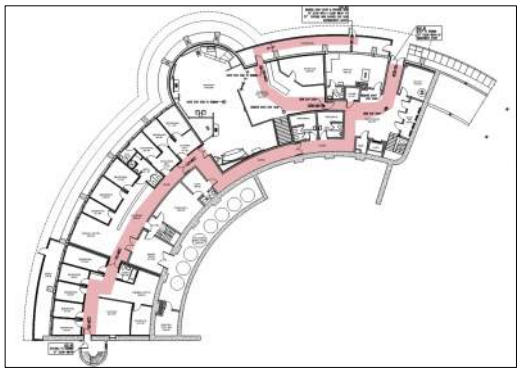


FIGURE 4-16
Ground Floor

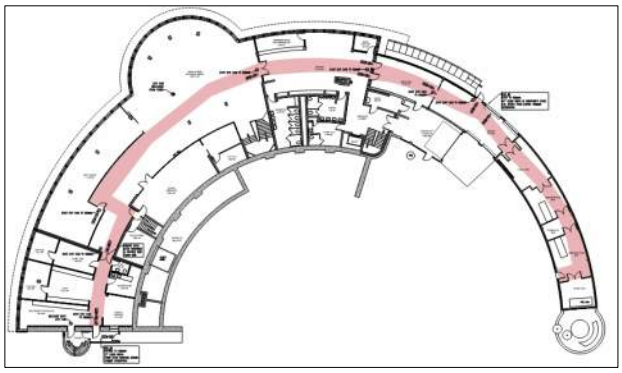


FIGURE 4-17
First Floor

Existing conditions observed within the building that do not comply with NFPA 101 and/ or NHSBC are detailed in Code Summary Appendix A. These conditions are permitted to remain unless otherwise required by NFPA 101, or the NHEBC based on the proposed scope of work. Code Summary Appendix A includes a general list of existing conditions observed on site and associated recommendations. Each condition is identified with a number, description, recommendation, location diagram, and photo. The existing conditions are grouped into different categories based on the code provisions that require them to be addressed.

4.1.2.11 Plumbing

The NHSBC and NHSPC regulate the minimum number of plumbing fixtures. The minimum number of plumbing fixtures are based upon the use and occupancy classification of the building or space and the occupant load as established by the NHSBC. Public and employee toilet facilities are required to be located not more than one story above or below the space required to be provided with toilet facilities, and the path of travel to such facilities is not permitted to exceed 500 feet (NHSPC 403.1). The following table summarizes the minimum requirements for plumbing fixtures based on the occupancies within the building (CSPC 403.1).

Code Summary Table 6: Plumbing Fixture Factors

Use Group	Toilets		Urinals	Lavatories		Drinking Fountains	Service Sink
	F	M		F	M		
Assembly (Gathering/ Museum)	1 per 65	1 per 125	67% substitution	1 per 200		1 per 500	1 Required
Assembly (Dining)	1 per 75	1 per 75	67% substitution	1 per 200		1 per 500	1 Required
Congregate Living Facilities [1]	1 per 10	1 per 10	50% substitution	1 per 10		1 per 100	1 Required
Business (Office)	1 per 25 for the first 50 and 1 per 50 for the remainder exceeding 50.		50% substitution	1 per 40 for the first 80 and 1 per 80 for the remainder exceeding 80.		1 per 100	1 Required
Mercantile	1 per 500		50% substitution	1 per 750		1 per 1,000	1 Required

1. Congregate living facilities require 1 shower per 8 occupants as well.

The public restrooms at the Ground and First Floor support up to 1,050 Assembly (Dining) occupants.

The following tables detail the plumbing fixture calculations for the building based on the calculated occupant loads prepared as part of the 2021 egress evaluation. Code Summary Table 8 includes calculations for the Ground – First Floors, since occupants are permitted to travel up or down a story within 500 ft. to access required fixtures. Code Summary

Table 9 and Table 10 detail calculations for the public spaces on each Floor for informational purposes.

Table 8: Plumbing Fixture Calculations

Floor	Occupant Load	Classification	Water Closets		Male Urinals [A] (SUBSTITUTION)	Lavatories		Drinking Fountains	Service Sink
			Female	Male		Female	Male		
Ground - First Floor (Public)	497	A-3 (Gathering)	1 per 65	1 per 125	0.67	1 per 200	1 per 200	1 per 500	1
		Required fixtures	3.82	1.99	1.33	1.24	1.24	0.994	1
	334	A-2 (Dining)	1 per 75	1 per 75	0.67	1 per 200	1 per 200	1 per 500	1
		Required fixtures	2.23	2.23	1.49	0.84	0.84	0.668	1
	38	Mercantile	1 per 500	1 per 500	0.50	1 per 750	1 per 750	1 per 1000	1
		Required fixtures	0.04	0.04	0.02	0.03	0.03	0.038	1
	Total Required Fixtures		**7**	**5**	**3**	**3**	**3**	**2**	**1**
	Total Provided Fixtures		**9**	**4**	**4**	**5**	**5**	**2**	**1**
Ground - First Floor (Non - Public)	31	Business (Office)	1 per 25 for the first 50 and 1 per 50 for the remainder exceeding 50		0.50	1 per 40 for the first 80 and 1 per 80 for the remainder exceeding 80		1 per 500	1 per Floor
		Required fixtures	0.62	0.62	0.31	0.39	0.39	0.062	1
	Total Required Fixtures		**1**	**1**	**1**	**1**	**1**	**1**	**1**
	Total Provided Fixtures		**2**	**2**	**0**	**2**	**2**	**1**	**1**
Ground - First Floor (Non - Public)	13	Residential	1 per 10	1 per 10	0.50	1 per 10	1 per 10	1 per 100	1
		Required fixtures	0.65	0.65	0.33	0.65	0.65	0.13	1
	Total Required Fixtures		**1**	**1**	**1**	**1**	**1**	**1**	**1**
	Total Provided Fixtures [B]		**2**	**2**	**0**	**1**	**2**	**1**	**1**

[A] Permitted to be substituted for male water closets
[B] 2 Showers are provided, which satisfies the minimum required for congregate living facilities.

Table 9: Ground Floor Plumbing Fixture Calculations (Public)

Floor	Occupant Load	Classification	Water Closets		Male Urinals [A] (SUBSTITUTION)	Lavatories		Drinking Fountains	Service Sink
			Female	Male		Female	Male		
Ground Floor (Public)	276	A-3 (Gathering)	1 per 65	1 per 125	0.67	1 per 200	1 per 200	1 per 500	1
		Required fixtures	2.12	1.10	0.74	0.69	0.69	0.552	1
	Total Required Fixtures		**3**	**2**	**1**	**1**	**1**	**1**	**1**
	Total Provided Fixtures		**3**	**2**	**1**	**1**	**1**	**0**	**1**

[A] Permitted to be substituted for male water closets

Table 10: First Floor Plumbing Fixture Calculations (Public)

Floor	Occupant Load	Classification	Water Closets		Male Urinals [A] (SUBSTITUTION)	Lavatories		Drinking Fountains	Service Sink
			Female	Male		Female	Male		
First Floor (Public)	323	A-3 (Gathering)	1 per 65	1 per 125	0.67	1 per 200	1 per 200	1 per 500	1
		Required fixtures	2.48	1.29	0.87	0.81	0.81	0.646	1
	244	A-2 (Dining)	1 per 75	1 per 75	0.67	1 per 200	1 per 200	1 per 500	1
		Required fixtures	1.63	1.63	1.09	0.61	0.61	0.488	1
	38	Mercantile	1 per 500	1 per 500	0.50	1 per 750	1 per 750	1 per 1000	1
		Required fixtures	0.04	0.04	0.02	0.03	0.03	0.038	1
	Total Required Fixtures		**5**	**3**	**2**	**2**	**2**	**2**	**1**
	Total Provided Fixtures		**6**	**2**	**3**	**4**	**4**	**1**	**1**

[A] Permitted to be substituted for male water closets

4.1.2.12 Accessibility

ICC/ ANSI A117.1

The work area within the existing building as part of future projects is required to be made accessible in accordance with ANSI/ICC A117.1 unless proven to be technically feasible (NHSEBC 305.6). If a future alteration is affecting an area of primary function, up to 20% of the alteration costs are required to include providing an accessible route to the primary function area including toilet rooms (NHSEBC 305.7).

ADA Application

Although not enforced by any authority having jurisdiction on the project, the requirements of ADA are also applicable and enforced through civil litigation only.

The Americans with Disabilities Act Accessibility Guidelines (ADAAG) requires that altered portions of an existing building are required to be readily accessible to and usable by individuals with disabilities to the maximum extent feasible (ADAAG 36.402(a)(1)). Further, alterations to primary function areas should be made such that the level of accessibility, including the path of travel to the space, is made accessible to the maximum extent feasible. When determining if the upgrade is feasible, the ADAAG requirements state that the upgrade to the path of travel is disproportionate to the project when the cost to perform the work exceeds 20% of the cost of the alteration to the primary function area. In choosing which accessible elements to provide if the cost is disproportionate, priority should be given to those elements that will provide the greatest access, in the following order:

1. An accessible entrance
2. An accessible route to the altered area
3. At least one accessible restroom for each sex or a single unisex restroom
4. Accessible drinking fountains
5. Accessible telephones

Code Summary Appendix A includes a general list of existing conditions observed on site and associated recommendations. Each condition is identified with a number, description, recommendation, location diagram, and photo. The existing conditions are grouped into different categories based on the code provisions that require them to be addressed.

4.1.3 Sherman Adams Building Envelope

On 6 September 2024, Jeffry J. Ceruti and Kelsey A. Dunn of Simpson Gumpertz & Heger Inc. (SGH) visited the site to perform a building envelope condition assessment of the Mount Washington summit buildings, including the Sherman Adams Summit Building and Mount Washington Observatory, the Tip Top House, and the Yankee Building Communications & Maintenance Facility. Note that we refer to directionals at each building based on the definitions established in the existing drawings provided for the respective buildings.

On the above-grade portion of the Sherman Adams Summit Building, the exterior walls are a combination of exposed reinforced concrete structural elements, wood shingle siding, aluminum-framed windows, and a plywood-clad soffit. The roof of the main building structure serves as an observation deck. The existing roofing assembly consists of a waterproofing membrane assembly covered by rigid insulation and precast concrete pavers. In the southwest corner of the building, an observation tower extends two stories above the main building structure. The exterior walls of the observation tower consist of wood shingle siding and steel windows.

FIGURE 4-18
Above-Grade Portion of the Building (East Elevation Looking North)

FIGURE 4-19
Observation Tower (North Elevation Looking Northwest)

Based on documents provided for our review, we understand that the following building envelope repair projects have been carried out at the building, in addition to routine maintenance performed by the State Park and Observatory staff:

- 1991: Roof Replacement Project
- 1993: Partial Window Replacement Project at Select First-Floor Locations
- 1998: Partial Window Replacement Project at Remaining First-Floor Locations
- 2014: Entrance Improvements Project at Entry Vestibule

The following sections include our observations, discussions, conclusions, and recommendations for each building enclosure system.

4.1.3.1 Exterior Foundation Walls

The foundation walls are reinforced cast-in-place concrete installed over concrete footings. The original building drawings indicate that the existing boulder was excavated several feet beyond the footprint of the building and that the foundation walls were waterproofed with a membrane waterproofing and 2 – 4 in. rigid insulation and backfilled with crushed stone. At the footings, 6 in. perforated pipe underdrains extend around the building perimeter. When the roof was replaced in 1991, the foundation was partially excavated, and the new roof membrane was extended approximately 10 ft down the foundation wall along the southwest side of the building. We assume that the waterproofing elsewhere on the building foundations is original.

The Park and Observatory staff reported that severe water leakage occurs through several penetrations in the foundation wall on the south elevation. The penetrations occur below the southwest stairwell, and the water leakage floods the Pack Room during heavy rain and snowmelt events. The Park staff have installed temporary catchments to collect leakage water. Some of these penetrations are active; however, some have been abandoned. These penetrations are exposed to excess groundwater, as the generator garage roof drains through a scupper to grade above this foundation wall. Additionally, the surrounding site is graded towards a catch basin approximately 10 feet from the foundation wall. The crushed stone installed between the foundation wall and catch basin is sloped towards the catch basin. Crushed stone is a fast-draining material that permits the water from the generator garage roof and site to percolate into the ground before reaching the catch basin. This water likely flows down the foundation wall until it reaches the pipe penetrations, where the foundation waterproofing is apparently not watertight.

For a long-term repair, we recommend excavating the foundation wall, removing and patching abandoned penetrations, installing new self-adhered waterproofing membrane on the exposed foundation wall, and flashing the remaining active penetrations with waterproofing membrane. Alternatively, redirect water from the generator garage roof directly to the catch basin with a gutter and downspout, regrade the site against the wall to promote drainage, and/or install impervious paving, such as a concrete sidewalk between the foundation wall and catch basin, to reduce the amount of site runoff that reaches the pipe penetrations below.

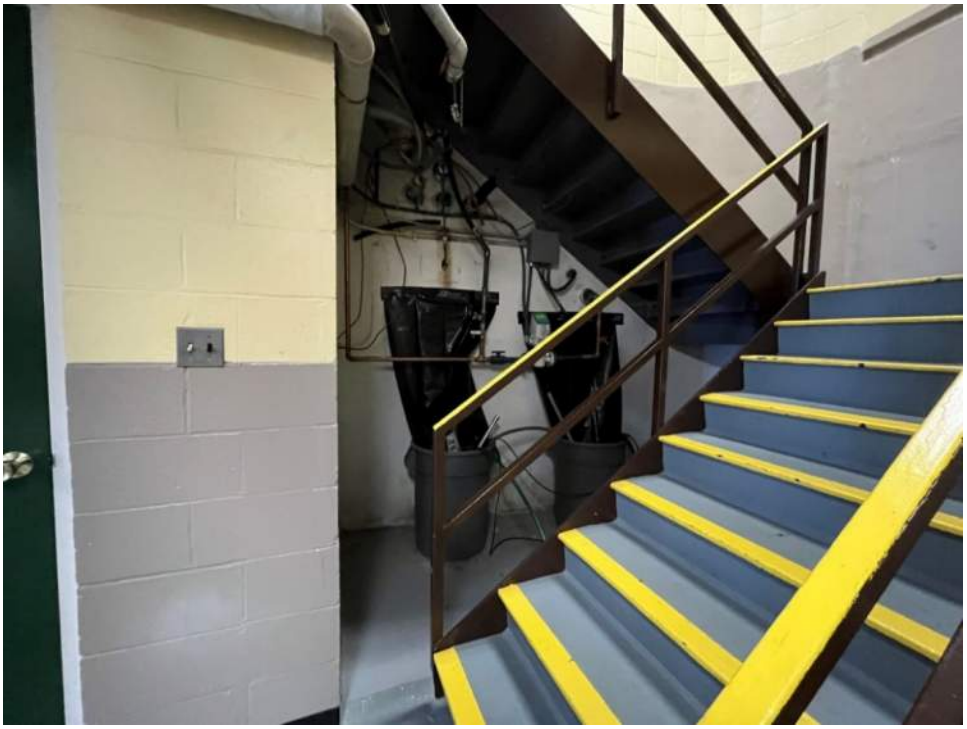


FIGURE 4-20
Temporary Catchments at Leakage through Foundation Penetrations

FIGURE 4-21
Condition at Grade on South Elevation.
Note Location above Reported Leakage (Red Arrow), Scupper from Generator Garage Roof (Blue Arrow), and Location of Catch Basin (Orange Arrow)

4.1.3.2 Exterior Walls – Concrete Facade

Portions of the building facade are exposed concrete structural elements with a cementitious parge coat. The cementitious parge coat is intended to protect the reinforced concrete structure from water intrusion and related corrosion of the reinforcing steel. It is a thin coat of cementitious material (1/4 in. or less) bonded to the concrete structure with no reinforcing or mechanical securement. The parge coat exhibits widespread deterioration, and the concrete structural elements are cracked and spalled in various locations. Efflorescence is visible at some cracks and spalls, indicating that water intrusion is ongoing and that freeze/thaw damage has occurred in some areas. At the roof parapet, cracks and construction joints are sealed; however, the sealant has failed, exposing the parapet to water entry. We generally observed deteriorated parge coat and cracked and spalled concrete below locations of failed parapet sealant joints.

If these conditions are not addressed, the parge coat will continue to deteriorate and permit water intrusion into the reinforced concrete structure. Continued and increased water intrusion will result in accelerated deterioration of the reinforced concrete structure, including corrosion of the steel reinforcing, freeze/thaw damage, and spalling. Repairs should include removal of all deteriorated and unbonded parge coat, sounding of the exposed concrete structural elements, concrete repairs at unsound concrete conditions, and replacing sealant joints. Once these repairs are complete, a finish system should be installed to protect the concrete structure. The recommended finish system depends on whether aesthetics or durability takes precedence. If aesthetics takes precedence, we recommend providing an exterior insulation and finish system (EIFS) finish coat over the reinforced concrete structure. An EIFS finish coat would provide a more consistent appearance; however, it would also require more maintenance. EIFS finish coats typically

require maintenance every five to ten years and provide a total service life of approximately twenty years. If durability and minimizing maintenance take precedence, we recommend patching the cementitious parge coat in kind. A cementitious parge coat typically provides an estimated service life of approximately ten to fifteen years but may be less at this building site due to extreme weather. Routine maintenance is required to perform patches when deterioration occurs so that the deterioration does not spread; however, if adjacent building seals are maintained, we expect that maintenance would be required only sporadically.

FIGURE 4-22
Typical Parge Coat Deterioration (Red Arrows)

FIGURE 4-23
Cracked and Spalled Concrete (Red Arrows)

FIGURE 4-24
Failed Parapet Sealant Joint (Red Arrow)

4.1.3.3 Exterior Walls – Wood Shingles and Trim

Based on the original building drawings, the wood shingle cladding assembly consists of, from interior to exterior: reinforced concrete structure, 3-1/2 in. rigid insulation, 3/4 in. plywood sheathing anchored to wood furring, 15 lb felt water-resistive barrier, and red cedar shingles with trim. The wood shingles and trim are in good condition on the main north- and east-facing elevations and appear to have been maintained recently. On the observatory tower, the shingles are more heavily weathered, and in several isolated locations the shingles and trim are cracked. The deteriorated shingles and trim boards should be replaced at isolated locations as needed. We expect this is an ongoing maintenance item based on the stockpile of shingles stored in the basement of the Yankee Building.

FIGURE 4-25
Shingles on North Elevation

FIGURE 4-26
Weathered Shingles on Observation Tower

4.1.3.4 Windows – Main Building

The original windows were constructed using double pane insulating glass units (IGUs) and an exterior lite of Lexan polycarbonate sheeting set in a steel frame with plastic glazing stops. All the windows on the first floor were replaced during window replacement projects in 1993 and 1998; however, the ground-floor windows are original. The replacement window project drawings indicate insulating glass and an exterior lite of Lexan; however, we did not see the exterior Lexan lite at the windows. We understand window replacement for the ground-floor staff residence areas is being planned, which must also provide an egress route through the windows.

The remaining original windows are in poor condition and require replacement; most contain fogged or weathered glass and lexan/plexi-glass on the interior with reduced visibility through them. The observatory staff reported active water leakage and air leakage from windows replaced in 1993 at the northwest corner of the building. Staining is visible on the concrete curb below the windows, indicating water leakage is occurring at the window sills. Within the cafeteria, the wood trim below several of the windows replaced in 1993 is stained and deteriorated, indicating that water leakage is occurring at the window sills. At one location in the rotunda within the first-floor cafeteria, Park staff reported that water collects on the floor slab adjacent to the exterior wall; however, they do not observe water dripping from the ceiling above. We suspect that water leakage occurs at the window sill, flows down the concrete wall behind the radiator cover, and collects on the floor. We recommend that Park staff remove the radiator cover to confirm the source of the leakage next time the water leakage is observed. In general, the windows replaced in 1998 remain in fair condition.

The previously replaced windows are anchored to a reverse steel angle with the vertical leg on the exterior at the sill. If water bypasses the window assembly through frame joints or perimeter conditions as the windows and sealants age, water cannot weep to the exterior and leaks to the interior. The replacement windows installed in 1993 are leaking, suggesting that the exterior and frame seals are failing; however, the replacement windows installed in 1998 are not leaking, indicating that the exterior and frame seals remain intact. We suspect that the replacement windows installed in 1998 will begin to leak as the exterior and frame seals continue to weather and begin to fail.

Although we do not know the actual water leakage path through the window system, addressing this leakage will require redesign of the window anchorage to eliminate the reverse steel angle at the sill. Eliminating the steel angle will permit the installation of self-adhered membrane within the rough openings and sheet metal sill pan flashings at the sills to collect any leakage water and drain it to the exterior when exterior and frame seals eventually fail. We recommend replacing the remaining original windows and modifying the design as needed to address the reported leakage. As an intermediate repair to reduce leakage at previously replaced windows, remove and replace backer rod and sealant joints at window perimeters and reseal frame joints. Consider drilling weeps at exterior window sills to promote drainage of leakage water. When windows are eventually replaced, install with self-adhered membrane in rough openings and sheet metal sill pan flashings at sills.

FIGURE 4-27
Previously Replaced Windows (North Elevation)

FIGURE 4-28
Previously Replaced Windows (North Elevation)

FIGURE 4-29
Original Windows within Observatory Space - Note Fogged Glass

FIGURE 4-30
Staining on Concrete Below Windowsill (Red Arrows)

FIGURE 4-31
Staining and Deteriorated Wood Trim Below Windows in Cafeteria

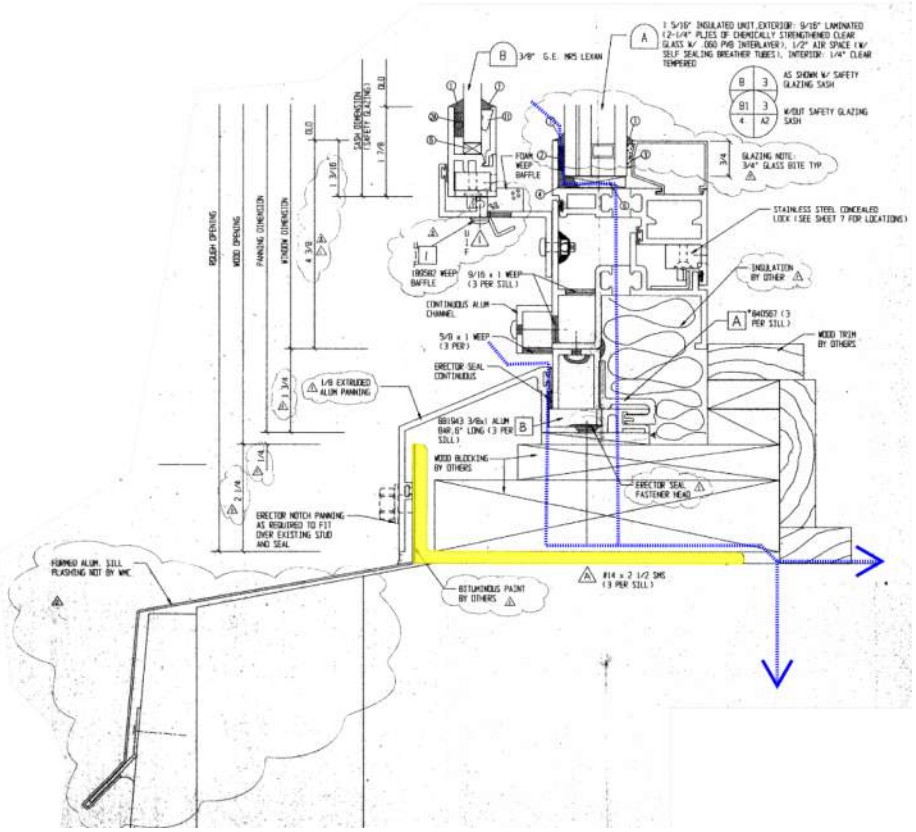


FIGURE 4-32
Sill Section Detail from 1993 Window Replacement Drawings - Note Reverse Angle (Yellow) and Potential Leakage Paths (Dashed Blue Line)

4.1.3.5 Observation Tower Windows and Doors

The steel windows in the observation tower appear to be original. The windows are weathered and stained, and the outer frames exhibit signs of surface corrosion; however, the windows appear to be functioning adequately. As part of regular maintenance, we

recommend removing and replacing perimeter sealant joints and recoating the window frames.

Park and Observatory staff reported that water leakage occurs into the observation tower through joints between the door sash and door frame at the exit onto the observation deck. The leakage water enters at the door opening, flows down the interior side of the exterior wall, and collects at the bottom of the observation tower. We understand that the door cannot be fully closed and sealed; otherwise, it freezes during the winter and is not functional, and the observatory staff use the door hourly year-round. To address this issue, we recommend replacing the observation deck access door with a new high-performance gasketed steel door system with heat trace installed within the door frame to prevent freezing in the winter months. Note that the heat trace will remain a maintenance item; however, it would provide targeted heating to reduce the risk of freezing. If the existing door is to remain, we recommend installing new weatherstripping, a sheet metal flashing sill pan, and a drainable door threshold to collect and drain leakage water to the exterior.

Regardless of whether a new door is provided, consider constructing a small vestibule on the exterior that could protect the primary door from wind-driven rain and snow. The vestibule could be an outdoor vestibule that does not include a second door or a fully enclosed vestibule, depending on the needs of the observatory staff. A fully enclosed vestibule would reduce the sudden change in building pressurization that is observed when the door is opened during the winter months.

FIGURE 4-33
Observation Tower Steel Window

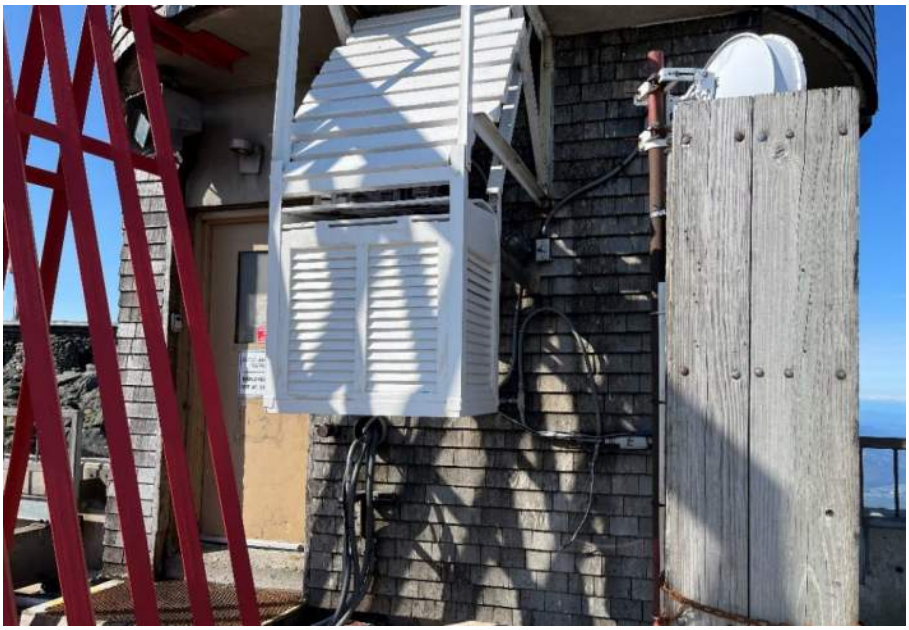


FIGURE 4-34
Observation Tower Door onto Observation Deck

FIGURE 4-35
Threshold of Observation Tower Door onto Observation Deck - Note Visible Daylight (Red Arrow)

4.1.3.6 Roof and Observation Deck

Water staining and efflorescence are visible in numerous locations on the ceiling and interior finishes throughout the first-floor space. The staining is generally present at the enclosed entrance vestibule, on the exterior walls adjacent to structural beams, and on the ceiling approximately 18 in. adjacent to and parallel with structural beams. Park staff informed us that they do not observe water dripping from these locations; however, water frequently drips from the ceiling at one location in the Gift Shop. Park staff keep small buckets on the counter below to catch the leakage water. We did not perform water testing to recreate leakage and trace leakage paths; however, we expect that the water leakage is occurring through the roofing assembly on the observation deck, directly above.

The existing roofing assembly was installed in 1991 and consists of, from interior to exterior: reinforced concrete deck, a three-ply SBS (modified bitumen) waterproofing membrane, two layers of 2 in. rigid insulation, filter fabric, and precast concrete pavers on corner supports. The expected service life of a typical two-ply SBS roofing assembly is approximately twenty to thirty years, and the existing three-ply roofing assembly has been in service for thirty-three years. The SBS roofing assembly is terminated on the parapet behind a saw-cut reglet-set sheet metal flashing to prevent water from bypassing the waterproofing membrane at the termination. Directly above the location of reported active leakage into the Gift Shop, the saw-cut reglet flashing is no longer secured to the parapet and the waterproofing termination is exposed; this is a likely source of leakage. Further investigation is required to determine the source of the leaks and whether the existing SBS waterproofing assembly is still intact and well bonded to the slab; this investigation is needed to evaluate whether the waterproofing has passed its useful service life and requires replacement or whether isolated repairs can extend the life of the waterproofing assembly. We did not remove pavers and insulation to review the condition of the existing waterproofing.

We recommend performing water testing to recreate reported leakage and trace leakage paths, followed by exploratory openings in the SBS waterproofing membrane to evaluate the condition of the membrane and adhesion to the concrete deck below. If it is determined that the existing waterproofing assembly requires replacement, we recommend replacing the existing waterproofing assembly with a new hot-applied rubberized asphalt (HRA) waterproofing assembly consisting of, from interior to exterior: reinforced HRA waterproofing membrane, protection board, drainage board, rigid insulation, and precast concrete pavers. Further review of the most suitable waterproofing system can be evaluated based on access challenges to the site; HRA systems require a hot asphalt kettle to be used on site.

FIGURE 4-36
Subflorescence at Entry Vestibule

FIGURE 4-37
Staining on the Exterior Walls Adjacent To A Structural Beam (Red Arrow)

FIGURE 4-38
Staining on the Exterior Walls Adjacent to a Structural Beam (Red Arrow)

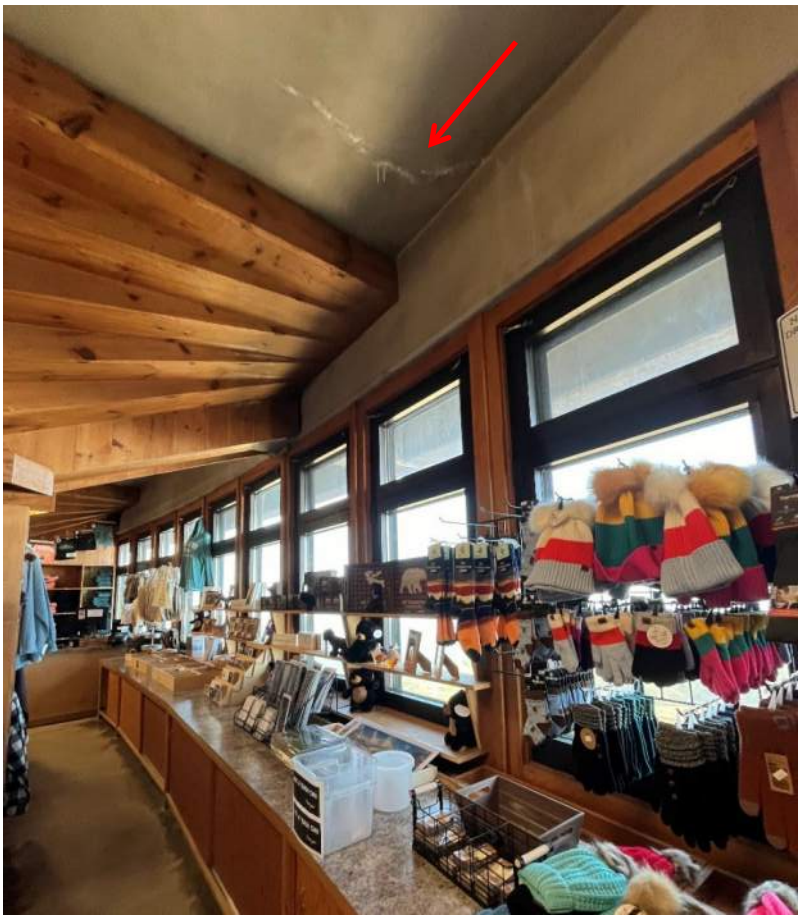


FIGURE 4-39
Location of Reported Leakage in the Gift Shop (Red Arrow)

FIGURE 4-40
Typical Waterproofing Termination Behind Sheet Metal Flashing

FIGURE 4-41
Unsecured Sheet Metal Flashing above the Location of Reported Leakage into the Gift Shop (Red Arrow)

The precast concrete pavers installed on the observation deck are displaced and create potential tripping hazards, most significantly where pavers are installed on grade along the south side of the building. The original building drawings indicate that the precast concrete pavers were to be 4 in. thick; however, the pavers on site are standard 2 in. thick precast pavers. These 2 in. thick pavers do not meet current wind load requirements

without a high wind uplift lockdown system given the extreme wind loads at this site; however, given the lack of apparent wind damage to the pavers over the years, the paver assembly may not require upgrading. The precast pavers should be reset as required to address trip hazards. When the existing roofing assembly is replaced, the precast concrete pavers should be set on either a high wind uplift lockdown system or paver supports with built-in spacers to reduce the displacement of pavers that occur over time. If a high wind uplift lockdown system is specified, it is possible that the existing precast concrete pavers can be reused by modifying them to accept the high wind uplift lockdown system. Where pavers are installed on grade, we recommend installing a new reinforced concrete sidewalk dowelled into the existing foundation wall to provide continuous support for the pavers. Alternatively, pavers could be reinstalled on grade similar to the existing construction; however, this will remain a maintenance item due to settlement of the subgrade, and the pavers will need to be reset periodically to avoid tripping hazards.

FIGURE 4-42
Displaced Pavers

FIGURE 4-43
Displaced Pavers on Grade. Note that the Red Line Indicates the Approximate Transition to Grade

Along the observation deck parapet, a steel railing is anchored to the interior face of the parapet. The coating on the observation deck railing is deteriorated, and widespread surface corrosion is visible. If not addressed, the steel railing will continue to corrode and section loss may occur. We recommend removing the railings, cleaning and preparing the surface as required by the manufacturer, recoating the railing with a primer and two-coat finish coat, and reinstalling the railing.

FIGURE 4-44
Surface Corrosion on Observation Deck Railing

4.1.3.7 Chimneys

Two existing chimneys, constructed of concrete masonry units (CMU), extend above the observation deck roof. One is located within and above the first-floor foyer outside of the men's restroom, and one is located within and above the tank vault on the southwest side of the building. Park staff reported minor water leakage at the chimney within the first-floor foyer. Staining, efflorescence, and concrete deterioration adjacent to the chimney in the tank vault indicate that more significant leakage occurs through the southwest chimney.

The chimneys are heavily deteriorated, and the parge coating and concrete block are failing with reinforcement exposed. Park staff have installed plywood in many locations to prevent the chimneys from falling apart. Due to the severe deterioration, the chimneys require rebuilding as repairs are not practical. The chimneys should be rebuilt with new reinforced grouted CMU block. We recommend installing high-temperature-resistant self-adhered waterproofing on the CMU block covered with a cladding system for protection. Provide a continuous transition between the new chimney waterproofing and the waterproofing on the observation deck roof.

FIGURE 4-45
Minor Water Leakage at Chimney in Foyer (Red Arrow)

FIGURE 4-46
Staining and Subflorescence at Chimney above Tank Vault (Red Arrows)

FIGURE 4-47
Plywood Installed on Chimney Above Foyer

FIGURE 4-48
Typical Deterioration of Southwest Chimney

4.1.3.8 Generator Garage

The generator garage was constructed by enclosing a portion of the existing entrance canopy. CMU block walls were installed between existing concrete columns. The exterior

walls are clad in a water-resistive barrier and wood shingles with trim boards. Sheet metal flashing is installed above wood trim boards. On the interior, efflorescence and staining on the interior side of the CMU block walls directly adjacent to columns indicate that minor water leakage occurs through these transitions. On the exterior, the edge of the water-resistive barrier is visible in several locations, and the membrane does not lap onto the concrete column. Additionally, the sheet metal through-wall flashings above the horizontal trim boards do not include end dams. The staining and efflorescence on the interior occur at approximately the same height as the through-wall flashing, indicating that water flows off the end of the through-wall flashing and leaks to the interior through the discontinuity in the water-resistive barrier at the transitions to the concrete columns.

We understand that this leakage is likely not a priority as it is not disruptive to the use of the space; however, we recommend performing repairs to mitigate the leakage to protect the CMU block and reinforced concrete columns from water ingress and resulting deterioration. Repairs should include removing the shingle cladding along the transitions to the exposed concrete columns, terminating the water-resistive barrier onto the concrete columns, providing end dams in the sheet metal through-wall flashings, and reinstalling new shingle cladding in kind.

FIGURE 4-49
Typical Signs of Water Leakage on Interior

FIGURE 4-50
Typical Infill Wall Construction - Note Sheet Metal Flashing

FIGURE 4-51
Typical Infill Wall Construction - Note Sheet Metal Flashing

4.1.4 Sherman Adams Structural Systems

The following are the findings by RSE Associates, Inc. based on a review of the structural components accessible at the time of their site visit on September 6, 2024. It excludes members that were covered with finishes and below grade elements such as footings, etc.

Existing drawings For the Sherman Adams building were made available to RSE and the structure that could be observed on site agreed with the drawings. The roof structure is steel wide flange composite beams encased in concrete supporting a 5½" thick reinforced concrete flat slab, the beams span to concrete encased steel wide flange girders that are supported on concrete encased steel columns or the inner most concrete wall. There is an integral concrete parapet around the building at the observation deck. The first-floor structure is similar to the main roof structure but with a 4" thick reinforced concrete flat slab. The basement ground floor is a 4" thick concrete slab on grade with welded wire fabric at mid-depth. The building is supported on shallow spread footings and wall footings. The entry corridor has a 6" thick reinforced concrete flat slab roof supported on concrete encased steel beams and columns. There is a slab on grade at the ground floor level that was found to be in good condition.

The exterior concrete of the building has a parge coat covering it, and in approximately 10 locations around the north and east facing exterior façade, this parge coat has cracked or spalled off. While the parge coat does not contribute to the structural properties of the building, it does provide a coating to protect the concrete from the elements. Therefore, it is important to patch and repair areas where this has spalled off. The concrete behind the parge coat is also cracked or spalled, and in some of the areas there is also exposed rebar or steel. Areas where there are cracks or spalls in the concrete should be repaired. Any unsound concrete should be removed and exposed rebar or steel beams should be cleaned of rust. The exposed steel and concrete should be coated with sealant and bonding agents prior to the repair patch being administered to help prevent future cracks and spalls from occurring at these locations.

The underside of the entry corridor roof slab has cracks with efflorescence. This indicates that salts from water infiltration have penetrated the roof slab and could be leading to corrosion of the rebar or concrete encased steel beams. The roofing of the entry corridor should be examined to determine if it has failed and what measures can be done to mitigate further penetration of salts into the concrete.

FIGURE 4-52
Spall at Concrete Encased Steel Roof Beam (East Side of Entry Corridor)

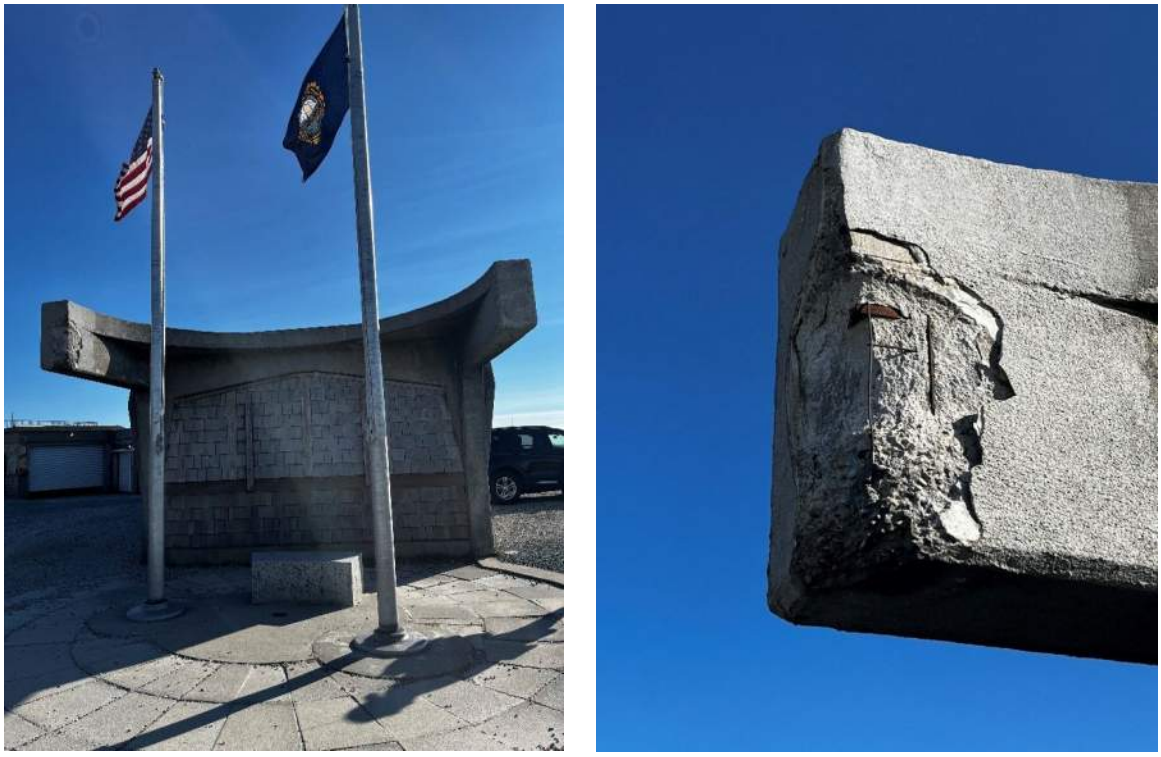


FIGURE 4-53
Spall at Corner of Concrete Encased Steel Roof Beam at Southwest End of Entry Corridor (Both Images)

FIGURE 4-54
Cracked Parge Coat and Spalled Concrete at Concrete Encased Steel Column at East Side of Entry Corridor (Both Images)

FIGURE 4-55
Spalled Concrete at Northeast Exterior Concrete Encased Steel Roof Beam

FIGURE 4-56
Spalled Concrete at Northeast Concrete Encased Steel Roof Beam

FIGURE 4-57
Spalled Concrete with Efflorescence at Underside of Northeast Concrete Encased First Floor Steel Beam

FIGURE 4-58
Cracks with Efflorescence at Underside of Entry Corridor Roof Slab (Both Images)

FIGURE 4-59
Cracks with Efflorescence at Underside of Entry Corridor Roof Slab

There are two chimneys on the roof of the building. The chimneys are not shown on the existing structural drawings, but they are shown on the original architectural roof plan, and they are reinforced CMU block construction. One of the chimneys is located above the southeast foyer and the other is above the tank vault at the southwest side of the building. The chimney above the foyer was partially covered with wood panels secured with steel angles and tie rods. It is assumed this was done to confine CMU blocks that are spalled and failed at that location. The areas of the chimney that could be observed had a heavily cracked parge coat. The southwest chimney above the tank vault also has plywood covering much of it but in one location where the CMU is exposed it was found to be heavily spalled with exposed rusted rebar. The current condition of these chimneys show failure, and it is recommended that both chimneys be rebuilt with grout filled reinforced CMU blocks.

FIGURE 4-60
Southeast Chimney above Foyer (Bothe Images)

FIGURE 4-61
Southwest Chimney above Tank Vault (Both Images)

The interior of the building was in good condition with localized areas of cracks, spalls and effloresence. The concrete roof slab and concrete encased steel roof beams and columns have a parge coat covering them so the concrete itself could not be observed. There were some cracks observed in the parge coat. These cracks were not significant and although there may be a crack in the concrete at these locations, a crack in the parge coat does not necessarily suggest a crack in the concrete within. At this time the recommendation is to monitor the cracks for any changes such as an increase in the width of the crack or spalling of the parge coat at those locations. There were some locations where effloresence was noted at the crack in the parge coat, at these locations there is a crack in the conrete within and indicates that salts from water infiltration have penetrated the roof slab and could lead to corrosion of the rebar or concrete encased steel beams. The causes of any leaks should be determined and remediated. Once this is done the efflorescence can be cleaned and the crack can be filled.

FIGURE 4-62
Interior Parge Coat at Underside of Concrete Roof Slab and Concrete Encased Steel Beams (Both Images)

FIGURE 4-63
Crack at Interior Parge Coat of Concrete Encased Steel Beams (Both Images)

FIGURE 4-64
Crack with Effloresence at Interior Parge Coat on Concrete Roof Slab

The first floor slab is an exposed concrete flat slab and was found to be in good condition. There were some cracks noted. These cracks should be monitored but at this time do not present a concern. The underside of the first floor slab that could be observed from the basement level did not have a parge coat. Overall the concrete that could be observed was in good condition. In the mechanical spaces there were some areas of spalls, these should be patched. There were also some cracks with effloresence that indicate water infiltration. The causes of any leaks should be determined and remediated. Once this is done the efflorescence should be be cleaned and the cracks can be filled.

The basement concrete slab on grade that could be observed was in good condition. There was an approximately ½" wide crack noted at the storage room adjacent to the janitors closet. The crack runs perpendicular to the reinfoced concrete wall between the storage room and the holding tank vault. There were no signs of settlement of the slab so it is believed the crack was caused by expansion due to the lack of control joints at an appropriate spacing.

FIGURE 4-65
Cracks in Exposed Concrete First Floor Slab (Both Images)

FIGURE 4-66
Underside of First Floor Concrete Slab, Concrete Encased Steel Beam, and Foundation Wall (Both Images)

FIGURE 4-67
Painted Underside of First Floor Slab and Concrete Encased Steel Beams

FIGURE 4-68
Spalled Concrete at Underside of First Floor Concrete Encased Steel Beam in Northeast Mechanical Room

FIGURE 4-69
Spalled Concrete at Underside of First-Floor Concrete Encased Steel Beam in Northeast Mechanical Room

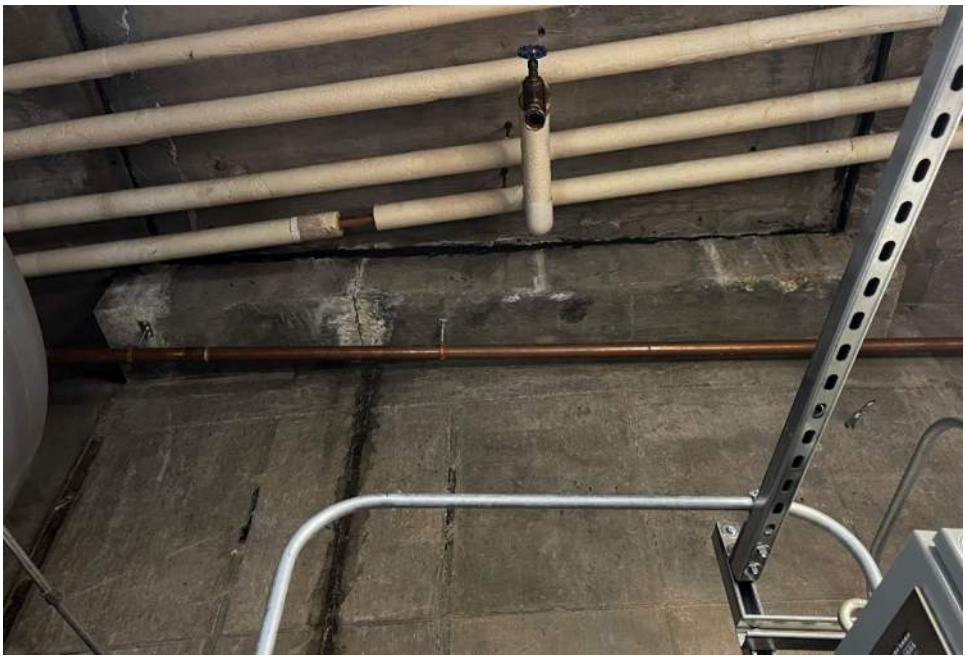


FIGURE 4-70
Cracks with Efflorescence at Underside of First Floor Slab

FIGURE 4-71
Painted Concrete Basement Slab on Grade in Good Condition (Both Images)

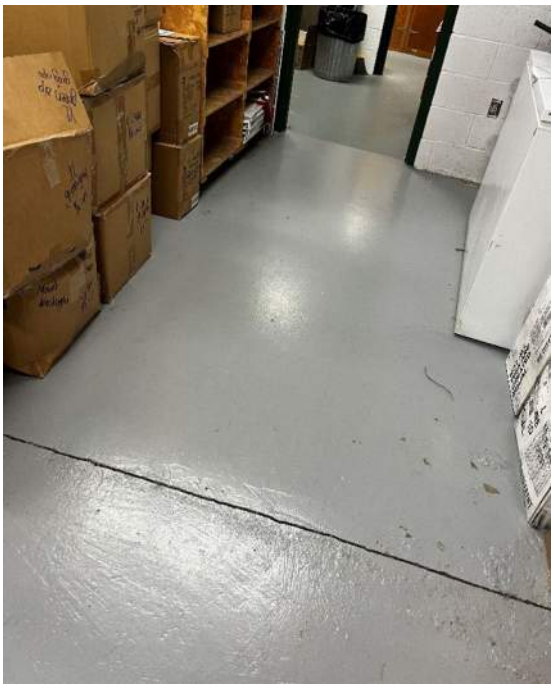


FIGURE 4-72
Painted Concrete Basement Slab on Grade With ½" Crack at Storage Room

4.1.5 Sherman Adams Interior Finishes, Fixtures, and Equipment

4.1.5.1 Main Floor: Entry & Foyer

The main entrance to the Sherman Adams Visitor's Center is located on the east side of the building to keep it protected from the site's harshest winds. There are two garage doors which the State Park staff open each morning to allow for a large number of people to enter the building from this single location. A single, hollow metal door is located next to the garage doors, but this door is typically locked. We recommend that this door remain unlocked for egress as advised in Code Summary Appendix A. This entry was originally an open-air platform when the building was constructed but was enclosed in 2014. There is another pair of garage doors on the opposite side of the entry, and at least one garage door per side is typically open during the day. Even with the entrance area being open to the elements, the concrete slab floor and concrete walls are in good condition. The painted finish on the concrete walls is peeling and should be refreshed or sand blasted and left unpainted to minimize ongoing painting needs. The concrete ceiling is in fair to good condition with a few areas of water damage visible which were described in the Exterior Envelope section.

Past the main entrance, visitors enter an airlock through a set of sliding doors, which remain open during the day. The airlock has a concrete floor except for a section of precast pavers on each side of the sliding doors, and staff reported that this area with pavers tends to flood. The walls of the airlock are a combination of wood paneling and exposed concrete and are in fair condition. The concrete ceiling in this space has some areas of water damage as described in the Exterior Envelope section.

FIGURE 4-73
Main Entrance on East Elevation with Both Garage Doors Open for the Day

FIGURE 4-74
Just Inside the Entry Looking Toward the Airlock

The hollow metal doors leading into the foyer appear to be original and are propped open during the day. The foyer, as well as the rest of the public spaces on the first floor, has polished concrete floors and concrete walls with continuous windows along the east side of the building. The exposed concrete ceilings have wood panel details below with wood lighting baffles. The lighting fixtures in the space appear to be in the original layout, and the space appears to be slightly under-lit. The polished concrete floor throughout the first floor is generally in good condition except for a few specific areas. Similarly, the walls and ceilings are generally in good condition.

FIGURE 4-75
Airlock/Vestibule Looking to Foyer, Water Damage Visible on Ceiling

FIGURE 4-76
View of Entrance Doors to Foyer and Adjacent Post Office

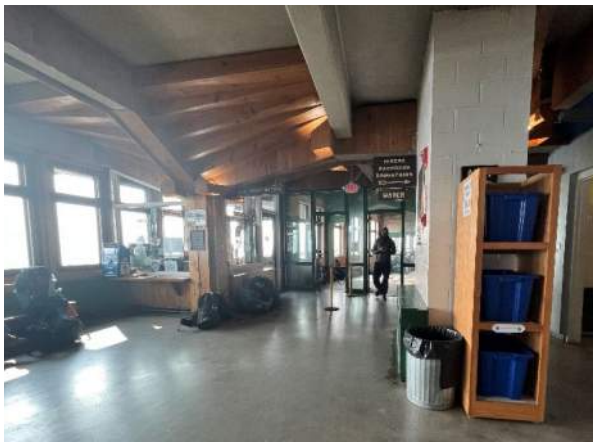


FIGURE 4-77
View in Foyer Looking Southeast to Post Office

FIGURE 4-78
Information Desk in Foyer Looking to Dining Area

The Post Office at the front, southeast corner of the foyer is original to the building. It is enclosed with a half wall of rough sawn, shiplap wood boards with tempered glass in a hollow metal frame above. These original walls and wood counters on the outside of this enclosure are in good condition. The information desk in the northeast corner of the foyer is a similar original structure and in good condition. The information desk is a hub for the staff on the main floor and more storage would be a great benefit to operations. The counter height is 42". A portion could be lowered to 26"-36" to provide accessibility.

Main Floor: Public Restrooms

The first-floor public restrooms directly off the main foyer have ceramic tile floors that appear older but are generally in good condition, as are the ceramic tile and painted CMU wall finishes. The drop ceilings in the Men's and Women's restrooms have 2x4 white plastic ceiling tiles in good condition and appear new. The lighting in these spaces appears new and the spaces are well lit. In the Women's restroom, the five sinks as well as the toilets appear to be in new condition. There are six stalls with partitions that are in good condition, but not all the door finishes match. The two end stalls are larger in size, with one measuring 5'x5', which indicates an accessible stall. There were two hand dryers, but the hand dryer farther from the door was out of order.

In the Men's main floor restroom, the four sinks, two toilets and three urinals appear to be in new condition. There are two stalls with partitions that are in good condition. One stall is larger in size to provide an accessible stall. There was also one functional hand dryer.

FIGURE 4-79
Main Floor Women's Restroom

FIGURE 4-80
Women's Restroom Partitions with One Mis-Matched

4.1.5.2 Main Floor: Dining, Food Service & Kitchen

The polished concrete floors, wood paneled walls, and exposed concrete ceilings with wood panel details continue throughout the dining and food service areas and are in good condition. The windows continue along the east wall and have steel frames with wood trim. The windows are generally in fair condition, although a few areas show signs of minor water damage as described in the Exterior Envelope section. There are radiators below the windows all along this east wall, which provide the main source of heat.

The food service area is located on the west side of the dining area. It is enclosed by half-height wooden walls on each side. The entrance to this area is through a wooden gate, which is painted blue, and it is held open during the day. A long condiment counter defines the outer limit of the food service area. Snacks are displayed on the other side of this counter, and there is storage in the cabinetry below. The walls, counters, and wood partitions are in good condition, with no major visible wear. The resilient flooring is also in good condition. Off to the side of the food service area is a narrow employee-only

storage space with three coolers and an adjacent retail office, separated by full-height wood partitions.

FIGURE 4-81
Dining Area Looking North Toward Gift Shop

FIGURE 4-82
Dining Area Looking East

FIGURE 4-83
Entrance to Food Service Area

FIGURE 4-84
View from Hot Food Counter to Food Service Area

The kitchen is separated from the food service area by a small hallway, for staff only, and accessed off to the north of the dining area. The ceramic tile flooring in the kitchen is in good condition, although it does show evidence of heavy use. We did not observe any damaged tiles, and the surface is smooth and suitable for equipment. The walls are painted concrete masonry units, and the ceiling is exposed concrete, all in good condition. The main challenge in the kitchen was the lack of adequate ventilation, and Resulting heat.

FIGURE 4-85
Kitchen Equipment

FIGURE 4-86
Kitchen Equipment

FIGURE 4-87
Fan Added by Park Staff to Improve Kitchen Ventilation

FIGURE 4-88
Kitchen Equipment

4.1.5.3 Main Floor: Gift Shop

The gift shop is located at the far end of the dining area along the eastern window wall and is defined by wood partitions on the south and west sides. There is a large, sliding

barn door on the south wall for visitors to enter the shop, which is in good condition. The cashier counter immediately on the right when entering the shop has a small space behind it with linoleum flooring, which is in fair condition compared to the rest of the flooring. The rest of the space has a polished concrete floor with a few minor cracks.

The concrete ceiling is in good condition, except for a crack in front of the windows in the center of the gift shop as described in the Exterior Envelope section. The staff reported that there has often been active water infiltration in this location. As a temporary solution, the staff placed a bucket on the counter under this crack to catch water. The shop has built-in wood cabinetry at counter height along the window wall and along the outer partition. The counters on these cabinets have laminate, which is in fair condition. The staff reported that the cabinets were likely built in the early 2000's, and they appear to be in good condition.

FIGURE 4-89
Entrance to Gift Shop from Dining

FIGURE 4-90
Entrance to Gift Shop from Dining

4.1.5.4 Main Floor: Service Lobby

Just off the main foyer, to the southwest, is the Service Lobby, which is an open space that includes the only public elevator and the primary public convenience staircase. This public staircase leads to the ground floor Pack Room and additional public restrooms, but it isn't well marked. This staircase is concrete with metal guardrails which double as the handrails. The stair materials are generally in good condition, but their appearance is utilitarian rather than a welcoming, and may contribute to the public not taking advantage of the restroom facilities on the lower level, discussed in the Visitor Experience section.

The polished concrete floors, concrete walls and ceilings of the service lobby are in good condition. The interior of the elevator looks to have original materials, which include linoleum flooring, plastic laminate wall, and fabric wall coverings, which have stains and a noticeable odor. The fluorescent lighting fixtures above a perforated ceiling grid in a square pattern has an aged look. These finishes are beyond the typical useful life for a high traffic area and detract from the visitor experience when using the elevator.

FIGURE 4-91
Service Lobby Looking to Elevator

FIGURE 4-92
Interior of Public Elevator

4.1.5.5 Ground Floor: Pack Room & Public Bathrooms

From the lobby, the stairs lead visitors down to the Pack Room, which was intended to provide a common, rest area for hikers. This space has concrete flooring, CMU painted walls, and an exposed concrete ceiling with many pipes, ducts and cables exposed. The materials are durable and generally in good condition, but the space appears utilitarian and has a noticeable odor, indicting inadequate ventilation. Visitors must travel through the Pack Room from the elevator to reach the ground level entrance to the Observatory Museum, which is signed as the museum's accessible entry. Unfortunately, this single door to enter the museum does not comply with accessible requirements as described in the Code section. The only ground level public exterior entry door is also off the Pack Room.

FIGURE 4-93
Pack Room, Looking Toward Exterior Door

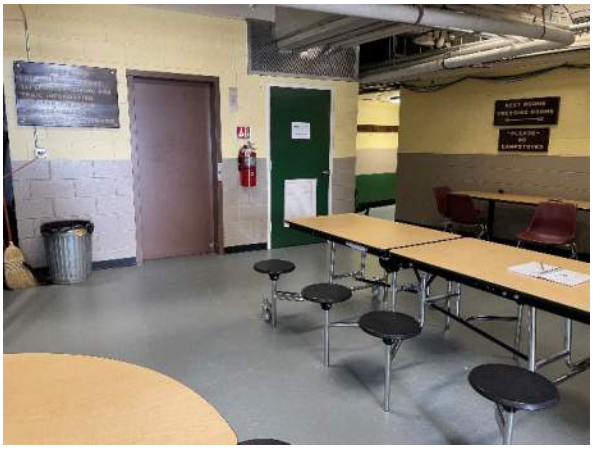


FIGURE 4-94
Pack Room, Looking Toward Elevator

The hallway off the ground floor Pack Room that leads to the public restrooms has acoustic ceiling tiles that are stained, broken and in poor condition. The public men's and women's restrooms both have a high threshold when entering, which are not ADA compliant as described in the Code section. The women's restroom has 3 toilets and 1 sink, and the men's restroom has 2 toilets, 1 urinal, and 1 sink, and all appear to be in good condition. Both bathrooms have ceramic tile flooring and ceramic tile extending up to the top of the partitions, all in fair condition. The ceilings are acoustic tile drop ceilings in poor condition. The State Park keeps the lights off in these bathrooms to save energy, but that means the vents are also not running. The bathrooms have a noticeable odor, like the adjacent Pack Room, so more ventilation would be beneficial. These ground floor public bathrooms are not easily visible to most visitors, and the aged materials and low lighting make them less desirable to use that the main floor restrooms.

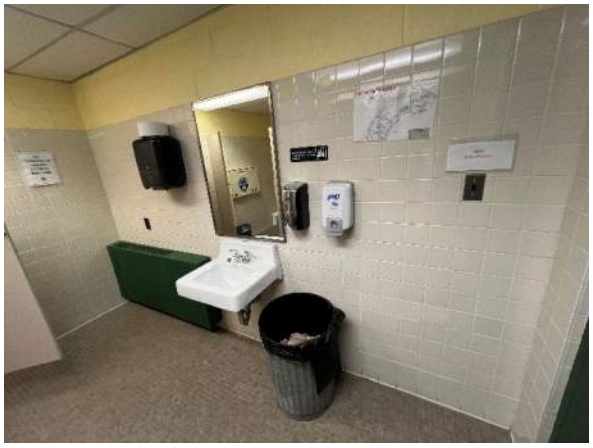


FIGURE 4-95
Lower-Level Restroom

FIGURE 4-96
Public Stair from Main Level to Lower Level

4.1.5.6 Ground Floor: Staff Quarters

The hallway off the Pack Room extends beyond the restrooms to the Staff Quarters. The stairs adjacent to the kitchen also lead down to the staff lounge on the ground floor. The hallway from the ground floor public bathrooms to the staff has the most damaged and stained acoustic ceiling tiles. All doors in the hallways have knobs instead of levers. The Janitor's Room off this hallway has general storage and includes a very small employee bathroom with one toilet and one sink. This bathroom has aged ceramic tile floors and original lighting fixtures.

The extent of the ground floor staff living quarters has acoustic tile drop ceilings in poor condition. The kitchen next to the lounge has floor, wall, ceiling, and cabinetry materials in poor condition with finishes well beyond their useful life. The shared staff bathroom adjacent to the lounge has ceramic tile floors in poor condition, acoustic tile ceilings in poor condition, a shower stall in fair condition, sinks in good condition, and toilet partitions are in poor condition with no locks.

The staff bedrooms and offices have painted gypsum wallboard in good condition, and the painted concrete floors appear to be in good condition. The acoustic ceiling tiles in these spaces are in poor condition, have cracks, and many tiles have stains from water damage

from the main floor above. Many of the bedrooms include original wood windows. As noted in the Building Envelope section, there is a ongoing project to replace these original lower level windows.

FIGURE 4-97
Staff Bedroom

FIGURE 4-98
Original Wood Window

4.1.5.7 Main Floor: Observatory Offices

The entrance to the Observatory office space is west of the dining hall and gift shop. This tenant area is comprised of several small spaces housing restrooms, storage, offices, and staff lounge. Most of these spaces have resilient flooring, painted wallboard on the walls, and 2x4 acoustic tile drop ceilings. They are in fair to good condition, except for isolated areas of the ceiling that are warped or have water damage. These damaged tiles are in locations where leaks were identified in the Exterior Envelope section. Where the sheet flooring meets tiles resilient flooring in the office space or polished concrete flooring at the exit doors, there are some areas of uplift that should be addressed. The flooring in the staff lounge is carpet in good condition. The ceiling in the IT/storage room is painted plywood in fair condition.

The wood frames around the windows in the office area show water damage. This corner of the building receives some of the harshest wind and wind-blown rain, ice and snow.

FIGURE 4-99
Observatory Office Corridor

FIGURE 4-100
Observatory Office Space

4.1.5.8 Observatory Tower

Within the observatory tower that connects the ground floor, main floor, roof deck and observation level, the finishes are utilitarian but generally fair to good. The inside surface of the walls, metal stair, metal and wood floor decks, and doors are all painted. There are some isolated areas with water damage that should be repaired. The paint on and around the doors is chipped and should be refreshed. The painted plywood flooring on the upper levels should be refreshed. There is often water in the tower due sealing issues at the door to the roof, as noted in the Exterior Envelope section. This leads to the lower level concrete floors being slippery. The concrete floors have rubber tiles laid on top of them to help make the flooring less slippery. Addressing the water leaks at the door would help reduce this condition.

FIGURE 4-101
Observatory Tower Stair and Landing

FIGURE 4-102
Observatory Tower Door

4.1.5.9 Ground Floor: Observatory Staff Quarters

The Observatory staff quarters include lounge space, sleeping rooms, bathroom, kitchen, pantry and storage. The lounge space floor is covered with a dated carpet in fair condition. The kitchen has resilient flooring in good condition. Both areas have painted wallboard walls and painted CMU walls, and 2x4 acoustical dropped drop ceilings, both in good condition. The kitchen cabinetry and appliances also appear to be in good condition. The staff sleeping rooms floor is carpeted; the walls and ceiling are covered with wood paneling. All in good condition.

4.1.5.10 Ground Floor: Observatory Museum and Gift Shop

The Observatory museum's primary access is from a generous staircase leading down from the dining area. There are large signs on the ceiling of the dining room just past the main foyer directing visitors down to the museum and gift shop. The finishes, furnishings and lighting in these spaces are all in very good condition. The only area that needs to be addressed is an isolated area in the gift shop directly below the main floor restrooms where there is a leak on the ceiling that has damaged the carpet tile. This Museum space does suffer from a lack of ventilation and fresh air. Please see the building Systems section for more information.

The second means of egress from this gift shop leads through a breezeway space along the north side of the building. The breezeway is unfinished and lacks accessibility as described in the Code section. While this space is not typically accessed by the public, at a minimum, the uneven concrete pavers on the floor should be leveled to avoid tripping.

FIGURE 4-103
Observatory Museum

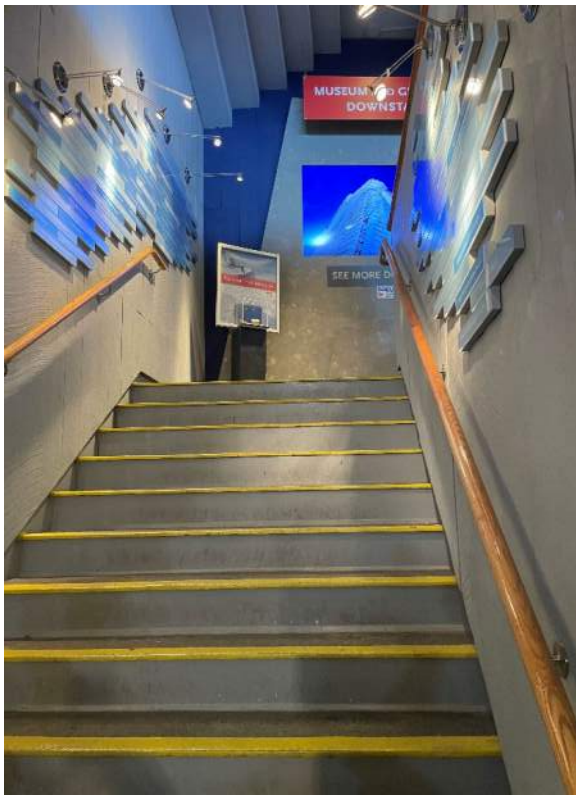


FIGURE 4-104
Stairs from Observatory Museum up to Main Floor

4.1.6 Sherman Adams Visitor Experience & Circulation

The purpose of this portion of the assessment is to evaluate the visitor experience at the Sherman Adams Summit Building and identify areas for improvement to enhance the public's experience of this important destination. This building plays a critical role in providing information, food, and amenities for those who visit the Mount Washington Summit. The building should function well and provide an accessible and comfortable place to have a place to gather and to take in the unique and beautiful landscape.

4.1.6.1 Entry & Foyer

All visitors enter and exit the building through the same main entrance at the pair of garage doors on the east side of the building. This area is heavily travelled; however, the flow of people is hindered by a small utility vehicle that is regularly parked just inside one of the large garage doors. Finding another location for that equipment, especially on the busiest of days, would improve the entry sequence. Visitors travel from the entry into the airlock, which functions like a vestibule, before they enter the main foyer. The airlock space has benches for people to rest and enjoy the view, and there is a variety of signage here that includes the Sherman Adams basic floor plan and the amenities within the building.

There is a secondary entrance to the building on the east side of the building, located on the ground floor off the Pack Room. This lower entrance is hard to find because visitors need to descend a set of exterior stairs which lack signage, and thus are infrequently used. Improving access to the secondary entrance may help alleviate some congestion at the main entry and help direct some visitors to use the ground level restrooms which are under used as compared to the main floor restrooms.

FIGURE 4-105
Busy Main Entry

FIGURE 4-106
Exterior Steps to Lower Lever Entry Door

Many visitors gather just outside the main entry and in the main entry area, in the airlock/vestibule space, and in the foyer, especially when the Cog Railway trains are arriving and departing. Three trains typically arrive at once, holding 70 people each. In bad weather, those people all seek cover in the main entry. In good weather people are also outside, impacting the site outside the main entry. The immediate arrival of many visitors is a major challenge for the visitor center.

The public restrooms on the first floor, conveniently located off the foyer, are accessible and well-placed. However, these restrooms are often congested, even though the number of plumbing fixtures generally meet the minimum code requirements based on the building's capacity (see Tables 8-10 in the code summary section). These restrooms feel undersized primarily when there is a large influx of visitors all needing to use the restrooms at the same time, which occurs when the three Cog Railway trains arrive at the building. The additional bathrooms on the ground floor could ease congestion if signage and wayfinding were improved to direct visitors to these facilities.

The post office, which is used by the Cog Railway staff as their base for the day, is located at the front, southeast corner of the foyer in a prime location. This small office is the first thing visitors see upon entering, which can sometimes compete with more immediate visitors' needs, such as accessing the information desk, restrooms, or finding the dining area. The Cog Rail staff like that they can see trains arriving, and they can easily attract visitors to buy one-way tickets and postcards. The Cog Railway does not pay rent for this post office space.

FIGURE 4-107
Outside Main Floor Restrooms, New Display Wall

FIGURE 4-108
Visitors Waiting for Cog Rail Outside Main Entry

The information desk can be found just past the post office and opposite the restrooms. It has a long counter with an adequate amount of space for up to three staff. Notably, there is a new display in the foyer on the wall across from the information desk that offers information about the Mount Washington Summit, enhancing the educational aspect of the arrival experience. Also, there is helpful information posted at and around the desk. However, this can be hard to focus on as there is abundant miscellaneous other signage packed into the foyer area, including directional, informational, historical, and other signage. This is a challenge throughout the public spaces of the main floor.

The service lobby, located to the left of the foyer, provides the only accessible route to the ground floor via elevator. Unfortunately, minimal signage pointing out the elevator makes it difficult for visitors to find. Additionally, the service lobby's functionality is compromised by its use for trash collection, with visible recycling bins, a trash dolly, and trash bins crowding the space. This is the primary space where recycling and trash are gathered because it is adjacent to the garage where the staff truck is parked. Trash bags are collected in the truck throughout the day, and then the truck leaves at 3:30 pm daily to take the trash down to the base of the mountain. This setup detracts from the visitor

experience, especially since the service lobby is the sole accessible pathway to the lower-level bathrooms.

FIGURE 4-109
Service Lobby with Trash Storage, Signage For Lower Level Restrooms

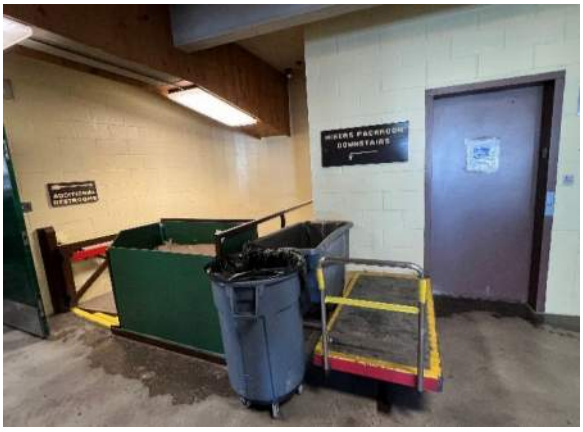


FIGURE 4-110
Service Lobby with Trash Storage, Signage for Lower Level Restrooms

4.1.6.2 Dining & Food Service

When entering the dining area from the foyer, the observatory museum signage is the most visible. The State Park signage is much smaller, inconsistent, and there is too much of it – making it less functional. The dining hall and adjacent food service area are often congested for visitors on typical days. To maximize seating, State Park Staff recently introduced new tables with fixed stools, which increased the seating capacity to 174 people. This type of table also keeps the space looking tidy and makes it easier to clean. The staff noted that this amount of seating must be maintained.

FIGURE 4-111
Entrance to Dining and Sign to Lower-Level Observatory Museum

FIGURE 4-112
Dining Area

The food service area directs traffic in a U-shaped flow, however, its layout creates bottlenecks. Visitors are first greeted by the popular hot food counter, which tends to get

clogged with people and lines, particularly in front of the oversized condiments counter and into the dining area. The food options are limited by the small kitchen, and our team overheard many people asking questions about the food options available. The layout also causes congestion near the entrance and at the cashier stations, where only one of the two stations is typically in use, resulting in additional backups.

FIGURE 4-113
Food Service Hot Food Area

FIGURE 4-114
Inside Food Service Area

4.1.6.3 State Park Gift Shop

The gift shop on the main floor is run by the State Park. It is very popular and is often congested. The entry is at the rear, northeast corner of the dining hall, which is not as convenient or visible as it could be to attract visitors. Some merchandise is displayed just outside of the entrance to the shop, and a clothing rack is in front of the shop as well.

There are two doors to the gift shop, so customers can enter from two points. The two-way flow is not ideal for customers to navigate the shop, especially when it is crowded. The recently located T-shirt shelves behind the rear sales desk have been beneficial for staff and customers because the T-shirt display was a congestion point previously.

FIGURE 4-115
Inside Gift Shop

FIGURE 4-116
Inside Gift Shop

4.1.6.4 Observatory Museum and Gift Shop

Access to the Observatory Museum down the staircase in the dining area is very well signed. The newly renovated staircase, gift shop and museum are easy to navigate and welcoming for visitors. However, the space feels stuffy due to the lack of ventilation. The designated accessible path to the museum, which is down the elevator from the Service Lobby and through the Pack Room, does not comply with accessibility requirements.

FIGURE 4-117
Observatory Museum Sales Area

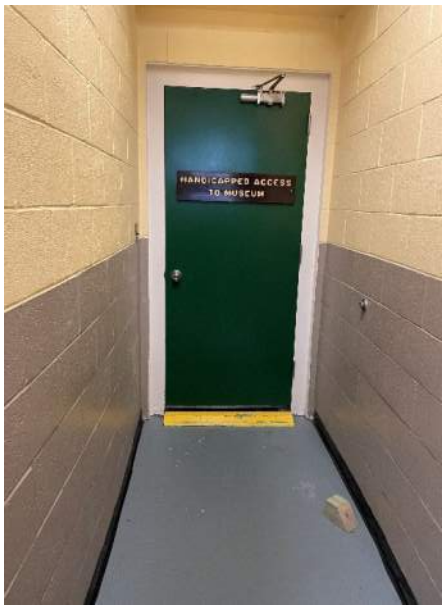


FIGURE 4-118
Lower Level Entry Door for Observatory Museum

4.1.6.5 Visitor Wayfinding & Building Signage

As has been alluded to in earlier sections of the Visitor Experience section, there is a wide variety of different types of signage throughout the Sherman Adams building, reflecting the many years it has been a hub for the Summit. While the impulse may be that more signage is better for wayfinding, the large number of signs and their inconsistency of graphic style detracts from the Visitor's ability to clearly navigate to important public areas within the building. Engaging in a comprehensive signage review and implementation of new, clear graphic standards could greatly benefit the clarity of the Visitor Experience.

4.1.7 Sherman Adams Staff Experience

The three primary categories of staff operating within the State Park include visitor service staff (located at the information desk, maintaining the restrooms and helping elsewhere), retail and food service staff (working in the dining area and gift shop), and maintenance staff (focused on larger systems throughout the buildings and site). There are some State Park staff at the Sherman Adams building 24 hours a day. Those that do not stay overnight come to the summit for the day via State Park vans up the Auto Road. The staff is active throughout the Sherman Adams building and the entire summit helping to make this very busy Park runs smoothly, in all weather conditions.

4.1.7.1 Visitor Services Staff Experience

There can be up to three staff at the Information Desk on a typically busy day. The staff reported that the standing and work area behind the desk felt like an adequate amount of space. The visitor services staff wear multiple hats, and they juggle maintaining the restrooms throughout the day and helping in other areas during other staff breaks, for example. Maintaining the public restrooms is one of the major focuses for visitor service staff due to the high traffic. These bathrooms are conveniently located near the information desk, but constant cleaning is required throughout the day.

Staff reported they do not have a good line of sight from the information desk to the main entrance doors, the hallway to the service lobby, or to the stairs that lead down to the hiker's pack room. They would like their visibility to these areas to improve.

FIGURE 4-119
Behind Information Desk

FIGURE 4-120
Information Desk

4.1.7.2 Food Service Staff Experience

The kitchen staff reported that their workspace is small and poorly ventilated, which can sometimes cause an uncomfortable work environment. A single fan in front of a small ventilation hole is insufficient to remove heat, particularly when the stove and pizza ovens are used. The staff reported that they typically try to avoid using both pizza ovens, for example, because the kitchen gets too hot. Despite this, the kitchen equipment is in good condition, and the staff uses the space efficiently to produce high quality food options for visitors.

In addition, the kitchen is separated from the food service area by the stairwell that leads to the ground floor storage and staff quarters. This setup makes it challenging for the staff because they must cross over the top landing of the stairs to bring food to the hot food counter, and other staff can be simultaneously crossing in the opposite direction.

FIGURE 4-121
Narrow Hallway between Food Service and Kitchen

FIGURE 4-122
Storage in Narrow Hallway Between Food Service and Kitchen

In addition to desiring more space, the staff expressed a need for additional equipment. This included wanting a larger sandwich cooler unit to accommodate high sandwich production since not having adequate and convenient cold storage for sandwich ingredients often causes inefficiencies in food prep. Storage space in the kitchen is generally lacking, and ingredients are often retrieved from a freezer in the hot food area and a freezer in the corridor just outside of the kitchen. It would also be beneficial if larger coolers and freezers could be utilized to consolidate the dispersed cold food storage.

The kitchen equipment includes:

- Six-burner stove with a commercial hood
- Two-tier pizza oven
- Floor-standing sandwich cooler with a reach-in lid for ingredient storage
- Stainless-steel worktable
- Dishwashing area with counter
- Small handwashing sink

In general, the key challenges in the kitchen are ventilation issues, space constraints, and dispersed storage. The poor ventilation makes it difficult for staff to work comfortably when cooking at a high volume. The kitchen is undersized for the current food preparation demands, limiting the menu and leading to cramped conditions.

FIGURE 4-123
Food Storage in Corridor Leading to Observatory Office Space

FIGURE 4-124
Dispersed Food Storage Near Retail Staff Office

The staff experience running the food service area seemed generally positive, but there are areas for improvement with how the space functions. One of the biggest challenges for the staff is needing to serve a high volume of visitors and move them through quickly. Another major challenge is to conveniently store food and beverage items efficiently and to be able to re-stock quickly.

The layout of the space is not ideal for accommodating high visitor traffic. For example, the hot food counter is located at the entrance to the food service area, where one or two staff will serve items like soup, chili, hot dogs and pizza cafeteria style. Because the staff need to serve each person individually, a line often forms in front of the counter that spills out into the dining area. This location is also likely to put extra pressure on the staff to move quickly since the line can block part of the entrance into the servery. The long condiments counter, which defines the outer edge of the food service area, also minimizes the entrance area. At the servery exit, there is often only a single cashier due to staffing challenges. This setup often leads to bottlenecks at the checkout line, creating delays during peak hours.

The staff reported that it can be challenging to keep everything well stocked, particularly the four grab-and-go refrigerators that are lined up along the wall. They need to replenish the bottled drinks in these refrigerators most often, which can be difficult since these are front-loading and are often obstructed by visitors. Extra premade food and drinks are mainly stored in the three refrigeration units located in the small, adjacent room outside of the retail office. These provide a convenient spot for extra stock, aligning with the staff's

principle of "store where you sell." However, the staff suggested having a larger, walk-in cooler outside of the retail office would consolidate and expand the storage for these high-turnover items. In addition, the staff noted that the coffee dispenser and hot chocolate dispenser were not ideal for serving these popular beverages to so many visitors, but the staff needs easy maintenance and minimal waste, which limits how they can serve coffee and hot chocolate.

Increased staffing at the cashier station, and reconfiguring the refrigerator layout, maybe dispersing the beverages, creating more entrances, could enhance the flow of operations and improve the experience of the staff.

4.1.7.3 Retail Staff Experience

The retail staff reported that the gift shop has grown more popular, and sales have been steadily increasing each year. While this is positive for the State Park, they feel that the shop is undersized and does not hold enough merchandise or have enough storage. The shop is often very busy with customers, and they staff up to three cashiers on the busiest days.

The staff would like the layout to be more open instead of an "L" shape, and they mentioned it would be helpful if the main aisle could be wider. This would allow for greater visibility from the back of the shop for staff to monitor customers who enter the front of the shop. Additional storage is also needed in or adjacent to the gift shop. The staff would like to install tall cabinets just outside of the gift shop, where a counter is currently located in front of the entrance to the Observatory wing. There are radiators along the window wall behind the cabinets. The radiators get very hot, so the staff will often turn them off, so it can be difficult to regulate an ideal temperature in this space.

The retail staff offices also share similar ventilation issues with those identified in the kitchen, although less extreme since there is not cooking equipment adding to the heat problem.

FIGURE 4-125
Retail Storage in Corridor Leading to Observatory Office Space

FIGURE 4-126
Lower Level Retail Storage

4.1.7.4 Food Service & Retail Storage

Adequate and efficient storage for Food Service & Retail is one of the biggest challenges the staff experiences in the daily operations of the visitor's center. The unique location on the summit means that the staff must strategically plan to make sure that all the food, merchandise, etc. needed each day are available and stored in the building. These supplies are brought up each morning from remote storage locations.

Storage for food service items is dispersed throughout the building on both floors. The main storage includes a cooler behind the hot food counter, three coolers for drinks and food items in the narrow room in front of the retail office, and cabinet space under the condiment and snack counters. There is also storage in the hallway where there is a counter with cabinetry underneath just outside of the kitchen, and there is a freezer located next to this counter as well. Further, there is a freezer for food service located under the staff stairs and another freezer in the ground floor storage room. This dispersed arrangement, while currently serving the food service needs, is not ideal and contributes to inefficiencies. The storage located in the hallway outside of the kitchen also puts it in view of the public, which is not ideal.

The State Park gift shop maximizes its space efficiently with built-in cabinets on either side of the shop, and well-placed display units in the center of the shop and along the back wall. However, the tightly packed store creates challenges in maintaining visibility to the front of the shop and in maintaining stock levels, as storage is mainly located in the ground floor storage room. Boxes with additional stock are often stacked just outside the back entrance of the gift shop and along the hallway leading to the Observatory offices. As with the food service in this hallway, storing retail items here is not ideal as it is in the view of the public.

On the ground floor, there is a large storage room that holds mostly retail stock, with two rows of shelving, vertical cabinetry and stacks of boxes. Because this storage room isn't large enough, the staff utilize built-in cabinetry for clothing items that line the corridor outside of the storage room. Boxes of retail items are often put on the floor of this corridor, and staff reported that this has raised concerns from the fire marshal.

In summary, the storage challenges include inefficient flow for staff, difficulty for visitors to recognize public versus private space, and safety concerns where storage minimizes egress and circulation space. The stacked boxes in the hallways, the freezer unit and counters outside of the Observatory offices, and the overflowing retail stock just outside of the gift shop, for example, are the most immediate concerns. Storage space is generally well used throughout the building, but the dispersed nature of storage poses many challenges and space limitations are evident.

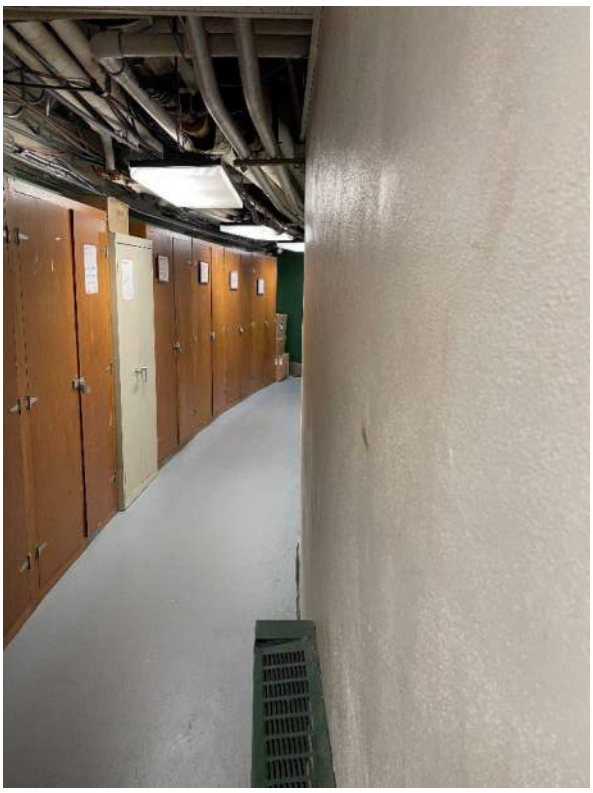


FIGURE 4-127
Retail Storage Cabinets in Lower-Level Corridor

FIGURE 4-128
Retail Storage in Retail Office

4.1.7.5 State Park Staff Quarters

The staff living quarters on the ground floor are generally well laid out but could benefit from updates. The lounge area, while functional, has outdated finishes and furniture, and the kitchen adjacent to the lounge needs renovation. The commercial-grade vent hood over the residential stove did not have a recent service date listed. All the cabinets and finishes in the kitchen are beyond their usable life. The lunch counter in the lounge is a beloved social space, and the staff like that the front of the counter is covered with shingles from the old Cog Railway office.

There are six bunk rooms for staff who stay overnight or live on-site for four days at a time due to their long drive from their homes. Each bunk room houses two people who are on alternating shifts, ensuring that staff members have time alone in their rooms. These rooms are not sprinklered, unlike the observatory bunk rooms. Staff did not report that more bunk space is required, but they emphasized the importance of maintaining the current capacity. The bunk rooms also have aged finishes, and the acoustic ceiling tiles are in the poorest condition seen in the building. Many ceiling tiles are damaged from leaks or cracked from age, and many tiles are missing or were moved for access. The State Park staff shared that they are currently working to find an appropriate replacement window for the windows in the State Park and Observatory staff quarters. Not only do the windows need replacement to better keep out harsh wind, rain and snow, the current windows do not allow for egress.

There are two administrative offices dispersed within the row of bunk rooms. The staff noted that there is a need for more administrative workspace to accommodate growing staff needs. They are looking for a new Wastewater Operator and an Operations Manager, so two new offices would be ideal. More dispersed administrative workspaces could be a challenge in the future, so devising a plan for consolidating the administrative space could be beneficial.

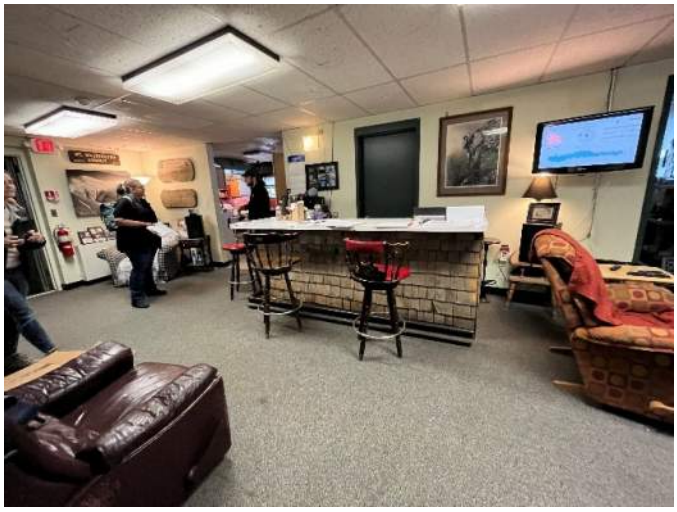


FIGURE 4-129
Staff Lounge

FIGURE 4-130
Staff Kitchen

4.1.7.6 Service and Maintenance Areas

The State Park staff have made good use of every available space within the building, taking advantage of storage spaces for tools and equipment wherever possible. As with the Food Service and Retail storage, the dispersed nature of these maintenance and service areas is somewhat inefficient.

The largest service spaces are the Maintenance Workshop adjacent to the Staff Lounge and the Garage adjacent to the Main Entry. The Maintenance Workshop is well laid out & well used. It is important to maintain some workshop space in the Sherman Adams building because the building is in use throughout the winter and it can be infeasible to leave the building to reach tools and supplies. The Garage is typically full throughout the day with the State Park pick-up truck that is used to collect trash for removal each day. The space is critical for this important operation function. However it's location directly adjacent to the Main Entry is challenging in terms of the Visitor Experience and access to the lower level via the Service Lobby stairs and elevator.

In addition to these two main service spaces, there are small storage closets for maintenance supplies located adjacent to the Garage, Pack-Up room, Boiler room, and Staff Living Quarters.

The other important Maintenance & Equipment spaces are discussed in the Building Systems section.

FIGURE 4-131
Garage with Pick-Up Truck

FIGURE 4-132
Maintenance Workshop

4.1.8 Building Diagrams

The following Building Diagrams were intended to supplement the narrative space descriptions in the previous sections. These focus on: the separation of Public (Visitor) and Private (Staff) spaces, the circulation of the Public and Staff through the building, the space use by program, areas of the building where water leaks were observed, and observations on the types and distribution of wayfinding signage throughout the building.

SHERMAN ADAMS PUBLIC/PRIVATE SPACE DIAGRAM – FIRST FLOOR

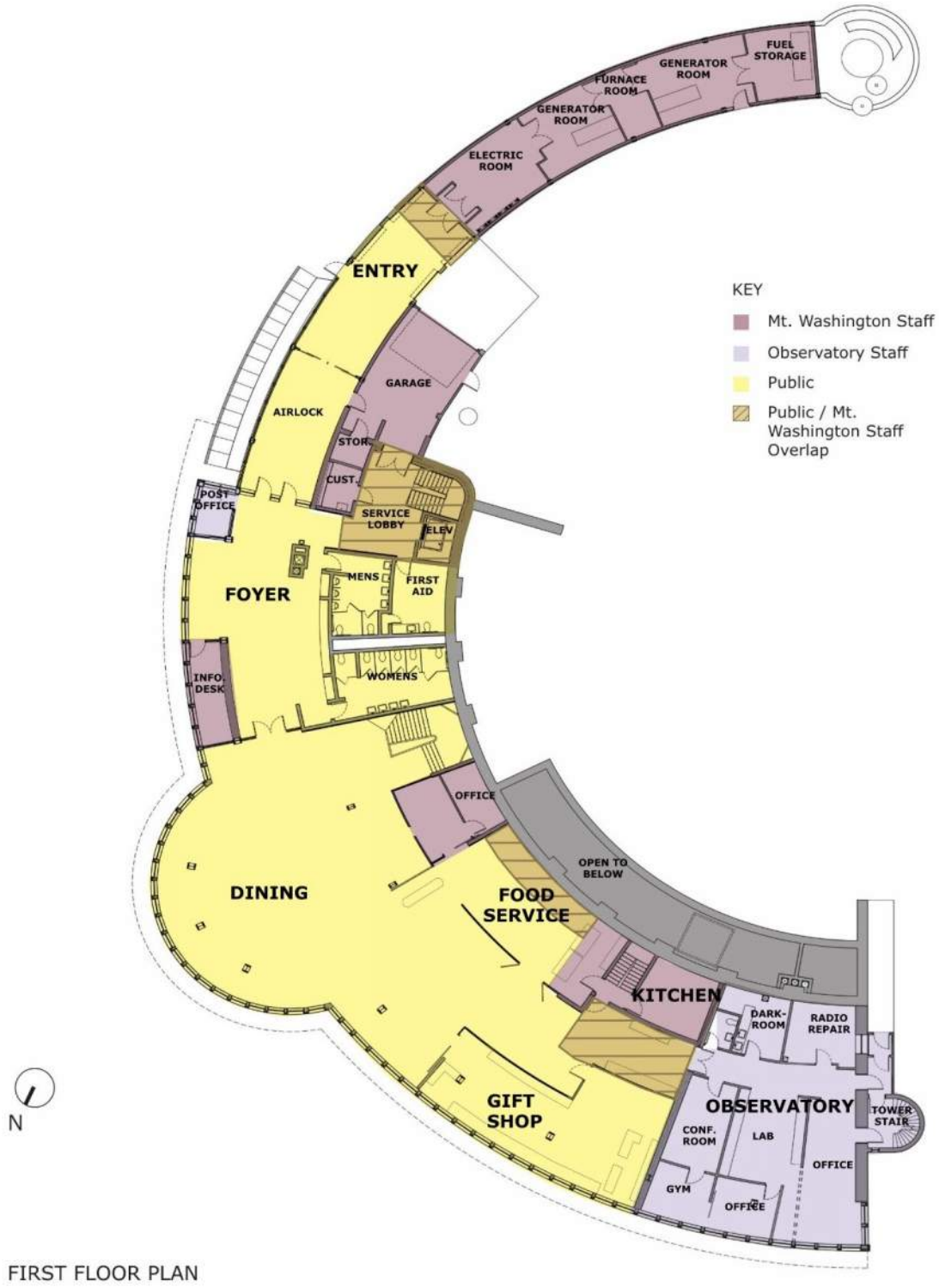


FIGURE 4-133
Sherman Adams Public/Private Space Diagram - First Floor

SHERMAN ADAMS PUBLIC/PRIVATE SPACE DIAGRAM – GROUND FLOOR

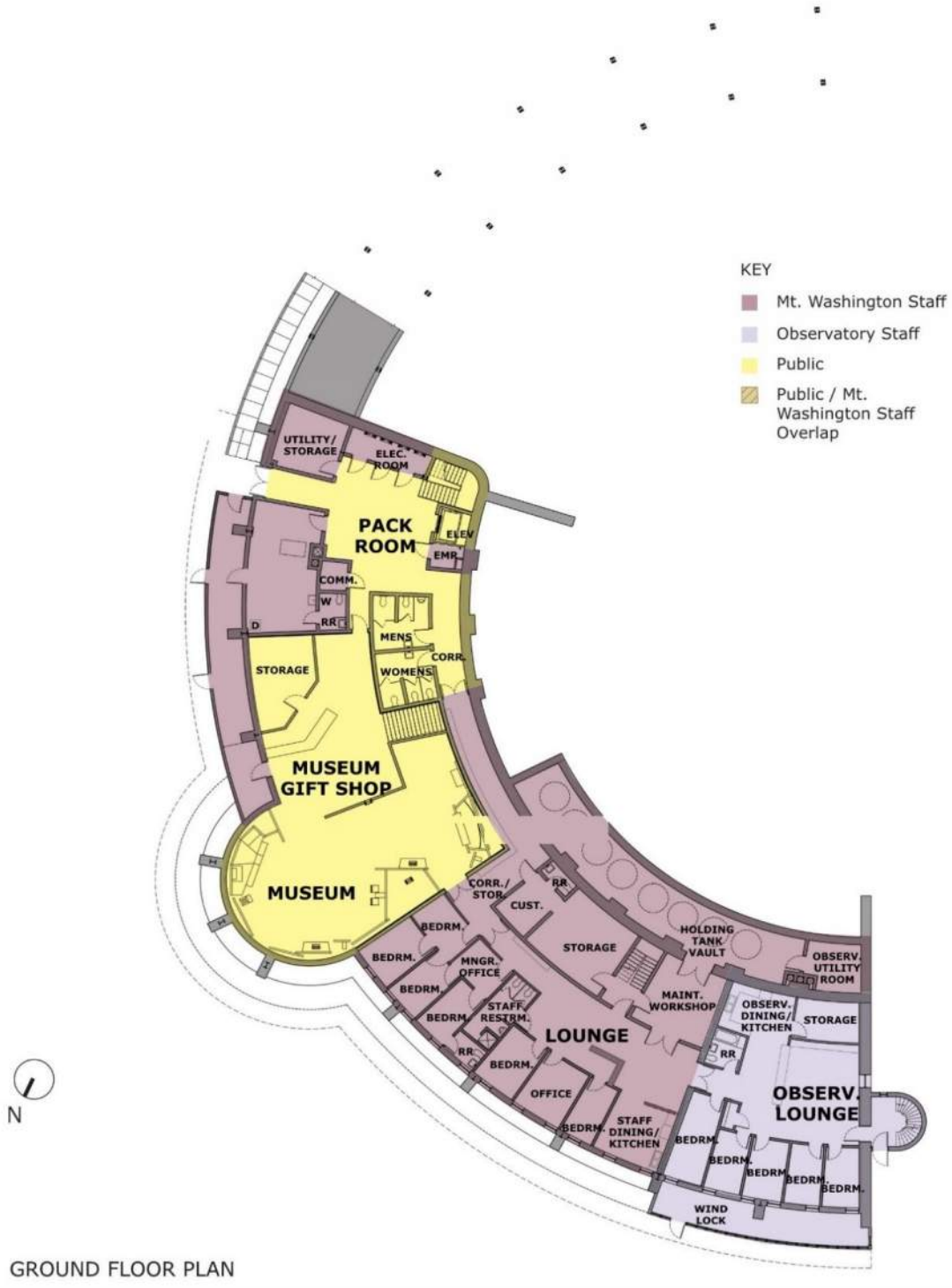


FIGURE 4-134
Sherman Adams Public/Private Space Diagram – Ground Floor

SHERMAN ADAMS CIRCULATION DIAGRAM – FIRST FLOOR

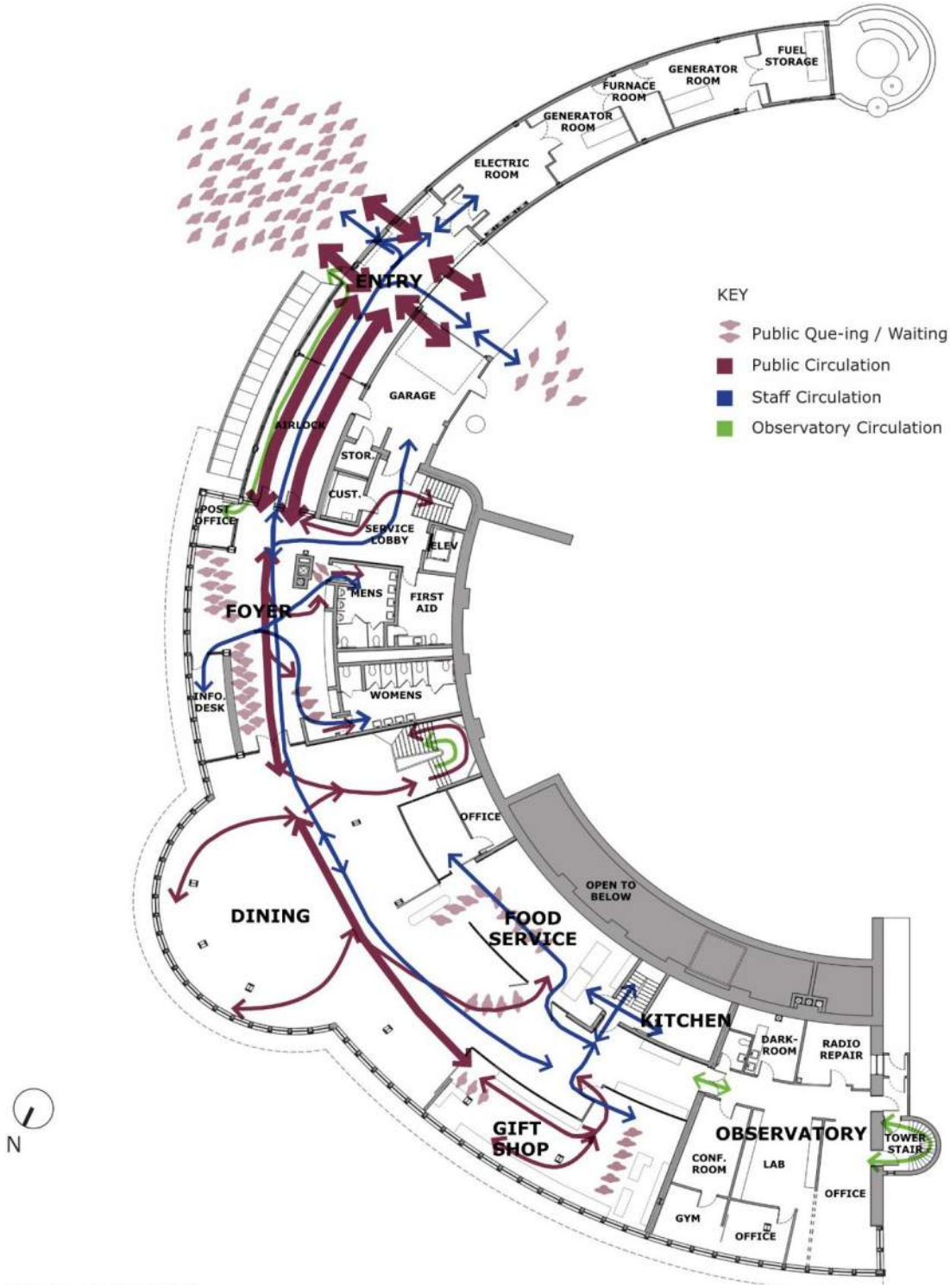


FIGURE 4-135
Circulation Diagram – First Floor

SHERMAN ADAMS CIRCULATION DIAGRAM – GROUND FLOOR

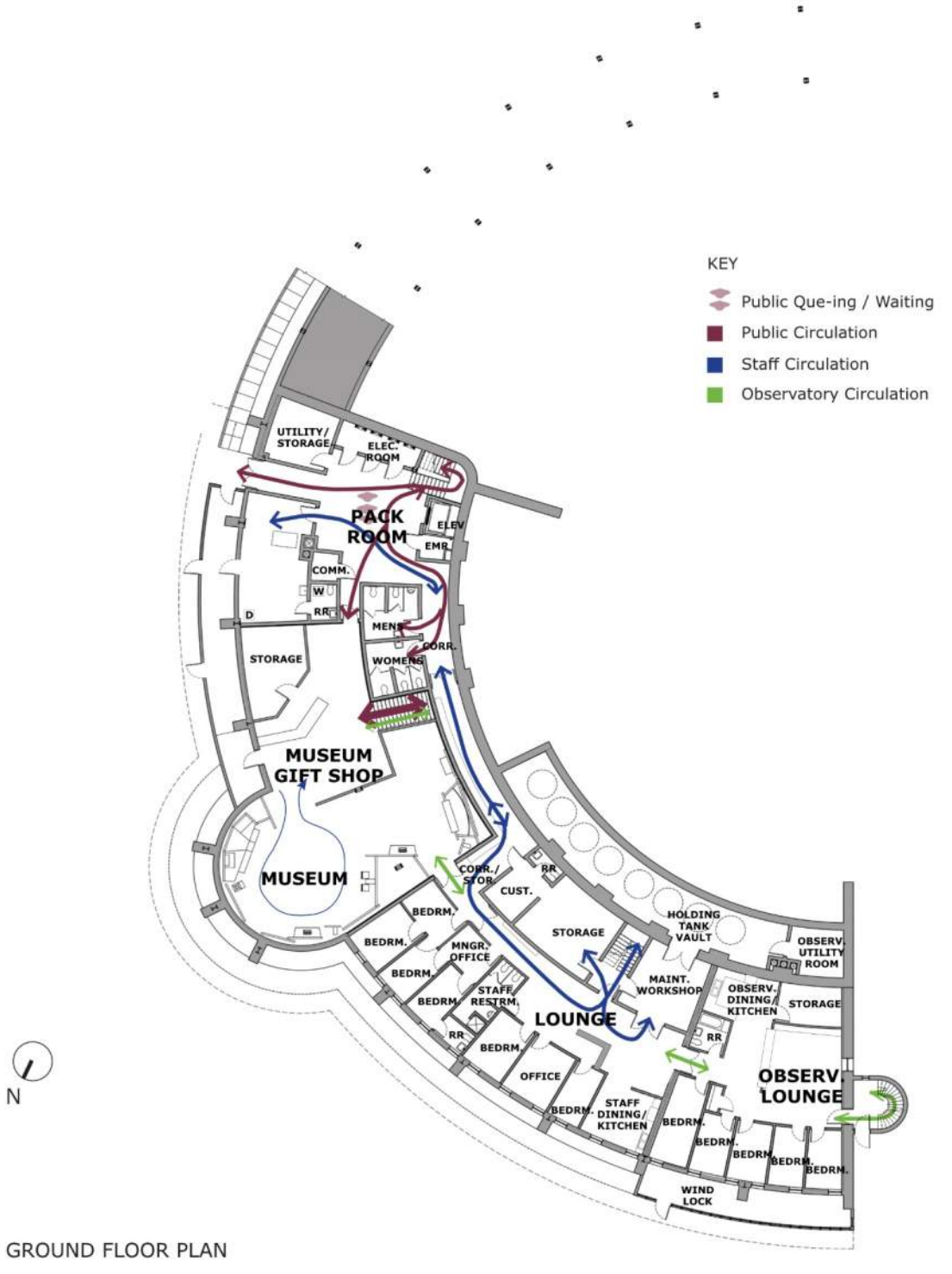


FIGURE 4-136
Sherman Adams Circulation Diagram – Ground Floor

SHERMAN ADAMS SPACE USE DIAGRAM – FIRST FLOOR

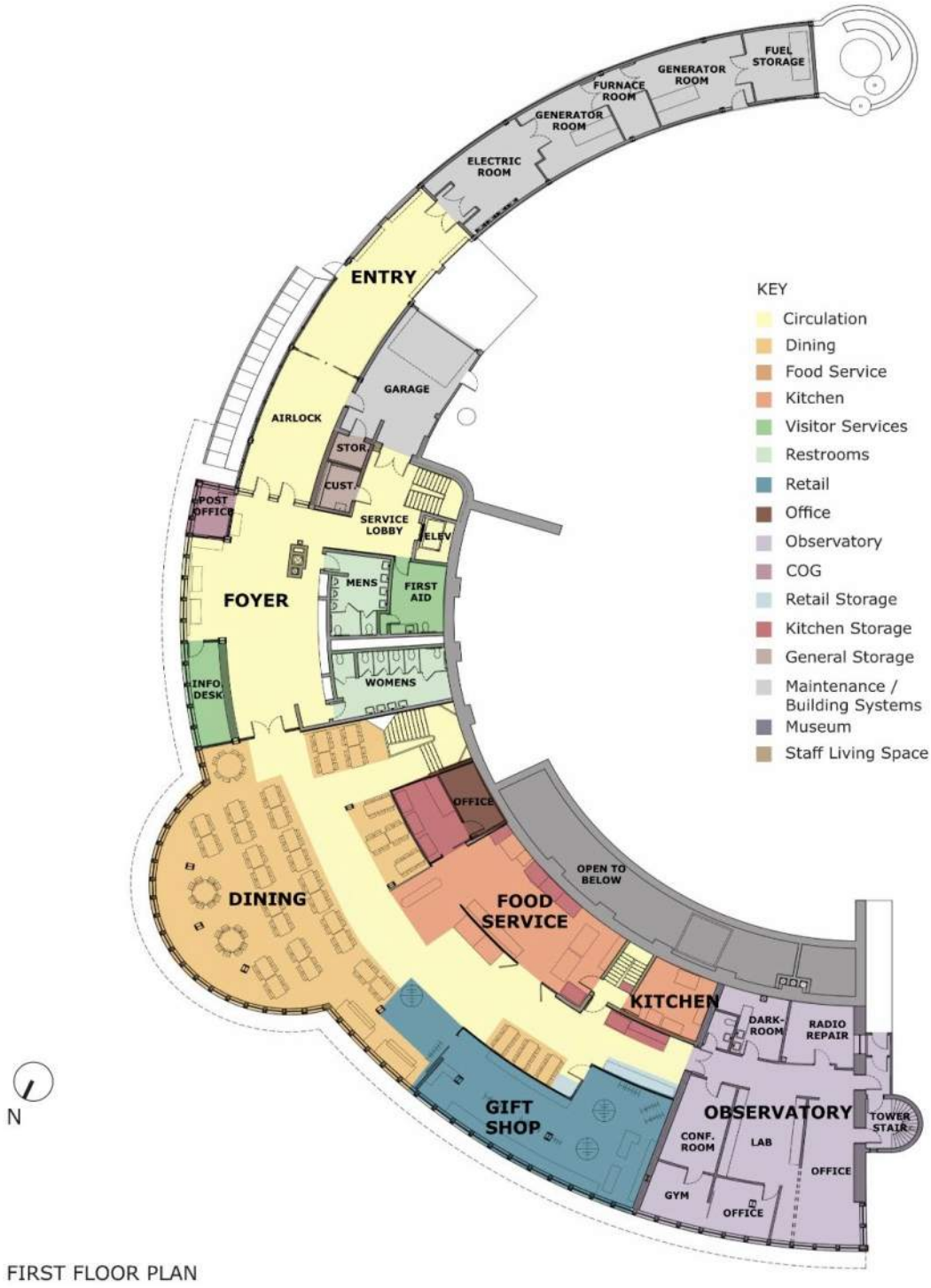


FIGURE 4-137
Sherman Adams Space Use Diagram – First Floor

SHERMAN ADAMS SPACE USE DIAGRAM – GROUND FLOOR

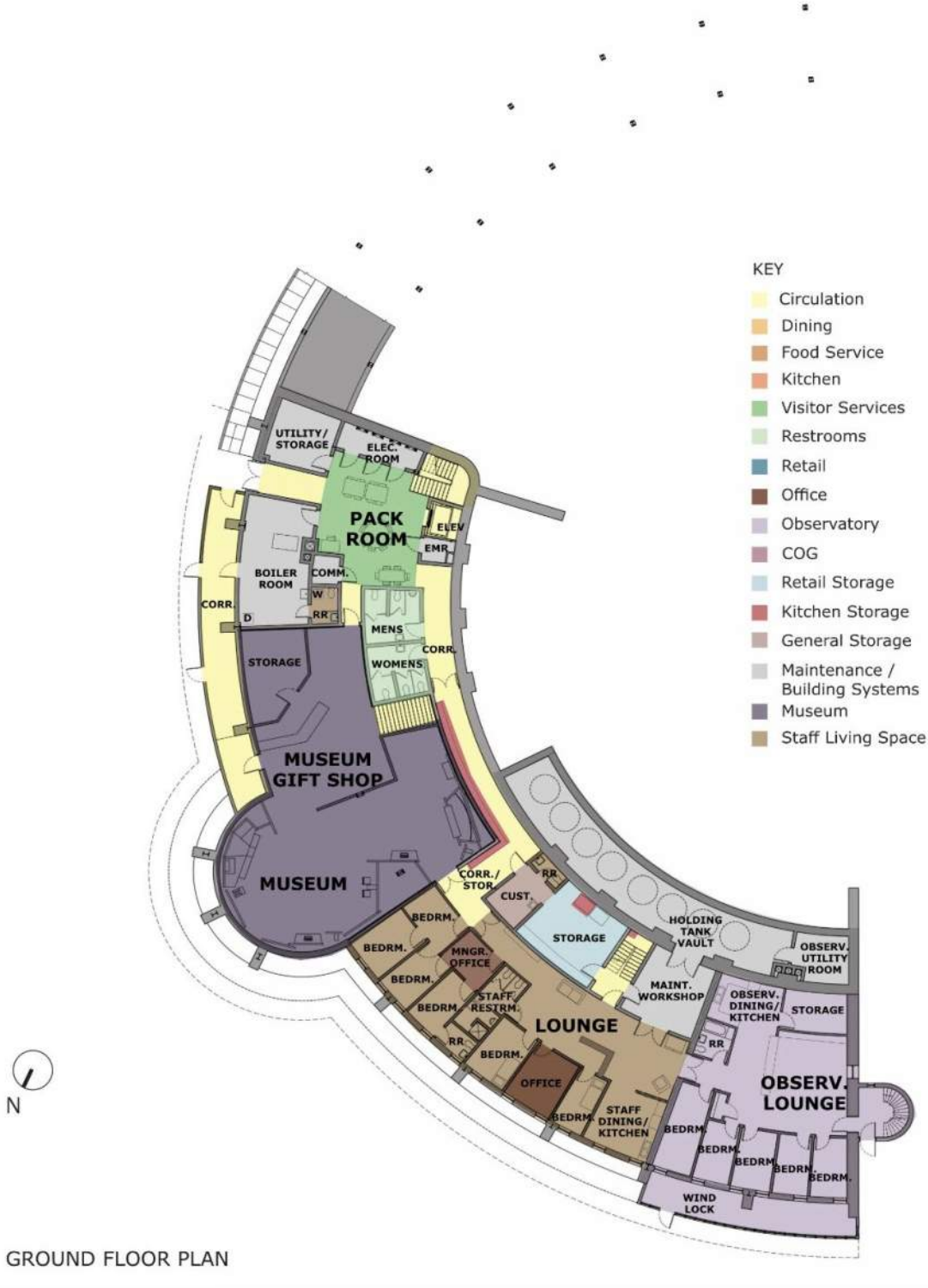


FIGURE 4-138
Sherman Adams Space Use Diagram – Ground Floor

SHERMAN ADAMS WATER ISSUES DIAGRAM – FIRST FLOOR

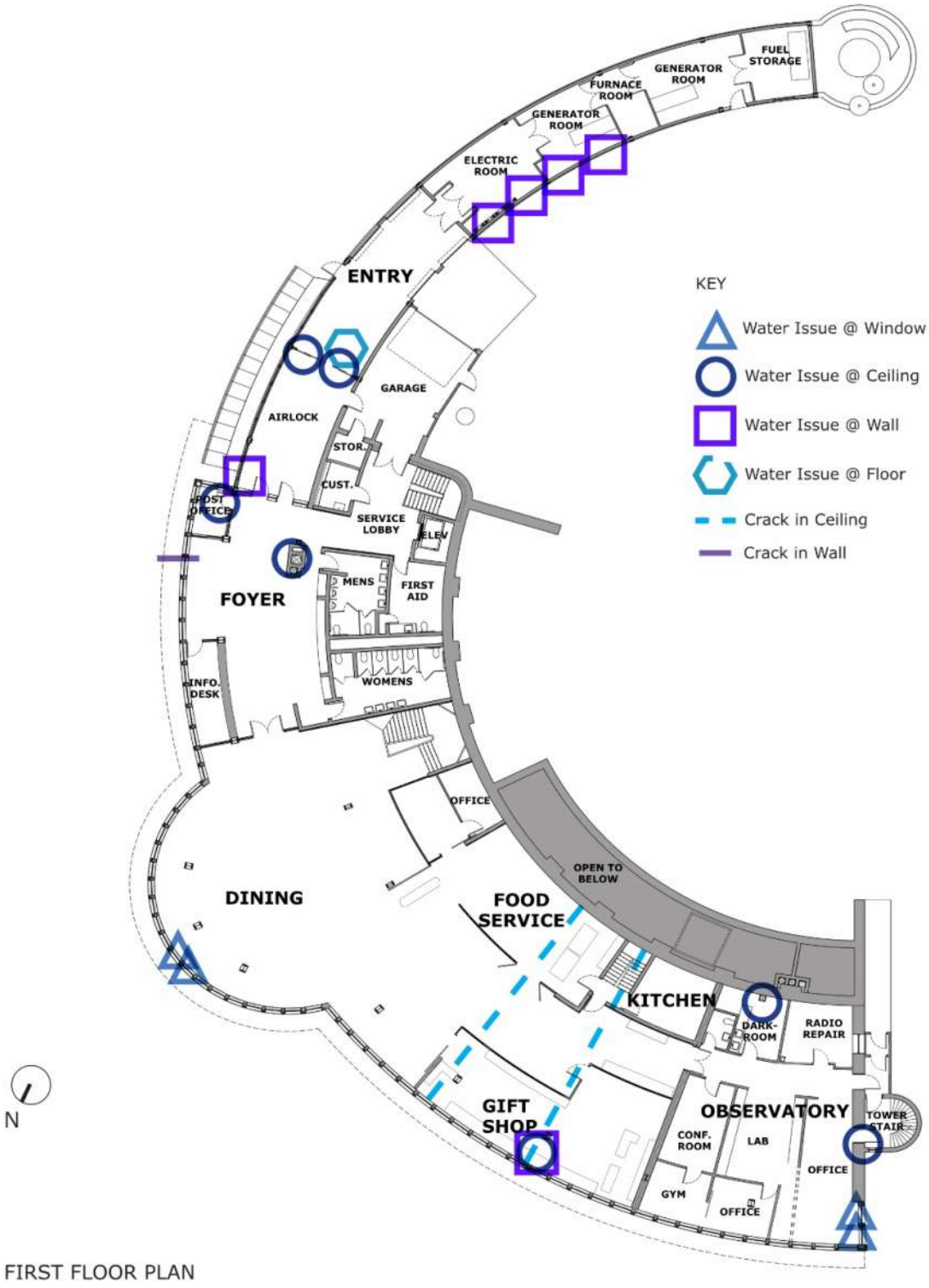


FIGURE 4-139
Sherman Adams Water Issues Diagram – First Floor

SHERMAN ADAMS WATER ISSUES DIAGRAM – GROUND FLOOR

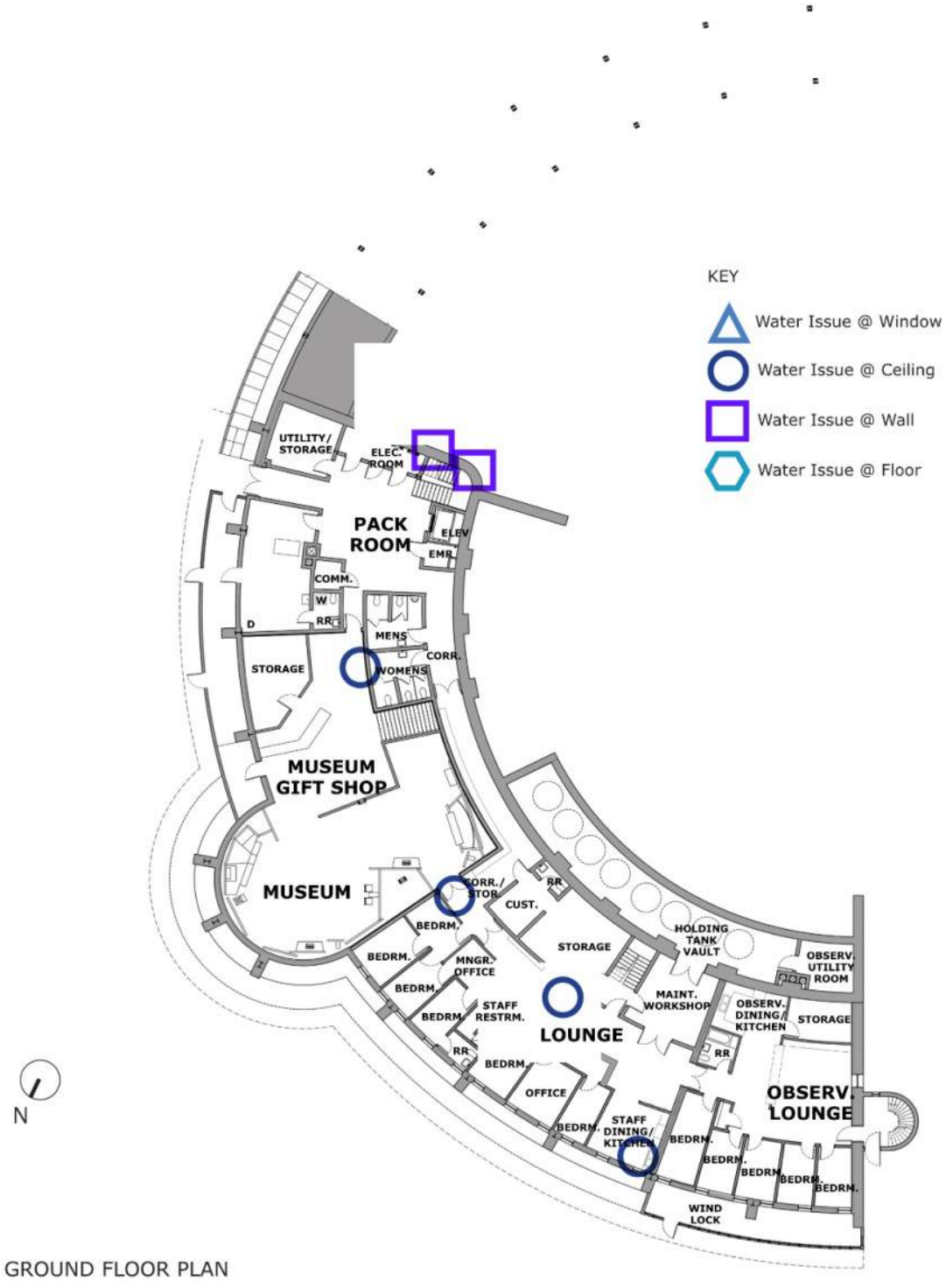


FIGURE 4-140
Sherman Adams Water Issues Diagram – Ground Floor

SHERMAN ADAMS SIGNAGE DIAGRAM – FIRST FLOOR

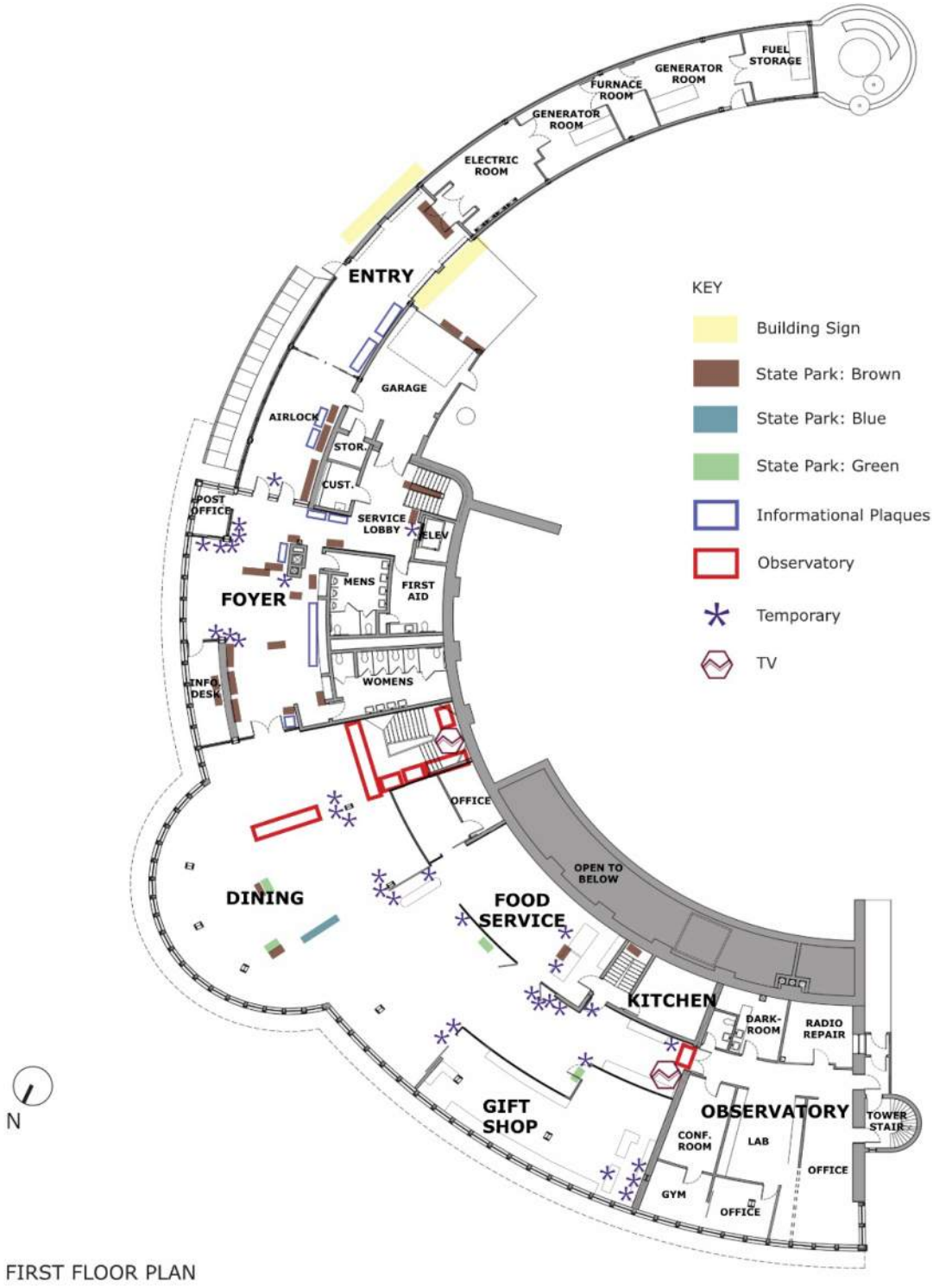


FIGURE 4-141
Sherman Adams Signage Diagram – First Floor

SHERMAN ADAMS SIGNAGE DIAGRAM – GROUND FLOOR

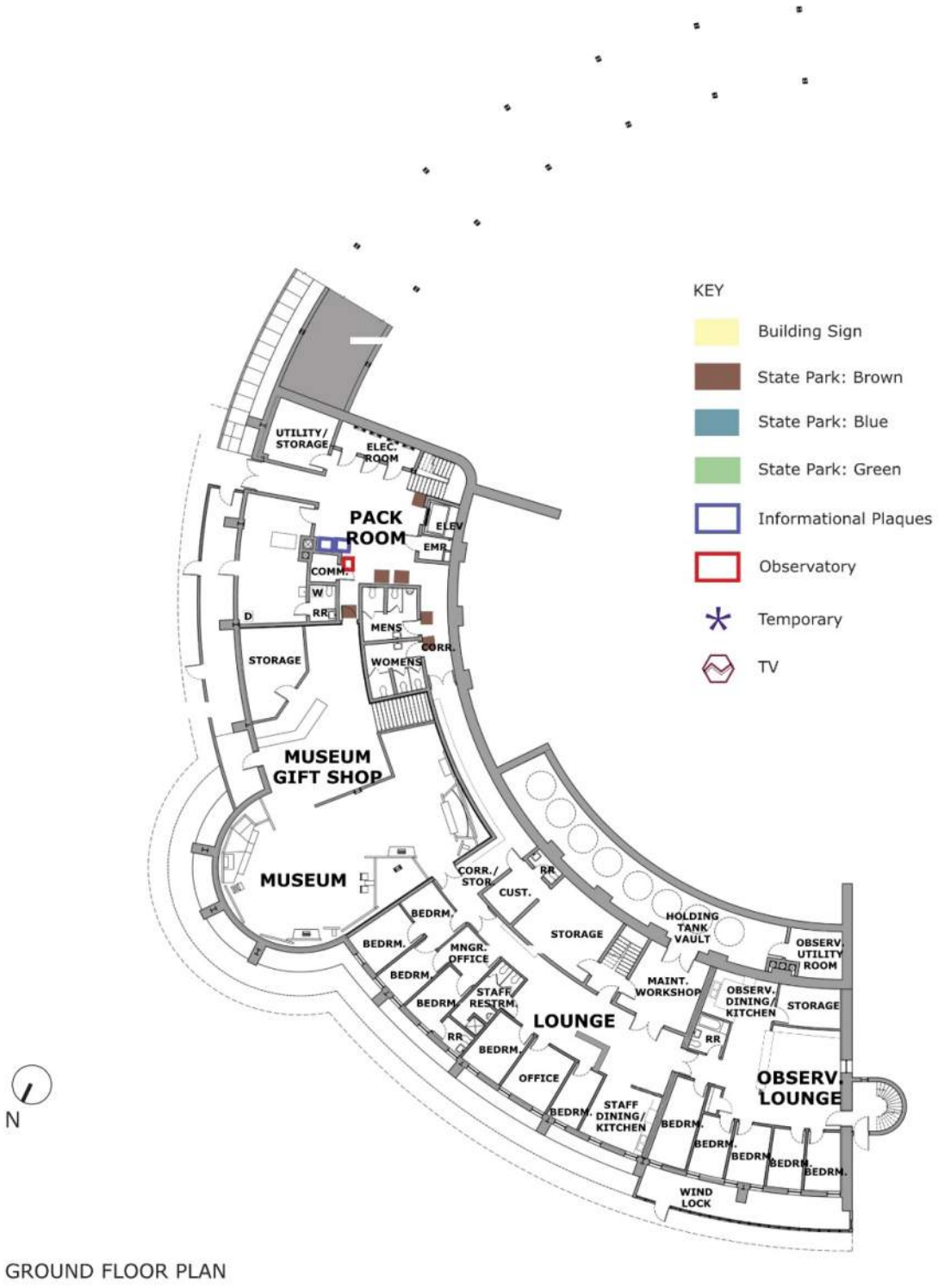


FIGURE 4-142
Sherman Adams Signage Diagram – Ground Floor

4.1.9 Code Summary Appendix A: Sherman Adams Existing Conditions Code Summary

Existing conditions are organized within the following tables in this Appendix as outlined below (Categories 1-3 & Accessibility). These conditions are documented for informational purposes and are intended to serve as a reference for consideration as part of future maintenance work and future projects within the building.

Category 1 – Existing conditions that have not been maintained as originally constructed, present a potential risk to life safety, and may be subject to citations by the fire department, irrespective of the work performed. We suggest addressing these items to the extent feasible to ensure these elements are upgraded and maintained as originally designed.

Category 2 - Existing conditions that may have complied with the code at the time of construction, but do not comply with Saf-FM 304 (NFPA 101). Saf-C 6000 gives the authority to the local fire marshal to issue violations for existing conditions that do not comply, regardless of whether work is taking place in the building.

Category 3 - Existing conditions that do not comply with the New Hampshire Building Code and could be required to be corrected as part of future work depending upon the scope of work.

Accessibility - Existing conditions that could be upgraded to improve the level of accessibility within the building.

Section 4.1.1 Sherman Adams Code Compliance

Tighe&Bond

Category 1			
#	Existing Condition & Recommendation	Location	Picture
1.	The corridor wall at the Ground Floor Pack Room was observed to be damaged. Penetrations that pass-through fire barriers are required to be protected by a firestop system (NFPA 101, 8.3.4.2.1 & NHSBC 714) An approved firestop system could be installed or the CMU could be repaired to maintained the 1-hour corridor rating.		
2.	Doors to the food service stair include manual hold open devices. Note that fire door assemblies are required to be self-closing and latching (NHSBC 716.2.6). The manual hold open devices could be removed to maintain the enclosure of the vertical opening.		

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Section 4.1.1 Sherman Adams Code Compliance — Tighe&Bond

	Category 2		
#	Existing Conditions Recommendations	Location	Picture
3.	The man door at the main entrance was observed to be locked, and is marked as an exit on the 2021 Egress plans. Doors are not permitted to be locked in the direction of egress (NFPPA 101, 26.2.3.5.1 & NHSBC 1010.2.4). It is recommended that this door remain unlocked from the inside.		
4.	The second door was observed to be locked in the direction of egress out of the generator room wing. Doors are not permitted to be locked on the egress side (NFPPA 101, 26.2.3.5.1 & NHSBC 1010.2.4) It is recommended that this door remain unlocked from the inside.		
5.	This exit discharge door was observed to be locked in the direction of egress. Doors are not permitted to be locked on the egress side (NFPPA 101, 26.2.3.5.1 & NHSBC 1010.2.4) New locking hardware or a new door could be installed so that the door remains unlocked on the egress side.		

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Section 4.1.1 Sherman Adams Code Compliance — Tighe&Bond

Category 2			
#	Existing Conditions Recommendations	Location	Picture
6.	The door label on the door to the elevator machine room is painted over. Labels are required to be provided on all rated doors and are required to be maintained in a legible condition (NFPA 101, 8.3.3.3.3 & NHSBC 712.1.13.1). The paint could be scraped off of the door label so that it is legible.		
7.	The sliding door from the gift shop into the snack bar/seating area was observed to have a lock. Doors are not permitted to be locked on the egress side (NFPPA 101, 26.2.3.5.1 & NHSBC 1010.2.4) The horizontal sliding door or locking hardware could be replaced.		
8.	The door to the Cafeteria/Foyer was observed to be locked. Doors are not permitted to be locked in the direction of egress (NFPPA 101, 26.2.3.5.1 & NHSBC 1010.2.4). When these doors are locked, the foyer spaces is only provided with access to a single exit and is required to be provided with access to two exits based on common path of travel (NFPA 101, 13.2.5.2). At least one of these doors could remain unlocked to mitigate this condition.		

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Section 4.1.1 Sherman Adams Code Compliance

Tighe&Bond

Category 2			
#	Existing Conditions Recommendations	Location	Picture
9.	The guard openings in the handrails were observed to be excessive. Openings in guards, other than approved existing guards, are required to restrict the passage of a sphere 4" in diameter (NFPA 101 7.2.2.4.6.3, NHSBC 1015.4). Assuming these guard openings were previously approved, no action would be required. Otherwise, the guard openings could be limited to 4".		
10.	No handrails are provided along the steps in the exit access corridor from the museum. At least one Handrail is required to be provided on one side of existing stairs (NFPA 101, 7.2.2.4.1.6). A handrail could be installed at the steps within the exit access corridor.		
11.	The doors to the park staff sleeping rooms weren't observed to bear fire door labels or be equipped with closers. Doors to sleeping rooms are required to prevent the passage of smoke and be provided with latches or other mechanisms to keep the door closed (NFPA 101 26.3.5.1, 26.3.5.5 & NHSBC 711.2.4.3) Compliant door closers could be provided that do no compromise the rating of the fire door.		

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Section 4.1.1 Sherman Adams Code Compliance

Tighe&Bond

#	Existing Conditions Recommendations	Location	Picture
Category 2			
12.	Each door leaf into the park staff sleeping wing at this double door assembly provides a clear width of 27". Existing doors are required to provide a minimum clear opening of 28" (NFPA 101, 7.2.1.2.3.2). A clear opening of 32" is required for new doors (NHSBC 1010.1.1). The double doors could be replaced with an assembly consisting of at least one leaf that provides a clear width of 32".		
13.	There are no handrails at the existing ramp within the airlock. At least one handrail is required at existing ramps (NFPA 101, 7.2.2.4.1.6). A handrail could be provided on either side of the ramp.		

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Section 4.1.1 Sherman Adams Code Compliance

Tighe&Bond

#	Existing Condition & Recommendation	Location	Picture
	Category 3		
14.	The gate at the top of the stairs limits the width of the stair to 37". Existing egress stairs are required to have a minimum 36" clear width (NFPA 101, 7.2.2.2.1.1(b)). New egress stairs are required to have a minimum 44" clear width (NHSBC 1011.2). The clear width of the stair is required to be increased to at least 44" if used for exit access and altered or if a change of occupancy to a higher hazard category occurs on either level served by the stair (NHSEBC 801.4 & 1011.5.1).		
15.	The handrails serving the Stair do not extend at the top or bottom of the steps and the outside handrail is not continuous. Handrails are required to extend 12" parallel at the top landing, and sloping for one tread depth at the bottom, and to be continuous along the full length of the stair (NHSBC 1014.6). Handrail extensions are required to be provided if the existing handrails are altered or if a change of occupancy to a higher hazard category occurs (NHSEBC 801.4 & 1011.5.1).		
16.	The handrails serving the Stair do not extend at the bottom of the steps. Handrails are required to slope for one tread depth at the bottom (NHSBC 1014.6). Handrail extensions are required to be provided if the stair is used for exit access and the existing handrails are altered or if a change of occupancy to a higher hazard category occurs (NHSEBC 801.4 & 1011.5.1).		

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Section 4.1.1 Sherman Adams Code Compliance — Tighe&Bond

	Category 3		
#	Existing Condition & Recommendation	Location	Picture
17.	The exit door was measured to have a clear width of 28.5″ and a step was observed. Doors are required to have 32″ clear width, and a level landing is required on each side of the door (NFPA 101, 7.2.1.2, 7.2.1.3.1 & NHSBC 10110.1.1, 1010.1.4) A new door could be provided with a clear width of 32″ and level landings on both sides of the door.		
18.	The running slope of the ramp gets up to 11.2%. New ramps are not permitted to exceed 8.3% (NHSBC 1012.2). If a change of occupancy took place within a portion of the building that used this ramp for egress, it would need to be addressed.		
19.	A sliding door serves as a second, required exit from the gift shop at the First Floor based on common path of travel and occupant load (NHSBC 1006.2.1). Horizontal sliding doors are not permitted to serve means of egress from spaces with an occupant load exceeding 10 (NHSBC 1010.1.2 Exception 9). The horizontal sliding door could be replaced with a side-hinged door.		

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Section 4.1.1 Sherman Adams Code Compliance

Tighe&Bond

Accessibility			
#	Existing Condition & Recommendation	Location	Picture
20.	The maneuvering clearance at the accessible stall was observed to be obstructed by the adjacent urinal. Maneuvering clearances are required to be provided at the stall door (ANSI A117.1, 604.3) The hinge side of the door could be switched to resolve this item.		
21.	The information counter measured 42" above the finish floor. A portion of the public use side of the counter surface is required to be at least 36" in length and 26"-36" in height (ANSI A117.1, 904.3) Either the existing information counter could be modified or a new portion could be constructed at a compliant height.		
22.	The slope in the airlock measured 11.2%. Walking surfaces with a slope greater than 5% are required to be considered a ramp. Ramps are not permitted to have a running slope that exceeds 8.3% (ANSI A117.1, 405.2). Handrails could be provided on both sides and the running slope could be reduced to improve this ramp from an accessibility perspective.		

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Section 4.1.1 Sherman Adams Code Compliance

Tighe&Bond

Accessibility			
#	Existing Condition & Recommendation	Location	Picture
23.	The riser heights were observed to be non-uniform due to the curb at the Ground Floor for flooding. All steps on a flight of stairs are required to have uniform tread depths and be 7" maximum (A117.1 504.2). A landing could be constructed so that the risers are consistent and the change in level to the landing is compliant.		
24.	The depth of the elevator car is 45", which is less than the minimum 54" required for existing cabs (ANSI 117.1 407.4.1).		
25.	The Men's restroom on the Ground Floor is not along an accessible route, does not include accessible fixtures and lacks clear floor space. Accessible restrooms are required to be designed per NHSBC 1110.2 and A117.1 Chapter 6. Improvements could be made to improve the accessible route into the restroom and the fixtures provided.		

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Section 4.1.1 Sherman Adams Code Compliance

Tighe&Bond

Accessibility			
#	Existing Condition & Recommendation	Location	Picture
26.	The Women's restroom on the Ground Floor is not along an accessible route, does not include accessible fixtures and lacks clear floor space. Accessible restrooms are required to be designed per NHSBC 1110.2 and A117.1 Chapter 6. Improvements could be made to improve the accessible route into the restroom and the fixtures provided.		
27.	The accessible route to the museum is non-compliant due to level changes and maneuvering clearances at the door. Accessible routes are required to comply with ANSI A117.1, 401. An automatic door opener could be provided to address the maneuvering clearances, and a compliant threshold could be installed to address the threshold.		
28.	The single user restroom in the First Floor Observatory space is not accessible. Restrooms are required to be accessible per NHSBC 1110.2 and A117.1 Chapter 6.		

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Section 4.1.1 Sherman Adams Code Compliance

Tighe&Bond

Accessibility			
#	Existing Condition & Recommendation	Location	Picture
29.	The park staff bathroom is not accessible. Restrooms are required to be accessible per NHSBC 1110.2 and A117.1 Chapter 6.		

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FIGURE 4-143
View of Front (South) Entrance and west side of Tip Top House

4.2 Tip Top House

4.2.1 Overall Conditions

The Tip Top House is the oldest standing structure at the summit, built in 1853. Constructed of wood brought to the top of the mountain on horseback and stones from the summit, it was the second structure built on the summit to provide overnight accommodation for visitors. The Tip Top House is currently closed to the public because it is undergoing interior renovations. The last major renovation was in 1984 by the Appalachian Mountain Club. The work included reinforcing the exterior stone walls, adding concrete sills for the windows, reconstructing the roof, adding an HVAC system, as well as interior renovations.

The building has been dormant in recent years. After this current renovation, the State Park is planning for the building to host self-guided tours for visitors so that the public can learn about this unique historic asset. As the building has undergone several updates and changes in its history, there is not one specific period that the self-guided tour is aiming to recreate, but rather it is aiming to share the overall history of the building on the site.

As described in the following sections, the primary conditions that were identified for the Tip Top House are:

- Code compliance upgrades, associated with other future work:
  - Accessibility deficiencies, specifically at the building entrance
- Exterior conditions:
  - Roof is likely beyond its service life.
  - Water leaks at the windows on the west elevation
  - Heavily weathered exterior rafter tails and window headers
- Interior conditions:
  - Moisture on the interior, specifically along the south wall
  - Interior humidity and musty smell due to lack of ventilation

- Round post bolted connections to ridge beam are insufficient

4.2.2 Tip Top House Building Code Summary

The following are the findings by Code Red Consultants based on their survey of the building at the time of their site visit on September 12, 2024.

The Tip Top House is listed in the national register of historic places (Inventory#: SGP0005). There are exceptions for historic buildings in the NHEBC that should be considered as part of future work in the building.

Code Summary Table 1: Existing Building Summary	
Occupancy:	Group A-3, Assembly (> 49 Occupants) Group B, Business (<49 Occupants)
Construction Type:	The building construction includes a mix of combustible and noncombustible structure. The building is classified as Type VB/ Type V(000).
Height & Area:	Building Height: 1 story Footprint Area: ~2,000 sf
Fire Protection/ Fire Alarm Systems:	The building is not equipped with a sprinkler or standpipe system. Fire extinguishers were observed throughout. Local smoke detection is provided.
Means of Egress:	The building is served by two exits and provided with illuminated exit signs.

4.2.2.1 Applicable Codes

The following is a list of applicable codes currently adopted in the State:

Building Code	New Hampshire State Building Code (NHSBC) which amends the 2021 International Building Code (IBC) and the 2021 International Existing Building Code (IEBC).
Fire Safety Code	Saf-C 6000 - The New Hampshire State Fire Code, which includes, but is not limited to: Saf-C 6008.02 - Fire Prevention Code: An amended version of the 2021 NFPA 1, Fire Code. Saf-C 6008.04 - Life Safety Code: An amended version of the 2021 NFPA 101, Life Safety Code.
Plumbing Code	The 2021 International Plumbing Code (IPC) as amended by the State of New Hampshire.
Electrical Code	2020 Edition of NFPA 70, National Electrical Code as amended by the State of New Hampshire.
Mechanical Code	2021 International Mechanical Code as amended by the State of New Hampshire.
Energy Code	2018 International Energy Conservation Code (IECC) as amended by the State of New Hampshire.

Accessibility	2017 Edition of ICC/ANSI A 117.1, Accessible and Usable Buildings and Facilities. 2010 ADA Standards for Accessible Design.
Other	Various National Fire Protection Association (NFPA) codes and standards as referenced by the codes listed above, including the following: - 2021 NFPA 10: *Standard for Portable Fire Extinguishers* - 2019 NFPA 13: *Standard for the Installation of Sprinkler Systems* - 2019 NFPA 14: *Standard for the Installation of Standpipe and Hose Systems* - 2019 NFPA 72: *National Fire Alarm and Signaling Code*

4.2.2.2 Existing Building Code Compliance Scoping

Existing buildings are required to comply with the applicable existing occupancy chapters of NFPA 101, regardless of whether any work is planned (NFPA 101, 1.3.1). In addition, portions of an existing building undergoing repair, renovation, modification, reconstruction, addition, or a change of use or occupancy classification are required to comply with the requirements of the applicable existing occupancy chapters, the requirements of the applicable section of NFPA 101 Chapter 43, and the NHEBC.

Fire Protection/ Life Safety

The following sections document the existing conditions of the building and outline major code considerations.

4.2.2.3 Use and Occupancy Classifications

Primary Occupancies

Museums and exhibits are classified as Group A-3, Assembly Occupancies where the occupant load exceeds 49 (NHSBC 302.1; NFPA 101, 6.1.2.1). Where the occupant load is less than 50, the building is classified as Group B, Business (NHSBC 303.1.1; NFPA 101, 6.1.2.1).

The area of the building is approximately 2,000 sf. Using the occupant load factor applicable to exhibit galleries and museums (30 net sf per occupant), the calculated occupant load of the building is 67 occupants. This calculation is based on the gross square footage of the building. Net floor area calculations permit the exclusion of permanent building components, including fixed equipment, thickness of walls, mechanical rooms, and closets. The calculated occupant load would be reduced with consideration to these elements.

FIGURE 4-144
Building Interior

FIGURE 4-145
Building Interior

4.2.2.4 Construction Type

The building consists of a mix of unprotected combustible and noncombustible structures. The construction type of the building is most consistent with Type VB/ Type V(000).

FIGURE 4-146
Wood Framing

FIGURE 4-147
Building Exterior

The following table indicates the minimum fire-resistance ratings required for the construction types considered for the building as part of future work (NHSBC 601; NFPA 101, 8.2.1).

Code Summary Table 2: Fire Resistance Ratings	
Building Element	**Type VB/ Type V(000)**
Columns	0 Hour
Primary Structural Frame other than columns	0 Hour
Interior Bearing Walls	0 Hour
Exterior Bearing Walls	0 Hour
Exterior Nonbearing Walls	See Exterior Walls Section
Floor construction and secondary members	0 Hour
Roof construction and secondary members	0 Hour

4.2.2.5 Building Height and Area

The existing building is 1-story in height with an approximate footprint area of 2,000 sf.

Existing buildings are required to be evaluated per the height and area limitations applicable to new construction where an addition is constructed or a change of occupancy to a higher hazard category takes place (NHEBC 1102 & 1011.6).

The following table summarizes the height and area limitations applicable to the building.

Code Summary Table 3: Height and Area		
Use Group	**Allowable Height**	**Allowable Area**
A-3	1 story/ 40 ft.	9,000 sf
B	2 stories/ 40 ft.	6,000 sf

The building complies with the most restrictive Group A-3 height and area limitations.

4.2.2.6 Exterior Walls

The exterior walls of the building are constructed with boulders, concrete, and wood. An evaluation of exterior wall construction and openings is only necessary if the walls are altered, or a renovation triggers them to be upgraded.

The rating and opening limitations are based on the fire separation distance for each wall. Fire separation distance is defined as the distance measured from the building face to the closest interior lot line, the centerline of a street, alley, or public way, or to an imaginary lot line between two buildings (NHSBC 202 – Fire Separation Distance definition). The distance is required to be measured at right angles from the face of the wall. The following table indicates the fire-resistance ratings and opening limitations required for the exterior walls (NHSBC 705.5 & 705.8).

Code Summary Table 4: Nonbearing Exterior Wall Fire Rating and Opening Limitations		
Fire Separation Distance (ft.)	**Fire Resistance Rating**	**Allowable Area**
$0 \leq X < 3$	1 Hour	Not Permitted
$3 \leq X < 5$	1 Hour	Not Permitted
$5 \leq X < 10$	1 Hour	10%
$X \geq 10$	0 Hours	No Limit

The building is provided with sufficient separation distance from other structures at the summit permitting nonrated non-bearing exterior walls and unlimited openings.

4.2.2.7 Interior Walls

The following table summarizes the existing interior walls and partitions throughout the building that are required to be provided maintained as fire/smoke resistive assemblies:

Code Summary Table 5: Fire/Smoke Resistive Assemblies		
Type of Assembly	**Construction**	**Code Reference**
Corridors	1-hour fire partition	NHSBC 1020.1 NFPA 101 26.1.3.3
Boiler and Furnace Rooms	1-hour fire barrier	NHSBC 509, NFPA 101, 13.3.2.1.2
Rooms used for storage of combustible supplies deemed hazardous by the AHJ	1-hour fire barrier	NHSBC 509, NFPA 101, 13.3.2.1.2

There is a mechanical room towards the back of the building that is enclosed with walls that do not terminate at the underside of the roof. The equipment within the room would need to be confirmed as to whether it would necessitate a rating.

FIGURE 4-148
MEP Room

FIGURE 4-149
MEP Room Partition

4.2.2.8 Fire Protection Systems

Automatic Sprinkler and Standpipe System

The existing building is not protected with a sprinkler or standpipe system. The building is not required to be sprinklered throughout based on the existing occupancy chapters of NFPA 101. This building would not be required to be sprinkler-protected based on new construction requirements either (NHSBC 903.2.1.3; NFPA 101, 12.3.5).

Fire Alarm and Detection System

The building is not provided with a fire alarm and detection system. Local smoke detectors were observed at select locations. The building is not required to be provided with a fire alarm and detection system (NHSBC 907.2.1 & 907.2.2; NFPA 101, 13.3.4.1 & 39.3.4).

4.2.2.9 Means of Egress

The building is served by two exits that are sufficiently remote and marked with illuminated exit signs.

FIGURE 4-150
Front Exit

FIGURE 4-151
Back Exit

Existing conditions observed within the building that do not comply with NFPA 101 and/ or NHSBC are detailed in Appendix A. These conditions are permitted to remain unless otherwise required by NFPA 101, or the NHEBC based on the proposed scope of work. Appendix A includes a general list of existing conditions observed on site and associated recommendations. Each condition is identified with a number, description, recommendation, location diagram, and photo. The existing conditions are grouped into different categories based on the code provisions that require them to be addressed.

4.2.2.10 Plumbing

The NHSBC and NHSPC regulate the minimum number of plumbing fixtures. The minimum number of plumbing fixtures are based upon the use and occupancy classification of the building or space and the occupant load as established by the NHSBC. Public and employee toilet facilities are required to be located not more than one story above or below the space required to be provided with toilet facilities, and the path of travel to such facilities is not permitted not exceed 500 feet (NHSPC 403.1). The following table summarizes the minimum requirements for plumbing fixtures based on the occupancies within the building (CSPC 403.1).

Code Summary Table 6: Plumbing Fixture Factors							
Use Group	**Toilets**		**Urinals**	**Lavatories**		**Drinking Fountains**	**Service Sink**
	F	**M**		**F**	**M**		
Museum/ Galleries	1 per 65	1 per 125	67% substitution	1 per 200		1 per 500	1 Required

A restroom is not provided in the building. The plumbing code does not have any exceptions for public buildings that consist of galleries/ museums. A single-user restroom could be provided to satisfy the minimum number of required water closets and lavatories in the building (NHSPC 403.1.2 & 403.2(5)). If a renovation project took place in the future and it's not feasible to provide a restroom in the building, it is recommended that this be reviewed with the local AHJ.

4.2.2.11 Accessibility

ICC/ ANSI A117.1

The work area within the existing building as part of future projects is required to be made accessible in accordance with ANSI/ICC A117.1 unless proven to be technically feasible (NHSEBC 305.6). If a future alteration is affecting an area of primary function, up to 20% of the alteration costs are required to include providing an accessible route to the primary function area including toilet rooms (NHSEBC 305.7).

ADA Application

Although not enforced by any authority having jurisdiction on the project, the requirements of ADA are also applicable and enforced through civil litigation only.

The Americans with Disabilities Act Accessibility Guidelines (ADAAG) requires that altered portions of an existing building are required to be readily accessible to and usable by individuals with disabilities to the maximum extent feasible (ADAAG 36.402(a)(1)). Further, alterations to primary function areas should be made such that the level of accessibility, including the path of travel to the space, is made accessible to the maximum extent feasible. When determining if the upgrade is feasible, the ADAAG requirements state that the upgrade to the path of travel is disproportionate to the project when the cost to perform the work exceeds 20% of the cost of the alteration to the primary function area. In choosing which accessible elements to provide if the cost is disproportionate, priority should be given to those elements that will provide the greatest access, in the following order:

1. An accessible entrance
2. An accessible route to the altered area
3. At least one accessible restroom for each sex or a single unisex restroom
4. Accessible drinking fountains
5. Accessible telephones

Code Summary Appendix A includes a general list of existing conditions observed on site and associated recommendations. Each condition is identified with a number, description, recommendation, location diagram, and photo. The existing conditions are grouped into different categories based on the code provisions that require them to be addressed.

4.2.3 Tip Top House Building Envelope

On 6 September 2024, Jeffry J. Ceruti and Kelsey A. Dunn of Simpson Gumpertz & Heger Inc. (SGH) visited the site to perform a building envelope condition assessment of the Mount Washington summit buildings, including the Sherman Adams Summit Building and Mount Washington Observatory, the Tip Top House, and the Yankee Building Communications & Maintenance Facility. Note that we refer to directionals at each building based on the definitions established in the existing drawings provided for the respective buildings.

According to the 1984 renovation drawings, provided by DNCR, The Tip Top House appears to be supported by a concrete foundation that extends above grade on the south, west, and east elevations, serving as the exterior walls with several courses of buttressed stone facing on the exterior. The stone is dry-stacked with partial mortar in some areas. The existing interior finish of the exterior walls would need to be removed to confirm the actual existing wall assembly. Wood-framed windows are installed in punched openings, and wood lintels support the stone above and below door and window openings. At the transition to the roof, there is an approximately 1 ft-6 in. tall wood-framed wall clad with shingles between the concrete wall and the roof overhang. The north elevation is wood framed and clad with wood shingles. The roof is wood framed with wood decking, EPDM membrane, and concrete pavers. Park staff informed us that there is a concrete slab and crawl space below the wood-framed finish floor. The finish flooring would need to be removed to confirm the crawl space condition and materials.

Based on documents provided for our review, we understand that a renovation was carried out in 1984 that included the following scope of work:

- Removal of the existing steep-sloped dormered roof with a new low-sloped roof.
- Removal and replacement of existing wood-framed windows and doors.
- Removal and replacement of the wood-framed wall on the north elevation.

The following sections include our observations, discussions, conclusions, and recommendations for each building enclosure system.

FIGURE 4-152
Main Entrance on South Elevation

FIGURE 4-153
North Elevation

4.2.3.1 Exterior Walls

The stone and concrete walls appear to be in good condition, and we did not observe any dislodged stone. Our review was limited as the concrete walls are concealed by buttressed stone on the exterior and interior finishes on the interior. Along the south elevation, deteriorated, wet wood flooring against the exterior wall indicates that water leakage may be occurring through the exterior wall. We recommend performing diagnostic water testing to recreate and trace leakage paths through the exterior wall. On the north elevation, the wood shingles are weathered, particularly toward the bottom of the wall. Weathered wood shingles should be replaced as needed as part of routine building maintenance, which we understand is performed periodically by Park staff.

FIGURE 4-154
Wet, Deteriorated Flooring West of Door on South Elevation (Red Arrow)

FIGURE 4-155
Wet, Deteriorated Flooring East of Door on South Elevation (Red Arrows)

4.2.3.2 Windows

On the exterior, the painted wood window frames are exposed and appear to be set in mortar against the exterior stone. The paint is peeling and in poor condition. We did not

observe perimeter seals present around the windows. Minor wood deterioration of the interior trim around various window openings indicates that leakage occurs through at least some of the windows, particularly on the west elevation. Further investigation is needed to evaluate leakage at windows, combined with sample removal of interior trim to review concealed conditions and confirm the most likely leakage paths.

FIGURE 4-156
Typical Window Condition (West Elevation)

FIGURE 4-157
Minor Wood Deterioration at Finishes (Red Arrow) (West Elevation)

4.2.3.3 Roof

The roof was replaced during the 1984 renovation project. Based on the renovation drawings, the roof consists of, from interior to exterior, wood framing, 1-1/2 in. tongue and groove wood decking, 1/2 in. exterior plywood, EPDM membrane, 1/2 in. 'STRYD BD' (insulation board), and 2 in. thick precast concrete pavers. We did not remove pavers to review the condition of the EPDM roof membrane, but we understand that no roof leakage is reported. At forty years old, the roofing is beyond the expected twenty-year service life, but the concrete pavers likely protect the membrane from weathering and damage. If Park staff wish to understand the remaining service life of the roofing assembly, sample openings should be made by removing concrete pavers and making test cuts in the roofing for evaluation. Otherwise, no action is required.

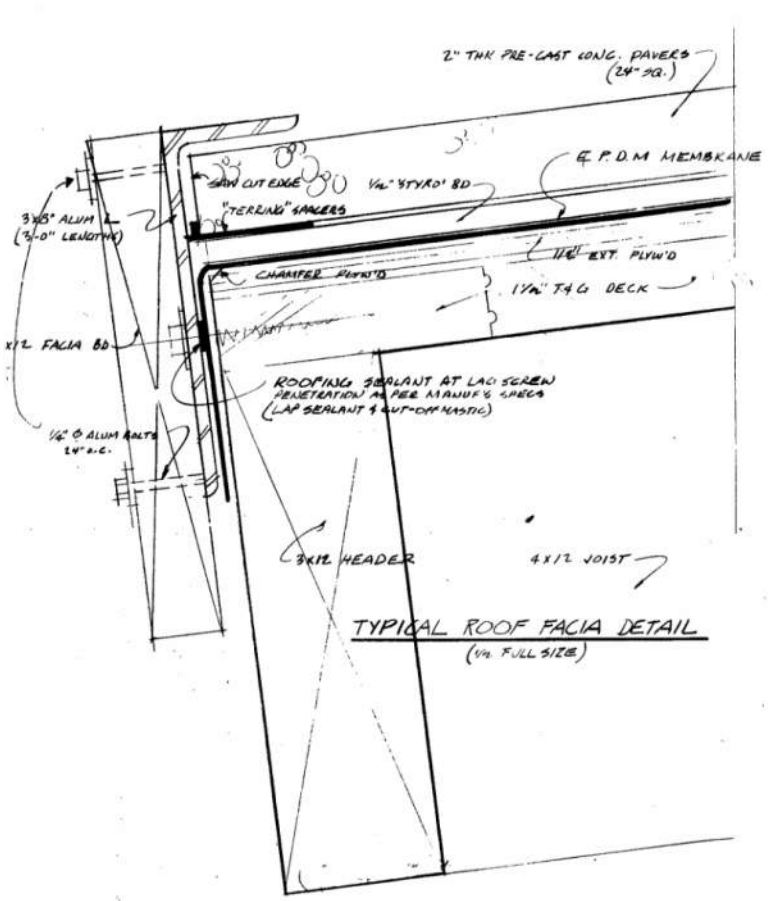

FIGURE 4-158
Typical Roof Assembly (Excerpt From 1984 Renovation Drawings)

4.2.3.4 Interior Environment

The interior space is damp and/or humid, and a musty, earthy smell is present, indicating the potential presence of mold/mildew as indicated by Park staff. Based on the limited drawings available, no insulation or air/vapor barriers exist in the walls or crawl space, and minimal insulation is included in the roof assembly. We understand that the building is not heated and is unused in the winter. The existing construction below the floor and behind the exterior wall finishes is unclear, but we did not see evidence of crawl space ventilation on the exterior. Available drawings indicate a concrete floor slab is present.

We recommend making sample openings in the existing flooring and existing interior wall finishes to confirm the existing construction and review concealed conditions. We recommend that an MEP engineer review options for ventilation through the wood-framed walls at the eaves or the wood-framed wall on the north elevation, or potential ventilation of the crawl space below the flooring.

FIGURE 4-159
Typical Interior Finishes

4.2.4 Tip Top House Structural Systems

The following are the findings by RSE Associates, Inc. based on a review of the structural components accessible at the time of their site visit on September 6, 2024. It excludes members that were covered with finishes and below grade elements such as footings, etc.

The Tip Top House is a one-story stone and wood framed structure with a wood framed roof structure that was replaced during a 1984 renovation and is in good condition. The framing that was observed and measured on site differs slightly from what is shown on the renovation drawings that were made available to our office. The center posts are 5½"-6" diameter round posts spaced at approximately 8'-0" o.c., the existing drawings show these posts as 6" square. The main concern with the switch from the square posts shown on the drawings to the round posts is that only one row of 3 bolts has been installed into the post. It is recommended that blocking be installed so the remaining 3 bolts can be added. The existing drawings show the attic/ceiling framing as existing to remain, but new 2x8 @ 24" o.c. joists have been installed at this level. The roof framing appears to agree with what is shown on the existing drawings and consists of 4x12 rafters @ 32" o.c. supported on a 6x12 ridge beam with hurricane ties from the rafters to the ridge beam.

The ground floor is assumed to be a concrete slab on grade that is covered with wood floorboards. The slab could not be observed on site but is documented in the renovation drawings from 1984. There is a musty odor in the space which suggests moisture issues, it would be beneficial to provide better ventilation and moisture control to help prevent rotting of the wood at the interior. The rafter tails that extend to the exterior as well as the window headers supporting the stone are heavily weathered and should be routinely inspected for any locations of rot.

FIGURE 4-160
Wood Posts and Attic/Ceiling Framing

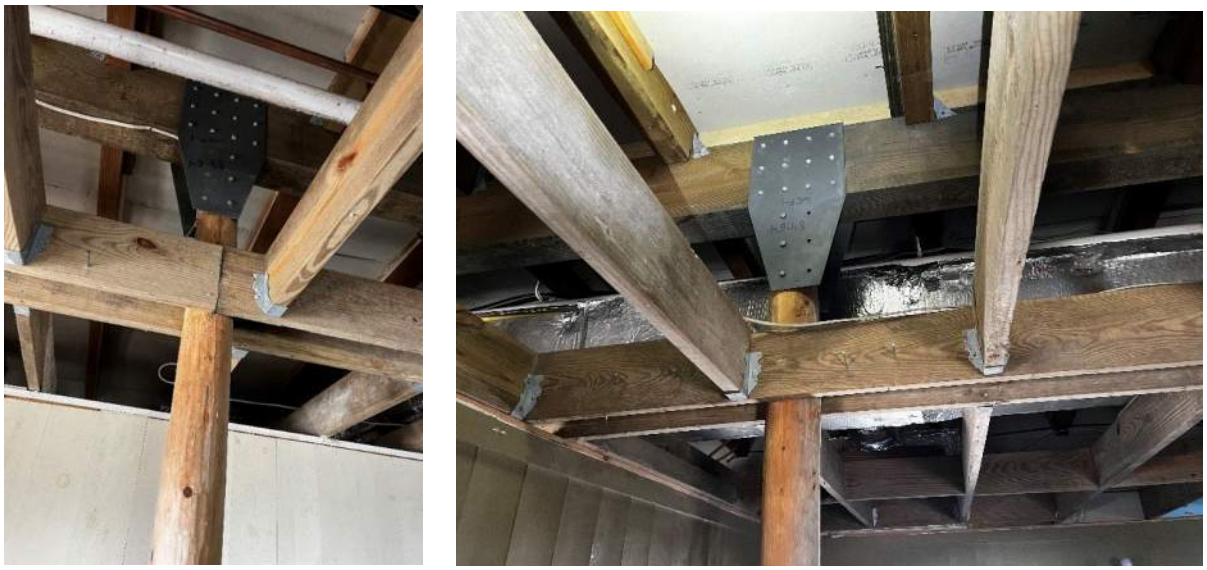

FIGURE 4-161
Wood Post Connection to Ridge Beam (Both Images)

FIGURE 4-162
Exterior Stone Façade, Heavily Weathered Rafter Tails, Fascia, and Window Header

4.2.5 Tip Top House Interior Finishes, Fixtures, and Equipment

The interior of the Tip Top House has hardwood flooring in mostly fair condition. There are some sections in poor condition on the south side of the building which show visible signs of water infiltration. Moisture is also evident around the base of the columns. Throughout the building, the wood flooring is cupping and warping, a sign of moisture issues in the building. Once the moisture issues are under control, it would be beneficial for the wood flooring to be refinished and select pieces replaced.

FIGURE 4-163
Moisture Visible at Base of Columns

FIGURE 4-164
Moisture Visible in Flooring at Joint with South Elevation

FIGURE 4-165
Mildew Visible on Interior Surface of Walls

FIGURE 4-166
Cement Board Above Ceiling

Most of the interior of the building has painted wood wall boards, and the boarding room has unpainted wood wall boards, all in fair to good condition. However, some mildew was observed on the walls, particularly in the front room.

The building currently does not have a ceiling, and the wood roof rafters are exposed. The State Park plans to cover these with tongue and groove wood to create a new flat ceiling throughout the entire building. There is a type of particle board covering the entire underside of the roof that our team recommends replacing with a cement board that will not absorb water.

The main room in the center of the building will be open for historical exhibits. In the rear of the building, there are fixtures which appear to be original to the building's kitchen. It is not expected that these fixtures will be operational, but they will be historical artifacts on display for the self-guided tour.

4.2.6 Tip Top House Staff and Visitor Experience

When the building is opened to visitors during the warmer months, it will be maintained at a comfortable temperature with the HVAC system that was added during the 1984 renovation. The HVAC is functional, but it is challenging for the staff to keep the kerosene tanks filled since that is done by hand. The staff must also close and winterize the building for the cold months.

Related to air quality, our team observed a musty smell in the building, which could negatively affect the visitor experience. This smell points to a lack of adequate ventilation

and the presence of moisture coming through the building envelope. The electrical system must also be updated before the Tip Top House can open to the public, and the staff noted that this has been particularly challenging to update.

FIGURE 4-167
Main Hall of Tip Top House

FIGURE 4-168
Former Kitchen of Tip Top House

4.2.7 Tip Top House Building Diagrams

The following Building Diagram was intended to supplement the narrative space descriptions in the previous sections. It focuses on: the separation of Public (Visitor) and Private (Staff) spaces, the circulation of the Public through the building, areas of the building where water leaks were observed, and observations on the types and distribution of wayfinding signage throughout the building.

TIP TOP HOUSE SPACE USE, CIRCULATION, WATER ISSUE AND SIGNAGE DIAGRAM

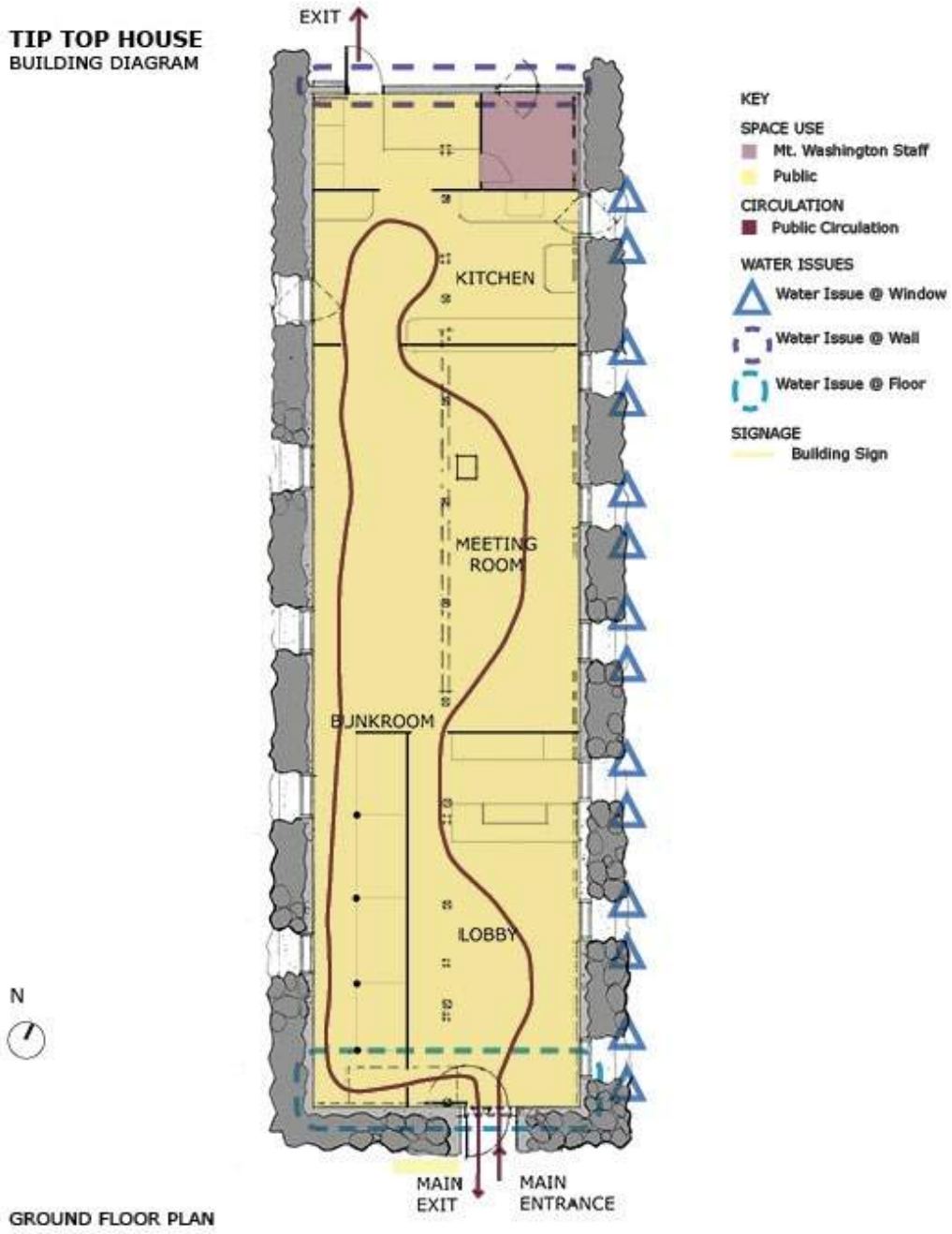

FIGURE 4-169
Tip Top House Space Use, Circulation, Water Issue and Signage Diagram

4.2.8 Code Summary Appendix B: Tip Top House Existing Conditions Code Summary

Existing conditions are organized within the following tables in this Appendix as outlined below (Categories 1-3 & Accessibility). These conditions are documented for informational purposes and are intended to serve as a reference for consideration as part of future maintenance work and future projects within the building.

Category 1 – Existing conditions that have not been maintained as originally constructed, present a potential risk to life safety, and may be subject to citations by the fire department, irrespective of the work performed. We suggest addressing these items to the extent feasible to ensure these elements are upgraded and maintained as originally designed.

Category 2 - Existing conditions that may have complied with the code at the time of construction, but do not comply with Saf-FM 304 (NFPA 101). Saf-C 6000 gives the authority to the local fire marshal to issue violations for existing conditions that do not comply, regardless of whether work is taking place in the building.

Category 3 - Existing conditions that do not comply with the New Hampshire Building Code and could be required to be corrected as part of future work depending upon the scope of work.

Accessibility - Existing conditions that could be upgraded to improve the level of accessibility within the building.

Section 4.1.2 Tip Top House Code Compliance

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Category 3			
#	Existing Condition & Recommendation	Location	Picture
1.	Both exit doors are not provided with level landings on both sides. Level landings are required on each side of doors at the same elevation (NFPA 101 7.2.1.3.1, NHSBC 1010.1.4) The landings at each exit could be upgraded.		
2.	The front exit door is not equipped with panic hardware. Assembly occupancies with a calculated occupant load exceeding 49 are required to be equipped with panic hardware (NHSBC 1010.2.9).		

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Section 4.1.2 Tip Top House Code Compliance Tighe&Bond

Accessibility			
#	Existing Condition & Recommendation	Location	Picture
3.	The running slope along the accessible route to the tip top house measures up to 10%. Walking surfaces with a slope greater than 5% are required to be considered a ramp. Ramps are not permitted to have a running slope that exceeds 8.3% (ANSI A117.1, 405.2). Handrails could be provided on both sides and/or the running slope could be reduced to improve this ramp from an accessibility perspective.		
4.	The front entrance includes a step, and changes in level along an accessible route are not permitted to exceed ¼" without a threshold (ANSI A117.1, 303.2). A transition from the top of the ramp to the door could be provided so that there is no step along the accessible route.		

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FIGURE 4-170
View of Front, East Side of the Yankee Building

4.3 Yankee Building Communications and Maintenance Facility

4.3.1 Overall Conditions

Our team's review of the Yankee Building was not as extensive as the other facilities, since the building underwent a complete study in 2019 by the H.L. Turner Group, which considered multiple options for the repair, renovation, or replacement of the building. This unique structure was originally built in 1941 as a broadcast station and included second floor sleeping rooms for crew members. The facility is now mostly unoccupied by people and houses extensive communications equipment for private companies and state and federal public agencies. The sensitive nature of that equipment, and the need to maintain its ongoing active status, is part of the challenging considerations for how to maintain and improve this building.

To keep the building weather tight and protect the important equipment within, the State Park has maintained the exterior of the building with obvious signs of continuous repairs such as new shingles and added storm windows. However, the Yankee building is generally in poor condition, especially on the inside. The uses of this building have grown in recent years to also include offices, a lab, a workshop and storage.

As described in the following sections, the primary conditions that were identified for the Yankee Building are:

- Code compliance upgrades, associated with other future work:
  - Building lacks sprinkler protection
  - Primary stairwell for egress is not enclosed
  - Corridor walls and doors are not fire rated
  - Headroom deficiencies on egress path

- Exterior conditions:
  - Exterior concrete on ground floor is heavily spalled and damaged
  - Missing siding on portion of southwest elevation
  - Severely weathered, missing or broken shingles
  - Wood-framed windows generally in poor condition
  - Low-sloped membrane roof above the third floor appears to be leaking
- Interior conditions:
  - Water leakage on upper floors and interior finish damage
  - Many heavily cracked and spalled Martin Fireproofing interior floor panels
  - Third floor notched, ad hoc, and makeshift structural members
  - Unused and underused spaces throughout

4.3.2 Yankee Building Code Summary

The following are the findings by Code Red Consultants based on their survey of the building at the time of their site visit on September 12, 2024.

Code Summary Table 7: Existing Building Summary	
Occupancy:	Group B, Business; Group S-1, Industrial; Group S-2 – Storage.
Construction Type:	The building construction includes a mix of combustible and noncombustible structures. The building is classified as Type VB/ Type V (000).
Height & Area:	Building Height: 2 stories above grade with a penthouse and basement Maximum Footprint: ~2,700 sf Aggregate Area: ~5,200 sf
Vertical Openings:	The building contains one unenclosed stairway that connects the Basement up to the penthouse.
Fire Protection Systems:	The building is not equipped with a sprinkler or standpipe system. Fire extinguishers were observed throughout.
Fire Alarm System:	The building is provided with a fire alarm and detection system including heat and smoke detectors, and a manual pull station at an exit at the First Floor.
Means of Egress:	The Basement, Second Floor, and Penthouse are served by an unenclosed stair. The First Floor is served by two exits directly to the exterior.

4.3.2.1 Applicable Codes

The following is a list of applicable codes currently adopted in the State:

Building Code	New Hampshire State Building Code (NHSBC) which amends the 2021 International Building Code (IBC) and the 2021 International Existing Building Code (IEBC).
Fire Safety Code	Saf-C 6000 - The New Hampshire State Fire Code, which includes, but is not limited to: Saf-C 6008.02 - Fire Prevention Code: An amended version of the 2021 NFPA 1, Fire Code. Saf-C 6008.04 - Life Safety Code: An amended version of the 2021 NFPA 101, Life Safety Code.

Plumbing Code	The 2021 International Plumbing Code (IPC) as amended by the State of New Hampshire.
Electrical Code	2020 Edition of NFPA 70, National Electrical Code as amended by the State of New Hampshire.
Mechanical Code	2021 International Mechanical Code as amended by the State of New Hampshire.
Energy Code	2018 International Energy Conservation Code (IECC) as amended by the State of New Hampshire.
Accessibility	2017 Edition of ICC/ANSI A 117.1, Accessible and Usable Buildings and Facilities. 2010 ADA Standards for Accessible Design.
Other	Various National Fire Protection Association (NFPA) codes and standards as referenced by the codes listed above, including the following: - 2021 NFPA 10: *Standard for Portable Fire Extinguishers* - 2019 NFPA 13: *Standard for the Installation of Sprinkler Systems* - 2019 NFPA 14: *Standard for the Installation of Standpipe and Hose Systems* - 2019 NFPA 72: *National Fire Alarm and Signaling Code*

4.3.2.2 Existing Building Code Compliance Scoping

Existing buildings are required to comply with the applicable existing occupancy chapters of NFPA 101, regardless of whether any work is planned (NFPA 101, 1.3.1). In addition, portions of an existing building undergoing repair, renovation, modification, reconstruction, addition, or a change of use or occupancy classification are required to comply with the requirements of the applicable existing occupancy chapters, the requirements of the applicable section of NFPA 101 Chapter 43, and the NHEBC.

Fire Protection/ Life Safety

The following sections document the existing conditions of the building and outline major code considerations.

4.3.2.3 Use and Occupancy Classifications

Primary Occupancies

The following table summarizes the primary occupancies within the building (NHBC 302.1; NFPA 101, 6.1):

Code Summary Table 2: Primary Occupancy Classifications		
NHBC Classification	**NFPA 101 Classification**	**Description**
Group F-1, Factory	Industrial	Workshop
Group S-1, Storage	Storage	Wood and Fuel Storage
Group S-2, Storage	Storage	Misc. Storage

FIGURE 4-171
Equipment Room

FIGURE 4-172
Workshop

If the building undergoes a change of occupancy as part of future renovation work, the following include major building features that would need to be reviewed to confirm compliance (NHEBC 1011): sprinkler coverage, fire alarm and detection coverage, building height and area, interior finishes, exterior walls, and means of egress.

Special Use and Occupancy

Fuel Oil Storage

The building contains a generator and fuel storage tanks and drums in the basement. No rated separation was observed from these spaces and the rest of the building. If changes are made to these rooms as part of future work, additional requirements detailed in NFPA 37 would be required to be evaluated.

4.3.2.4 Construction Type

The building consists of a mix of unprotected combustible and noncombustible structure. The construction type of the building is most consistent with Type VB/ Type V(000).

FIGURE 4-173
Roof Structure

FIGURE 4-174
Floor Structure

The following table indicates the minimum fire-resistance ratings required for the construction types considered for the building as part of future work (NHSBC 601, NFPA 101, 8.2.1).

Code Summary Table 3: Fire Resistance Ratings	
Building Element	**Type VB/ Type V(000)**
Columns	0 Hour
Primary Structural Frame other than columns	0 Hour
Interior Bearing Walls	0 Hour
Exterior Bearing Walls	0 Hour
Exterior Nonbearing Walls	See Exterior Walls Section
Floor construction and secondary members	0 Hour
Roof construction and secondary members	0 Hour

4.3.2.5 Building Height and Area

The existing building is 2-stories in height with a subgrade basement and a penthouse. The area of the Penthouse is less than one-third the area of the supporting roof deck, so it is not considered a story (NHSBC 1511.1.1). Penthouses are required to be limited to MEP equipment (NHSBC 1511.2.2). The building footprint and aggregate area are 2,700 sf and 5,200 sf, respectively.

Existing buildings are required to be evaluated per the height and area limitations applicable to new construction where an addition is constructed or a change of occupancy to a higher hazard category takes place (NHEBC 1102 & 1011.6).

The following table summarizes the height and area limitations applicable to the building based on the Type VB/ Type V(000) construction type.

Code Summary Table 4: Height and Area			
Use Group	**Allowable Height**	**Allowable Footprint Area**	**Allowable Aggregate Area**
F-1	1 story/ 40 ft.	8,500 sf	17,000 sf
S-1	1 story/ 40 ft.	9,000 sf	18,000 sf
S-2	2 stories/ 40 ft.	13,500 sf	27,000 sf

The building complies as a partially separated, mixed use building if Group F-1 and S-1 occupancies are limited to the Basement and First Floors of the building. The Second Floor is required to be limited to Group B and S-2 occupancies with this approach, and no occupancy separation is required (NHSBC Table 508.4).

4.3.2.6 Exterior Walls

The exterior walls of the building are constructed with a mix of steel, masonry and wood, and include openings at each elevation. An evaluation of exterior wall construction and openings is only necessary if the walls are altered, or a renovation triggers them to be upgraded.

The rating and opening limitations are based on the fire separation distance for each wall. Fire separation distance is defined as the distance measured from the building face to the closest interior lot line, the centerline of a street, alley, or public way, or to an imaginary lot line between two buildings (NHSBC 202 – Fire Separation Distance definition). The distance is required to be measured at right angles from the face of the wall. The following table indicates the fire-resistance ratings and opening limitations required for the exterior walls (NHSBC 705.5 & 705.8).

Code Summary Table 5: Nonbearing Exterior Wall Fire Rating and Opening Limitations		
Fire Separation Distance (ft.)	**Fire Resistance Rating**	**Allowable Area**
0 ≤ X < 3	1 Hour	Not Permitted
3 ≤ X < 5	1 Hour	Not Permitted
5 ≤ X < 10	1 Hour	10%
X ≥ 10	0 Hours	No Limit

The building is provided with sufficient separation distance from other structures at the summit permitting nonrated non-bearing exterior walls and unlimited openings.

4.3.2.7 Interior Walls

The following table summarizes the existing interior walls and partitions throughout the building that are required to be provided maintained as fire/smoke resistive assemblies:

Code Summary Table 6: Fire/Smoke Resistive Assemblies		
Type of Assembly	**Construction**	**Code Reference**
Corridors	1-hour fire partition	NHSBC 1020.1 NFPA 101 26.1.3.3
Rooms containing high-pressure boilers, refrigerating machinery of other than the domestic refrigerator type, large transformers, or other service equipment subject to explosion	1-hour fire barrier	NHSBC 509, NFPA 101, 13.3.2.1.1
Maintenance Shops	1-hour fire barrier	NFPA 101, 13.3.2.1.2
Boiler and Furnace Rooms	1-hour fire barrier	NHSBC 509, NFPA 101, 13.3.2.1.2
Rooms used for storage of combustible supplies deemed hazardous by the AHJ	1-hour fire barrier	NHSBC 509, NFPA 101, 13.3.2.1.2
Shafts Connecting 3 Stories or Less	1-hour fire barrier	NHSBC 713.4
Emergency Generator Room	2-hour fire barrier	NFPA 110, 7.2.1.1

Unprotected penetrations and nonrated doors were commonly observed within corridor walls. Consideration should be given to repairing damaged fire/ smoke resistive assemblies and unprotected penetrations through the assemblies noted in the table above. Making upgrades and repairing existing fire/ smoke resistive assemblies enhances the passive fire protection systems serving the building.

FIGURE 4-175
Second Floor Corridor

FIGURE 4-176
Nonrated Corridor Door

4.3.2.8 Vertical Openings

The existing building contains an unenclosed stair that connects the Basement up to the Penthouse. Partial separations are provided from the Penthouse and Basement Levels within the vertical opening, but they do not include rated fire doors. The stairs are the only exit serving the Second Floor, and unenclosed vertical openings created by convenience stairs are not permitted to serve as exits (NFPA 101, 8.6.9.2). Based on this, and some additional considerations indicated in the Means of Egress Section, it is recommended that the existing stair be enclosed with 1-hour rated construction.

FIGURE 4-177
First Floor Landing

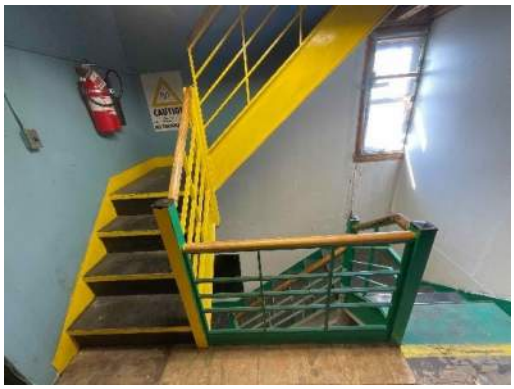


FIGURE 4-178
Second Floor Landing

4.3.2.9 Fire Protection Systems

Automatic Sprinkler and Standpipe System

The existing building is not protected with a sprinkler or standpipe system. The building is not required to be sprinklered throughout based on the existing occupancy chapters of NFPA 101. Sprinkler thresholds applicable to new construction are required to be evaluated as part of future projects including an addition and/ or change of occupancy (NHEBC 1011.2 & 1011.1). Renovations throughout the building could also require sprinkler thresholds to be evaluated depending on the extent of the work area.

Fire Alarm and Detection System

The building is provided with a fire alarm and detection system consisting of manual pull stations at exits, smoke and heat detectors at select locations, and audio/visual notification devices at select locations. The fire alarm control unit (FACU) is located near the Stair on the First Floor and hard-wired to two audio/visual notification devices in the Sherman Adams Building.

FIGURE 4-179
Combination Heat/ Smoke Detector

FIGURE 4-180
Pull Station

Coverage of the existing system is required to be maintained as part of future renovations (NHEBC 701.2). Where the fire alarm system is altered or reconfigured, this scope of work is required to be in accordance with the NHSBC and NFPA 72.

4.3.2.10 Means of Egress

The following summarizes the egress arrangement at each Floor:

- **Basement**: The Basement is served by the open stair. The basement is only permitted to be served by a single means of egress if the storage is limited to Low Hazard Contents (NFPA 101, 42.2.4.1). Based on the fuel storage in the basement, it is considered an Ordinary or High-Hazard Storage Occupancy, which are only permitted to be served by a single exit if the exit can be reached within the maximum common path of travel permitted (NFPA 101, 42.2.4.1).
- **First Floor**: The First Floor is served by two exits to the exterior. One of the exits is not operational in the wintertime due to the buildup of snow and ice. The travel distance from the most remote point to the exit that is available during the wintertime is 92 ft. The common path of travel for non-sprinklered buildings containing Group F-1 and Industrial Occupancies is 75 ft. and 50 ft., respectively. Based on this, the wintertime exit arrangement is not compliant.
- **Second Floor**: The Second Floor is served by the open stair. Open stairs in buildings that are not sprinklered throughout are not permitted to serve as means of egress (NFPA 101, 8.6.9.2 & NHSBC 712.1.9(5)).
- **Penthouse**: The Penthouse level is served by a single exit but is considered a normally unoccupied space and not subject to the means of egress requirements for an occupied floor.

An option to improve the exit arrangement at the Basement and Second Floors would be enclosing the Stair at all Floors in 1-hour rated construction with protected openings, and constructing a 1-hour exit passageway at the First Floor. It is recommended that this option be reviewed with the local AHJ if it is ever incorporated as part of future work, given there are existing openings into the corridor at the First Floor from normally unoccupied spaces (NHSBC 1024.5).

Existing conditions observed within the building that do not comply with NFPA 101 and/ or NHSBC are detailed in Appendix A. These conditions are permitted to remain unless otherwise required by NFPA 101, or the NHEBC based on the proposed scope of work. Appendix A includes a general list of existing conditions observed on site and associated recommendations. Each condition is identified with a number, description, recommendation, location diagram, and photo. The existing conditions are grouped into different categories based on the code provisions that require them to be addressed.

4.3.2.11 Plumbing

The NHSBC and NHSPC regulate the minimum number of plumbing fixtures. The minimum number of plumbing fixtures are based upon the use and occupancy classification of the building or space and the occupant load as established by the NHSBC. Public and employee toilet facilities are required to be located not more than one story above or below the space required to be provided with toilet facilities, and the path of travel to such facilities is not permitted to exceed 500 feet (NHSPC 403.1). The following table summarizes the minimum requirements for plumbing fixtures based on the occupancies within the building (CSPC 403.1).

Code Summary Table 7: Plumbing Fixture Factors							
Use Group	Toilets		Urinals	Lavatories		Drinking Fountains	Service Sink
	F	M		F	M		
Factory/ Industrial	1 per 100	1 per 100	50% substitution	1 per 100		1 per 400	1 Required
Storage	1 per 100	1 per 100	50% substitution	1 per 100		1 per 1,000	1 Required

2. Congregate living facilities require 1 shower per 8 occupants as well.

The public restrooms at the Ground and First Floor support up to 1,050 Assembly (Dining) occupants.

The following table details the plumbing fixture calculations for the building based on occupant load calculations.

Table 8: Plumbing Fixture Calculations

Floor	Occupant Load	Classification	Water Closets		Male Urinals [A] (SUBSTITUTION)	Lavatories		Drinking Fountains	Service Sink
			Female	Male		Female	Male		
First – Second Floor	19	Factory/ Industrial	1 per 100	1 per 100	0.67	1 per 150	1 per 200	1 per 500	1
		Required fixtures	0.10	0.10	0.06	0.06	0.05	0.038	1
	334	Storage	1 per 75	1 per 75	0.67	1 per 150	1 per 200	1 per 500	1
		Required fixtures	0.07	0.07	0.05	0.04	0.03	0.022	1
	Total Required Fixtures		**1**	**1**	**1**	**1**	**1**	**1**	**1**
	Total Provided Fixtures		**1**	**1**	**0**	**1**	**1**	**0**	**1**

[A] Permitted to be substituted for male water closets

[B] 2 Showers are provided, which satisfies the minimum required for congregate living facilities.

As shown above, the building is provided with a sufficient number of fixtures.

4.3.2.12 Accessibility

The work area within the existing building as part of future projects is required to be made accessible in accordance with ANSI/ICC A117.1 unless proven to be technically feasible (NHSEBC 305.6). The following include accessibility exceptions to consider for the building:

- Accessibility is not required for employee work areas, but an accessible route to and from these spaces would be required if future work impacted them (NHSBC 1103.2.2 & ADA 203.9).
- Equipment Spaces are not required to be accessible (NHSBC 1103.2.9 & ADA 203.5). When determining whether accessible upgrades are required as part of future renovation work, consideration should be given to this exception.

The building is generally not accessible. As part of future work, accessible upgrades would be required if new employee work areas were introduced into the building.

4.3.3 Yankee Building Envelope

On 6 September 2024, Jeffry J. Ceruti and Kelsey A. Dunn of Simpson Gumpertz & Heger Inc. (SGH) visited the site to perform a building envelope condition assessment of the Mount Washington summit buildings, including the Sherman Adams Summit Building and Mount Washington Observatory, the Tip Top House, and the Yankee Building Communications & Maintenance Facility. Note that we refer to directionals at each building based on the definitions established in the existing drawings provided for the respective buildings.

The original Yankee Building was constructed in 1941 and consists of a cast-in-place concrete foundation, steel structural framing, and masonry infill. In the 1960s, a two-story additional was constructed on the north elevation and at an undetermined time, a one-story summer entrance was constructed on the east elevation. The building enclosure assemblies consist of wood shingle siding, double-hung windows, and wood shingle roofing.

We understand that a comprehensive building assessment was performed by The H.L. Turner Group Inc. in 2017. As part of the assessment, the team produced building elevations and floor plans, which were provided for our reference. The following sections include our observations, discussions, conclusions, and recommendations for each building enclosure system.

FIGURE 4-181
Yankee Building. Note the 1960s Addition (Red Arrow) and Summer Entrance Addition (Blue Arrow)

4.3.3.1 Exterior Foundation Walls

The concrete foundation walls are exposed several feet above grade around the perimeter of the building. The concrete is heavily spalled with possible freeze-thaw damage on the

south elevation and on a portion of the west elevation. Other smaller spalls and cracks are also present. We recommend performing concrete crack and spall repairs; otherwise, the concrete will continue to deteriorate. On the west elevation, there are various penetrations through the foundation that have been abandoned and filled with a cementitious patch mortar. The cementitious mortar does not fill the entire depth of the wall and minor staining on the interior side of the foundation wall indicates that water leakage occurs through these penetrations. We recommend sealing these penetrations from the exterior to prevent water from bypassing the foundation wall and entering the basement.

FIGURE 4-182
Spalled Concrete on South Elevation (Red Arrows**)**

FIGURE 4-183
Abandoned Penetrations (Exterior)

FIGURE 4-184
Abandoned Penetrations (Interior)

4.3.3.2 Exterior Walls

The wood shingles and trim on the exterior walls are generally in fair condition, with some shingles that exhibit more severe weathering and many shingles that are broken or missing. On the southwest-facing elevation, there is an area of missing shingles where the wood substrate is exposed. A water-resistive barrier is not visible between the wood shingles and wood substrate. We recommend performing isolated replacement of wood shingles as needed, starting with the missing siding on the south elevation and replacement of missing or broken shingles.

FIGURE 4-185
Weathered Shingles on North Elevation

FIGURE 4-186
Broken or Missing Shingles on East Elevation (Red Arrows)

FIGURE 4-187
Missing Shingles on South Elevation (Red Arrow)

4.3.3.3 Windows

There are various windows on the building, including wood-framed (presumed original) and vinyl (presumed replacement) windows. The vinyl windows appear relatively new and are in good condition; however, the paint on the wood window frames is peeling, the weatherstripping is loose in various locations, and the flashings are in poor condition. Plexiglass or Lexan covers many of the windows, particularly on the west and south elevations. We recommend replacing the wood-framed windows similar to locations elsewhere on the building. Provide new self-adhered membrane in rough openings and sheet metal sill pan flashings at sills to collect leakage water and drain it to the exterior.

FIGURE 4-188
Wood-Framed Window on South Elevation. Note Damaged Flashing (Red Arrow)

FIGURE 4-189
Wood-Framed Window on North Elevation. Note Deteriorated Paint

FIGURE 4-190
Vinyl Window on North Elevation

4.3.3.4 Roof

The wood shingle roofs appear to be in good condition, as seen from the tower windows. We understand that the Park staff perform routine maintenance on the roofs, and it appears to have been performed recently. We did not review the high low-sloped membrane roof, which is only accessible from an exterior ladder on the tower. We recommend that Park staff continue to maintain the wood shingle roofs. Further review of the higher low-sloped roof may be needed if leakage is currently occurring.

FIGURE 4-191
Roof Over East Wing

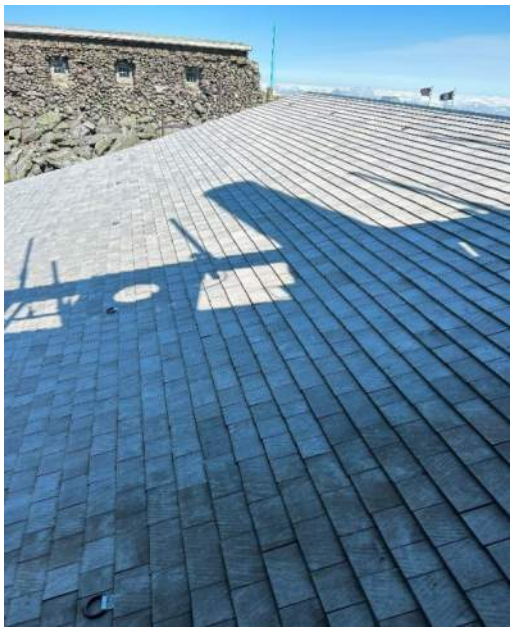


FIGURE 4-192
Roof Over North Wing

4.3.3.5 Leakage and Interior Finish Damage

We did not receive reports of active leakage; however, interior finish damage is present throughout the building, and several buckets and pots are set below the tower roof. It is unclear whether the finish damage is related to active leakage or leakage that has been previously addressed without repairs to the corresponding damaged interior finishes. To differentiate and identify active leakage, we recommend removing all deteriorated finishes and monitoring for leakage. After identifying active leaks, an investigation including water testing and sample openings may be warranted to trace leakage paths and determine the required repairs to address leakage.

FIGURE 4-193
Interior Finish Damage Below Window

FIGURE 4-194
Interior Finish Damage Below Roof

4.3.3.6 General Use

The exterior walls' existing construction is unclear. Both CMU and brick masonry infill are visible in several locations, and it is unclear whether any insulation is installed between the masonry infill and shingle siding. If the observatory is considering a programmatic change to start using the building more actively, we recommend making sample openings in the interior finishes at the exterior walls and roofs to further confirm the existing construction and determine whether the building can be insulated.

FIGURE 4-195
Bucket Below Tower Roof

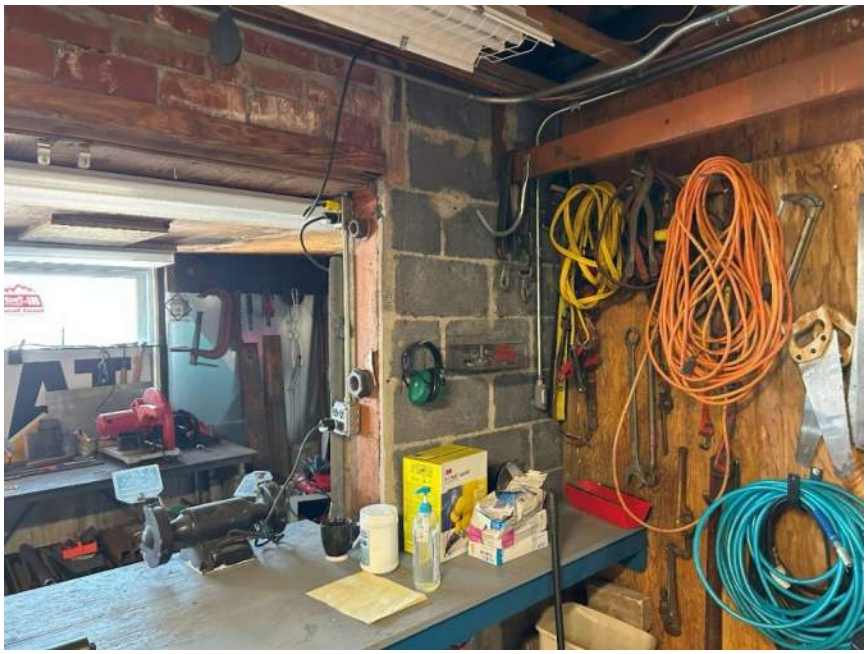


FIGURE 4-196
Masonry Infill

4.3.4 Yankee Building Structural Systems

The following are the findings by RSE Associates, Inc. based on a review of the structural components accessible at the time of their site visit on September 6, 2024. It excludes members that were covered with finishes and below grade elements such as footings, etc.

The Yankee Building is a two-story wood, steel and CMU building with a partial basement. There are no structural drawings available. From observations on site, it is believed that the foundation is reinforced concrete walls bearing on a reinforced concrete wall footing. The exterior foundation walls that could be observed had localized areas of spalled concrete and cracks. The spalls should be patched, and any cracks should be filled to prevent leaks into the basement level. At two locations there were numerous holes cored through the concrete wall. From the interior it could be seen that some of the holes these have been filled with spray foam. Any holes cored through the foundation wall should be filled with an appropriate concrete grout to prevent water coming through the foundation wall. The interior of the foundation walls that could be observed at the basement level were in good condition. At the northeast corner of the building there is a portion of wood sill plate that is heavily rotted. It is unclear if this is supporting structure or simply an architectural sill board since the exterior walls are believed to be CMU bearing directly on the concrete foundation walls.

FIGURE 4-197
Spalled Concrete at Foundation Walls (Both Images)

FIGURE 4-198
Spalled Concrete and Crack in Foundation Wall (Both Images)

FIGURE 4-199
Holes Cored Through Foundation Wall and Filled with Spray Foam at The Interior (Both Images)

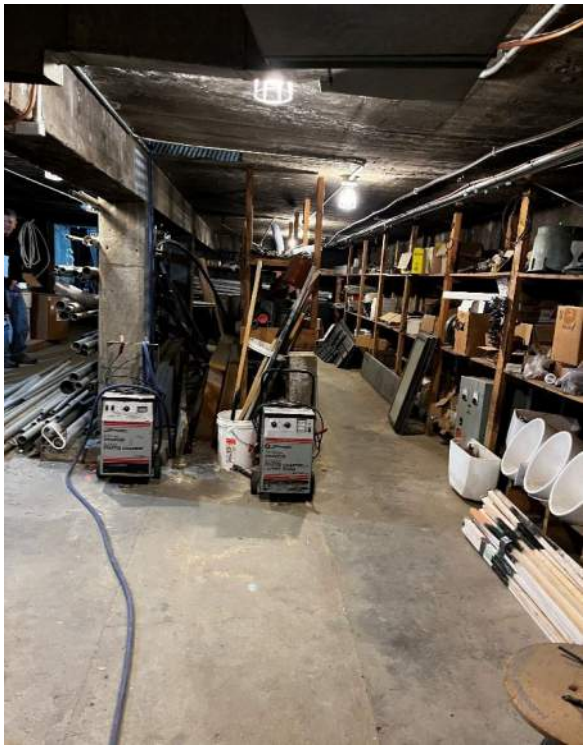
FIGURE 4-200
Rotted Sill at Northeast Corner

The first-floor structure that could be observed on site indicates a reinforced concrete flat slab spanning to reinforced concrete beams and columns. The underside of the first-floor slab had areas of significant spalls and some exposed and rusted rebar. These areas should be repaired. Any unsound concrete should be removed and exposed rebar should be cleaned of rust. The exposed rebar and concrete should be coated with sealant and a bonding agent prior to the repair patch being administered. The concrete beams and columns that could be observed at the basement level were in good condition.

FIGURE 4-201
Underside Of First Floor Concrete Flat Slab and Spalled Concrete with Exposed Rebar (Both Images)

FIGURE 4-202
Spalled Concrete at Underside of First Floor Concrete Slab (Both Images)

FIGURE 4-203
Underside of First Floor Concrete Slab and Concrete Beam in Good Condition



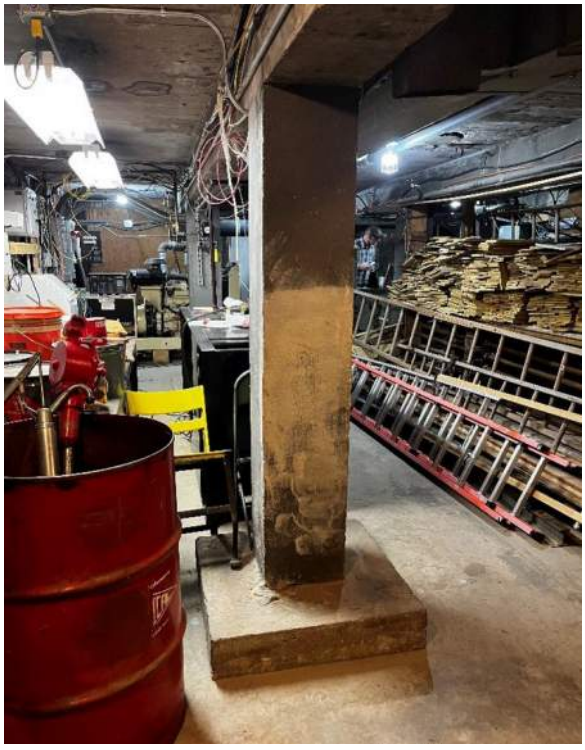


FIGURE 4-204
Basement Slab on Grade and Concrete Beam and Columns in Good Condition
(Both Images)

Basement slab on grade and concrete beam and columns in good condition

The second and partial third floor structure consists of steel beams and columns supporting precast concrete floor planks known as Martin Fireproofing floor planks. There is a thin topping slab over the floor planks. The wide flange steel columns measured 6½" deep x 6" wide, the steel beams measured 8" deep. The steel beams and columns that could be observed were in good condition. Approximately 40% of the Martin floor planks that could be observed were heavily cracked and spalled. The topping slab above the floor planks has areas of heavy spalling. Due to the level of deterioration seen at the Martin floor planks it is recommended that all cracked and spalled floor planks be removed. The infill floor system could be concrete on metal deck that spans to the existing steel beams. If the depth of slab is required to be the same thickness as the Martin floor planks then additional steel beams could be added to reduce the span of the infill slab on deck and arrive at a thinner floor assembly.

FIGURE 4-205
Second Floor Steel Beams and Columns (Both Images)

FIGURE 4-206
Second Floor Steel Beams and Column

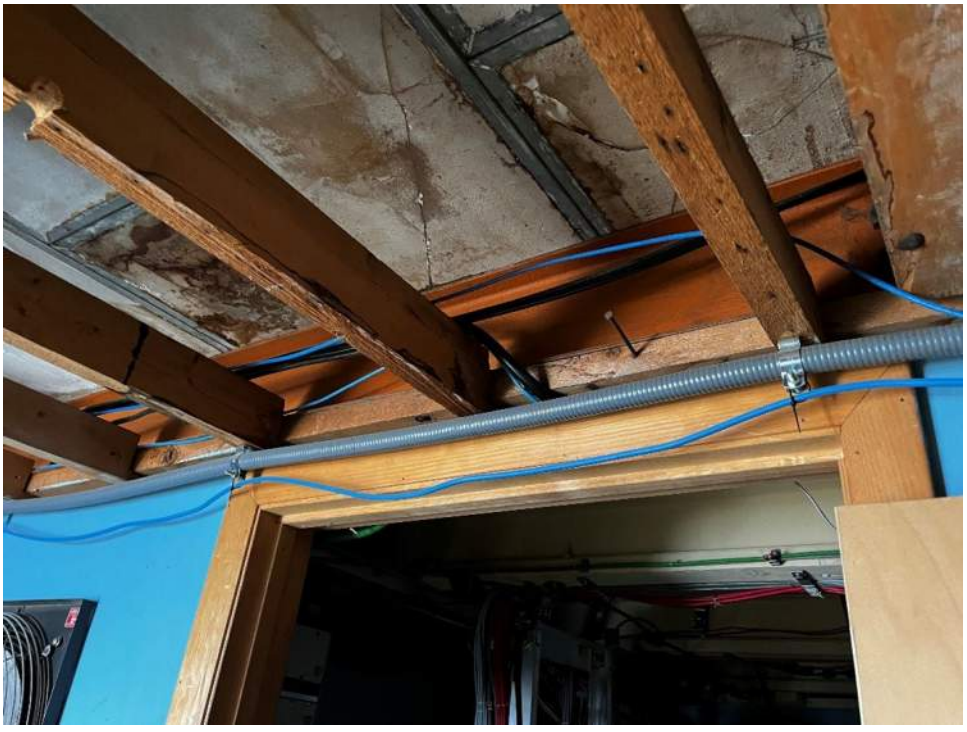


FIGURE 4-207
Steel Beam Supporting Cracked Martin Floor Planks

FIGURE 4-208
Underside of Martin Floor Planks with Spalls and Cracks

FIGURE 4-209
Second and Third Floor Spalled Topping Slab

The sloped roof framing above the second floor is 5” deep by 3” wide steel wide flange roof beams spaced at approximated 4’-3” o.c. with wood tongue and groove roof planks above. The areas that could be observed were in good condition. The steel roof beams are supported on the CMU exterior walls. Two courses of brick could be seen above the CMU in the northeast corner.

The third-floor high roof is wood framed with 2x12 rafters and 9½" x 9½" wood beams and columns. There are extensive signs of water damage and numerous notched/cut members with a mix of additional posts and framing added. Due to the condition of the third-floor roof framing and the number of modified structural members it is recommended that the walls and roof be rebuilt. This could be a wood framed structure with 2x6 wood bearing/shear walls that are anchored to the CMU walls below, and a mix of conventional and composite lumber for the roof framing.

FIGURE 4-210
Sloped Roof Beam with Wood Roof Decking at Low Northeast Roof

FIGURE 4-211
Sloped Steel Roof Beam Supported at CMU Wall and Ceiling Level Steel Beams at North Wing Main Roof (Both Images)

FIGURE 4-212
Third Floor 2x12 Rafters and 9½”X9½” Beam with Water Damage (Both Images)

FIGURE 4-213
Third Floor 2x12 Roof Rafters with Water Damage and Reinforced With 2x8s

FIGURE 4-214
Third Floor Framing with Steel Post Added

FIGURE 4-215
Third Floor Roof 9½”X9½” Column Cut and Anchored to Wall and Double Joist With Steel Bracket

4.3.5 Yankee Building Interior Finishes, Fixtures, and Equipment

4.3.4.1 First Floor

There are two entrances into the Yankee Building, both on the south east side of the building facing the parking area. The main entrance, also called the summer entrance, is at the inside corner of the courtyard formed by the two wings of the building. The secondary entrance at the end of the southern wing of the building, known as the winter entrance, is used when snow and ice fill the courtyard and block access to the summer entry. There is also a small storage area, with its own exterior entrance, in the courtyard that is used by the Appalachian Mountain Club to store supplies for their nearby White Mountain huts.

FIGURE 4-216
Summer Entrance and Separate AMC Storage Area in Courtyard

FIGURE 4-217
Winter Entrance at End of Southern Wing

The building is exclusively used by Park staff. There is no public access to this building. Inside the building, there is a mix of Park staff work areas, telecommunications tenant spaces filled with their unique pieces of equipment, and unused or abandoned rooms. Many rooms were not purpose built for their current use and are inefficiently laid out. If the Yanke Building is to remain and be improved, reviewing these unused and underused spaces for opportunities to better serve the staff storage needs, especially during the busy tourist season, would be worthwhile. Since accessing the building from the Sherman Adams building requires going outside, critical storage and equipment needs to remain in the Sherman Adams building where staff is housed.

Inside the summer entrance to the building is a large staff workshop space. The workshop appears to be actively used, including the welding station. Given this equipment, this space presents the largest fire hazard within the building. The other active staff work area on the first floor is lab space used for water testing in the south wing. There are telecommunication tenants at the far end of both wings of the first floor. The condition of their spaces are outside the scope of this review. Rooms that appear to be unused or abandoned on the first floor include a storage room near the stairs, small office, and the restrooms – which do not function.

FIGURE 4-218
Workshop Space

FIGURE 4-219
Stair from First to Second Floor

Flooring finishes vary from room to room, and the materials include concrete, resilient tile flooring, plywood, and broadloom carpet. Most of the floor finishes are worn and in poor condition, and in some areas, the resilient flooring is missing. The equipment rooms used by tenants, such as the WPKQ room which holds media equipment, have newer flooring.

The walls consist of gypsum wallboard, wood paneling, and exposed CMU. The tenant equipment rooms have painted gypsum wallboard or a panelized wall surface. The ceilings are primarily made up of acoustic tile, wallboard, precast concrete panels and exposed framing. As noted in the Structural section, areas of the precast ceiling panels are broken and need to be repaired.

4.3.4.2 Second Floor

The stair connecting the first and second floor is narrow with low ceilings and low guardrails. It is missing a handrail on the wall mounted side. The finishes are in poor condition and the space is under lit. The same conditions continue throughout the second floor corridors.

There are four telecommunication tenant spaces on the second floor as well as two underused or abandoned rooms with no clear purpose. The closets on this floor are also unused or underused and the restroom is non-functional. Room finishes are comparable to those noted on the first floor.

FIGURE 4-220
Example Flooring Condition

FIGURE 4-221
Example Ceiling Condition

FIGURE 4-222
Example Low Ceiling on Second Floor

FIGURE 4-223
Example Underused Space on Second Floor with Poor Finishes

4.3.4.3 Third Floor

The third floor is essentially an unfinished space, and it appears to be used like an attic. Various unrelated items are stored here, and it does not appear to have any current use. Active water leakage is evident, and there are several buckets in the space located below the leaks.

FIGURE 4-224
Unfinished Third Floor in Poor Conditions

FIGURE 4-225
Unfinished Third Floor in Poor Condition

4.3.4.4 Basement Level

The basement of the Yankee Building is unfinished with exposed concrete slab floors, CMU walls, concrete beams and columns, and cast in place concrete board ceilings. The finishes are utilitarian but generally in fair condition, with no significant signs of water infiltration through the foundation or slab. The basement is primarily used for mechanical equipment and storage. Due to the large runs of exposed ductwork in the space, there are low ceilings at several points. The basement is used to store a large amount of cedar shingles used for siding repairs on the Yankee Building and the Sherman Adams Building.

FIGURE 4-226
Unfinished Basement Storage

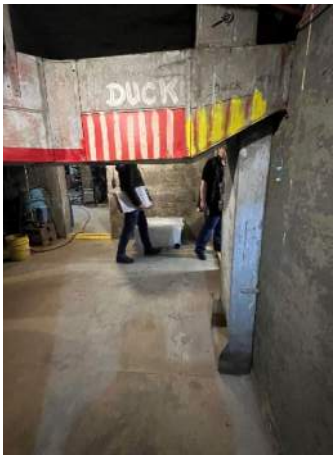


FIGURE 4-227
Basement Ductwork

4.3.5 Yankee Building Diagrams

The following Building Diagram was intended to supplement the narrative space descriptions in the previous sections. It focuses on the building space use.

YANKEE BUILDING HOUSE SPACE USE DIAGRAM – BASEMENT AND FIRST FLOOR

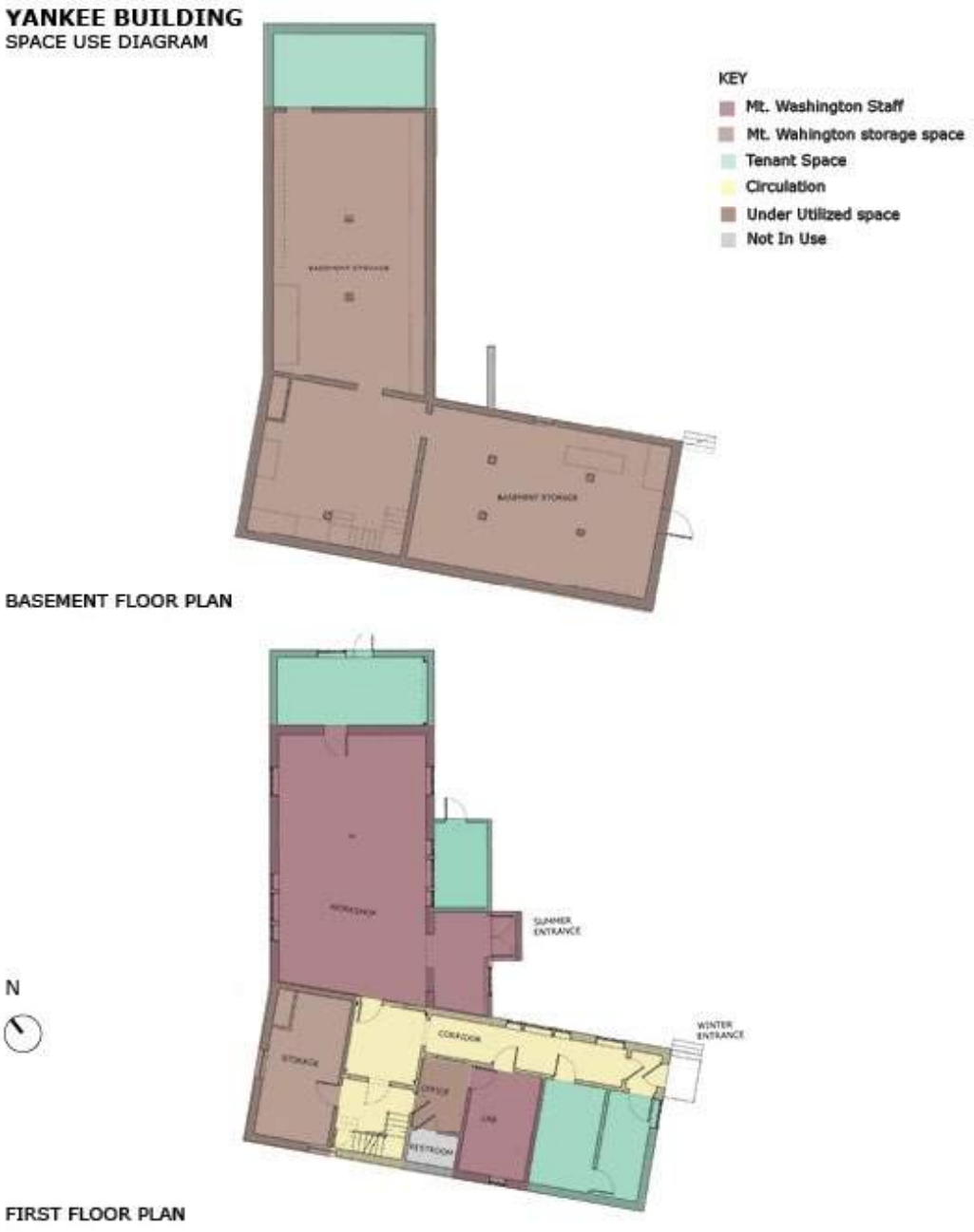


FIGURE 4-228
Yankee Building House Space Use Diagram

YANKEE BUILDING HOUSE SPACE USE DIAGRAM – SECOND AND THIRD FLOOR

FIGURE 4-229
Yankee Building House Space Use Diagram – Second and Third Floor

4.3.6 Code Summary Appendix C: Yankee Building Existing Conditions Code Summary

Existing conditions are organized within the following tables in this Appendix as outlined below (Categories 1-3 & Accessibility). These conditions are documented for informational purposes and are intended to serve as a reference for consideration as part of future maintenance work and future projects within the building.

Category 1 – Existing conditions that have not been maintained as originally constructed, present a potential risk to life safety, and may be subject to citations by the fire department, irrespective of the work performed. We suggest addressing these items to the extent feasible to ensure these elements are upgraded and maintained as originally designed.

Category 2 - Existing conditions that may have complied with the code at the time of construction, but do not comply with Saf-FM 304 (NFPA 101). Saf-C 6000 gives the authority to the local fire marshal to issue violations for existing conditions that do not comply, regardless of whether work is taking place in the building.

Category 3 - Existing conditions that do not comply with the New Hampshire Building Code and could be required to be corrected as part of future work depending upon the scope of work.

Section 4.1.3 Yankee Building Code Compliance

Tighe&Bond

Category 1			
#	Existing Condition & Recommendation	Location	Picture
1.	The treads on the stairs are damaged at select locations. Stair treads and risers are required to be of uniform size and shape (NHSBC 1011.5.4). The stair treads could be repaired where damaged.		
2.	The corridor doors throughout the building were observed to be non-rated. Corridors and corridor doors in buildings without a sprinkler system are required to be 1 hour rated (NFPA 101, 26.1.3.3 and NHSBC 1020.2) 20-minute rated corridor doors could replace existing doors to resolve this condition.		
3.	The detector cap is taped to the ceiling within the vicinity of the detector. Detectors are required to be spaces and located so that they are not obstructed (NFPA 72, 17.8.3.1.2). It is recommended that the detector caps be removed from the ceiling and stored elsewhere.		

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Section 4.1.3 Yankee Building Code Compliance

Tighe&Bond

Category 2			
#	Existing Conditions Recommendations	Location	Picture
4.	The winter exit door is equipped with a lock. Doors are not permitted to be locked in the direction of egress (NFPPA 101, 26.2.3.5.1 & NHSBC 1010.2.4) It is recommended that this door remain unlocked from the inside, or locking hardware be installed such that it is not locked on the egress side.		
5.	The summer exit door is equipped with a flush bolt. Unlatching of any door leaf is not permitted to require more than one operation (NFPA 101, 7.2.1.5.9). It is recommended that this door remain unlocked from the inside, or locking hardware be installed such that it is not locked on the egress side.		
6.	The winter exit door is equipped with a lock. Doors are not permitted to be locked in the direction of egress (NFPPA 101, 26.2.3.5.1 & NHSBC 1010.2.4) It is recommended that this door remain unlocked from the inside, or locking hardware be installed such that it is not locked on the egress side.		

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Section 4.1.3 Yankee Building Code Compliance

Tighe&Bond

	Category 2		
#	Existing Conditions Recommendations	Location	Picture
7.	The stair has a clear width of that is less than the minimum 36" required for existing stairs (NFPA 101, 7.2.2.2.1.1(b)). New egress stairs are required to have a minimum 44" clear width (NHSBC 1011.2). The clear width could be increased, or this condition could be reviewed with the AHJ for approval as part of future work.		
8.	No handrails are provided along the steps from the basement to the first floor. Handrails are required on both sides of all new egress stairways (NHSBC 1011.11). Handrails are permitted to be provided on one side of existing stairs (NFPA 101, 7.2.2.4.1.6). A new handrail could be installed on at least one side of the stair.		
9.	Each door leaf provides a clear opening of 26". Existing doors are required to provide a minimum clear opening of 28" (NFPA 101, 7.2.1.2.3.2). A clear opening of 32" is required for new doors (NHSBC 1010.1.1). The exit door assembly could be removed and replaced with at least one new door with a clear width of 32".		

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Section 4.1.3 Yankee Building Code Compliance

Tighe&Bond

	Category 2		
#	Existing Conditions Recommendations	Location	Picture
10.	The headroom throughout the corridors at the Second Floor is reduced to 71" at the lowest point. The minimum ceiling height is not permitted to be less than 7 ft. in existing buildings (NFPA 101, 7.1.5). A minimum 7 ft. 6 in. ceiling height is required in new buildings (NHSBC 1003.3.1). The ceiling could be reconfigured to provide the minimum required headroom.		
11.	The headroom throughout the Stair is reduced at multiple floors below the minimum 6 ft. 8 in. permitted (NFPA 101, 7.1.5 & NHSBC 1003.3.1). At locations where this occurs, the edges of the ceiling should be provided with protection and signage indicating a low ceiling height.		

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Section 4.1.3 Yankee Building Code Compliance

Tighe&Bond

Category 3			
#	Existing Condition & Recommendation	Location	Picture
12.	No outside handrails are provided along the stair. Handrails are required on both sides of all new egress stairways (NHSBC 1011.11). Handrails are permitted to be provided on one side of existing stairs (NFPA 101, 7.2.2.4.1.6). Another handrail could be provided on the outside of the stair.		
13.	The handrail along the steps is interrupted by newel posts. Handrails are required to be continuous along the full length, uninterrupted by posts (NHSBC 1014.4). This requirement does not apply to existing handrails (NFPA 101, 7.2.2.4.5.7). The handrail is required to be replaced if altered, or if a change of occupancy to a higher hazard category occurs (NHEBC 801.4 & 1011.5.1).		
14.	The guard openings in the handrails were measured to be 5.5". Openings in guards, other than approved existing guards, are required to restrict the passage of a sphere 4" in diameter (NFPA 101 7.2.2.4.6.3, NHSBC 1015.4). The guard condition is required to be addressed if altered, or if a change of occupancy to a higher hazard category occurs (NHEBC 801.4 & 1011.5.1).		

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Section 4.1.3 Yankee Building Code Compliance

Tighe&Bond

Category 3			
#	Existing Condition & Recommendation	Location	Picture
15.	The handrails are mounted 32″ above the stair nosing. New handrails are required to be mounted 34″ – 38″ above the stair nosing (NHSBC 1014.2). The handrails are required to be adjusted to comply with the NHSBC if a change of occupancy to a higher hazard category occurs, or if the handrails are otherwise altered (NHEBC 1011.5.1).		
16.	Only one handrail is provided along exterior stair from the winter exit. Handrails are required on both sides of all new egress stairways (NHSBC 1011.11). Compliant handrails are required to be installed on both sides if a change of occupancy to a higher hazard category occurs, or if the handrails are otherwise altered (NHEBC 1011.5.1).		
17.	The door is not provided with landings on both sides. Landings should be provided on each side of doors at the same elevation (NFPA 101 7.2.1.3.1, NHSBC 1010.1.4) Landings at each side of the door would be required if a change of occupancy to a higher hazard category occurs, or if the handrails are otherwise altered (NHEBC 1011.5.1).		

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Section 4.1.3 Yankee Building Code Compliance

Tighe&Bond

#	Existing Condition & Recommendation	Location	Picture
	Category 3		
18.	The guards within the stairway have a height of 33.5". Existing guards are required to have a minimum height of 36" (NFPA 101, 7.2.2.4.6.2(1)). New Guards are required to have a minimum height of 42" (NHSBC 1015.3). The openings in the guards are 4.25" - 4.5". Openings in guards, other than approved existing guards, are required to restrict the passage of a sphere 4" in diameter (NFPA 101 7.2.2.4.6.3 & NHSBC 1015.4). Compliant guards are required if a change of occupancy to a higher hazard category occurs, or if the guards are otherwise altered (NHEBC 1011.5.1).		
19.	An MEP and Storage room is located with and opening to the stair. Exit stair enclosures are not permitted to be used for any purpose that interferes with its function as a means of egress (NFPA 101, 7.1.3.2.3 & NHSBC 1022.1). This item would need to be addressed if the scope of work for future projects included the enclosure of this stair.		
20.	The current arrangement of these doors does not provide sufficient clear floor space between doors. Doors in series are required to have 48" between them plus the width of the door swinging into the space (NHSBC 1010.1.7) The doors could be rearranged so that sufficient clear floor space is provided.		

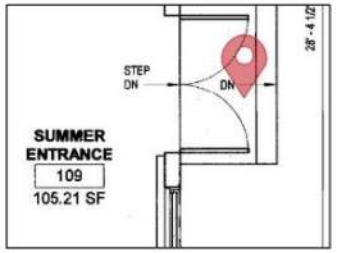
Category 3			
#	Existing Condition & Recommendation	Location	Picture
21.	The handrails serving the exterior steps do not extend at the bottom of the steps. Handrails are required to slope for one tread depth at the bottom (NHSBC 1014.6). Handrail extensions are required to be provided if the existing handrails are altered or if a change of occupancy to a higher hazard category occurs (NHSEBC 801.4 & 1011.5.1).		
22.	The corridor measured 32″ wide at the narrowest point. Corridors are required to be at least 36″ wide where the occupant load is less than 50 (NFPA 101 7.2.4.6.1, NHSBC 1020.3). The corridor width is required to be addressed if the existing handrails are altered or if a change of occupancy to a higher hazard category occurs (NHSEBC 801.4 & 1011.5.1).		

FIGURE 4-230
Aerial View of Foundations at Former Power House and Former WMTV Building
(Image Source: Unknown)

4.4 Foundations of the Former Power House and Former WMTV Building

4.4.1 Overall Conditions

Our team also assessed the remaining concrete foundations of the former Power House and the former WMTV Building, which both burned down in 2003. These two structures were connected, and the smaller Power House was located in front of the larger WMTV Building. The State Park left the foundations in place in case they could be used to support a new building on the summit. The Mt. Washington Communications Facilities Assessment Report from 2019 noted that these two buildings, which were together referred to as the Old Generator Building in that report, were constructed around 1954, but there are no record drawings of concrete foundation details or dimensions.

The visible portion of the Power House foundation is crumbling with rebar exposed and is in poor condition. A concrete slab is still intact, but it is cracked and spalling, so this appears to be in very poor condition as well. A large portion of the larger WMTV Building foundation is currently exposed, and from what our team could observe, the 70-year-old foundation appeared to be in fair to good condition.

As described further in the following section, the primary conditions that were identified for the foundations of the Former Power House and Former WMTV Building are:

- The visible portion of the Former WMTV Building foundation appears to be in fair to good condition and has the potential to be reused.
- The foundation of the Former Power House appears to be in poor condition and not able to be reused.

4.4.2 Foundation Structural Assessment

The following are the findings by RSE Associates, Inc. based on a review of the structural components accessible at the time of their site visit on September 6, 2024. It excludes members that were covered with finishes and below grade elements such as footings, etc.

The Old Generator Building foundations remain in place and could be partially observed on site. What could be observed at the foundation above grade at the south and west lower most walls are 18" thick reinforced concrete foundation walls with #6 bars @ 24" o.c. at each face, and these walls were in good condition. It is anticipated that similar reinforcement is present in the horizontal direction. The east foundation wall could not be observed but is likely of similar construction. It is unknown if there is a footing below these walls. There was an area where the concrete foundation wall had been cut out at the southwest corner. These lower foundation walls could be reused provided the proposed building loads do not exceed those from the previous structure. Scanning of the walls will be required to determine the extent of the reinforcement, and test pits should be dug to further investigate how far below grade the walls extend and if there is a footing. The southwest corner where the concrete has been cut can be infilled with a new cast-in-place reinforced concrete wall with rebar that is drilled and epoxied into the existing wall.

The upper foundation walls and the interior foundation walls had extensive areas of spalls and crumbling concrete. It is recommended that these should not be reused for foundation support of a future building. They can remain in place or be removed. If they remain in place, they should be cut down, so they do not interfere with the new foundations of the future building.

FIGURE 4-231
Lower South Foundation Wall

FIGURE 4-232
Lower Southwest Corner of Foundation Wall and Lower West Foundation Wall
With Upper South Foundation Wall in The Background

FIGURE 4-233
Upper South Foundation Wall and Lower Interior Foundation Wall

Section 5
Building Infrastructure Assessment

The following assessment of building and facilities infrastructure has been based on a review of records provided by the DNCR, site reconnaissance visits performed by Tighe & Bond staff in August and September 2025, and interviews with the State Park staff.

5.1 Fuel Oil Distribution Systems

The Mount Washington Summit primarily uses kerosene for heating and hot water, as well as for its emergency generators. Because of the extreme conditions on Mount Washington, kerosene is used for its low gel point temperature (-40°F) compared to traditional heating oil (+15°F).

An array of five (5) 20,000-gallon aboveground storage tanks (often referred to as 'Tank Farm') is used to provide sufficient storage for emergency generator operation and heating due to the difficult access through the winter. See Figure 5-1 below for aboveground storage tank locations and Table 5-1 for the Tank Schedule.

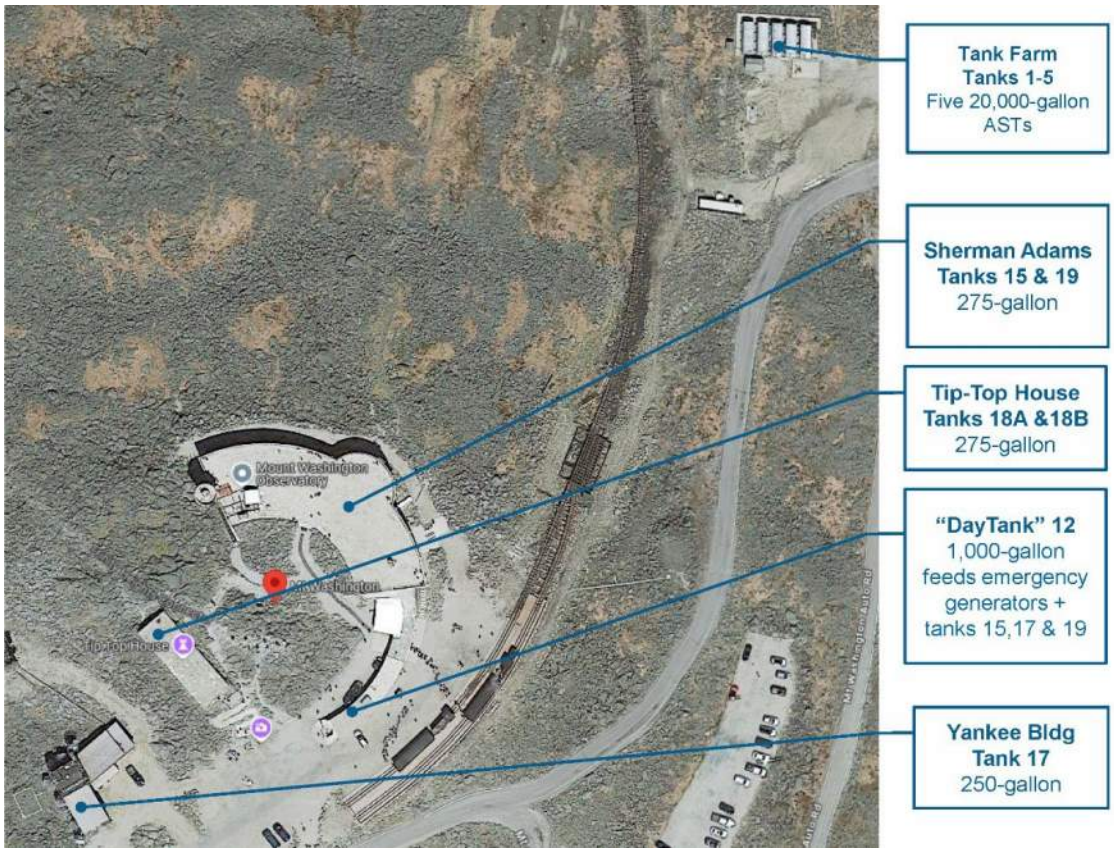


FIGURE 5-1
Tanks Location Key Plan

TABLE 5-1

Tank Schedule

Facility	Tank Capacity (Gallons)	Quantity	Construction Material	Associated Boilers
Tank Farm (ASTs 1-5)	20,000	5	Single-Walled Steel Tank	N/A, Piped to AST 12
Sherman Adams Building (AST 15 & 19)	275	2	Double-Walled Steel Tank	Two (2) The H.B. Smith Co, Inc. Model No. B79-123 One (1) Smith Cast Iron Boilers: Model No. HE-03
Tip Top House (AST 18A & 18B)	165	2	Double-Walled Steel Tank	One (1) Lennox Industries: Model No. OF 12-185
Yankee Building (AST 17)	250	1	Double-Walled Steel Tank	Two (2) Furnaces Model No. Undetermined
Generator Housing Shed (AST 12)	1,000	1	Double-Walled Steel Tank	N/A, Piped to AST 15, 17, 18A, 18B, 19, EGEN-1 & EGEN 2

From the "Tank Farm" storage tanks, fuel is pumped to a 1,000-gallon storage tank (Tank 12 - "day tank") near the emergency generators in the extension of Sherman Adams Building. From this tank, kerosene is in turn piped to various tanks in the Sherman Adams and Yankee Buildings, with fuel oil transfers initiated manually by staff. Facility staff observe the complete fuel transfers.

Systems fed from the 1,000-gallon day tank include:

- Two (2) standby generators in the Sherman Adams Building. These units each have a 275-gallon undermount day tanks (Tanks 20 & 21), but they are not used. Fuel is drawn directly from the 1,000-gallon day tank with the generator fuel pumps.
- A 275-gallon day tank (Tank 19) serves the Mount Washington Summit Building Parks Department boiler system.
- A 275-gallon day tank (Tank 15) serves the Mount Washington Observatory boiler system.
- A 275-gallon day tank (Tank 17) serves the Yankee Building.
- A dispenser pump to allow the filling of portable tanks.

According to the 2023 Nobis SPCC plan and confirmed by Tighe & Bond, the product supply piping from the tanks to associated pump houses is manifolded together with in-line valves to isolate selected tanks, but only two tanks are used at once. The product supply lines are connected to pump systems located in two pump houses. The pump system in the main pump house transfers fuel at a rate of approximately 15 gallons per minute (gpm) to a 1,000-gallon storage tank (AST #12) that supplies fuel for the generators and for furnaces located at the summit. The main pump house system has two pumps for redundancy in the event one pump fails. Product piping within the pump houses is primarily single-wall steel.

Two (2) of the 20,000-gallon ASTs may be online at any given time to reduce the potential quantity of fuel that might be released in the event of a pump or pump house piping failure. A release in the main pump house would result in a spill to the concrete floor of the structure potentially at a pumping rate of 15 gpm. The main pump house is constructed with steel discharge piping at the concrete floor surface which is designed to direct spills within the pump house to flow by gravity back into the concrete AST containment area. The secondary pump house no longer has electrical power and is not used.

5.1.1 Tank Farm -Tanks 1 through 5

The five (5) 20,000-gallon kerosene tanks were installed in 1945 and are in fair to poor condition. Two (2) of the 20,000-gallon tanks are currently out of service as they had previously been internally inspected in 2014 by InterSpec, LLC to the American Petroleum Institute (API) 653 inspection code, revealing areas of weld deterioration and areas of pitting. Due to their current condition and age, State Park staff have elected to defer recommended repairs to these tanks and placed the tanks out of service. A majority of the findings and recommendations in the 2014 InterSpec, LLC report were not addressed prior to our site visit.

The following observations were identified during our site visit:

- All five (5) tanks are exhibiting moderate to severe coating failure and corrosion on the exterior.
- The associated piping, appurtenances and anchor straps are also exhibiting moderate to severe coating failure and corrosion.
- All five (5) tank atmospheric vent pipes are manifolded together and terminate inside of the pump shed.
- The tanks are not equipped with proper emergency venting.
- The concrete containment area associated with the tanks are exhibiting areas of vegetation growth, cracking, spalling and water accumulation.

  Gaps between the tank shells and concrete pedestal supports were observed, allowing water, dirt, and debris to accumulate inside these gaps.
- The existing labels do not fully meet the signage requirements.
- Metal on metal contact was observed at pipe supports.
- The tank vents are smaller than the fill connection (2" vent, 3" fill). While the tanks predate UL 142 construction standards, current industry practice requires vent capacity equal to or greater than the largest fill or withdrawal opening. The existing configuration may restrict vapor flow during filling operations.

FIGURE 5-2
Aboveground Fuel Storage Tanks (Tanks 1 to 5)

5.1.2 Generator Housing Shed – Tank 12 "Day Tank"

It was undetermined when the day tank was installed, however, the tank is generally in good condition.

According to the 2023 Nobis SPCC plan and confirmed by Tighe & Bond, the tank is of double-wall construction and the interstitial space is continuously monitored for leaks with an electronic sensor. An electronic high-level sensor and alarm panel continuously monitor for high liquid level within the tank. The tank is situated on a solid concrete floor. The tank is filled via piping installed from the main pump house using a switch at the tank that manually activates the pump house transfer pump.

The following observations were made during our site visit:

- Product staining was observed on the tank top.
- The tank is not equipped with proper grounding.
- The tank's atmospheric vent terminates inside of the building.
- The atmospheric vent piping is manifolded together with the dispenser pump and mechanical level gauge.
- The associated level gauge is inaccurate.
- Not enough threaded couplings available for associated piping and appurtenances on the tank top.

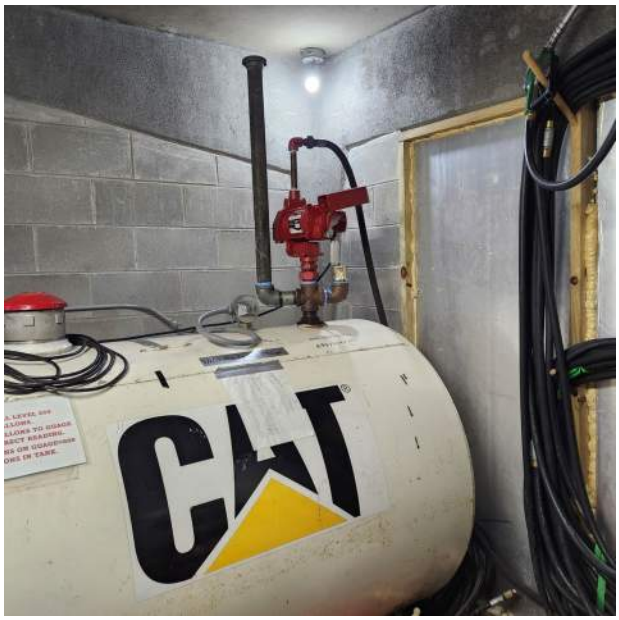


FIGURE 5-3
Day Tank (Tank 12)

5.1.3 Sherman Adams Building – Tank 19

Tank 19 was installed in 2009 and is generally in fair condition.

According to the 2023 Nobis SPCC plan and confirmed by Tighe & Bond, the tank is of double-wall steel construction, consisting of a steel exterior containing a polyethylene primary container, with a visual float to indicate if liquid is present in the interstitial space. An electronic high-level sensor and alarm panel continuously monitor for high liquid level within the tank. The tank is supported by a metal frame situated on the concrete basement floor. The tank is filled via piping installed from AST #12 using a transfer pump mounted on the wall.

The following observations were made during our site visit:

- The tank was not equipped with emergency vents for both primary and secondary tanks.
- The tank is not equipped with proper grounding.
- The tank's atmospheric vent terminates inside of the building.
- Product staining was observed on the tank top.
- The visual interstitial monitoring float was raised, and fuel was observed inside the interstitial space resulting from a recent overfill of the tank. It was unclear whether the fuel within the interstitial space entered exclusively through the top opening around the monitoring device or if the primary tank was damaged.

FIGURE 5-4
Tank 19

5.1.4 Mount Washington Observatory – Tank 15

The date of installation for Tank 15 is unknown. However, the tank is generally in good condition. The following observations were made during our site visit:

According to the 2023 Nobis SPCC plan and confirmed by Tighe & Bond, the tank is of double-wall steel construction consisting of a steel exterior containing a polyethylene primary container and is fitted with a visual fuel level gauge. An electronic high-level sensor and alarm panel continuously monitor for high liquid level within the tank. The tank is supported by metal legs situated on the concrete basement floor. The tank is filled via piping installed from AST #12 using a transfer pump mounted on the wall.

The following observations were made during our site visit:

- The tank was not equipped with emergency vents for both primary and secondary tanks.
- The tank is not equipped with proper grounding.
- The tank's atmospheric vent terminates inside of the building.
- Wooden planks were observed on the tank top supporting the vent pipe.

FIGURE 5-5
Typical Boiler Storage Tank (Tank 15)

5.1.5 Yankee Building – Tank 17

The date of installation for Tank 17 is unknown. However, the tank is generally in good condition. The following observations were made during our site visit:

According to the 2023 Nobis SPCC plan and confirmed by Tighe & Bond, the tank is of double-wall construction, consisting of a steel exterior containing a polyethylene primary container, and is fitted with a visual fuel level gauge and high-level alarm. The high-level alarm is not currently functioning due to a broken float switch. The tank is situated on the concrete basement floor of the building.

The following observations were made during our site visit:

- Product staining was observed on the tank top.
- The tank is not equipped with proper grounding.
- The tank's atmospheric vent terminates inside of the building.
- The tank was not equipped with an emergency vent for the secondary tank.
- The associated leak detection sensor for the interstitial space is not wired properly and is in need of maintenance.

FIGURE 5-6
"Belly" Storage Tank (Tank 17)

5.1.6 Tip-Top House – Tank 18A & 18B

The date of installation for Tanks 18A & 18B is unknown. However, the tanks are generally in good condition. According to the 2023 Nobis SPCC plan and confirmed by Tighe & Bond, the tanks are of double-wall construction consisting of a steel exterior containing a polyethylene primary container, with a visual float to indicate if liquid is present in the interstitial space. Both tanks are equipped with visual product level gauges and the tanks are manifolded together at the tank tops. The tanks are supported by metal frames situated on the concrete floor.

Historically, the Tip-Top house tanks (Tanks 18A & 18B) were filled with 5-gallon portable containers. According to staff, a conventional exterior oil fill and vent to these tanks have been installed since our site visit. This fill mechanism would likely allow fills from an oil truck.

The following observations were made during our site in August, 2025:

- The tanks were not equipped with proper grounding.
- The tanks were not equipped with atmospheric vents.
- The tanks were not equipped with emergency vents for both primary and secondary tanks.
- Tanks were out of service as the Tip-Top House is currently unheated.

FIGURE 5-7
Storage Tanks (Tank 18A & 18B)

5.2 HVAC Systems

5.2.1 Sherman Adams Building - Parks Department Heating

Heat and domestic hot water for the Parks Department areas of the Sherman Adams Building is provided via three (3) 375 MBH kerosene-fired, cast-iron sectional boilers. Kerosene is stored in Tank 19 in the boiler room. According to staff, two boilers are typically able to maintain space conditions, with the third boiler only needed in extreme conditions (-30°F and below).

FIGURE 5-8
Parks Department Boiler

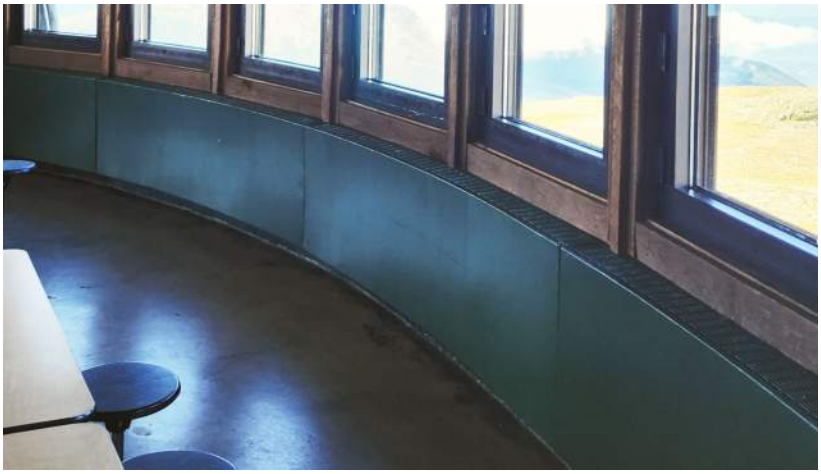


FIGURE 5-9
Typical Fin Tube Radiation with Architectural Style Enclosure

The boilers were replaced in 2014, appear to be in good condition, and are well within their expected service life of 25-30 years. The boilers are piped in a primary-secondary configuration, where a pair of variable flow system pumps circulate hot water throughout the building, and each boiler has a separate, dedicated boiler circulation pump. This system also serves the indirect domestic hot water heater. All pumps and the indirect water heater were also replaced in 2014 and are in good condition.

The shaft housing the chimney and original combustion air intake up to the roof is in extremely poor condition, with severe spalling. Refer to 'Section 4 Building Assessment' for additional commentary on the shafts. While the exhaust still discharges vertically, the combustion air intake shaft is no longer used. At some point, a new opening and combustion air damper was installed in the exterior wall to draw air from an unheated, interstitial space built by staff, with manually operable openings to the exterior. This offers some protection to the boiler room from the elements, while still permitting outdoor air to be drawn in.

Perimeter fin tube radiators are used for heating in most of the parks department areas, except for several cabinet unit heaters near visitor entrance doors. The existing distribution piping and heaters appear to be in fair condition but have exceeded their expected useful life of 30 years.

A note on the 1978 drawings includes a directive to use a propylene glycol mixture to reduce the risk of freezing. However, there is no glycol makeup feed system, only a pressure regulator and backflow preventer from the domestic water system. With this arrangement, the glycol could become diluted over time as the system is serviced and through small leaks through pumps and valves. The mixture should be tested to confirm its concentration, and a glycol makeup feeder should be added to maintain the glycol mixture. The existing domestic water makeup can remain as a backup makeup source, but should be shut and tagged off to avoid diluting the glycol mixture.

5.2.2 Sherman Adams Building - Observatory Heating

The Mount Washington Observatory heating and domestic hot water systems in the Sherman Adams Building are physically separate from the Parks Department systems.

Heat and domestic hot water for the Observatory is provided via two (2) 180 MBH kerosene-fired boilers. Kerosene is stored in Tank 15 in the boiler room. According to staff, one boiler is typically able to maintain space conditions, with the second boiler only operating in extreme conditions (-30°F and below).

The boilers, pumps, and other accessories are original from the 1978 construction. They are operational but in poor condition and have exceeded their expected system life. We recommend replacing them within the next 5 years. The boilers are piped in constant flow primary pumping configuration, where a pair of system pumps circulates water through both the boilers and the building. Note that while the pumps appear to be constant speed and the fin tube radiators indicate a 2-way, on/off control valve, there was no visible differential pressure bypass valve in the system. This should be added if not present to allow a minimum flow through the boilers and pumps when only a few devices are calling for heat.

FIGURE 5-10
Observatory Boiler

FIGURE 5-11
Observatory Fin Tube Radiation

Domestic hot water is provided via an instantaneous hot water coil connected to each boiler. The domestic water coils appear to have been repaired recently, as they are piped with PEX tubing.

The shaft housing the chimney and original combustion air intake up to the roof is in extremely poor condition, with severe spalling. Refer to 'Section 4 Building Assessment' for additional commentary on the shafts. It appears that the combustion air intake through the roof is still used, but we could not confirm. There is no other means of combustion air intake.

Perimeter fin tube radiators are used for heating in most areas within the Observatory, except for two unit heaters in Utility Room 30. The existing distribution piping and heaters appear to be in fair condition but have exceeded their expected useful life of 30 years.

Like the Parks Department, the 1978 drawings indicate the use of a propylene glycol mixture to reduce the risk of freezing. However, there is no glycol makeup, only a pressure regulator and backflow preventer from the domestic water system. With this arrangement, the glycol could become diluted over time as the system is serviced and through small leaks through pumps and valves. The mixture should be tested to confirm its concentration, and a glycol makeup feeder should be added to maintain the glycol mixture. The existing domestic water makeup can remain as a backup but should be shut and tagged off to avoid diluting the mixture.

5.2.3 Sherman Adams Building - Ventilation

The Sherman Adams Building was designed to be predominantly unventilated and unexhausted, with only natural ventilation in the upstairs visitor areas and residential areas. Originally, the only area with exhaust to the exterior was the Dark Room, which has since been eliminated.

As a substitute for ventilation and exhaust, many areas in the building, including toilet rooms, use "exhaust fans" which recirculate air through particulate prefilters and odor absorbing carbon filters. These systems can manage dust and odors, while limiting outdoor air openings (given the extreme conditions on Mount Washington). However, they are not a substitute for outdoor air ventilation, and do not control or manage humidity. Note that while the mechanical code does not allow for the recirculation of exhaust air from toilet rooms, it is possible that special permission was granted for this recirculating system design. Except for the systems serving toilet rooms, these systems have all been removed or are no longer operational. Staff stated that they regularly replace the carbon and prefilters for the systems serving the toilet rooms, and that they work well to manage odors.

The upstairs visitor areas are ventilated with only natural ventilation from the windows. Natural ventilation is permitted by code if there are operable window and door openings that consist of more than 4% of the floor area and the visitor areas meet this requirement. Staff noted that these areas are generally comfortable but can be stuffy during peak occupancy. They also noted that due to the high winds, they have some issues with doors slamming and occasional ears popping. While the winds and cool dry air on Mount Washington make a good use case for natural ventilation, it still may be inadequate during high occupancy periods and has drawbacks. Natural ventilation with windows is not typically used or recommended for most new systems, as it is poorly controlled, unfiltered, and is not typically used by occupants on colder days.

Natural ventilation through infiltration for the residential areas is acceptable by code and is reasonable for the lower occupant density of the living quarters within the Sherman Adams Building. The individual bedrooms also have operable windows.

At some point, commercial type kitchen hoods with fire suppression were added to both the residential and commercial cooking areas to replace the recirculating systems, with exhausts to the building exterior. Staff have noted that the fire suppression systems are obsolete and becoming increasingly difficult to service. There is no makeup air for these systems, which is required by the mechanical code for commercial kitchen exhaust systems. While unpowered openings are permitted to be used for kitchen exhaust makeup air, windows cannot satisfy this requirement as they cannot open automatically. Additionally, there are no means to heat this makeup air in the winter, and it is unlikely the windows will be opened during extreme weather.

TABLE 5-3
Exhaust (Recirculating) Fan Systems

Area	Status	Notes
Toilet rooms (All Single)	Varies	Compact Wall type
Toilet rooms (All Multiple)	Working	
First Aid Room	Not working	
Residential Kitchen (2)	Replaced w/ Hood	Exhausts to exterior, no makeup
Commercial food prep	Replaced w/ Hood	Exhausts to exterior, no makeup
Commercial food storage	Not working	
Commercial food service	Removed	
Museum (3 units)	Removed	
Pack Room	Not working	
Dark Room (true exhaust)	Removed	Dark Room Eliminated

FIGURE 5-12
Rooftop Observatory and Commercial Cooking Exhaust Fans

FIGURE 5-13
Parks Department Cooking Exhaust Fan

FIGURE 5-14
Typical Recirculating Fan / Filter System (Food Storage)

FIGURE 5-15
Typical Kitchen Exhaust Hood

The downstairs museum has no mechanical or natural ventilation. While the 1978 drawings show (3) recirculating carbon filtration fan systems to serve this area, they appear to have all been removed and the wall openings closed off during or before the 2012 museum renovation. Similarly, the pack room has no mechanical ventilation, and the carbon filtration system for this area is not operational. Staff noted that both these areas are stuffy, hot, and humid. The pack room is especially problematic due to body

odors and hikers regularly bringing in wet gear. In the museum, two 600 CFM portable air cleaners with HEPA filtration were installed to improve air quality. Staff noted that the museum collection includes items of significant historical value, which could justify improved environmental control in this area.

FIGURE 5-16
Museum Portable Air Cleaners

5.2.4 Sherman Adams Building - Miscellaneous Systems

5.2.4.1 Generator Ventilation Systems

A supply fan and intake louver located in the vehicle storage area provides combustion air to allow the generators to safely operate. To provide cooling for the indoor generators, a system of intake openings (with removeable covers instead of louvers) and a gravity exhaust system provides cooling air to the generators. To protect against freezing, these openings are normally closed. However, control of the cooling intake and exhaust systems is entirely manual. Staff stated that in the event of a power outage, the generators will start automatically, and the hot generator air will recirculate within the generator room. If staff do not quickly get to the generator building and manually open the exhaust air dampers and doors to the garage (they don't use the cooling air openings), the generators will overheat. While the use of manual dampers and openings offers resiliency through simplicity, this is entirely reliant on staff responsiveness to avoid a generator shutdown. We recommend investigating the possibility of automatic operation of cooling air dampers.

FIGURE 5-17
Generator Gravity Vent and Intake Opening

5.2.4.2 Split Air Conditioner

A wall-mounted split air conditioner (mini split) is installed in the Radio Repair Room 124 to cool electronic equipment.

5.2.4.3 Building Management System

There are no building management systems onsite. Most systems operate with local automatic controls, and many require manual operation such as the boiler dampers noted above.

5.2.5 Yankee Building HVAC

The Yankee Building primarily houses telecommunications equipment. Various Rooms in the building are used to house equipment by different organizations, and most rooms have a cooling requirement associated with their equipment.

The building's HVAC systems are in poor condition and should be replaced in their entirety in the near future if the building continues to be used. Refer to the 2017 building assessment provided by the Turner Group for additional commentary.

5.2.5.1 Basement Generator

A 30 kW kerosene-fired generator is located in the basement. The generator muffler and exhaust are uninsulated and routed through the sidewall with a section of flexible exhaust tubing. At the time of our site visit we observed that a portion of the muffler ran very close to a wood board used for attaching electrical cabling to the structure. NFPA 37-8.3 requires a minimum distance of 18" from generator exhaust to combustible construction. According to staff, the generator is not in use but is tested annually. Staff have indicated that they have since removed the wood board, eliminating the hazard.

FIGURE 5-18
Basement Generator

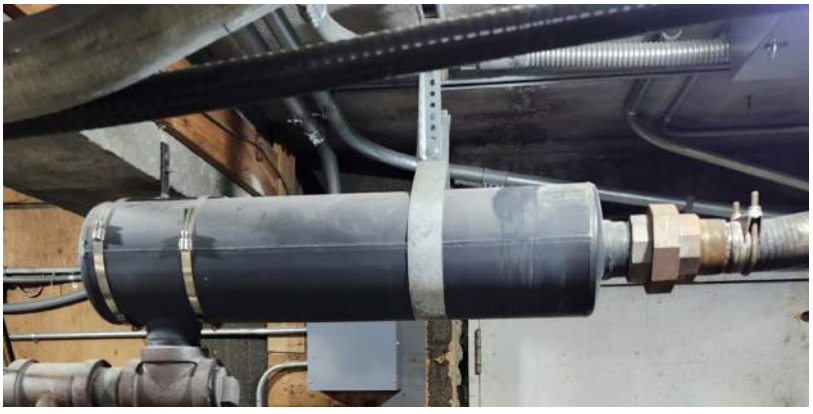


FIGURE 5-19
Generator Exhaust

5.2.5.2 Furnaces

Two kerosene furnaces of unknown capacity and installation date provide heating to the Yankee building. The furnaces serve supply diffusers throughout the first and second floor, primarily in the corridors and many, but not all rooms. They do not provide any ventilation air to the building. We did not see any fire or smoke dampers at openings between floors or between the corridors and the rooms. Smoke and fire dampers are required for new buildings to slow the spread of smoke and fire.

The furnaces are in poor condition and have exceeded their useful life. The furnaces and the 30 kW generator are fed from the 275 gallon kerosene tank (Tank 17). Tank 10 is out of service and no longer used.

5.2.5.3 Telecommunication Room Cooling

Most telecommunications rooms have some form of fan cooling, primarily with two transfer openings and a fan connecting the corridors and rooms. The DES Room did not have any transfer openings.

The WPKQ system draws air from the basement below, and discharges air to the adjacent workshop, which is in turn transferred to the basement.

According to staff, several users reported that their space is often too hot, including the State Police and the DES.

FIGURE 5-20
Typical Wall Fan for Cooling

5.2.6 Tip-Top House HVAC

A single kerosene furnace of unknown capacity and installation date historically provided heating to the Tip-Top House. As Noted in the tanks section, the Tip-Top House was unheated at the time of our visit. However, with the new tank fills in place, they plan to heat the building with the furnace in the near future. The furnace serves a supply duct that runs the length of the building, and air returns through a single opening near the furnace. The furnace does not provide any ventilation air to the building. It is in poor condition and has exceeded its useful life. We recommend replacing it in the next few years.

A small antique woodstove is located in the main open area of the building, but it is not currently connected to any chimney. It appears to be for decorative purposes only.

Due to the location, bare wood construction, high thermal mass due to stone construction, and high infiltration rate, the building has significant humidity challenges. Any future design should include year-round heating and / or dehumidification. Improvements to the building envelope should also be considered to improve moisture management.

FIGURE 5-21
Furnace

FIGURE 5-22
Exposed Ductwork in Ceiling

5.3 Domestic Hot and Cold-Water Systems

The assessment below was based on records and information provided by DNCR and Mount Washington State Park staff, as well as a site reconnaissance visit Tighe&Bond staff performed on September 6, 2024. Since that date, the State Park has rectified several of the issues identified during the site visit. We have noted the corrected items.

Within the Sherman Adams Building there are systems dedicated to the entire buildings, as well as systems dedicated to the State Park (Park) and the Mount Washington Observatory (Observatory), which is a tenant in the building. We have highlighted the systems specific to the Observatory.

5.3.1 Sherman Adams Building

Cold domestic water from an 800 foot deep well enters the building on the south side and fills two (2) 20,000 gallon storage tanks.

A booster pump system, installed in 2023, draws from the tanks and creates a pressurized water supply system to serve the building users. The system does not create pressure inside the storage tanks, rather it independently creates pressure only within the building distribution piping using two VFD-driven booster pumps, a building water pressure tank, and a control panel. The 3HP pumps increase the pipe pressure to 55psi. The pressure very quickly falls to about 40psi as the pumps turn off. The system setup causes the pumps to cycle with 30 seconds on, 5 seconds off. This operation pattern appeared very short. The operators have indicated the issue was further evaluated and the operating scheme was improved.

Three (3) original domestic cold water storage tanks with 2,400-gallon capacity each are being maintained for backup purposes. These tanks can be filled directly from the well system by bypassing the new storage tanks.

FIGURE 5-23
Domestic Water Booster Pressure System with Pumps, Control Panel, and Pressurization Tank (Blue); Grey Backup Tanks on Left

The building's hot water supply is divided between the Observatory side and the Park side. Both systems utilize indirect water heaters connected to the HVAC heating boilers.

An HTP SSU-80 indirect water heater serves the Park side of the building and includes a TACO Model 006-B4 recirculation pump and a Honeywell MX mixing valve. The water heater has a storage volume of 80 Gallons and a first hour rating of 647 Gallons. The circulation pump appears new, while the mixing valve and surrounding piping shows extensive signs of corrosion. Consider replacing the valve soon.

FIGURE 5-24
Domestic Water Heater and Hot Water Recirculation Pump for Park Service

FIGURE 5-25
Domestic Hot Water Mixing Valve for Park Service

We measured hot water temperatures of 157°F and 133°F at two different lavatories and did not observe any scald protection devices. Adults risk scalding within 1.5 seconds at 155°F, and within 15 seconds at 135°F. Plumbing code requirements restrict hot water supply at showers and lavatories to 120°F to prevent scalding. The operator has indicated plans to address anti-scald protection.

We recommend installing temperature gauges on the mixing valve outlet side, to simplify regular maintenance checks and to ensure the maximum temperature is maintained.

Sensor-operated faucets were installed in the main public restrooms on the first floor. They appear to be connected to cold water supply only. A mixing valve may exist in the basement to provide tempered water to these faucets but was not visible during the site visit. Thru-hiker restrooms in the basement are supplied with hot and cold water without scald protection devices.

The Observatory hot water needs are provided through a domestic hot water heat exchanger which is part of the HVAC boilers. A separate storage tank does not exist. A mixing valve is connected directly to the boiler outlet. Hot water recirculation piping and pump were not observed and hot water at fixtures was not measured. We recommend reviewing anti-scald protection measures for this system and adding temperature gauges to the mixing valve outlet.

FIGURE 5-26
Domestic Hot Water Connection to HVAC Boilers for Observatory Supply

FIGURE 5-27
Plumbing of Public Lavatories: First Floor (left) and Ground Floor (right)

The building includes a variety of fixtures, most of them in good condition, including:

- Stainless-steel sinks in the kitchens
- Under-counter mounted vitreous china lavatories with sensor faucets in the first floor restrooms
- Wall hung lavatories with manual faucets in the ground floor restrooms
- Water closets and urinals with manual flush valves in the more frequently visited first floor restrooms
- Tank type water closets in the less frequently visited ground floor restrooms
- A stainless-steel sink for bottle refill
- Three janitor sinks with hose connections, two of which have no vacuum breaker (both in the custodian rooms of the ground and first floor). Vacuum breakers are required per NH Plumbing Code. The operator has indicated plans to address this issue.
- A stainless-steel sink with manual faucet in the first aid room
- Tiled shower stalls with shower heads and mixing valves exist in the staff living quarters

FIGURE 5-28
Food Service Kitchen Sinks

FIGURE 5-29
First Floor Public Lavatories, Water Closets and Urinals

FIGURE 5-30
First Floor Bottle Fill Station and First Aid Room Fixtures

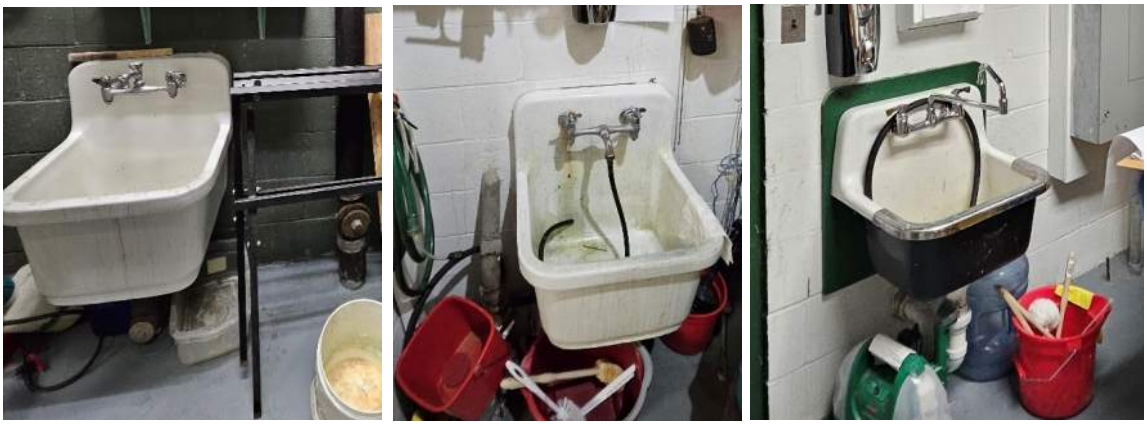


FIGURE 5-31
Janitor Sinks: Park Service Boiler Room (Left; With Vacuum Breaker), Custodian Room First Floor (Middle; Lacking Vacuum Breaker), Custodian Room Ground Floor (Right; Lacking Vacuum Breaker)

FIGURE 5-32
Ground Floor Lavatory, Water Closets and Urinal

FIGURE 5-33
Observatory Shower Stall

The original domestic water distribution piping shows corrosion where it is exposed from the insulation. Partial repairs suggest occasional pipe leakage, which can be expected in a 50-year-old system. Pipe repairs have been made with copper piping and PEX tubing. Maintenance needs are expected to further increase due to the age of the piping.

Insulation is partially damaged, but in good condition along most of the visible piping system.

FIGURE 5-34
Evidence of Pipe Corrosion and Partial Insulation

5.3.2 Tip Top House

The Tip Top House currently has no water service. Some domestic water piping remained in place from a previously installed water service and domestic water heater.

Ongoing DNCR renovation plans for the Tip Top House do not include sanitary facilities in the building. Therefore, future need for domestic water is not anticipated.

5.3.3 Yankee Building

The Yankee Building receives water from the Sherman-Adams Building during the warm season. Its domestic water system is drained back before winter. Fixtures in the upper levels have been disconnected from the system. A first-floor restroom and janitor sink are the only connected fixtures.

A water heater in the basement appears to be abandoned.

Further details about the history and conditions of the Yankee building's 1200ft deep water well are covered in the 2017 conditions assessment report by H.L. Turner Group, as well as in the Environmental Site Assessment section of this report.

For future building use, the well water quality and well pumping system should be investigated further, to determine its potential as a source of potable water. Fixture counts and types have to be updated based on the proposed future building use to comply with current building and plumbing code requirements.

5.4 Propane Gas System

5.4.1 Sherman Adams Building

A 1000-gallon propane tank supplies the food service kitchen's six-burner professional range and the Observatory kitchen's high-end six-burner residential range. The park's kitchen includes an electric stove top. The propane supplier utilizes a remote monitoring system to observe the tank fill level. The food service kitchen's propane system, according to the operator, is deactivated during off-season periods.

FIGURE 5-35
Propane Storage Tank

FIGURE 5-36
(Left to Right): Food Service Gas Range, Observatory Gas Range, Park Electric Range

5.4.2 Tip Top House

The Tip Top house has no dedicated propane system, and future need is not anticipated.

5.4.3 Yankee Building

The Yankee Building has no dedicated propane system and future need is not anticipated.

5.5 Sanitary Drainage Systems

5.5.1 Sherman Adams Building

The sanitary drainage system includes cast iron and PVC piping. A new wastewater treatment plant receives sanitary waste through a 4" discharge pipe at the building's southeast corner. A grease trap treating kitchen wastewater resides in a foundation pit below the maintenance shop. The waste stream flows from the trap into a sump pump vessel and a septic pit, before being discharged into the sanitary main. The grease trap is serviced every two months.

Exposed piping is in fair condition showing corrosion and pitting. The visible interior of floor drains bodies is very corroded. We recommend scoping the existing sanitary system to determine interior pipe conditions and to confirm routing of the sanitary piping.

Vent piping is routed to the outside along chimney features and is covered by protective steel plates to reduce pressure fluctuations due to high wind speeds on the summit. The cast iron vent piping shows corrosion and pitting, and a PVC vent extension was disconnected at the roof/platform level from the cast iron vent section coming from the building interior. We recommend reconnecting the piping and replacing the PVC section with cast iron for longevity and improved resistance against the elements.

The vent penetrations to the outside appear to be poorly sealed. However, leaks were not reported to us.

FIGURE 5-37
PVC and Cast-Iron Vent Piping and Protection Covers

5.5.2 Tip Top House

New Hampshire plumbing code requires public and employee toilet facilities within 500 feet. The travel distance between the Tip Top House and the Sherman-Adams Building toilet rooms is around 400 feet, which covers the toilet room requirements. Depending on the intended future use, the installation of facilities is not required.

5.5.3 Yankee Building

Some sanitary facilities are in place in the building. According to the operator the building is not connected to the new wastewater treatment plant at the Sherman-Adams building. The Yankee building has its own septic tank and leach field. However the tank is disconnected from the leach field and is currently used like a tight tank. Pumping out of the tank is required only very occasionally due to the limited number of connected fixtures. Further details on the conditions are covered in the 2017 conditions assessment report by H.L. Turner Group.

The wastewater system will need to be upgraded based on future building use.

FIGURE 5-38
Various Fixtures for Temporary Use

5.6 Fire Protection System

5.6.1 Sherman Adams Building

The building has limited water fire suppression on the Observatory side. A fire hose and some sprinkler heads in the Observatory sleeping quarters are supplied from the domestic water booster pump system.

The food service kitchen hood and the employee quarter kitchen hoods on the park and the Observatory side are protected by dedicated wet chemical fire suppression systems. According to the operator difficulties exist in obtaining inspection, repair and maintenance services for these systems. The last hydrostatic test was performed in 2016. NFPA 96 requires a hydrostatic test every five years, as well as other monthly, and bi-annual inspections and cleanings.

FIGURE 5-39
Food Service Range Hood

FIGURE 5-40
Observatory Range Hood

FIGURE 5-41
Park Range Hood

5.6.2 Tip Top House

The Tip Top house has no fire protection system. The operator mentioned a desire to include fire protection measures and fire alarming for future protection. This could include a fire hose connection to supply building sprinklers, and a fire pump arrangement in the Sherman Adams building for manual connection in case of a fire event. Such a system needs to be engineered and coordinated with the local fire department.

5.6.3 Yankee Building

The Yankee Building has no fire protection system. Fire extinguishers are located throughout the building. A determination of fire protection requirements has to be made when the building's future use is determined. A system similar to the Sherman-Adams' building living quarter system with standpipe and selective sprinkler installation might be beneficial. The design would have to be coordinated with the local fire department due to the special challenges posed by the building location.

Further details about the history and conditions of the Yankee building fire protection system are covered in the 2017 conditions assessment report by H.L. Turner Group.

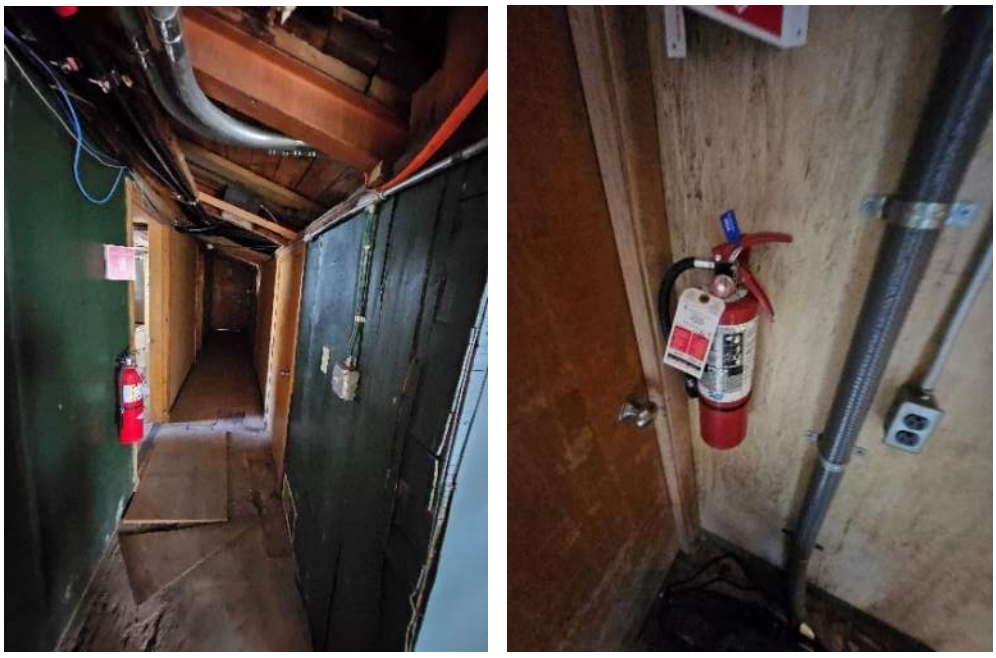


FIGURE 5-42
Fire Extinguishers in Yankee Building

5.7 Electrical System

5.7.1 Fire Alarm Systems

5.7.1.1 Sherman Adams Building

The Sherman Adams Building is served by an addressable, Firelite MS-9600LS fire alarm control panel. In an addressable fire alarm system, the initiating device has a specific electronic address which helps to detect which specific fire alarm was triggered. Fire alarm branch wiring for this facility is achieved via conduit and low energy cabling. The building is not sprinkled, and therefore, has smoke detectors installed throughout the paths of egress, common areas and within each of the tenant spaces. The system appears to be fairly new and in good condition.

5.7.1.2 Yankee Building

The Yankee Building is served by a conventional, non-addressable, 5-zone Firelite MS-5UD fire alarm control panel. A "non-addressable fire alarm system" is a type of fire alarm system that uses zones, based upon how each circuit is installed. This is a traditional type of system, unlike modern addressable systems, which provide specific device identification and location information. Individual zone wiring for this facility is achieved via exposed low energy cabling, typically not installed in conduit. The building is not sprinkled, and therefore, has smoke detectors installed throughout the paths of egress, common areas and within each of the tenant spaces. The system appears to be fairly new and in good condition.

5.7.1.3 Tip Top House

The Tip Top House has no fire alarm panel or hardwired fire alarm system components. The facility is served by individual standalone battery-backed smoke detectors. Currently the building is under renovation and unoccupied. Once the building is opened for use, the fire protection and associated alarming should be considered. A potential solution for the unheated structure, which is not occupied during colder periods of the year, is to install a fire alarm zone in the Sherman Adams building, using underground wiring to the Tip Top House and using Protectowire within the space. This system would be accompanied by a single-zone fire alarm panel. This system is well suited for harsh environments, that uses a special heat sensing cable product that acts as a heat detector. It is typically installed along the ceiling to detect high heat conditions, and would report any fire condition to the Sherman Adams fire alarm system.

5.7.2 Building Lighting Protections

As a general observation, none of the observed facilities at the Mt. Washington summit had observable lightning protection components installed along their respective roof lines or affixed to roof mounted equipment (fans, vents or antenna systems). Conventional lighting protection utilize copper air terminals installed along the roof and at roof mounted equipment. The terminals are interconnected by a roof ground loop cable that is interconnected to “down” conductors that traverse the interior or exterior of the building to grade level. The down conductors are then interconnected to a building perimeter ground loop with intermittently installed ground rods, driven into the earth, to dissipate lightning energy. However, the summit is mostly rock with limited soil opportunity for driven ground rods. Rocky surfaces do not conduct electricity from lightning very well. Hence, if lightning strikes a communications tower, it likely does not have any place to

go, and discharges locally. In review of lightning protection for the summit buildings, we offer the following for consideration: a. The Sherman Adams building electrical system

ground appears to be adequate and capable of shunting lightning energy that may migrate to a nearby building surface or conduit. b. The Yankee building has an extensive grounding system due to the Telcom vendors and their respectively grounded systems, capable of shunting lightning energy that may migrate to a nearby building surface or conduit. c. The Tip Top house has a basic electrical system, however, the grounding appears to be adequate and capable of shunting lightning energy that may migrate to a nearby building surface or conduit. It should be noted that the Sherman Adams building, the Yankee Building and the Tip Top House are all sub-fed from the main distribution equipment housed adjacent to the summit standby generators. Hence, the lightning energy will dissipate locally and will follow the grounding system and shunt into the earth at the Sherman Adams main electric room.

5.7.3 Emergency / Standby Power

5.7.3.1 Sherman Adams Building

The Sherman Adams visitor center is served by two standby generators rated for 200KW/250KVA, 120/208V, 3-Phase, 4-Wire, fueled by kerosene subbase tanks located in the curved building extension, identified as the "PowerHouse" space. Generator#1 feeds automatic transfer switch #1 and Generator#2 feeds auto matic transfer switch #2, providing redundant back up to the summit buildings. The generators utilize a custom ducted combustion air system and a shared exhaust air space.

FIGURE 5-43
Generator #1 and Generator #2

5.7.3.2 Yankee Building

The Yankee Building is served by a diesel fired Kohler 30ROZJ, 30KW/37.5KVA, 120/208V, 3-phase, 4-wire standby generator. The generator is fueled via a separate freestanding 300gallon double walled fuel (Kerosene) tank, located adjacent to the generator, in the

basement. The generator output feeder is routed along the ceiling to the Standby source connection of a manual transfer switch. It was observed that the building does not have a code compliant life safety power distribution system, therefore, there is no life safety branch. All emergency lighting in this building is achieved via battery pack units installed throughout common spaces and corridors on each level. The existing fire alarm panels are also equipped with a battery backup power source. The diesel generator and the fuel tank appear to be in good condition. The generator's automatic battery charger, mounted adjacent to the unit, does not appear to be connected to the generator's two main batteries, that reside on the floor. The battery terminals have disconnecting cables. Additionally, the installation is atypical in that there are no combustion air ductwork or louvers to supply the generator with sufficient air to operate at full load, nor is there exhaust air ductwork or louvers and dedicated outdoor ductwork on the output of the generator's radiator fan. There is a small door that is likely opened during operation that serves to provide combustion and cooling air to the unit. During the occasion of heavy snow, it will be problematic to open the door to provide enough combustion and cooling air to the generator.

As this facility appears to not house staff that might be working directly above the generator on the first floor or in an adjacent space, noise from generator operation may not be of concern. Additionally, the generator's exhaust system leaves the space horizontally via flexible exhaust hose to the stack. Tighe & Bond recommends an HVAC system be designed and installed to support the generator. Additionally, perform a NFPA required loadbank test at 50% and 100% rating, for 4-hours, with simulated outages and manual transfer switch functional testing, to ensure the system operates as intended.

FIGURE 5-44
Yankee Building Generator and Fuel Tank

5.7.3.3 Tip Top House

The Tip Top House does not have any additional standby generation other than being connected to the redundant generator system at the Sherman Adams visitor center.

5.7.4 Normal Electrical Power

The utility vault (which couldn't be opened) on Mt. Washington summit appears to be served by a single medium voltage utility circuit that was routed up the mountain via the Cog Railway "right of way". The circuit terminates in a multiconnection enclosure at the top of the mountain, in front of the Sherman Adams visitor center. The medium voltage circuit is then routed underground to a single 3-phase pad-mounted transformer, located at the Sherman Adams visitor center, that provides 120/208V, 3-phase, 4-wire power to the four buildings that occupy the top of the mountain. The transformer feeds a main 1200A fused disconnect switch that then feeds a 1200A main panel (main lug only - MV-TX-2)) and is equipped with two circuit breakers that feed automatic transfer switch #1 and #2. The switch is the main power disconnect for the entire summit.

FIGURE 5-45
Pad Mount Transformer (Left), Main Fused Disconnect Switch and 1200A Distribution Panel MV-TX-2 (Right)

Additionally, there are two side by side 600A sub distribution panels (Sub Panel A and Sub Panel B), equipped with a "Main-Tie-Main" circuit breaker arrangement. The two main distribution panels are served individually by the two standby generators, via automatic transfer switch#1 and #2, respectively. The two main distribution panels include individual building feeder circuit breakers, that are at the top of the mountain (Sherman Adams Panel #1, Sherman Adams Panel#2, The Yankee Building, Sewage Treatment Plant, Stage Office). The panels have submetering in a separately enclosed unit mounted to the side of Sub Panel B. In this distribution system, the summit is served by redundant standby generators and distribution panels. The equipment appears to be new and in excellent condition.

5.7.4.1 Sherman Adams Building

The Sherman Adams building is served by two 400A distribution panels located in the basement level. One panel is dedicated to the state park and the museum (SA Panel#1), while the second panel serves observatory and fire alarm system (SA Panel#2). There is

dedicated submetering at the two panels, for each tenant load inside the building, such as the food court, museum, observatory, cog railway, and the feeder to the tip top house. The equipment appears to be new and in excellent condition. There is a dedicated surge protection device for the panels.

FIGURE 5-46
600A Distribution Panels and Automatic Transfer Switch

FIGURE 5-47
400A Distribution Panels in Basement of Sherman Adams Building

The building grounding system could not be observed aside of the exposed 4/0Awg ground cable inside the main electric closet, that appears to be routed to an exterior ground rod

array. In the main electric closet, there is a 200A manual transfer switch to allow manual transfer between normal utility power and standby generator power for Panel#2.

There are a number of power panels distributed throughout the visitor center, of varying age and condition. There were two instances of older panels transitioning to pull boxes with new panels installed adjacent, to refeed all existing circuits.

5.7.4.2 Yankee Building

The Yankee Building is served by two service disconnect switches located in the basement level. One of the main disconnect switches serves the Normal/Standby source of a 240V, 200A manual transfer switch, that is located adjacent to the main building service panel. The main panel, manufactured in 1987, has a 200A rated main circuit breaker which appears to be still in good condition, and should be NETA tested every 3 years to ensure that it operates as manufactured. Within the main panel, there are circuit breakers that feed house panels located on each floor within respective individual tenant spaces. Each tenant space has its own utility meter. Tighe and Bond recommends the building grounding system be modified to include a main grounding bus, a main telecommunications grounding bus, interconnection between all tenant grounding buses, and the establishment of an exterior grounding grid that provides code compliant total ground resistance of 5 ohms or less. Note: In the basement, there are multiple 4/0 Awg bare copper ground lines routed, that require verification of interconnection. We could not find a central ground where all the individual grounds are tied. If they are all individual that could be a problem. It is believed they are individual tenant grounds, which, if verified, defeats the purposes of having a building wide system that is code compliant.

FIGURE 5-48
Yankee Building Main Panel/Disconnect Switch and Ground Wires

5.7.4.3 Tip Top House

The Tip Top House is served by a single 100A rated, 120/208V, 1-Phase, 3-wire panel at the far west end of the building. The structure is currently under repair and renovation, for electrical branch wiring replacements and upgrades. The building grounding system

could be observed routed the length of the building, via a bare copper conductor installed along the ceiling that eventually is routed to the exterior of the building near the front door.

FIGURE 5-49
Electrical Panel and Ground Wire Along the Ceiling at Tip Top House

5.7.5 Lighting (Illumination)

No areas that were deficient in terms of lighting illumination were noticed. Various types of fluorescents, LED, incandescent lights are used. Code complaint battery pack lights (exit signs, emergency battery pack lights) are installed. It is recommended to simulate an outage to test those emergency battery lights to ensure that the path of egress is adequately illuminated.

Section 6
Site Stormwater Assessment

6.1 Drainage Patterns, Erosion, Environmental Impacts

6.1.1 Precipitation Patterns

Mount Washington's summit and surrounding areas are renowned for having "the worst weather in the world" as famously described by the Mount Washington Observatory. Rising to 6,288 feet and sitting well above the tree line, the summit regularly experiences powerful storms with wind speeds exceeding 100 miles per hour. Extreme precipitation events are common. Mount Washington Observatory recorded 11.07 inches of precipitation in a single day in October 1996 — the highest 24-hour total on record — and a record 49.3 inches of snowfall in 24 hours in February of 1969.[1]

Managing stormwater in this environment is a considerable challenge. The most difficult conditions typically occur in early winter and mid- to late spring, when snowmelt saturates partially frozen ground and prevents infiltration. Increasingly frequent periods of unusually warm winter weather, combined with heavy rainfall, are leading to more rain-on-snow (ROS) events that accelerate snowmelt and generate rapid runoff, which can contribute to flooding and other damaging conditions.

6.1.2 Ground Conditions

Ground conditions are a key factor in understanding and improving the site's drainage performance. Ground conditions consist primarily of fractured bedrock and thin, well drained soils, with a mix of impervious surfaces from roads and existing structures. The existing ground conditions help disperse runoff—though their infiltration capacity is limited when frozen. Precipitation that is not absorbed into the ground flows off-site as sheet runoff. Existing stormwater infrastructure is limited, and several deficiencies have been observed.

6.2 Observed Drainage and Stormwater Issues

The only stormwater infrastructure observed is located east of the Sherman Adams building. Key issues include clogged permeable interlocking concrete pavers, ponding at Sherman Adams building entrances, standing water in maintenance areas, eroding gravel paths and parking areas, and damaged drainage features. These conditions result in sediment transport into sensitive alpine ecosystems and flooding impacts to park facilities.

The following stormwater related concerns have been identified at the summit.

[1] Mount Washington Observatory; Weather - Normal, Means, and Extremes; https://mountwashington.org/weather/mount-washington-weather-archives/normals-means-and-extremes/

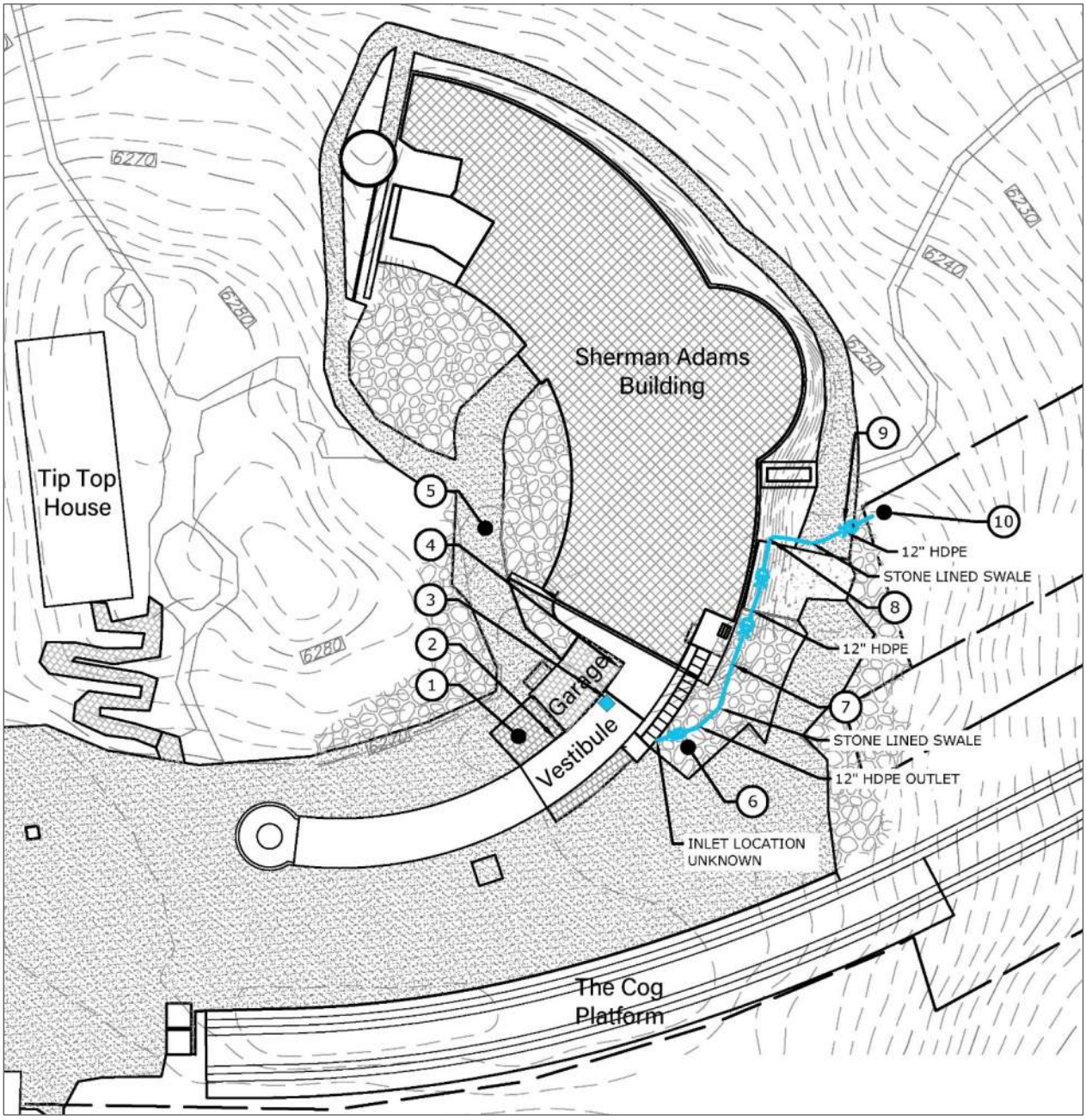


FIGURE 6-1
Key Plan for Observed Stormwater Issues 1 through 10

1. Permeable interlocking concrete pavers (PICP) at the two entrances to Sherman Adams building are clogged with sediment and no longer infiltrating as designed.
2. Localized ponding frequently occurs within the Sherman Adams vestibule.
3. A floor drain with a loose metal grate is located in the Sherman Adams vestibule.
4. Standing water in the Sheman Adams building maintenance garage. The PICP are no longer infiltrating as designed.
5. The crushed stone pedestrian path west of Sherman Adams slopes steeply towards the entrance, with no stormwater controls.
6. Several areas were identified where gravel and crushed stone from the parking or pedestrian areas is eroding off-site and impacting sensitive natural areas. Critical areas are east of the Sherman Adams building.
7. A drop inlet grate was identified adjacent to the southeast corner of the Sherman Adams building. Stone surrounding the structure is eroding into the grate, and a brick check dam has been placed to temporarily mitigate the sedimentation.
8. A drainage system was installed east of the Sherman Adams building, which alternates between pipe discharge and a stone/grass lined swale. The top of an approximately20-foot section of drainage pipe crossing the pedestrian path is exposed, and the end of the pipe is approximately 75% buried in stone.
9. Gravel material erodes off-site from the drainage pipe discharge.
10. It was noted by a State Park employee that the basement of the visitor center floods during large storm events.

FIGURE 6-2
Permeable Interlocking Concrete Pavers at Sherman Adams Building Vestibule

FIGURE 6-3
Loose Grate in Vestibule of the Sherman Adams building (Left);
Standing Water in the Sherman Adams Maintenance Garage (Right)

FIGURE 6-4
Drop Inlet Grate at the Bottom of an Existing Drainage Swale (Left),
Exposed Drainage Pipe and Obstructed Discharge (Right)

FIGURE 6-5
Gravel Material from Paved Areas Eroding into Natural Alpine Communities

In summary, the assessment highlights the need for improved stormwater infrastructure, a routine maintenance plan for existing infrastructure, and targeted erosion mitigation measures to protect the natural alpine ecosystem.

FIGURE 6-1 Key Plan for Observed Stormwater Issues 1 through 10
FIGURE 6-2 Permeable Interlocking Concrete Pavers at Sherman Adams Building Vestibule
FIGURE 6-3 Loose Grate in Vestibule of the Sherman Adams building (Left); Standing Water in the Sherman Adams Maintenance Garage (Right)
FIGURE 6-4 Drop Inlet Grate at the Bottom of an Existing Drainage Swale (Left), Exposed Drainage Pipe and Obstructed Discharge (Right)

Section 7
Visitor Experience and Site Circulation Experience Assessment

7.1 Site Arrival Modes

7.1.1 Mount Washington as a Historic Visitor Destination

Mount Washington has been a sought-after visitor destination for nearly two centuries. Uniquely, since the mid-19th century the summit has been accessed by multiple modes: on foot, by horse or horse-drawn carriage, by rail, or by motor vehicle. These transportation modes have been intrinsically connected to the summit's development as a tourist destination, long before the establishment of Mount Washington State Park at the summit in 1964.

The first recorded ascent to the summit of Mount Washington was in 1642, by Darby Field, a British colonist. In 1819, Ethan Allen Crawford and his father Abel built a footpath from Crawford Notch to the Mount Washington summit, which is now known as Crawford Path and is the oldest maintained hiking trail in the United States. By the mid-1800s, tourism on the mountain flourished. Around 1835, a bridle path was opened that made it possible to access the summit on horseback. In 1852, the Summit House was the first hotel to be built, and its success spurred the building of a competing hotel, the Tip Top House, in 1953.

During the same year, the New Hampshire State Legislature granted General David O. Macomber the charter for the Mount Washington Road Company, which was envisioned as a road for horse-drawn omnibuses. By 1856 the road was built half-way until funding ran out. A new company, the Mount Washington Summit Road Company, was formed in 1859, resuming the road construction. After the Road was opened to the public in 1861, its business doubled every year until a new, competing mode of transport arrived: the Mount Washington Cog Railway. In 1866, Silvester Marsh established the Mount Washington Railway Company and began construction of the Cog Railway, reaching the summit in 1869. Many visitors found the relatively short trip in the Cog's enclosed cars preferable to a journey on the Road in open mountain wagons, so for many years the Cog Railway carried more visitors to the summit than the Road.

The advent of the motorcar at the turn of the 20th century reversed this balance. The first motorized ascent was by Freelan O. Stanley in 1899 in a steam-powered vehicle. In 1902, the first two gasoline-powered cars reached the summit. In 1912, the first motorized stage appeared. Since then, there has been steady growth of automobile visitation: 3,100 private cars in 1935, 6,600 in 1955 and 12,800 in the Road's 100th anniversary year, 1961. As the automobiles took over from horse-drawn carriages, the Carriage Road became known as the Auto Road. Today the Auto Road brings more visitors than the Railway.

7.1.2 Recent Visitation Trends

The three modes of arrival: on-foot via hiking trails, by rail via the Cog Railway, or by motor vehicle via the Auto Road, bring hundreds of thousands of visitors to the Summit every year. According to the Mount Washington Commission's records, the Auto Road and the Cog Railway each brought approximately 150,000 visitors in 2021. The number of hikers at the Summit cannot be reliably determined. Mount Washington State Park staff estimates this number to be comparable to those arriving via the Auto Road or Railway. At the end of the 2024 visitor season, the Mount Washington Commission's constituents reported a continuing record-high tourist demand. The majority of visitors arrive during the season when the State Park facilities are open, between mid-May and mid-October.

Table 7-1
Mt Washington Visitation Numbers (Source: Mount Washington Commission)

Year	Mt. Washington Auto Road			Mount Washington Railway Company	Total Visitors
	Guided Tours	In Private Vehicle	Total Auto Road	Total Railway	
2017	22,480	139,187	161,667	119,249	**280,916**
2018	19,571	134,600	154,171	117,936	**272,107**
2019	22,155	152,067	174,222	125,256	**299,478**
2020*	3,226	156,692	159,918	57,043	**216,961**
2021	12,878	136,260	149,138	147,948	**297,086**

* In 2020 the COVID-19 pandemic impacted overall visitation

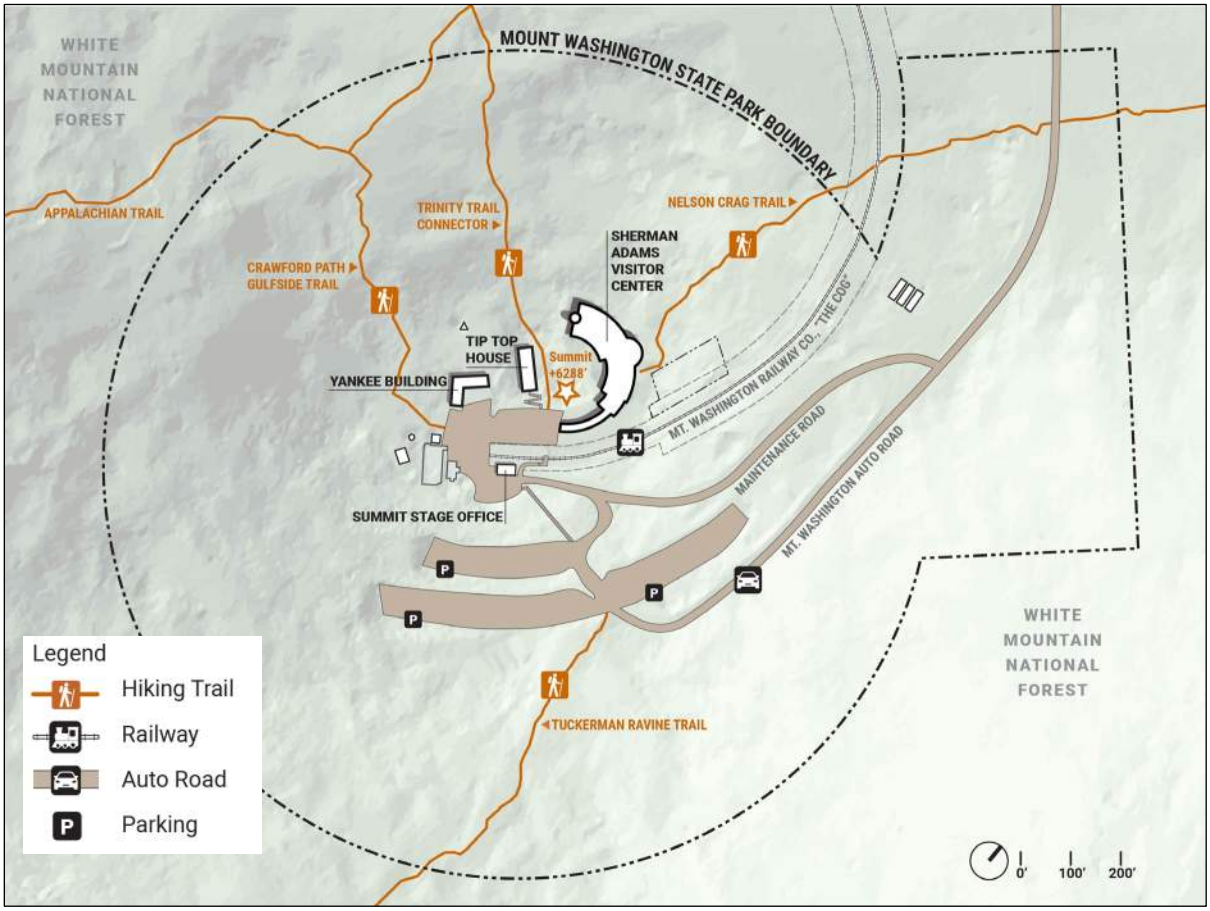


FIGURE 7-1
Site Arrival Modes at Mt. Washington State Park

7.1.3 Mt. Washington Auto Road

The Mt. Washington Auto Road (Auto Road) is a private entity that was first established as a carriage road in 1861 and has been a tourist attraction ever since. The scenic drive, which originates on NH Route 16 in Gorham, allows visitors to drive to the highest summit in the Northeast using their own car, truck, or motorbike. The Auto Road charges a fee for drivers and passengers to use the road. Its operations are weather-dependent, with a visitor season typically from mid-May to early November, often starting weeks earlier and closing later than the State Park's Visitor Center. During the shoulder seasons, visitors do not have access to shelter and amenities at the summit that are provided by the State Park's Visitor Center. The Auto Road also owns and operates the Summit Stage Office which contains a gift shop at the summit. This iconic chained-to-the-ground wood building is the first sight visitors encounter as they ascend the stairs from the parking lot.

The Auto Road's scenic 7.6-mile long drive gains over 4,000 feet in elevation and travels through four distinct ecological zones. This highly scenic and exciting drive is integral to the overall arrival experience to the State Park. The Auto Road also offers a free cell phone application with an audio tour, which narrates historical anecdotes about Mt. Washington and educates visitors about the importance of protecting the alpine environment. The educational value of the audio tour is a positive contributor to the arrival experience.

In addition to personal vehicle access during the visitor season, the Auto Road offers guided tours in the company's vans (including sunrise and sunset tours outside of the normal opening hours), a hiker's shuttle for one-way transport, and various special events such as the Adaptive Sunrise Ascent, New Hampshire ATV Day, an annual "Hillclimb" bicycle race, and an annual Road Race for runners. Some of these events have caused high levels of demand, well exceeding the capacity of State Park facilities.

7.1.4 Visitor Parking

The Auto Road maintains three gravel-surfaced parking lots within the State Park property, with a total capacity of approximately 200 cars.

Handicap accessible parking is provided near the Yankee Building, marked informally with portable signage. There are four (4) accessible parking spaces. Per the New Hampshire Building Code, Section 1106 Parking and Passenger Loading Facilities, six (6) accessible parking spaces are required if the overall parking count is between 151 to 200 spaces, or (7) accessible parking spaces are required if the overall parking count is between 201 and 300. So given the number of available parking spaces, there should be more accessible spaces provided than they are currently.

The top plateau also provides parking for State Park and Auto Road staff vehicles as well as a designated area for Auto Road tour vans. The clusters of parking for various users take up space in this popular visitor zone and can conflict with pedestrian circulation.

FIGURE 7-2
Visitor Parking Area

FIGURE 7-3
Accessible Parking Area at the Top Plateau

7.1.5 Mount Washington Cog Railway

The Mount Washington Cog Railway (The Cog), the first mountain-climbing cog railway in the world, has been bringing visitors to the summit since 1869. Originating at the Marshfield Base Station on the western approach of Mount Washington, trains to the summit typically run every hour. When passengers arrive, they have one hour to spend on the summit. These visitors must rely on the Visitor Center for shelter if the weather is poor, and therefore the Cog operating season is typically tied to the Visitor Center's opening season. In the shoulder season when the Visitor Center is closed, mid-May and late October, the Cog runs to the summit (weather permitting) allowing passengers a shorter visit.

The Cog provides a scenic ride to Mount Washington State Park for visitors with a wide range of abilities. However, there are limitations for wheelchair users, as the coaches are historical in design with narrow aisles and doorways and three steps to the boarding deck. Mobility-impaired guests must be capable of transferring from their wheelchair by themselves or with assistance.[1]

The arrival area for the Cog is located adjacent to the main entry to the Sherman Adams Visitor Center. Upon disembarking, visitors directly proceed towards the Visitor Center vestibule, where they either walk straight through the building towards the Observation Deck and the Summit Point, or turn right towards the Visitor Center lobby and facilities. Unlike hikers and Auto Road visitors whose arrival is dispersed throughout the day, the Cog Railway visitors arrive in groups every hour. Each coach brings up to 70 people. During peak season multiple trains run concurrently, bringing as many as 200 people every hour. At the same time, the departing passengers are waiting to board in the same area. This causes crowding in front of the Visitor Center entrance and inside the vestibule where people congregate if weather is poor.

[1] Mount Washington Cog Railway, Disabilities Statement; https://www.thecog.com /disabilities-statement.

FIGURE 7-4
The Cog Arrival to the Summit as Seen from the Observation Deck

FIGURE 7-5
Cog Passengers Heading to the Visitor Center Entrance

FIGURE 7-6
Departing Cog Passengers Waiting to Board

FIGURE 7-7
Visitor Center Vestibule

7.1.6 Hiking Trails

Four trails reach the summit—Crawford Path (part of the Appalachian Trail), Trinity Trail Connector, Nelson Crag Trail, and Tuckerman Ravine Trail. All are challenging and can be hazardous due to Mount Washington's extreme and unpredictable weather. Still, thousands of hikers make the ascent each year and view reaching the summit as a significant achievement.

The arrival experience varies by route. Nelson Crag and the Trinity Trail Connector offer appealing views of the Sherman Adams Visitor Center and its tower. In contrast, the Crawford Path approach is affected by views of the deteriorated Yankee Building and other utilitarian structures such as tower supports and guy wires. Hikers coming from Tuckerman Ravine arrive at the Auto Road parking lot and must either walk along the road or climb the stairs to reach the summit.

FIGURE 7-8
View of the Sherman Adams Tower from Trinity Trail Connector

FIGURE 7-9
Hiker's Arrival View from Crawford Path

7.2 Site Circulation Challenges

The various modes of transportation and user groups converging at Mount Washington State Park bring in various types of users to the site, including tourists, day hikers, through hikers, Mount Washington State Park employees, Observatory staff, and maintenance personnel for telecommunication tenants. With so many users and modes of arrival there are several challenges related to site circulation. FIGURE XX illustrates the challenges discussed in this section.

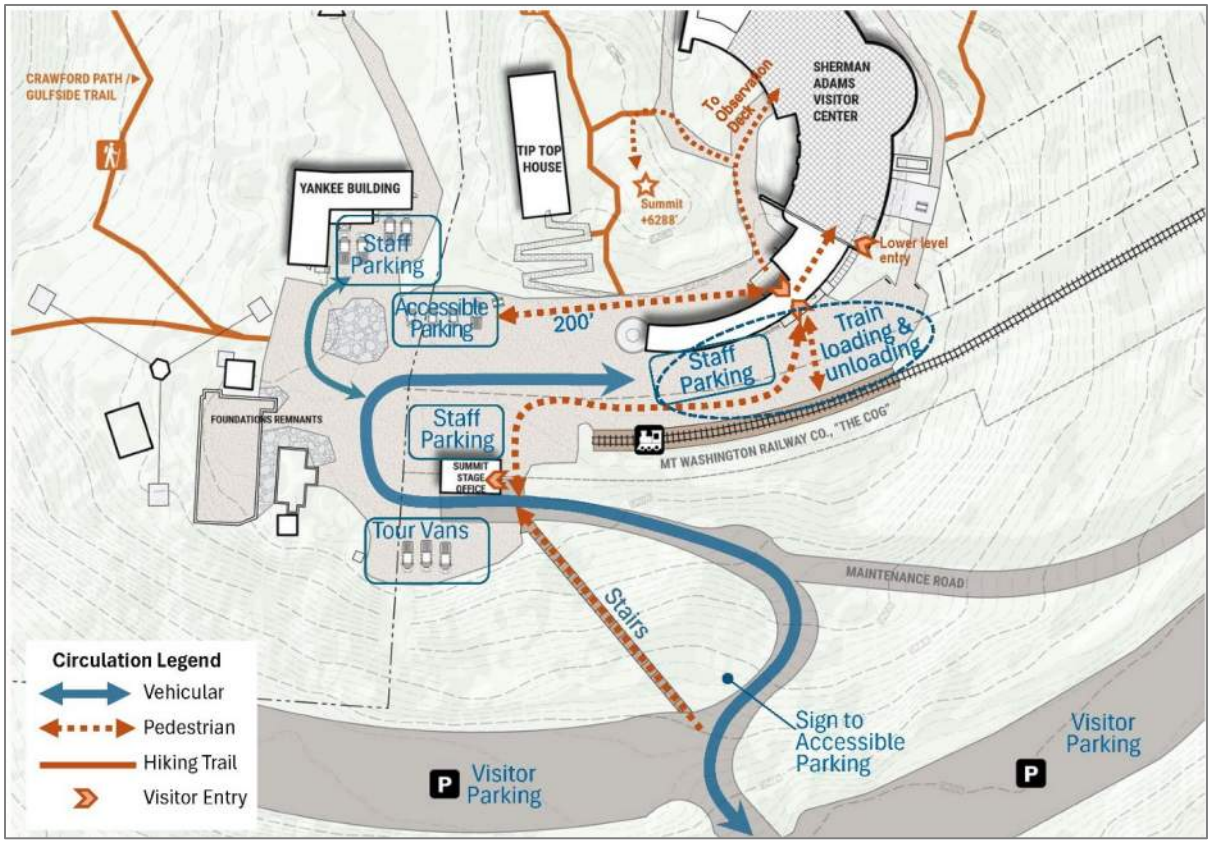


FIGURE 7-10
Circulation Diagram of Vehicular and Pedestrian Traffic

7.2.1 Site Arrival from the Auto Road

Visitor arrival and circulation along the Auto Road are critical components of the overall site experience and safety at the summit. During periods of high visitation, congestion, limited parking availability, and unclear wayfinding can create challenges for both drivers and pedestrians. This section evaluates existing conditions related to vehicular access, parking management, and pedestrian circulation from the Auto Road to the summit area. Key issues include traffic backups when parking reaches capacity, unclear routes to accessible parking, safety concerns associated with pedestrian crossings, and limited visibility near the upper plateau.

Traffic Backups on Auto Road

During peak visitation, when visitor parking is at capacity, backups on the road can be significant. This impacts the visitor experience and potentially, visitor safety. To alleviate this issue, during busy weekends the Auto Road provides staff at the summit to direct parking and notify the toll house when capacity is reached so that they can delay visitor entry to the Auto Road.

Route to Accessible Parking

Currently there is a paved road from the parking area that joins the maintenance road, which is intended to provide access to accessible parking at the summit; however, the signage is inadequate. At the time of the site assessment the signage consisted of one small, difficult to locate, sign of the type typically used at accessible parking spaces; and there was no additional signage to restrict other vehicles from driving to the summit. For the 2025 season, the State Park provided alternate access and signage to the accessible parking via the maintenance road.

FIGURE 7-11
Sign to Accessible Parking from Auto Road

Pedestrian Circulation

Pedestrian circulation from parking lot to the upper plateau is physically challenging. Pedestrians have two options: climb the wooden staircase or walk along the Auto Road. The stairs are long and steep. If someone needs to stop and rest, there is constrained space on the landings to step aside from the foot traffic. The second option, which avoids the stairs, is to walk along the paved Auto Road, sharing the road with vehicles that drive to the summit. The Auto Road currently has a striped shoulder for pedestrians, however on the maintenance road, pedestrians must walk on the drive lane.

Lack of Visibility

The stairs provide a primary arrival route from the visitor parking area to the summit plateau. At the top of the stairs there is a small landing where pedestrians can pause before crossing over the Auto Road to get to the summit attractions. The maintenance road arrives at this location at a sharp angle and steep incline, which causes visibility issues for both pedestrians and vehicle operators. The pedestrians on the stair landing must look backwards to see oncoming vehicles, and drivers may not be able to see pedestrians until their vehicle is almost at the crossing. Especially in foggy conditions, which are frequent at the summit, low visibility at this point is a concern. This area requires a study for potential reconfiguration that would improve circulation and safety for pedestrians and vehicle operators.

FIGURE 7-12
Top of Stair Landing

FIGURE 7-13
Pedestrian Crossing from Stairs as Seen from the Maintenance Road

7.2.2 Upper Plateau Circulation Challenges

The circulation challenges at the summit mainly relate to the need to accommodate multiple uses and the lack of clear circulation paths for each of these user group (i.e., hikers, Auto Road, and Cog Railway visitors).

Route to Visitor Center

Visitors arriving in the parking lot and at the top of the stairs cannot see the Sherman Adams Visitor Center as the view is obstructed by the raised Cog Railway platform and two large storage boxes containing portable restrooms. A large sign points visitors in the general direction of the Visitor Center, which is useful at this location. However, as the pedestrians proceed, the first view of Sherman Adams Building can be confusing as it pairs the visual cues of an entry (i.e., paved plaza, flagpoles), with a blank façade. This façade was originally a portal to a covered passage leading to the Visitor Center. The passage has been enclosed and converted to storage space for fuel tanks and a backup generator (i.e., "the generator barn"). Visitors must walk past this curved wing to find the main entrance to the Sherman Adams Building, the vestibule to the Visitor Center.

FIGURE 7-14
Flagpoles and Entry Plaza at Former Entrance to Visitor Center

Parking within Pedestrian Zones at the Summit

Parking for State Park staff is located between the Sherman Adams Building and the Cog Railway platform. This is confusing for visitors trying to find the Visitor Center entrance. Parked cars obstruct the most direct walking route along the east side of the building, intruding into a zone that is also used for the Cog Railway passenger loading and unloading. With large groups of visitors regularly boarding and disembarking the Cog, this area is often crowded, so cars parked in this zone constrain pedestrian circulation and diminish the visitor experience.

FIGURE 7-15
Staff Parking Within the Cog Passenger Area and Pedestrian Circulation Zone

Tourist Van Parking

The Auto Road's tour van parking space is located immediately adjacent to the top of the stairs, lacking separation from pedestrian traffic from the parking lot. Furthermore, the parking area is adjacent to a steep slope without adequate edge protection to prevent vehicles from rolling over. This is a potential hazard for van drivers, passengers, and visitors parking downhill from the van parking area.

FIGURE 7-16
Tour Vans Parking (Image Source: Google)

Crowding in the Sherman Adams vestibule

The small vestibule in the curved wing of Sherman Adams serves as an entrance to the Visitor Center, a passage to the Observation Deck and the Summit Point, and a garage for the State Park's maintenance vehicle. This space is often overcrowded, especially when departing passengers wait to board the Cog during inclement weather, as there is no other sheltered waiting area. An alternative entrance to the Visitor Center located on the lower floor could provide direct access to restrooms and the Observatory Museum without going through the vestibule, though it lacks visibility and is not ADA accessible.

Site Hazard at Foundation Remnants

The foundation of the former WMTW buildings which burned down in 2003 have been partially filled in, however a section of foundation walls are still exposed, posing a fall hazard. Vehicular access is blocked by concrete blocks, though pedestrians are able to walk past the barriers and onto the foundation walls, risking injury. This location lacks signage that could alert visitors to potential hazards or prohibit access to this area.

FIGURE 7-17
Pedestrians Walk Past Exposed Foundation Remnants

7.2.3 Impact on Alpine Environment by Off-Trail Foot Traffic

Off trail encroachment by hikers and visitors impacts the alpine environment through soil disturbance (i.e., compaction and erosion) and direct damage to plants. The cumulative impact caused by thousands of visitors each year compounds over time and is not easily mitigated. In this ecosystem, it may take decades for native vegetation and soil structure to fully restore.

Impacts from off-trail foot traffic are evident both around the summit and along the hiking trails. The trails are rocky and narrow, so passing others on the trail requires hikers to step aside, onto vegetated areas. The summit plateau is defined by the gravel surface. However, there is a particular location near the RCA tower that draws visitors as a scenic promontory with no formalized path and visitors tend to impact a wider area.

Impacts During the Auto Road's Special Events

The Auto Road hosts multiple road races that attract spectators along the route. These events are permitted; however, it is not clear if there are any policies in place to protect the adjacent alpine environment from spectators' impacts. Typically, events should provide measures to protect natural areas from damage and provide post-event restoration measures.

FIGURE 7-18
Spectators Watching the Mt. Washington Auto Road Bicycle Hillclimb Event (Image Source https://www.mwarbh.org/)

Damage from Spring Skiing

Backcountry skiing also draws visitors to Mount Washington State Park. The spring skiing season generally occurs from mid-May to early June. Most backcountry ski routes launch from the top of Tuckerman's Ravine, below the summit. When the Auto Road is closed, skiers can only hike up to those locations. When the Auto Road opens in late spring, skiers may drive up to access the eastern snow fields, ski down, and hike back up. There can be up to one hundred skiers per day.

The concern about this practice is that there are no established paths or trails, so skiers wander through the alpine zone to get to the snow fields. This can be detrimental to alpine vegetation when snow cover is shallow or non-existent in some areas, resulting in erosion and damage to the vegetation.

FIGURE 7-19
Spring-Time Skiers access to Snow Fields Along the Eastern Slopes

7.2.4 Accessibility Challenges for Persons with Disabilities

Mount Washington State Park faces accessibility challenges associated with its extreme terrain and the presence of facilities that predate the Americans with Disabilities Act (ADA). The following observations identify challenges specifically related to site accessibility to visitor-oriented facilities and site features: the Sherman Adams Visitor Center and observation deck, the Tip Top House, and the Summit Point.

Accessible Route

Per the to the U.S. Access Board ADA Accessibility Standards[2] (ADA Standards) at least one accessible route within the site shall be provided from an accessible parking to the accessible building entrance served. The current accessible parking for the Summit is located on the upper plateau at about 200 feet from the Sherman Adams Visitor Center entrance.

The entire Summit plateau, including the accessible parking and the route from that parking to the Sherman Adams entrance, is surfaced with coarse gravel. This material is difficult to navigate for wheelchair users. According to ADA Standards, accessible floor and ground surfaces must be stable, firm, and slip resistant. Stable surfaces resist movement, while firm surfaces resist deformation by applied forces. Most loose materials, including gravel will not meet these requirements unless treated to provide sufficient surface integrity and resilience with binders, consolidants, compaction, and grid forms. ADA guidelines encourage firm paved surfaces such as concrete, asphalt, or wood.

Accessible Parking Spaces

Per the 2010 ADA Standards for Accessible Design[3], at least six (6) accessible parking spaces are required based on the total number of parking spaces provided in the visitor parking lot. The accessible spaces are to be defined with pavement striping and signage and must include aisles for getting in and out of the vehicle. The existing designated accessible parking area accommodates only four (4) vehicles; furthermore, this area is currently informal in layout without defined parking an aisle spaces, as the gravel surface does not allow for pavement striping.

Steep Path to the Observation Deck

Based on topographic survey records, the longitudinal slope of the main path leading from the Sherman Adams entrance to the Observation Deck exceeds 12%. An accessible route may not exceed a 5% longitudinal slope; if steeper than 5% and up to a maximum of 1:12 (8.3%), it must be treated as a ramp and equipped with handrails and level landings. The feasibility of establishing an alternate accessible route from the Sherman Adams vestibule to the Observation Deck requires further study.

Observation Deck Pavement

[2] U.S. Access Board Guide to the ADA Accessibility Standards, Chapter 4: Accessible Routes https://www.access-board.gov/ada/guides/chapter-4-accessible-routes/

[3] U.S. Department of Justice Civil Rights Division, 2010 ADA Standards for Accessible Design, Chapter 5: General Site and Building Elements https://www.ada.gov/law-and-regs/design-standards/2010-stds/#501-general

Openings in ground and floor surfaces should be limited in width to prevent passage of a 0.5-inch diameter sphere, and changes between pavement levels shall be less than 0.25-inches. The large concrete pavers at the edge of the Observation Deck have shifted over time due to lack of edge restrain, causing large gaps that do not meet the ground opening requirements.

Access to the Tip Top House

With the State Park's plans to reactivate the Tip Top House as a self-guided interpretive exhibit, the building will be reopened to the general public and must therefore be made accessible. However, the existing zigzag path to the Tip Top House does not meet the width, slope, and material requirements for an accessible route. The entrance door to the Tip Top House is also noncompliant, as further described in the Building Assessment section.

Access to the Summit Point

Access to the Summit Point, a popular visitor destination, is currently provided by a rocky hiking trail. This trail does not meet the width, slope, and material requirements for an accessible route.

Lack of Accessible Furnishings

Accessibility deficiencies are evident throughout the site's furnishings and amenities. None of the site picnic tables and observation scopes are ADA-compliant models. The site stairs lack ADA-compliant handrails.

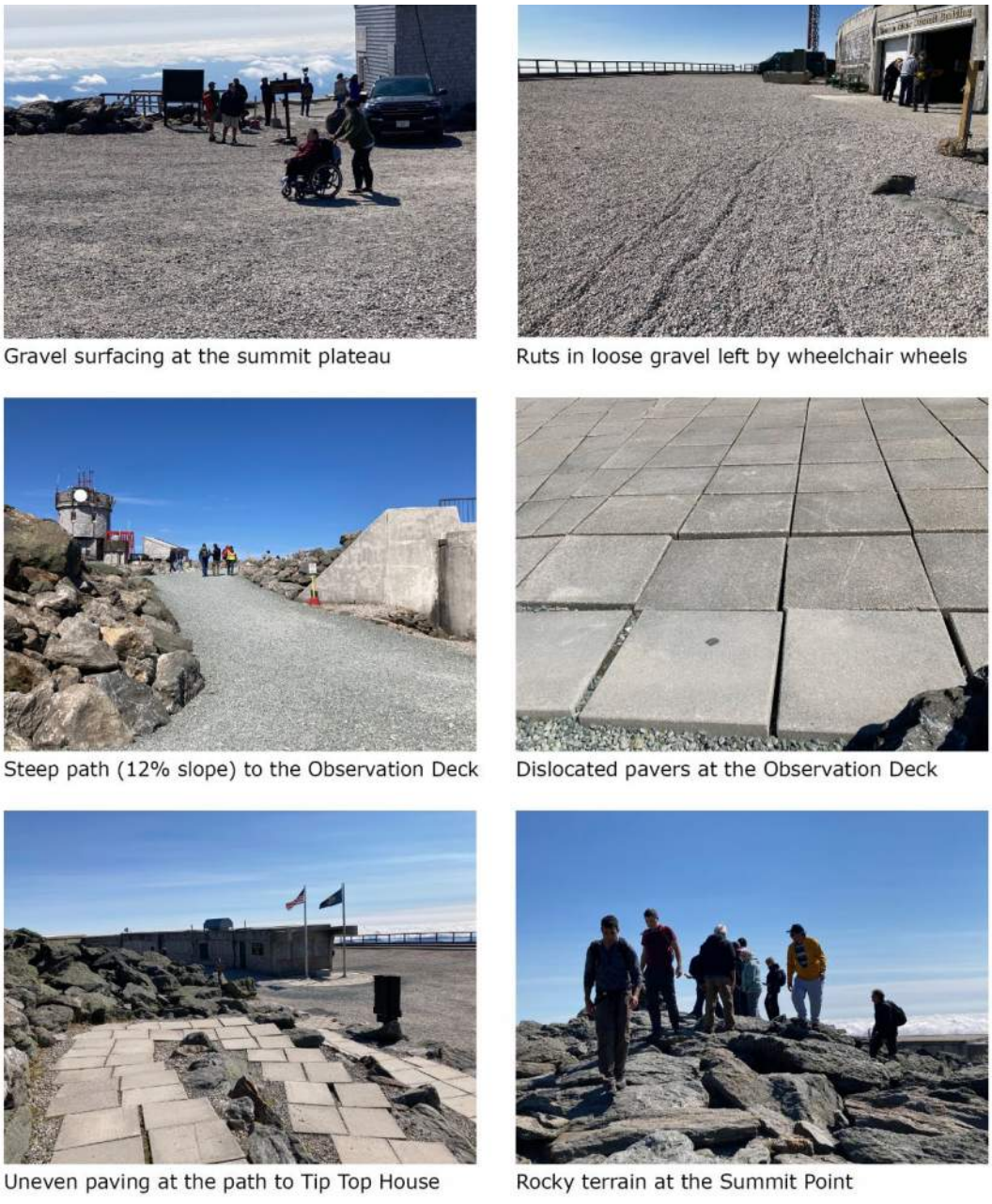


FIGURE 7-20
Site Accessibility Issues at the Summit Plateau

7.3 Site Signage and Wayfinding

The intent of site signage in visitor-oriented spaces is to aid visitors in finding their way, inform visitors about site features and activities, and communicate important messages about safety and usage. Signage should also convey the brand for the organization and the site. Finally, signage can educate and "tell the story" of the site's unique cultural history, climate, and ecology. The existing signage at Mount Washington state park accomplishes these diverse goals at varying degrees.

There are several categories of site signage at Mount Washington State Park, including building identification signs, site feature designations, wayfinding signage, and trailhead signs. Below are the general observations relating to signage:

- The building identification signs lack consistency in style, materials, and placement. There is no cohesive branding other than at the Summit Stage Office, which displays the Auto Road logo.
- There are numerous wayfinding signs featuring destination names and directional arrows. The wayfinding signs at the parking lot differs in design from the wayfinding signs at the summit plateau, using blocky serif lettering printed on sheet metal, while the upper plateau signs use carved sans-serif lettering and painted wood boards with a rustic hand-crafted look. The parking lot signs were provided by the Auto Road, while the upper plateau signs were developed by the State Park.
- There is no site map to help with overall wayfinding.
- There are no safety or fall hazard signs at the exposed old foundations of the former WMTM building.
- There is no interpretive signage. Educational signage is limited to the Crawford Path sign at the back of the Visitors Center, see FIGURE 7-23 Site Feature Signage.
- Overall, site signage gives the impression that it has been assembled over time and without consistent design and fabrication standards. The only branding element used frequently, but not consistently, is the recognizable lettering type that appears on the State Park's site signage and on posters within the building.

FIGURE 7-21
Lettering Type Used on Interior Signage (Left) and Exterior Signage (Right)

7.3.1 Building Identification Signs

The four buildings at the summit each have a different style. The Tip-Top House sign is the most legible from a distance, while the Sherman Adams building lettering does not stand out against the faded wooden background. The Summit Stage Office has two different signs on its front and back sides.

Visitor Center sign

Visitor Center sign

Tip-Top House sign

Yankee Building sign

Summit Stage Office sign at entrance

Summit Stage Office sign at rear facade

FIGURE 7-22
Building Identification Signs

7.3.2 Site Feature Signs

Site feature signage connects visitors to special locations and /or events. For instance, the Summit Point is a popular photo opportunity, as is the large Mount Washington State Park sign (despite the visul intrusion of a white propane tank in the background). There are two memorial markers: the 10th Mountain Division plaque next to the Cog Railway waiting area, and the Lizzie Bourne memorial near the railway.

State Park main sign

The Mt Washington Summit sign

Crawford Path informational sign

Crawford Path informational sign closeup

10th Mountain Division WWII Memorial

Lizzie Bourne Memorial (Source: Patrick Hummel)

FIGURE 7-23
Site Feature Signage

7.3.3 Wayfinding Signs

Wayfinding signage directs visitors from the Auto Road to the parking lot(s), and then from the parking lots to the upper plateau. At the summit, there are numerous directional signs to the Visitor Center, as its entrance is not initially obvious for visitors arriving from the parking lots due to the configuration and orientation of the Sherman Adams Building.

Auto Road parking directional sign

Directional sign from parking to summit

Directional sign to Visitor Center

Closeup of directional sign to Visitor Center

Cluster of directional signs near Tip-Top House

Directional sign to Visitor Center entrance

FIGURE 7-24
Wayfinding Signage Sequence from the Auto Road Parking to the Visitor Center

7.3.4 Trailhead Signs

Located at the beginning of each trail, these rustic signs are constructed of wooden boards with carved and painted lettering. They provide the name of the trail and distance to nearby destinations. Some trailhead signs feature Appalachian Mountain Club (AMC) and/or United States Forest Service (USFS) logos.

Nelson Crag Trail trailhead sign

Crawford Path trailhead sign

Tuckerman Ravine Trail trailhead sign

FIGURE 7-25
Trailhead Signs

7.3.5 Other Informational Signs

Informational signage conveys information related to site usage. The few signs of this type on the site include the Auto Road's regulatory signage (hours of operations, road safety) and the USFS Alpine Zone rules and regulations signs (that are small, located outside of the primary circulation routes, feature fine print and could be easily missed by visitors).

Auto Road informational sign

Hours of Operation sign

Alpine Zone informational sign

FIGURE 7-26
Informational Signs

7.4 Site Amenities

Site furnishings and amenities are important for the enjoyment of the site and the views. Site amenities are scarce at the summit, due to maintenance and safety considerations associated with the high winds, harsh weather conditions, and the lack of on-site storage.

During the site assessment, the following amenities were observed: a few wooden benches and Adirondack chairs, three movable picnic tables (neither were wheelchair-accessible), three viewing scopes, a water spigot, and two aluminum flagpoles. A well-thought-out palette and placement of site amenities would improve the visitor experience and relieve indoor crowding with opportunities to rest or eat outside.

Benches at Visitor Center entrance

Adirondack chairs near the Cog landing

Picnic table near lower entry to Visitor Center

Picnic table near Yankee Building

Flagpoles at former Visitor Center entrance

Water spigot

Viewing scope

FIGURE 7-27
Existing Site Amenities

7.5 Scenic Aspects and Views

Most visitors arrive to the Mount Washington State Park with the goal of experiencing spectacular views of the surrounding landscape. Accessible vistas and viewpoints throughout the site are critical as visitors explore the summit's attractions. However, the dualistic nature of the summit's facilities, some of which are visitor-oriented and others necessary for telecommunications, weather observation, or site operations, affect the character of the site. In some areas, the utilitarian aspects prevail at the expense of the scenic character and visitor experience. Below are several observations of areas to consider for improvements.

Utilitarian Elements

Utilitarian elements intrude into important vistas. For example, the white propane tank next to the Sherman Adams Building distracts from scenic views to the east.

Broken Foundations

Partially left exposed, the former WMTW building foundations are an eyesore and a safety hazard as visitors walk to the edge to enjoy scenic panoramas.

Yankee Building

With its deteriorated appearance and myriad of telecommunication appurtenances, the Yankee Building is a visual distraction.

Gravel Surfacing

While important for the operations and stormwater management, the widespread use of gravel has several drawbacks. The material is loose and is eroding into adjacent vegetated areas. It is also not ADA compliant. Additionally, the gravel surfacing lacks visual appeal and does not provide a spatial definition for pedestrian versus vehicular circulation areas.

FIGURE 7-28
Propane Tank within One of the Most Photographed Vistas

FIGURE 7-29
Unsightly Concrete Barriers and Broken Foundation Walls

FIGURE 7-30
Telecommunications Antennas and Wide Expanse of Gravel Create a Rugged, Utilitarian Site Character

Tighe & Bond

PART THREE
Recommendations

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Section 8
Natural Resources Recommendations

8.1 Purpose and Framework for Ecological Stewardship

Natural Resources Recommendations are intended to guide the implementation of the 2022 Mt. Washington Master Plan's environmental objectives, supporting balanced visitor access, operational needs, and long-term ecological stewardship. Building upon the Natural Resources Assessment (Section 2), these recommendations include:

1. Manage off-trail use
2. Manage invasive and non-native species populations
3. Restore alpine vegetation
4. Plan for future development
5. Plan for future study
6. Manage litter and solid waste

These Recommendations build on the ongoing efforts of NH State Parks, the NH Natural Heritage Bureau, the NH Fish & Game Department, the U.S. Forest Service, the Appalachian Mountain Club, and other Summit Partners. Public and volunteer participation further strengthens these efforts through stewardship, education, and field support. Each contribution plays a vital role in protecting the fragile alpine ecosystem at Mt. Washington State Park. Continued engagement remains essential as the Park advances the Recommendations outlined in this report and evaluates future management decisions. A key objective for management is the ***protection and rehabilitation of natural resources***. This objective should be integrated with broader site circulation improvements (i.e., pedestrian walkways, parking improvements, or exhibits). Recommendations should be implemented in coordination with facility upgrades, visitor experience planning, and Summit Partners.[1]

8.2 Natural Resources Recommendations

This section presents management recommendations designed to protect the unique alpine tundra ecosystem of Mt. Washington State Park. The following subsections outline near-term (2026–2027) and long-term (years 2028+) actions, including opportunities for coordination among NH State Parks, the Mount Washington Commission, Summit Partners, and regulatory agencies.

[1] As defined by the Mt. Washington Master Plan (October 2022), "'*Summit Partners'* shall refer to [Mt. Washington] Commission members who own, lease, or otherwise contractually occupy an area on the physical Mount Washington summit. However, the Commission recognizes that it benefits from the efforts of all of its members including the voluntary support and assistance of the U.S. Forest Service. The Commission also recognizes that many parties have legal interests in the summit area."

8.2.1 Manage Off-Trail Use

Off-trail walking, backcountry skiing, and informal recreation are some of the most significant stressors to alpine vegetation and soils. Unregulated movement across sensitive tundra causes trampling, plant mortality, soil compaction, and erosion, which reduce vegetative cover and accelerate non-native species colonization. Management of off-trail use is therefore a priority for maintaining ecological integrity.

Near-Term Actions (2026–2027)

In the near term, efforts should focus on managing visitor movement and increasing awareness of the sensitivity of the alpine environment. Key actions include:

- Clearly mark designated routes using durable and aesthetically appropriate materials to create a clear physical and visual distinction between pedestrian paths and protected habitats.
- Enhance signage and interpretive messaging, particularly at the Auto Road and Cog Railway arrival points and entrances to trails from the Visitor Center, to explain the importance of staying on designated paths and the vulnerability of alpine vegetation.
- Integrate consistent educational messaging throughout the visitor journey, including arrival points, summit facilities, and digital platforms, to drive the message for visitors to stay on trails and to reinforce the stewardship message through repeated exposure.

Long-Term Actions (2028 onward)

Longer-term strategies should establish a more comprehensive framework for visitor management and enforcement, informed by ongoing monitoring and periodic updates. Recommended actions include:

- Develop a structured visitor management and enforcement strategy that provides clear expectations and consequences for off-trail travel. Consider fines or other penalties for recurring off-trail incursions, applied consistently as part of a broader enforcement framework.
- Designate positive control points, such as scenic overlooks, rest areas, and interpretive platforms, to draw visitors toward dedicated visitor use locations and reduce pressure on native natural communities.
- Consider seasonal or weather-dependent restrictions for backcountry skiing and other high use, particularly when soil is saturated and/or snow cover is insufficient for ground protection.

8.2.2 Manage Invasive and Non-Native Species

The persistence and spread of non-native and range-expanding species pose a growing threat to alpine biodiversity. Even low levels of non-native plant coverage can compromise habitat integrity and outcompete uniquely adapted, native flora. Non-native plant occurrences in turn reduce the amount of suitable habitat for alpine-adapted wildlife such as White Mountain arctic butterfly and snow bunting (see more on wildlife in Section 2). Active prevention, early detection, and coordinated response are essential to managing invasives and sustaining the native alpine plant community.

Coordination with facility operations, trail management, and visitor education programs are critical to managing non-native plant species. Building on dandelion control efforts at Mt. Washington, future invasive species management should broaden to include all non-native species present on the summit. Invasive species management should be institutionalized within the Park's broader maintenance and environmental compliance frameworks.

Near-Term Actions (2026–2027)

In the near term, management efforts should prioritize rapid detection and containment of invasive and non-native species. Recommended actions include:

- Establish an Early Detection, Rapid Response (EDRR) framework that formalizes procedures for identifying, reporting, and responding to new occurrences.
- Coordinate with the NH Natural Heritage Bureau and the Appalachian Mountain Club, integrating their ongoing summit stewardship and invasives removal efforts into Park-led initiatives.
- Conduct regular field surveys performed by trained staff, partner organizations, and volunteers to support consistent monitoring across the summit.
- Immediately remove all invasive occurrences using methods that minimize disturbance to native vegetation. Removal should be accompanied by native species restoration (Section 8.2.3).
- Require visitor cleaning of footwear with boot-brush stations and designated cleaning areas at trailheads, arrival points, and summit entrances.

Long-Term Actions (2028 onward)

Over the long term, invasive species management should transition toward a sustained, Park-led, programmatic approach that increases prevention and rapid response measures and incorporates adaptive management. The intent is for invasive species management to become an integral part of the Park's standard operations and grounds management plans, including training of staff in the identification and low-resource removal and restoration practices.

Long-term strategies include:

- Implement inspection programs of all vehicles including visitors' and maintenance vehicles, contractor equipment, and transportation services.
- Expand volunteer monitoring programs that complement staff surveys and increase detection coverage throughout the growing season.
- Maintain robust public education highlighting the ecological risks of invasive species and encouraging visitor stewardship.
- Maintain regular and scheduled cross-agency collaboration and communication among NH DNCR, NHB, NHFG, USFS, and AMC to coordinate management across jurisdictions.

8.2.3 Restore Alpine Vegetation

Given the limited soil development and slow recovery rates in alpine ecosystems, restoration efforts must be carefully designed and adaptively managed. Opportunities to restore alpine vegetation should be proactively identified and incorporated into planned facility upgrades, stormwater improvements, or other capital projects at the summit. Concurrently, smaller-scale and opportunistic restoration should occur wherever conditions allow, including following invasive species removal, trail containment, or localized disturbances. These incremental actions (such as sowing native seeds in exposed soil and protecting recovering areas from foot traffic) can meaningfully contribute to long-term ecological recovery.

Coordinating restoration with broader infrastructure projects will increase efficiency and reduce costs, while small-scale efforts can be implemented routinely as part of ongoing management. All restoration efforts, whether large or small, should include measurable long-term monitoring objectives such as native vegetation establishment thresholds, soil stability indicators, or non-native species exclusion criteria to support ongoing evaluation and adaptive management over time.

Near-Term Actions (2026–2027)

In the near term, restoration efforts should focus on establishing priorities, testing techniques, and building on prior scientific efforts that explore alpine vegetation recovery. Recommended actions include:

- Develop an adaptive management plan to prioritize restoration zones, define appropriate treatment methods, and establish measurable performance objectives for evaluating success.
- Train Park staff in current alpine restoration practices and encourage them to apply low-resource techniques opportunistically, such as during non-native plant removal. Protect treated areas from future disturbance by users, wind, and water using appropriate stabilization and exclusion methods.
- Initiate pilot restoration projects in areas exhibiting soil loss, erosion, or historic disturbance, using minimal-impact approaches. Locate some pilot efforts in high-visibility areas for the educational opportunity and message that users are in a living laboratory.
- Pursue partnerships with the Native Plant Trust and academic institutions to advance restoration research including propagation trials and species-specific techniques tailored to alpine conditions at the Mt. Washington summit.

Long-Term Actions (2028 onward)

Over the long term, restoration should transition from targeted pilot efforts to broader implementation that supports ecological resilience and visitor education. Key long-term actions include:

- Expand restoration to additional priority zones, including edge areas and older disturbed areas where recovery potential is high.
- Implement adaptive management and long-term monitoring.

8.2.4 Planning for Future Development

Future development and redevelopment within Mt. Washington State Park must balance operational and visitor needs with the imperative to minimize ecological disturbance and preserve ecological connectivity with habitat areas beyond the Park. Given the summit's isolation (it is the highest peak in the northeastern U.S.), global ecological value, and role as a keystone node within the limited network of alpine and subalpine habitats in the region, careful planning to avoid sensitive habitat is paramount.

Development planning should incorporate habitat connectivity considerations into site design, trail alignment and control, and circulation improvements to prevent fragmentation and support the natural movement of wildlife, ecological processes, and climate-driven species shifts. Early coordination among Summit Partners, facility designers, and regulatory agencies will be essential to coordinate planning, environmental compliance, and conservation objectives.

Near-Term Actions (2026–2027)

Near-term efforts should focus on establishing a clear understanding of existing conditions and the ecological constraints that must guide future planning and design decisions. Recommended actions include:

- Map current limits of disturbance as a baseline.
- Build on and refine the 2024–2025 vegetation inventories to define priority conservation zones including areas critical for habitat connectivity.
- Integrate connectivity objectives into all stages of planning. Priority is avoidance of damage to or fragmentation of alpine habitats; and planning should account for efforts to avoid damage. If avoidance cannot be achieved, then damage should be minimized.
- Deploy educational kiosks and interpretive signage to highlight the summit's global and regional ecological role and build public support for minimizing development-related impacts.

Long-Term Actions (2028 onward)

Long-term planning should strengthen the Park's commitment to development approaches that safeguard natural resources, maintain habitat continuity, and promote resilient ecological conditions. Key actions include:

- Confine new construction and infrastructure to existing developed footprints where feasible.
- Evaluate design alternatives through formal environmental review processes, incorporating ecological monitoring data and trends, connectivity considerations, and mitigation strategies into final decisions.
- Avoid constructing new trails. Evaluate the impacts of existing trails and plan trail adjustments to reduce fragmentation, including consolidation of redundant routes and realignment of trails along habitat edges, where feasible.
- Maintain narrow, minimally developed trail corridors to protect the natural continuity of alpine terrain and reduce the corridor-of-influence associated with visitor movement. However, selective trail widening may be a preferred alternative if it prevents fragmentation elsewhere (either within or outside the Park).

- Coordinate long-term planning with regional land managers, including NHFG, USFS, and AMC, to maintain landscape-scale corridor function for climate-sensitive species and support regional conservation goals.

8.2.5 Plan for Future Study

Make the best use of the 2024-2025 baseline assessment by continuing scientific research and data collection. The NH DNCR may compare future monitoring results against historic ecological conditions, evaluate the effectiveness of conservation actions, and detect long-term trends associated with recreation pressures and climate change. Ongoing collaboration among research institutions, state agencies, and Summit Partners will ensure that new findings are consistently integrated into management, stewardship, and restoration planning.

Near-Term Actions (2026–2027)

In the near term, monitoring efforts should focus on strengthening and extending the baseline established through this assessment. Recommended actions include:

- Establish permanent monitoring plots to track changes in vegetation composition, soil condition, and species distribution.
- Conduct focused studies of rare and endemic species, building on the current dataset to refine conservation priorities and contribute to regional biodiversity databases.

These near-term recommendations are already underway. The NH Natural Heritage Bureau was responsive to the early recommendation to strengthen the natural resources inventory baseline and conducted supplemental vegetation survey and field data collection through the 2025 growing season, strengthening the foundation for long-term analysis.

Long-Term Actions (2028 onward)

Over time, research efforts should expand in scope to support a deeper understanding of alpine ecosystem dynamics and provide long-term continuity in data collection at the Mt. Washington summit. Key long-term actions include:

- Expand research to include lichen observations, genetic diversity assessments (eDNA is one possible method), and seed banking, enabling comparison to existing data.
- Strengthen partnerships with universities, the NH Natural Heritage Bureau, the AMC, and federal agencies such as the U.S. Forest Service to coordinate efforts, support consistent, high-quality long-term data collection and integration with broader regional research initiatives.

8.2.6 Manage Litter and Solid Waste

Even small amounts of litter can cause ecological and visual impacts in the alpine environment. Strong summit winds can carry debris into tundra vegetation, where removal may cause additional disturbance. Food waste and trash can attract wildlife, alter behavior, and contribute to the spread of non-native species. With high visitation and multiple points of arrival, active litter prevention and removal are necessary to protect ecological integrity.

Litter control should be integrated into visitor management, facility operations, and ongoing monitoring.

Near-Term Actions (2026–2027)

Focus on prevention and timely removal.

- Evaluate trash and recycling bin locations, capacity, and emptying schedules to prevent overflow and wind-blown debris during peak visitation.
- Install or upgrade wind- and wildlife-resistant receptacles where needed.
- Reinforce "pack-in, pack-out" messaging through signage, digital platforms, tickets, and exhibits.
- Coordinate with Summit Partners to ensure consistent waste practices across food service, retail, and maintenance operations.
- Conduct routine litter patrols during peak periods and remove debris promptly.

Long-Term Actions (2028 onward)

Institutionalize litter prevention within broader planning and operations.

- Incorporate waste reduction and secure waste storage into future facility upgrades.
- Work with vendors to reduce single-use materials sold or distributed at the summit.
- Expand pack-in/pack-out messaging during peak visitation periods.
- Track litter volume and high-accumulation areas to adjust bin placement, servicing, and visitor flow.
- Include litter indicators in the adaptive management framework (Section 3).

Consistent litter control protects alpine vegetation, supports wildlife, improves visitor experience, and reinforces the Park's stewardship commitments.

8.3 Adaptive Management

Implementation of these Recommendations should follow an adaptive management framework, linking performance metrics to a monitoring schedule, action thresholds, and management practices in an iterative process. An adaptive management plan **should be developed within three years** and updated every five years.

Adaptive management recognizes that management, restoration, and planning can be more effective if they are responsive to regular, scheduled observations of a site and its changes. It is based on repeated monitoring, assessment, and follow-up action to understand and allow natural changes in a system over time while guiding it toward realistic goals. It also provides guidance for managers to respond to unexpected shifts, such as in climate and plant communities. Barring disturbance, management inputs are expected to decrease over time in a restored, adaptively managed system.

Natural Resource Recommendations for Mt. Washington lend themselves to a nested adaptive management program: the Recommendations should be tracked for implementation (illustrated in Table 1) and certain Recommendations should also have their own dedicated adaptive management system as well (see below).

Table 8.1. Example tracking system for the near-term actions of Recommendation 8.3.2: Manage Invasive and Non-Native Species.

Recommendation	Monitoring Schedule	Action Threshold	Management Action
Near-Term (2026–2027)			
Establish an Early Detection, Rapid Response (EDRR) framework	Spring 2027	EDRR system not established	Determine why system was not established, whether it is still desirable, and take appropriate action as necessary
Integrate stewardship and removal efforts of NH Natural Heritage Bureau and Appalachian Mountain Club into Park-led initiatives	Spring 2027	Coordination is not established	
Conduct regular surveys for invasive & non-native species	Survey schedule established by Spring 2026	Schedule is not established	
	Surveys are carried out as scheduled	Surveys are not occurring as scheduled	
Remove all invasive occurrences immediately and using low-disturbance methods. Removal should be accompanied by native species restoration (Section 2.3)	As needed: all detections are followed by immediate removal and restoration	Invasive species are not immediately removed	Deploy weed control effort ASAP

Recommendation	Monitoring Schedule	Action Threshold	Management Action
All equipment entering the Park is inspected and cleaned	Protocols implemented by Spring 2027	Protocols have not been implemented	Determine why protocols are not implemented and take appropriate action as necessary
Require visitor cleaning of footwear with boot-brush stations and designated cleaning areas at trailheads, arrival points, and summit entrances	Footwear cleaning & education system implemented by Spring 2027	Footwear cleaning system has not been implemented	

The following Recommendations are more complex than whether a protocol has been implemented, as illustrated in Table 8.1. Adaptive management of the more complex Recommendations will require thoughtful exploration (list is not necessarily comprehensive):

8.3.1 Manage Off-Trail Use:

- Implement ongoing monitoring and use data to refine and update education, signage, enforcement, and physical controls over time.

8.3.2 Manage Invasive and Non-Native Species

- Expand volunteer monitoring programs that complement staff surveys and increase detection coverage throughout the growing season.
- Maintain robust public education that highlights the ecological risks of invasive species, inform about ongoing management efforts, and encourages visitor stewardship.
- Evaluate management effectiveness periodically and adjust strategies accordingly, including containment, targeted removal, native species restoration, and monitoring.
- Maintain regular and scheduled collaboration and communication among NH DNCR, Summit Partners, the Mt. Washington Commission, USFS, AMC, and other stakeholders to coordinate management across jurisdictions.

8.3.3 Restore Alpine Vegetation:

- Implement long-term monitoring, recognizing that successful alpine restoration unfolds over decades and requires consistent evaluation, refinement, and documentation of performance outcomes.

8.3.4 Manage Litter and Solid Waste:

- Track litter frequency, volume, and distribution; adjust receptacle placement, emptying schedule, education, and enforcement as needed.

A sample (and partial) adaptive management framework is started in Table 8.2 for some of these specific Recommendations. A comprehensive adaptive management plan will be more detailed and should be coordinated among partners and stakeholders.

Table 8.2. Sample and partial adaptive management framework for select Natural Resource Recommendations at Mt. Washington State Park.

Indicators, Monitoring Methods, & Frequency	Action Threshold	Management Actions
Recommendation 8.2.1: Managing Off-Trail Use		
Indicators: Off-trail use incidents *Methods*: Passive infrared cameras and trail counters *Frequency*: • Continuous monitoring • Monthly data analysis	Off-trail use does not decrease in any treated location.	Evaluate reasons for ineffective treatment. Increase deterrent types (education, signage, enforcement, physical controls).
Recommendation 8.2.2: Manage Invasive and Non-Native Species		
Indicators: Volunteer monitoring programs (frequency, coverage area, and number of participants) *Methods:* Recordkeeping of volunteer programs *Frequency:* Annual	Programs have not increased in number, frequency, breadth, participants.	Evaluate reasons for lack of increase; use this insight to target outreach.
Indicators: Implementation of educational efforts including webpage, signage, and visible on-site control efforts such as boot brushes *Methods: S*ite-wide count and mapping of indicators *Frequency:* Annual	One or more elements of education campaign are not implemented.	Implement all elements of education campaign.
Indicators: Number, size, and locations of non-native or invasive species occurrences, by species *Methods:* As established by monitoring program *Frequency:* Annual	Increases in any indicator. Note: Occurrences in new locations should be of heightened concern.	Evaluate reasons for increases including off-trail use, ineffective control efforts, spread from nearby areas, climate change, etc. If possible, address immediately (e.g., protection from foot traffic). Consider increased containment, removal effort, native species restoration, and short-term post-removal monitoring.

Indicators, Monitoring Methods, & Frequency	Action Threshold	Management Actions
Indicators: Regularity of cross-agency management coordination *Methods*: Calendar commitments consistent with objectives, accountability tracking *Frequency*: TBD	Meeting schedule is not adhered to. Collaborative management commitments are not being met.	Identify responsible entity for monitoring cross-agency collaboration. Collaboratively assess why management coordination is not meeting schedule and/or action items. Evaluate if this continues to be realistic for the scheduled time frame or should be revisited.

8.4 Integration and Implementation

The Natural Resources Recommendations presented herein collectively advance the guiding principles of the 2022 Mount Washington Master Plan: protection of natural resources, avoidance and minimization of impacts, provision of a high-quality public recreation experience, and expansion of environmental education and outreach.

Success will depend on sustained coordination among NH State Parks, the Mount Washington Commission, Summit Partners, and the scientific community. While there are limited actionable measures available to fully resist the impacts of global climate change on the alpine tundra at Mt. Washington State Park, proactive resilience and adaptation planning remain essential. Because Mount Washington represents the highest elevation in the region, alpine communities have virtually no upslope migration capacity, underscoring the urgency of protecting the habitats that remain. Coordinated stewardship and restoration efforts, informed by ongoing monitoring and science-based adaptive management, will help sustain the summit's ecological integrity for as long as possible.

Section 9
Environmental Site Assessment Recommendations

Based on the findings of the Environmental Site Assessment (ESA) presented in Section 3, Tighe & Bond recommends the following actions to support future planning, design, and potential construction activities at Mount Washington State Park. The recommended actions focus on further evaluation of conditions identified as Recognized Environmental Conditions (RECs) or Potential Areas of Concern during the ESA.

9.1 Recommended Actions

The following recommended actions are intended to further evaluate conditions identified during the ESA and to support environmental planning and management for future activities at the Summit.

9.1.1 Inactive Yankee Building Well

Further evaluation of the inactive Yankee Building well is recommended to assess current water quality conditions and determine whether the well is suitable for redevelopment, continued inactive status, or formal decommissioning. Evaluation should include coordination with the New Hampshire Department of Environmental Services (NHDES), as appropriate, regarding sampling parameters and regulatory requirements associated with well closure or redevelopment.

As described in Section 3, the inactive well was reportedly impacted by a historical kerosene release associated with a former aboveground storage tank (AST) located adjacent to the well. No recent analytical data were identified during the ESA. Additional sampling should therefore be completed to evaluate current groundwater conditions and to determine whether the well may represent a potential vapor intrusion pathway for petroleum-related constituents in the building.

9.1.2 Formerly Used Defense Site (FUDS)

Additional evaluation of the Formerly Used Defense Site (FUDS) is recommended with respect to potential historical releases associated with military operations and related research activities described in Section 3.

Historical records indicate that the United States Air Force operated an icing and atmospheric research facility at the Mount Washington Summit from approximately 1932 through 1964. The facility supported aviation safety research and wartime era atmospheric testing, jet engine testing, and included laboratories, research structures, fuel storage systems, and related infrastructure located primarily north of the current summit development area.

Although portions of the facility were reportedly demolished and removed by the U.S. Army Corps of Engineers between 1965 and 1967, available documentation provides limited detail regarding the extent of demolition activities or the removal of associated infrastructure near existing summit facilities. Section 3 also documents the presence of remaining building foundations, debris, and possible buried infrastructure within portions of the former FUDS area.

This effort should include submittal of a Freedom of Information Act (FOIA) request to the United States Air Force and other parties potentially associated with the FUDS and historical research projects (including General Electric [GE], if applicable) to obtain additional documentation relevant to the following:

- Potential release(s) from the former AST/UST tank farm;
- Removal and/or closure of ASTs, USTs, piping, and associated fuel systems related to the FUDS;
- The existence and location of former drinking water well(s) associated with the FUDS; and
- Historical research infrastructure and operational areas associated with the icing research facility.

Documentation obtained through this effort should be reviewed to further define the extent of former operations and determine whether additional field investigation may be warranted in areas associated with former research infrastructure, jet engine testing locations, or petroleum storage systems.

In addition to environmental considerations, the former FUDS research complex represents a historically significant component of summit operations related to World War II and post-war aviation research and atmospheric science. Coordination with DNCR and summit partners may present opportunities to document or interpret this aspect of the summit's history in conjunction with future planning initiatives.

9.1.3 Historic Fires and Burn Debris

Based on the documented history of fires at the Mount Washington Summit, evaluation of soil and/or debris is recommended in areas proposed for construction or where significant ground disturbance is planned.

Section 3 documents multiple historic fires affecting summit structures between 1908 and 2003, as well as reports that demolition debris and burned materials were historically used as fill in portions of the summit parking areas. Evaluation should therefore be completed to identify the potential presence of contaminants or hazardous materials associated with historic fires and demolition activities and to determine whether specific materials management precautions (e.g., dust controls, worker protection measures, or disposal requirements) may be necessary during construction.

9.1.4 Sampling and Analysis Plan (SAP)

Prior to construction or disturbance within identified areas of concern at the summit, preparation of a Sampling and Analysis Plan (SAP) is recommended in coordination with NHDES.

The SAP should identify proposed investigation areas, media to sample, analytical parameters, and procedures for characterization and management of soil, debris, and/or groundwater encountered during future work. Investigation activities should focus on areas associated with identified RECs or Potential Areas of Concern described in Section 3, including:

- Areas associated with former FUDS infrastructure and fuel storage systems;
- Areas where historic fire debris may have been buried or used as fill;

- The vicinity of the inactive Yankee Building well; and
- Locations where ground disturbance is proposed as part of future development or infrastructure improvements.

Coordination with NHDES during development of the SAP will help ensure that investigation activities are consistent with state environmental review requirements and appropriate for the remote and environmentally sensitive conditions at the summit.

9.2 Conclusions

The ESA identified several environmental conditions of concern associated with historical activities at the summit, including former military research operations associated with the Icing Research Facility/FUDS, the reported kerosene-impacted inactive Yankee Building well, and areas where historic fires and demolition activities may have resulted in buried debris or materials.

Although no evidence of active releases was observed during site reconnaissance, the historical uses of the Site and limited documentation regarding certain closure activities warrant further evaluation in areas where future construction or ground disturbance is planned. These conditions were therefore identified as Recognized Environmental Conditions (RECs) or Potential Areas of Concern during the ESA. These are summarized in Section 3.

Implementation of the recommended actions outlined above will help to further characterize potential environmental conditions, address remaining data gaps related to historical operations at the summit, and support informed planning and design decisions. These actions will also assist NH DNCR in managing environmental considerations associated with future improvements at the Summit while recognizing the historical significance of the former military research activities conducted at Mount Washington.

Section 10
Building and Infrastructure Recommendations

The building and facilities assessment identified considerations to be addressed related to the structural condition, exterior envelope, code compliance, interior finishes and equipment, visitor and staff experience, storage and maintenance needs, and building infrastructure for the Sherman Adams Building, Tip Top House and Yankee Building, as well as the structural condition of the former Power House and WMTW Building foundations.

Recommendations for the items identified can be approached with varying levels of intervention on the summit. Those recommendations that can be planned for and folded into the cycle of building and facility up-keep have been listed below as Maintenance Recommendations. If the proposed approach to addressing an issue would require a reconfiguration of the building program or a larger investment to modify the existing building, it has been listed below as an Enhancement Recommendation. Finally, recommendations that significantly reimagine the built environment of the summit and would require long-term planning and investment have been listed as Transformation Recommendations.

These recommendations require the collaboration of the NH State Parks and the Summit Partners, particularly the Cog Railway, the Auto Road, and those entities leasing communication spaces in the Yankee Building as some Enhancement and Transformation Recommendations would impact spaces used by those groups.

10.1 Sherman Adams Building

The Sherman Adams building – a reinforced concrete two-story building constructed in 1980, is generally structurally sound and performs well in its unique, harsh environment on the summit. While the building is very durable, it is also inflexible, leading to challenges meeting the dynamic needs of visitors and staff, especially if considering possible increased visitation. Additionally, ongoing envelope maintenance is needed and some finishes and equipment are beyond their useful life.

10.1.1 Sherman Adams Building – Exterior Envelope

Addressing the identified envelope issues is important for the long-term function of the building and the interior comfort of its users. The assessment found the following issues:

- Roof leaks that indicate the waterproofing on the observation deck is damaged or has reached the end of its useful life, especially along the guardrails.
- Deteriorated chimneys, which are weak points for the structure and envelope.
- Uneven, dislocated roof pavers that are trip hazards and impede accessibility.
- Widespread surface corrosion on the observation deck railing due to deteriorated coatings.

- Spalled concrete facades with some cracks and efflorescence; if not maintained, these could allow water infiltration, which would corrode the metal reinforcing and accelerate surface damage.
- Penetrations through the foundation wall on the south elevation allowing ground water into the lower level of the building near the elevator. This condition is made worse by the slope of surrounding grate which directs water toward this location.
- Damaged generator barn shingles, which are a result of improper drainage from the roof.
- Leaking observation tower door, which affects the interior materials in the tower and creates slip hazards.
- Leaking ground-floor windows, which indicate a problem with the seals.
- Lower-level windows in poor condition, which also do not provide emergency egress from sleeping rooms. (These were in the process of being replaced in 2025.)

Exterior Envelope Maintenance Recommendations

- Replace the observation deck roofing membrane with a new hot-applied rubberized asphalt waterproofing assembly consisting of: reinforced hot-rubberized asphalt waterproofing membrane, protection board, drainage board, rigid insulation, and pavers on pedestals with a high wind-uplift lockdown system.
- Remove and replace both chimneys with new reinforced-grouted CMU block. Install high-temperature resistant self-adhered waterproofing on the CMU block, with a cladding system for protection. Provide a continuous transition to the waterproofing on the observation deck slab.
- Replace or reinstall roof pavers and install paver restraints along edges to keep the pavers from moving. Reuse existing precast pavers, if possible. Where pavers are installed on grade, install a new reinforced-concrete sidewalk dowelled into the existing foundation wall to provide continuous support for the pavers. Alternately, reinstall pavers on grade similar to the existing condition. Note that this will be a maintenance item, and the pavers will need to be resent periodically to avoid tripping hazards.
- Recoat roof guardrails. Remove the railings, clean and prepare the surface as required by the new coating product, recoat the railing with a primer and two0coat finish coat, and reinstall the railing.
- Re-parge concrete walls. Remove the deteriorated parge coat, sound the exposed concrete structural elements and perform concrete repairs.
- Correct the path of stormwater off the generator barn roof. Remove shingle cladding along the transitions to the exposed concrete columns. Seal the weather barrier to the concrete columns and provide end dams in the sheet metal flashings. Reinstall new shingle cladding.
- Replace the tower door with a new hollow-framed steel door, with heat trace installed within the door frame to prevent freezing in the winter months. If the existing door is to remain, install new weatherstripping, a sheet metal flashing sill pan, and a drainable door threshold, to collect and drain leakage water to the exterior.

- Re-seal ground-level windows. Consider drilling weeps at exterior window sills to promote drainage of leakage water.
- Complete the replacement of the lower-level windows started in 2025.

Exterior Envelope Enhancement Recommendations

- If maintenance roof repair work is undertaken, there are opportunities to add amenities to the roof deck, such as:
  - » Built-in benches around the rebuilt chimneys.
  - » Educational signage along the repaired or replaced guardrail.
  - » Tundra Garden clusters - example native species installations to break up the expanse of pavers and create an educational opportunity
- If roof and wall maintenance is undertaken, there are opportunities to also improve the envelope efficiency:
  - » Install additional exterior insulation.
  - » Replace ground level windows. Redesign the window anchorage to eliminate the steel angle at the sill. Provide self adhered membrane in rough openings and sheet metal sill pan flashings at sills to collect leakage water and drain it to the exterior.
  - » Install new ground floor windows.
  - » Build a new air-lock at the tower door. Construct a small vestibule on the exterior that could protect the primary door from wind-driven rain and snow.

Exterior Envelope Transformation Recommendations

- In coordination with site improvements, there is an opportunity to re-envision the programmatic use of the visitor center roof by building an addition on the roof and providing an accessible route to reach it. (See Transformation Recommendation Diagram). This transformative approach to roof access could include building a new usable space on the back side of the observation deck to provide additional space for dining or the gift shop. An addition on the observation deck could be paired with new roof access via an expanded and improved elevator, providing an accessible path to the roof. If this transformative recommendation is considered, it would be advised to plan for that while maintaining the roof elements noted above.

Sherman Adams Building - Exterior Envelope

Considerations	Possible Approaches		
Envelope	Maintenance	Enhancement	Transformation
• **Roof Leaks** • **Deteriorated Chimneys** • **Uneven Roof Pavers** • **Spalled Concrete Facade** • **Damaged Generator Barn Shingles** • **Leaking observation tower door** • **Leaking ground floor windows** • **Lower level windows poor condition**	• Replace roofing. • Replace chimneys. • Replace or reinstall roof pavers and guardrails. • Re-parge concrete walls. • Correct stormwater from generator barn roof. • Replace damaged shingles. • Replace tower door. • Re-seal ground level windows. • Replace lower level windows.	• Add amenities to the roof deck: » built-in benches around rebuilt chimneys, » educational signage along guardrail, » example native species installations among new pavers. • Improve envelope efficiency: » Add exterior insulation, » Replace ground floor windows, » Add air-lock at tower door.	• Use the roof for Visitor Center program space. » Build addition, » Provide accessible route.

10.1.2 Sherman Adams Building – Space Use and Circulation

The visitor center is an essential visitor facility providing protection from the elements, restrooms, food service, visitor information, and retail opportunities to a steadily increasing volume of visitors. The peak of activity in the building is linked with the Cog Railway train arrivals as riders load and unload hourly.

Considerations in the entry and restroom areas related to space use and circulation include:

- Heavy building use in peak times results in a congested main entry which can be hard to navigate.
- While the main entry is congested, the lower-level exterior entry is under-used as it is not easy to find due to its recessed configuration and lack of signage.
- While the building restroom capacity complies with the plumbing code for the building type, it struggles to meet visitors' needs at peak times.
- The overused ground floor restrooms and under-used lower-level restrooms do not meet the need equally.
- Lack of a clear or inviting path on the interior of the building to bring visitors to the lower-level restrooms.
- The interior stair and elevators are connected to a service lobby which is not welcoming to visitor's use.

The organization of the other major program components in the building also present challenges for efficient space use, including:

- The signage is inconsistent throughout the building. There is an over-abundance of signage of various types and designs that can be confusing and ineffective for wayfinding.

- The gift shop is located at the far end of the dining area, limiting its visibility and which potentially reduces its visitation.
- Conflicting circulation for the gift shop and food service creates congestion. Back-up at food service check-out is a bottleneck.
- Dining seating capacity struggles to meet visitor need at peak times.
- Limited kitchen space prohibits expanding the menu.
- Mechanical ventilation is lacking. The main upper-level areas relies on natural ventilation through operable windows. The kitchen has no makeup air system causing overheating and poor working conditions for staff. The lower-level museum and pack areas have no means of ventilation.
- Lack of storage for food service and the gift shop challenges staff efficiency.
- Pack room is inefficiently used.
- The Observatory Museum 's lower-level entrance, which is the designated accessible entrance, does not meet clearance and level change ADA requirements.
- Secondary egress path from museum is made up of pavers similar to those on the observation deck that have settled resulting in uneven surface with gaps between the pavers..
- Staff quarters are outdated and lack office space.

Space Use and Circulation Maintenance Recommendations

- Improve main entry visibility and accessibility in coordination with landscape and site circulation, with improvements such as a paved accessible route, relocated flagpoles, and improved signage
- Relocate maintenance vehicles stored inside the entrance vestibule during visitor hours.
- Encourage the use of lower-level entry and restrooms: provide enhanced signage to make visitors aware of these facilities.
- Audit signs and eliminate redundant/outdated signs.
- Ease flow of visitors through busy dining and gift shop spaces – test a system of self-checkout at the food service.
- Build permanent storage such as cabinets to keep food service and retail boxes out of hallways.
- Reconfigure museum entries to provide proper accessible clearances and an even egress path.
- Renovate the staff quarters with new finishes and furnishings.

Space Use and Circulation Enhancement Recommendations

- Provide a canopy or covered porch at the main entry and along the façade of the generator barn, to create a sheltered waiting area for Cog passengers outside of the constrained entrance vestibule. (See Enhanced Space Use Diagram)
- Enhance the lower level entrance and visitor spaces to lessen the load on the ground level: provide new stairs to the lower level entry, improve the ventilation and plumbing in the lower level restrooms, improve the ventilation in the pack-up

room, and clarify space signage and the layout of program spaces. (See Enhanced Space Use Diagram)

- Install consistent signage throughout the building as part of a coordinated signage and wayfinding plan, with a clear State Park identity or co-branded with summit partners.
- Reorganize food services and gift shop spaces by moving the gift shop to a more prominent location, providing new separated access for food services and gift shop. (See Enhanced Space Use Diagram)
- Add storage as part of the space reorganization.
- Add office spaces as part of space reorganization.

Space Use and Circulation Transformation Recommendations

- Provide additional entries to the building, potentially from a reenvisioned roof as described in the Exterior Envelope Transformation Recommendations above.
- Separate the service lobby from public interior stairs and elevator by reconfiguring visitor and staff spaces in that area and potentially building a new internal stair for visitor use connecting the levels in a more public area. (See Transformed Space Use Diagram)
- Relocate the pack-up room elsewhere on site and expand the lower-level restrooms. (See Transformed Space Use Diagram) Pack-up hikers needs are often not consistent with other visitors, and could be programmatically separated. Such as locating the pack room in a new facility at the foundations as part of that facility's programming along with additional restrooms. Provide a new separate public reestrooms elsewhere on site, potentially on the site of the existing foundations..
- Install interactive and modifiable digital signage to provide more flexibility for messaging.
- Expand food service and gift shop spaces beyond the ground floor by relocating the gift shop to a roof addition, expanding the kitchen, food service and dining into former gift shop area. (See Transformed Space Use Diagram) As described in the Exterior Envelope Transformation Recommendations above. A new addition on the observation deck could provide new programmatic space that would allow the two heavily used spaces of the food service area and gift shop to separate, providing improved ease of use for both.

Sherman Adams Building - Space Use & Circulation

Considerations	Possible Approaches		
Entry & Restrooms	Maintenance	Enhancement	Transformation
• **Congested main entry** • **Hidden lower level entry** • **Building restroom capacity** • **Ground floor restrooms over-used** • **Lower level restrooms under-used** • **Interior Visitor Center stair and elevator** • **Inconsistent signage**	• Improve main entry visibility & accessibility in coordination with landscape & site circulation. • Relocate vehicles stored inside the entry doors during peak times. • Encourage use of lower level entry and restrooms. • Audit signs and eliminate redundant/outdated signs.	• Expand main entry capacity: » Provide an awning at the main entry to extend the covered entry area. • Enhance lower level to lessen load on ground level: » New stairs to entry, » Improve restroom ventilation and plumbing, » Improve pack-up room ventilation, signage, layout. • Create consistent signage with State Park identity.	• Provide additional entries, potentially from roof. • Separate service lobby from interior stair & elevator. • Relocate pack-up room elsewhere on site to expand lower level restrooms. • Provide additional restrooms elsewhere on site. • Interactive & modifiable digital signage to provide more flexibility.

Sherman Adams Building - Space Use & Circulation

Consideration	Possible Approaches		
Visitor Amenities	Maintenance	Enhancement	Transformation
• **Gift shop location** • **Conflicting circulation for gift shop & food service** • **Back-up at check-out.** • **Dining seating capacity** • **Limited kitchen space** • **Lack of storage** • **Museum access & egress** • **Staff quarters**	• Ease flow of visitors through busy dining & gift shop spaces: » Test system of self-checkout for food service. • Build permanent storage: » Cabinets to keep boxes out of hallways. (in progress) • Reconfigure museum entries: » Accessible clearances, » Even egress path. • Refresh staff quarters finishes & furnishings.	• Reorganize food services & gift shop: » Move gift shop to more prominent location, » Provide new separated access for food services & gift shop. • Add storage as part of reorganization. • Add office spaces as part of reorganization.	• Expand food service & gift shop beyond ground floor: » Relocate gift shop to roof addition, » Expand kitchen, food service & dining into former gift shop area.

10.1.3 Sherman Adams Building - Systems

The assessment identified that the building only has natural ventilation from the windows. Ventilation and make-up air is inadequate in the main kitchen, lower-level restrooms and pack room. Some mechanical, electrical and plumbing (MEP) equipment is at the end of its expected service life. There is a limited fire protection system in the building.

Due to the unique location, mechanical ventilation and outdoor equipment is challenging, at least in the winter. Additionally, there is limited space for equipment or ventilation openings in the existing structure. To accommodate the recommended changes, a mechanical room may be needed (either on a new upper floor, or under upper-level overhang).

Building Systems Maintenance Recommendations

- Replace identified MEP equipment due to age, including:
    a. HVAC – radiation, hot water piping, observatory boiler system, exhaust fans.
    b. Plumbing – piping, anti-scalds, backflow, consider adding hot water to upstairs rest rooms.
    c. Electrical – Replace outdated distribution panels.

Building Systems Enhancement Recommendations

- Design replacement HVAC systems to allow for future electrification.
- Add makeup air systems to serve the kitchens
- Add mechanical ventilation with energy recovery systems to serve the museum, pack room, and possibly the main areas on the upper-level.
- Create Fire Department connections from the existing domestic water tanks to allow emergency connections.
- Design a limited capacity sprinkler system working closely with AHJ (Authority having Jurisdiction).

Building Systems Transformation Recommendations

- Plan for MEP system changes to manage carbon footprint and energy costs
    a. Install an air-to-water, air source heat pump for heating, with boilers to remain as backup and to operate during more extreme weather.
    b. Locate outdoor air source heat pump in a sheltered or semi-enclosed location to prevent damage and ice/snow accumulation.
    c. Reduce operating costs vs fuel oil alone (by approximately 20%)
    d. Reduce building carbon footprint.

10.1.4 Sherman Adams Building – Recommendation Diagrams

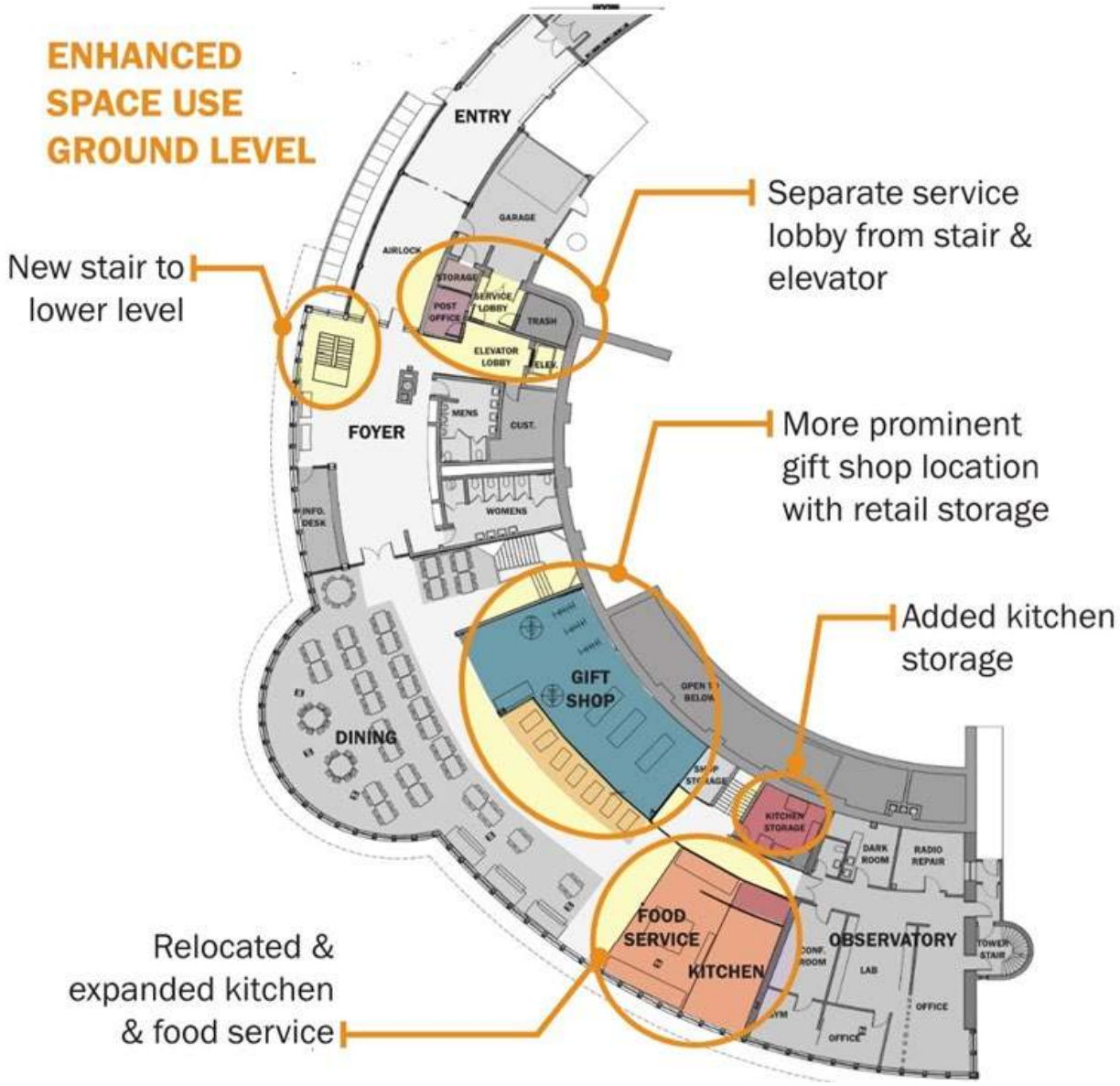

Figure 10-1

Enhanced space use at ground level

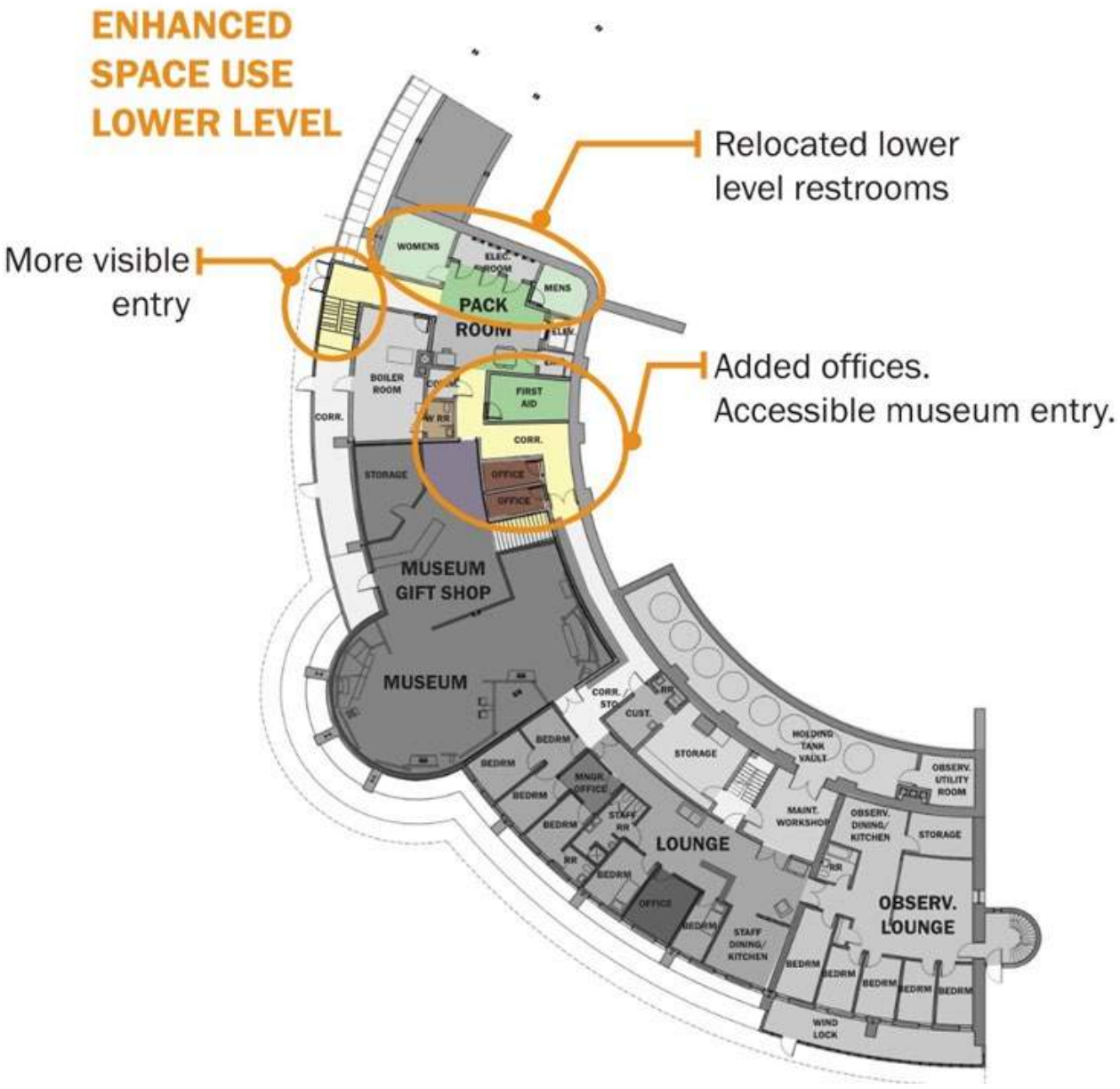

Figure 10-2

Enhanced space use at lower level

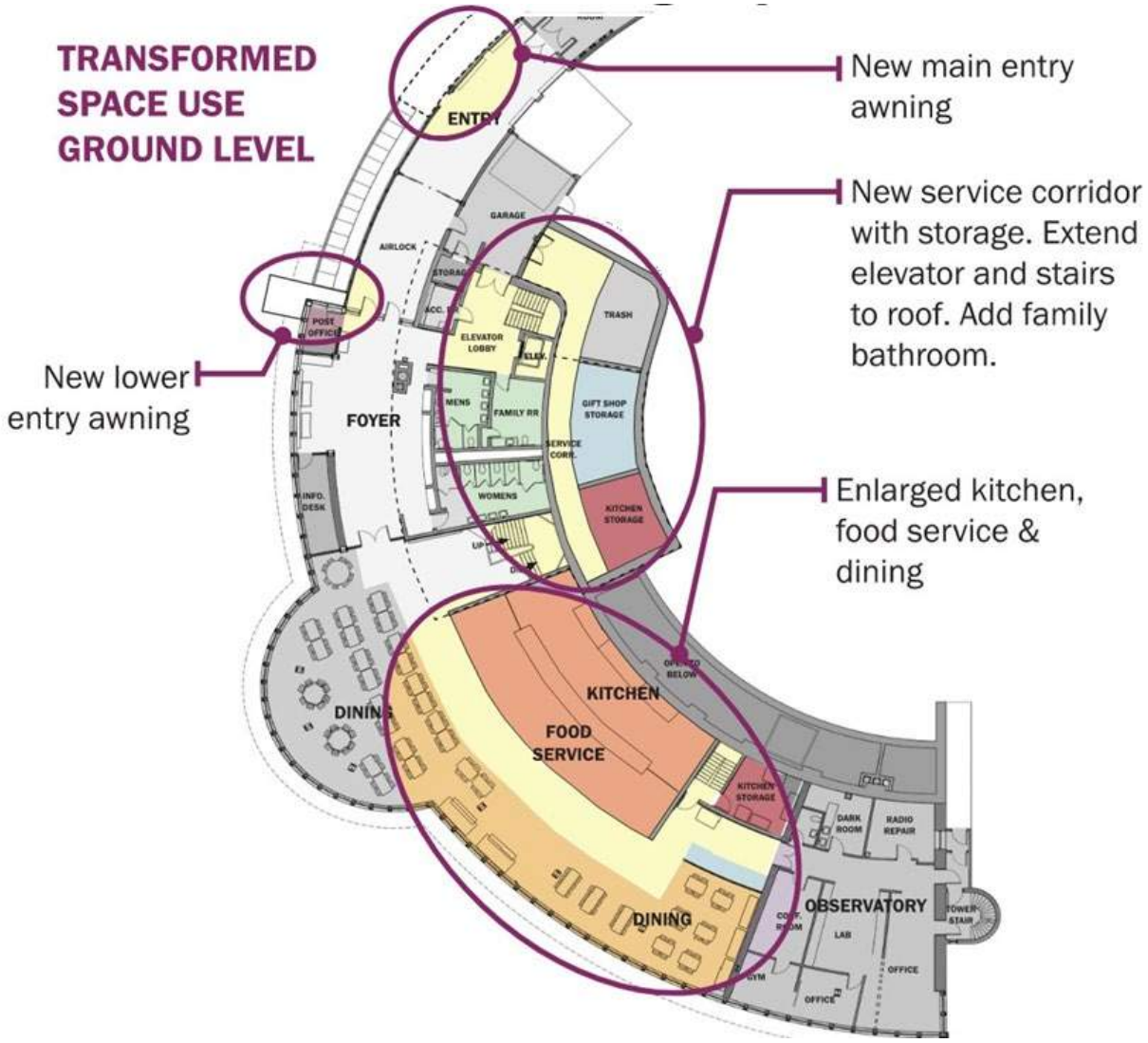

Figure 10-3

Transformed space us at ground level

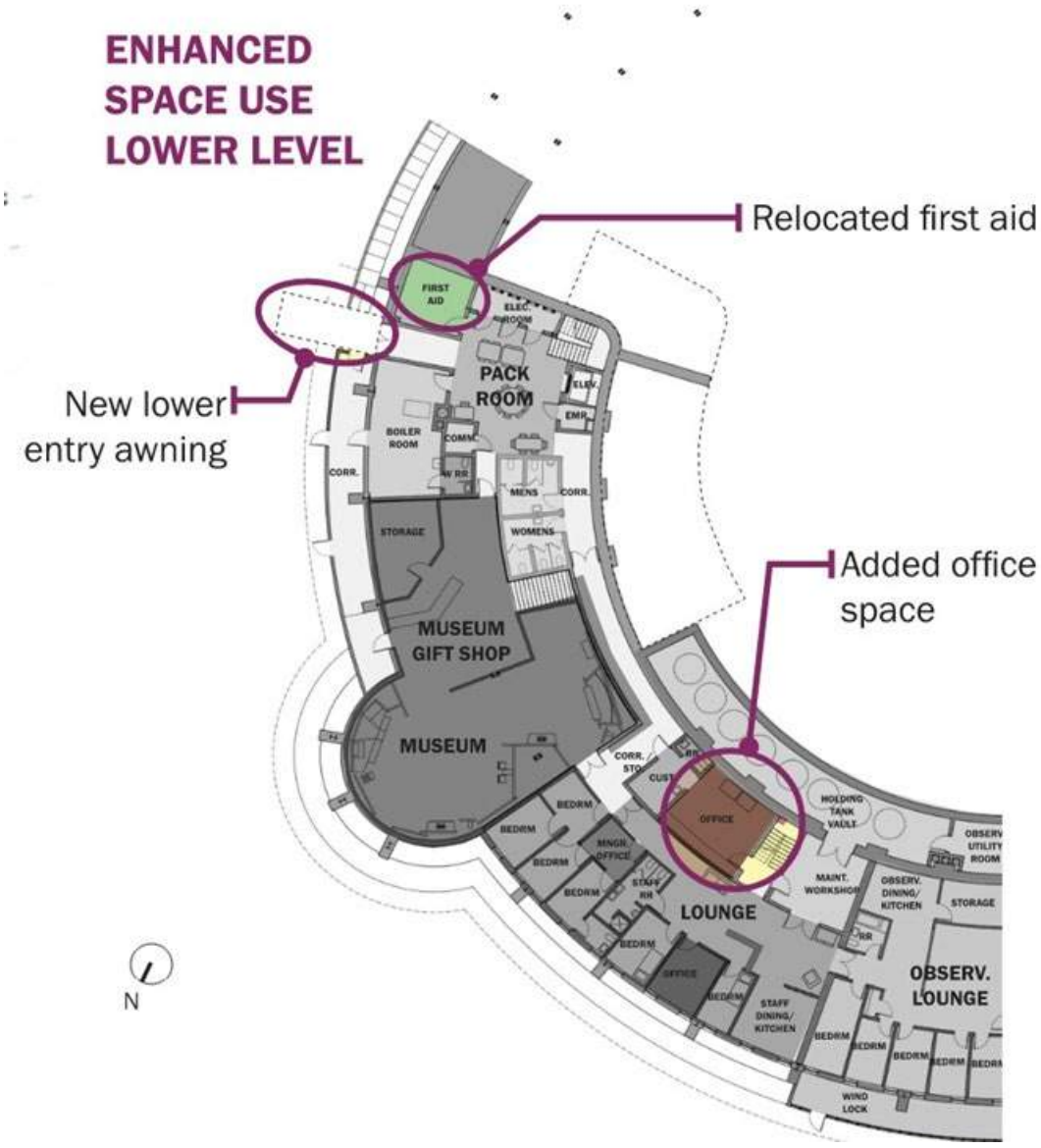

Figure 10-4

Transformed space use a lower level

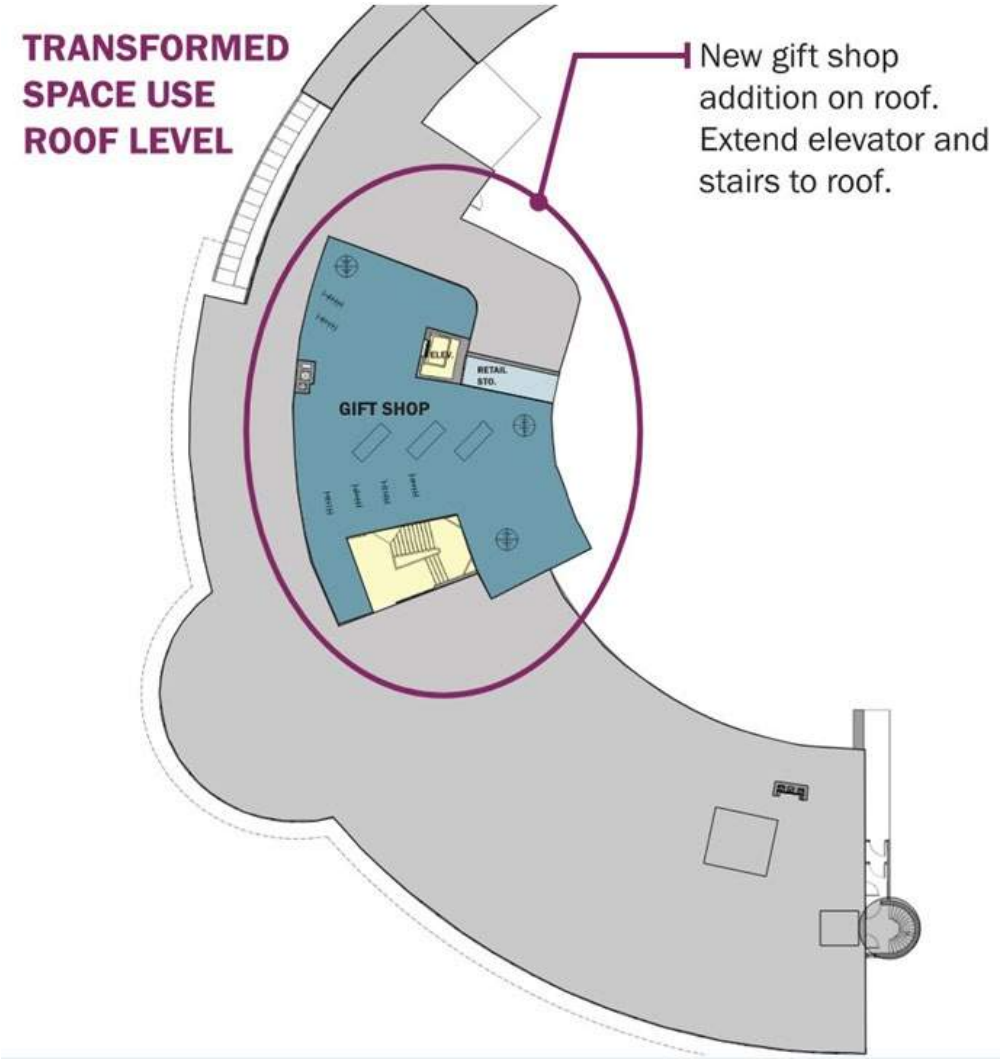

Figure 10-5

Transformed space use at roof level

10.2 Tip Top House

The Tip Top House is a historically significant stone and wood structure built in 1853. It has undergone several updates and changes throughout its history and at the time of our assessment was closed to the public. The State Park has ongoing plans and efforts for renovation of the Tip Top house as a self-guided interpretive exhibit space. While the building is structurally sound, the assessment identified issues such as roofing that has reached its useful life, water infiltration into the building, interior moisture control, and accessibility to and into the building. White the exhibit space is not anticipated to include artifacts that require precise climate control, the comfort of visitors and longevity of exhibits are considerations that need to be addressed.

Below are recommended approaches related to Maintenance and Enhancement; there are no recommendations related to Transformation approaches.

Envelope and Structure Maintenance Recommendations

- Replace roofing.
- Replace windows, especially on west elevation.
- Replace exterior trim, especially on west elevation.
- Add additional structural connections at identified roof framing conditions.

Access and Interior Maintenance Recommendations

- Conduct exploratory demolition to determine the existing wall assembly and floor assembly and identify if there is a vapor retarder.
- Identify where water is getting into the interior through the walls.
- Restart the existing HVAC system to raise interior temperature and space relative humidity.

Enhancement – Access and Interior

- Study the feasibility of providing an ADA-compliant entrance into the building while preserving the structure's historic integrity. Options may include door and threshold modifications, leaving the front entry door on hold-opens, or installing an automatic opener. (These approaches would need to be coordinated and approved with AHJ.)
- If the study above found that an accessible entrance is not feasible, provide equal accommodation alternatives such as using audio-visual materials to depict the exhibit content or offering personalized assistance to access the space.
- Coordinate building access with accessible site circulation and parking: construct an accessible exterior path or ramp to the entrance.
- Install a vapor retarder if it is found to be lacking.
- Install a monitoring system for moisture and interior air quality.

10.3 Yankee Building – Envelope and Structure

The Yankee Building is a wood and steel framed building constructed in 1941. It accommodates multiple uses including State Park support spaces and public and private communications equipment. The Yankee Building was not purpose-built for its current uses, leading to some spaces remaining empty or underutilized. The building is generally in poor condition, especially on the interior and lacks functioning domestic water and sanitary sewer systems. The building underwent an extensive study in 2019 which should be reviewed for a full understanding of the considerations and recommendation options for this building.

The current assessment identified the following issues:

- Heavily spalled and damaged concrete on the ground floor.
- Missing and severely weathered shingles throughout the exterior envelope.
- Wood-framed windows in poor condition.
- Low slope membrane roof leaking on the upper level.
- Interior stairs, walls and doors not compliant with fire ratings.
- Second floor headroom deficiencies.
- Water leak on the upper floors causing damage to interior materials and framing.
- No sprinkler protection.
- Structural floor panels heavily cracked and spalled in some areas.
- Ad-hoc, notched structural members on the third floor.

The need for basic exterior maintenance continues while the ultimate larger plan for the building is considered. Below are possible approaches related to Maintenance, Enhancement, and Transformation.

Maintenance Recommendations

- Repair heavily spalled and damaged concrete on ground floor.
- Replace and continue to maintain missing and damaged shingles.
- Replace and protect windows in poor condition.
- Replace low-sloped membrane roof above the third floor that appears to be leaking.
- Repair damage from water leaks on upper floors.
- Repair Martin Fireproofing floor panels that are heavily cracked and spalled.
- Repair ad-hoc, notched, structural members on third floor.

Enhancement Recommendations

- Invest in improvements to existing buildings to be more usable, such as providing water services.
- Enclose the primary stairwell for code compliant egress.
- Provide fire-rated corridor walls and doors.
- Rectify headroom deficiencies throughout second floor.

- Provide sprinkler protection.

Transformation Recommendations

- Demolish and build a new structure – or - a large-scale phased renovation.

Tip Top House

Consideration	Possible Approaches		
Envelope & Structure	Maintenance	Enhancement	Transformation
• **Roofing** • **West elevation windows & trim** • **Structural post connections**	• Replace roofing • Replace windows • Replace exterior trim • Add additional structural connections		
Access & Interior			
• **Entrance not accessible** • **Moisture on interior**	• Provide virtual walkthrough of historic building interior. • Exploratory demolition to determine wall assembly & floor assembly and if there is a vapor retarder. • Identify where water is getting into interior through walls. • Restart existing HVAC to raise temperature and lower dew point.	• Provide accessible entry compatible with historic structure. (Leave front entry door on hold-opens, consider possible back entrance.) • Coordinate with accessible site circulation & parking. • Install a vapor retarder (if lacking). • Install monitoring system for moisture and interior air quality.	

10.4 Existing Foundations - Reuse

The existing foundations are remnants from the WMTW building, constructed in 1954 and a former powerhouse, which both burned down in 2003. The assessment identified the existing, partially filled foundations as creating an unsafe condition for pedestrians. The former powerhouse foundation appears to be in poor condition and is not reusable. Former WMTW building appears to be in good condition and has the potential to be reused.

Maintenance Recommendations

- Enhance the pedestrian safety at both building foundations: fill in the foundations, install guardrails and access deterrents, provide hazard signage

Enhancement Recommendations

- Remove former Powerhouse foundations.
- Create accessible viewing platform in this area to capture views on the southwest side of the summit.

Transformation Recommendations

- Consider a new structure with overlook on the location of former foundations. Possible uses for this building that were identified as part of the study include: a swing space for communications during Yankee Building replacement; a permanent space for communications to replace that use in the Yankee Building, workshop space, a new pack-up room and additional restrooms, or retail space.

Existing Foundations

Consideration	Possible Approaches		
Foundation Reuse	Maintenance	Enhancement	Transformation
• **Unsafe for pedestrians.** • **Former Power House not reusable.** • **Former WMTW potentially reusable.**	• Remove former Power House foundations. • Make safe former WMTV foundations.	• Create accessible viewing platform on southwest of summit.	• Consider new structure with roof access for viewing on location of former foundations. » Swing space for communications during Yankee replacement. » Permanent space for communications. » Workshop space. » Pack-up room & additional restrooms. » Retail space.

10.4.2 Existing Foundations – Recommendation Diagrams

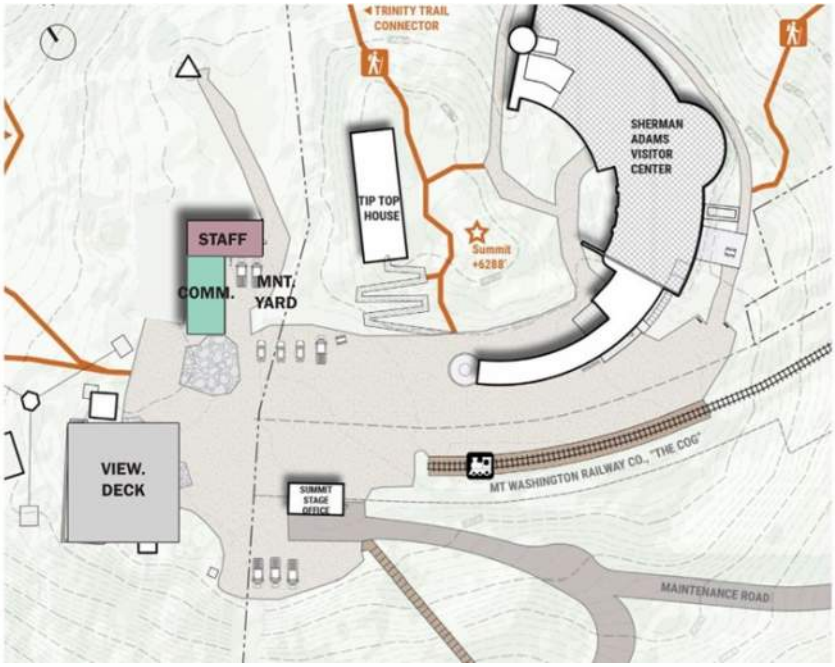

Figure 10-6
Enhanced Reuse Plan Diagram

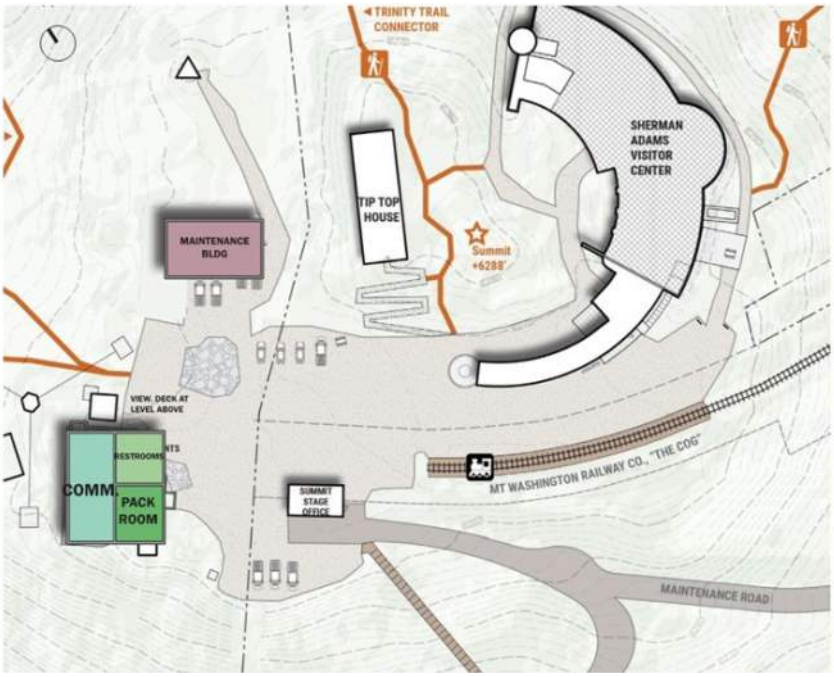

Figure 10-7
Transformed Reuse Plan Diagram

10.5 Opinion of Probable Costs

The Maintenance, Enhancement, and Transformation Recommendations described above, along with the recommended code-related improvements itemized in section 4, represent a potential significant investment in the Mount Washington Summit buildings and structures. As a follow-up to this study, each item will require additional detailed study and design prior to implementation. The order for implementation will also require further consideration, especially with regard to: the summit's narrow construction season, the sensitive environmental considerations, and the availability of funding.

The Opinion of Probable Costs summarized below is intended to help in planning for the next phases of study and design.

***Please note, there are significant unknown factors that will impact the final cost of any improvement undertaken on the summit. The biggest variables are timing, access, and weather. As it is not possible to bracket the impacts of those variables with a reasonable amount of certainty at this early assessment phase, they have not been included in the estimated costs included in this report. The estimated cost ranges below represent conceptual level estimates for construction cost, based on prevailing-wage labor rates and assuming 1-1/2 years of escalation from February 2026. No soft costs, such as design fees, permitting, or owner costs are included. ***

	Estimated Cost Range**	
	Low	High
Sherman Adams Building		
Section #4.1.1		
• Code-related improvements	$200,000	$270,000
Section #6.1.1 Exterior Envelope		
• Maintenance Recommendations	$2,1750,000	$2,950,000
• Enhancement Recommendations	$445,000	$605,000
• Transformation Recommendations	$1,550,000	$2,100,000
Section #6.1.2 Space Use & Circulation		
• Maintenance Recommendations	$260,000	$350,000
• Enhancement Recommendations	$920,000	$1,245,000
• Transformation Recommendations	$280,000	$380,000
Section #6.1.3 Building Systems		
• Maintenance Recommendations	$580,000	$790,000
• Enhancement Recommendations	$840,000	$1,140,000
• Transformation Recommendations	$455,000	$615,000
Tip Top House		
Section #4.1.2 Envelope & Structure		
• Code-related improvements	$33,000	$45,000
Section #6.1.1 Exterior Envelope		
• Maintenance Recommendations	$215,000	$290,000
Section #6.2.2 Access & Interior		
• Maintenance Recommendations	$75,000	$105,000
• Enhancement Recommendations	$24,000	$32,000
Yankee Building		
Section #6.3.1 Envelope & Structure		
• Maintenance Recommendations	$380,000	$510,000
• Enhancement Recommendations	$190,000	$255,000
Existing Foundations		
Section #6.4.1 Reuse Options		
• Maintenance Recommendations	$40,000	$55,000
• Enhancement Recommendations	$ 530,000	$720,000
• Transformation Recommendations	$4,600,000	$6,200,000

Figure 10-8
Opinion of Probable Cost

Section 11
Fuel Tanks Recommendations

The assessment of the fuel oil distribution system found that most of the tanks within the Sherman Adams Building, the Tip Top House, and the Yankee building are in good condition, and therefore the recommendations pertain to operations, maintenance, and inspection requirements for regulatory compliance. The only part of the system that is considered for replacement is the 1940s Tank Farm, which is a critical component of the system and is increasingly difficult to maintain to meet compliance requirements.

11.1 Tank Farm -Tanks 1 through 5 Recommendations

The five (5) 20,000-gallon kerosene tanks were installed in 1945 and have long exceeded their expected service life. Two out of the five tanks are out of service, and the remaining have various issues that imperil the continued usage. While the recommendations below offer a Regulatory Compliance Path and a Tank Replacement Path, only the Tank Replacement Path will fulfill the long-term needs of Mt Washington State Park.

11.1.1 Operational and Maintenance Recommendations

The following recommendations should be considered in order to meet state and federal regulations and applicable codes:

- Touch up/recoat areas of corrosion and coating failure on the tank exteriors, saddle supports, associated piping, and appurtenances to prevent further corrosion (best management practice (BMP) or industry standard (IS)).
- Replace the tank vent manifold system to a standalone venting system (NFPA 30 §27.8.1.4).
- Reroute the tank venting system to terminate outside of the shed (NFPA 30 §27.8.1.3).
- Tank manway should be retrofitted with either a proper 8-inch emergency vent or long-bolt hardware installed on every other hole on the manway to act as an emergency vent system. Periodically actuate the emergency vent on the tank top to ensure functionality. Actuate the emergency vents at least once a year. Replacing the emergency venting gaskets should also be completed on a periodic maintenance interval. Replace the gaskets at least every 3-5 years (NFPA 30 §22.7.3.2.1).
- Areas of vegetation growth, dirt, debris, and combustible materials should be removed from secondary containment (NFPA §6.10.4).
- Secondary containment area bottom and walls should be upgraded, in the current condition (cracking and spalling), the containment area will not adequately contain a release (BMP or IS).
- Tank labels need to be updated and/or replaced to comply with the requirements of the *NFPA 704, Standard System for the Identification of the Hazards of Materials for Emergency Response*:

  Provide the following labels:

  - NFPA 704 Hazard Diamond for Kerosene (1,2,0)
  - Tank Identification Label

  - Safe Fill Volume of the Tank: "18,000-gallons"
  - "Combustible"
  - "No Smoking"
- Add non-absorbent pads at pipe supports to prevent further metal on metal contact (BMP or IS).
- Tank predates UL 142 construction standards; however, per current NFPA 30 (2024) §21.4.3.3 and UL 142 §8.2, the vent capacity should be evaluated to ensure it can relieve vapors and prevent overpressure during fill or withdrawal.
- Previously these tanks were inspected to the API 653 inspection code. The STI SP001 inspection code would be more applicable to these tanks. Inspecting these tanks to the STI SP001 inspection moving forward should be considered.

11.1.2 Inspection Intervals

Federal SPCC Requirements:

Periodic monthly and annual inspections are to be conducted by the Owner's inspector who shall be knowledgeable about storage facility operations, the type of AST and its associated components, the spill control system for the facility, and characteristics of the liquid stored. Owner's inspectors must also be familiar with pumping, piping, and valve operations of the AST system.

NHDES Requirements:

- Formal Internal Inspection: **Due August 2024**
- Internal inspections are due every 10 years. Last internal inspection was completed in August 2014.

API 653 Requirements:

- Formal External Inspection: **Due August 2019 (every 5 years)**
- Ultrasonic Thickness Testing: Due August 2029 (every 15 years)
- Formal Internal Inspection: Due August 2034 (every 20 years).

or

STI SP001 Requirements:

All five (5) tanks - Category 2 Tanks - ASTs with spill control, and without continuous release detection method (CRDM); not adequate release prevention barrier (RPB). See Table 5-2 for inspection interval two (2) options below:

TABLE 11-1

Inspection Interval Options for Category 2 tanks with a capacity between 5,001-30,000-gallons

Option A	Option B
External Inspections Every 10 Years	External Inspections Every 5 Years
Internal Inspections Every 20 Years	Leak Testing Every 10 Years

11.1.3 Recommendation for Path Forward

We have identified two (2) paths forward for these tanks, one (1) being restoring condition of the tanks to meet regulatory compliance or the second to replace the tanks. The two (2) paths are outlined below.

Regulatory Compliance Path (Short-Term):

In order to restore regulatory compliance, the following should be completed:

- Continue monthly and annual SPCC inspections
- Complete internal inspections at the earliest convenience. Repair any areas of concern identified during the internal inspection to restore storage tanks to a good working condition.
- Utilize STI SP001 inspection code instead of API 653, follow Option A in Table 5-2 inspection intervals moving forward.
- Restore concrete containment dike to a liquid tight form. Once restored, tanks qualify as Category 1 tanks and will require less stringent inspection intervals (externals every 20 years, internals every 10 years to meet NHDES requirements).
- Complete operational and maintenance recommendations as noted in section 11.1.1 and outlined in the previous 2014 InterSpec, LLC inspection reports, excluding wear plates in between the saddle and tanks.

***Tank Replacement Path (Preferred)*:**

Due to age and the current overall condition of the tanks, replacement of all five (5) tanks should be considered to ensure the safety and reliability required in this extreme climate and for the State Park's long-term use.

Options to replace all five (5) 20,000-gallon ASTs are estimated to be in the $2.9 million to $3.9 million range. The new system should be sized to allow the State Park facilities to continue to operate safely for prolonged periods of electrical service disruption in which the oil system will power the emergency generator. Refer to the technical memo provided by Tighe & Bond to review the opinion of cost associated with replacing the tanks and additional recommendations – **see Appendix C** of this report.

11.2 Generator Housing Shed – Tank 12 "Day Tank"

Tank 12 is generally in good condition, however the assessment found several issues recommended to be addressed.

11.2.1 Operational and Maintenance Recommendations

The following recommendations should be considered to be compliant with state and federal regulations and fire codes:

- Monitor product staining during future inspections (BMP or IS).
- Proper grounding should be installed (NFPA 30 §6.5.4.3).
- Rerouting the tank venting system to terminate outside of the building (NFPA 30 §27.8.1.3).

- Remove dispenser pump and level gauge attached to vent manifold. Replace the tank vent manifold system to a standalone venting system (NFPA 30 §27.8.1.4).
- Replace and relocate the level gauge to a dedicated tank top opening for more accurate readings (Manufacturer's recommendation).
- Add an appropriate bushing on the 6-inch threaded coupling to provide additional threaded openings for appurtenances and piping (BMP or IS).

11.2.2 Inspection Intervals

Federal SPCC Requirements:

Periodic monthly and annual inspections are to be conducted by the Owner's inspector who shall be knowledgeable about storage facility operations, the type of AST and its associated components, the spill control system for the facility, and characteristics of the liquid stored. Owner's inspectors must also be familiar with pumping, piping, and valve operations of the AST system.

STI SP001 Requirements:
Category 1 Tank - ASTs with spill control, and CRDM

Category 1 tank with a capacity of between 1,101 – 5,000 gallon require periodic monthly and annual inspections by owner/user's inspector.

11.2.3 Recommendation for Path Forward

Regulatory Compliance:

In order to restore regulatory compliance, the following should be completed:

- Continue monthly and annual SPCC/STI inspections
- Complete operational and maintenance recommendations as per section 11.2.1.

11.3 Sherman Adams Building – Tank 19

Tank 19 is generally in fair condition, however the assessment found several issues recommended to be addressed.

11.3.1 Operational and Maintenance Recommendations

The following recommendations should be considered to be compliant with state and federal regulations and fire codes:

- Install proper emergency venting systems to both the primary and secondary tanks (NFPA §22.7.1.1.1)
- Proper grounding should be installed (NFPA 30 §6.5.4.3).
- Rerouting the tank venting system to terminate outside of the building (NFPA 30 §27.8.1.3).
- Monitor product staining during future inspections (BMP or IS).
- Tightness testing of the primary tank should be considered to confirm structural integrity of the tank. If the tightness testing reveals a compromise of the primary tank, replacement of the system should be considered.

11.3.2 Inspection Intervals

Federal SPCC Requirements:

Periodic monthly and annual inspections are to be conducted by the Owner's inspector who shall be knowledgeable about storage facility operations, the type of AST and its associated components, the spill control system for the facility, and characteristics of the liquid stored. Owner's inspectors must also be familiar with pumping, piping, and valve operations of the AST system.

STI SP001 Requirements:

Category 1 Tank - ASTs with spill control, and CRDM

Category 1 tank with a capacity of between 0 – 1,100 gallon require periodic monthly and annual inspections by owner/user's inspector.

11.3.3 Recommendation for Path Forward

Regulatory Compliance:

In order to restore regulatory compliance, the following should be completed:

- Continue monthly and annual SPCC/STI inspections
- Complete operational and maintenance recommendations as per section 11.3.1.

11.4 Mount Washington Observatory – Tank 15

Tank 15 tank is generally in good condition, however the assessment found several issues recommended to be addressed.

11.4.1 Operational and Maintenance Recommendations

The following recommendations should be considered to be compliant with state and federal regulations and fire codes:

- Install proper emergency venting systems to both the primary and secondary tanks (NFPA §22.7.1.1.1 & 22.11.4.8)
- Proper grounding should be installed (NFPA 30 §6.5.4.3).
- Rerouting the tank venting system to terminate outside of the building (NFPA 30 §27.8.1.3).
- Combustible materials should be removed from the tank top (NFPA §6.10.4).

11.4.2 Inspection Intervals

Federal SPCC Requirements:

Periodic monthly and annual inspections are to be conducted by the Owner's inspector who shall be knowledgeable about storage facility operations, the type of AST and its associated components, the spill control system for the facility, and characteristics of the liquid stored. Owner's inspectors must also be familiar with pumping, piping, and valve operations of the AST system.

STI SP001 Requirements:

Category 1 Tank - ASTs with spill control, and CRDM.

Category 1 tank with a capacity of between 0 – 1,100 gallon require periodic monthly and annual inspections by owner/user's inspector.

11.4.3 Recommendation for Path Forward

Regulatory Compliance:

In order to restore regulatory compliance, the following should be completed:

- Continue monthly and annual SPCC/STI inspections.
- Complete operational and maintenance recommendations as noted in section 11.4.1.

11.5 Yankee Building – Tank 17

Tank 17 is generally in good condition, however the assessment found several issues recommended to be addressed.

11.5.1 Operational and Maintenance Recommendations

The following recommendations should be considered to be compliant with state and federal regulations and fire codes:

- Monitor product staining during future inspections (BMP or IS).
- Proper grounding should be installed (NFPA 30 §6.5.4.3).
- Rerouting the tank venting system to terminate outside of the building (NFPA 30 §27.8.1.3).
- Install a proper emergency venting system for the secondary tank (NFPA §22.7.1.1.1 & 22.11.4.8).
- Properly install leak detection sensor to ensure continuous monitoring of the secondary tank. If leak detection sensor is not installed, periodically check secondary containment tank for the presence of water (BMP or IS).

11.5.2 Inspection Intervals

Federal SPCC Requirements:

Periodic monthly and annual inspections are to be conducted by the Owner's inspector who shall be knowledgeable about storage facility operations, the type of AST and its associated components, the spill control system for the facility, and characteristics of the liquid stored. Owner's inspectors must also be familiar with pumping, piping, and valve operations of the AST system.

STI SP001 Requirements:

Category 2 Tank - ASTs with spill control, without CRDM

Category 2 tank with a capacity of between 0 – 1,100 gallon require periodic monthly and annual inspections by owner/user's inspector.

11.5.3 Recommendation for Path Forward

Regulatory Compliance:

In order to restore regulatory compliance, the following should be completed:

- Continue monthly and annual SPCC/STI inspections
- Complete operational and maintenance recommendations as per section 11.5.1.

11.6 Tip-Top House – Tank 18A & 18B

Tanks 18A and 18B are generally in good condition, however the assessment found several issues recommended to be addressed.

11.6.1 Operational and Maintenance Recommendations

The following recommendations should be considered to be compliant with state and federal regulations and fire codes:

- Proper grounding should be installed (NFPA 30 §6.5.4.3).
- Install proper tank venting systems to both tanks following guidelines outline in NFPA 30 (NFPA 30 §27.8).
- Install proper emergency venting systems to both the primary and secondary tanks (NFPA §22.7.1.1.1 & 22.11.4.8).

11.6.2 Inspection Intervals

Federal SPCC Requirements:

Periodic monthly and annual inspections are to be conducted by the Owner's inspector who shall be knowledgeable about storage facility operations, the type of AST and its associated components, the spill control system for the facility, and characteristics of the liquid stored. Owner's inspectors must also be familiar with pumping, piping, and valve operations of the AST systems.

STI SP001 Requirements:

Category 1 Tank - ASTs with spill control, and CRDM

Category 1 tank with a capacity of between 0 – 1,100 gallon require periodic monthly and annual inspections by owner/user's inspector.

11.6.3 Recommendation for Path Forward

Regulatory Compliance:

In order to meet regulatory compliance, the following should be completed:

- Continue monthly and annual SPCC/STI inspections.
- Complete operational and maintenance recommendations as noted in section 11.6.1.

Section 12
Site Stormwater Recommendations

The stormwater assessment highlighted the need for improved stormwater infrastructure, routine maintenance plan for existing infrastructure, and targeted erosion mitigation measures to protect the natural alpine ecosystem.

Stormwater management recommendations include:

1. Drainage improvements around the Sherman Adams Building
2. Erosion control and mitigation for gravel migration into the natural areas
3. Design requirements for new developments

These recommendations require the collaboration of the NH State Parks and the Summit Partners, particularly the Mt. Washington Auto Road as some of the proposed improvements regard the parking lots and other areas that the Auto Road uses and maintains as part of their agreement.

12.1 Drainage Improvements at Sherman Adams Building

The assessment identified poorly functioning or inadequate existing stormwater measures and the resulting flooding of entrances along with other deficiencies detailed in the Stormwater Assessment. Near term recommendations focus on maintenance of existing stormwater infrastructure, while longer-term recommendations consider construction of a more robust infrastructure to address the site's extreme precipitation.

12.1.1 Near-Term Actions (2026 - 2027)

- Perform annual maintenance of the permeable interlocking concrete pavers (PICP) at the Sherman Adams entrances, lobby and garage: Vacuum-sweep surface of permeable pavers to remove sediment buildup from the joints.
- Install a new 8"x8" metal frame and grate in the lobby.
- At the drainage system south of Sherman Adams secure the screen mesh to vertical grate, regrade exterior of building to provide minimum 6" cover over the existing drainage pipe (pedestrian loading only), and remove debris from drainage pipe and at outlet.

12.1.2 Longer-Term Actions (2028 and onward)

- Reconstruct the Sherman Adams entrance pavement: Regrade exterior surfaces to slope away from entrances, reconstruct the permeable paver (PICP) sections with clean base material and install underdrains with outlets. Supplement PICP with new catch basins or trench drains near the building entrance and inside the garage.
- Reconstruct the drainage system on the south side of the building: Enhance the existing swale with 6" riprap, install new vertical drain inlet and new discharge pipe with minimum 12" cover over the pipe and flared end discharge. Provide additional drainage such as catch basin or area drain near the lower-level entrance to prevent flooding.

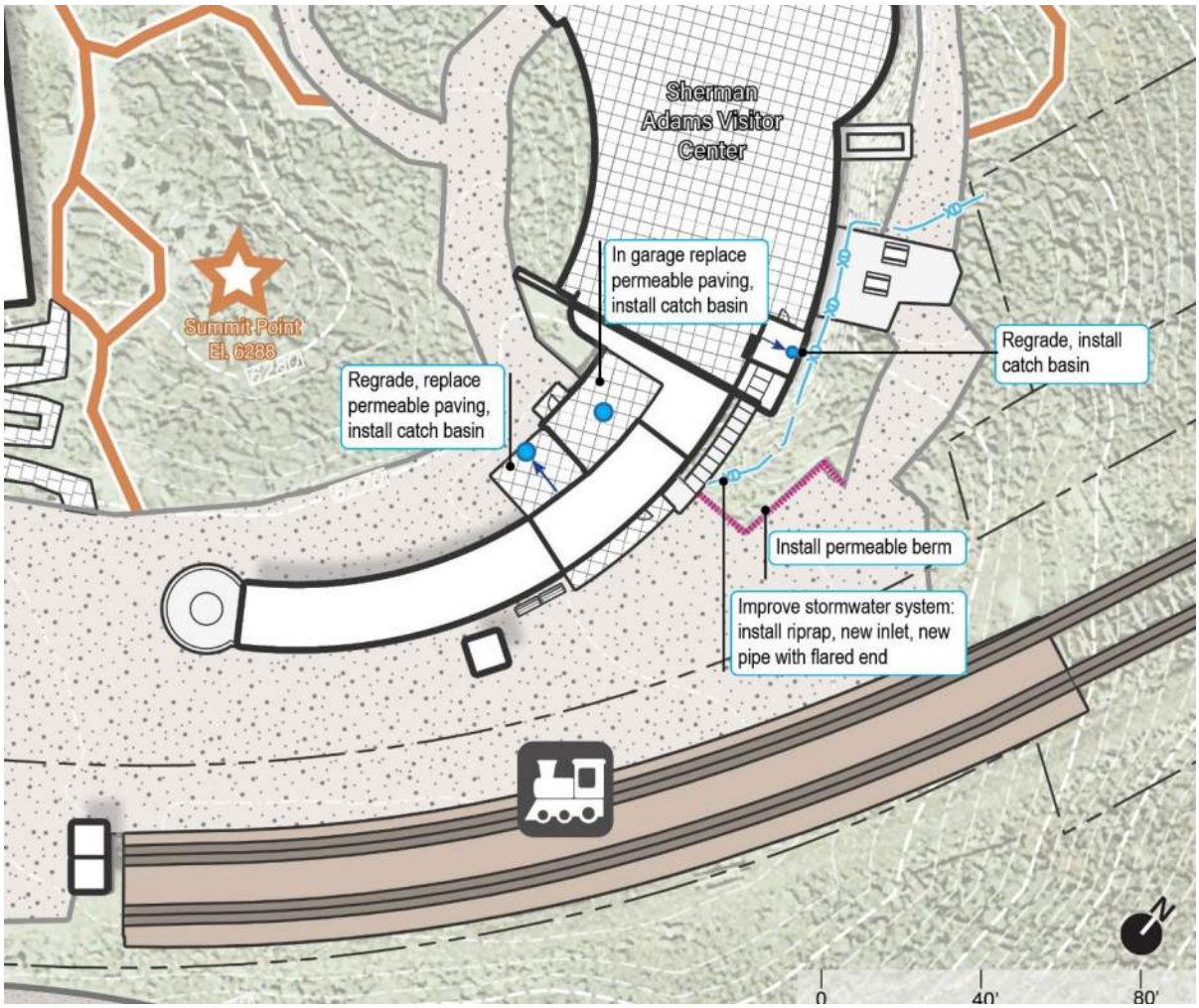

FIGURE 12-1
Proposed stormwater infrastructure improvements at the Sherman Adams Building

12.2 Erosion Control and Mitigation

The assessment identified erosion of the gravel surfacing from the developed area into the natural areas, with associated impacts on the soil and vegetation. Critical areas are between the upper and lower parking lots, to the east of the Sherman Adams building, and along the Auto Road. Near term actions focus on mitigation and localized prevention of erosion, while longer-term actions include enhanced stormwater management.

12.2.1 Near-Term Actions

- Mitigate existing erosion impacts in identified areas: Hand-remove migrated gravel from natural areas, restore the impacts in coordination with natural restoration work.
- Install permeable berm at edge of the upper plateau at identified critical areas to limit gravel from migrating offsite.

12.2.2 Longer-Term Actions:

- Regrade and reconstruct parking lots to direct runoff into a constructed rip-rap swale at the base of the slope. Construct rip-rap drainage swale to capture, infiltrate, and control stormwater runoff. Install permeable berm along pedestrian areas to limit stone from migrating offsite.

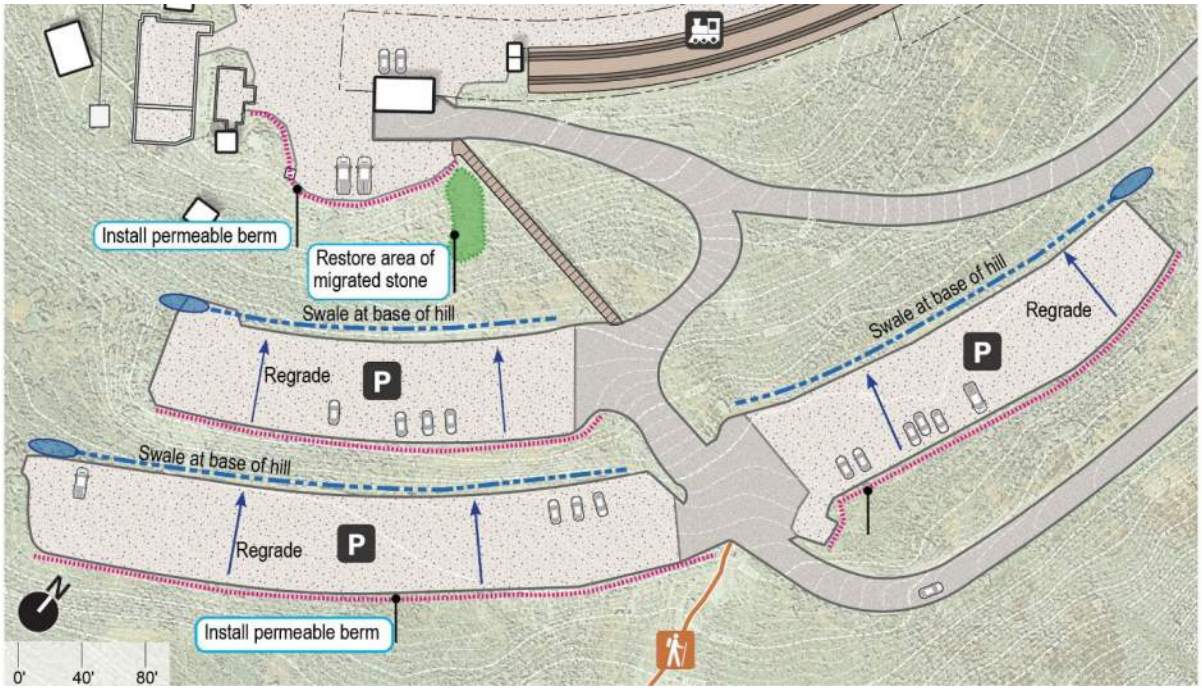

FIGURE 12-2
Proposed improvements to mitigate erosion at the developed summit and parking lots

12.3 Design Requirements for New Developments

These recommendations regard redevelopment or new development projects on the summit.

- Design the stormwater infrastructure to meet the needs of unique site with extreme precipitation.
- Maximize the use of permeable materials as feasible. Supplement with drainage structures to enhance the drainage function during more intense precipitation.
- Provide robust erosion and sediment control during construction.
- Prioritize nature-based stormwater solutions such as above-ground infiltration basins.

Section 13
Visitor Experience and Circulation Recommendations

The recommendations in this section address the suite of identified issues related to the visitor's use and enjoyment of the site as a recreational and cultural destination. Site visitor experience recommendations include:

1. Improvements to Visitor Arrival and Site Circulation
2. Site Accessibility Improvements
3. Site Furnishings and Amenities Recommendations
4. Site Signage and Wayfinding Improvements
5. Scenic Aspects and Views Recommendations

13.1 Improvements to Visitor Arrival and Site Circulation

Visitor arrival and circulation are critical components of the overall site experience and safety at the summit. During periods of high visitation or inclement weather, congestion, low visibility, and unclear wayfinding can create challenges for both drivers and pedestrians. The circulation recommendations on the summit plateau relate to the need to consolidate employee parking away from primary pedestrian routes, provide more clarity in wayfinding to the Sherman Adams entrance, and alleviating crowding in its vestibule. Because of ownership and use agreements at the summit, the arrival and circulation recommendations will require a close collaboration among the State Park, the Auto Road, and other summit stakeholders to develop shared policies and coordinate the implementation.

13.1.1 Near-Term Actions

Clarify the Vehicular Route to Accessible Parking

- Designate the Maintenance Road as the primary access route to the accessible parking area, to bypass the main parking lot and the steep connector road. Provide well-visible signage directing towards the accessible parking.
- Discontinue vehicular access from the main parking to the accessible parking via the connector road (except for emergencies).

Improve Traffic Visibility at the Parking and the Connector Road

- Designate the connector road for pedestrian and emergency access only. Consider installing handrails along the edges to assist pedestrians navigating this steep route.
- Regularly maintain pavement striping to clearly delineate pedestrian zones from the Auto Road parking area to the summit. Consider using retroreflective materials, bright colors, and distinct symbols to improve the distinction between vehicular and pedestrian areas in low-visibility conditions.
- Improve the landing and crosswalk at the top of the stairs. Create a more generous landing area before the road crossing, and enhance the crosswalk with appropriate pavement markings on both sides to improve visibility for motorists. A crossing attendant may also be appropriate during peak periods.

- Consider providing stair handrail lighting and LED markers along the designated walking route to enhance safety and wayfinding during low-visibility conditions.

13.1.2 Longer-Term Actions

Alleviate Traffic Backups on Auto Road when Parking is at Capacity

- Develop a policy for enhanced vehicular management during peak periods to reduce backups on the Auto Road caused by limited parking availability. To meet visitor demand while minimizing the number of individual vehicles, the Auto Road could consider expanding its van shuttle service[1].

Improve the Stair in collaboration with the Auto Road

- Construct widened landings for a person to step aside and rest away from traffic on the stairs. Alternately, reconstruct the stairs with a new, wider and more user-friendly design.

Improve Wayfinding to the Visitor Center Entrance

- Improve the directional signage and pave the accessible route with a different material so that visitors can follow it to the entrance.
- Relocate the flagpoles near the existing entrance to call attention to its location.

Alleviate Crowding in the Sherman Adams Entrance Vestibule

- Provide a covered porch, to serve as a weather shelter for Cog passengers, along the outside of the Sherman Adams generator barn wing.
- Encourage the use of the ground-level entrance for its direct access to restrooms and the Observatory Museum: improve the stairs leading to this entrance and enhance the entrance visibility with signage and an added canopy.

[1] *Several units of the National Park Service have implemented bus and shuttle systems to alleviate the impacts of private automobiles. https://www.nps.gov/subjects/transportation/buses.htm*

Figure 13-1
Covered Porch and Walkway Example, as Proposed for the Sherman Adams Generator Barn as a Shelter for Cog Passengers

Study Consolidation and Relocation of Parking for Staff and Tour Vans

- Study options for reorganizing the summit plateau to improve the arrival sequence and reduce conflicts between pedestrian and vehicular traffic. Recommended strategies include consolidating parking, relocating tourist van parking, creating a vehicular turnaround area, and relocating the Stage Office in coordination with potential redevelopment of the foundation remnants. See **Figure 8-3 Proposed Site Diagram with Circulation and Accessibility Improvements** for a proposed site diagram study that integrates the recommended circulation improvement strategies.

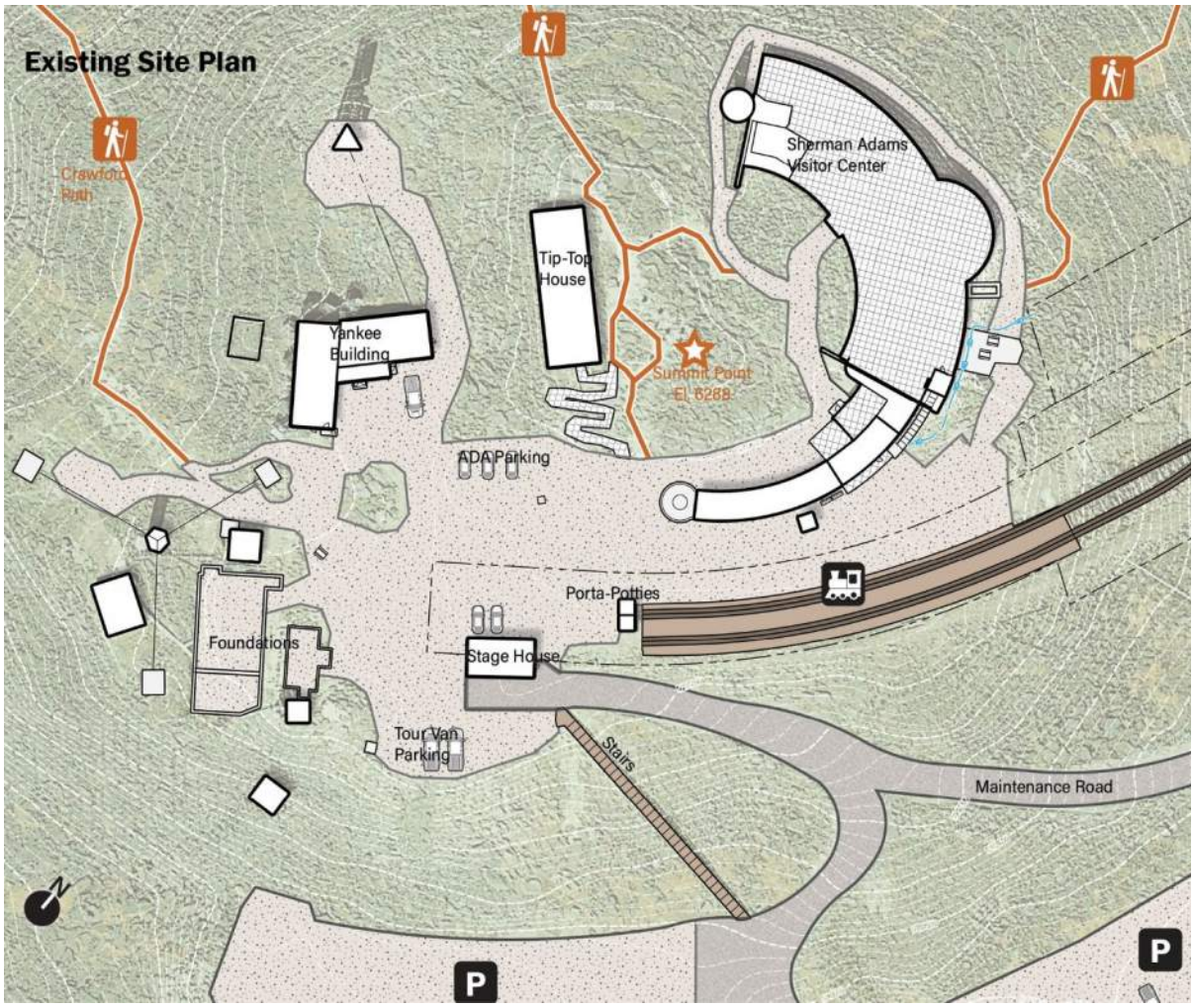

Figure 13-2
Existing Site Plan for Reference

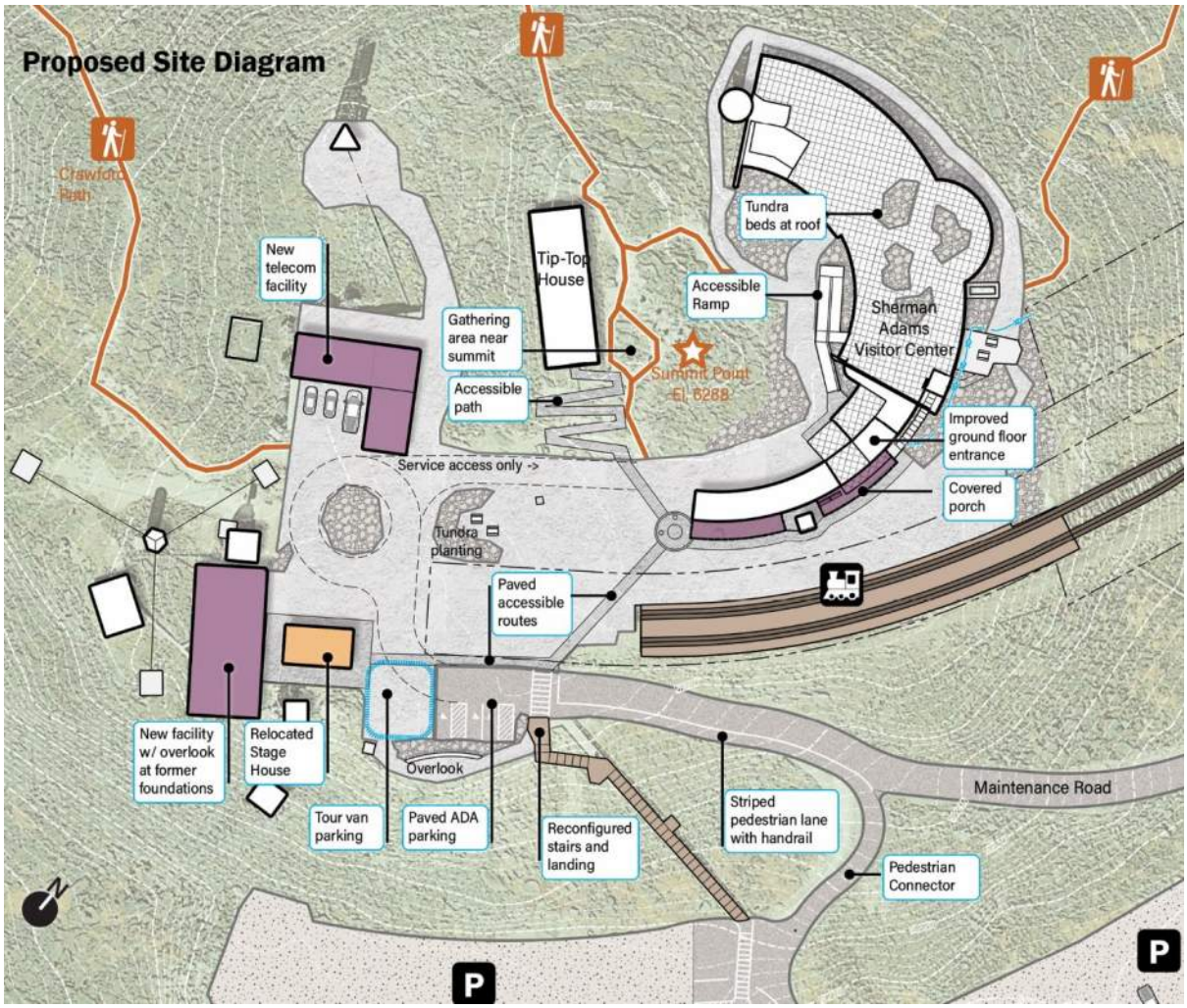

Figure 13-3
Proposed Site Diagram with Circulation and Accessibility Improvements

13.2 Site Accessibility Recommendations

Mount Washington State Park faces several accessibility challenges, including the lack of ADA-compliant routes from the accessible parking area to various site destinations; extensive use of loose gravel surfacing; and the lack of ADA-compliant stair handrails and site furnishings. The recommendations below will contribute to equitable access to amenities and experiences. These recommendations can be implemented as stand-alone projects or as part of more holistic site and facility improvements.

13.2.1 Near-Term Actions

Install Accessible Furnishings

- Replace existing picnic tables with ADA-compliant models.
- Replace or supplement existing viewing scopes with ADA-compliant models
- Install ADA-compliant handrails at the stairs from the visitor parking to the summit plateau, in collaboration with the Auto Road. Install handrails along the stairs from the Sherman Adams main entrance to the lower entrance.

Provide Paved Accessible Routes

- Provide stable, firm, and slip resistant pavement materials at the accessible routes to the Sherman Adams Visitor Center, the Tip Top House, and other existing or future visitor destination points on the summit plateau.
- Reconstruct the path to Tip Top House to meet ADA requirements.
- Collaborate with historic preservation specialists to develop feasible and historically appropriate solutions for accessibility modifications to the entry door and threshold, or to pursue a variance to retain the door in its present condition. Other accommodations may include an automatic door opener or a call button for assistance.

13.2.2 Longer-Term Actions

Improve the Accessibility of the Observation Deck

- Repair or replace the rooftop pavers – to be implemented as part of the project to repair the Sherman Adams roof.
- Study the feasibility of an accessible ramp to the observation deck – to be implemented as part of the project to repair the Sherman Adams roof.
- Alternatively, extend the elevator to the roof – to be implemented as part of potential expansion of the Visitor Center programming to the roof level.

Enhanced Access to the Summit Point

- Improve the trail to the summit with a user-friendly paving material, and create an accessible gathering space nearby to enhance the communal aspect of visiting the summit point.

13.3 Site Furnishings and Amenities Recommendations

Site furnishings and amenities play an important role in enhancing visitor comfort and the overall experience. The summit currently has limited furnishings—primarily portable pieces—which must be seasonally stored during storms and the off-season. There is also a lack of accessible furnishings for visitors with disabilities, as well as insufficient edge-defining elements to help manage foot traffic and improve safety. The following recommendations address opportunities for improving site furnishings and amenities.

13.3.1 Near-Term Actions

- Provide ADA-compliant viewing scopes and picnic tables in accordance with USFS Outdoor Recreation Accessibility Guidelines, while maintaining a modest number of picnic tables to help reduce littering.

13.3.2 Longer-Term Actions

- Install fixed and built furnishings, such as seat walls and seating integrated into site structures, rather than portable furnishings. Prioritize durable natural materials such as stone, metal, and wood. Coordinate the design of new furnishings with other site improvements, for example, adding amenities to the observation deck as part of the roof replacement project.
- Improve edge definition in pedestrian areas to discourage off-trail and off-site foot traffic. Identify priority protection areas around the developed summit to install edge protection features, such as walls or guardrails at overlooks and areas with potential fall hazards, and porous curb elements along the edges of gravel surfaces to prevent erosion and limit gravel migration into natural areas.

13.4 Site Signage and Wayfinding Recommendations

Site signage at Washington State Park is abundant; however, it lacks consistency in style, materials, fabrication, and branding. In addition to State Park signage, multiple Auto Road signs introduce additional design variations, resulting in a visually inconsistent environment. There is a notable absence of interpretive signage to educate about the site's extraordinary ecology and history, and no Alpine Zone Protection signs to urge visitors to stay on the path.

The recommendations below require coordination between the State Park and the summit partners to develop a cohesive, non-redundant signage and wayfinding plan.

13.4.1 Near-Term Actions

Enhance Safety Signage

- Provide fall hazard signage around the old foundation, in coordination with other safety measures such as guardrails and filling the foundation cavity.
- Install a comprehensive Rules and Regulations sign that communicates general site hazards and visitor responsibilities.

13.4.2 Longer-Term Actions

Prepare a Coordinated Signage Plan

- Engage an environmental signage consultant to develop a unified design package that includes a coordinated sign hierarchy, usage and fabrication standards, and a site plan identifying all proposed sign locations. Utilize a consistent "family of signs" aligned with established standards.
- Explore opportunities for co-branding with other Summit partners to minimize redundant signage and reduce the proliferation of multiple organizational brands.

Provide Interpretive and Educational Signage

- Integrate interpretive signage into the overall signage strategy, including interior signage and the proposed interpretive content for the Tip Top House. Identify key storylines and their corresponding locations throughout the site.
- Install Alpine Zone signage at select points along the margins of the developed summit and at trailheads.

Figure 13-4
Family of Signs Example, Appalachian National Scenic Trail

13.5 Scenic Aspects and Views Recommendations

Most visitors arrive at Mount Washington State Park seeking the spectacular views of the surrounding landscape that can be enjoyed from multiple vantage points throughout the site. The park's character is defined largely by its natural features - the rugged alpine environment surrounding the summit, as well as the man-made features – the mix of visitor-oriented and utilitarian telecommunications facilities. In some areas the utilitarian elements detract from the visitor experience, particularly the hazardous exposed foundations of former structures, the deteriorated Yankee Building, and extensive areas of gravel surfacing. Finally, the views from the summit are weather dependent so many visitors might miss the views when weather conditions are not favorable.

The following observations highlight recommendations for improvement related to views and visual experience.

13.5.1 Near-Term Actions

Address Site Safety at Desirable Vantage Points

- Fill the open foundation of the former WMTW building. Utilize natural boulders, built stone walls, and attractive metal guardrails rather than precast concrete traffic barriers where required
- Install edge protection along the van parking area to enhance the safety of both vehicles and pedestrians along this edge that is also a desirable viewing area.

Provide Virtual View Options

- Enhance educational exhibits in the Sherman Adams Visitors Center to replicate select views digitally or virtually. This will provide virtual views during times when clouds or fog obscure actual views, and will also accommodate visitors unable to reach certain viewing points on the site. This is an opportunity to supplement the visual aspects with an education narrative.

Alleviate the Visual Impact of Utilitarian Features

- Relocate or place underground the propane tank at Sherman Adams.
- Establish a review process for locating future utilitarian elements to minimize visual impacts.

13.5.2 Longer-Term Actions

- Redevelop the exposed foundations footprint as a new facility with an integrated overlook. The new facility could meet operational and visitor service needs, such as providing an alternate location for the pack room, additional restroom facilities, and storage.
- Demolish Yankee Building and construct a new telecommunications center.
- Study options for breaking up the gravel expanse with "Tundra Garden" clusters, as part of the wider reorganization of the summit plateau.

FIGURE 13-5
Overlook Structure Example, Pike's Peak, CO

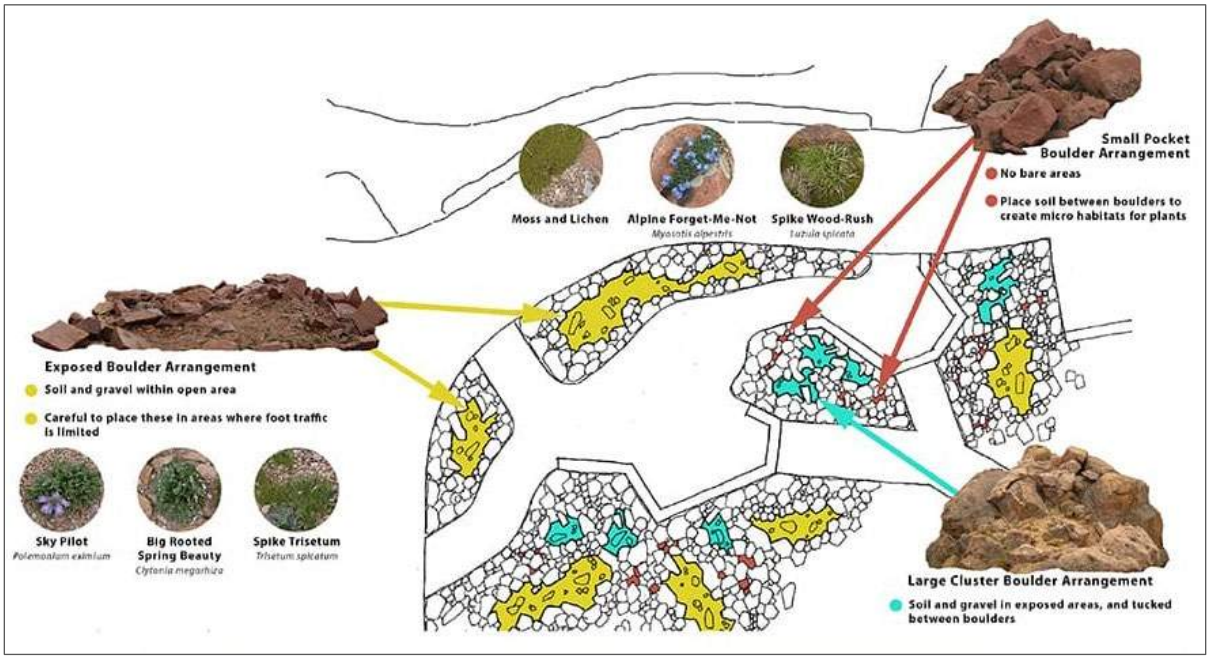

FIGURE 13-6
Tundra Garden Example, Pike's Peak, CO

Section 14
Financial Sustainability Recommendations

The recommendations for ensuring the long-term financial sustainability of Mount Washington State Park are based on the Mount Washington Master Plan as well as insights gathered during the planning process of this Assessment project. This section includes:

- Financial summary from the Mt. Washington Master Plan
- An overview of the State Park's retail and concessions plan
- Feedback from the Advisory Committee and stakeholders
- Insights from the Visitor Experience Survey and the Statewide Opinion Survey
- Recommendations for improving the financial sustainability.

14.1 Financial Summary from Mt. Washington Master Plan

The Mt. Washington Master Plan emphasizes the goal of achieving a fiscally sustainable State Park with reliable funding for operations, maintenance, and improvement projects.

Currently, the park's operating budget relies primarily on revenue from retail and food concessions at the Sherman Adams Visitor Center. The retail operation is not sufficient to ensure financial stability nor to allow investment in expanded service, preservation initiatives, or facility enhancements. Moreover, the physical constraints of the existing retail and food service spaces limit the growth of revenue from retail - specifically, the gift shop is undersized, poorly located, and lacks adequate storage; the kitchen suffers from insufficient ventilation and storage; and the food service area frequently experiences backups due to high visitor volume and an inefficient layout.

The summit serves as a significant revenue generator for private partners such as the Auto Road and the Cog Railway, who benefit from its continued popularity as a destination. Enhancing the State Park's facilities improves visitors' experience and directly supports these partners. However, while such capital improvements benefit all parties, funding for facility improvements has typically come from the State. Capital improvements funding, including design fees and construction costs, requires approval from the State of New Hampshire Governor and Council upon request by the Department of Natural and Cultural Resources. These funds may take considerable time to secure and are not guaranteed, given competition with other state funding priorities.

The Master Plan acknowledges that the State Park's retail revenue by itself is not sufficient, and that additional funding sources are needed to facilitate the implementation of preservation and enhancement goals. To strengthen financial sustainability, the Master Plan recommendations include:

- Exploring options to share costs with other entities, such as agreements with summit partners or other mechanisms for shared investment in improvements.
- Considering an entry / usage fee for the State Park facilities - in addition to the fees visitors already pay to reach the summit via the Auto Road or the Cog.

14.2 Overview of the State Park Retail & Concessions Plan

The retail revenue will remain an essential supplement to the park's finances. The State Park's 10-year goals for retail and food concessions, presented below, focus on enhancing retail revenue while also improving customer service:

- Expand kitchen and food service capacity to meet growing demand: increase workspace, broaden menu options, replace upright coolers with walk-in cold storage, and consider interior reconfiguration to improve workflow and customer circulation.
- Enlarge the gift shop to provide more retail space and better visitor flow; explore layout changes to improve visibility and accessibility.
- Maintain a diverse and evolving product mix that reflects customer preferences. Include unique, park-designed items and products from local vendors to support the regional economy.
- Maximize storage capacity for retail and food service inventory, both on-site and off-site.
- Increase sales revenue to sustain park operations and fund improvements beyond capital allocations. Introduce off-season mail-order options.
- Strengthen social media presence to attract customers and potential employees.
- Expand staffing levels to accommodate rising visitor numbers and ensure excellent service. Offer competitive wages and incentives to maintain full staffing throughout the season.

14.3 Feedback from Advisory Committee & Stakeholders

The Advisory Committee and stakeholders have acknowledged the challenges and limitations of the current gift shop and kitchen facilities as the State Park's revenue generators. Throughout the planning process, which included public meetings and stakeholder workshops, they expressed interest in proposals to reconfigure the Sherman Adams building to expand these facilities – including options to swap the locations of the kitchen and gift shop, increasing storage on the ground floor, and construct a new gift shop on the Sherman Adams roof in conjunction with other needed improvements.

14.4 Insights from the Visitor Experience Survey & the Statewide Opinion Survey

The Visitor Survey and the Statewide Opinion Survey, conducted with assistance from the UNH Survey Center, sought to assess the public opinion about admission fees and other potential revenue sources for the park.

- The Visitor Survey asked, "*If visitors to Mount Washington State Park were required to pay a nominal per-person fee to enter the Sherman Adams Building, what is the maximum amount you would be willing to pay?"* Nearly half of respondents (46%) indicated they would pay $2–$5. In comparison, 21% said they would not pay anything, 17% would pay less than $2, and 8% would pay more than $5.

- The Public Opinion Survey posed the same question regarding an entrance fee for the Visitor Center. A majority (38%) felt $2–$5 would be fair, while 31% believed entrance should remain free.
- The survey also asked how the Yankee Building renovation or reconstruction should be funded, given its current use by private and public telecommunications tenants. State residents were nearly evenly split: 41% favored a public-private partnership, while 36% preferred state or federal funding.

In summary, most respondents agreed that investing in facility improvements at Mount Washington is a worthwhile use of public funds. Entry fees would be acceptable to the majority of the public as an additional revenue source.

14.5 Recommendations for Improving the Park's Financial Sustainability

Ensuring the long-term financial sustainability of Mount Washington State Park requires not only supporting its day-to-day operations and revenue-generating activities but also making significant strategic investments—through strengthened partnerships and diverse public and private funding sources—to deliver the environmental, visitor experience, and facility improvements envisioned in the Mount Washington Master Plan and in this study.

14.5.1 Pursue Stakeholder Engagement and Investment Assistance

Active engagement with stakeholders and strategic investment partnerships are essential to ensure the long-term sustainability and operational improvements at Mount Washington State Park.

- Public-Private Partnerships: Collaborate with summit partners such as the Auto Road and Cog Railway to develop shared investment models for facility upgrades, environmental preservation, and visitor experience enhancements.
- Advisory Committee Collaboration: Continue leveraging input from the Mt. Washington Commission and stakeholders to align improvements with visitor expectations and operational needs.

14.5.2 Implement Alternative Funding Mechanisms

Complement state funding for capital improvements with alternative funding mechanisms to involve other public sources and private investments.

- Explore joint funding agreements for capital projects.
- Consider sponsorships for major improvements and environmental initiatives.
- Obtain assistance with grant opportunities.

14.5.3 Improve Retail Facilities for Sustained Revenue

Invest in capital improvements of retail and food service facilities to improve customer service and increase revenue.

- Study and implement the reorganization or the expansion of the State Park's gift shop, kitchen, food service, and storage to provide expanded capacity.

APPENDIX A
Environmental Site Assessment Supporting Documents

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A.1.
Photographic Log (August 2024 Site Reconnaissance)

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Photographic Log — Environmental Site Assessment

Client: NH Department of Natural and Cultural Resources **Job Number:** N-5114-002

Site: Mount Washington State Park — Environmental Site Assessment

Photograph No.: 1	**Date:** 8/26/2024	**Direction Taken:** South
Description: View of western portion of FUDS area and remnants of former building foundations and infrastructure.		

Photograph No.: 2	**Date:** 8/26/2024	**Direction Taken:** Northwest
Description: View of inactive sand filter beds located on the western side of the Auto Road. Sand filter beds can be used in case of emergency for wastewater treatment purposes.		

Client: NH Department of Natural and Cultural Resources **Job Number:** N-5114-002

Site: Mount Washington State Park — Environmental Site Assessment

Photograph No.: 3	**Date:** 8/26/2024	**Direction Taken:** South
Description: View of Cog Railway corridor and coal / coal ash observed to the ground surface in the immediate vicinity of the tracks.		

Photograph No.: 4	**Date:** 8/26/2024	**Direction Taken:** Southeast
Description: View of former building debris and filled in building foundations associated with the FUDS. Other miscellaneous building materials including metal, piping, and roofing material, and wood were observed on the ground surface in the vicinity of the FUDS area.		

Photograph No.: 5	**Date:** 8/26/2024	**Direction Taken:** South
Description: View of former tank farm area associated with the FUDS. No visual or olfactory evidence of petroleum releases were observed during the site reconnaissance.		

Photograph No.: 6	**Date:** 8/26/2024	**Direction Taken:** North
Description: View of former concrete slab associated with the FUDS on the eastern side of the Auto Road.		

Photograph No.: 7	**Date:** 8/26/2024	**Direction Taken:** Northeast
Description: View of helicopter pad on the western side of the Auto Road. A smaller concrete support pad is located immediately to the southwest along with remnants of former building infrastructure including metal and PVC piping, rebar and wood.		

Photograph No.: 8	**Date:** 8/26/2024	**Direction Taken:** South
Description: View of Auto Road leading to the Summit.		

Photograph No.: 9	**Date:** 8/26/2024	**Direction Taken:** Southeast
Description: View of WWTF, holding tanks and effluent discharge location.		

Photograph No.: 10	**Date:** 8/26/2024	**Direction Taken:** Southeast
Description: View various sewer manholes and wastewater holding tanks associated with the WWTF.		

Photograph No.: 11	**Date:** 8/26/2024	**Direction Taken:** South
Description: View of inactive wastewater holding tank located to the north of the WWTF. Tanks are currently inactive but can be used in case of emergency.		

Photograph No.: 12	**Date:** 8/26/2024	**Direction Taken:** South
Description: View of WWTF effluent discharge location located south of the WWTF.		

Photograph No.: 13	**Date:** 8/26/2024	**Direction Taken:** Northwest
Description: View of the tank farm and concrete containment structure located west of the Auto Road.		

Photograph No.: 14	**Date:** 8/26/2024	**Direction Taken:** East
Description: View of the AST tank farm and pump house.		

Photograph No.: 15	**Date:** 8/26/2024	**Direction Taken:** Northeast
Description: View of the tank farm and WWTF located on the northern portion of the Mt. Washington State Park between the Auto Road and Cog Railway.		

Photograph No.: 16	**Date:** 8/26/2024	**Direction Taken:** N/A
Description: View of the interior of the tank farm pump house.		

Photograph No.: 17	**Date:** 8/26/2024	**Direction Taken:** East
Description: View of former WMTV building foundation on the southern portion of the Summit. Both the Yankee Power House Building and WMTV Building were destroyed as a result of a fire in 2003.		

Photograph No.: 18	**Date:** 8/26/2024	**Direction Taken:** Northeast
Description: View of former Yankee Building Power House building foundation located on the southern portion of the Summit.		

Photograph No.: 19	**Date:** 8/26/2024	**Direction Taken:** N/A
Description: View of basement of former Yankee Power House Building with various piping and abandoned utilities observed. Petroleum odor noted within basement area.		

Photograph No.: 20	**Date:** 8/26/2024	**Direction Taken:** N/A
Description: View of basement of former Yankee Building Power House building.		

Photograph No.: 21	**Date:** 8/26/2024	**Direction Taken:** Northeast
Description: View of WHOM Building located on the southern portion of the developed area of the Summit.		

Photograph No.: 22	**Date:** 8/26/2024	**Direction Taken:** East
Description: Representative view of the interior of the WHOM Building housing various electrical and communications equipment. In addition, several canisters of compressed gas observed.		

Photograph No.: 23	**Date:** 8/26/2024	**Direction Taken:** Southwest
Description: View of the exterior of the Yankee Building located on the southwestern portion of the developed area of the Summit.		

Photograph No.: 24	**Date:** 8/26/2024	**Direction Taken:** Southwest
Description: View of inactive sand filter bed used for wastewater treatment from the Yankee Building.		

Photograph No.: 25	**Date:** 8/26/2024	**Direction Taken:** Southeast
Description: View of southeast portion of the basement predominantly used for storage of materials.		

Photograph No.: 26	**Date:** 8/26/2024	**Direction Taken:** East
Description: View of 275-gallon kerosene AST (Tank #17) located in the southeastern portion of the basement of the Yankee Building.		

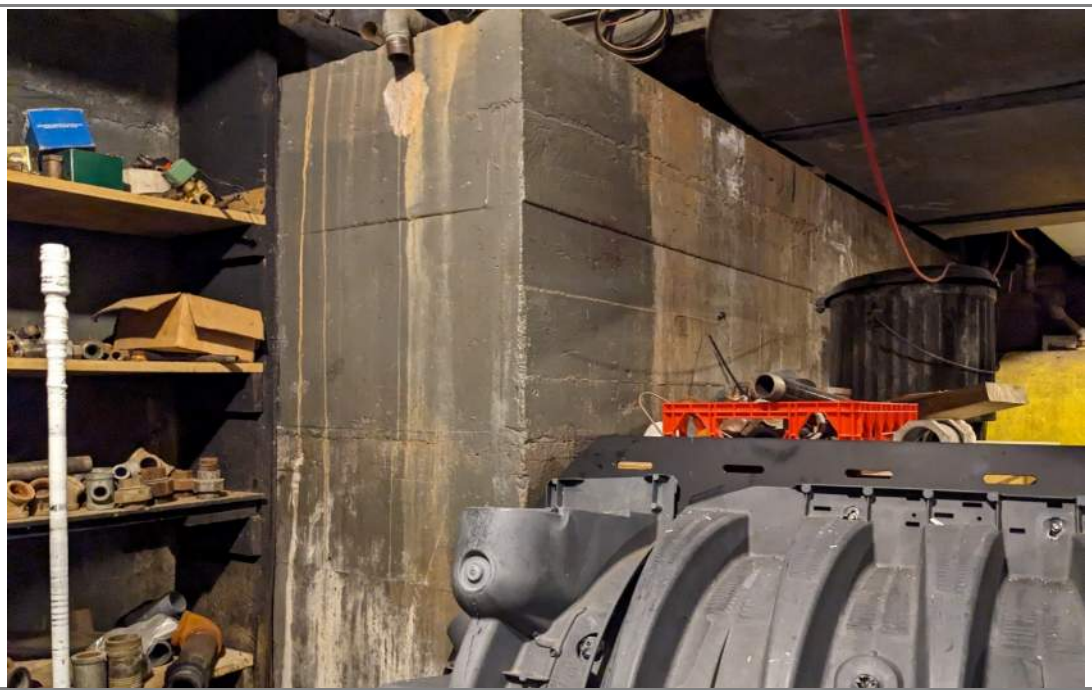
Photograph No.: 27	**Date:** 8/26/2024	**Direction Taken:** Southeast
Description: View of emergency backup generator located in the southeastern portion of the basement of the Yankee Building.		

Photograph No.: 28	**Date:** 8/26/2024	**Direction Taken:** West
Description: View of central portion of the basement of the Yankee Building used for miscellaneous storage of materials, empty containers of flocculant chemicals, water heater and filtration system, and a cinderblock septic tank.		

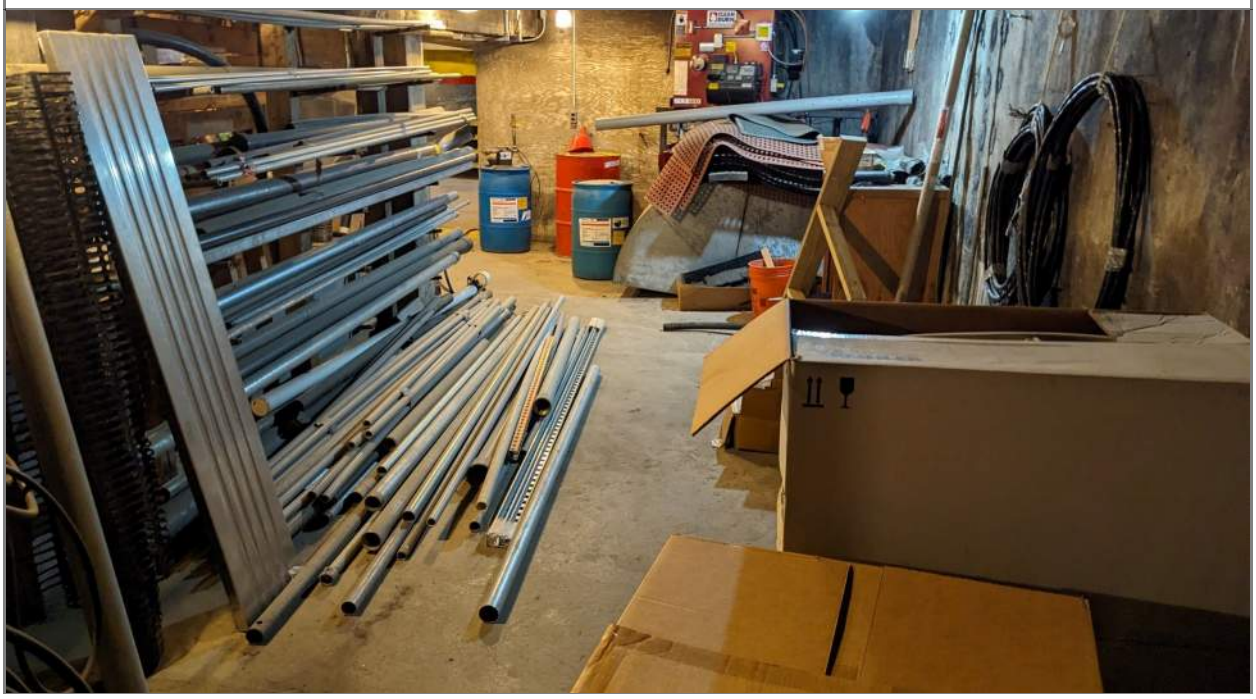
Photograph No.: 29	**Date:** 8/26/2024	**Direction Taken:** West
Description: View of out of service 500-gallon kerosene AST (Tank #10) located in the central portion of the basement of the Yankee Building.		

Photograph No.: 30	**Date:** 8/26/2024	**Direction Taken:** N/A
Description: View of inactive drinking water supply well located in the central portion of the basement of the Yankee Building.		

Photograph No.: 31	**Date:** 8/26/2024	**Direction Taken:** West
Description: View of approximate 1,000-gallon cinderblock septic tank located in the central portion of the basement of the Yankee Building.		



Photograph No.: 32	**Date:** 8/26/2024	**Direction Taken:** Southwest
Description: View of northern portion of the basement of the Yankee Building used for storage of materials and equipment, and an inactive waste oil furnace.		



Photograph No.: 33	**Date:** 8/26/2024	**Direction Taken:** Southwest
Description: View of inactive 250-gallon waste oil furnace located in the northern portion of the basement of the Yankee Building.		

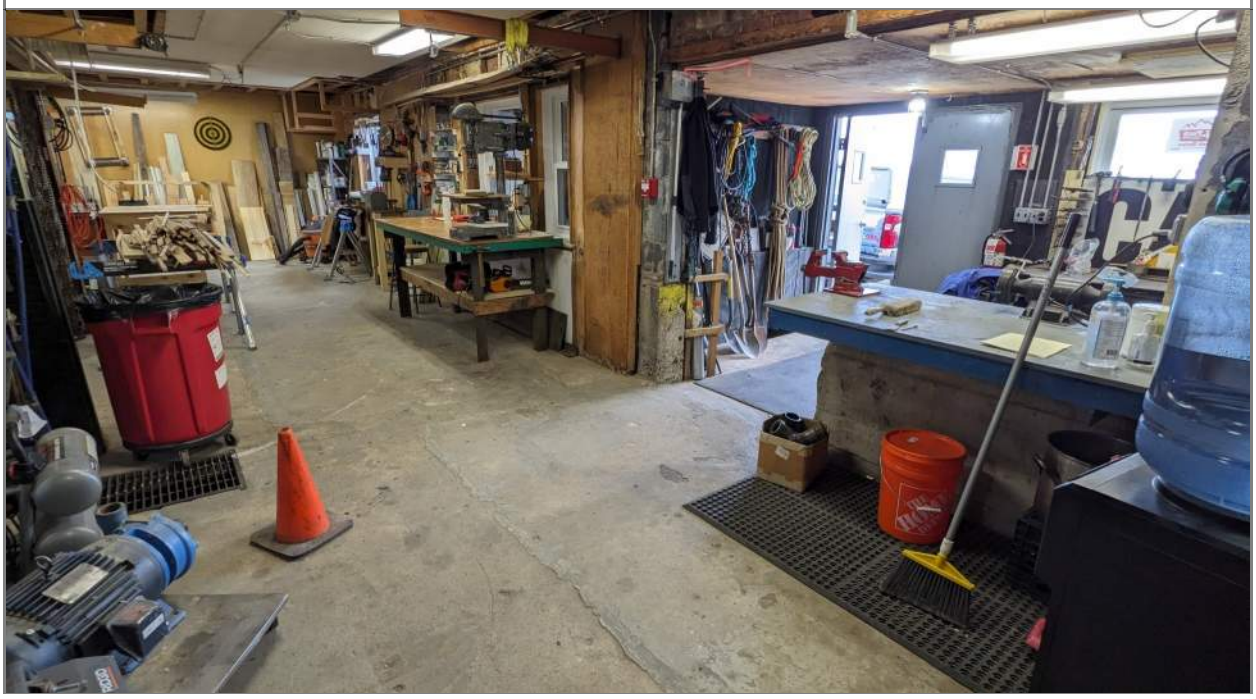
Photograph No.: 34	**Date:** 8/26/2024	**Direction Taken:** Southwest
Description: View of 55-gallon steel drum containing motor oil and other plastic drums of flocculant chemicals in the northern portion of the basement of the Yankee Building.		

Photograph No.: 35	**Date:** 8/26/2024	**Direction Taken:** North

Description: View of small annex room located off the northern portion of the basement of the Yankee Building.

Photograph No.: 36	**Date:** 8/26/2024	**Direction Taken:** Northeast

Description: View of northern portion of the first floor of the Yankee Building utilized as a workshop and materials storage.



Photograph No.: 37	**Date:** 8/26/2024	**Direction Taken:** Northwest
Description: View of communications room located in the northern portion of the first floor of the Yankee Building.		

Photograph No.: 38	**Date:** 8/26/2024	**Direction Taken:** South
Description: View of central portion of the first floor of the Yankee Building and stairwell.		

Photograph No.: 39	**Date:** 8/26/2024	**Direction Taken:** South
Description: View of wastewater testing laboratory on the first floor of the Yankee Building.		

Photograph No.: 40	**Date:** 8/26/2024	**Direction Taken:** West
Description: View of wastewater testing laboratory and various chemicals for wastewater testing.		

Photograph No.: 41	**Date:** 8/26/2024	**Direction Taken:** N/A

Description: View of used wastewater sample vials stored in open cardboard boxes and containers awaiting pick up by NHDES for disposal.

Photograph No.: 42	**Date:** 8/26/2024	**Direction Taken:** South

Description: View of wastewater testing laboratory bathroom facilities where excess wastewater samples are disposed of. Wastewater generated from the Yankee Building is stored in the cinderblock holding tank in the basement of the building.

Photograph No.: 43	**Date:** 8/26/2024	**Direction Taken:** South
Description: View of communications room used to store several batteries and electronics.		

Photograph No.: 44	**Date:** 8/26/2024	**Direction Taken:** Northeast
Description: View of typical room located on the second floor of the Yankee Building primarily used for storage of equipment and materials to support communications operations.		

Photograph No.: 45	**Date:** 8/26/2024	**Direction Taken:** East
Description: View of third floor of the Yankee Building used for storage of equipment and materials.		

Photograph No.: 46	**Date:** 8/26/2024	**Direction Taken:** West
Description: View of the Tip Top House and surrounding area at the Summit.		

Photograph No.: 47	**Date:** 8/26/2024	**Direction Taken:** East

Description: View of the interior of the Tip Top House which includes a central gathering area, cots for sleeping purposes, and a kitchen.

Photograph No.: 48	**Date:** 8/26/2024	**Direction Taken:** North

Description: View of two kerosene fuel tanks (Tank #18A and #18B) at the Tip Top House used for heating purposes.

Photograph No.: 49	**Date:** 8/26/2024	**Direction Taken:** Southeast

Description: View of the exterior of the Tip Top House and surrounding area.

Photograph No.: 50	**Date:** 8/26/2024	**Direction Taken:** South

Description: View of Sherman Adams Building and Cog Railway in the foreground.

Photograph No.: 51	**Date:** 8/26/2024	**Direction Taken:** West
Description: View of oil-filled electrical transformer located on the northern exterior of the Sherman Adams Building.		

Photograph No.: 52	**Date:** 8/26/2024	**Direction Taken:** North
Description: View of potable well located on the southern exterior portion of the Sherman Adams Building.		

Photograph No.: 53	**Date:** 8/26/2024	**Direction Taken:** Northwest
Description: View of entrance to the Sherman Adams Building and Visitors Information Center.		

Photograph No.: 54	**Date:** 8/26/2024	**Direction Taken:** Northwest
Description: View of Cafeteria and observation area located in the central portion of the Sherman Adams Building.		

Photograph No.: 55	**Date:** 8/26/2024	**Direction Taken:** West

Description: View of kitchen in the Cafeteria of the Sherman Adams Building.

Photograph No.: 56	**Date:** 8/26/2024	**Direction Taken:** N/A

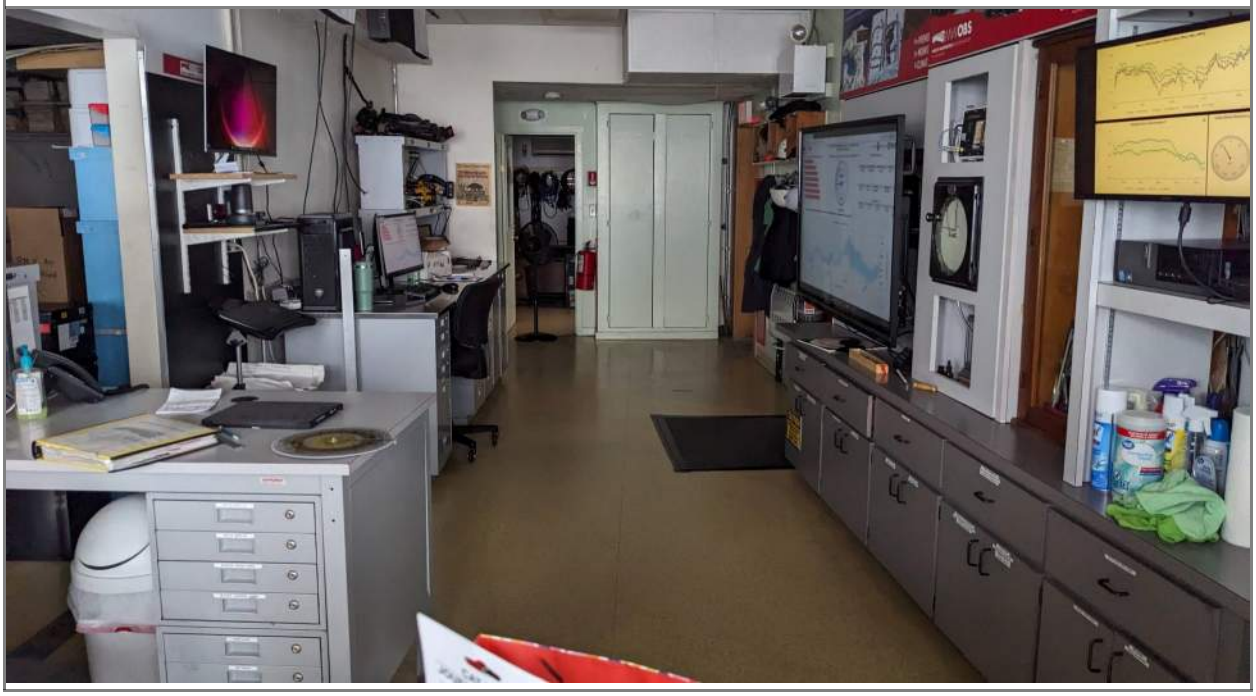
Description: View of floor drain under the sink in the Cafeteria of the Sherman Adams Building. Graywater from sinks flow to the WW Collection Pit prior to discharge to the WWTF.

Photograph No.: 57	**Date:** 8/26/2024	**Direction Taken:** West

Description: View of Gift Shop located in the west-central portion of the Sherman Adams Building.

Photograph No.: 58	**Date:** 8/26/2024	**Direction Taken:** South

Description: View of meteorological laboratory located in the western portion of the Sherman Adams Building.



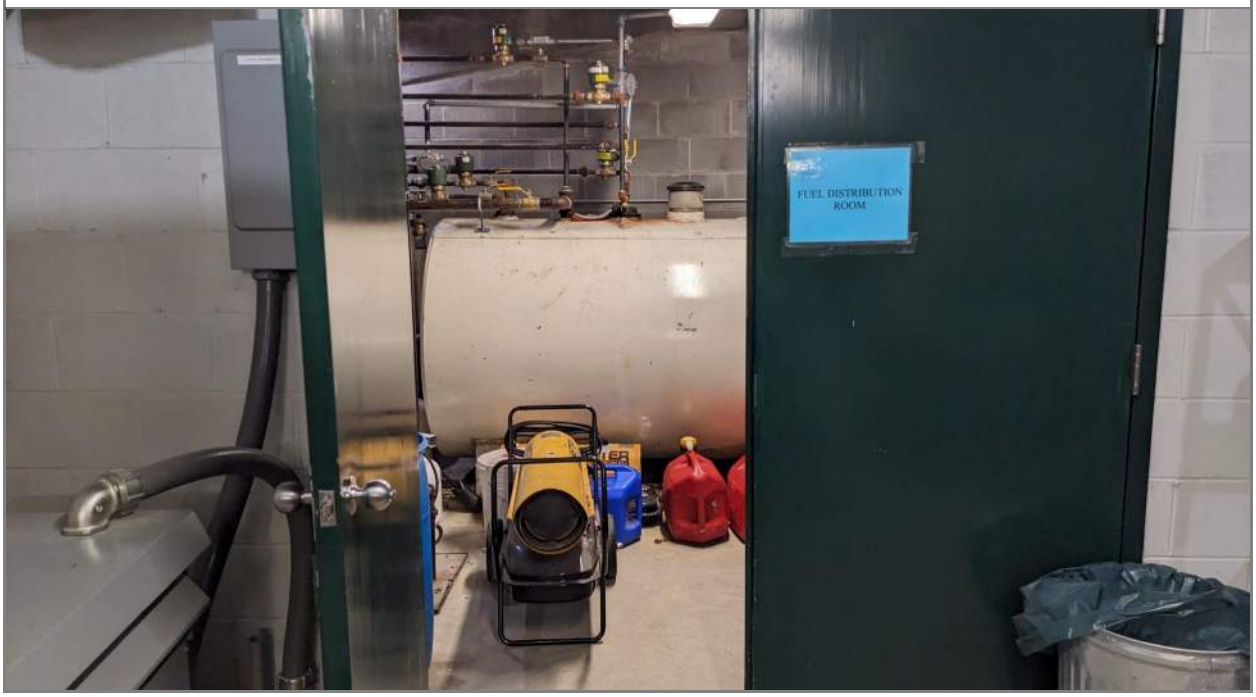
Photograph No.: 59	**Date:** 8/26/2024	**Direction Taken:** East

Description: View of electrical room as part of the annex portion of the Sherman Adams Building.

Photograph No.: 60	**Date:** 8/26/2024	**Direction Taken:** Southeast

Description: View of one of two GenSet tanks located in the Sherman Adams Building annex.

Photograph No.: 61	**Date:** 8/26/2024	**Direction Taken:** East
Description: View of entrance to fuel distribution room located in the Sherman Adams Building annex.		



Photograph No.: 62	**Date:** 8/26/2024	**Direction Taken:** Southeast
Description: View of the 800-gallon "Day Tank" located in the fuel distribution room of the Sherman Adams Building annex.		

Photograph No.: 63	**Date:** 8/26/2024	**Direction Taken:** West
Description: View of boilers in basement of Sherman Adams Building.		

Photograph No.: 64	**Date:** 8/26/2024	**Direction Taken:** Southeast
Description: View of kerosene AST in basement of Sherman Adams Building.		

Photograph No.: 65	**Date:** 8/26/2024	**Direction Taken:** North
Description: View of 2,500 gallon graywater holding tanks in the basement of the Sherman Adams Building.		

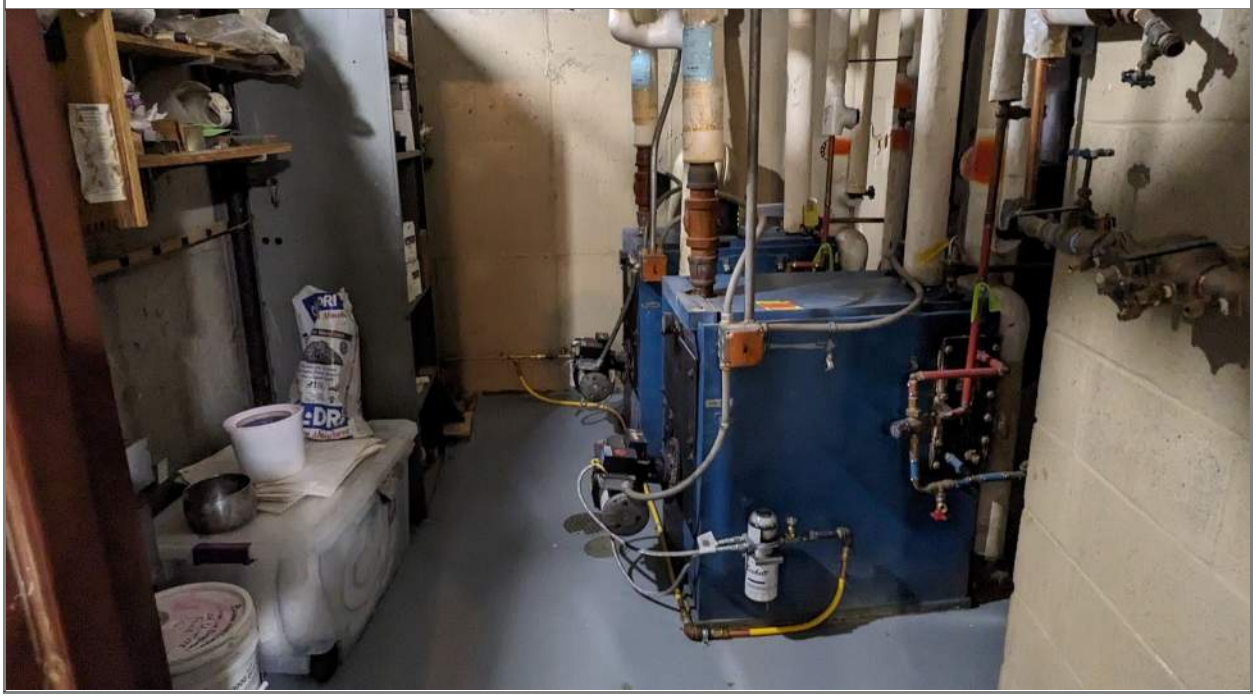
Photograph No.: 66	**Date:** 8/26/2024	**Direction Taken:** Southeast
Description: View of wastewater holding tank in the basement of the Sherman Adams Building.		

Photograph No.: 67	**Date:** 8/26/2024	**Direction Taken:** North

Description: View of kerosene AST in the basement of the Sherman Adams Building.

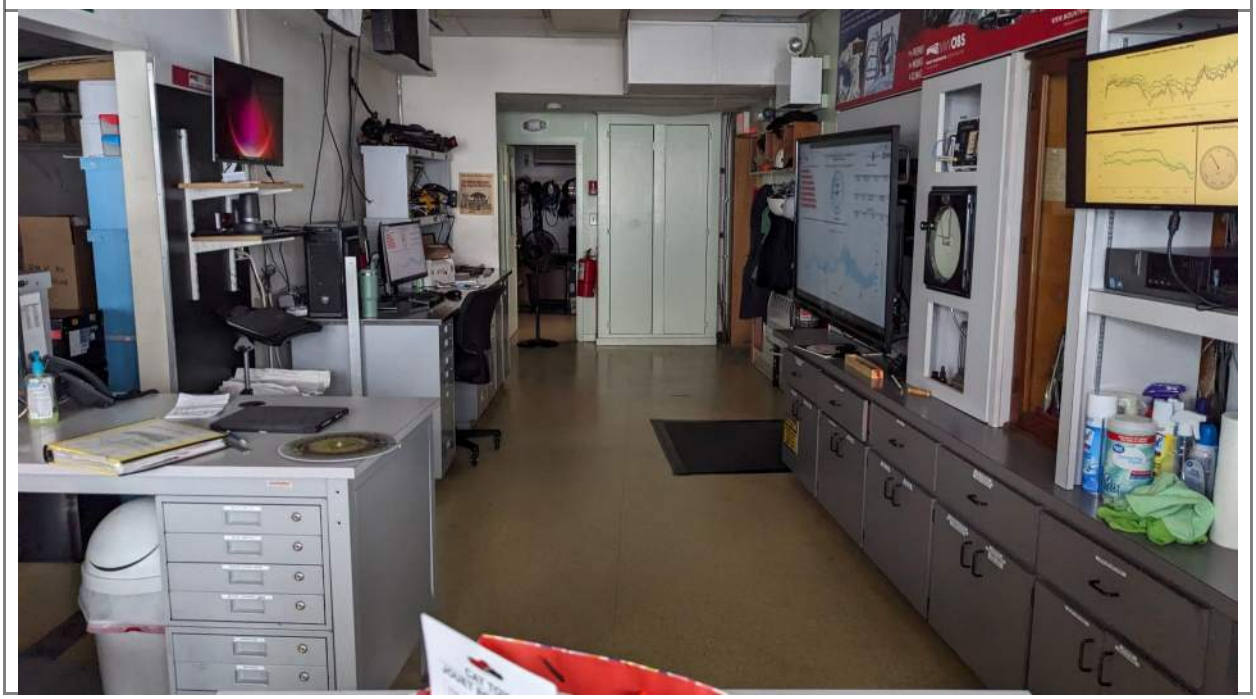
Photograph No.: 68	**Date:** 8/26/2024	**Direction Taken:** Southeast

Description: View of boilers in the basement of the Sherman Adams Building.



Photograph No.: 69	**Date:** 8/26/2024	**Direction Taken:** South

Description: View of meteorological station occupying the western portion of the Sherman Adams Building.



Photograph No.: 70	**Date:** 8/26/2024	**Direction Taken:** Northeast

Description: View of propane tank on the exterior of the Sherman Adams Building.

Photograph No.: 71	**Date:** 8/26/2024	**Direction Taken:** East

Description: View of visitor look-out on top of the Sherman Adams Building.

Photograph No.: 72	**Date:** 8/26/2024	**Direction Taken:** East

Description: View of miscellaneous debris on the ground surface between the Sherman Adams Building and Cog Railway.

Client: NH Department of Natural and Cultural Resources **Job Number:** N-5114-002

Site: Mount Washington State Park — Environmental Site Assessment

Photograph No.: 73	**Date:** 8/26/2024	**Direction Taken:** East
Description: View of the Stage Office building		

Photograph No.: 74	**Date:** 8/26/2024	**Direction Taken:** North
Description: View of interior portions of the Stage Office building used as a gift shop.		

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A.2.
Historial Records and Background Documents Reviewed

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Mount Washington Icing Research Facility

DERP-FUDS No. D01NH0308
NHDES#200106016

Limited Site Assessment

September 2005

Background information used in the generation of this report was obtained through file searches at the New Hampshire Department of Environmental Services (DES), telephone interviews with town officials and individuals knowledgeable of the property history and characteristics, and conversations with other federal, state, and local agencies. The following report is a limited effort and is not intended to supersede more detailed investigations.

Figure 1
Former Mount Washington Icing Research Facility

Site Description

The Former Mount Washington Icing Research Facility is located 20 miles northwest of North Conway (Latitude 44° 16' 24"N, Longitude 71° 18' 06"W) on Route 16 in Sargents Purchase, New Hampshire (figures 1 & 2). The, approximately, 37-acre parcel of land was used for aeronautical research projects by the Air Force Air Material Command. The Air Force built a climactic laboratory, light storage building, helicopter test stand, helicopter pad, radome pad, an above ground fuel tank farm with pump house, and underground fuel tanks. The site was not under other than DOD ownership during the period of DOD ownership and use.

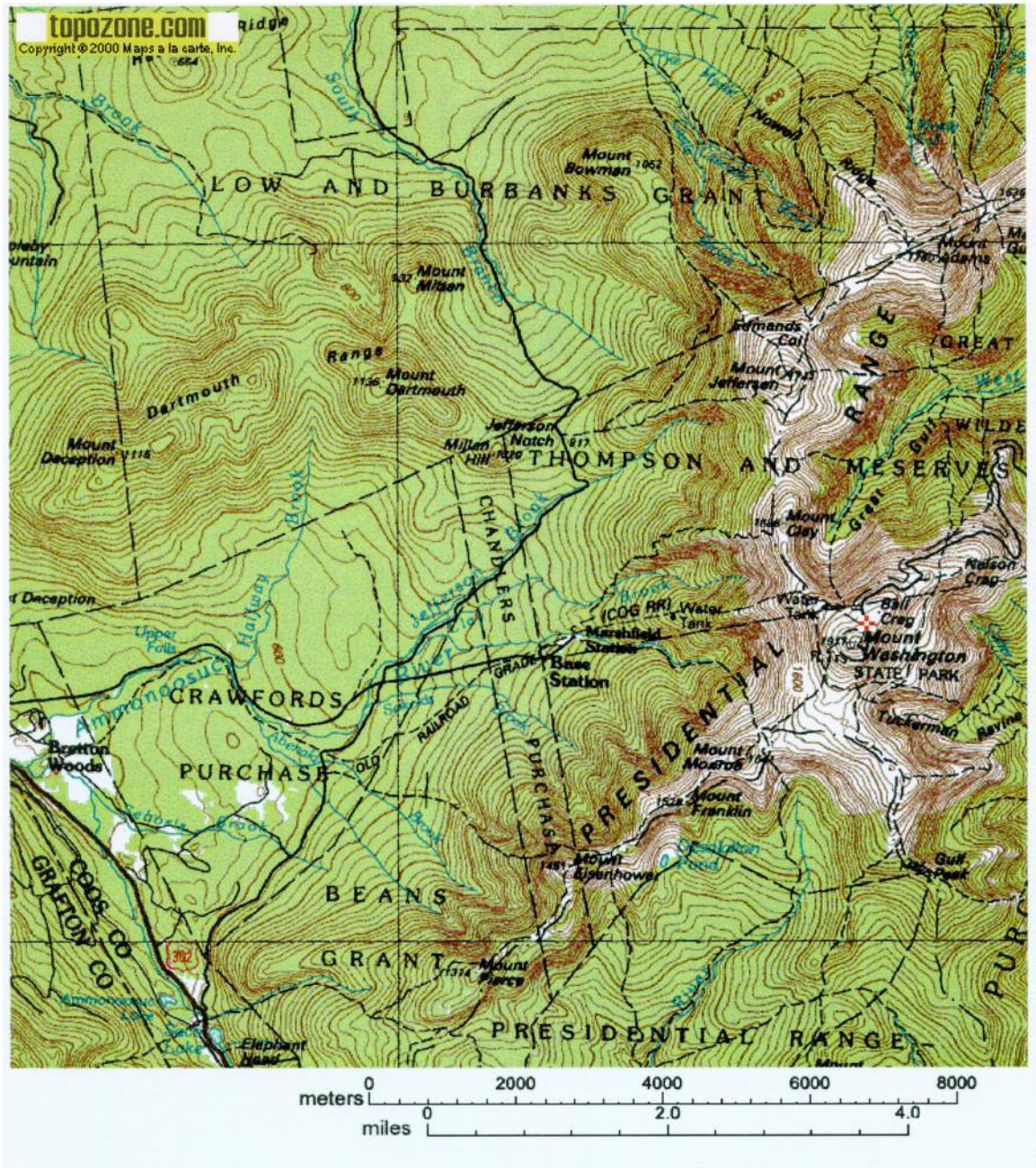

Figure 2
USGS Mount Washington Quadrangle (Locus Map)

Site History

A permit and amendment issued by the United States Department of Agriculture (USDA) allowed use of 22.64 acres on the summit, 2.9 acres along the auto road, and five shelters totaling 0.01 acre along the summit road between 1950 and 1952. (Ref.3). The five shelters were reportedly used as emergency shelters for individuals inadvertently trapped by unpredictable weather. The Air Force closed the Icing Research Facility effective June 15, 1964. The USDA permit for 25.5 acres was terminated sometime between 1964 and 1967. The permit stated that the Air Force had to remove all structures and improvements and restore the site within a reasonable time, unless otherwise agreed upon in writing or in the permit. If the Air Force failed to remove all improvements, the Air Force was not relieved of

its liability for the cost to remove any structures and restore the site. The site has not been owned by private interests and has not been altered or beneficially used since DOD usage. An August 2, 1967 letter from USDA Forest Service requested that the restoration of the site not include building ground slabs or the helicopter pad, and requested that the radome pad be removed.

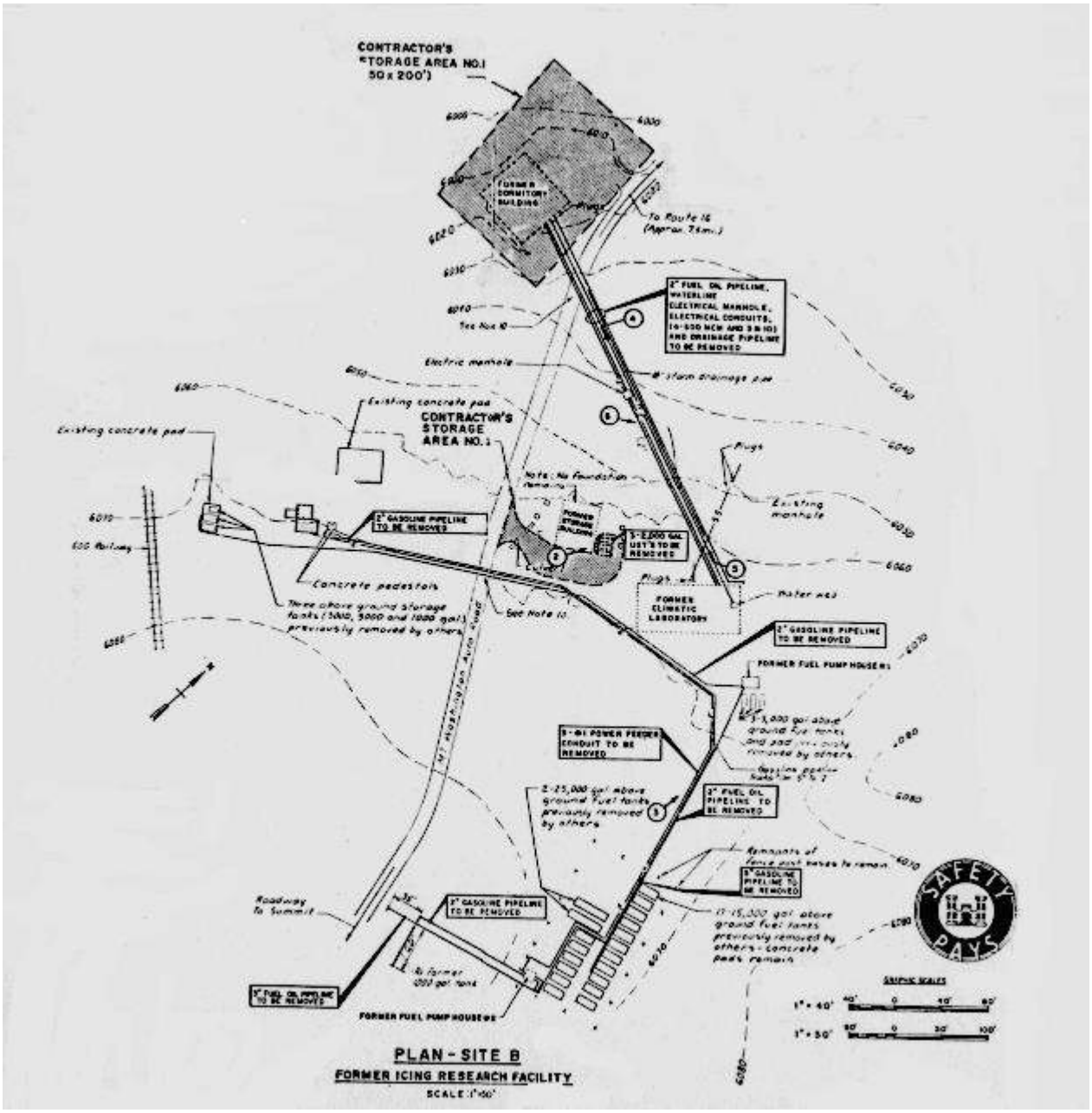

FIGURE 3
Site Plan Prior to Demolition By ACOE

A USDA Forest Service memorandum dated September 8, 1967 stated that all conditions regarding disposal of existing buildings and restoration had been met, ground surface restored to as near original condition as practicable.

Potential Hazards

Potential hazards, as referenced in a DERP-FUDS Project Summary Sheet (Ref. 2) provided by the ACOE, included danger of impalement or serious personal injury from loss of footing on the rocky uneven terrain and falling on metal reinforcement bars, scrap metal, exposed rebar in the remains of building foundations, debris from demolished buildings, and unstable concrete pieces.

Previous Investigations

Available information on previous investigations and remediation at this site is sketchy. Due to the age of this project difficulties were encountered during the Department's attempts to access ACOE archived files.

Current Investigations

Representatives of the New Hampshire Department of Environmental Services visited the site for the purpose of conducting a site reconnaissance on July 25, 2001. The site reconnaissance included an interview and a general site walkover with Howie Wemyss, Mount Washington Auto Road Manager. At the time of the walkover a drinking water sample was collected from the Mount Washington Summit bedrock drinking water supply well. The well is reportedly over 900 feet deep although no drilling logs or other documentation could be located during the site visit.

The site reconnaissance and interview with Howie Wemyss confirmed that the ACOE had conducted previous remedial activities at the site. The buildings had been raised. The tank farm, underground storage tanks and associated pipe lines had been removed. Figure 3 (Site map) shows former site conditions, figure 1 (photo) shows current conditions.

Soils

No soil samples were collected since the ground surface at the summit project area was comprised primarily of rock. No evidence of leaks was noted. There were no stained rocks or soils in the vicinity of the former tank farm area.

Groundwater

The Mount Washington Summit bedrock drinking water supply well was sampled from the spigot at the base of the staircase. The sample (A27310-1) was analyzed for VOCs using EPA Method 524.2 at the Department of Environmental Services laboratory. Results of the analysis indicate that no VOCs were detected above method detection limits in the Mount Washington Summit drinking water supply well. The analytical results are included in appendix A.

Conclusions/Recommendations

Based on the data currently available the Department believes this site does not pose a significant risk to public health and the environment and does not recommend that the site be placed into CERCLIS.

Analyses of the summit drinking water supply well for Volatile Organic Compounds (VOCs) via USEPA Method 524.2 did not detect any contamination above method detection limits. The terrain on the summit of Mount Washington in the area of concern (Fig. 1) is comprised primarily of stone, gravel and sand. Soil sampling was not conducted since very little soil existed in the areas of concern and no visible staining from past spills was evident.

REFERENCES

1) Project Summary Sheet For DERP-FUDS BD/DR Project No. D01NH030802, Mount Washington Icing Research Facility, Sargents Purchase, New Hampshire, Site No. D01NH030800, 7 February 1992.

2) Defense Environmental Restoration Program for Formerly Used Defense Sites, Findings and Determination of Eligibility, Mount Washington Icing Research Facility, Sargents Purchase, New Hampshire, Site No. D01NH030800.

STATE OF NEW HAMPSHIRE
Inter-Department Communication

DATE: July 23, 2018

FROM: K. Allen Brooks **AT (OFFICE)** Department of Justice
Senior Assistant Attorney General Environmental Protection Bureau

SUBJECT: Ownership of Mount Washington Summit

TO: The Mount Washington Commission

Ownership History of the Mount Washington Summit[1]

The ownership history of the summit of Mount Washington is interwoven with that of Sargent's Purchase, Thompson and Meserve's Purchase, and numerous other early grants and conveyances in what is now Coos County. Throughout these areas, there has never been a shortage of controversy.

Confusion over what is now called Sargent's Purchase began as far back as 1786 when the Legislature appointed McMillan Bucknam to sell certain state lands. Bucknam conveyed land described as being southwest of Roger's Location, Treadwell's Location, and Wentworth's

[1] The following history draws extensively from several N.H. Supreme Court opinions (formerly called the Superior Court of Judicature of New Hampshire) and to a lesser extent from various deeds and third-party information, specifically – *Wells v. Jackson Iron Mfg. Co.*, 44 N.H. 61 (1862); *Wells v. Jackson Iron Mfg. Co.*, 47 N.H. 235 (1866); *Wells v. Jackson Iron Mfg. Co.*, 48 N.H. 491 (1869); *Wells v. Jackson Iron Co.*, 50 N.H. 85 (1870); Coos County Registry of Deeds – ("Book/Page") B8/117; B9/241; B9/245; B9/246; B9/247; B9/249; B9/249; 12/170; 12/172; B15/122; B15/326; 22/28; B22/28; B22/29; 22/68; B25/255; B28/176; B28/334; B30/285; B30/287; B30/319; B31/309; B31/310; B32/3; B32/5; B32/8; B32/9; B32/10; B32/11; B32/35; B32/66; B32/69; B32/105; B32/278; B32/316; B32/317; B32/339; B32/367; B32/340; B33/3; B33/41; 33/358; 34/321; 34/323; 40/213; 46/11; 59/286; 59/288; 65/71; 65/72; 65/73; 65/74; 65/75; 65/76; 65/77; 65/78; 68/23; 68/22; 68/24; 68/310; 74/30; 76/72; 79/2; 83/194; 90/148; 90/154; 126/171; 132/298; 132/315; 132/347; 134/172; 134/178; 134/188; 134/199; 153/150; 176/98; 252/827; 306/10; 419/117; 471/245; 474/1; 474/5; 474/7; 474/58; 481/96; 481/209; 482/344; State of N.H. Archives, Book of Deeds of State Land; *https://mtwashingtonautoroad.com/history*; *https://thecog3-px.reservationnow.us/about-the-ride/;* Jackson Historical Society, *http://www.jacksonhistory.org/Collection/reports/web_obituariesPage11.html*; *Mount Washington, A Handbook for Travelers*, Frank H. Burt (1906); *Saco Valley Settlements and Families, Historical, Biographical, Genealogical, Traditional, and Legendary*, G.T. Ridlon. Sr. (1895).

Location (an area distinct from the existing Wentworth's Location near the Maine border). In 1800, a statute incorporated the Town of Adams (now Jackson) to include this land but in 1806, a map surfaced purporting to show that the western boundary of Jackson differed from the western boundary of the land transferred by Buckman, causing some to claim that parts of that land actually lay to the west of Jackson, in the area now called Sargent's purchase. In the course of a subsequent lawsuit, the N.H. Supreme Court reviewed this plan but held it in low regard. This issue, at least, was quickly dispatched never to rise again.

In 1824, the Legislature passed a resolution granting Daniel Pinkham land to build a road extending from Jackson (then Adams) to Randolph (then Durand). Not long after Pinkham began his arduous task, the Legislature authorized the Treasurer to convey 1,000 acres lying near Pinkham's grant and to the north of Rocky Branch to a woman named Dorcas Merrill. With tens of thousands of as yet unbounded, un-surveyed, and often unexplored land still to be granted, the drafters of the Merrill deed nevertheless found it wise to identify the corner of this lot with nothing more than an ash tree. Decades later, this land and that tree would become the focal point of years of litigation.

At this time, Dorcas Merrill's half-sister, Harriet Eastman, was married to a man named George P. Meserve – a figure featuring prominently in the remainder of this history and deserving some attention. A book published in 1906 entitled *Saco Valley Settlements and Families* gives this description:

> On April 11, 1798 was born George P. Meserve, who:
>
> > having been employed on the rugged soil in boyhood he was deprived of the means of gratifying his inherent thirst for that knowledge obtained from books, such as are accessible today; but after the days expired, and when others were reposing, he was wont to study such works as came within reach by the uncertain, flickering light of pitch-wood. His strongest trend was on military lines, and he became an adept in tactics, and at the early age of twenty-six was commissioned major-general of the state militia.

In 1832 Meserve served as a selectman in Jackson. He, a man named "Tricky," and John Rogers claim that they "ran the line" of the Jackson boundary in May of 1832. In that very same month in 1832, adjacent to the very same Jackson boundary "run" by Meserve and also adjacent to the land of Merserve's half sister-in-law, the State Lands Commissioner James Willey (sometimes "Wiley") granted (for $300) a large tract of land to Jacob Sargent and others. This "Sargent's Purchase" encompassed 25,000 acres, covered (some said) the State's most iconic mountaintop, and rested on a boundary description rife with ambiguity. The deed describes Sargent' Purchase as follows:

> Beginning on the northeast corner of a lot of land given to widow *Dorcas Eastman* of said Bartlett by the Legislature of New Hampshire; thence running due west three and one fourth miles; thence due north so far as that a due east

> course, extending to the west line of the town of Jackson or Pinkham's Grant, shall contain 25,000 acres; thence southerly on said westerly line of Jackson to the southwesterly corner thereof; thence south so far as that a due west course shall strike the first mentioned bounds

First, the deed references a lot given to Dorcas Eastman rather than Dorcas Merrill. No record exists for such a transfer and, if one believes George Meserve, only Dorcas Merrill ever obtained this land, the drafters of Sargent's deed having mistakenly named a close family member in place of the actual grantee. As Meserve later testified, Merrill's "mother's name was Dorcas Eastman; never knew any other Dorcas Eastman."[2] Second, the south side of Sargent's purchase in this description runs east to west for "three and one fourth miles," a distance that would have placed its western terminus well into Hart's Location which had already been delineated in the late 1700's and which actually lay in another county.[3] Finally, the description contains no static northern boundary. In a manner now appearing almost reckless but consistent with other grants of the time, the northern boundary is nothing more than a line running from the west to the east until it intersects either the Town of Jackson[4] or Pinkham's Grant. This line continues to slide north until the area within the shape it helps create includes the full 25,000 acres. Nevertheless, for the time being, no one disputed the bounds of Sargent's Purchase.

Later, in 1835, Willey quitclaimed to Samuel Thompson and George Meserve a parcel starting at the northwest corner of Pinkham's Grant (which now appears to be near the corner of Martin's Location if, indeed, Pinkham's grant did originally reach to Randolph), running along the bottom of Low and Burbank's Grant, south along the recently created Chandler's grant, and then back to its beginning. But just like Sargent's Purchase, the deed essentially creates a line running west to east that continues to slide south until the parcel it helps describe contains 12,000 acres. The deed states:

> Beginning at the northwest corner of Pinkham's Grant, thence running westerly to the south line of Shelburne Addition and the south line of Low & Burbank's Grant, to the northeast corner of Jeremiah Chandler's Grant; thence due south on the east line of said Chandler's Grant, so far that a due east line extending to the west line of said Pinkham's Grant shall contain 12,000 acres; thence northerly on said west line to the first bound.

In 1839, Thompson and Meserve quitclaimed this parcel to Daniel Eastman, perhaps yet another relative of George Meserve. However, this quitclaim deed purports to transfer only 10,000 acres

---

[2] Merserve's wife's maiden name being Eastman.

[3] By comparison, today, the southern edge of Sargent's Purchase is only about a half of a mile long. In all likelihood, Hart's Location, Low and Burbank's Purchase, Cutt's Grant, Crawford's Grant (Purchase) and Bean's Grant all existed at this time.

[4] In 1834, James Willey made a plan of Jackson but there is no available record of him having delineating Jackson's boundaries prior to granting Sargent's Purchase.

from Willey and uses a different but overlapping description.[5] Daniel Eastman transferred this land to men named Whitney and Wetherell in 1840.

In 1841, George Meserve, now the local tax collector, determined that taxes on Sargent's Purchase were in arrears. In 1842, the *N.H. Patriot* and the *Coos County Democrat* printed notice of the pending tax sale of Sargent's Purchase along with other prominent lands in the area. Subsequently, in 1844, the Coos County sheriff sold Sargent's Purchase to Jared Williams. The sheriff at the time was the same George Meserve. The deed making the transfer essentially just described the land as "Sargent's Purchase" minus some specific lots. Williams subsequently quitclaimed Sargent's Purchase to George Herring in 1844 who then, in 1846, conveyed it by quitclaim deed to none other than George Meserve. It is Meserve who quitclaimed it to Coues (sometimes "Cowes") and David Pingree in 1846.

In 1848, more tax trouble brewed to the north. Taxes went unpaid on an undivided one-half interest in Thompson and Meserve's Purchase so the new combination sheriff and tax collector, John Bellows, sold at auction this half interest to Joseph Cady. Joseph Cady then sold this interest back to tax collector/sheriff John Bellows for the exact amount Cady paid for it ($20.71). Bellows then quitclaimed this to the ubiquitous George Meserve. Although apparently now without any legal title, witnesses in 1851 claimed that Sheriff Bellows controlled the "pony road" that ran to the Mount Washington summit (which sources say came down Tuckerman's Ravine) and that no one could pass without his permission.[6]

N.H. Supreme Court opinions record testimony that "Rosebrook and others" built the first Summit House in 1852. The next year, a man named Samuel Spaulding testified that he and others (having for some reason sought the permission of John Bellows) built the tip-top house. Afterwards, Spaulding went into business with Hall and others – owners of the Summit House.[7] Nothing indicates that any of these parties actually owned the land beneath the buildings although some anomalous deeds indicate an attempt to transfer interests in the summit from, for instance, John Bellows to Thompson. These deeds do not appear to be part of a valid title chain. Adding to the mystery, many deeds, including the one from Bellows mentioned above, were burned in a fire at the Coos Registry in 1886 and have been re-transcribed with significant omissions to the extent they exist at all.

In 1853, Coues and Pingree quitclaimed Sargent's Purchase to the Jackson Iron Mfg. Co. of which David Pingree was president. After David Pingree's death, his heirs took over the

[5] The initial part of the description in the 1839 deed makes no sense as it fails to describe a closed shape.

[6] Sheriff Bellows appeared to be less than fastidious with respect to the finer points of property ownership. In *Cahoon v. Coe*, 57 N.H. 556 (1876), the N.H. Supreme Court upheld a decision requiring him to return land that he had sold at a tax sale to his nephew because he had failed to give the owner proper notice.

[7] In 1854, Spaulding jointly owned the tip-top house with Hall and Noyes.

company. In that same year, the Legislature gave Gen. David O. Macomber a charter to create a road to the summit. Through fits and starts, the road emerged from the mountainside and continues in operation today, touted as "America's oldest manmade attraction."[8]

The next year, George Meserve quitclaimed Thompson and Meserve's Purchase to John Hitchcock who then quitclaimed it to John Bellows. In 1858, Samuel Thompson also quitclaimed his interest to John Bellows so that Bellows now appeared to control all of Thompson and Meserve's Purchase, if, in fact, the 1848 tax sale was valid. However, Wetherell, Whitney, and Faulkners continued to claim ownership through their original grant from Daniel Eastman and they later quitclaimed that interest to Henry B. Wells. The discrepancies in the competing title chains became irrelevant in 1859 as Bellows too quitclaimed to Wells. Although circuitous, this series of transactions left the Jackson Iron Mfg. Co. and Henry Wells in control of Mount Washington – Wells to the north and the manufacturing company to the south.

In the meantime, a new vision for the mountain started to materialize in 1858, when Sylvester Marsh obtained a charter from the N.H. Legislature to build a railway. Completed in 1869, what is generally known as the "Cog Railway" still operates today as a "marvel of 19th century technology and modern innovation."[9]

In the 1860's, the ambiguities in the boundary descriptions of Sargent's Purchase and Thompson and Meserve's Purchase took center stage. Wells and the Jackson Iron Mfg. Co. each claimed that the summit of Mount Washington resided within each party's respective parcel. Part of the dispute focused on the boundaries of the lot granted to Dorcas Merrill. Previous transfers of Sargent's Purchase relied on the boundaries of the Merrill lot – if the location of the Merrill lot changed, so too would the boundaries of Sargent's Purchase. Although the transfer to the legislature described an "ash tree" as the boundary, others believed that the parties to the transfer wanted to refer to the boundaries of the land actually occupied by Merrill, not just what the Legislature had granted. In came George Meserve to testify. That boundary, he said, was not defined by an "ash tree" but by a maple of which only he and his cohorts knew the location.[10] Apparently, his testimony did not prove decisive. Between 1862 and 1869, no fewer than four New Hampshire Supreme Court decisions addressed the dispute between Wells and the Jackson Iron Mfg. Co., none of them culminating in resolution.

Around this same time, State Treasurer Peter Sanborn independently created a new title chain by transferring the summit of Mount Washington to Aurin Chase. This action appeared to re-grant land already transferred years before. Eventually, this title chain became vested in the heirs of Pingree and the Road Company.

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[8] *https://mtwashingtonautoroad.com/history*.

[9] *https://thecog3-px.reservationnow.us/about-the-ride/*

[10] Around 1853, Thompson says that he and Willey made a preliminary survey and referred to the Maple tree. Noah Barker, who claimed to have made several surveys (though he may not have actually been a surveyor) called on Willey "[b]y advice of Gen. Meserve."

In 1872, a partial reconciliation came to the summit when the heirs of Pingree, presumably tired of the legal imbroglio in which they participated on behalf of the Jackson Iron Mfg. Co. and perhaps daunted by the prospect of ever proving ambiguous boundaries, bought Thompson and Meserve's Purchase so that they now owned both parcels. Although owning the two might result in resolution of the respective lot boundaries, other parties still had interests in the mountain; specifically, both the Summit Road Co. and the Mount Washington Railway Co. ("Railway") were pressing their respective rights. Out of this situation comes the settlement of 1894.[11]

The 1894 settlement actually involved four parties – the heirs of Pingree, the Railway, the Road Company, and the Concord & Montreal Railroad. The agreement served as a deed for all practical purposes but its atypical structure created its own set of ambiguities. For instance, rather than including a transfer clause, the agreement contains a series of separate paragraphs each naming different parties, including different interests, and using different transfer mechanisms (some warranty, some quitclaim, some just by way of agreement). As a result of this agreement, the Railway owned a large circular area of the summit in fee as well as the railway corridor to the base; the Road Company held easements to use the road, turning grounds, and what were then stables; and the heirs of Pingree continued with the residual. Later, in 1910, the Railway obtained additional land at the summit consisting of a 10-acre quasi-rectangular tract attached to the summit circle from the successors of the Pingree heirs.

In 1915, the federal government took essentially all land on the mountain other than these areas through condemnation. Three years later, in 1918, the White Mountain National Forest was born.

Finances now began to play a role in ownership. In 1939, the Railway, seemingly strapped for cash, entered into an indenture with the Mount Washington Club, Inc., which would later change its name to the Mount Washington Summit House ("MWSH"), for the summit circle and rectangle. The MWSH in 1962 obtained the remainder of the Railway's land through a deed. Within days, the MWSH transferred all of this land, the rail corridor, the summit, and the base, to Dartmouth College.

In 1962, Dartmouth College owned almost every interest in the mountain not already taken by the federal government – but not for long. The College quickly began transferring interests to various parties. It gave the railway corridor down to the base in fee to a company called Marshfield, Inc. along with an easement over the summit circle. Later, it gave Marshfield Inc. a 200-foot long rectangular lot near what is now the Sherman Adams building. To the State

[11] George P. Meserve died ten years prior to this settlement on September 19, 1884 at the age of 86. His obituary read: "Married to Harriet Eastman. Grandson of Captain Jonathan Meserve of the British Army who revolted and fought in the Revolutionary War. Son of Colonel Jonathan Meserve one of the first settlers of Jackson." Jackson Historical Society, *http://www.jacksonhistory.org/Collection/reports/web_obituariesPage11.html*.

it gave the summit circle and the large quasi-rectangular tract, reserving from the summit circle an 8-acre parcel that it could use for any purpose including broadcasting. Marshfield Inc. eventually merged with the Railway which survived the merger and now holds all of the rail-related interests. Many years later, Dartmouth College transferred the 8-acre "out parcel" to the State, solidifying the State as the fee owner of almost all of the Mount Washington Summit.

Today, N.H. State Parks operates the summit of Mount Washington in partnership with the fee and easement owners and others with interests on the mountain. Since 1969, the Mount Washington Commission has helped guide management with input from the relevant stakeholders. The Mount Washington Commission is comprised of:

- N.H. State Parks;
- The Mount Washington Auto Road (Road Company);
- The Cog Railway (Mount Washington Railway Company);
- The Appalachian Mountain Club;
- The U.S. Forest Service;
- Townsquare Media;
- The Mount Washington Observatory;
- A New Hampshire Senate member;
- A New Hampshire House of Representatives member;
- And public members appointed by the Governor and Executive Council.

Emery& Garrett
GROUNDWATER INVESTIGATIONS
A Division of GZA

GEOTECHNICAL
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April 7, 2022
Project No. 33.0083175.00

Mr. Seth Prescott
State of New Hampshire
Department of Natural and Cultural Resources
Office of the Commissioner
Design Development and Maintenance Section
172 Pembroke Road
Concord, NH 03301

Re: Results of Site Review to Assess the Potential to Enhance the Yield of the Sherman Adams Well and Mitigation Plan for the Yankee Well

Dear Mr. Prescott:

This letter serves to provide you with a summary of Emery & Garrett Groundwater Investigations (EGGI), a Division of GZA's understanding of conditions and our recommendations related to the water supply serving the summit of Mt. Washington. Our understanding is based on our review of information provided to EGGI and our observations at the summit on September 17, 2021.

Background

The facilities on Mt. Washington are served by two wells that include the Yankee Well that formerly provided water to the maintenance building and the Sherman Adams Well which serves the observatory, museum, maintenance building, and tourist facilities. The Yankee Well has been out of service for more than 10 years, as it was believed to have been impaired by aviation fuels stored near the summit. The purpose of our site visit was to assess what steps could be taken to bring the Yankee Well back into production and to maximize the yield from the Sherman Adams Well.

The Sherman Adams Well is reported to be 800 feet deep with a pump set at 625 feet. The facility uses on average 3,000-4,000 gallons per day (gpd) and up to 7,500 gpd during the tourist season (**Appendix A** – attached data were obtained from Underwood Engineers). The main season for tourism is Memorial Day through mid-October when maximum day water demands are experienced. The Sherman Adams Well is pumped and discharges water into two 20,000-gallon storage tanks which are filled daily by water pumped from this well. The well is pumped until the water level in the well reaches a low water shut off control and then remains off until the water level rises sufficiently. The depth of the low-water and high-water control points were not known at the time of the site visit.

Physical access to the Sherman Adams Well is restricted by bedrock outcroppings and the Observatory building, limiting the size of the equipment that can access the well. A site visit with the drilling contractor will be required prior to bringing equipment on site to further evaluate access and plan the mobilization of drilling equipment.

The Yankee Well is located in the basement level of the maintenance building. Access portals are present from the roof level through the three stories to the basement level. However, the size and location of the portals along with equipment constructed within the building make it nearly impossible to access this well with any equipment without significant modifications to the building. We identified a suitable outdoor location where a replacement well could potentially be drilled within about 50 feet from the Yankee Well.

Summary and Recommendations

Currently the entire Mt. Washington complex (observatory, maintenance building, museum, and tourist facilities), is served by a single water supply well (Sherman Adams Well). If that well were to be contaminated, or failed for any reason, there is no other water source except to truck water to the mountain top to address water supply needs. The low yield of the Sherman Adams Well also limits the further development of the summit. The vulnerability created by the limited yield and lack of redundancy threatens the operation of the entire complex during winter weather conditions and the ability to provide sufficient water to allow visitors access to the summit during the tourist season. A new bedrock water supply well should be drilled and connected to the water supply system as soon as is practicable.

Additionally, actions should be taken to enhance the yield of the Sherman Adams Well to the extent that is possible. The Yankee Well could also be used to monitor the water level response to the pumping of the Sherman Adams Well and the proposed well. The data collected could be used to understand the availability of groundwater and manage the operation of the two water supply wells. Water level response data could be collected using a pressure transducer and data recorder deployed in the well that could be downloaded by the observatory staff biannually and reviewed.

Recommended Work Tasks

The following provide brief summaries of the work tasks recommended to address the water supply issues identified above.

Task 1 –Water Quality Sampling – Collection of water quality samples from both the Yankee Well and Sherman Adams Well and analyze it for volatile organic compounds (VOCs), total petroleum hydrocarbons (TPH), and Per- and Polyfluoroalkyl Substances [PFAS].

Task 2 – **Well Construction** – Construction of a new well outside of the Yankee building (**Figure 1**). We recommend the well be drilled to a depth of approximately 1,000 feet given the summit location, depth to water in and yield of the Sherman Adams Well, and to provide potential borehole storage. Once the Well is installed, we recommend conducting a 24-hour pumping test on the well to assess its yield and long-term water quality. The existing Yankee Well and Sherman Adams Well would be monitored for water level impacts associated with the pumping of the new well. A description of proposed work would be prepared and submitted to New Hampshire Department of Environmental Services (NHDES) for their review and approval prior to constructing and testing the new well. This task would also include required water quality sampling and analyses during the pump testing of the well. Deployment of pressure transducers within each of the three bedrock wells is not included in the associated cost estimate presented herein.

Task 3 – Sherman Adams Well Redevelopment – At the time when the pump is removed from the Sherman Adams Well during the upcoming construction program, EGGI would mobilize the Drilling Rig to the Sherman Adams Well and run the drill rig tools to the bottom of the well while blowing out any iron bacteria or mineral buildup that may have formed along the boring wall. The intent is to clean out that well to the extent possible with the objective of increasing the well yield. A decision to Hydro-Frack the Sherman Adams Well could be made following the redevelopment. That decision would made based on the combined yield of the new well and redeveloped Sherman Adams Well.

Task 4 – Report – A report would be prepared by EGGI summarizing the activities on site, the yield of the new well, and the water quality data collected. Additional recommendations for follow up work may also be made. This task will also include general consulting services and project management.

The estimated costs for these tasks are as follows:

TASK DESCRIPTION	**COST**
Task 1 – Water Quality Sampling-2 wells	$5,000
Task 2 – Well Construction - Install well to a depth of 1,000 feet, conduct 24-hour pumping test, and water quality analyses (purchase and installation of pressure transducers for monitoring of wells is not included)	$55,500
Task 3 – Redevelop the Sherman Adams Well - Use of drilling rig to clean out well and Hydro-Frack - Assumes both can be done in one mobilization	$26,500
Task 4 – Report, general consulting, and project management	$23,000
COST:	**$110,000**

The estimated costs presented above are our opinions of probable cost based on our experience and selected subcontractor quotations. If pressure transducers are to be purchased and installed, the estimated additional cost for two transducers specially made for up to 400 feet of varying head will be approximately $12,600 for purchase

and installation. Cost also assumes that the pump truck that is present on site for the ongoing summer construction project can be used to install a test pump in the new well near the maintenance building. EGGI will update the costs based on the final scope of services selected by UE and our client. We recommend conducting a site visit with the proposed drilling subcontractor to evaluate access, drill cutting and water management, and any other necessary support required to complete Task 2 and Task 3.

The estimated costs do not include modifications to summit infrastructure necessary to connect the wells to the water distribution system, installation of down well equipment including pumps, and electrical supply and pump control systems.

We appreciate the opportunity to provide you this letter and look forward to discussing the project with you.

Very truly yours,

EMERY & GARRETT GROUNDWATER INVESTIGATIONS, A DIVISION OF GZA

James M. Emery, P.G.
Principal/District Office Manager
Senior Hydrogeologist

James M. Wieck, P.G.
Associate Principal/Hydrogeologist

JME/JMW:rlk

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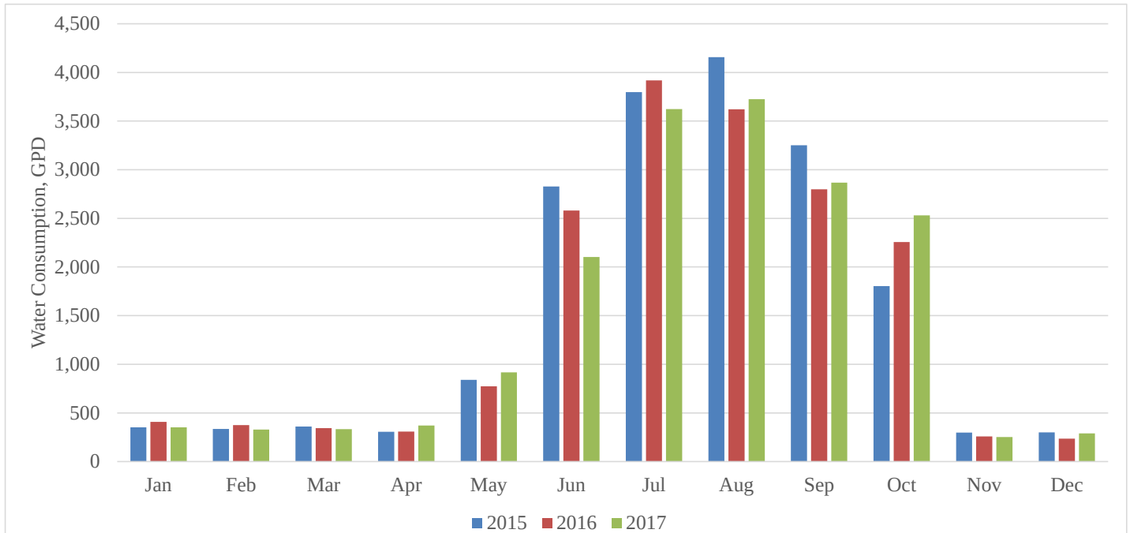
Attachments: Appendix A – Water Use Data - Mt. Washington Complex - Provided by Underwood Engineers, Inc.

APPENDIX A - WATER USE DATA

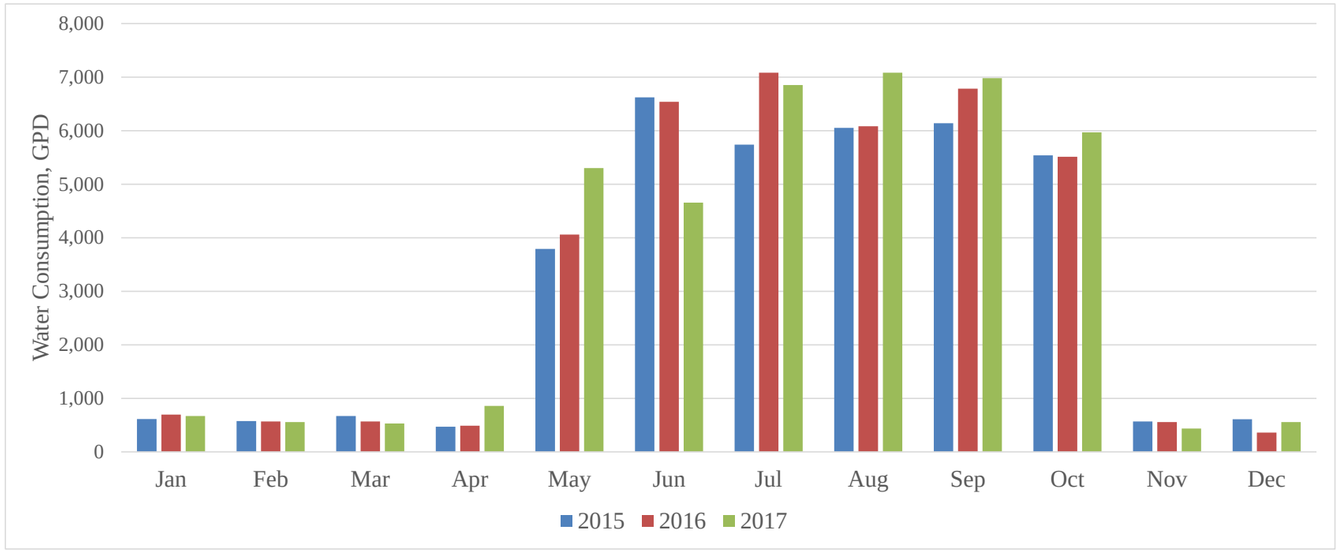
PT Month
4/5/2022 3:12 PM

Row Labels	Average of Water Production, GPD	Max of Water Production, GPD
2015	**1,564**	**6,620**
Jan	353	615
Feb	335	575
Mar	359	670
Apr	306	470
May	840	3,790
Jun	2,828	6,620
Jul	3,799	5,740
Aug	4,157	6,050
Sep	3,251	6,140
Oct	1,805	5,540
Nov	299	570
Dec	299	610
2016	**1,496**	**7,080**
Jan	407	695
Feb	374	570
Mar	345	570
Apr	309	490
May	773	4,060
Jun	2,581	6,540
Jul	3,918	7,080
Aug	3,622	6,080
Sep	2,799	6,785
Oct	2,257	5,510
Nov	257	555
Dec	235	360
2017	**1,467**	**7,080**
Jan	353	670
Feb	328	555
Mar	333	530
Apr	370	860
May	916	5,300
Jun	2,102	4,655
Jul	3,623	6,850
Aug	3,726	7,080
Sep	2,867	6,980
Oct	2,530	5,970
Nov	253	435
Dec	289	555
Grand Total	**1,509**	**7,080**

Sherman Adam's Building Monthly Average Water Consumption



Sherman Adam's Building Monthly Max Day Water Consumption



Tighe & Bond

A.3.
EDR® Environmental Records Search Report

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Mt. Washington State Park Assessment

1598 Mt. Washington Auto Road

Sargents Purchase, NH 00176

Inquiry Number: 7718481.8

July 29, 2024

The EDR Aerial Photo Decade Package

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Shelton, CT 06484
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07/29/24

Site Name:

Mt. Washington State Park Ass
1598 Mt. Washington Auto Roa
Sargents Purchase, NH 00176
EDR Inquiry # 7718481.8

Client Name:

Tighe & Bond
446 Main St
Worcester, MA 01608
Contact: Michael Trovato

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Search Results:

Year	*Scale*	*Details*	*Source*
2018	1"=500'	Flight Year: 2018	USDA/NAIP
2014	1"=500'	Flight Year: 2014	USDA/NAIP
2011	1"=500'	Flight Year: 2011	USDA/NAIP
2008	1"=500'	Flight Year: 2008	USDA/NAIP
1994	1"=500'	Acquisition Date: May 11, 1994	USGS/DOQQ
1986	1"=500'	Flight Date: May 13, 1986	USGS
1977	1"=500'	Flight Date: April 19, 1977	USGS
1960	1"=500'	Flight Date: July 01, 1960	USGS

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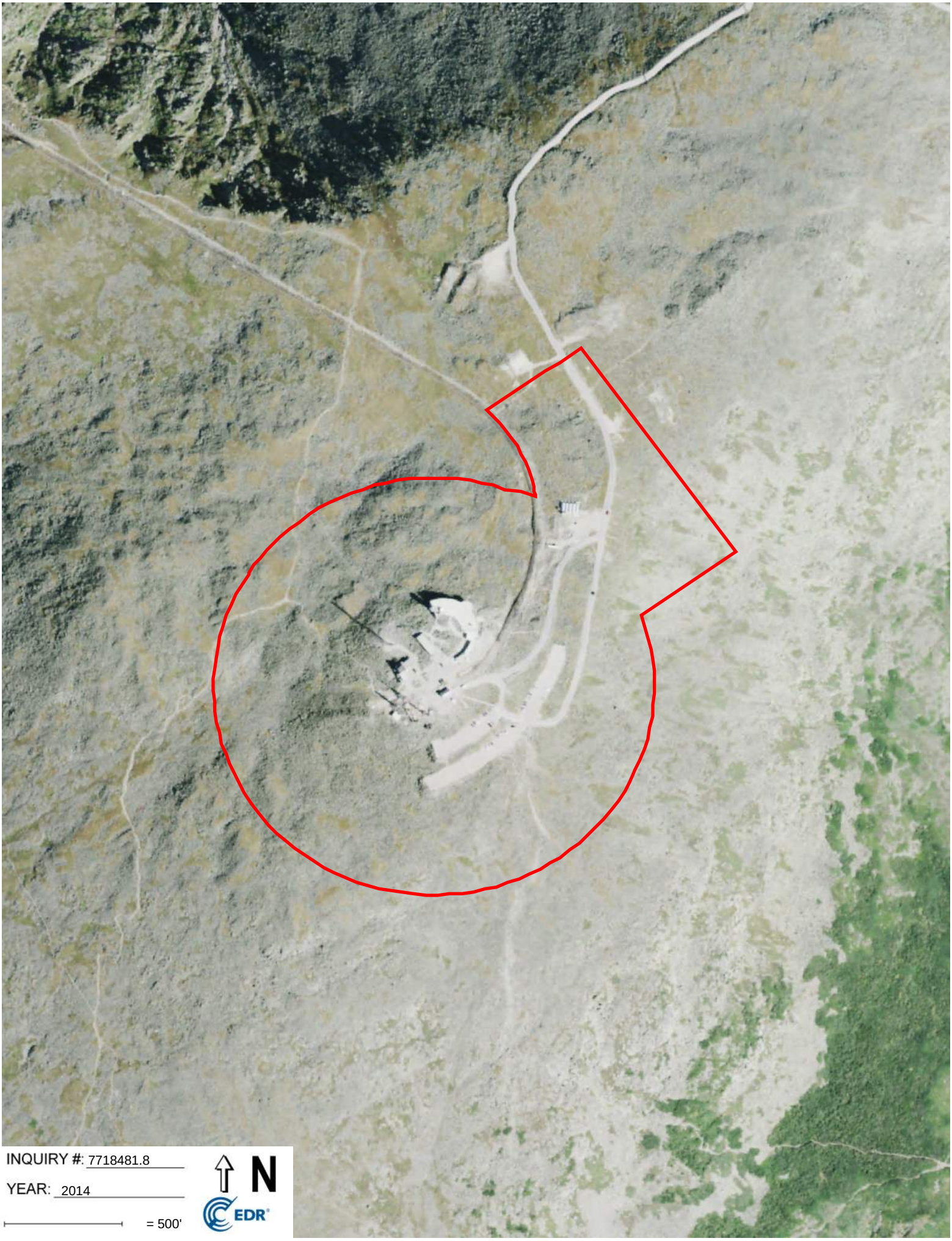
N
EDR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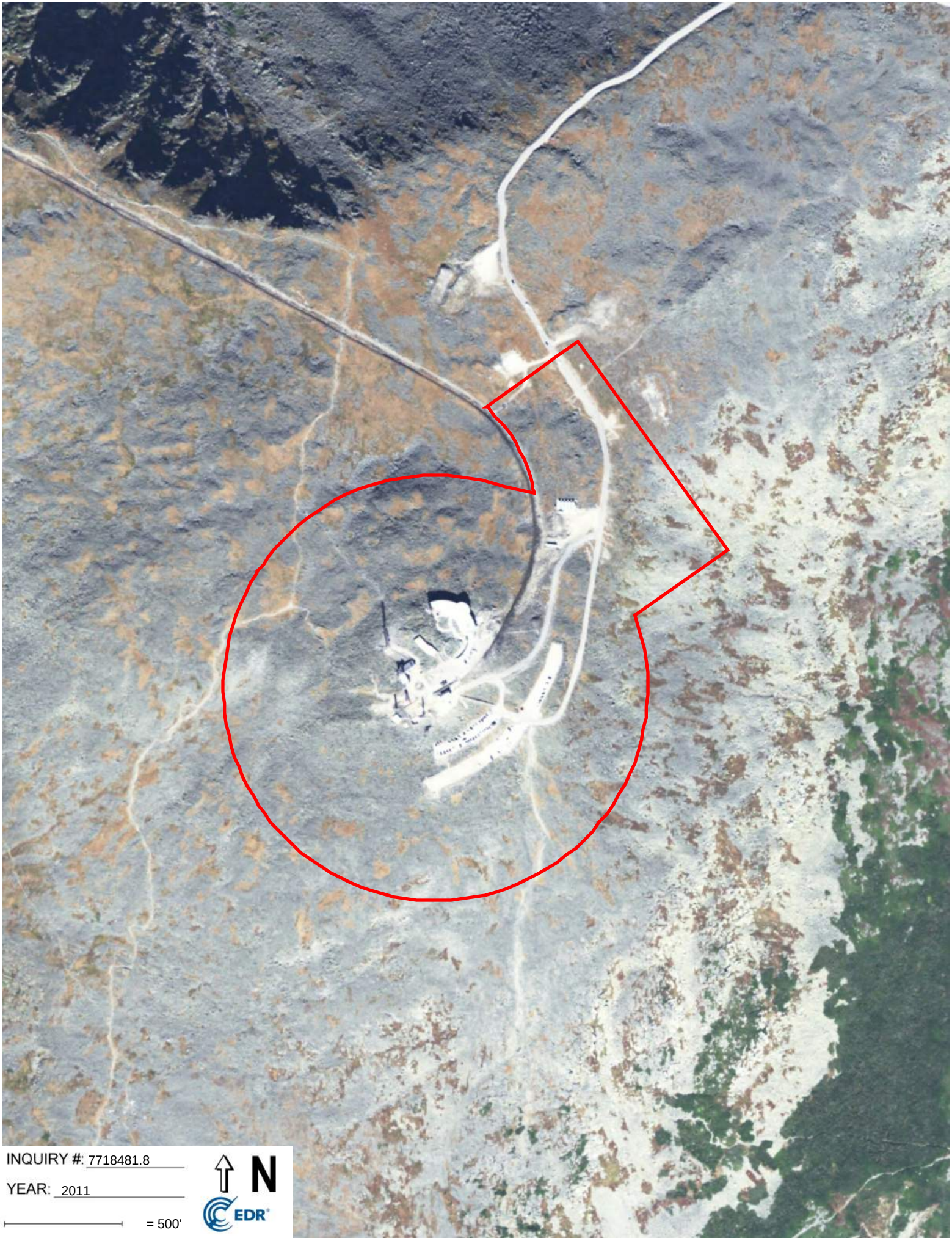
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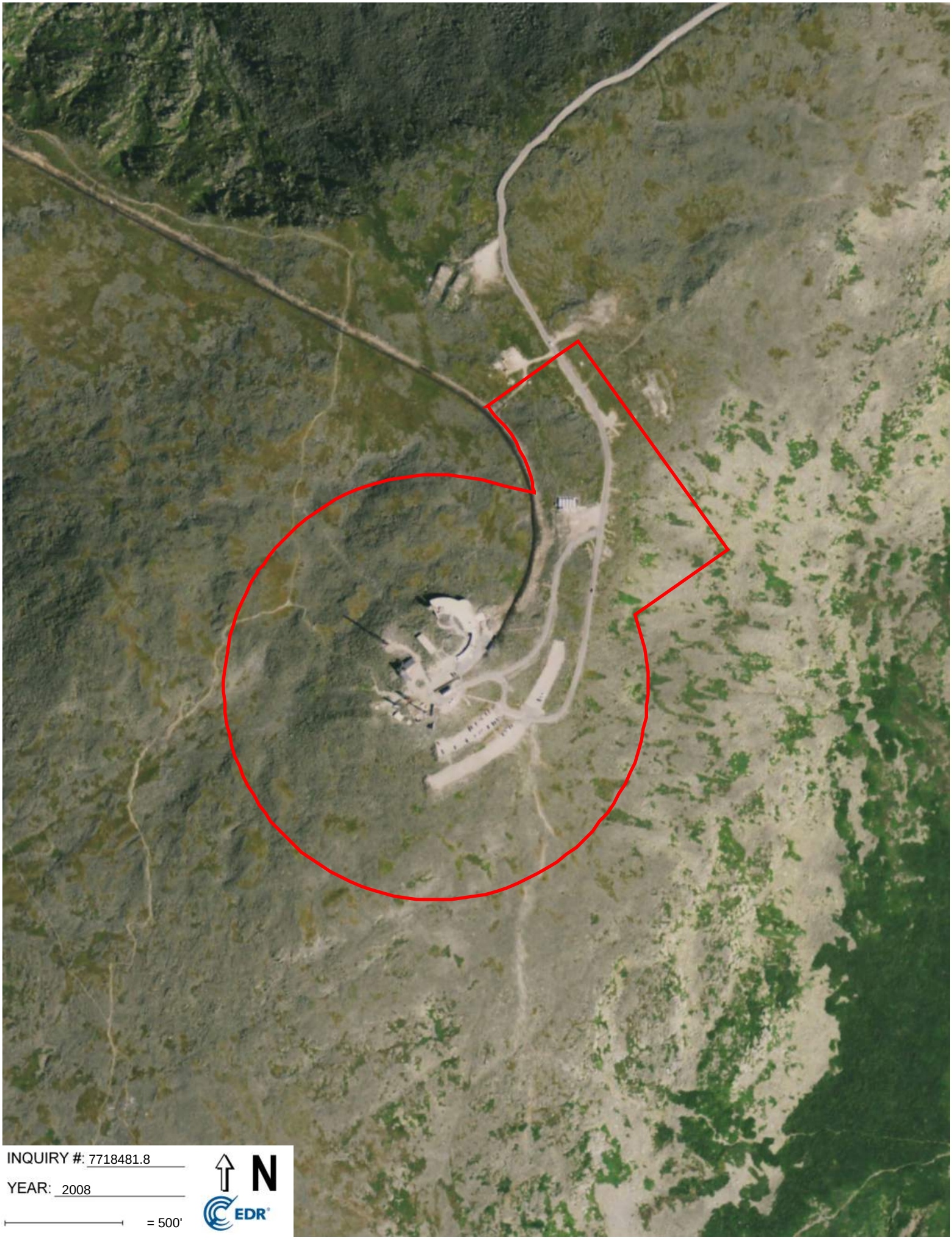
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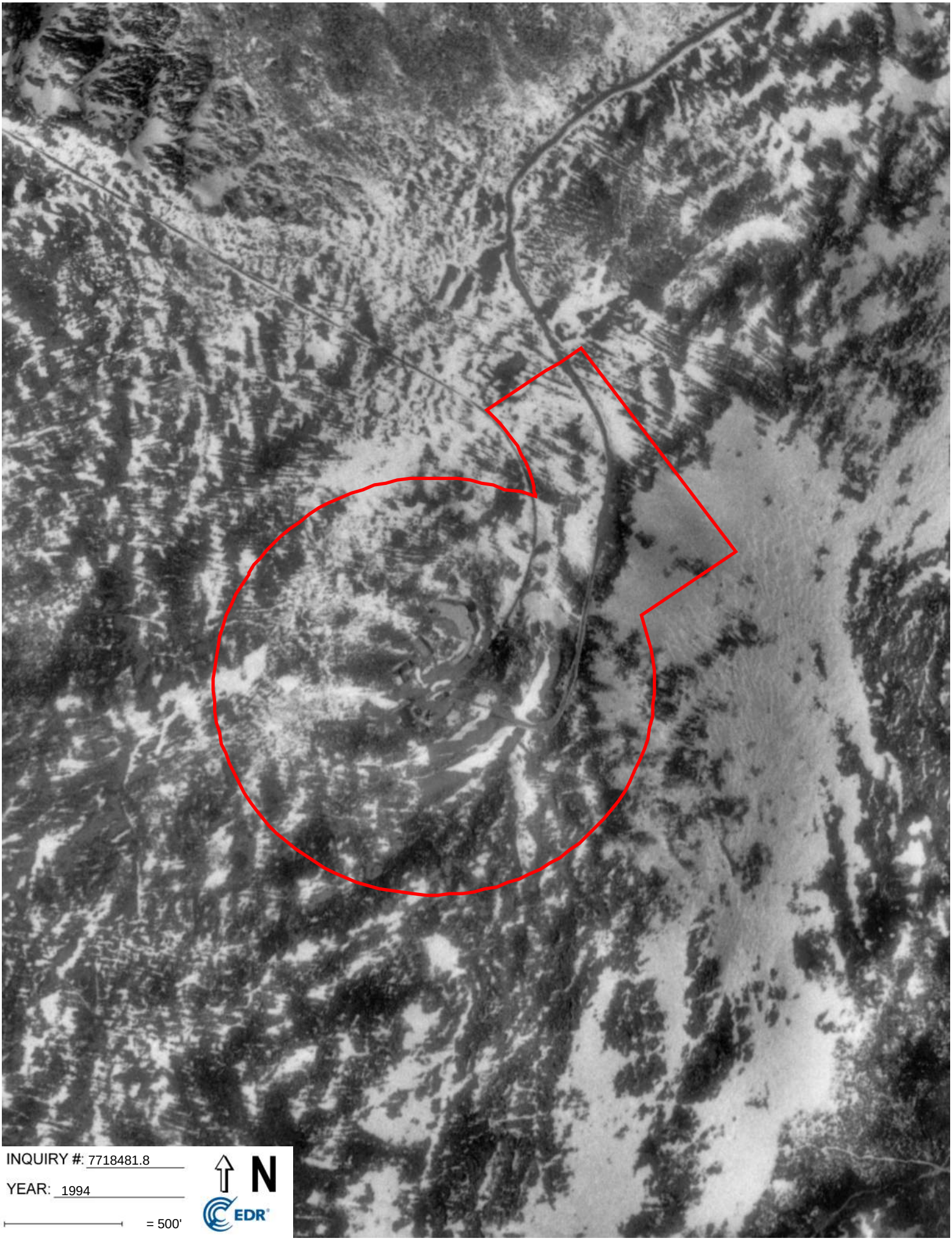
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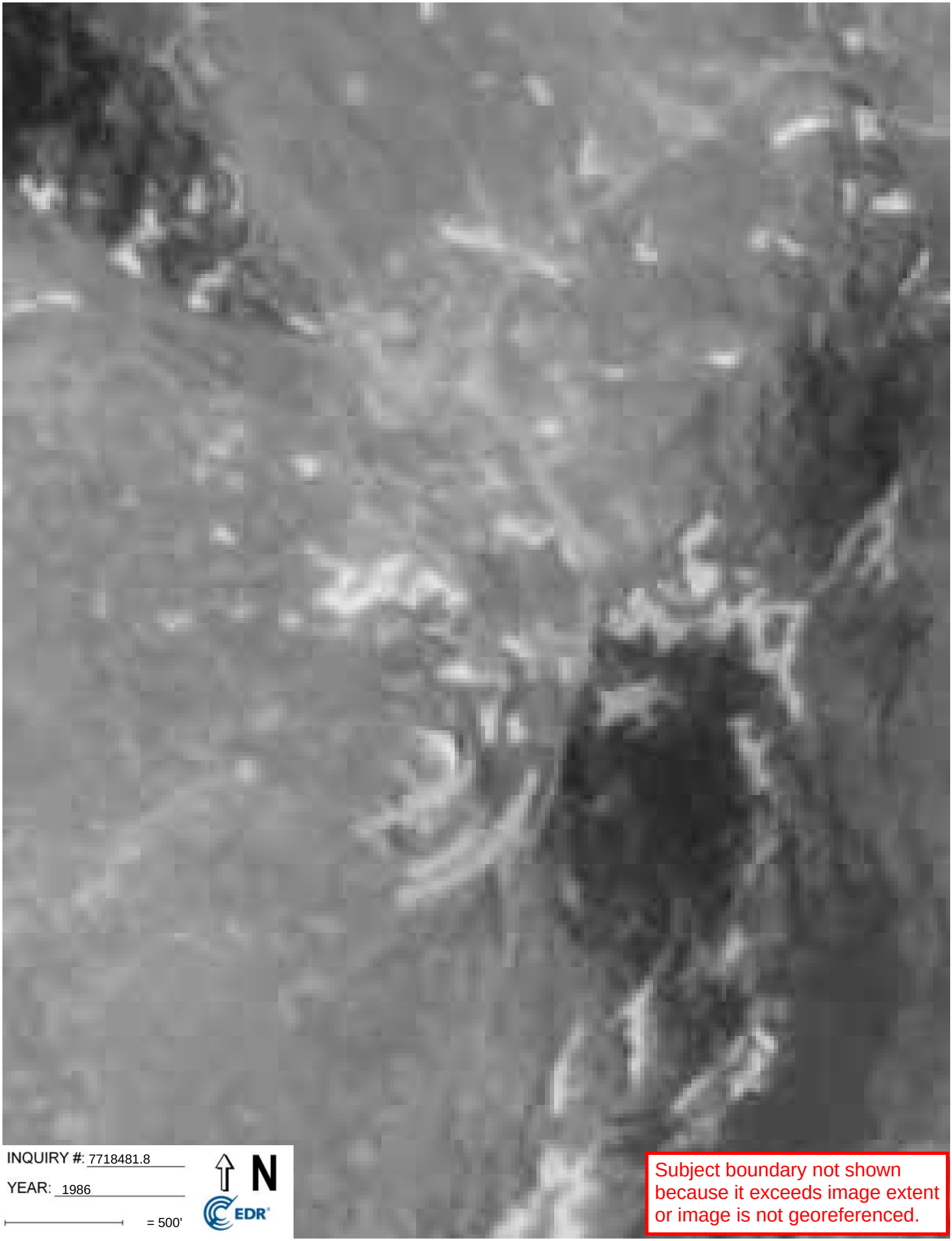

INQUIRY #: 7718481.8

YEAR: 1986

= 500'

N

EDR

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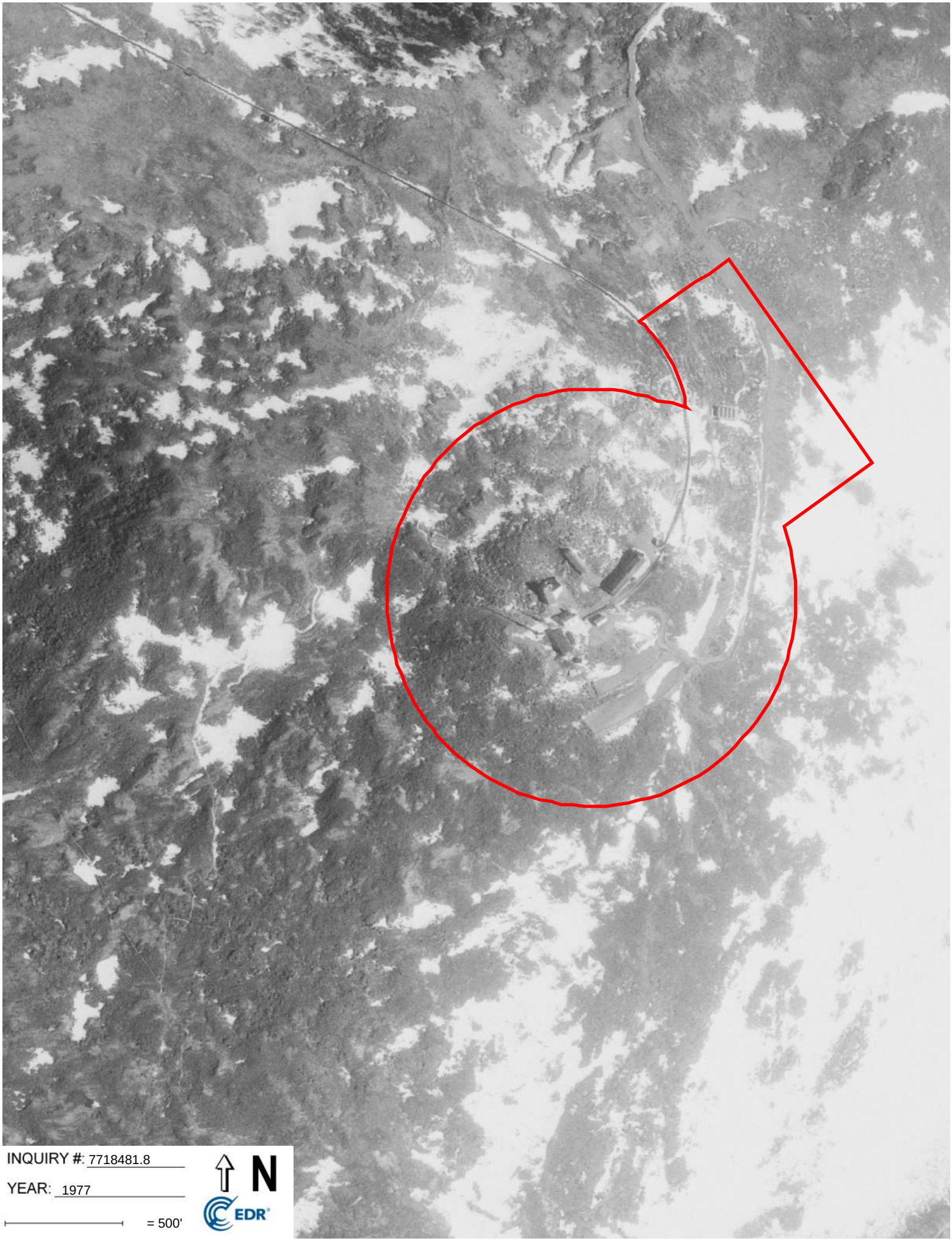

INQUIRY #: 7718481.8

YEAR: 1977

= 500'

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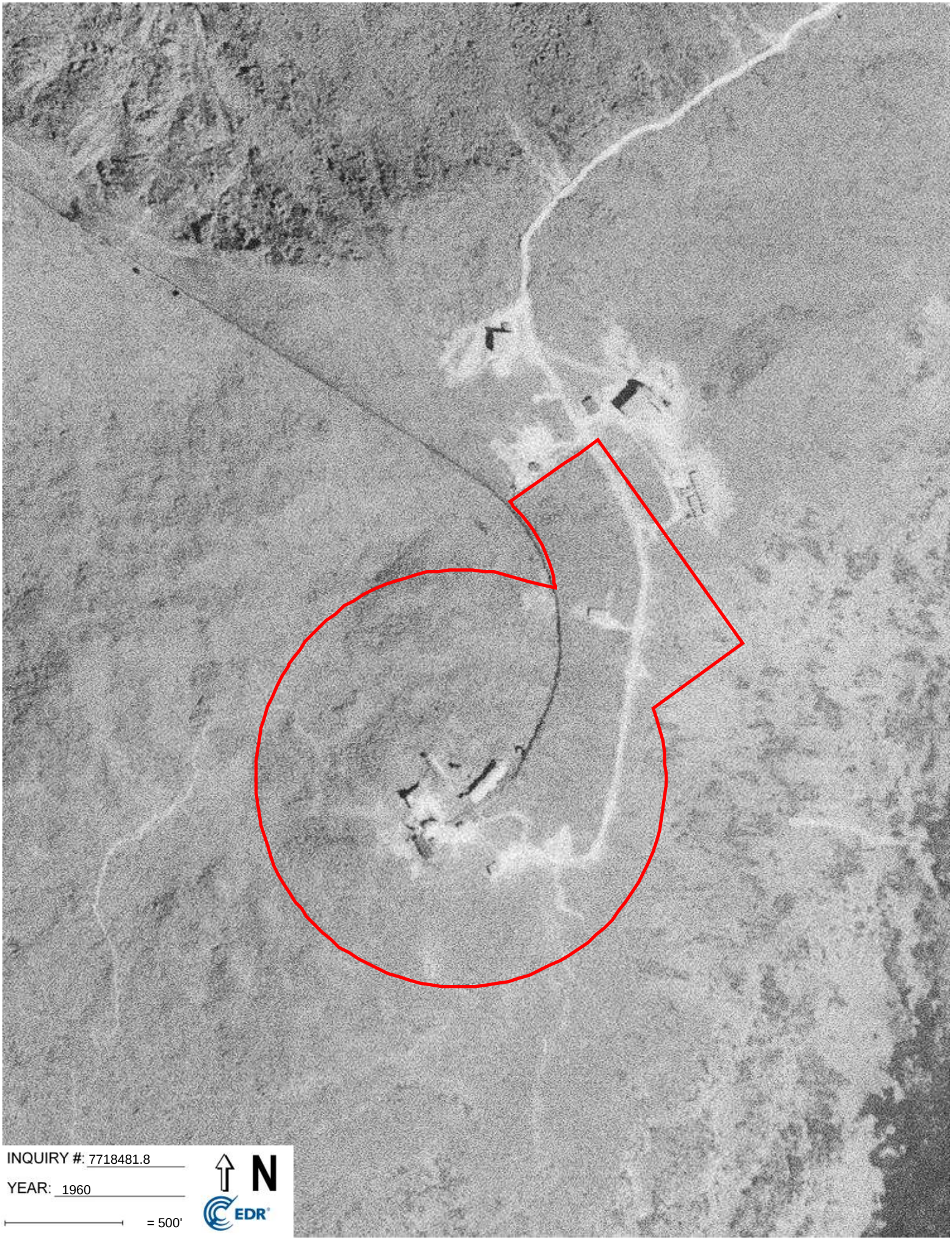
EDR


INQUIRY #: 7718481.8
YEAR: 1960
= 500'
N
EDR

Mt. Washington State Park Assessment

1598 Mt. Washington Auto Road

Sargents Purchase, NH 00176

Inquiry Number: 7718481.4

July 26, 2024

EDR Historical Topo Map Report

with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Historical Topo Map Report

07/26/24

Site Name:	Client Name:
Mt. Washington State Park Ass	Tighe & Bond
1598 Mt. Washington Auto Roa	446 Main St
Sargents Purchase, NH 00176	Worcester, MA 01608
EDR Inquiry # 7718481.4	Contact: Michael Trovato

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by Tighe & Bond were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:		*Coordinates:*	
P.O.#	N-5114-002	**Latitude:**	44.269419 44° 16' 10" North
Project:	Mt. Washington State Park	**Longitude:**	-71.301699 -71° 18' 6" West
		UTM Zone:	Zone 19 North
		UTM X Meters:	316299.10
		UTM Y Meters:	4904373.66
		Elevation:	6159.89' above sea level

Maps Provided:

2021	1896
2018	1893, 1895
2015	
2012	
1995	
1982	
1938	
1935	

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Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2021 Source Sheets

Mount Washington
2021
7.5-minute, 24000

Stairs Mountain
2021
7.5-minute, 24000

2018 Source Sheets

Mount Washington
2018
7.5-minute, 24000

Stairs Mountain
2018
7.5-minute, 24000

2015 Source Sheets

Mount Washington
2015
7.5-minute, 24000

Stairs Mountain
2015
7.5-minute, 24000

2012 Source Sheets

Mount Washington
2012
7.5-minute, 24000

Stairs Mountain
2012
7.5-minute, 24000

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1995 Source Sheets

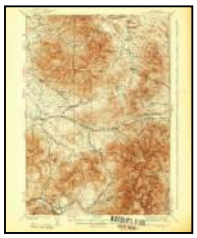
Stairs Mountain
1995
7.5-minute, 24000
Aerial Photo Revised 1994

Mount Washington
1995
7.5-minute, 24000
Aerial Photo Revised 1994

1982 Source Sheets

Mt. Washington
1982
7.5-minute, 25000
Aerial Photo Revised 1972

1938 Source Sheets



Mt. Washington
1938
15-minute, 62500

1935 Source Sheets

Mt. Washington
1935
15-minute, 62500

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1896 Source Sheets

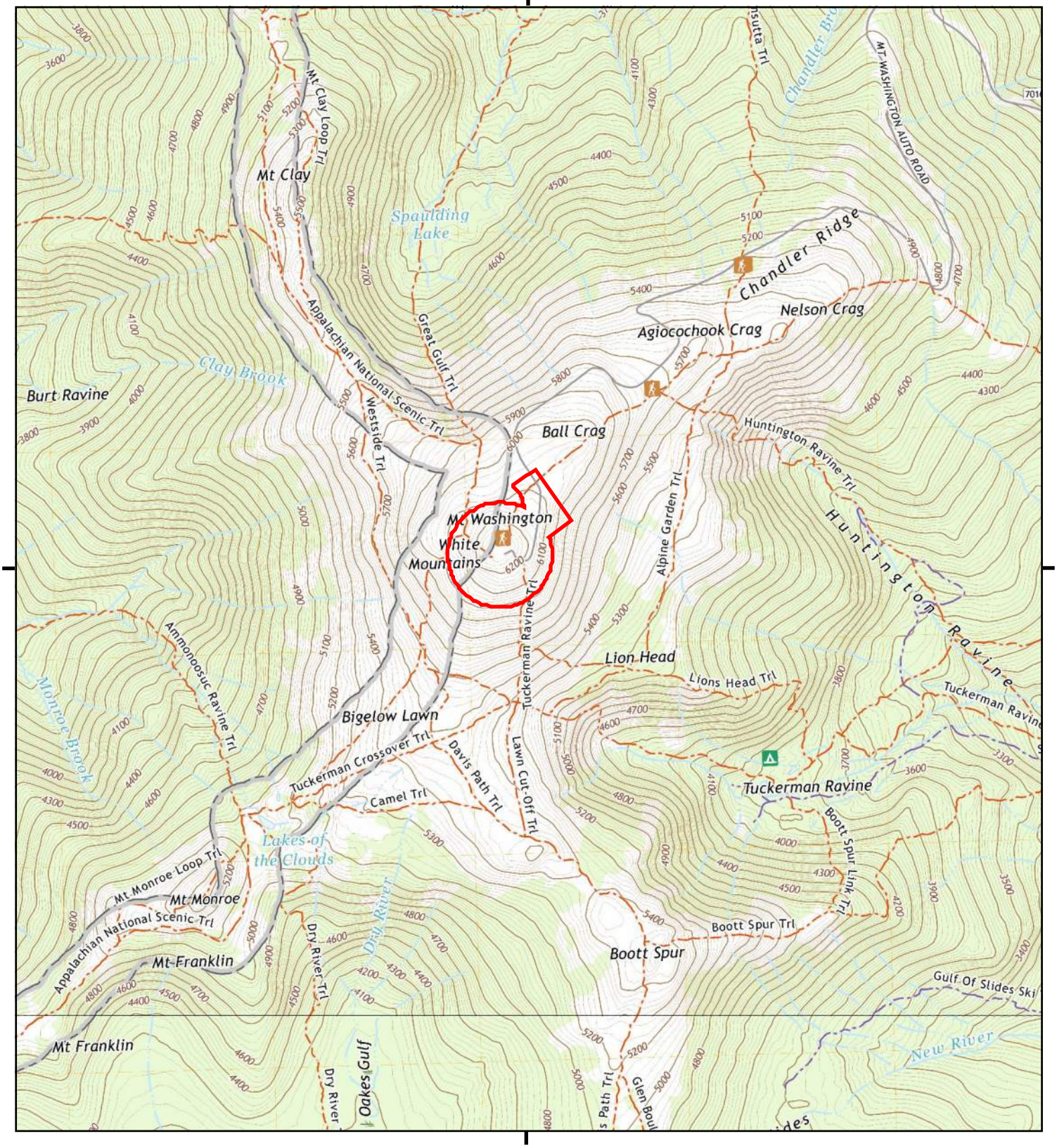
Mt. Washington
1896
15-minute, 62500

Crawford Notch
1896
15-minute, 62500

1893, 1895 Source Sheets

Mt. Washington
1893
15-minute, 62500

Crawford Notch
1895
15-minute, 62500



This report includes information from the following map sheet(s).

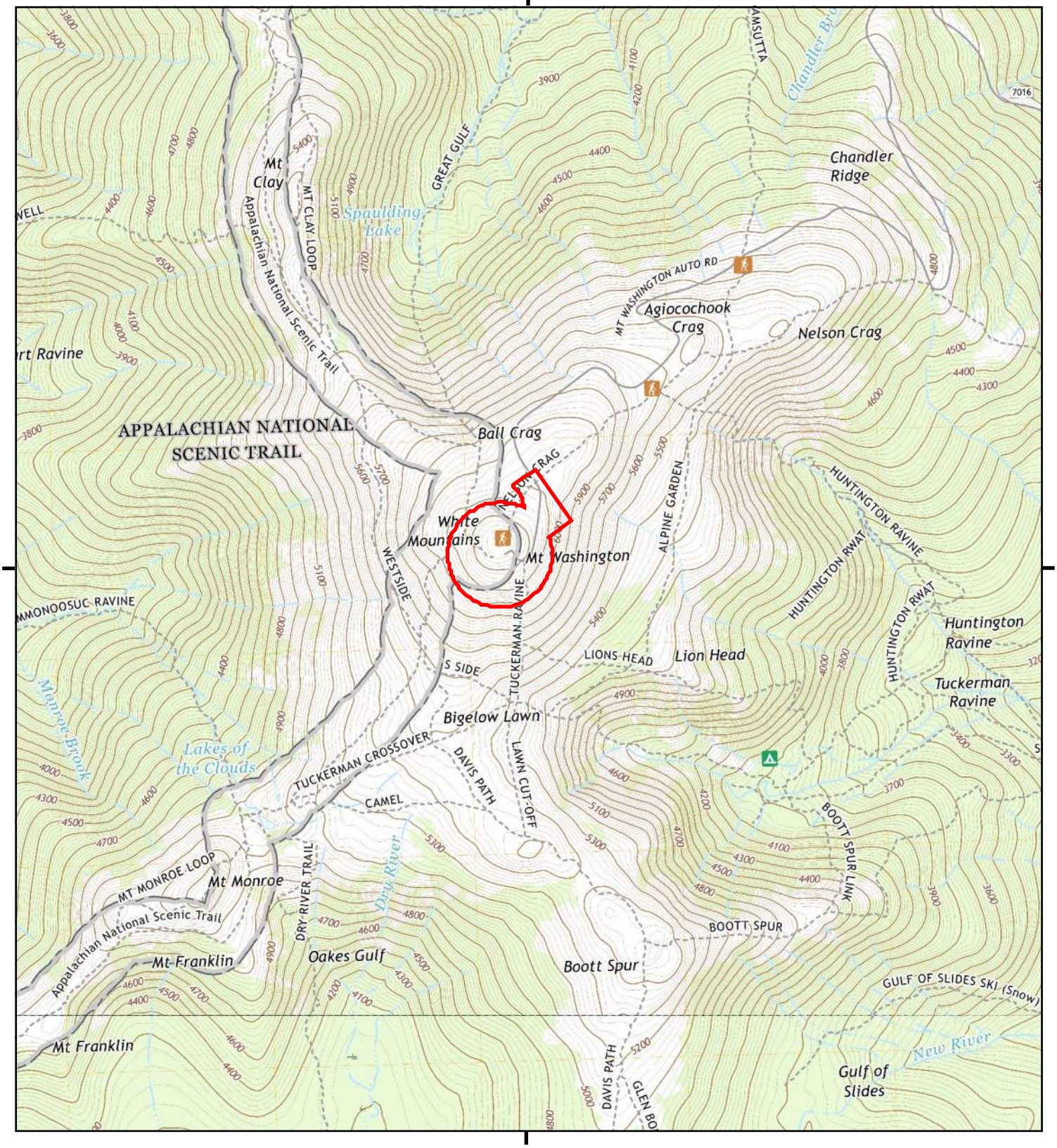
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Mount Washington, 2021, 7.5-minute
S, Stairs Mountain, 2021, 7.5-minute

SITE NAME: Mt. Washington State Park Assessment
ADDRESS: 1598 Mt. Washington Auto Road
Sargents Purchase, NH 00176
CLIENT: Tighe & Bond

N



This report includes information from the following map sheet(s).

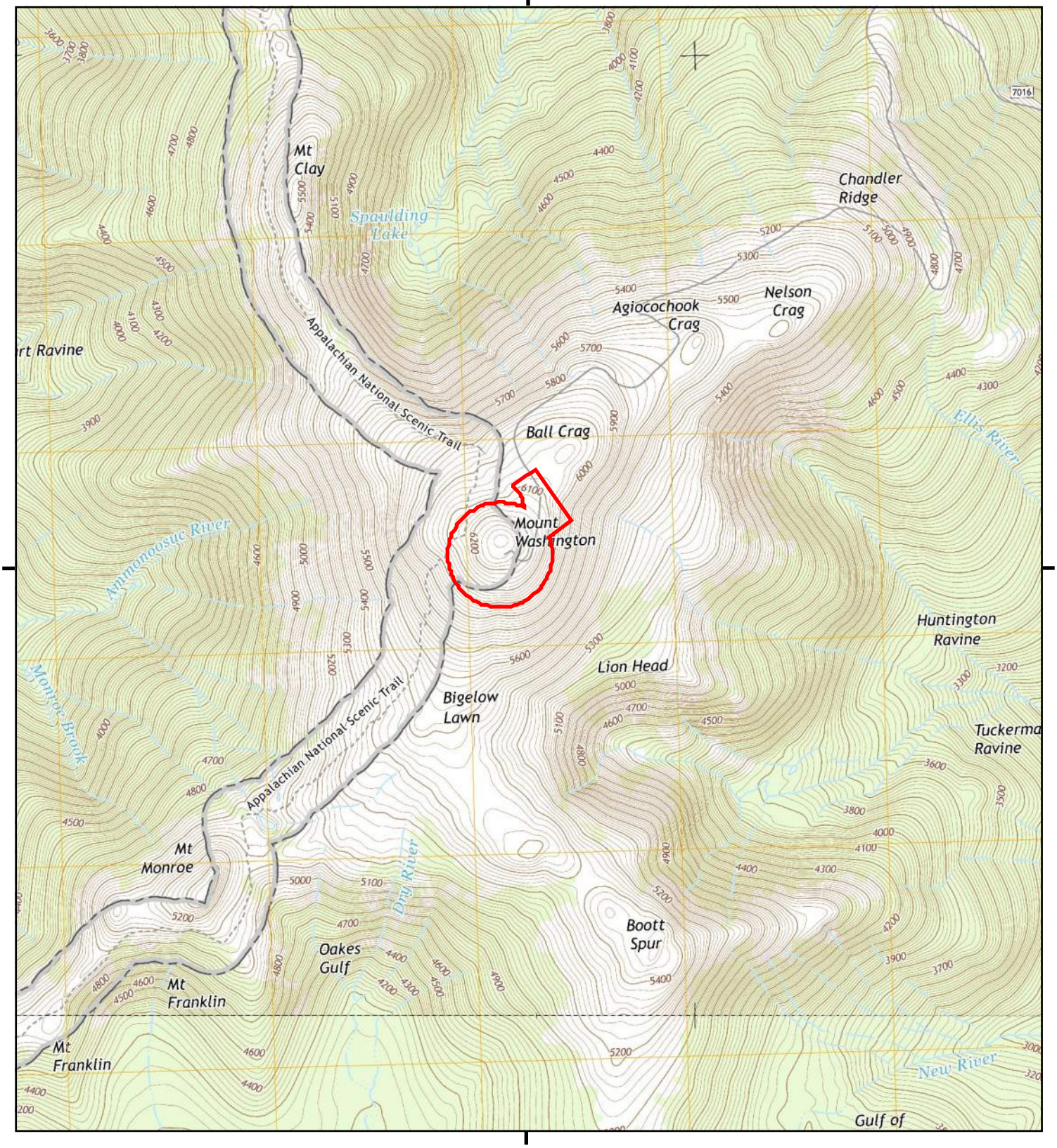
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Mount Washington, 2018, 7.5-minute
S, Stairs Mountain, 2018, 7.5-minute

SITE NAME: Mt. Washington State Park Assessment
ADDRESS: 1598 Mt. Washington Auto Road
Sargents Purchase, NH 00176
CLIENT: Tighe & Bond

N



This report includes information from the following map sheet(s).

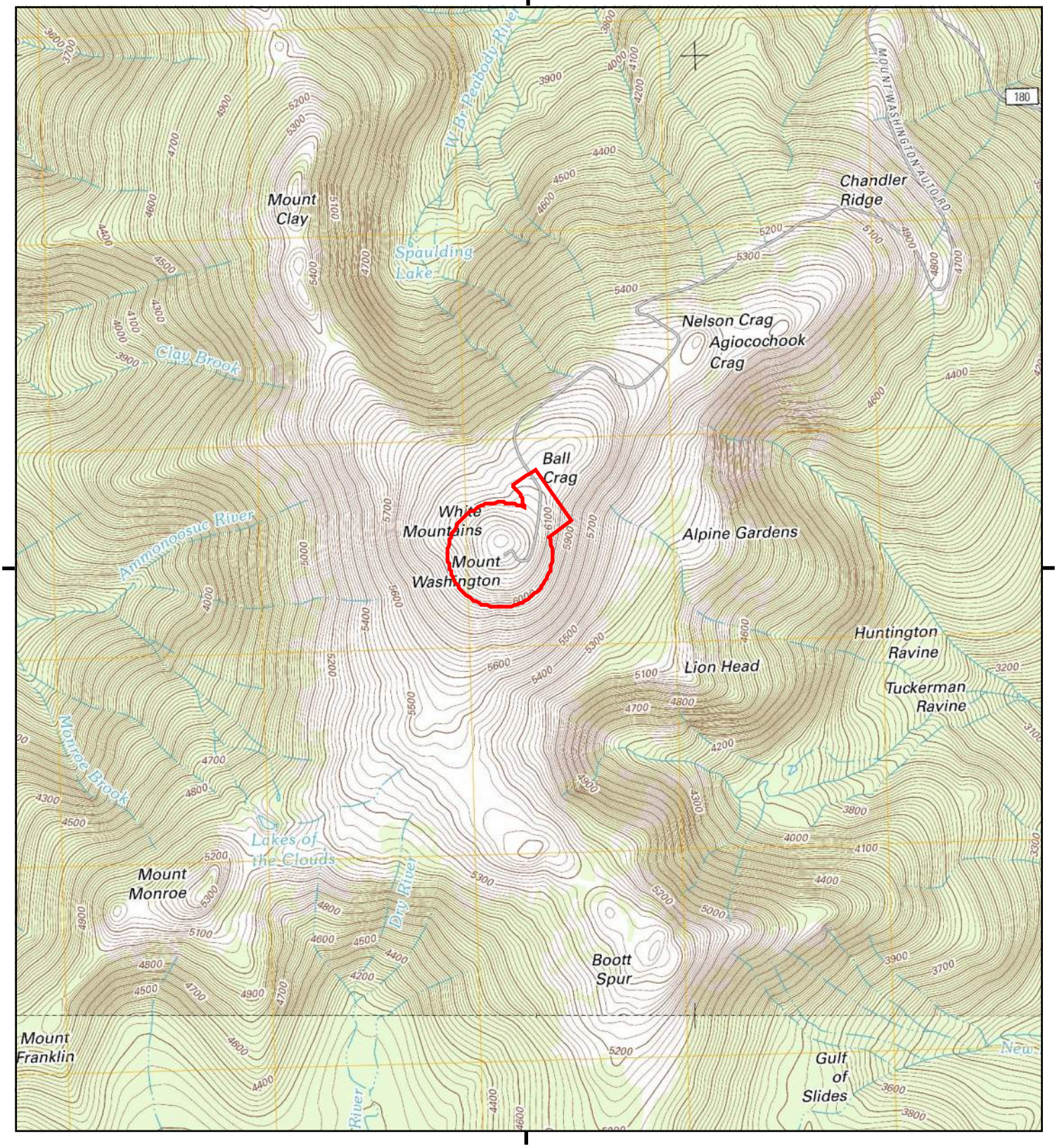
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Mount Washington, 2015, 7.5-minute
S, Stairs Mountain, 2015, 7.5-minute

SITE NAME: Mt. Washington State Park Assessment
ADDRESS: 1598 Mt. Washington Auto Road
Sargents Purchase, NH 00176
CLIENT: Tighe & Bond

N



This report includes information from the following map sheet(s).

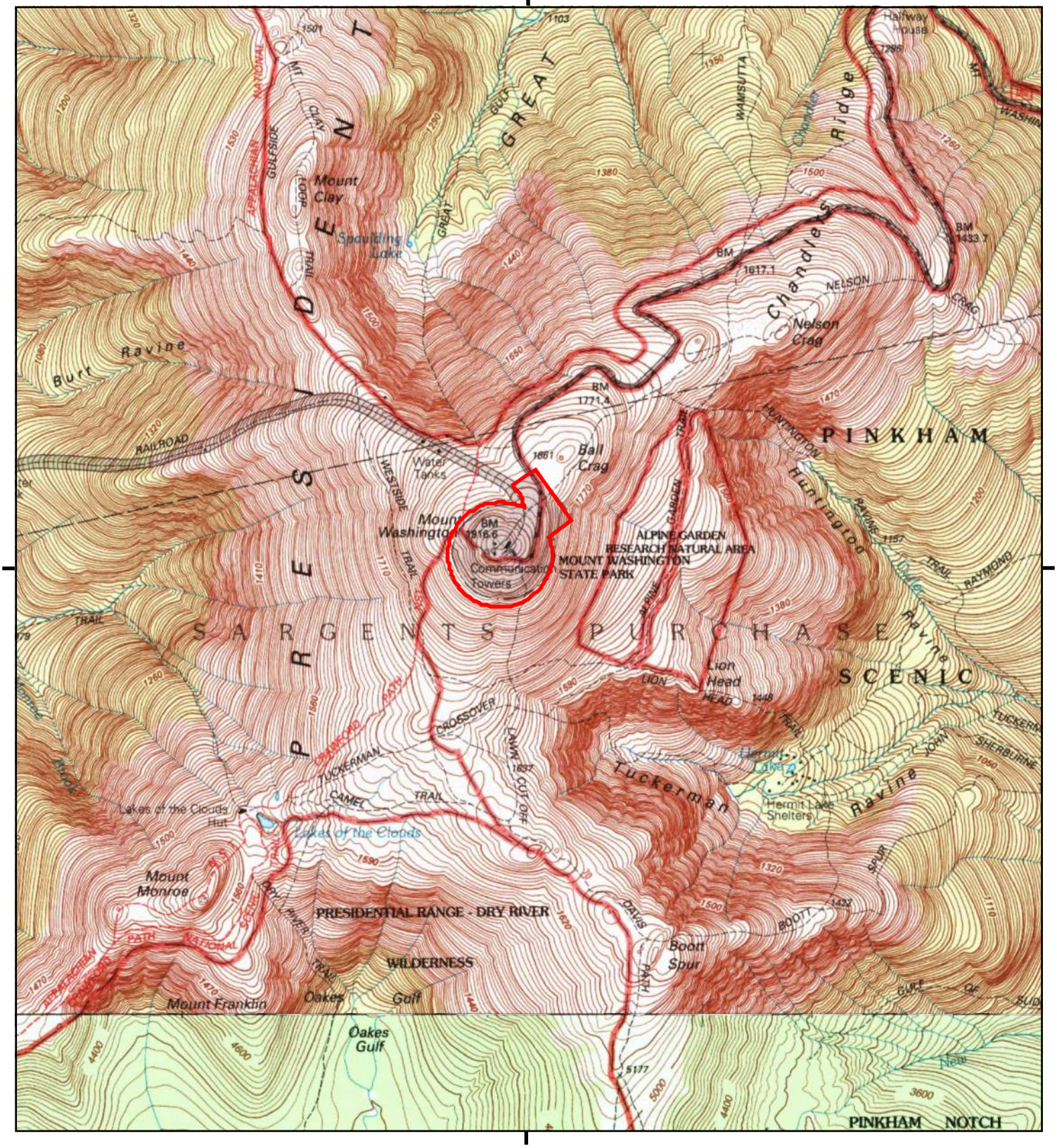
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Mount Washington, 2012, 7.5-minute
S, Stairs Mountain, 2012, 7.5-minute

SITE NAME: Mt. Washington State Park Assessment
ADDRESS: 1598 Mt. Washington Auto Road
Sargents Purchase, NH 00176
CLIENT: Tighe & Bond

N



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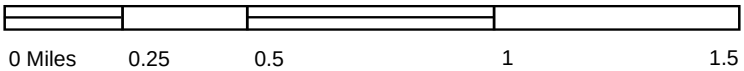
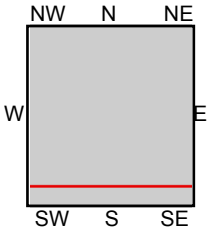
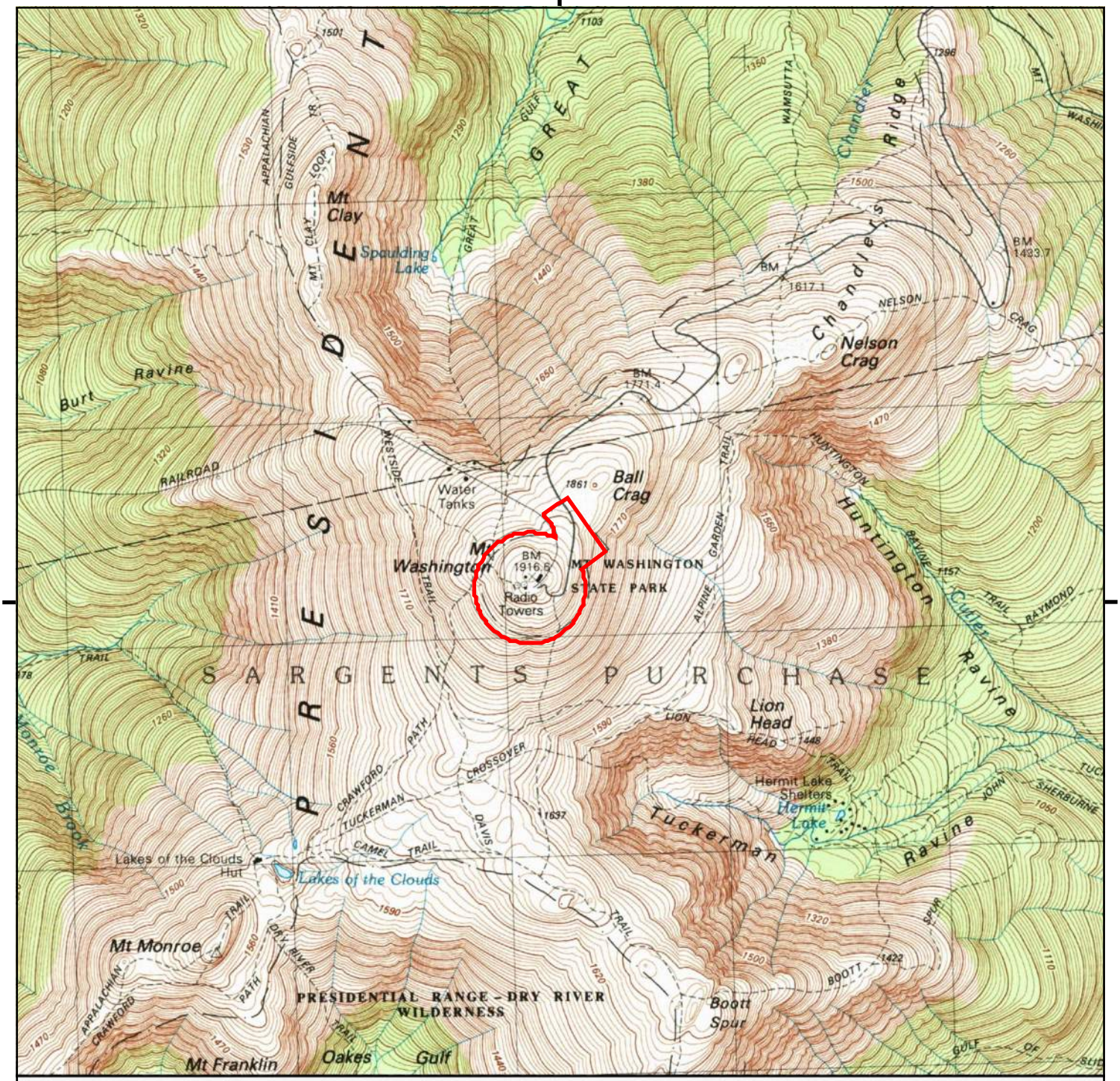




TP, Mount Washington, 1995, 7.5-minute
S, Stairs Mountain, 1995, 7.5-minute

SITE NAME: Mt. Washington State Park Assessment
ADDRESS: 1598 Mt. Washington Auto Road
Sargents Purchase, NH 00176
CLIENT: Tighe & Bond



This report includes information from the following map sheet(s).

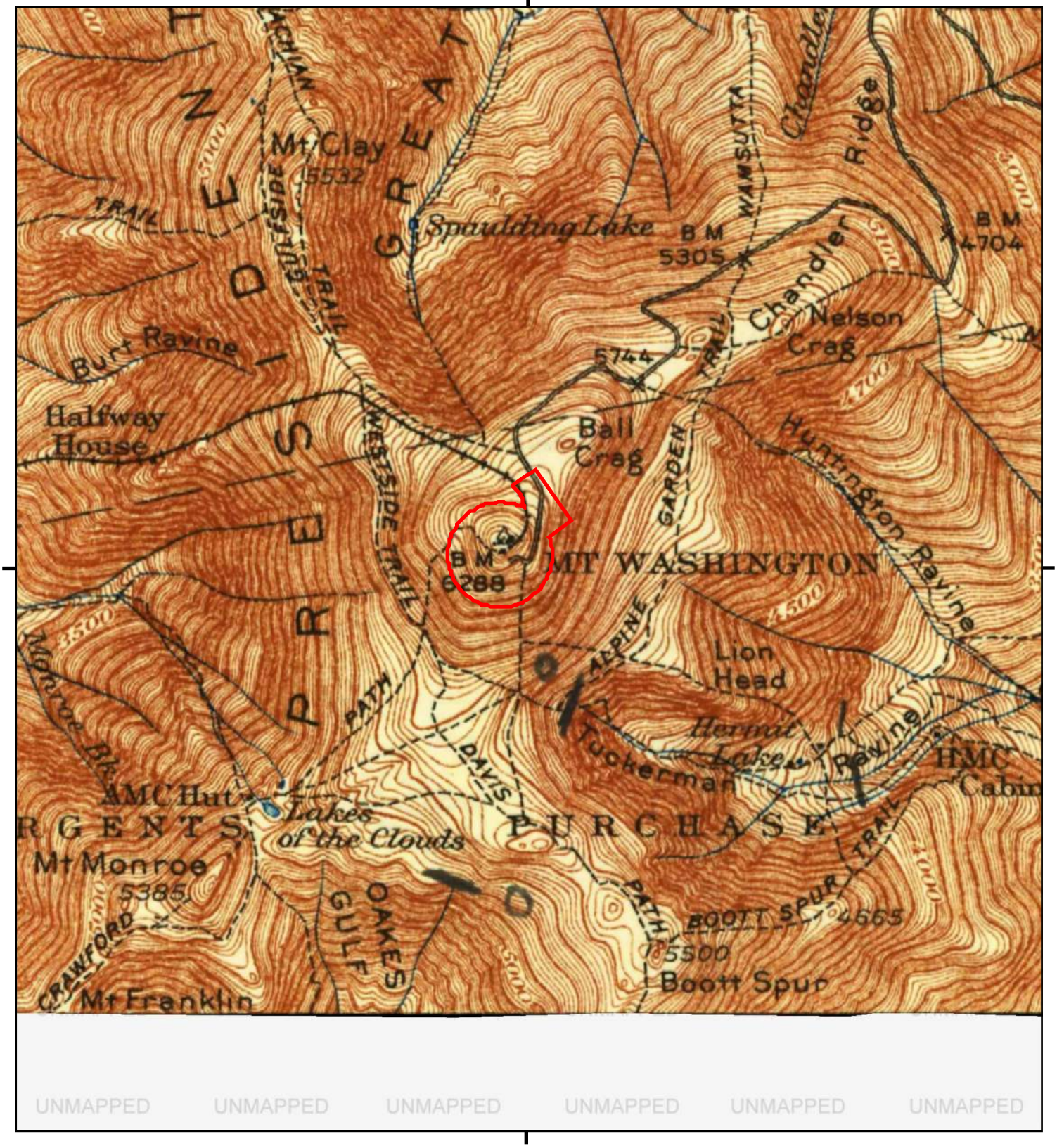
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Mt. Washington, 1982, 7.5-minute

SITE NAME: Mt. Washington State Park Assessment
ADDRESS: 1598 Mt. Washington Auto Road
Sargents Purchase, NH 00176
CLIENT: Tighe & Bond

N



This report includes information from the following map sheet(s).

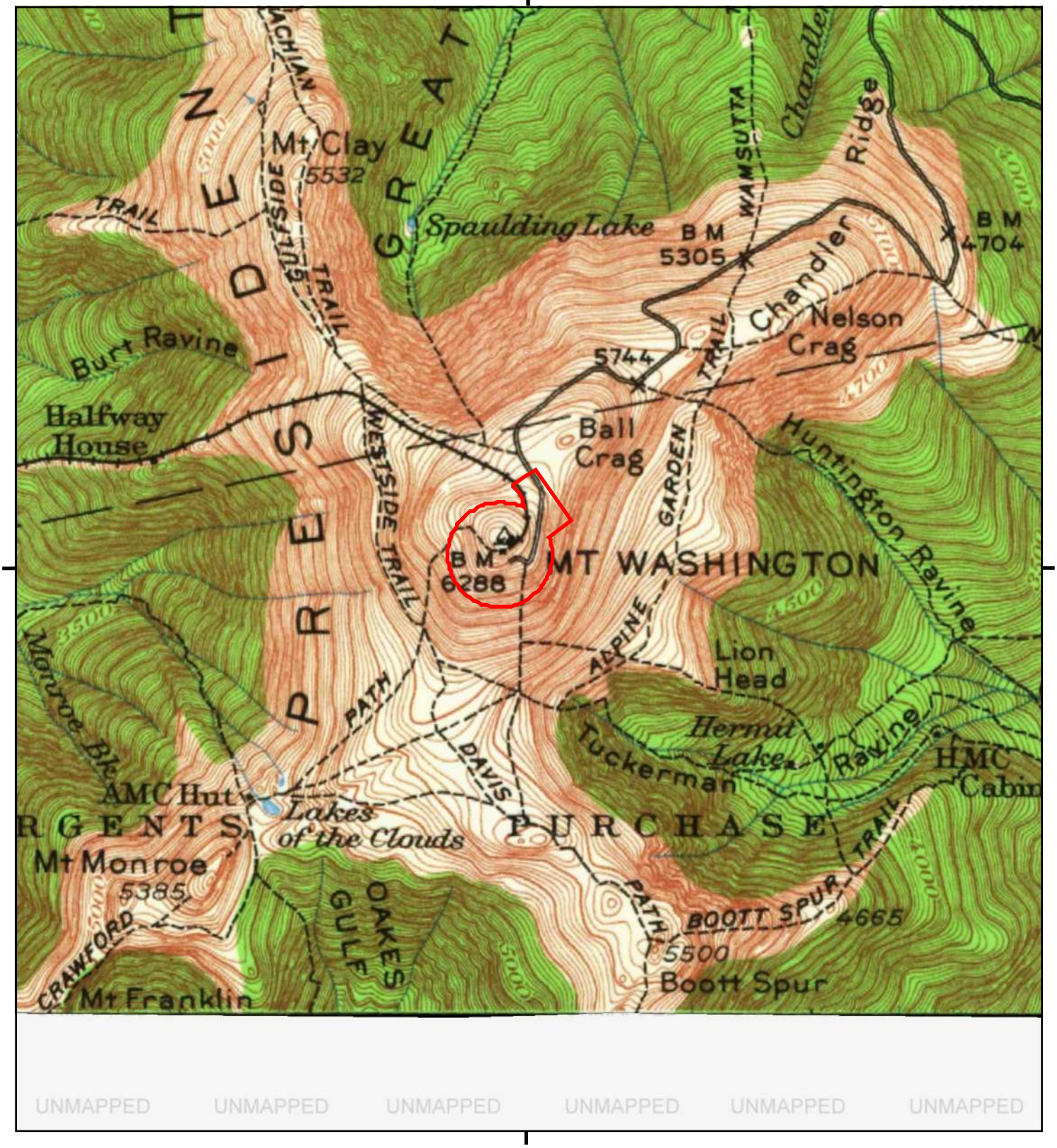
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Mt. Washington, 1938, 15-minute

SITE NAME: Mt. Washington State Park Assessment
ADDRESS: 1598 Mt. Washington Auto Road
Sargents Purchase, NH 00176
CLIENT: Tighe & Bond

N



This report includes information from the following map sheet(s).

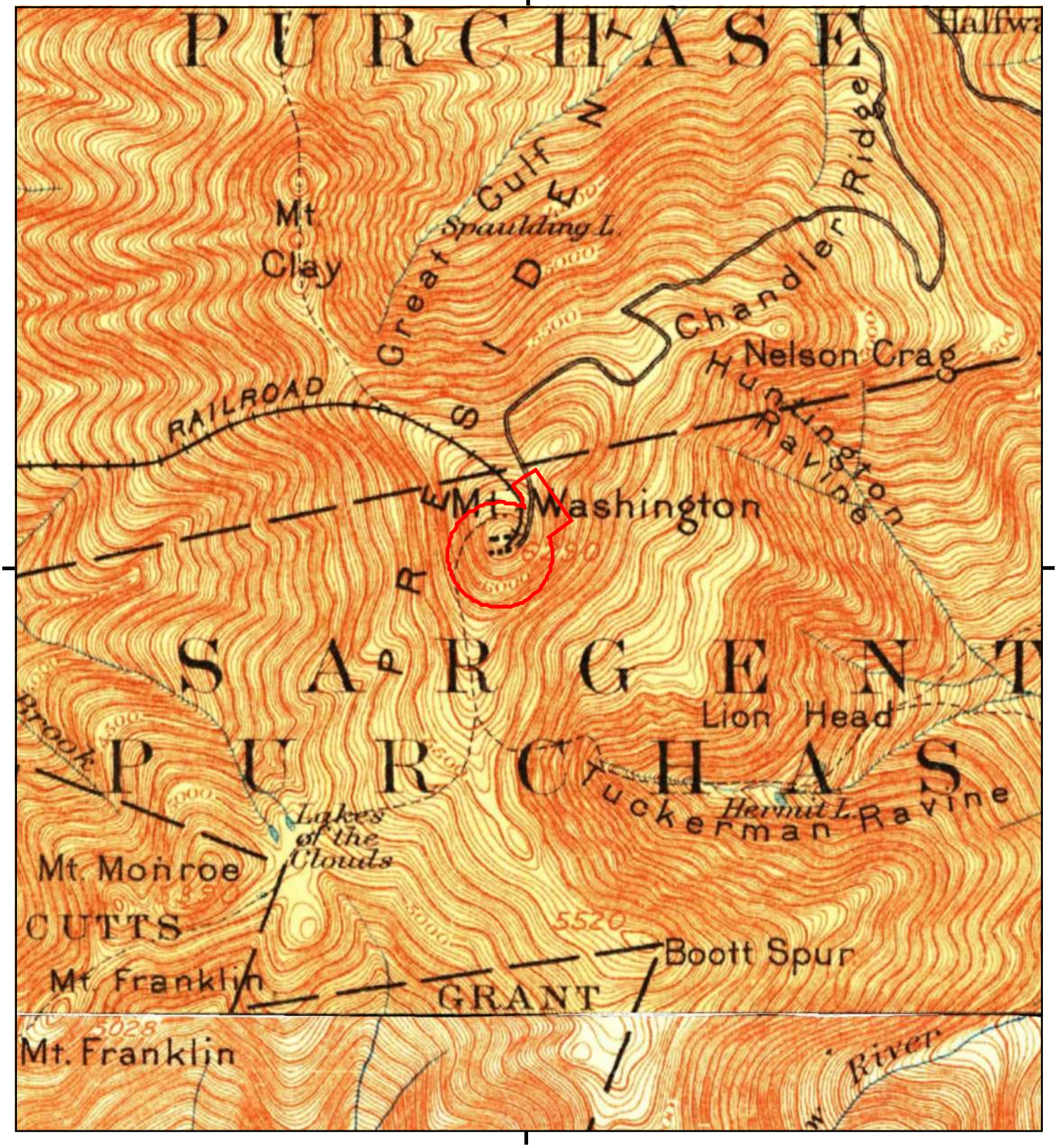
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Mt. Washington, 1935, 15-minute

SITE NAME: Mt. Washington State Park Assessment
ADDRESS: 1598 Mt. Washington Auto Road
Sargents Purchase, NH 00176
CLIENT: Tighe & Bond

N



This report includes information from the following map sheet(s).

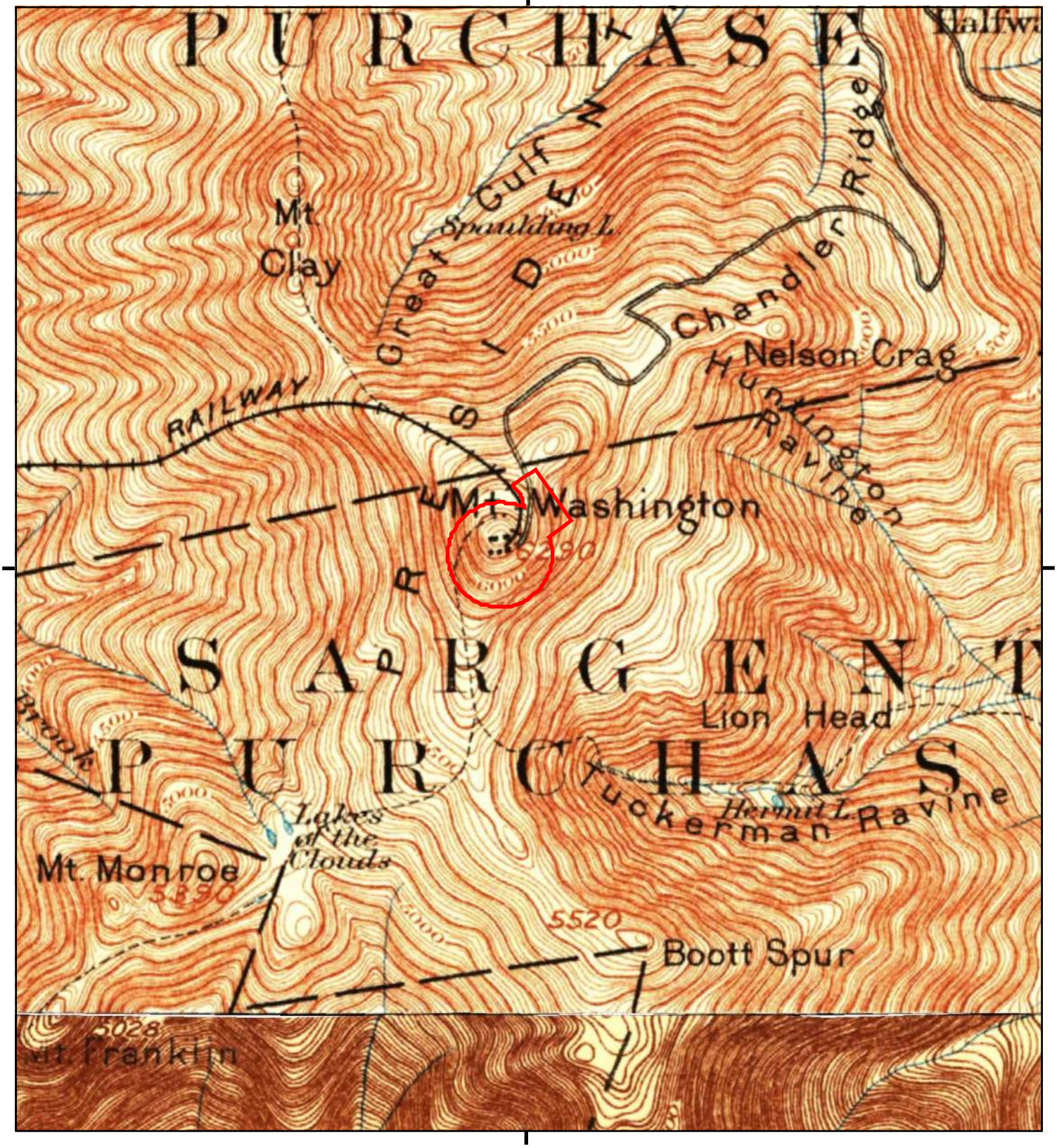
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Mt. Washington, 1896, 15-minute
S, Crawford Notch, 1896, 15-minute

SITE NAME: Mt. Washington State Park Assessment
ADDRESS: 1598 Mt. Washington Auto Road
Sargents Purchase, NH 00176
CLIENT: Tighe & Bond

N



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0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Mt. Washington, 1893, 15-minute
S, Crawford Notch, 1895, 15-minute

SITE NAME: Mt. Washington State Park Assessment
ADDRESS: 1598 Mt. Washington Auto Road
Sargents Purchase, NH 00176
CLIENT: Tighe & Bond

N

Mt. Washington State Park Assessment
1598 Mt. Washington Auto Road
Sargents Purchase, NH 00176

Inquiry Number: 7718481.2s
July 26, 2024

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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Map Findings	8
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GEOCHECK ADDENDUM

Physical Setting Source Addendum	A-1
Physical Setting Source Summary	A-2
Physical Setting Source Map	A-7
Physical Setting Source Map Findings	A-8
Physical Setting Source Records Searched	PSGR-1

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with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E1527 - 21), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E2247 - 16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E1528 - 22) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

1598 MT. WASHINGTON AUTO ROAD
SARGENTS PURCHASE, NH 00176

COORDINATES

Latitude (North):	44.2694190 - 44° 16' 9.90''
Longitude (West):	71.3016990 - 71° 18' 6.11''
Universal Tranverse Mercator:	Zone 19
UTM X (Meters):	316293.8
UTM Y (Meters):	4904157.5
Elevation:	6164 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	24165880 MOUNT WASHINGTON, NH
Version Date:	2021

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20180806
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
1598 MT. WASHINGTON AUTO ROAD
SARGENTS PURCHASE, NH 03589

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
1	ICING RES AX N CONWA		FUDS	Lower	309, 0.059, North

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal NPL (Superfund) sites

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Lists of Federal Delisted NPL sites

Delisted NPL ---------- National Priority List Deletions

Lists of Federal sites subject to CERCLA removals and CERCLA orders

FEDERAL FACILITY ---------- Federal Facility Site Information listing
SEMS ---------- Superfund Enterprise Management System

Lists of Federal CERCLA sites with NFRAP

SEMS-ARCHIVE ---------- Superfund Enterprise Management System Archive

Lists of Federal RCRA facilities undergoing Corrective Action

CORRACTS ---------- Corrective Action Report

Lists of Federal RCRA TSD facilities

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Lists of Federal RCRA generators

RCRA-LQG ---------- RCRA - Large Quantity Generators
RCRA-SQG ---------- RCRA - Small Quantity Generators
RCRA-VSQG ---------- RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

Federal institutional controls / engineering controls registries

LUCIS ---------- Land Use Control Information System

US ENG CONTROLS ..... Engineering Controls Sites List
US INST CONTROLS ..... Institutional Controls Sites List

Federal ERNS list

ERNS ..... Emergency Response Notification System

Lists of state- and tribal hazardous waste facilities

SHWS ..... Listing of All Sites

Lists of state and tribal landfills and solid waste disposal facilities

SWF/LF ..... Solid Waste Facility Information

Lists of state and tribal leaking storage tanks

LAST ..... Listing of All Sites
LUST ..... Listing of All Sites
INDIAN LUST ..... Leaking Underground Storage Tanks on Indian Land

Lists of state and tribal registered storage tanks

FEMA UST ..... Underground Storage Tank Listing
UST ..... Underground Storage Tank Registration Data
AST ..... Registered Aboveground Petroleum Storage Tank Database
INDIAN UST ..... Underground Storage Tanks on Indian Land

State and tribal institutional control / engineering control registries

INST CONTROL ..... Activity and Use Restrictions

Lists of state and tribal voluntary cleanup sites

VCP ..... Voluntary Cleanup Program Sites
INDIAN VCP ..... Voluntary Cleanup Priority Listing

Lists of state and tribal brownfield sites

BROWNFIELDS ..... Brownfields Sites

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ..... A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

SWRCY ..... Recycling Centers
INDIAN ODI ..... Report on the Status of Open Dumps on Indian Lands
ODI ..... Open Dump Inventory
DEBRIS REGION 9 ..... Torres Martinez Reservation Illegal Dump Site Locations
IHS OPEN DUMPS ..... Open Dumps on Indian Land

EXECUTIVE SUMMARY

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL	Delisted National Clandestine Laboratory Register
ALLSITES	Site Remediation & Groundwater Hazard Inventory Listing of All Sites
CDL	Clandestine Drug Lab Listing
US CDL	National Clandestine Laboratory Register

Local Land Records

LIENS	Environmental Liens Information Listing
LIENS 2	CERCLA Lien Information

Records of Emergency Release Reports

HMIRS	Hazardous Materials Information Reporting System
SPILLS	Listing of All Sites
SPILLS 90	SPILLS 90 data from FirstSearch

Other Ascertainable Records

RCRA NonGen / NLR	RCRA - Non Generators / No Longer Regulated
DOD	Department of Defense Sites
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR	Financial Assurance Information
EPA WATCH LIST	EPA WATCH LIST
2020 COR ACTION	2020 Corrective Action Program List
TSCA	Toxic Substances Control Act
TRIS	Toxic Chemical Release Inventory System
SSTS	Section 7 Tracking Systems
ROD	Records Of Decision
RMP	Risk Management Plans
RAATS	RCRA Administrative Action Tracking System
PRP	Potentially Responsible Parties
PADS	PCB Activity Database System
ICIS	Integrated Compliance Information System
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS	Material Licensing Tracking System
COAL ASH DOE	Steam-Electric Plant Operation Data
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER	PCB Transformer Registration Database
RADINFO	Radiation Information Database
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS	Incident and Accident Data
CONSENT	Superfund (CERCLA) Consent Decrees
INDIAN RESERV	Indian Reservations
FUSRAP	Formerly Utilized Sites Remedial Action Program
UMTRA	Uranium Mill Tailings Sites
LEAD SMELTERS	Lead Smelter Sites
US AIRS	Aerometric Information Retrieval System Facility Subsystem
US MINES	Mines Master Index File
ABANDONED MINES	Abandoned Mines
MINES MRDS	Mineral Resources Data System
FINDS	Facility Index System/Facility Registry System

ECHO ---------- Enforcement & Compliance History Information
DOCKET HWC ---------- Hazardous Waste Compliance Docket Listing
UXO ---------- Unexploded Ordnance Sites
FUELS PROGRAM ---------- EPA Fuels Program Registered Listing
PFAS NPL ---------- Superfund Sites with PFAS Detections Information
PFAS FEDERAL SITES ---------- Federal Sites PFAS Information
PFAS TSCA ---------- PFAS Manufacture and Imports Information
PFAS TRIS ---------- List of PFAS Added to the TRI
PFAS RCRA MANIFEST ---------- PFAS Transfers Identified In the RCRA Database Listing
PFAS ATSDR ---------- PFAS Contamination Site Location Listing
PFAS WQP ---------- Ambient Environmental Sampling for PFAS
PFAS PROJECT ---------- NORTHEASTERN UNIVERSITY PFAS PROJECT
PFAS NPDES ---------- Clean Water Act Discharge Monitoring Information
PFAS ECHO ---------- Facilities in Industries that May Be Handling PFAS Listing
PFAS ECHO FIRE TRAIN ---------- Facilities in Industries that May Be Handling PFAS Listing
PFAS PT 139 AIRPORT ---------- All Certified Part 139 Airports PFAS Information Listing
AQUEOUS FOAM NRC ---------- Aqueous Foam Related Incidents Listing
BIOSOLIDS ---------- ICIS-NPDES Biosolids Facility Data
UST FINDER RELEASE ---------- UST Finder Releases Database
UST FINDER ---------- UST Finder Database
E MANIFEST ---------- Hazardous Waste Electronic Manifest System
PFAS ---------- PFAS Contamination Site Location Listing
AQUEOUS FOAM ---------- Aqueous Film Forming Foam Release Investigations Listing
AIRS ---------- Permitted Airs Facility Listing
ASBESTOS ---------- ASBESTOS
DRYCLEANERS ---------- Listing of Drycleaners
Financial Assurance ---------- Financial Assurance Information Listing
LEAD ---------- Lead Inspection Database
MANIFEST ---------- Hazardous Waste Manifest Information Listing
NPDES ---------- NPDES Permit Listing

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP ---------- EDR Proprietary Manufactured Gas Plants
EDR Hist Auto ---------- EDR Exclusive Historical Auto Stations
EDR Hist Cleaner ---------- EDR Exclusive Historical Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA HWS ---------- Recovered Government Archive State Hazardous Waste Facilities List
RGA LF ---------- Recovered Government Archive Solid Waste Facilities List
RGA LUST ---------- Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

EXECUTIVE SUMMARY

ADDITIONAL ENVIRONMENTAL RECORDS

Other Ascertainable Records

FUDS: The Listing includes locations of Formerly Used Defense Sites Properties where the US Army Corps Of Engineers is actively working or will take necessary cleanup actions.

A review of the FUDS list, as provided by EDR, and dated 01/30/2024 has revealed that there is 1 FUDS site within approximately 1 mile of the target property.

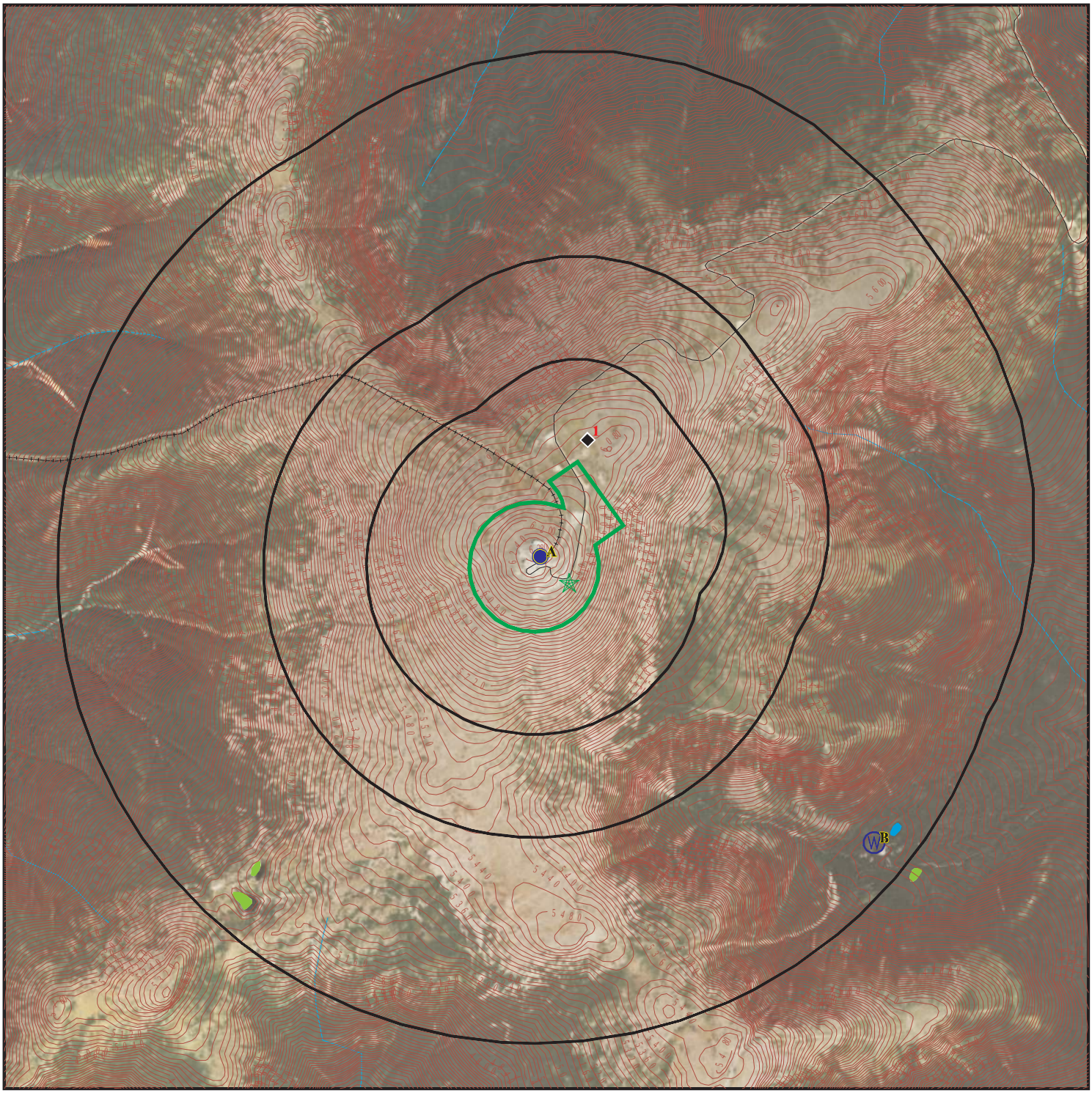
Lower Elevation	Address	Direction / Distance	Map ID	Page
ICING RES AX N CONWA		N 0 - 1/8 (0.059 mi.)	1	8

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 4 records.

Site Name	Database(s)
MT WASHINGTON STATE PARK WWTF	ALLSITES, PFAS
NH DNCR MOUNT WASHINGTON STATE PAR	AIRS
MOUNT WASHINGTON STATE PARK	UST, AST
MT WASHINGTON STATE PARK	FINDS

OVERVIEW MAP - 7718481.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

0 1/4 1/2 1 Miles

Indian Reservations BIA

Special Flood Hazard Area (1%)

0.2% Annual Chance Flood Hazard

National Wetland Inventory

State Wetlands

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Mt. Washington State Park Assessment	CLIENT:	Tighe & Bond
ADDRESS:	1598 Mt. Washington Auto Road Sargents Purchase NH 00176	CONTACT:	Michael Trovato
LAT/LONG:	44.269419 / 71.301699	INQUIRY #:	7718481.2s
		DATE:	July 26, 2024 10:05 am

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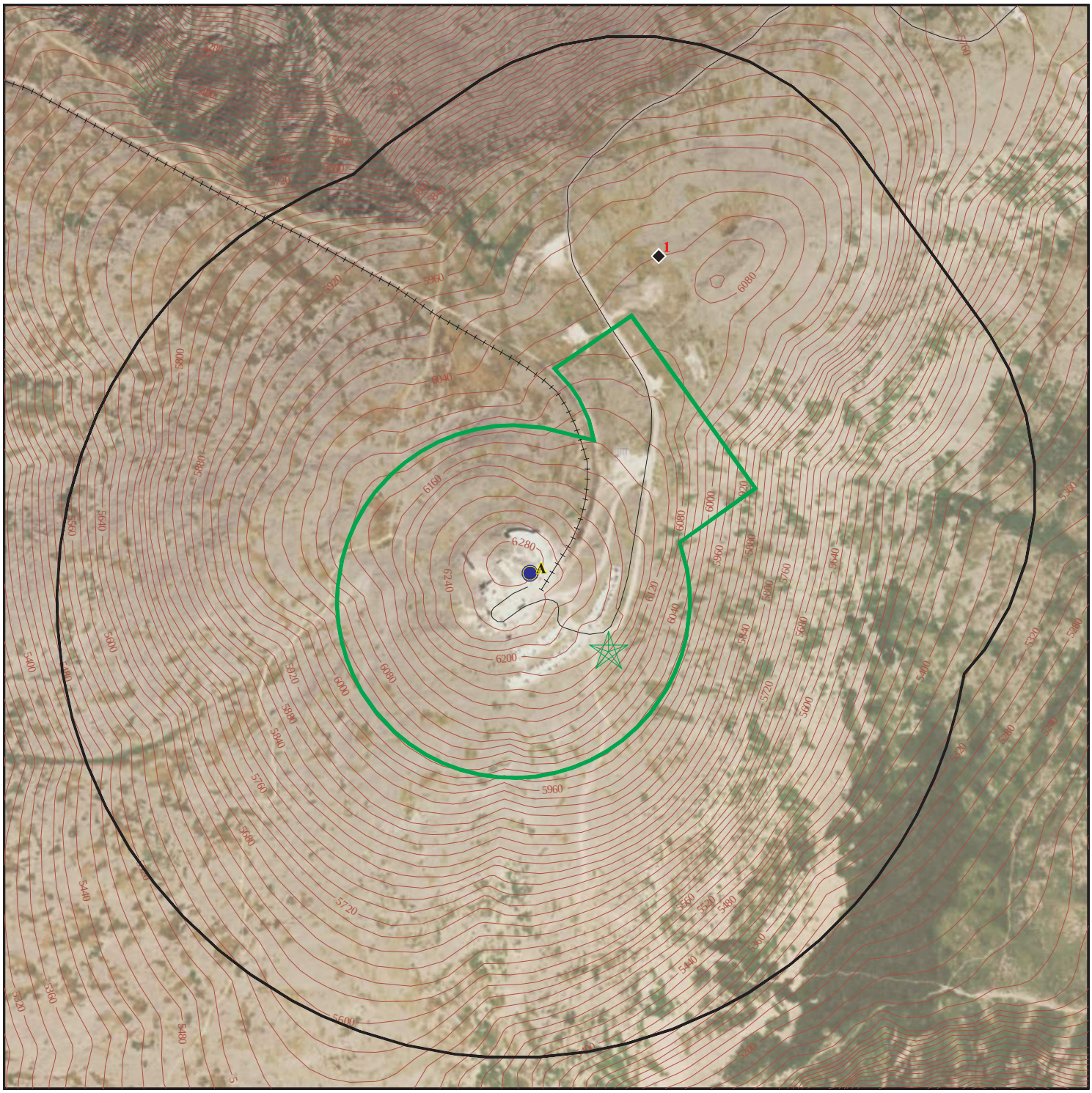
DETAIL MAP - 7718481.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

Sensitive Receptors

National Priority List Sites

Dept. Defense Sites

0 1/16 1/8 1/4 Miles

Indian Reservations BIA

Special Flood Hazard Area (1%)

0.2% Annual Chance Flood Hazard

N

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Mt. Washington State Park Assessment	CLIENT:	Tighe & Bond
ADDRESS:	1598 Mt. Washington Auto Road Sargents Purchase NH 00176	CONTACT:	Michael Trovato
LAT/LONG:	44.269419 / 71.301699	INQUIRY #:	7718481.2s
		DATE:	July 26, 2024 10:06 am

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Lists of Federal NPL (Superfund) sites								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
Lists of Federal Delisted NPL sites								
Delisted NPL	1.000		0	0	0	0	NR	0
Lists of Federal sites subject to CERCLA removals and CERCLA orders								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Lists of Federal CERCLA sites with NFRAP								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Lists of Federal RCRA facilities undergoing Corrective Action								
CORRACTS	1.000		0	0	0	0	NR	0
Lists of Federal RCRA TSD facilities								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Lists of Federal RCRA generators								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-VSQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROLS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	TP		NR	NR	NR	NR	NR	0
Lists of state- and tribal hazardous waste facilities								
SHWS	1.000		0	0	0	0	NR	0
Lists of state and tribal landfills and solid waste disposal facilities								
SWF/LF	0.500		0	0	0	NR	NR	0
Lists of state and tribal leaking storage tanks								
LAST	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
LUST	0.500		0	0	0	NR	NR	0
INDIAN LUST	0.500		0	0	0	NR	NR	0
Lists of state and tribal registered storage tanks								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		0	0	NR	NR	NR	0
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
INST CONTROL	0.500		0	0	0	NR	NR	0
Lists of state and tribal voluntary cleanup sites								
VCP	0.500		0	0	0	NR	NR	0
INDIAN VCP	0.500		0	0	0	NR	NR	0
Lists of state and tribal brownfield sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
SWRCY	0.500		0	0	0	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	TP		NR	NR	NR	NR	NR	0
ALLSITES	0.500		0	0	0	NR	NR	0
CDL	TP		NR	NR	NR	NR	NR	0
US CDL	TP		NR	NR	NR	NR	NR	0
Local Land Records								
LIENS	TP		NR	NR	NR	NR	NR	0
LIENS 2	TP		NR	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
SPILLS	TP		NR	NR	NR	NR	NR	0
SPILLS 90	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
FUDS	1.000		1	0	0	0	NR	1
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
MINES MRDS	0.250		0	0	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
ECHO	TP		NR	NR	NR	NR	NR	0
DOCKET HWC	TP		NR	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
PFAS NPL	0.250		0	0	NR	NR	NR	0
PFAS FEDERAL SITES	0.250		0	0	NR	NR	NR	0
PFAS TSCA	0.250		0	0	NR	NR	NR	0
PFAS TRIS	0.250		0	0	NR	NR	NR	0
PFAS RCRA MANIFEST	0.250		0	0	NR	NR	NR	0
PFAS ATSDR	0.250		0	0	NR	NR	NR	0
PFAS WQP	0.250		0	0	NR	NR	NR	0
PFAS PROJECT	0.250		0	0	NR	NR	NR	0
PFAS NPDES	0.250		0	0	NR	NR	NR	0
PFAS ECHO	0.250		0	0	NR	NR	NR	0
PFAS ECHO FIRE TRAIN	0.250		0	0	NR	NR	NR	0
PFAS PT 139 AIRPORT	0.250		0	0	NR	NR	NR	0
AQUEOUS FOAM NRC	0.250		0	0	NR	NR	NR	0
BIOSOLIDS	TP		NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
UST FINDER RELEASE	0.500		0	0	0	NR	NR	0
UST FINDER	0.250		0	0	NR	NR	NR	0
E MANIFEST	0.250		0	0	NR	NR	NR	0
PFAS	0.250		0	0	NR	NR	NR	0
AQUEOUS FOAM	0.250		0	0	NR	NR	NR	0
AIRS	TP		NR	NR	NR	NR	NR	0
ASBESTOS	TP		NR	NR	NR	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
Financial Assurance	TP		NR	NR	NR	NR	NR	0
LEAD	TP		NR	NR	NR	NR	NR	0
MANIFEST	0.250		0	0	NR	NR	NR	0
NPDES	TP		NR	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA HWS	TP		NR	NR	NR	NR	NR	0
RGA LF	TP		NR	NR	NR	NR	NR	0
RGA LUST	TP		NR	NR	NR	NR	NR	0
- Totals --		0	1	0	0	0	0	1

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

1
North
< 1/8
0.059 mi.
309 ft.

ICING RES AX N CONWAY
GORHAM, NH

FUDS **1010309758**
N/A

Relative:
Lower

Actual:
6060 ft.

FUDS:

EPA Region:	01
Installation ID:	NH19799F209200
Congressional District Number:	2
Name:	ICING RES AX N CONWAY
FUDS Number:	D01NH0308
City:	GORHAM
State:	NH
County:	COOS
Object ID:	4959
USACE Division:	NAD
USACE District:	New England District (NAE)
Status:	Properties with all projects at site closeout
Current Owner:	OTHER: OTHER
EMS Map Link:	https://fudsportal.usace.army.mil/ems/inventory/map?id=61773
Eligibility:	Eligible
Has Projects:	Yes
NPL Status:	Not reported
Project Required:	Yes
Feature Description:	The site consisted of approximately 37 acres. A permit and amendment issued by the USDA allowed use of 22.64 acres on the summit, 2.9 acres along the auto road, and five shelters totaling .01 acres along the summit road between 1950 and 1952. A 4/17/1953 declaration of taking conveyed 9.51 acres of land on the top of the mountain to the Air Force. An 8/10/1954 amendment excepted .5 acres from the 9.51 acre tract. Addition property was acquired by land lease. One for E. Libby and Son Co. for 2 acres and .11 acres 1/1/1956. The other from the Mount Washington Summit Road Co. for .03 acres 1/1/1956. The Air Force closed the site effective 6/15/1964. The USDA permit was terminated sometime between 1964 and 1967. The permit stated that the Air Force had to remove all structures and improvements from the site. A USDA Forest Service Memorandum dated 9/8/1967 indicated that all conditions regarding the disposal of existing buildings and restoration were met by the Air Force. The leasehold that had been condemned was terminated 6/30/1957. The land lease from E. Libby & Sons was terminated 11/30/1961. The land lease from the Mount Washington Summit Road Company was terminated 11/30/1961. The Mount Washington Summit Road Company currently owns the 2.0 acre, 0.11acre, and 0.03 acre tracts; Dartmouth College owns the 8.2-acre tract and the USDA Forest Service owns the remaining tracts.
Latitude:	44.274502
Longitude:	-71.300797

FUDS Detail as of Jan 2015:

Fiscal Year:	2013
Federal Facility ID:	NH9799F2092
RAB:	Not reported
NPL Status:	Not Listed
Description:	The former Mount Washington Icing Research Facility (Mount Washington Climatic Projects Laboratory) is located on portions of Sargents Purchase, Chandlers Purchase, Thompsons & Meserves Purchase, and Greens Grant, NH. The site was used by the Air Force Materiel Command for aeronautical research projects. The Air Force built a climatic laboratory, light storage building, dormitory, helicopter test and

ICING RES AX N CONWAY (Continued) **1010309758**

control building, helicopter test stand, helicopter pad, radome pad, an aboveground tank farm with pumphouse, and underground fuel tanks.

History: The site consisted of approximately 37 acres. A permit and amendment issued by the USDA allowed use of 22.64 acres on the summit, 2.9 acres along the auto road, and five shelters totaling .01 acres along the summit road between 1950 and 1952. A 4/17/1953 declaration of taking conveyed 9.51 acres of land on the top of the mountain to the Air Force. An 8/10/1954 amendment excepted .5 acres from the 9.51 acre tract. Addition property was acquired by land lease. One for E. Libby and Son Co. for 2 acres and .11 acres 1/1/1956. The other from the Mount Washington Summit Road Co. for .03 acres 1/1/1956. The Air Force closed the site effective 6/15/1964. The USDA permit was terminated sometime between 1964 and 1967. The permit stated that the Air Force had to remove all structures and improvements from the site. A USDA Forest Service Memorandum dated 9/8/1967 indicated that all conditions regarding the disposal of existing buildings and restoration were met by the Air Force. The leasehold that had been condemned was terminated 6/30/1957. The land lease from E. Libby & Sons was terminated 11/30/1961. The land lease from the Mount Washington Summit Road Company was terminated 11/30/1961. The Mount Washington Summit Road Company currently owns the 2.0 acre, 0.11acre, and 0.03 acre tracts; Dartmouth College owns the 8.2-acre tract and the USDA Forest Service owns the remaining tracts.

CTC: 71
Current Program: Not reported
Future Program: Not reported
Institutional ID: 61773

Count: 4 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
SARGENTS PURCHASE	S105772883	MT WASHINGTON STATE PARK WWTF	SUMMIT - MT WASHINGTON		ALLSITES, PFAS
SARGENTS PURCHASE	U001555816	MOUNT WASHINGTON STATE PARK	SUMMIT OF MOUNT WASHINGTON		UST, AST
SARGENTS PURCHASE	S123799085	NH DNCR MOUNT WASHINGTON STATE PAR	MT WASHINGTON AUTO RD	03589	AIRS
SARGENTSPURCHAS	1016612385	MT WASHINGTON STATE PARK	WASHINGTON AUTO RD	03589	FINDS

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal NPL (Superfund) sites

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 05/22/2024
Date Data Arrived at EDR: 06/03/2024
Date Made Active in Reports: 06/26/2024
Number of Days to Update: 23

Source: EPA
Telephone: N/A
Last EDR Contact: 07/02/2024
Next Scheduled EDR Contact: 10/07/2024
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 05/22/2024
Date Data Arrived at EDR: 06/03/2024
Date Made Active in Reports: 06/26/2024
Number of Days to Update: 23

Source: EPA
Telephone: N/A
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 10/07/2024
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Lists of Federal Delisted NPL sites

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 05/22/2024
Date Data Arrived at EDR: 06/03/2024
Date Made Active in Reports: 06/26/2024
Number of Days to Update: 23

Source: EPA
Telephone: N/A
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 10/07/2024
Data Release Frequency: Quarterly

Lists of Federal sites subject to CERCLA removals and CERCLA orders

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 03/25/2024
Date Data Arrived at EDR: 03/26/2024
Date Made Active in Reports: 06/24/2024
Number of Days to Update: 90

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 06/25/2024
Next Scheduled EDR Contact: 10/07/2024
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 04/22/2024
Date Data Arrived at EDR: 05/01/2024
Date Made Active in Reports: 05/24/2024
Number of Days to Update: 23

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 10/21/2024
Data Release Frequency: Quarterly

Lists of Federal CERCLA sites with NFRAP

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 04/22/2024
Date Data Arrived at EDR: 05/01/2024
Date Made Active in Reports: 05/24/2024
Number of Days to Update: 23

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 10/21/2024
Data Release Frequency: Quarterly

Lists of Federal RCRA facilities undergoing Corrective Action

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 06/03/2024
Date Data Arrived at EDR: 06/07/2024
Date Made Active in Reports: 06/20/2024
Number of Days to Update: 13

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 06/07/2024
Next Scheduled EDR Contact: 09/30/2024
Data Release Frequency: Quarterly

Lists of Federal RCRA TSD facilities

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 06/03/2024
Date Data Arrived at EDR: 06/07/2024
Date Made Active in Reports: 06/20/2024
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 06/07/2024
Next Scheduled EDR Contact: 09/30/2024
Data Release Frequency: Quarterly

Lists of Federal RCRA generators

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/03/2024
Date Data Arrived at EDR: 06/07/2024
Date Made Active in Reports: 06/20/2024
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 06/07/2024
Next Scheduled EDR Contact: 09/30/2024
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 06/03/2024
Date Data Arrived at EDR: 06/07/2024
Date Made Active in Reports: 06/20/2024
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 06/07/2024
Next Scheduled EDR Contact: 09/30/2024
Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/03/2024
Date Data Arrived at EDR: 06/07/2024
Date Made Active in Reports: 06/20/2024
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 06/07/2024
Next Scheduled EDR Contact: 09/30/2024
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 02/14/2024
Date Data Arrived at EDR: 02/16/2024
Date Made Active in Reports: 04/04/2024
Number of Days to Update: 48

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 05/17/2024
Next Scheduled EDR Contact: 08/19/2024
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 02/13/2024
Date Data Arrived at EDR: 02/21/2024
Date Made Active in Reports: 04/04/2024
Number of Days to Update: 43

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 05/21/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 02/13/2024
Date Data Arrived at EDR: 02/21/2024
Date Made Active in Reports: 04/04/2024
Number of Days to Update: 43

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 05/21/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 03/13/2024
Date Data Arrived at EDR: 03/19/2024
Date Made Active in Reports: 06/17/2024
Number of Days to Update: 90

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 06/17/2024
Next Scheduled EDR Contact: 09/30/2024
Data Release Frequency: Quarterly

Lists of state- and tribal hazardous waste facilities

SHWS: Listing of All Sites

State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: 04/29/2024
Date Data Arrived at EDR: 05/01/2024
Date Made Active in Reports: 07/25/2024
Number of Days to Update: 85

Source: Department of Environmental Services
Telephone: 603-271-2919
Last EDR Contact: 07/25/2024
Next Scheduled EDR Contact: 11/11/2024
Data Release Frequency: Quarterly

Lists of state and tribal landfills and solid waste disposal facilities

SWF/LF: Solid Waste Facility Information

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 07/08/2024
Date Data Arrived at EDR: 07/08/2024
Date Made Active in Reports: 07/10/2024
Number of Days to Update: 2

Source: Department of Environmental Services
Telephone: 603-271-5380
Last EDR Contact: 07/03/2024
Next Scheduled EDR Contact: 10/21/2024
Data Release Frequency: Annually

Lists of state and tribal leaking storage tanks

LAST: Listing of All Sites

Leaking Aboveground Storage Tank Incident Reports.

Date of Government Version: 04/29/2024
Date Data Arrived at EDR: 05/01/2024
Date Made Active in Reports: 07/25/2024
Number of Days to Update: 85

Source: Department of Environmental Services
Telephone: 603-271-2975
Last EDR Contact: 07/25/2024
Next Scheduled EDR Contact: 11/11/2024
Data Release Frequency: Quarterly

LUST: Listing of All Sites

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 04/29/2024
Date Data Arrived at EDR: 05/01/2024
Date Made Active in Reports: 07/25/2024
Number of Days to Update: 85

Source: Department of Environmental Services
Telephone: 603-271-2975
Last EDR Contact: 07/25/2024
Next Scheduled EDR Contact: 11/11/2024
Data Release Frequency: Quarterly

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 10/25/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56
Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 10/25/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56
Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 10/25/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56
Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 10/04/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56
Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 10/25/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56
Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 10/25/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56
Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 10/25/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 10/25/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56
Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

Lists of state and tribal registered storage tanks

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 03/15/2024
Date Data Arrived at EDR: 03/19/2024
Date Made Active in Reports: 06/17/2024
Number of Days to Update: 90
Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 06/26/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Varies

UST: Underground Storage Tank Registration Data
Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 04/29/2024
Date Data Arrived at EDR: 05/01/2024
Date Made Active in Reports: 07/25/2024
Number of Days to Update: 85
Source: Department of Environmental Services
Telephone: 603-271-2975
Last EDR Contact: 07/25/2024
Next Scheduled EDR Contact: 11/11/2024
Data Release Frequency: Quarterly

AST: Registered Aboveground Petroleum Storage Tank Database
Registered Aboveground Storage Tanks.

Date of Government Version: 04/29/2024
Date Data Arrived at EDR: 04/30/2024
Date Made Active in Reports: 07/22/2024
Number of Days to Update: 83
Source: Department of Environmental Services
Telephone: 603-271-6058
Last EDR Contact: 07/25/2024
Next Scheduled EDR Contact: 11/11/2024
Data Release Frequency: Quarterly

INDIAN UST R4: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 10/24/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56
Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 10/24/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56
Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 10/24/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 10/24/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 10/17/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 10/24/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 10/24/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 10/24/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

State and tribal institutional control / engineering control registries

Inst Control: Activity and Use Restrictions
An inventory of sites where Activity and Use Restrictions have been utilized.

Date of Government Version: 03/12/2024
Date Data Arrived at EDR: 03/13/2024
Date Made Active in Reports: 06/06/2024
Number of Days to Update: 85
Source: Department of Environmental Services
Telephone: 603-271-2659
Last EDR Contact: 06/11/2024
Next Scheduled EDR Contact: 09/23/2024
Data Release Frequency: Semi-Annually

Lists of state and tribal voluntary cleanup sites

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142
Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 06/14/2024
Next Scheduled EDR Contact: 09/30/2024
Data Release Frequency: Varies

VCP: Voluntary Cleanup Program Sites
The program provides comprehensive liability protections to eligible persons who voluntarily assume responsibility for the cleanup of contaminated properties. The sites on the list are ones where persons have applied to participate in the program and in most cases have been deemed eligible.

Date of Government Version: 06/19/2023
Date Data Arrived at EDR: 06/20/2023
Date Made Active in Reports: 09/12/2023
Number of Days to Update: 84
Source: Department of Environmental Services
Telephone: 603-271-2183
Last EDR Contact: 07/16/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27
Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 07/08/2021
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

Lists of state and tribal brownfield sites

BROWNFIELDS: Brownfields Sites
Sites that have benefited from one or more brownfields initiative.

Date of Government Version: 04/29/2024
Date Data Arrived at EDR: 05/01/2024
Date Made Active in Reports: 07/25/2024
Number of Days to Update: 85
Source: Department of Environmental Services
Telephone: 603-271-6422
Last EDR Contact: 07/25/2024
Next Scheduled EDR Contact: 11/11/2024
Data Release Frequency: Varies

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites
Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 03/11/2024
Date Data Arrived at EDR: 03/12/2024
Date Made Active in Reports: 05/10/2024
Number of Days to Update: 59

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 06/11/2024
Next Scheduled EDR Contact: 09/23/2024
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

SWRCY: Recycling Centers
A listing of recycling center locations in the state of New Hampshire.

Date of Government Version: 04/09/2024
Date Data Arrived at EDR: 04/10/2024
Date Made Active in Reports: 07/09/2024
Number of Days to Update: 90

Source: Department of Environmental Services
Telephone: 603-271-0675
Last EDR Contact: 07/09/2024
Next Scheduled EDR Contact: 10/21/2024
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 07/22/2024
Next Scheduled EDR Contact: 11/04/2024
Data Release Frequency: Varies

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land
A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 07/18/2024
Next Scheduled EDR Contact: 11/04/2024
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register
A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 12/31/2023
Date Data Arrived at EDR: 02/21/2024
Date Made Active in Reports: 04/04/2024
Number of Days to Update: 43

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 05/21/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: No Update Planned

ALLSITES: Site Remediation & Groundwater Hazard Inventory Listing of All Sites

Provides information on sites in New Hampshire, with activities that either have resulted in groundwater contamination or pose a potential hazard to groundwater supplies. The regulated activities and groundwater hazards include: confirmed releases of oil or hazardous materials to the soil and/or groundwater as a result of discharges, spills, and removal of underground storage tanks; underground injection wells such as floor drains, leaching galleries, and septic systems anything other than domestic wastewater; large discharges of wastewater such as domestic wastewater septic systems which are designed to discharge more than 20,000 gpd, land application of wastewater treatment facility effluent (spray irrigation, rapid infiltration basins, etc.) and unlined septage and wastewater lagoons; unpermitted hazardous waste storage facilities; landfills and other waste repositories in which groundwater quality is at risk.

Date of Government Version: 04/29/2024
Date Data Arrived at EDR: 05/01/2024
Date Made Active in Reports: 07/25/2024
Number of Days to Update: 85

Source: Department of Environmental Services
Telephone: 603-271-3503
Last EDR Contact: 07/25/2024
Next Scheduled EDR Contact: 11/11/2024
Data Release Frequency: Quarterly

CDL: Clandestine Drug Lab Listing

A listing of clandestine drug lab site locations included in the Site Remediation and Groundwater Hazard Inventory.

Date of Government Version: 04/29/2024
Date Data Arrived at EDR: 05/01/2024
Date Made Active in Reports: 07/25/2024
Number of Days to Update: 85

Source: Department of Environmental Services
Telephone: 603-271-0650
Last EDR Contact: 07/25/2024
Next Scheduled EDR Contact: 11/11/2024
Data Release Frequency: Every 4 Years

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 12/31/2023
Date Data Arrived at EDR: 02/21/2024
Date Made Active in Reports: 04/04/2024
Number of Days to Update: 43

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 05/21/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: Quarterly

Local Land Records

LIENS: Environmental Liens Information Listing

An Environmental Lien is a charge, security, or encumbrance upon title to a property to secure the payment of a cost, damage, debt, obligation, or duty arising out of response actions, cleanup, or other remediation of hazardous substances or petroleum products upon a property, including (but not limited to) liens imposed pursuant to CERCLA 42 USC 9607(1) and similar state or local laws. In other words: a lien placed upon a propertys title due to an environmental condition

Date of Government Version: 01/17/2024
Date Data Arrived at EDR: 01/18/2024
Date Made Active in Reports: 02/08/2024
Number of Days to Update: 21

Source: Department of Environmental Services
Telephone: 603-271-8808
Last EDR Contact: 07/24/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: No Update Planned

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 05/22/2024
Date Data Arrived at EDR: 06/03/2024
Date Made Active in Reports: 06/26/2024
Number of Days to Update: 23

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 10/07/2024
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 06/14/2024
Date Data Arrived at EDR: 06/17/2024
Date Made Active in Reports: 06/24/2024
Number of Days to Update: 7

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 06/17/2024
Next Scheduled EDR Contact: 09/30/2024
Data Release Frequency: Quarterly

NH SPILLS: Listing of All Sites

Spills reported to the Emergency Response section that are included in the All Sites database.

Date of Government Version: 04/29/2024
Date Data Arrived at EDR: 05/01/2024
Date Made Active in Reports: 07/25/2024
Number of Days to Update: 85

Source: Department of Environmental Services
Telephone: 603-271-2975
Last EDR Contact: 07/25/2024
Next Scheduled EDR Contact: 11/11/2024
Data Release Frequency: Quarterly

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 12/18/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/28/2013
Number of Days to Update: 56

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 06/03/2024
Date Data Arrived at EDR: 06/07/2024
Date Made Active in Reports: 06/20/2024
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 06/07/2024
Next Scheduled EDR Contact: 09/30/2024
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 01/30/2024
Date Data Arrived at EDR: 02/13/2024
Date Made Active in Reports: 04/04/2024
Number of Days to Update: 51

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 05/14/2024
Next Scheduled EDR Contact: 08/26/2024
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 06/07/2021
Date Data Arrived at EDR: 07/13/2021
Date Made Active in Reports: 03/09/2022
Number of Days to Update: 239

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 07/11/2024
Next Scheduled EDR Contact: 10/21/2024
Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/11/2018
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 574

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 07/02/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 07/30/2021
Date Data Arrived at EDR: 02/03/2023
Date Made Active in Reports: 02/10/2023
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 05/09/2024
Next Scheduled EDR Contact: 08/19/2024
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 03/18/2024
Date Data Arrived at EDR: 03/19/2024
Date Made Active in Reports: 06/20/2024
Number of Days to Update: 93

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 06/17/2024
Next Scheduled EDR Contact: 09/30/2024
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA Watch List

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 07/25/2024
Next Scheduled EDR Contact: 11/11/2024
Data Release Frequency: No Update Planned

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 05/02/2024
Next Scheduled EDR Contact: 08/12/2024
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 06/14/2022
Date Made Active in Reports: 03/24/2023
Number of Days to Update: 283

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 06/13/2024
Next Scheduled EDR Contact: 09/23/2024
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2022
Date Data Arrived at EDR: 11/13/2023
Date Made Active in Reports: 02/07/2024
Number of Days to Update: 86

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 05/16/2024
Next Scheduled EDR Contact: 08/26/2024
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 07/11/2024
Date Data Arrived at EDR: 07/11/2024
Date Made Active in Reports: 07/12/2024
Number of Days to Update: 1

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 07/11/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 05/22/2024
Date Data Arrived at EDR: 06/03/2024
Date Made Active in Reports: 06/26/2024
Number of Days to Update: 23

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 09/09/2024
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 04/01/2024
Date Data Arrived at EDR: 04/17/2024
Date Made Active in Reports: 07/12/2024
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 07/11/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 09/19/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 10/19/2023
Number of Days to Update: 16

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 08/12/2024
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 03/20/2023
Date Data Arrived at EDR: 04/04/2023
Date Made Active in Reports: 06/09/2023
Number of Days to Update: 66

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 07/02/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 06/26/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 01/02/2024
Date Data Arrived at EDR: 01/16/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 57
Source: Nuclear Regulatory Commission
Telephone: 301-415-0717
Last EDR Contact: 07/11/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2022
Date Data Arrived at EDR: 11/27/2023
Date Made Active in Reports: 02/22/2024
Number of Days to Update: 87
Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 05/28/2024
Next Scheduled EDR Contact: 09/09/2024
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 251
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 05/28/2024
Next Scheduled EDR Contact: 09/09/2024
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 09/13/2019
Date Data Arrived at EDR: 11/06/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 96
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 05/02/2024
Next Scheduled EDR Contact: 08/12/2024
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/01/2019
Date Data Arrived at EDR: 07/01/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 84

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 06/21/2024
Next Scheduled EDR Contact: 10/07/2024
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/17/2020
Number of Days to Update: 80

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 07/23/2024
Next Scheduled EDR Contact: 11/04/2024
Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 03/31/2024
Date Data Arrived at EDR: 04/19/2024
Date Made Active in Reports: 06/26/2024
Number of Days to Update: 68

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 06/26/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2021
Date Data Arrived at EDR: 03/09/2023
Date Made Active in Reports: 03/20/2023
Number of Days to Update: 11

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 06/07/2024
Next Scheduled EDR Contact: 09/30/2024
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 07/02/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 03/03/2023
Date Data Arrived at EDR: 03/03/2023
Date Made Active in Reports: 06/09/2023
Number of Days to Update: 98

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 07/24/2024
Next Scheduled EDR Contact: 11/11/2024
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 08/30/2019
Date Data Arrived at EDR: 11/15/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 74

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 05/16/2024
Next Scheduled EDR Contact: 08/26/2024
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 05/22/2024
Date Data Arrived at EDR: 06/03/2024
Date Made Active in Reports: 06/24/2024
Number of Days to Update: 21

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 10/07/2024
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 02/05/2024
Date Data Arrived at EDR: 02/21/2024
Date Made Active in Reports: 04/04/2024
Number of Days to Update: 43

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 05/21/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: Semi-Annually

MINES VIOLATIONS: MSHA Violation Assessment Data

Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 04/01/2024
Date Data Arrived at EDR: 04/04/2024
Date Made Active in Reports: 07/12/2024
Number of Days to Update: 99

Source: DOL, Mine Safety & Health Admi
Telephone: 202-693-9424
Last EDR Contact: 07/02/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: Quarterly

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 01/07/2022
Date Data Arrived at EDR: 02/24/2023
Date Made Active in Reports: 05/17/2023
Number of Days to Update: 82

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 05/22/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 05/23/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 03/18/2024
Date Data Arrived at EDR: 03/19/2024
Date Made Active in Reports: 06/06/2024
Number of Days to Update: 79

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 06/13/2024
Next Scheduled EDR Contact: 09/16/2024
Data Release Frequency: Quarterly

MINES MRDS: Mineral Resources Data System
Mineral Resources Data System

Date of Government Version: 08/23/2022
Date Data Arrived at EDR: 11/22/2022
Date Made Active in Reports: 02/28/2023
Number of Days to Update: 98

Source: USGS
Telephone: 703-648-6533
Last EDR Contact: 05/22/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: Varies

FINDS: Facility Index System/Facility Registry System
Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 02/09/2024
Date Data Arrived at EDR: 02/27/2024
Date Made Active in Reports: 05/24/2024
Number of Days to Update: 87

Source: EPA
Telephone: (617) 918-1111
Last EDR Contact: 05/29/2024
Next Scheduled EDR Contact: 09/09/2024
Data Release Frequency: Quarterly

ECHO: Enforcement & Compliance History Information
ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 06/23/2024
Date Data Arrived at EDR: 06/28/2024
Date Made Active in Reports: 07/12/2024
Number of Days to Update: 14

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 06/28/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing
A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/06/2021
Date Data Arrived at EDR: 05/21/2021
Date Made Active in Reports: 08/11/2021
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 05/17/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: Varies

UXO: Unexploded Ordnance Sites
A listing of unexploded ordnance site locations

Date of Government Version: 09/06/2023
Date Data Arrived at EDR: 09/13/2023
Date Made Active in Reports: 12/11/2023
Number of Days to Update: 89

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 07/08/2024
Next Scheduled EDR Contact: 10/21/2024
Data Release Frequency: Varies

FUELS PROGRAM: EPA Fuels Program Registered Listing
This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 02/12/2024
Date Data Arrived at EDR: 02/13/2024
Date Made Active in Reports: 04/04/2024
Number of Days to Update: 51

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 05/14/2024
Next Scheduled EDR Contact: 08/26/2024
Data Release Frequency: Quarterly

PFAS NPL: Superfund Sites with PFAS Detections Information

EPA's Office of Land and Emergency Management and EPA Regional Offices maintain data describing what is known about site investigations, contamination, and remedial actions under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) where PFAS is present in the environment.

Date of Government Version: 07/01/2024
Date Data Arrived at EDR: 07/01/2024
Date Made Active in Reports: 07/12/2024
Number of Days to Update: 11

Source: Environmental Protection Agency
Telephone: 703-603-8895
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Varies

PFAS FEDERAL SITES: Federal Sites PFAS Information

Several federal entities, such as the federal Superfund program, Department of Defense, National Aeronautics and Space Administration, Department of Transportation, and Department of Energy provided information for sites with known or suspected detections at federal facilities.

Date of Government Version: 07/01/2024
Date Data Arrived at EDR: 07/01/2024
Date Made Active in Reports: 07/12/2024
Number of Days to Update: 11

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Varies

PFAS TRIS: List of PFAS Added to the TRI

Section 7321 of the National Defense Authorization Act for Fiscal Year 2020 (NDAA) immediately added certain per- and polyfluoroalkyl substances (PFAS) to the list of chemicals covered by the Toxics Release Inventory (TRI) under Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) and provided a framework for additional PFAS to be added to TRI on an annual basis.

Date of Government Version: 07/01/2024
Date Data Arrived at EDR: 07/01/2024
Date Made Active in Reports: 07/12/2024
Number of Days to Update: 11

Source: Environmental Protection Agency
Telephone: 202-566-0250
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Varies

PFAS TSCA: PFAS Manufacture and Imports Information

EPA issued the Chemical Data Reporting (CDR) Rule under the Toxic Substances Control Act (TSCA) and requires chemical manufacturers and facilities that manufacture or import chemical substances to report data to EPA. EPA publishes non-confidential business information (non-CBI) and includes descriptive information about each site, corporate parent, production volume, other manufacturing information, and processing and use information.

Date of Government Version: 07/01/2024
Date Data Arrived at EDR: 07/01/2024
Date Made Active in Reports: 07/12/2024
Number of Days to Update: 11

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Varies

PFAS RCRA MANIFEST: PFAS Transfers Identified In the RCRA Database Listing

To work around the lack of PFAS waste codes in the RCRA database, EPA developed the PFAS Transfers dataset by mining e-Manifest records containing at least one of these common PFAS keywords: PFAS, PFOA, PFOS, PERFL, AFFF, GENX, GEN-X (plus the VT waste codes). These keywords were searched for in the following text fields: Manifest handling instructions (MANIFEST_HANDLING_INSTR), Non-hazardous waste description (NON_HAZ_WASTE_DESCRIPTION), DOT printed information (DOT_PRINTED_INFORMATION), Waste line handling instructions (WASTE_LINE_HANDLING_INSTR), Waste residue comments (WASTE_RESIDUE_COMMENTS).

Date of Government Version: 07/01/2024
Date Data Arrived at EDR: 07/01/2024
Date Made Active in Reports: 07/12/2024
Number of Days to Update: 11

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Varies

PFAS ATSDR: PFAS Contamination Site Location Listing

PFAS contamination site locations from the Department of Health & Human Services, Center for Disease Control & Prevention. ATSDR is involved at a number of PFAS-related sites, either directly or through assisting state and federal partners. As of now, most sites are related to drinking water contamination connected with PFAS production facilities or fire training areas where aqueous film-forming firefighting foam (AFFF) was regularly used.

Date of Government Version: 06/24/2020
Date Data Arrived at EDR: 03/17/2021
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 601

Source: Department of Health & Human Services
Telephone: 202-741-5770
Last EDR Contact: 07/18/2024
Next Scheduled EDR Contact: 11/04/2024
Data Release Frequency: Varies

PFAS WQP: Ambient Environmental Sampling for PFAS

The Water Quality Portal (WQP) is a part of a modernized repository storing ambient sampling data for all environmental media and tissue samples. A wide range of federal, state, tribal and local governments, academic and non-governmental organizations and individuals submit project details and sampling results to this public repository. The information is commonly used for research and assessments of environmental quality.

Date of Government Version: 07/01/2024
Date Data Arrived at EDR: 07/01/2024
Date Made Active in Reports: 07/12/2024
Number of Days to Update: 11

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Varies

PFAS NPDES: Clean Water Act Discharge Monitoring Information

Any discharger of pollutants to waters of the United States from a point source must have a National Pollutant Discharge Elimination System (NPDES) permit. The process for obtaining limits involves the regulated entity (permittee) disclosing releases in a NPDES permit application and the permitting authority (typically the state but sometimes EPA) deciding whether to require monitoring or monitoring with limits. Caveats and Limitations: Less than half of states have required PFAS monitoring for at least one of their permittees and fewer states have established PFAS effluent limits for permittees. New rulemakings have been initiated that may increase the number of facilities monitoring for PFAS in the future.

Date of Government Version: 07/01/2024
Date Data Arrived at EDR: 07/01/2024
Date Made Active in Reports: 07/12/2024
Number of Days to Update: 11

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Varies

PFAS PROJECT: NORTHEASTERN UNIVERSITY PFAS PROJECT

The PFAS Contamination Site Tracker records qualitative and quantitative data from each site in a chart, specifically examining discovery, contamination levels, government response, litigation, health impacts, media coverage, and community characteristics. All data presented in the chart were extracted from government websites, such as state health departments or the Environmental Protection Agency, and news articles.

Date of Government Version: 05/19/2023
Date Data Arrived at EDR: 04/05/2024
Date Made Active in Reports: 06/06/2024
Number of Days to Update: 62

Source: Social Science Environmental Health Research Institute
Telephone: N/A
Last EDR Contact: 06/04/2024
Next Scheduled EDR Contact: 09/16/2024
Data Release Frequency: Varies

PFAS ECHO: Facilities in Industries that May Be Handling PFAS Listing

Regulators and the public have expressed interest in knowing which regulated entities may be using PFAS. EPA has developed a dataset from various sources that show which industries may be handling PFAS. Approximately 120,000 facilities subject to federal environmental programs have operated or currently operate in industry sectors with processes that may involve handling and/or release of PFAS.

Date of Government Version: 07/01/2024
Date Data Arrived at EDR: 07/01/2024
Date Made Active in Reports: 07/12/2024
Number of Days to Update: 11

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Varies

PFAS ECHO FIRE TRAIN: Facilities in Industries that May Be Handling PFAS Listing

A list of fire training sites was added to the Industry Sectors dataset using a keyword search on the permitted facilitys name to identify sites where fire-fighting foam may have been used in training exercises. Additionally, you may view an example spreadsheet of the subset of fire training facility data, as well as the keywords used in selecting or deselecting a facility for the subset. as well as the keywords used in selecting or deselecting a facility for the subset. These keywords were tested to maximize accuracy in selecting facilities that may use fire-fighting foam in training exercises, however, due to the lack of a required reporting field in the data systems for designating fire training sites, this methodology may not identify all fire training sites or may potentially misidentify them.

Date of Government Version: 07/01/2024
Date Data Arrived at EDR: 07/01/2024
Date Made Active in Reports: 07/12/2024
Number of Days to Update: 11

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Varies

PFAS PT 139 AIRPORT: All Certified Part 139 Airports PFAS Information Listing

Since July 1, 2006, all certified part 139 airports are required to have fire-fighting foam onsite that meet military specifications (MIL-F-24385) (14 CFR 139.317). To date, these military specification fire-fighting foams are fluorinated and have been historically used for training and extinguishing. The 2018 FAA Reauthorization Act has a provision stating that no later than October 2021, FAA shall not require the use of fluorinated AFFF. This provision does not prohibit the use of fluorinated AFFF at Part 139 civilian airports; it only prohibits FAA from mandating its use. The Federal Aviation Administration?s document AC 150/5210-6D - Aircraft Fire Extinguishing Agents provides guidance on Aircraft Fire Extinguishing Agents, which includes Aqueous Film Forming Foam (AFFF).

Date of Government Version: 07/01/2024
Date Data Arrived at EDR: 07/01/2024
Date Made Active in Reports: 07/12/2024
Number of Days to Update: 11

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Varies

AQUEOUS FOAM NRC: Aqueous Foam Related Incidents Listing

The National Response Center (NRC) serves as an emergency call center that fields initial reports for pollution and railroad incidents and forwards that information to appropriate federal/state agencies for response. The spreadsheets posted to the NRC website contain initial incident data that has not been validated or investigated by a federal/state response agency. Response center calls from 1990 to the most recent complete calendar year where there was indication of Aqueous Film Forming Foam (AFFF) usage are included in this dataset. NRC calls may reference AFFF usage in the ?Material Involved? or ?Incident Description? fields.

Date of Government Version: 07/01/2024
Date Data Arrived at EDR: 07/01/2024
Date Made Active in Reports: 07/12/2024
Number of Days to Update: 11

Source: Environmental Protection Agency
Telephone: 202-267-2675
Last EDR Contact: 07/01/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Varies

PCS: Permit Compliance System

PCS is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

Date of Government Version: 12/16/2016
Date Data Arrived at EDR: 01/06/2017
Date Made Active in Reports: 03/10/2017
Number of Days to Update: 63

Source: EPA, Office of Water
Telephone: 202-564-2496
Last EDR Contact: 06/27/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: No Update Planned

PCS ENF: Enforcement data
No description is available for this data

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 02/05/2015
Date Made Active in Reports: 03/06/2015
Number of Days to Update: 29

Source: EPA
Telephone: 202-564-2497
Last EDR Contact: 06/27/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Varies

BIOSOLIDS: ICIS-NPDES Biosolids Facility Data
The data reflects compliance information about facilities in the biosolids program.

Date of Government Version: 04/14/2024
Date Data Arrived at EDR: 04/16/2024
Date Made Active in Reports: 07/12/2024
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: 202-564-4700
Last EDR Contact: 07/16/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Varies

UST FINDER: UST Finder Database
EPA developed UST Finder, a web map application containing a comprehensive, state-sourced national map of underground storage tank (UST) and leaking UST (LUST) data. It provides the attributes and locations of active and closed USTs, UST facilities, and LUST sites from states and from Tribal lands and US territories . UST Finder contains information about proximity of UST facilities and LUST sites to: surface and groundwater public drinking water protection areas; estimated number of private domestic wells and number of people living nearby; and flooding and wildfires.

Date of Government Version: 06/08/2023
Date Data Arrived at EDR: 10/04/2023
Date Made Active in Reports: 01/18/2024
Number of Days to Update: 106

Source: Environmental Protection Agency
Telephone: 202-564-0394
Last EDR Contact: 05/08/2024
Next Scheduled EDR Contact: 08/19/2024
Data Release Frequency: Varies

UST FINDER RELEASE: UST Finder Releases Database
US EPA’s UST Finder data is a national composite of leaking underground storage tanks. This data contains information about, and locations of, leaking underground storage tanks. Data was collected from state sources and standardized into a national profile by EPA’s Office of Underground Storage Tanks, Office of Research and Development, and the Association of State and Territorial Solid Waste Management Officials.

Date of Government Version: 06/08/2023
Date Data Arrived at EDR: 10/31/2023
Date Made Active in Reports: 01/18/2024
Number of Days to Update: 79

Source: Environmental Protecton Agency
Telephone: 202-564-0394
Last EDR Contact: 05/08/2024
Next Scheduled EDR Contact: 08/19/2024
Data Release Frequency: Semi-Annually

E MANIFEST: Hazardous Waste Electronic Manifest System
EPA established a national system for tracking hazardous waste shipments electronically. This system, known as ?e-Manifest,? will modernize the nation?s cradle-to-grave hazardous waste tracking process while saving valuable time, resources, and dollars for industry and states.

Date of Government Version: 07/24/2023
Date Data Arrived at EDR: 04/18/2024
Date Made Active in Reports: 06/06/2024
Number of Days to Update: 49

Source: Environmental Protection Agency
Telephone: 833-501-6826
Last EDR Contact: 06/07/2024
Next Scheduled EDR Contact: 09/30/2024
Data Release Frequency: Varies

PFAS: PFAS Contamination Site Location Listing
a listing (current as of today) of the Waste Management Division Remediation Programa??s sites where PFAS has been detected to date.

Date of Government Version: 02/12/2024
Date Data Arrived at EDR: 02/13/2024
Date Made Active in Reports: 05/07/2024
Number of Days to Update: 84

Source: Department of Environmental Services
Telephone: 603-271-3744
Last EDR Contact: 05/13/2024
Next Scheduled EDR Contact: 08/26/2024
Data Release Frequency: Varies

AQUEOUS FOAM: Aqueous Film Forming Foam Release Investigations Listing

A listing of sites included in the New Hampshire Department of Environmental Services (DES) OneStop database where the project type is Class B Foam / AFF - Fire Fighting Use Area.

Date of Government Version: 04/18/2024
Date Data Arrived at EDR: 04/19/2024
Date Made Active in Reports: 07/18/2024
Number of Days to Update: 90

Source: Department of Environmental Services
Telephone: 603-271-3744
Last EDR Contact: 07/25/2024
Next Scheduled EDR Contact: 11/01/2024
Data Release Frequency: Quarterly

AIRS: Permitted Airs Facility Listing

A listing of permitted Airs facility locations in New Hampshire.

Date of Government Version: 02/27/2024
Date Data Arrived at EDR: 02/28/2024
Date Made Active in Reports: 05/20/2024
Number of Days to Update: 82

Source: Department of Environmental Services
Telephone: 603-271-6283
Last EDR Contact: 05/23/2024
Next Scheduled EDR Contact: 09/09/2024
Data Release Frequency: Varies

ASBESTOS: Asbestos Notification Listing

Asbestos notification sites

Date of Government Version: 02/12/2024
Date Data Arrived at EDR: 02/13/2024
Date Made Active in Reports: 05/02/2024
Number of Days to Update: 79

Source: Department of Environmental Services
Telephone: 603-271-1373
Last EDR Contact: 05/13/2024
Next Scheduled EDR Contact: 08/26/2024
Data Release Frequency: Varies

DRYCLEANERS: Listing of Drycleaners

A listing of drycleaner locations in New Hampshire.

Date of Government Version: 03/12/2024
Date Data Arrived at EDR: 03/13/2024
Date Made Active in Reports: 06/06/2024
Number of Days to Update: 85

Source: Department of Environmental Services
Telephone: 603-271-2937
Last EDR Contact: 06/11/2024
Next Scheduled EDR Contact: 09/23/2024
Data Release Frequency: Quarterly

FIN ASSURANCE 1: Financial Assurance Information Listing

Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay

Date of Government Version: 04/10/2024
Date Data Arrived at EDR: 04/11/2024
Date Made Active in Reports: 07/10/2024
Number of Days to Update: 90

Source: Department of Environmental Services
Telephone: 602-271-0675
Last EDR Contact: 07/03/2024
Next Scheduled EDR Contact: 10/21/2024
Data Release Frequency: Quarterly

FIN ASSURANCE 2: Financial Assurance Information listing

A listing of financial assurance information for hazardous waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 04/09/2024
Date Data Arrived at EDR: 04/11/2024
Date Made Active in Reports: 07/10/2024
Number of Days to Update: 90

Source: Department of Environmental Services
Telephone: 603-271-5328
Last EDR Contact: 07/03/2024
Next Scheduled EDR Contact: 10/21/2024
Data Release Frequency: Varies

LEAD: Lead Inspection Database
The Childhood Lead Poisoning Prevention Program data of lead inspection for the state.

Date of Government Version: 10/16/2007
Date Data Arrived at EDR: 10/18/2007
Date Made Active in Reports: 11/13/2007
Number of Days to Update: 26
Source: Department of Health & Human Services, Childhood Lead Poisoning Prevention Progr
Telephone: 603-271-3854
Last EDR Contact: 07/24/2024
Next Scheduled EDR Contact: 11/11/2024
Data Release Frequency: Varies

NH MANIFEST: Hazardous Waste Manifest Information Listing
Hazardous waste manifest information for the state of New Hampshire.

Date of Government Version: 06/30/2019
Date Data Arrived at EDR: 07/23/2019
Date Made Active in Reports: 02/03/2020
Number of Days to Update: 195
Source: Department of Environmental Services
Telephone: 603-271-3203
Last EDR Contact: 07/10/2024
Next Scheduled EDR Contact: 10/28/2024
Data Release Frequency: Annually

NPDES: NPDES Permit Listing
General information regarding NPDES (National Pollutant Discharge Elimination System) permits.

Date of Government Version: 03/04/2024
Date Data Arrived at EDR: 03/05/2024
Date Made Active in Reports: 05/23/2024
Number of Days to Update: 79
Source: Department of Environmental Services
Telephone: 603-271-0671
Last EDR Contact: 05/17/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: Semi-Annually

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A
Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations
EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A
Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA HWS: Recovered Government Archive State Hazardous Waste Facilities List

The EDR Recovered Government Archive State Hazardous Waste database provides a list of SHWS incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Services in New Hampshire.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/08/2014
Number of Days to Update: 191

Source: Department of Environmental Services
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Services in New Hampshire.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/17/2014
Number of Days to Update: 200

Source: Department of Environmental Services
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Services in New Hampshire.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/03/2014
Number of Days to Update: 186

Source: Department of Environmental Services
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 02/05/2024
Date Data Arrived at EDR: 02/06/2024
Date Made Active in Reports: 04/25/2024
Number of Days to Update: 79

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 05/07/2024
Next Scheduled EDR Contact: 08/19/2024
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/16/2019
Number of Days to Update: 36

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 06/26/2024
Next Scheduled EDR Contact: 10/14/2024
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 11/30/2023
Date Made Active in Reports: 12/01/2023
Number of Days to Update: 1

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 07/25/2024
Next Scheduled EDR Contact: 11/04/2024
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 07/19/2019
Date Made Active in Reports: 09/10/2019
Number of Days to Update: 53

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 07/03/2024
Next Scheduled EDR Contact: 10/21/2024
Data Release Frequency: Annually

RI MANIFEST: Manifest information

Hazardous waste manifest information

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 11/30/2021
Date Made Active in Reports: 02/18/2022
Number of Days to Update: 80

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 05/13/2024
Next Scheduled EDR Contact: 08/26/2024
Data Release Frequency: Annually

VT MANIFEST: Hazardous Waste Manifest Data

Hazardous waste manifest information.

Date of Government Version: 10/28/2019
Date Data Arrived at EDR: 10/29/2019
Date Made Active in Reports: 01/09/2020
Number of Days to Update: 72

Source: Department of Environmental Conservation
Telephone: 802-241-3443
Last EDR Contact: 07/03/2024
Next Scheduled EDR Contact: 10/21/2024
Data Release Frequency: Annually

WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 06/19/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 76

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 06/03/2024
Next Scheduled EDR Contact: 09/16/2024
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: Endeavor Business Media
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data
Source: Endeavor Business Media
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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Child Care Facility List
Source: Department of Health & Human Services
Telephone: 603-271-4624

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010 and 2015 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: US Fish & Wildlife Service
Telephone: 703-358-2171

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

MT. WASHINGTON STATE PARK ASSESSMENT
1598 MT. WASHINGTON AUTO ROAD
SARGENTS PURCHASE, NH 00176

TARGET PROPERTY COORDINATES

Latitude (North):	44.269419 - 44° 16' 9.91''
Longitude (West):	71.301699 - 71° 18' 6.12''
Universal Tranverse Mercator:	Zone 19
UTM X (Meters):	316293.8
UTM Y (Meters):	4904157.5
Elevation:	6164 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	24165880 MOUNT WASHINGTON, NH
Version Date:	2021

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

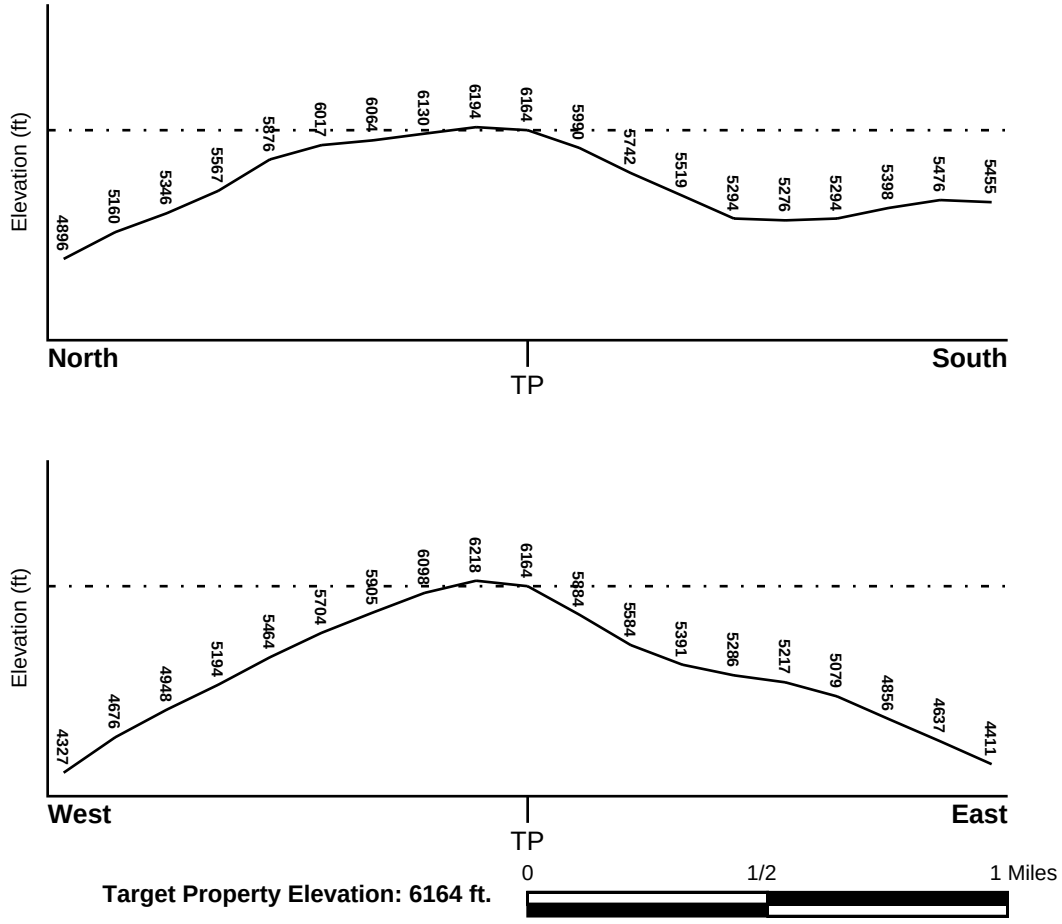
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General SE

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Target Property Elevation: 6164 ft.

Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
Not Reported	

Additional Panels in search area:	FEMA Source Type
Not Reported	

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
EAST HALF OF MOUNT WASHINGTON	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

Era:	Paleozoic
System:	Devonian
Series:	Devonian
Code:	De *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Eugeosynclinal Deposits

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name:	SURPLUS
Soil Surface Texture:	very stony - sandy loam
Hydrologic Group:	Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.
Soil Drainage Class:	Moderately well drained. Soils have a layer of low hydraulic conductivity, wet state high in the profile. Depth to water table is 3 to 6 feet.

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel:	MODERATE
Depth to Bedrock Min:	> 60 inches
Depth to Bedrock Max:	> 60 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
1	0 inches	4 inches	very stony - sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 2.00 Min: 0.60	Max: 5.50 Min: 3.60
2	4 inches	26 inches	fine sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 2.00 Min: 0.60	Max: 5.50 Min: 3.60
3	26 inches	65 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 0.60 Min: 0.00	Max: 5.50 Min: 4.50

OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: very stony - fine sandy loam
very stony - silt loam
fine sandy loam
peat
unweathered bedrock

Surficial Soil Types: very stony - fine sandy loam
very stony - silt loam
fine sandy loam
peat
unweathered bedrock

Shallow Soil Types: No Other Soil Types

Deeper Soil Types: gravelly - fine sandy loam
unweathered bedrock
gravelly - silt loam

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A1	USGS40000807657	0 - 1/8 Mile NW

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

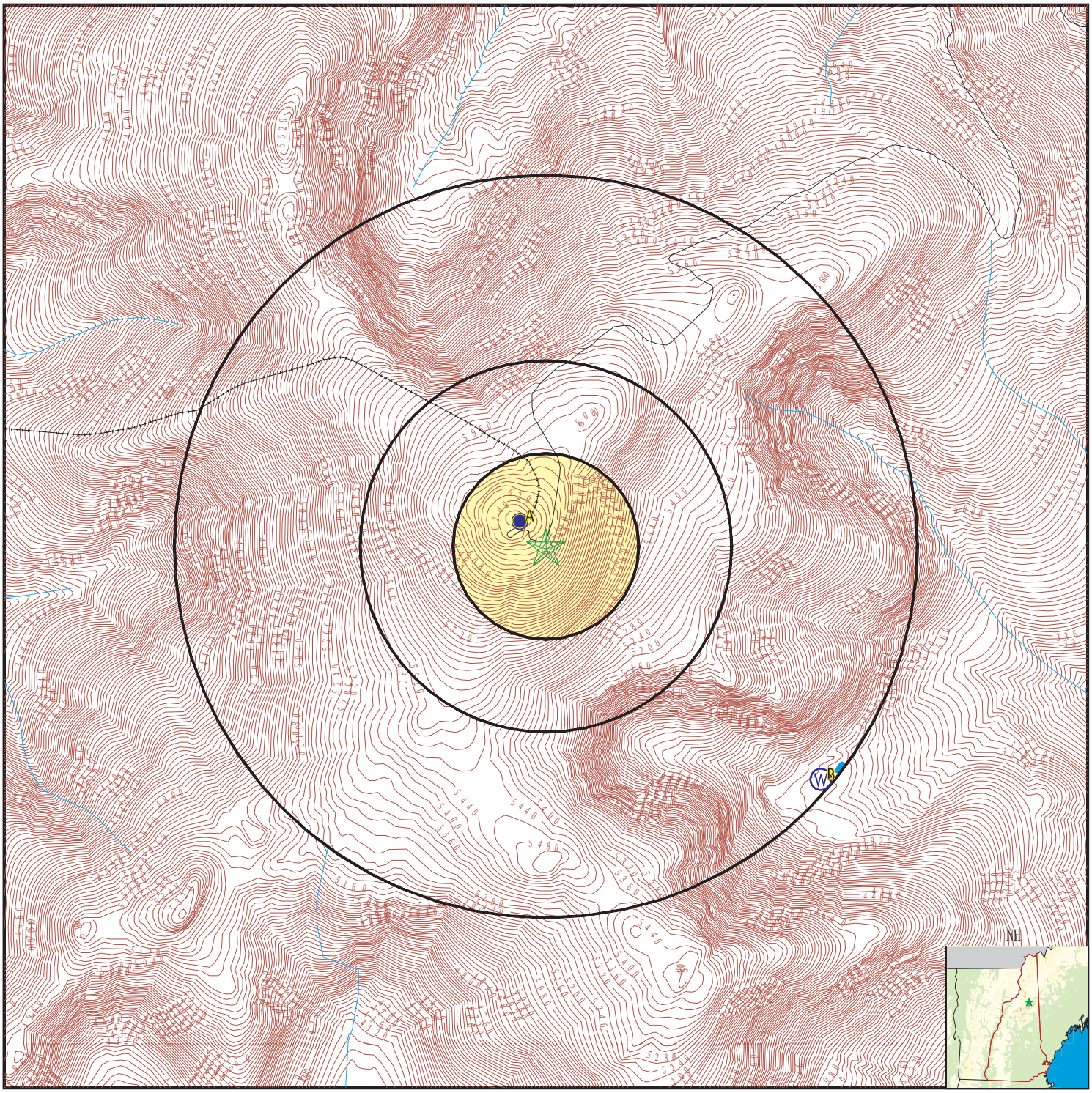
MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A2	NHINV0000025486	0 - 1/8 Mile NW
A3	NHPW00000004865	0 - 1/8 Mile NW
B4	NHINV0000051610	1/2 - 1 Mile SE
B5	NHPW00000002920	1/2 - 1 Mile SE

PHYSICAL SETTING SOURCE MAP - 7718481.2s



- County Boundary
- Major Roads
- Contour Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location

SITE NAME:	Mt. Washington State Park Assessment	CLIENT:	Tighe & Bond
ADDRESS:	1598 Mt. Washington Auto Road Sargents Purchase NH 00176	CONTACT:	Michael Trovato
LAT/LONG:	44.269419 / 71.301699	INQUIRY #:	7718481.2s
		DATE:	July 26, 2024 10:06 am

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

A1
NW
0 - 1/8 Mile
Higher | **FED USGS** | **USGS40000807657**

Organization ID:	USGS-NH		
Organization Name:	USGS New Hampshire Water Science Center		
Monitor Location:	NH-SFW 4	Type:	Well
Description:	Not Reported	HUC:	01060002
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Bedrock
Aquifer Type:	Confined single aquifer	Construction Date:	Not Reported
Well Depth:	800	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

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A2
NW
0 - 1/8 Mile
Higher | **NH WELLS** | **NHINV0000025486**

Database:	Well Locations	Driller #:	25487
Well #:	301	WRB ID:	213.0001
Elevation:	0	Well Owner:	STATE OF NH
Date Completed:	1985 829	Well Use:	Domestic
Well Need:	Provide Additional Supply	Well Type:	Drilled in Bedrock
Well Depth:	800	Bedrock Depth:	7
Casing Length:	73	Yield Test Method:	Not Reported
Duration:	0	Discharge (GPM):	16
Static Water Level:	0	Date Measured:	0
Water Quality Checked:	Not Reported		

A3
NW
0 - 1/8 Mile
Higher | **NH WELLS** | **NHPW00000004865**

Database:	Public Water Supply Sources		
NH DES ID:	51834	PWS ID:	0927020-001
Water System Facility ID:	0927020	Name:	MT WASHINGTON STATE PARK
System Active/Inactive:	A		
System Type:	Transient, non community system (hotel/restaurant/campground/etc.)		
Population Served:	1200	Source Active/Inactive:	A
Water Source:	Groundwater	Source Record and Water Type:	Groundwater, non-purchased
Well Type:	Bedrock Well	Well Depth:	800
Well Protection Delineation:	Not Reported	Max Extraction Rate:	0
Production Volume:	0	Yield:	12

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
B4 **SE** **1/2 - 1 Mile** **Lower**	**NH WELLS**	**NHINV0000051610**

Database:	Well Locations	Driller #:	51611
Well #:	Not Reported	WRB ID:	213.0002
Elevation:	0	Well Owner:	US FOREST SERVICE
Date Completed:	200311 7	Well Use:	Small Community Water Supply
Well Need:	New	Well Type:	Drilled in Gravel
Well Depth:	135	Bedrock Depth:	0
Casing Length:	105	Yield Test Method:	Pumped
Duration:	40	Discharge (GPM):	10
Static Water Level:	22	Date Measured:	200311 7
Water Quality Checked:	Y		

	Database	EDR ID Number
B5 **SE** **1/2 - 1 Mile** **Lower**	**NH WELLS**	**NHPW00000002920**

Database:	Public Water Supply Sources		
NH DES ID:	59451	PWS ID:	2107020-001
Water System Facility ID:	2107020	Name:	HERMIT LAKE SHELTER SITE
System Active/Inactive:	A		
System Type:	Transient, non community system (hotel/restaurant/campground/etc.)		
Population Served:	200	Source Active/Inactive:	A
Water Source:	Groundwater	Source Record and Water Type:	Groundwater, non-purchased
Well Type:	Gravel Packed Well	Well Depth:	135
Well Protection Delineation:	Not Reported	Max Extraction Rate:	0
Production Volume:	0	Yield:	10

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: NH Radon

Radon Test Results

County	Town	Num Tests	Avg Result	Max Result	Min Result
COOS	BERLIN	303	9.0	120.1	0.3
COOS	CARROLL	95	4.9	30.9	0.3
COOS	CLARKSVILLE	28	13.4	67.5	0.3
COOS	COLEBROOK	255	5.2	32.7	0.3
COOS	COLUMBIA	73	7.7	95.5	0.3
COOS	DALTON	75	2.4	10.0	0.3
COOS	DUMMER	40	2.1	7.4	0.3
COOS	ERROL	29	6.3	20.8	0.3
COOS	GORHAM	280	19.7	261.5	0.3
COOS	JEFFERSON	143	2.7	11.6	0.3
COOS	LANCASTER	119	1.5	13.1	0.3
COOS	NORTHUMBERLAND	183	5.6	62.8	0.3
COOS	PITTSBURG	182	4.6	77.0	0.3
COOS	RANDOLPH	54	9.8	42.6	0.3
COOS	SHELBURNE	64	22.1	169.5	1
COOS	STARK	38	10.9	38.8	0.3
COOS	STEWARTSTOWN	69	3.5	21.0	0.3
COOS	STRATFORD	88	8.7	191.4	0.3
COOS	WHITEFIELD	86	3.3	30.5	0.3
COOS	MILAN	139	4.7	93.0	0.3

Federal EPA Radon Zone for COOS County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for COOS COUNTY, NH

Number of sites tested: 85

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area	1.730 pCi/L	73%	20%	8%
Basement	4.690 pCi/L	51%	38%	12%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010 and 2015 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: US Fish & Wildlife Service
Telephone: 703-358-2171

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Public Water Supply Sources
Source: Department of Environmental Services
Telephone: 603-271-3503

Well Locations
Source: University of New Hampshire, GRANIT
Telephone: 603-862-1792

OTHER STATE DATABASE INFORMATION

RADON

State Database: NH Radon
Source: Department of Health and Human Services
Telephone: 603-271-4610
Summary Table of Short-term Radon Test Results

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

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Mt. Washington State Park Assessment
1598 Mt. Washington Auto Road
Sargents Purchase, NH 00176

Inquiry Number: 7718481.5
July 26, 2024

The EDR-City Directory Image Report

Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

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Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available business directory data at approximately five year intervals.

RECORD SOURCES

The EDR City Directory Report accesses a variety of business directory sources, including Haines, InfoUSA, Polk, Cole, Bresser, and Stewart. Listings marked as EDR Digital Archive access Cole and InfoUSA records. The various directory sources enhance and complement each other to provide a more thorough and accurate report.

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RESEARCH SUMMARY

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Year	*Target Street*	*Cross Street*	*Source*
2020	☐	☐	Cole Information
2017	☐	☐	Cole Information
2014	☐	☐	Cole Information
2010	☐	☐	Cole Information
2005	☐	☐	Cole Information

FINDINGS

TARGET PROPERTY STREET

1598 Mt. Washington Auto Road
Sargents Purchase, NH 00176

Year	*CD Image*	*Source*	
MT WASHINGTON AUTO RD			
2020	-	Cole Information	Street not listed in Source
2017	-	Cole Information	Street not listed in Source
2014	-	Cole Information	Street not listed in Source
2010	-	Cole Information	Street not listed in Source
2005	-	Cole Information	Street not listed in Source

FINDINGS

CROSS STREETS

Year	*CD Image*	*Source*	
TUCKERMAN RAVINE TRL			
2020	-	Cole Information	Street not listed in Source
2017	-	Cole Information	Street not listed in Source
2014	-	Cole Information	Street not listed in Source
2010	-	Cole Information	Street not listed in Source
2005	-	Cole Information	Street not listed in Source

Mt. Washington State Park Assessment

1598 Mt. Washington Auto Road

Sargents Purchase, NH 00176

Inquiry Number: 7718481.3

July 26, 2024

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
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07/26/24

Site Name:

Mt. Washington State Park Ass
1598 Mt. Washington Auto Roa
Sargents Purchase, NH 00176
EDR Inquiry # 7718481.3

Client Name:

Tighe & Bond
446 Main St
Worcester, MA 01608
Contact: Michael Trovato

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Certified Sanborn Results:

Certification # 1125-495F-AF33

PO # N-5114-002

Project Mt. Washington State Park

UNMAPPED PROPERTY

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Sanborn® Library search results

Certification #: 1125-495F-AF33

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- ☑ Library of Congress
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APPENDIX B
Building Assessment Supporting Documents

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Tighe & Bond

B.1.
Code Compliance

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Sherman Adams Code Compliance

Existing Building Description

The Sherman Adams Building is an existing 2-story building located at the summit of Mt. Washington in New Hampshire. The following details major projects that have taken place since the building was originally constructed in 1978:

- 1990's: Reroofing and window replacement projects.
- 2014: A small addition was constructed to enclose a vehicular bay.
- 2017: It is our understanding that a renovation took place in the observatory wing at the Ground Floor.

Table 1 summarizes key features of the building that will be discussed further throughout this Section.

Table 1: Existing Building Summary	
Occupancy:	Group A-2 – Assembly, Group B – Business, Group M – Mercantile, Group R-1 – Lodging or Rooming House, Group S-2 – Storage. Nonseparated, mixed-use occupancies.
Construction Type:	The building construction includes concrete encased steel structure, concrete slab, and concrete exterior walls. The code analysis prepared as part of the 2014 vehicle addition classified the building as Type IA/ Type I (332).
Height & Area:	Building Height: 2 stories above grade Maximum Footprint: 15,200 sf Aggregate Area: 26,100 sf
Vertical Openings:	The building contains two enclosed convenience stairways and two unenclosed convenience stairways.
Fire Protection Systems:	Sprinkler coverage is provided within the residential observatory wing at the Ground Floor. The building is not equipped with a standpipe system but is provided with an occupant hose on the Ground Floor.
Fire Alarm System:	The building is provided with a fire alarm and detection system. Manual pull stations are provided at exits and audio/visual notification devices were observed at select locations. Heat and smoke detectors were also observed in select locations, but coverage is not provided throughout. The fire alarm system is cross connected to the Yankee building fire alarm system.
Means of Egress:	The Ground and First Floor are served by exits providing access directly to the exterior. Based on the 2021 Egress Analysis and exit sign layout, it is our understanding that the stairways in the building are not used for egress, and are for convenience only.

Applicable Codes

The following is a list of applicable codes currently adopted in the State:

Building Code	New Hampshire State Building Code (NHSBC) which amends the 2021 International Building Code (IBC) and the 2021 International Existing Building Code (IEBC).
Fire Safety Code	Saf-C 6000 - The New Hampshire State Fire Code, which includes, but is not limited to: Saf-C 6008.02 - Fire Prevention Code: An amended version of the 2021 NFPA 1, Fire Code. Saf-C 6008.04 - Life Safety Code: An amended version of the 2021 NFPA 101, Life Safety Code.
Plumbing Code	The 2021 International Plumbing Code (IPC) as amended by the State of New Hampshire.
Electrical Code	2020 Edition of NFPA 70, National Electrical Code as amended by the State of New Hampshire.
Mechanical Code	2021 International Mechanical Code as amended by the State of New Hampshire.
Energy Code	2018 International Energy Conservation Code (IECC) as amended by the State of New Hampshire.
Accessibility	2017 Edition of ICC/ANSI A 117.1, Accessible and Usable Buildings and Facilities. 2010 ADA Standards for Accessible Design.
Other	Various National Fire Protection Association (NFPA) codes and standards as referenced by the codes listed above, including the following: - 2021 NFPA 10: *Standard for Portable Fire Extinguishers* - 2019 NFPA 13: *Standard for the Installation of Sprinkler Systems* - 2019 NFPA 14: *Standard for the Installation of Standpipe and Hose Systems* - 2019 NFPA 72: *National Fire Alarm and Signaling Code*

Existing Building Code Compliance Scoping

Existing buildings are required to comply with the applicable existing occupancy chapters of NFPA 101, regardless of whether any work is planned (NFPA 101, 1.3.1). In addition, portions of an existing building undergoing repair, renovation, modification, reconstruction, addition, or a change of use or occupancy classification are required to comply with the requirements of the applicable existing occupancy chapters, the requirements of the applicable section of NFPA 101 Chapter 43, and the NHEBC.

Fire Protection/ Life Safety

The following sections document the existing conditions of the building and outline major code considerations.

Use and Occupancy Classifications

Primary Occupancies

The following table summarizes the primary occupancies within the building (NHBC 302.1; NFPA 101, 6.1):

Table 2: Primary Occupancy Classifications		
NHBC Classification	**NFPA 101 Classification**	**Description**
Group A-2, Assembly	Assembly	Snack Bar & Seating Area
Group A-3, Assembly	Assembly	Museum
Group B, Business	Business	Offices & Observatory
Group M, Mercantile	Mercantile	Gift Store
Group R-1, Residential	Lodging or Rooming Houses	Park Staff and Observatory Sleeping Rooms
Group S-2, Storage	Storage	Misc. Storage

Based on the allowable height and area limitations for the building, it is permitted to be designed as a nonseparated, mixed-use occupancy (NHSBC 508.3). However, the 2014 vehicular addition was constructed with a 2-hour occupancy separation from the remainder of the building. Although occupancy separations are not required based on height and area of the building, it is expected that this separation was provided based on the separation requirements for garages per NFPA 88A. Other fire/smoke resistive assemblies throughout the building required due to the level of sprinkler coverage in the building are noted in the "Special Use and Occupancy" and "Interior Walls" Sections.

FIGURE 1. Snack Bar

FIGURE 2. Museum

If the building undergoes a change of occupancy as part of future renovation work, the following include major building features that would need to be reviewed to confirm compliance (NHEBC 1011): Sprinkler coverage, Fire alarm and detection coverage, Building height and area, interior finishes, exterior walls, and means of egress.

Special Use and Occupancy

Residential

The building contains a residential wing at the Ground Floor for park and observatory staff. It is our understanding that tickets are sold to the public to stay in the observatory wing. For the purposes of this evaluation, the residential wing is classified as Group R-1, Lodging or Rooming House based on the transient use of these sleeping rooms and the number of available rooms. Depending on the number of total beds in the residential wing, this space could be classified a Dormitory and/or Hotel (NFPA 101, 6.1.8.1.3 & 6.1.8.1.4). Residential occupancies in this building are subject to specific occupancy requirements out of NHSBC Section 420 and NFPA 101 Chapter 26 based on this classification.

Sleeping unit separations are a major consideration for the design of residential occupancies. The walls separating sleeping rooms in the building include 6-8" concrete block assemblies and walls consisting of metal studs and 2 layers of ½" gypsum on both sides per the 1978 drawings. These walls minimally provide the required 1-hour rating, but the existing doors in these separation walls did not bear fire door labels and were not equipped with closers, and in some instances latches (NHSBC 420.2 & 716.2.6). Consideration should be given to evaluating existing corridor and sleeping unit opening protectives if work took place within these residential wings in the future.

Fuel Oil Storage

The building includes a fuel oil storage room and two generator rooms. Each room is enclosed with concrete block construction and provided with 90-minute rated opening protectives. If changes are made to these rooms as part of future work, additional requirements detailed in NFPA 37 would be required to be evaluated.

Construction Type

The building consists of substantial concrete construction including concrete exterior walls, steel structure encased in concrete, and concrete slab. The building was previously classified as Type IA construction as part of the 2014 addition project. The 1978 drawings indicate concrete slab with a thickness that ranges from 4"-6". Depending on the type of concrete, the rating of the concrete slab could range from 1-hour to 2-hour (NHSBC Table 721.1(3). For the purposes of this review, the building is considered Type IA/ Type I (332) construction based on the prior classification as part of the 2014 project. If a change of occupancy took place in the building necessitating a review of building height and area limitations or an addition was constructed, further review would be necessary to confirm the rating of building elements aligns with the minimum required ratings for Type IA/ Type I(332).

FIGURE 3. Building Exterior

FIGURE 4. Concrete Slab

The following table indicates the minimum fire-resistance ratings required for Type IA construction (NHSBC 601, NFPA 101, 8.2.1).

Table 3: Fire Resistance Ratings	
Building Element	**Type IA**
Columns	3 Hours
Primary Structural Frame other than columns	3 Hours
Interior Bearing Walls	3 Hours
Exterior Bearing Walls	3 Hours
Exterior Nonbearing Walls	See Exterior Walls Section
Floor construction and secondary members	2 Hours
Roof construction and secondary members	1-1/2 Hours

Combustible construction was observed at the IT Closet on the Ground Floor, the First Floor gift shop, and the exit access corridor from the museum at the Ground Floor. Combustible materials in Type I or II buildings are not permitted unless they meet one of the criteria outlines in NHSBC Section 603. It is assumed that this construction was previously approved, but it is recommended that this Section of the building code be reviewed if combustible construction is proposed as part of future work.

FIGURE 5. First Floor Gift Shop

FIGURE 6. Ground Floor IT Closet

Building Height and Area

Based on the sloped site, the Ground Floor is considered the first story above grade and as a result the existing building is 2 stories in height. The maximum footprint and aggregate area of the building are approximately 15,200 sf and 26,100 gsf, respectively.

Existing buildings are required to be evaluated per the height and area limitations applicable to new construction where an addition is constructed or a change of occupancy to a higher hazard category takes place (NHEBC 1102 & 1011.6).

Type IA/ Type I(223) buildings are permitted to be unlimited in height and area (NHSBC 504 & 506). Therefore, the building complies with the height and area limitations applicable to Type IA/ Type I(223) construction.

If the fire resistance rating of building elements was evaluated further and resulted in a Type IIA/ Type II (111) construction type classification (1-hour structure), the building would still comply with the most restrictive height and area limitations based on a nonseparated, mixed-use approach.

Exterior Walls

The exterior walls of the building are constructed with concrete and include openings at each elevation. An evaluation of exterior wall construction and openings is only necessary if the walls are altered, or a renovation triggers them to be upgraded.

The rating and opening limitations are based on the fire separation distance for each wall. Fire separation distance is defined as the distance measured from the building face to the closest interior lot line, the centerline of a street, alley, or public way, or to an imaginary lot line between two buildings (NHSBC 202 – Fire Separation Distance definition). The distance is required to be measured at right angles from the face of the wall. The following table indicates the fire-resistance ratings and opening limitations required for the exterior walls (NHSBC 705.5 & 705.8).

Table 4: Nonbearing Exterior Wall Fire Rating and Opening Limitations

Fire Separation Distance (ft.)	Fire Resistance Rating	Allowable Area
$0 \leq X < 3$	1 Hour	Not Permitted
$3 \leq X < 5$	1 Hour	Not Permitted
$5 \leq X < 10$	1 Hour	10%
$10 \leq X < 15$	1 Hour	15%
$15 \leq X < 20$	1 Hour	25%
$20 \leq X < 25$	0 Hours	45%
$25 \leq X < 30$	0 Hours	70%
$X \geq 30$	0 Hours	No Limit

The building is provided with sufficient separation distance from other structures at the summit permitting nonrated nonbearing exterior walls and unlimited openings.

Interior Walls

The following table summarizes the existing interior walls and partitions throughout the building that are required to be provided maintained as fire/smoke resistive assemblies:

Table 5: Fire/Smoke Resistive Assemblies		
Type of Assembly	**Construction**	**Code Reference**
Corridors	1-hour fire partition	NHSBC 1020.1 NFPA 101 26.1.3.3
Dry Type Transformer Room > 112.5 kVA	1-hour fire barrier	NFPA 70, 450.21(B)
Rooms containing high-pressure boilers, refrigerating machinery of other than the domestic refrigerator type, large transformers, or other service equipment subject to explosion	1-hour fire barrier	NHSBC 509, NFPA 101, 13.3.2.1.1
Maintenance Shops	1-hour fire barrier	NFPA 101, 13.3.2.1.2
Boiler and Furnace Rooms	1-hour fire barrier	NHSBC 509, NFPA 101, 13.3.2.1.2
Rooms used for storage of combustible supplies deemed hazardous by the AHJ	1-hour fire barrier	NHSBC 509, NFPA 101, 13.3.2.1.2
Sleeping Unit Separations	1-hour fire barrier	NHSBC 420.2 NFPA 101, 26.1.3.2.2
Elevator machine room/controls room	1-hour fire barrier	NHSBC 3005.4
Shafts Connecting 3 Stories or Less	1-hour fire barrier	NHSBC 713.4
Emergency Generator Room	2-hour fire barrier	NFPA 110, 7.2.1.1

Corridor walls primarily consist of concrete block construction. Unprotected penetrations and nonrated doors were observed at select locations within corridor walls. Consideration should be given to repairing damaged fire/ smoke resistive assemblies and unprotected penetrations through the assemblies noted in the table above. Making upgrades and repairing existing fire/ smoke resistive assemblies enhances the passive fire protection systems serving the building.

FIGURE 7. Corridor Penetration

FIGURE 8. MEP Closet Penetrations

Two stairs in the building are enclosed and were observed to be provided with 1-hour-rated doors at openings; one is located near the food service area and the other is located in the observatory. Doors to the food service stair include manual hold open devices. Note that fire door assemblies are required to be self-closing and latching without manual hold open devices (NHSBC 716.2.6).

FIGURE 9. Manual Hold Open Device

FIGURE 10. 90-Minute Stair Door

Vertical Openings

The existing building contains floor openings as follows:

- **Food Service Stair** – An enclosed stair connecting the Ground and First Floors. This stair includes openings to a storage room and maintenance shop at the Ground Floor and was observed to contain storage at each landing. Based on the openings into the stair and the exit discharge arrangement, the stair is not permitted to be used for egress. The existing enclosure should be maintained since two-story openings created by convenience stairs are not permitted in buildings that are not protected with a sprinkler system throughout (NFPA 101, 8.6.9.2 & NHSBC 712.1.9(5)).
- **Observatory Stair** – An enclosed, spiral stairway serving the observatory wing. The stair enclosure is minimally 1-hour rated and is required to be maintained.
- **Open Stairs** –Two unenclosed stairs connecting the Ground and First Floors. Two-story openings created by stairs are not permitted in buildings that are not sprinklered throughout (NFPA 101, 8.6.9.2 & NHSBC 712.1.9(5)). This arrangement was previously approved, but could be raised as an issue as part of a future inspection. If these vertical openings are located within the work area of a future renovation, they could be required to be enclosed at one or both Floors.
- **Elevator hoistway** – The elevator hoistway connects the Ground and First Floors and is enclosed with at least 1-hour rated construction.

FIGURE 11. Museum Open Stair

FIGURE 12. Service Lobby Stair

Fire Protection Systems

Automatic Sprinkler and Standpipe System

The existing building is not protected by an automatic sprinkler system throughout. The sprinkler system only serves the residential observatory wing. An occupant hose is also located within the park staff common area at the Ground Floor.

FIGURE 13. Observatory Sprinkler

FIGURE 14. Occupant Fire Hose

The building is not required to be sprinklered throughout based on the existing occupancy chapters of NFPA 101. Sprinkler thresholds applicable to new construction are required to be evaluated as part of future projects including an addition and/ or change of occupancy (NHEBC 1011.2 & 1011.1). Renovations throughout the building could also require these thresholds be evaluated depending on the extent of the work area.

Fire Alarm and Detection System

The building is provided with a fire alarm and detection system consisting of manual pull stations at exits, smoke and heat detectors at select locations, and audio/visual notification devices at select locations. The fire alarm control unit (FACU) is located within the electrical room on the Ground Floor. The Yankee building FACU is connected to two

A/V devices in the Sherman Adams building. Coverage of the existing fire alarm and detection system varies depending on the space within the building.

Coverage of the existing system is required to be maintained as part of future renovations (NHEBC 701.2). Where the fire alarm system is altered or reconfigured, this scope of work is required to be in accordance with the NHSBC and NFPA 72.

Means of Egress

The building is served by exits directly to the exterior at both the Ground and First Floor Levels. The stairs in the building are not permitted to be used for egress based on the exit discharge arrangement and level of sprinkler coverage. The Egress Plans developed in 2021 indicate the exits serving the building, which align with the exit signage observed on site. The following table summarizes the overall occupant load calculations and egress capacities prepared as part of the 2021 evaluation.

Table 6: Occupant Load and Egress Capacity		
Floor	**Calculated Occupant Load**	**Egress Capacity**
Ground Floor	298	495
First Floor	495	495

On site, a number of doors were observed to be equipped with locking hardware. Doors are not generally permitted to be locked in the direction of egress (NHSBC 1010.2 & NFPA 101, 7.2.1.5.2). Although these locking mechanisms provide security based on the different uses in the buildings, it is recommended that locks be removed from doors along the exit access highlighted in the figures below. An option to maintain a sense of security at a door that would otherwise be provided with a locking device is a local alarm that initiates when any of these doors are opened. With this approach, the door can be opened in the direction of egress and the alarm provides notification to building staff when it is opened.

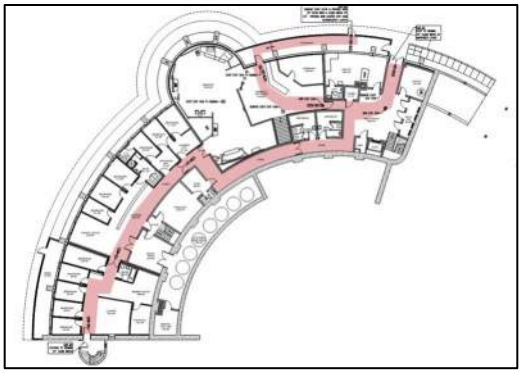


FIGURE 15. Ground Floor

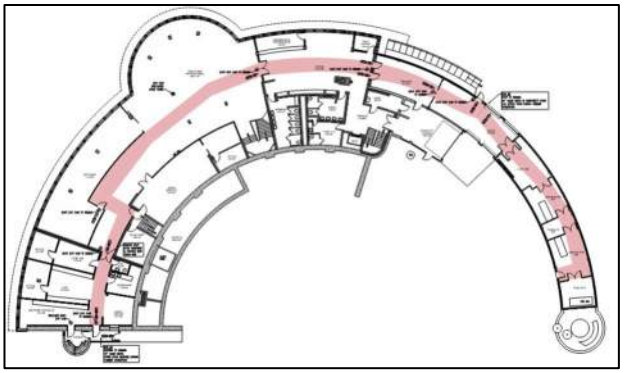


FIGURE 16. Occupant Fire Hose

Existing conditions observed within the building that do not comply with NFPA 101 and/ or NHSBC are detailed in Appendix A. These conditions are permitted to remain unless otherwise required by NFPA 101, or the NHEBC based on the proposed scope of work. Appendix A includes a general list of existing conditions observed on site and associated

recommendations. Each condition is identified with a number, description, recommendation, location diagram, and photo. The existing conditions are grouped into different categories based on the code provisions that require them to be addressed.

Plumbing

The NHSBC and NHSPC regulate the minimum number of plumbing fixtures. The minimum number of plumbing fixtures are based upon the use and occupancy classification of the building or space and the occupant load as established by the NHSBC. Public and employee toilet facilities are required to be located not more than one story above or below the space required to be provided with toilet facilities, and the path of travel to such facilities is not permitted not exceed 500 feet (NHSPC 403.1). The following table summarizes the minimum requirements for plumbing fixtures based on the occupancies within the building (CSPC 403.1).

Table 7: Plumbing Fixture Factors

Use Group	Toilets		Urinals	Lavatories		Drinking Fountains	Service Sink
	F	M		F	M		
Assembly (Gathering/ Museum)	1 per 65	1 per 125	67% substitution	1 per 200		1 per 500	1 Required
Assembly (Dining)	1 per 75	1 per 75	67% substitution	1 per 200		1 per 500	1 Required
Congregate Living Facilities [1]	1 per 10	1 per 10	50% substitution	1 per 10		1 per 100	1 Required
Business (Office)	1 per 25 for the first 50 and 1 per 50 for the remainder exceeding 50.		50% substitution	1 per 40 for the first 80 and 1 per 80 for the remainder exceeding 80.		1 per 100	1 Required
Mercantile	1 per 500		50% substitution	1 per 750		1 per 1,000	1 Required

1. Congregate living facilities require 1 shower per 8 occupants as well.

The public restrooms at the Ground and First Floor support up to 1,050 Assembly (Dining) occupants.

The following tables details the plumbing fixture calculations for the building based on the calculated occupant loads prepared as part of the 2021 egress evaluation. Table 8 includes calculations for the Ground – First Floors, since occupants are permitted to travel up or down a story within 500 ft. to access required fixtures. Table 9 and Table 10 detail calculations for the public spaces at each Floor for informational purposes.

Table 8: Plumbing Fixture Calculations									
Floor	**Occupant Load**	**Classification**	**Water Closets**		**Male Urinals** [A] (SUBSTITUTION)	**Lavatories**		**Drinking Fountains**	**Service Sink**
			Female	**Male**		**Female**	**Male**		
Ground - First Floor (Public)	**497**	A-3 (Gathering)	1 per 65	1 per 125	0.67	1 per 200	1 per 200	1 per 500	1
		Required fixtures	3.82	1.99	1.33	1.24	1.24	0.994	1
	334	A-2 (Dining)	1 per 75	1 per 75	0.67	1 per 200	1 per 200	1 per 500	1
		Required fixtures	2.23	2.23	1.49	0.84	0.84	0.668	1
	38	Mercantile	1 per 500	1 per 500	0.50	1 per 750	1 per 750	1 per 1000	1
		Required fixtures	0.04	0.04	0.02	0.03	0.03	0.038	1
	Total Required Fixtures		**7**	**5**	**3**	**3**	**3**	**2**	**1**
	Total Provided Fixtures		**9**	**4**	**4**	**5**	**5**	**2**	**1**
Ground - First Floor (Non - Public)	**31**	Business (Office)	1 per 25 for the first 50 and 1 per 50 for the remainder exceeding 50		0.50	1 per 40 for the first 80 and 1 per 80 for the remainder exceeding 80		1 per 500	1 per Floor
		Required fixtures	0.62	0.62	0.31	0.39	0.39	0.062	1
	Total Required Fixtures		**1**	**1**	**1**	**1**	**1**	**1**	**1**
	Total Provided Fixtures		**2**	**2**	**0**	**2**	**2**	**1**	**1**
Ground - First Floor (Non - Public)	**13**	Residential	1 per 10	1 per 10	0.50	1 per 10	1 per 10	1 per 100	1
		Required fixtures	0.65	0.65	0.33	0.65	0.65	0.13	1
	Total Required Fixtures		**1**	**1**	**1**	**1**	**1**	**1**	**1**
	Total Provided Fixtures [B]		**2**	**2**	**0**	**1**	**2**	**1**	**1**

[A] Permitted to be substituted for male water closets

[B] 2 Showers are provided, which satisfies the minimum required for congregate living facilities.

Table 9: Ground Floor Plumbing Fixture Calculations (Public)									
Floor	**Occupant Load**	**Classification**	**Water Closets**		**Male Urinals** [A] (SUBSTITUTION)	**Lavatories**		**Drinking Fountains**	**Service Sink**
			Female	**Male**		**Female**	**Male**		
Ground Floor (Public)	**276**	A-3 (Gathering)	1 per 65	1 per 125	0.67	1 per 200	1 per 200	1 per 500	1
		Required fixtures	2.12	1.10	0.74	0.69	0.69	0.552	1
	Total Required Fixtures		**3**	**2**	**1**	**1**	**1**	**1**	**1**
	Total Provided Fixtures		**3**	**2**	**1**	**1**	**1**	**0**	**1**

[A] Permitted to be substituted for male water closets

Table 10: First Floor Plumbing Fixture Calculations (Public)									
Floor	**Occupant Load**	**Classification**	**Water Closets**		**Male Urinals** [A] (SUBSTITUTION)	**Lavatories**		**Drinking Fountains**	**Service Sink**
			Female	**Male**		**Female**	**Male**		
First Floor (Public)	**323**	A-3 (Gathering)	1 per 65	1 per 125	0.67	1 per 200	1 per 200	1 per 500	1
		Required fixtures	2.48	1.29	0.87	0.81	0.81	0.646	1
	244	A-2 (Dining)	1 per 75	1 per 75	0.67	1 per 200	1 per 200	1 per 500	1
		Required fixtures	1.63	1.63	1.09	0.61	0.61	0.488	1
	38	Mercantile	1 per 500	1 per 500	0.50	1 per 750	1 per 750	1 per 1000	1
		Required fixtures	0.04	0.04	0.02	0.03	0.03	0.038	1
	Total Required Fixtures		**5**	**3**	**2**	**2**	**2**	**2**	**1**
	Total Provided Fixtures		**6**	**2**	**3**	**4**	**4**	**1**	**1**

[A] Permitted to be substituted for male water closets

Accessibility

ICC/ ANSI A117.1

The work area within the existing building as part of future projects is required to be made accessible in accordance with ANSI/ICC A117.1 unless proven to be technically feasible (NHSEBC 305.6). If a future alteration is affecting an area of primary function, up to 20% of the alteration costs are required to include providing an accessible route to the primary function area including toilet rooms (NHSEBC 305.7).

ADA Application

Although not enforced by any authority having jurisdiction on the project, the requirements of ADA are also applicable and enforced through civil litigation only.

The Americans with Disabilities Act Accessibility Guidelines (ADAAG) requires that altered portions of an existing building are required to be readily accessible to and usable by individuals with disabilities to the maximum extent feasible (ADAAG 36.402(a)(1)). Further, alterations to primary function areas should be made such that the level of accessibility, including the path of travel to the space, is made accessible to the maximum extent feasible. When determining if the upgrade is feasible, the ADAAG requirements state that the upgrade to the path of travel is disproportionate to the project when the cost to perform the work exceeds 20% of the cost of the alteration to the primary function area. In choosing which accessible elements to provide if the cost is disproportionate, priority should be given to those elements that will provide the greatest access, in the following order:

1. An accessible entrance
2. An accessible route to the altered area
3. At least one accessible restroom for each sex or a single unisex restroom
4. Accessible drinking fountains
5. Accessible telephones

Appendix A includes a general list of existing conditions observed on site and associated recommendations. Each condition is identified with a number, description, recommendation, location diagram, and photo. The existing conditions are grouped into different categories based on the code provisions that require them to be addressed.

Appendix A: Existing Conditions Summary

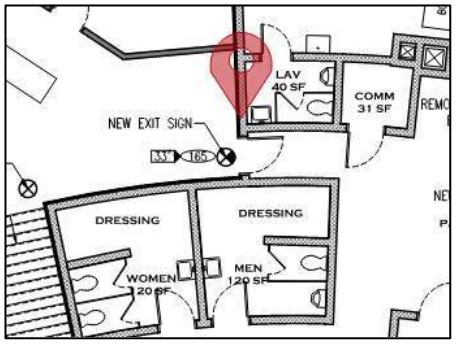
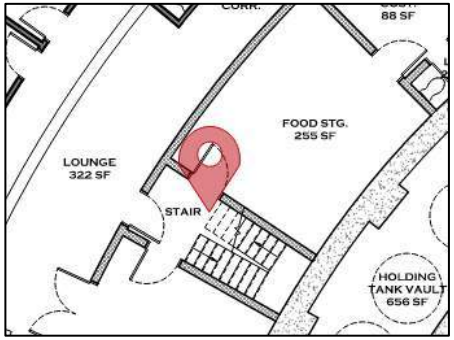
Existing conditions are organized within the following tables in this Appendix as outlined below (Categories 1-3 & Accessibility). These conditions are documented for informational purposes and are intended to serve as a reference for consideration as part of future maintenance work and future projects within the building.

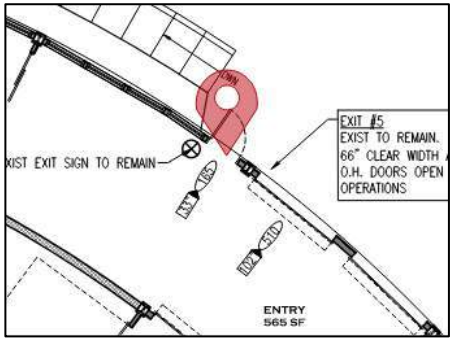
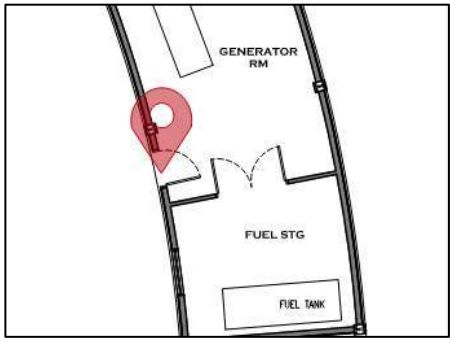
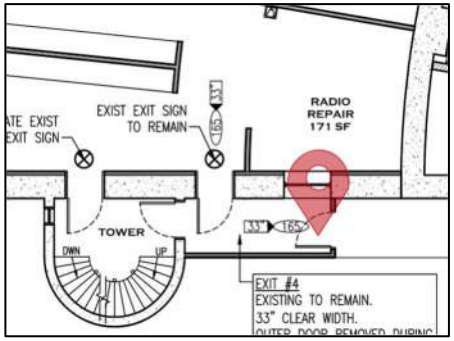
Category 1 – Existing conditions that have not been maintained as originally constructed, present a potential risk to life safety, and may be subject to citations by the fire department, irrespective of the work performed. We suggest addressing these items to the extent feasible to ensure these elements are upgraded and maintained as originally designed.

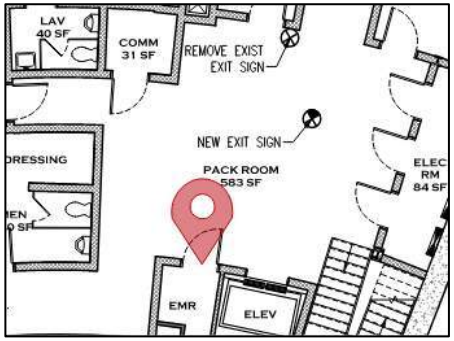
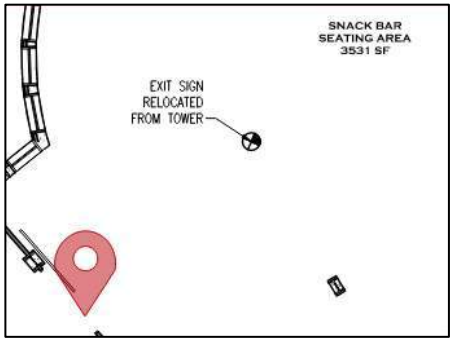
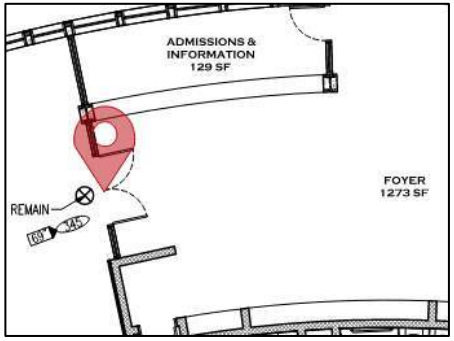
Category 2 - Existing conditions that may have complied with the code at the time of construction, but do not comply with Saf-FM 304 (NFPA 101). Saf-C 6000 gives the authority to the local fire marshal to issue violations for existing conditions that do not comply, regardless of whether work is taking place in the building.

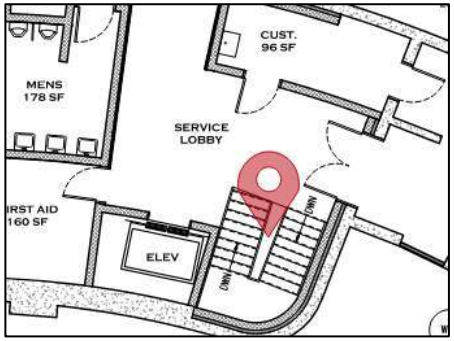
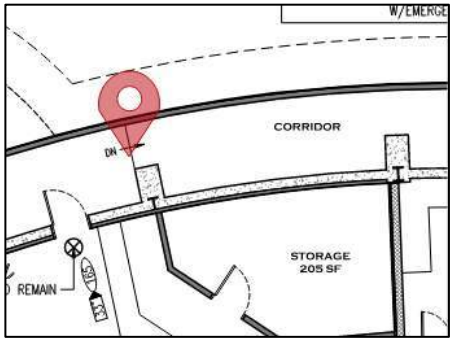
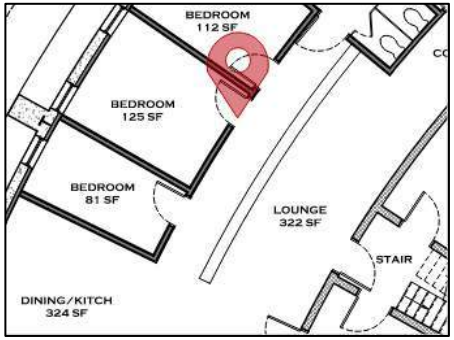
Category 3 - Existing conditions that do not comply with the New Hampshire Building Code and could be required to be corrected as part of future work depending upon the scope of work.

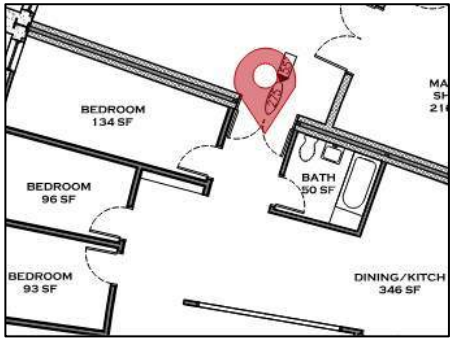
Accessibility - Existing conditions that could be upgraded to improve the level of accessibility within the building.

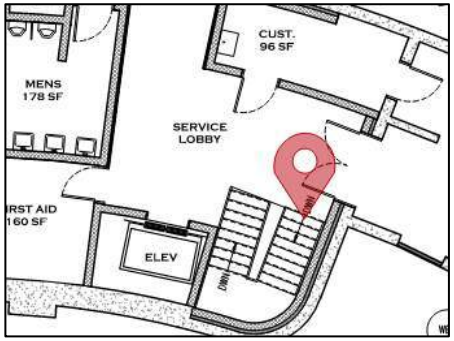
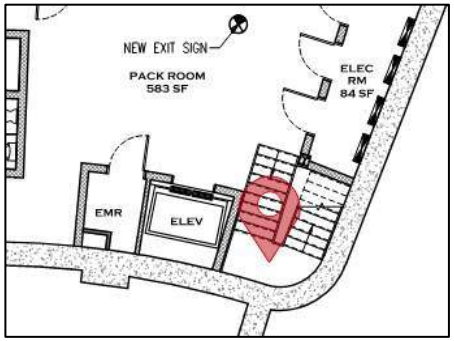
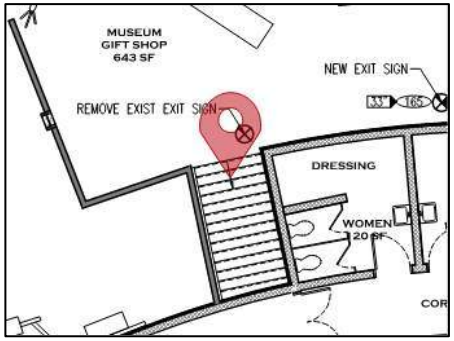
Category 1			
#	**Existing Condition & Recommendation**	**Location**	**Picture**
1.	The corridor wall at the Ground Floor Pack Room was observed to be damaged. Penetrations that pass-through fire barriers are required to be protected by a firestop system (NFPA 101, 8.3.4.2.1 & NHSBC 714) An approved firestop system could be installed or the CMU could be repaired to maintained the 1-hour corridor rating.		
2.	Doors to the food service stair include manual hold open devices. Note that fire door assemblies are required to be self-closing and latching (NHSBC 716.2.6). The manual hold open devices could be removed to maintain the enclosure of the vertical opening.		

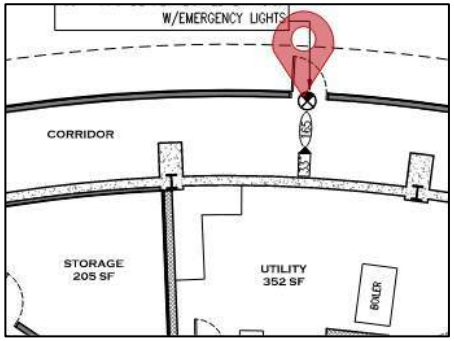
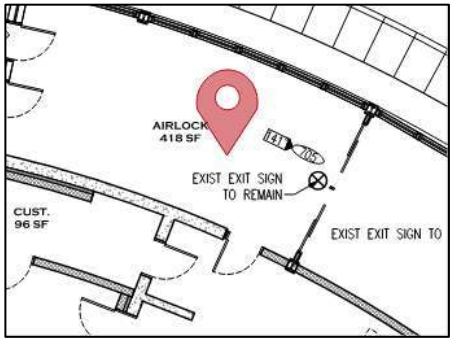
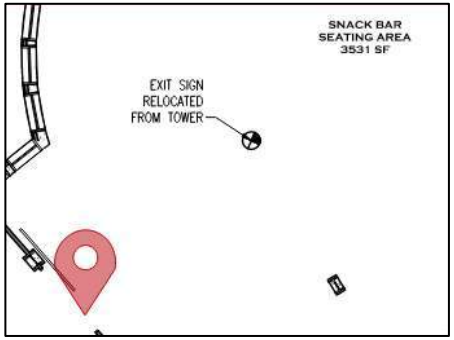
Category 2			
#	**Existing Conditions Recommendations**	**Location**	**Picture**
3.	The man door at the main entrance was observed to be locked, and is marked as an exit on the 2021 Egress plans. Doors are not permitted to be locked in the direction of egress (NFPPA 101, 26.2.3.5.1 & NHSBC 1010.2.4). It is recommended that this door remain unlocked from the inside.		
4.	The second door was observed to be locked in the direction of egress out of the generator room wing. Doors are not permitted to be locked on the egress side (NFPPA 101, 26.2.3.5.1 & NHSBC 1010.2.4) It is recommended that this door remain unlocked from the inside.		
5.	This exit discharge door was observed to be locked in the direction of egress. Doors are not permitted to be locked on the egress side (NFPPA 101, 26.2.3.5.1 & NHSBC 1010.2.4) New locking hardware or a new door could be installed so that the door remains unlocked on the egress side.		

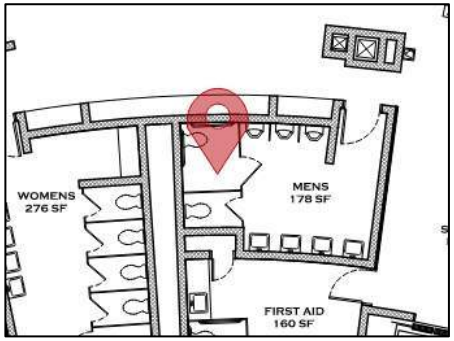
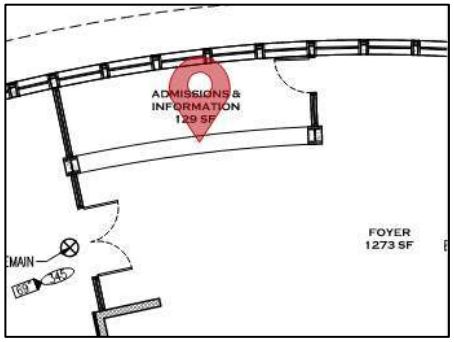
Category 2			
#	**Existing Conditions Recommendations**	**Location**	**Picture**
6.	The door label on the door to the elevator machine room is painted over. Labels are required to be provided on all rated doors and are required to be maintained in a legible condition (NFPA 101, 8.3.3.3.3 & NHSBC 712.1.13.1). The paint could be scraped off of the door label so that it is legible.		
7.	The sliding door from the gift shop into the snack bar/seating area was observed to have a lock. Doors are not permitted to be locked on the egress side (NFPPA 101, 26.2.3.5.1 & NHSBC 1010.2.4) The horizontal sliding door or locking hardware could be replaced.		
8.	The door to the Cafeteria/Foyer was observed to be locked. Doors are not permitted to be locked in the direction of egress (NFPPA 101, 26.2.3.5.1 & NHSBC 1010.2.4). When these doors are locked, the foyer spaces is only provided with access to a single exit and is required to be provided with access to two exits based on common path of travel (NFPA 101, 13.2.5.2). At least one of these doors could remain unlocked to mitigate this condition.		

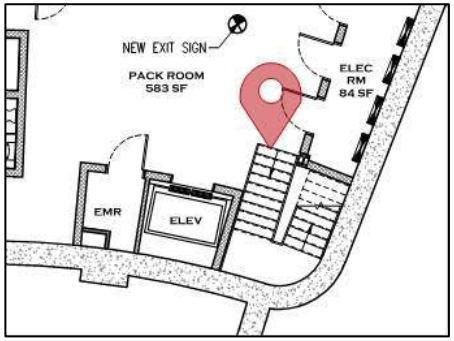
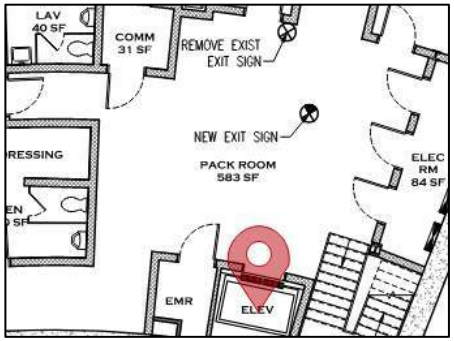
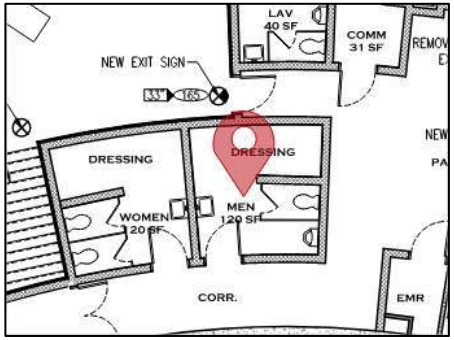
Category 2			
#	**Existing Conditions Recommendations**	**Location**	**Picture**
9.	The guard openings in the handrails were observed to be excessive. Openings in guards, other than approved existing guards, are required to restrict the passage of a sphere 4" in diameter (NFPA 101 7.2.2.4.6.3, NHSBC 1015.4). Assuming these guard openings were previously approved, no action would be required. Otherwise, the guard openings could be limited to 4".		
10.	No handrails are provided along the steps in the exit access corridor from the museum. At least one Handrail is required to be provided on one side of existing stairs (NFPA 101, 7.2.2.4.1.6). A handrail could be installed at the steps within the exit access corridor.		
11.	The doors to the park staff sleeping rooms weren't observed to bear fire door labels or be equipped with closers. Doors to sleeping rooms are required to prevent the passage of smoke and be provided with latches or other mechanisms to keep the door closed (NFPA 101 26.3.5.1, 26.3.5.5 & NHSBC 711.2.4.3) Compliant door closers could be provided that do no compromise the rating of the fire door.		

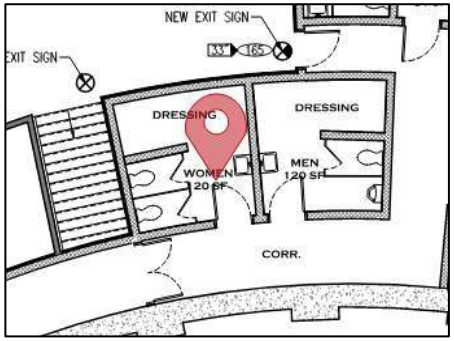
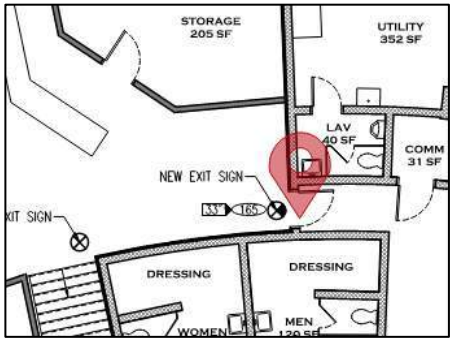
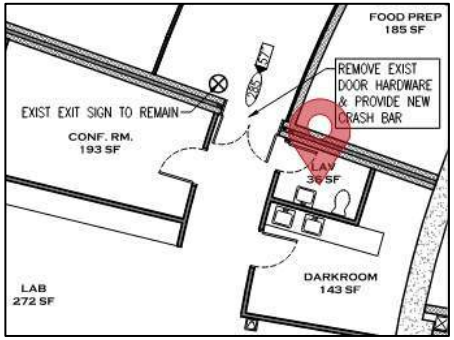
Category 2			
#	**Existing Conditions Recommendations**	**Location**	**Picture**
12.	Each door leaf into the park staff sleeping wing at this double door assembly provides a clear width of 27”. Existing doors are required to provide a minimum clear opening of 28” (NFPA 101, 7.2.1.2.3.2). A clear opening of 32” is required for new doors (NHSBC 1010.1.1). The double doors could be replaced with an assembly consisting of at least one leaf that provides a clear width of 32”.		
13.	There are no handrails at the existing ramp within the airlock. At least one handrail is required at existing ramps (NFPA 101, 7.2.2.4.1.6). A handrail could be provided on either side of the ramp.		

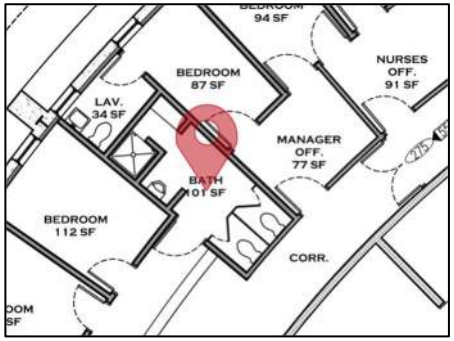
Category 3			
#	**Existing Condition & Recommendation**	**Location**	**Picture**
14.	The gate at the top of the stairs limits the width of the stair to 37". Existing egress stairs are required to have a minimum 36" clear width (NFPA 101, 7.2.2.2.1.1(b)). New egress stairs are required to have a minimum 44" clear width (NHSBC 1011.2). The clear width of the stair is required to be increased to at least 44" if used for exit access and altered or if a change of occupancy to a higher hazard category occurs on either level served by the stair (NHSEBC 801.4 & 1011.5.1).		
15.	The handrails serving the Stair do not extend at the top or bottom of the steps and the outside handrail is not continuous. Handrails are required to extend 12" parallel at the top landing, and sloping for one tread depth at the bottom, and to be continuous along the full length of the stair (NHSBC 1014.6). Handrail extensions are required to be provided if the existing handrails are altered or if a change of occupancy to a higher hazard category occurs (NHSEBC 801.4 & 1011.5.1).		
16.	The handrails serving the Stair do not extend at the bottom of the steps. Handrails are required to slope for one tread depth at the bottom (NHSBC 1014.6). Handrail extensions are required to be provided if the stair is used for exit access and the existing handrails are altered or if a change of occupancy to a higher hazard category occurs (NHSEBC 801.4 & 1011.5.1).		

Category 3			
#	**Existing Condition & Recommendation**	**Location**	**Picture**
17.	The exit door was measured to have a clear width of 28.5" and a step was observed. Doors are required to have 32" clear width, and a level landing is required on each side of the door (NFPA 101, 7.2.1.2, 7.2.1.3.1 & NHSBC 10110.1.1, 1010.1.4) A new door could be provided with a clear width of 32" and level landings on both sides of the door.		
18.	The running slope of the ramp gets up to 11.2%. New ramps are not permitted to exceed 8.3% (NHSBC 1012.2). If a change of occupancy took place within a portion of the building that used this ramp for egress, it would need to be addressed.		
19.	A sliding door serves as a second, required exit from the gift shop at the First Floor based on common path of travel and occupant load (NHSBC 1006.2.1). Horizontal sliding doors are not permitted to serve means of egress from spaces with an occupant load exceeding 10 (NHSBC 1010.1.2 Exception 9). The horizontal sliding door could be replaced with a side-hinged door.		

Accessibility			
#	**Existing Condition & Recommendation**	**Location**	**Picture**
20.	The maneuvering clearance at the accessible stall was observed to be obstructed by the adjacent urinal. Maneuvering clearances are required to be provided at the stall door (ANSI A117.1, 604.3) The hinge side of the door could be switched to resolve this item.		
21.	The information counter measured 42” above the finish floor. A portion of the public use side of the counter surface is required to be at least 36” in length and 26”-36” in height (ANSI A117.1, 904.3) Either the existing information counter could be modified or a new portion could be constructed at a compliant height.		
22.	The slope in the airlock measured 11.2%. Walking surfaces with a slope greater than 5% are required to be considered a ramp. Ramps are not permitted to have a running slope that exceeds 8.3% (ANSI A117.1, 405.2). Handrails could be provided on both sides and the running slope could be reduced to improve this ramp from an accessibility perspective.		

Accessibility			
#	**Existing Condition & Recommendation**	**Location**	**Picture**
23.	The riser heights were observed to be non-uniform due to the curb at the Ground Floor for flooding. All steps on a flight of stairs are required to have uniform tread depths and be 7" maximum (A117.1 504.2). A landing could be constructed so that the risers are consistent and the change in level to the landing is compliant.		
24.	The depth of the elevator car is 45", which is less than the minimum 54" required for existing cabs (ANSI 117.1 407.4.1).		
25.	The Men's restroom on the Ground Floor is not along an accessible route, does not include accessible fixtures and lacks clear floor space. Accessible restrooms are required to be designed per NHSBC 1110.2 and A117.1 Chapter 6. Improvements could be made to improve the accessible route into the restroom and the fixtures provided.		

Accessibility			
#	**Existing Condition & Recommendation**	**Location**	**Picture**
26.	The Women's restroom on the Ground Floor is not along an accessible route, does not include accessible fixtures and lacks clear floor space. Accessible restrooms are required to be designed per NHSBC 1110.2 and A117.1 Chapter 6. Improvements could be made to improve the accessible route into the restroom and the fixtures provided.		
27.	The accessible route to the museum is non-compliant due to level changes and maneuvering clearances at the door. Accessible routes are required to comply with ANSI A117.1, 401. An automatic door opener could be provided to address the maneuvering clearances, and a compliant threshold could be installed to address the threshold.		
28.	The single user restroom in the First Floor Observatory space is not accessible. Restrooms are required to be accessible per NHSBC 1110.2 and A117.1 Chapter 6.		

Accessibility			
#	**Existing Condition & Recommendation**	**Location**	**Picture**
29.	The park staff bathroom is not accessible. Restrooms are required to be accessible per NHSBC 1110.2 and A117.1 Chapter 6.		

Tip Top House Code Compliance

Existing Building Description

The Tip House was originally constructed in 1853 for lodging and underwent renovations in 1984. The building is a historic exhibit for visitors and is listed in the national register of historic places (Inventory #: SGP0005). There are exceptions for historic buildings in the NHEBC that should be considered as part of future work in the building.

Table 1 summarizes key features of the building that will be discussed further throughout this Section.

Table 1: Existing Building Summary	
Occupancy:	Group A-3, Assembly (> 49 Occupants) Group B, Business (<49 Occupants)
Construction Type:	The building construction includes a mix of combustible and noncombustible structure. The building is classified as Type VB/ Type V(000).
Height & Area:	Building Height: 1 story Footprint Area: ~2,000 sf
Fire Protection/ Fire Alarm Systems:	The building is not equipped with a sprinkler or standpipe system. Fire extinguishers were observed throughout. Local smoke detection is provided.
Means of Egress:	The building is served by two exits and provided with illuminated exit signs.

Applicable Codes

The following is a list of applicable codes currently adopted in the State:

Building Code	New Hampshire State Building Code (NHSBC) which amends the 2021 International Building Code (IBC) and the 2021 International Existing Building Code (IEBC).
Fire Safety Code	Saf-C 6000 - The New Hampshire State Fire Code, which includes, but is not limited to: Saf-C 6008.02 - Fire Prevention Code: An amended version of the 2021 NFPA 1, Fire Code. Saf-C 6008.04 - Life Safety Code: An amended version of the 2021 NFPA 101, Life Safety Code.
Plumbing Code	The 2021 International Plumbing Code (IPC) as amended by the State of New Hampshire.
Electrical Code	2020 Edition of NFPA 70, National Electrical Code as amended by the State of New Hampshire.

Mechanical Code	2021 International Mechanical Code as amended by the State of New Hampshire.
Energy Code	2018 International Energy Conservation Code (IECC) as amended by the State of New Hampshire.
Accessibility	2017 Edition of ICC/ANSI A 117.1, Accessible and Usable Buildings and Facilities. 2010 ADA Standards for Accessible Design.
Other	Various National Fire Protection Association (NFPA) codes and standards as referenced by the codes listed above, including the following: - 2021 NFPA 10: *Standard for Portable Fire Extinguishers* - 2019 NFPA 13: *Standard for the Installation of Sprinkler Systems* - 2019 NFPA 14: *Standard for the Installation of Standpipe and Hose Systems* - 2019 NFPA 72: *National Fire Alarm and Signaling Code*

Existing Building Code Compliance Scoping

Existing buildings are required to comply with the applicable existing occupancy chapters of NFPA 101, regardless of whether any work is planned (NFPA 101, 1.3.1). In addition, portions of an existing building undergoing repair, renovation, modification, reconstruction, addition, or a change of use or occupancy classification are required to comply with the requirements of the applicable existing occupancy chapters, the requirements of the applicable section of NFPA 101 Chapter 43, and the NHEBC.

Fire Protection/ Life Safety

The following sections document the existing conditions of the building and outline major code considerations.

Use and Occupancy Classifications

Primary Occupancies

Museums and exhibits are classified as Group A-3, Assembly Occupancies where the occupant load exceeds 49 (NHSBC 302.1; NFPA 101, 6.1.2.1). Where the occupant load is less than 50, the building is classified as Group B, Business (NHSBC 303.1.1; NFPA 101, 6.1.2.1).

The area of the building is approximately 2,000 sf. Using the occupant load factor applicable to exhibit galleries and museums (30 net sf per occupant), the calculated occupant load of the building is 67 occupants. This calculation is based on the gross square footage of the building. Net floor area calculations permit the exclusion of permanent building components, including fixed equipment, thickness of walls, mechanical rooms, and closets. The calculated occupant load would be reduced with consideration to these elements.

FIGURE 1. Building Interior

FIGURE 2. Building Interior

Construction Type

The building consists of a mix of unprotected combustible and noncombustible structure. The construction type of the building is most consistent with Type VB/ Type V(000).

FIGURE 3. Wood Framing

FIGURE 4. Building Exterior

The following table indicates the minimum fire-resistance ratings required for the construction types considered for the building as part of future work (NHSBC 601; NFPA 101, 8.2.1).

Table 2: Fire Resistance Ratings	
Building Element	**Type VB/ Type V(000)**
Columns	0 Hour
Primary Structural Frame other than columns	0 Hour
Interior Bearing Walls	0 Hour
Exterior Bearing Walls	0 Hour
Exterior Nonbearing Walls	See Exterior Walls Section
Floor construction and secondary members	0 Hour
Roof construction and secondary members	0 Hour

Building Height and Area

The existing building is 1-story in height with an approximate footprint area of 2,000 sf.

Existing buildings are required to be evaluated per the height and area limitations applicable to new construction where an addition is constructed or a change of occupancy to a higher hazard category takes place (NHEBC 1102 & 1011.6).

The following table summarizes the height and area limitations applicable to the building.

Table 3: Height and Area		
Use Group	**Allowable Height**	**Allowable Area**
A-3	1 story/ 40 ft.	9,000 sf
B	2 stories/ 40 ft.	6,000 sf

The building complies with the most restrictive Group A-3 height and area limitations.

Exterior Walls

The exterior walls of the building are constructed with boulders, concrete, and wood. An evaluation of exterior wall construction and openings is only necessary if the walls are altered, or a renovation triggers them to be upgraded.

The rating and opening limitations are based on the fire separation distance for each wall. Fire separation distance is defined as the distance measured from the building face to the closest interior lot line, the centerline of a street, alley, or public way, or to an imaginary lot line between two buildings (NHSBC 202 – Fire Separation Distance definition). The distance is required to be measured at right angles from the face of the wall. The following table indicates the fire-resistance ratings and opening limitations required for the exterior walls (NHSBC 705.5 & 705.8).

Table 4: Nonbearing Exterior Wall Fire Rating and Opening Limitations		
Fire Separation Distance (ft.)	**Fire Resistance Rating**	**Allowable Area**
$0 \leq X < 3$	1 Hour	Not Permitted
$3 \leq X < 5$	1 Hour	Not Permitted
$5 \leq X < 10$	1 Hour	10%
$X \geq 10$	0 Hours	No Limit

The building is provided with sufficient separation distance from other structures at the summit permitting nonrated nonbearing exterior walls and unlimited openings.

Interior Walls

The following table summarizes the existing interior walls and partitions throughout the building that are required to be provided maintained as fire/smoke resistive assemblies:

Table 5: Fire/Smoke Resistive Assemblies		
Type of Assembly	**Construction**	**Code Reference**
Corridors	1-hour fire partition	NHSBC 1020.1 NFPA 101 26.1.3.3
Boiler and Furnace Rooms	1-hour fire barrier	NHSBC 509, NFPA 101, 13.3.2.1.2
Rooms used for storage of combustible supplies deemed hazardous by the AHJ	1-hour fire barrier	NHSBC 509, NFPA 101, 13.3.2.1.2

There is a mechanical room towards the back of the building that is enclosed with walls that do not terminate at the underside of the roof. The equipment within the room would need to be confirmed as to whether it would necessitate a rating.

FIGURE 5. MEP Room

FIGURE 6. MEP Room Partition

Fire Protection Systems

Automatic Sprinkler and Standpipe System

The existing building is not protected with a sprinkler or standpipe system. The building is not required to be sprinklered throughout based on the existing occupancy chapters of NFPA 101. This building would not be required to be sprinkler-protected based on new construction requirements either (NHSBC 903.2.1.3; NFPA 101, 12.3.5).

Fire Alarm and Detection System

The building is not provided with a fire alarm and detection system. Local smoke detectors were observed at select locations. The building is not required to be provided with a fire alarm and detection system (NHSBC 907.2.1 & 907.2.2; NFPA 101, 13.3.4.1 & 39.3.4).

Means of Egress

The building is served by two exits that are sufficiently remote and marked with illuminated exit signs.

FIGURE 7. Front Exit

FIGURE 8. Back Exit

Existing conditions observed within the building that do not comply with NFPA 101 and/ or NHSBC are detailed in Appendix A. These conditions are permitted to remain unless otherwise required by NFPA 101, or the NHEBC based on the proposed scope of work. Appendix A includes a general list of existing conditions observed on site and associated recommendations. Each condition is identified with a number, description, recommendation, location diagram, and photo. The existing conditions are grouped into different categories based on the code provisions that require them to be addressed.

Plumbing

The NHSBC and NHSPC regulate the minimum number of plumbing fixtures. The minimum number of plumbing fixtures are based upon the use and occupancy classification of the building or space and the occupant load as established by the NHSBC. Public and employee toilet facilities are required to be located not more than one story above or below the space required to be provided with toilet facilities, and the path of travel to such facilities is not permitted not exceed 500 feet (NHSPC 403.1). The following table summarizes the minimum requirements for plumbing fixtures based on the occupancies within the building (CSPC 403.1).

Table 6: Plumbing Fixture Factors

Use Group	Toilets		Urinals	Lavatories		Drinking Fountains	Service Sink
	F	M		F	M		
Museum/ Galleries	1 per 65	1 per 125	67% substitution	1 per 200		1 per 500	1 Required

A restroom is not provided in the building. The plumbing code does not have any exceptions for public buildings that consist of galleries/ museums. A single-user restroom could be provided to satisfy the minimum number of required water closets and lavatories in the building (NHSPC 403.1.2 & 403.2(5)). If a renovation project took place in the future and it's not feasible to provide a restroom in the building, it is recommended that this be reviewed with the local AHJ.

Accessibility

ICC/ ANSI A117.1

The work area within the existing building as part of future projects is required to be made accessible in accordance with ANSI/ICC A117.1 unless proven to be technically feasible (NHSEBC 305.6). If a future alteration is affecting an area of primary function, up to 20% of the alteration costs are required to include providing an accessible route to the primary function area including toilet rooms (NHSEBC 305.7).

ADA Application

Although not enforced by any authority having jurisdiction on the project, the requirements of ADA are also applicable and enforced through civil litigation only.

The Americans with Disabilities Act Accessibility Guidelines (ADAAG) requires that altered portions of an existing building are required to be readily accessible to and usable by individuals with disabilities to the maximum extent feasible (ADAAG 36.402(a)(1)). Further, alterations to primary function areas should be made such that the level of accessibility, including the path of travel to the space, is made accessible to the maximum extent feasible. When determining if the upgrade is feasible, the ADAAG requirements state that the upgrade to the path of travel is disproportionate to the project when the cost to perform the work exceeds 20% of the cost of the alteration to the primary function area. In choosing which accessible elements to provide if the cost is disproportionate, priority should be given to those elements that will provide the greatest access, in the following order:

1. An accessible entrance
2. An accessible route to the altered area
3. At least one accessible restroom for each sex or a single unisex restroom
4. Accessible drinking fountains
5. Accessible telephones

Appendix A includes a general list of existing conditions observed on site and associated recommendations. Each condition is identified with a number, description, recommendation, location diagram, and photo. The existing conditions are grouped into different categories based on the code provisions that require them to be addressed.

Appendix A: Existing Conditions Summary

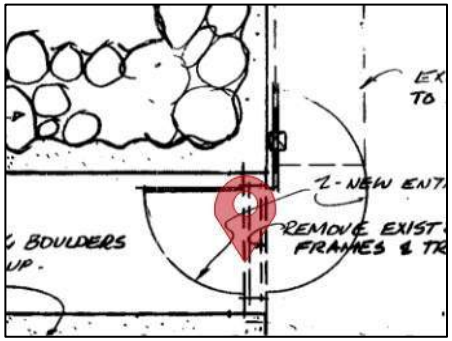
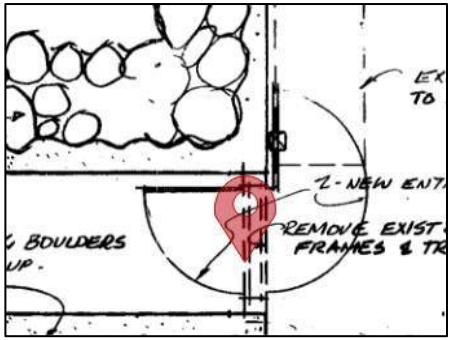
Existing conditions are organized within the following tables in this Appendix as outlined below (Categories 1-3 & Accessibility). These conditions are documented for informational purposes and are intended to serve as a reference for consideration as part of future maintenance work and future projects within the building.

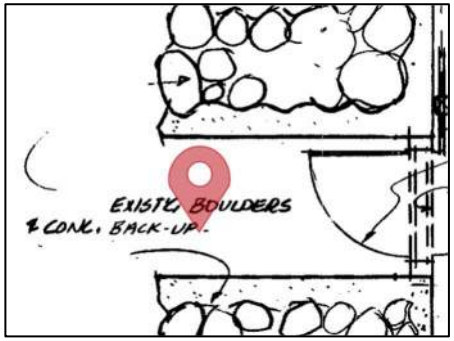
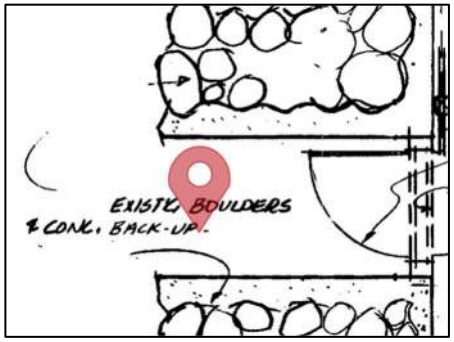
Category 1 – Existing conditions that have not been maintained as originally constructed, present a potential risk to life safety, and may be subject to citations by the fire department, irrespective of the work performed. We suggest addressing these items to the extent feasible to ensure these elements are upgraded and maintained as originally designed.

Category 2 - Existing conditions that may have complied with the code at the time of construction, but do not comply with Saf-FM 304 (NFPA 101). Saf-C 6000 gives the authority to the local fire marshal to issue violations for existing conditions that do not comply, regardless of whether work is taking place in the building.

Category 3 - Existing conditions that do not comply with the New Hampshire Building Code and could be required to be corrected as part of future work depending upon the scope of work.

Accessibility - Existing conditions that could be upgraded to improve the level of accessibility within the building.

Category 3			
#	**Existing Condition & Recommendation**	**Location**	**Picture**
1.	Both exit doors are not provided with level landings on both sides. Level landings are required on each side of doors at the same elevation (NFPA 101 7.2.1.3.1, NHSBC 1010.1.4) The landings at each exit could be upgraded.		
2.	The front exit door is not equipped with panic hardware. Assembly occupancies with a calculated occupant load exceeding 49 are required to be equipped with panic hardware (NHSBC 1010.2.9).		

Accessibility			
#	**Existing Condition & Recommendation**	**Location**	**Picture**
3.	The running slope along the accessible route to the tip top house measures up to 10%. Walking surfaces with a slope greater than 5% are required to be considered a ramp. Ramps are not permitted to have a running slope that exceeds 8.3% (ANSI A117.1, 405.2). Handrails could be provided on both sides and/or the running slope could be reduced to improve this ramp from an accessibility perspective.		
4.	The front entrance includes a step, and changes in level along an accessible route are not permitted to exceed ¼" without a threshold (ANSI A117.1, 303.2). A transition from the top of the ramp to the door could be provided so that there is no step along the accessible route.		

Yankee Building Code Compliance

Existing Building Description

The Yankee Building was originally constructed in 1941 as a broadcast station. Currently, the building contains space for offices, storage, transmitter equipment, and a workshop.

Table 1 summarizes key features of the building that will be discussed further throughout this Section.

Table 1: Existing Building Summary	
Occupancy:	Group B, Business; Group S-1, Industrial; Group S-2 – Storage.
Construction Type:	The building construction includes a mix of combustible and noncombustible structure. The building is classified as Type VB/ Type V(000).
Height & Area:	Building Height: 2 stories above grade with a penthouse and basement Maximum Footprint: ~2,700 sf Aggregate Area: ~5,200 sf
Vertical Openings:	The building contains one unenclosed stairway that connects the Basement up to the penthouse.
Fire Protection Systems:	The building is not equipped with a sprinkler or standpipe system. Fire extinguishers were observed throughout.
Fire Alarm System:	The building is provided with a fire alarm and detection system including heat and smoke detectors, and a manual pull station at an exit at the First Floor.
Means of Egress:	The Basement, Second Floor, and Penthouse are served by an unenclosed stair. The First Floor is served by two exits directly to the exterior.

Applicable Codes

The following is a list of applicable codes currently adopted in the State:

Building Code	New Hampshire State Building Code (NHSBC) which amends the 2021 International Building Code (IBC) and the 2021 International Existing Building Code (IEBC).
Fire Safety Code	Saf-C 6000 - The New Hampshire State Fire Code, which includes, but is not limited to: Saf-C 6008.02 - Fire Prevention Code: An amended version of the 2021 NFPA 1, Fire Code. Saf-C 6008.04 - Life Safety Code: An amended version of the 2021 NFPA 101, Life Safety Code.
Plumbing Code	The 2021 International Plumbing Code (IPC) as amended by the State of New Hampshire.
Electrical Code	2020 Edition of NFPA 70, National Electrical Code as amended by the State of New Hampshire.

Mechanical Code	2021 International Mechanical Code as amended by the State of New Hampshire.
Energy Code	2018 International Energy Conservation Code (IECC) as amended by the State of New Hampshire.
Accessibility	2017 Edition of ICC/ANSI A 117.1, Accessible and Usable Buildings and Facilities. 2010 ADA Standards for Accessible Design.
Other	Various National Fire Protection Association (NFPA) codes and standards as referenced by the codes listed above, including the following: - 2021 NFPA 10: *Standard for Portable Fire Extinguishers* - 2019 NFPA 13: *Standard for the Installation of Sprinkler Systems* - 2019 NFPA 14: *Standard for the Installation of Standpipe and Hose Systems* - 2019 NFPA 72: *National Fire Alarm and Signaling Code*

Existing Building Code Compliance Scoping

Existing buildings are required to comply with the applicable existing occupancy chapters of NFPA 101, regardless of whether any work is planned (NFPA 101, 1.3.1). In addition, portions of an existing building undergoing repair, renovation, modification, reconstruction, addition, or a change of use or occupancy classification are required to comply with the requirements of the applicable existing occupancy chapters, the requirements of the applicable section of NFPA 101 Chapter 43, and the NHEBC.

Fire Protection/ Life Safety

The following sections document the existing conditions of the building and outline major code considerations.

Use and Occupancy Classifications

Primary Occupancies

The following table summarizes the primary occupancies within the building (NHBC 302.1; NFPA 101, 6.1):

Table 2: Primary Occupancy Classifications

NHBC Classification	NFPA 101 Classification	Description
Group F-1, Factory	Industrial	Workshop
Group S-1, Storage	Storage	Wood and Fuel Storage
Group S-2, Storage	Storage	Misc. Storage

FIGURE 1. Equipment Room

FIGURE 2. Workshop

If the building undergoes a change of occupancy as part of future renovation work, the following include major building features that would need to be reviewed to confirm compliance (NHEBC 1011): Sprinkler coverage, Fire alarm and detection coverage, Building height and area, interior finishes, exterior walls, and means of egress.

Special Use and Occupancy

Fuel Oil Storage

The building contains a generator and fuel storage tanks and drums in the basement. No rated separation was observed from these spaces and the rest of the building. If changes are made to these rooms as part of future work, additional requirements detailed in NFPA 37 would be required to be evaluated.

Construction Type

The building consists of a mix of unprotected combustible and noncombustible structure. The construction type of the building is most consistent with Type VB/ Type V(000).

FIGURE 3. Roof Structure

FIGURE 4. Floor Structure

The following table indicates the minimum fire-resistance ratings required for the construction types considered for the building as part of future work (NHSBC 601, NFPA 101, 8.2.1).

Table 3: Fire Resistance Ratings	
Building Element	**Type VB/ Type V(000)**
Columns	0 Hour
Primary Structural Frame other than columns	0 Hour
Interior Bearing Walls	0 Hour
Exterior Bearing Walls	0 Hour
Exterior Nonbearing Walls	See Exterior Walls Section
Floor construction and secondary members	0 Hour
Roof construction and secondary members	0 Hour

Building Height and Area

The existing building is 2-stories in height with a subgrade basement and a penthouse. The area of the Penthouse is less than one-third the area of the supporting roof deck, so it is not considered a story (NHSBC 1511.1.1). Penthouses are required to be limited to MEP equipment (NHSBC 1511.2.2). The building footprint and aggregate area are 2,700 sf and 5,200 sf, respectively.

Existing buildings are required to be evaluated per the height and area limitations applicable to new construction where an addition is constructed or a change of occupancy to a higher hazard category takes place (NHEBC 1102 & 1011.6).

The following table summarizes the height and area limitations applicable to the building based on the Type VB/ Type V(000) construction type.

Table 4: Height and Area			
Use Group	**Allowable Height**	**Allowable Footprint Area**	**Allowable Aggregate Area**
F-1	1 story/ 40 ft.	8,500 sf	17,000 sf
S-1	1 story/ 40 ft.	9,000 sf	18,000 sf
S-2	2 stories/ 40 ft.	13,500 sf	27,000 sf

The building complies as a partially-separated, mixed use building if Group F-1 and S-1 occupancies are limited to the Basement and First Floors of the building. The Second Floor is required to be limited to Group B and S-2 occupancies with this approach, and no occupancy separation is required (NHSBC Table 508.4).

Exterior Walls

The exterior walls of the building are constructed with a mix of steel, masonry and wood, and include openings at each elevation. An evaluation of exterior wall construction and openings is only necessary if the walls are altered, or a renovation triggers them to be upgraded.

The rating and opening limitations are based on the fire separation distance for each wall. Fire separation distance is defined as the distance measured from the building face to the closest interior lot line, the centerline of a street, alley, or public way, or to an imaginary lot line between two buildings (NHSBC 202 – Fire Separation Distance definition). The distance is required to be measured at right angles from the face of the wall. The following

table indicates the fire-resistance ratings and opening limitations required for the exterior walls (NHSBC 705.5 & 705.8).

Table 5: Nonbearing Exterior Wall Fire Rating and Opening Limitations		
Fire Separation Distance (ft.)	**Fire Resistance Rating**	**Allowable Area**
0 ≤ X < 3	1 Hour	Not Permitted
3 ≤ X < 5	1 Hour	Not Permitted
5 ≤ X < 10	1 Hour	10%
X ≥ 10	0 Hours	No Limit

The building is provided with sufficient separation distance from other structures at the summit permitting nonrated nonbearing exterior walls and unlimited openings.

Interior Walls

The following table summarizes the existing interior walls and partitions throughout the building that are required to be provided maintained as fire/smoke resistive assemblies:

Table 6: Fire/Smoke Resistive Assemblies		
Type of Assembly	**Construction**	**Code Reference**
Corridors	1-hour fire partition	NHSBC 1020.1 NFPA 101 26.1.3.3
Rooms containing high-pressure boilers, refrigerating machinery of other than the domestic refrigerator type, large transformers, or other service equipment subject to explosion	1-hour fire barrier	NHSBC 509, NFPA 101, 13.3.2.1.1
Maintenance Shops	1-hour fire barrier	NFPA 101, 13.3.2.1.2
Boiler and Furnace Rooms	1-hour fire barrier	NHSBC 509, NFPA 101, 13.3.2.1.2
Rooms used for storage of combustible supplies deemed hazardous by the AHJ	1-hour fire barrier	NHSBC 509, NFPA 101, 13.3.2.1.2
Shafts Connecting 3 Stories or Less	1-hour fire barrier	NHSBC 713.4
Emergency Generator Room	2-hour fire barrier	NFPA 110, 7.2.1.1

Unprotected penetrations and nonrated doors were commonly observed within corridor walls. Consideration should be given to repairing damaged fire/ smoke resistive assemblies and unprotected penetrations through the assemblies noted in the table above. Making upgrades and repairing existing fire/ smoke resistive assemblies enhances the passive fire protection systems serving the building.

FIGURE 5. Second Floor Corridor

FIGURE 6. Nonrated Corridor Door

Vertical Openings

The existing building contains an unenclosed stair that connects the Basement up to the Penthouse. Partial separations are provided from the Penthouse and Basement Levels within the vertical opening, but they do not include rated fire doors. The stair is the only exit serving the Second Floor, and unenclosed vertical openings created by convenience stairs are not permitted to serve as exits (NFPA 101, 8.6.9.2). Based on this, and some additional considerations indicated in the Means of Egress Section, it is recommended that the existing stair be enclosed with 1-hour rated construction.

FIGURE 7. First Floor Landing

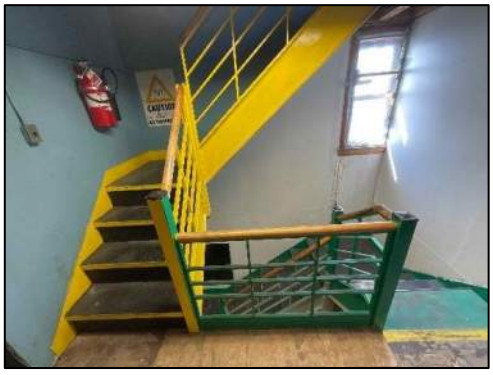


FIGURE 8. Second Floor Landing

Fire Protection Systems

Automatic Sprinkler and Standpipe System

The existing building is not protected with a sprinkler or standpipe system. The building is not required to be sprinklered throughout based on the existing occupancy chapters of NFPA 101. Sprinkler thresholds applicable to new construction are required to be evaluated as part of future projects including an addition and/ or change of occupancy (NHEBC 1011.2 & 1011.1). Renovations throughout the building could also require sprinkler thresholds to be evaluated depending on the extent of the work area.

Fire Alarm and Detection System

The building is provided with a fire alarm and detection system consisting of manual pull stations at exits, smoke and heat detectors at select locations, and audio/visual notification devices at select locations. The fire alarm control unit (FACU) is located near the Stair on the First Floor and hard-wired to two audio/visual notification devices in the Sherman Adams Building.

FIGURE 9. Combination Heat/ Smoke Detector

FIGURE 10. Pull Station

Coverage of the existing system is required to be maintained as part of future renovations (NHEBC 701.2). Where the fire alarm system is altered or reconfigured, this scope of work is required to be in accordance with the NHSBC and NFPA 72.

Means of Egress

The following summarizes the egress arrangement at each Floor:

- **Basement**: The Basement is served by the open stair. The basement is only permitted to be served by a single means of egress if the storage is limited to Low Hazard Contents (NFPA 101, 42.2.4.1). Based on the fuel storage in the basement, it is considered an Ordinary or High-Hazard Storage Occupancy, which are only permitted to be served by a single exit if the exit can be reached within the maximum common path of travel permitted (NFPA 101, 42.2.4.1).
- **First Floor**: The First Floor is served by two exits to the exterior. One of the exits is not operational in the wintertime due to the build up of snow and ice. The travel distance from the most remote point to the exit that is available during the wintertime is 92 ft. The common path of travel for nonsprinklered buildings containing Group F-1 and Industrial Occupancies is 75 ft. and 50 ft., respectively. Based on this, the wintertime exit arrangement is not compliant.
- **Second Floor**: The Second Floor is served by the open stair. Open stairs in buildings that are not sprinklered throughout are not permitted to serve as means of egress (NFPA 101, 8.6.9.2 & NHSBC 712.1.9(5)).
- **Penthouse**: The Penthouse level is served by a single exit, but is considered a normally unoccupied space and not subject to the means of egress requirements for an occupied floor.

An option to improve the exit arrangement at the Basement and Second Floors would be enclosing the Stair at all Floors in 1-hour rated construction with protected openings, and constructing a 1-hour exit passageway at the First Floor. It is recommended that this option be reviewed with the local AHJ if it is ever incorporated as part of future work, given there are existing openings into the corridor at the First Floor from normally unoccupied spaces (NHSBC 1024.5).

Existing conditions observed within the building that do not comply with NFPA 101 and/ or NHSBC are detailed in Appendix A. These conditions are permitted to remain unless otherwise required by NFPA 101, or the NHEBC based on the proposed scope of work. Appendix A includes a general list of existing conditions observed on site and associated recommendations. Each condition is identified with a number, description, recommendation, location diagram, and photo. The existing conditions are grouped into different categories based on the code provisions that require them to be addressed.

Plumbing

The NHSBC and NHSPC regulate the minimum number of plumbing fixtures. The minimum number of plumbing fixtures are based upon the use and occupancy classification of the building or space and the occupant load as established by the NHSBC. Public and employee toilet facilities are required to be located not more than one story above or below the space required to be provided with toilet facilities, and the path of travel to such facilities is not permitted not exceed 500 feet (NHSPC 403.1). The following table summarizes the minimum requirements for plumbing fixtures based on the occupancies within the building (CSPC 403.1).

Table 7: Plumbing Fixture Factors

Use Group	Toilets		Urinals	Lavatories		Drinking Fountains	Service Sink
	F	M		F	M		
Factory/ Industrial	1 per 100	1 per 100	50% substitution	1 per 100		1 per 400	1 Required
Storage	1 per 100	1 per 100	50% substitution	1 per 100		1 per 1,000	1 Required

1. Congregate living facilities require 1 shower per 8 occupants as well.

The public restrooms at the Ground and First Floor support up to 1,050 Assembly (Dining) occupants.

The following table details the plumbing fixture calculations for the building based on occupant load calculations.

Table 8: Plumbing Fixture Calculations									
Floor	**Occupant Load**	**Classification**	**Water Closets**		**Male Urinals** [A] (SUBSTITUTION)	**Lavatories**		**Drinking Fountains**	**Service Sink**
			Female	**Male**		**Female**	**Male**		
First – Second Floor	**19**	Factory/ Industrial	1 per 100	1 per 100	0.67	1 per 150	1 per 200	1 per 500	1
		Required fixtures	0.10	0.10	0.06	0.06	0.05	0.038	1
	334	Storage	1 per 75	1 per 75	0.67	1 per 150	1 per 200	1 per 500	1
		Required fixtures	0.07	0.07	0.05	0.04	0.03	0.022	1
	Total Required Fixtures		**1**	**1**	**1**	**1**	**1**	**1**	**1**
	Total Provided Fixtures		**1**	**1**	**0**	**1**	**1**	**0**	**1**

[A] Permitted to be substituted for male water closets

[B] 2 Showers are provided, which satisfies the minimum required for congregate living facilities.

As shown above, the building is provided with a sufficient number of fixtures.

Accessibility

The work area within the existing building as part of future projects is required to be made accessible in accordance with ANSI/ICC A117.1 unless proven to be technically feasible (NHSEBC 305.6). The following include accessibility exceptions to consider for the building:

- Accessibility is not required for employee work areas, but an accessible route to and from these spaces would be required if future work impacted them (NHSBC 1103.2.2 & ADA 203.9).
- Equipment Spaces are not required to be accessible (NHSBC 1103.2.9 & ADA 203.5). When determining whether accessible upgrades are required as part of future renovation work, consideration should be given to this exception.

The building is generally not accessible. As part of future work, accessible upgrades would be required if new employee work areas are introduced into the building.

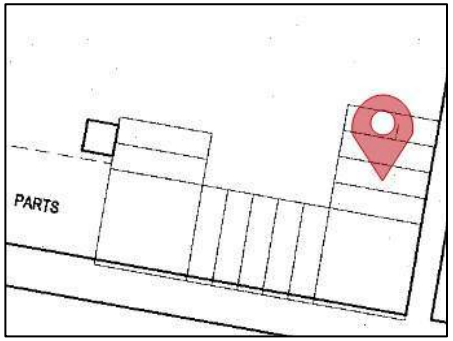
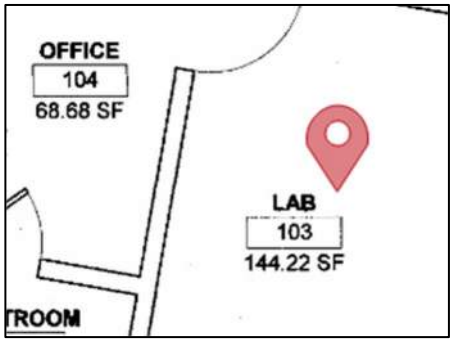
Appendix A: Existing Conditions Summary

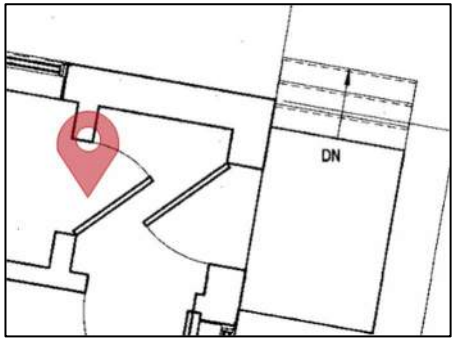
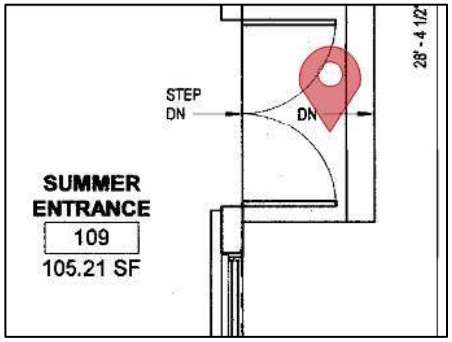
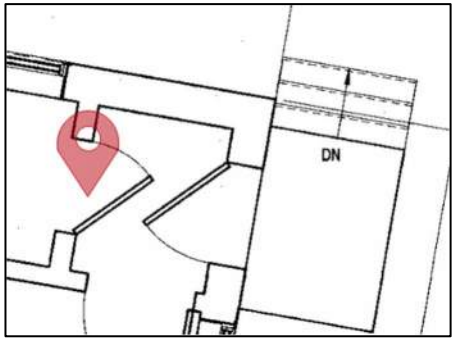
Existing conditions are organized within the following tables in this Appendix as outlined below (Categories 1-3 & Accessibility). These conditions are documented for informational purposes and are intended to serve as a reference for consideration as part of future maintenance work and future projects within the building.

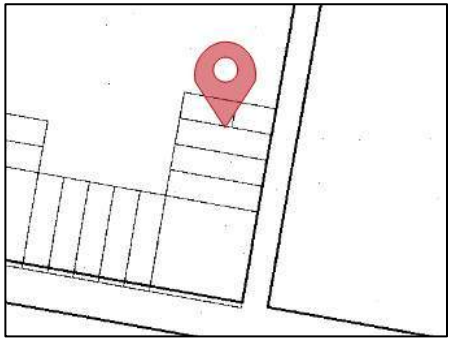
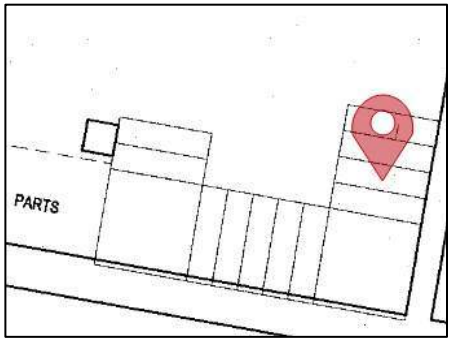
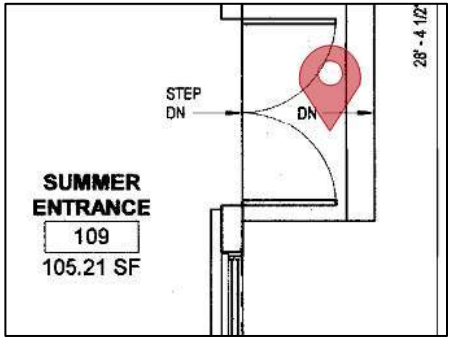
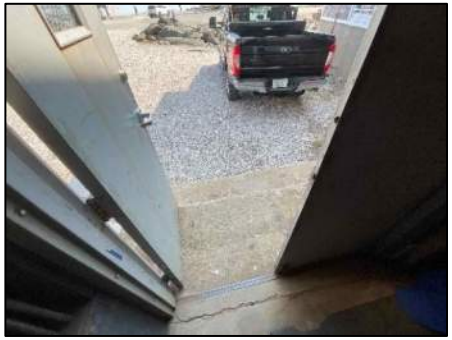
Category 1 – Existing conditions that have not been maintained as originally constructed, present a potential risk to life safety, and may be subject to citations by the fire department, irrespective of the work performed. We suggest addressing these items to the extent feasible to ensure these elements are upgraded and maintained as originally designed.

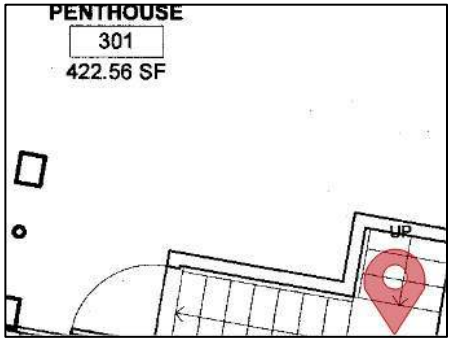
Category 2 - Existing conditions that may have complied with the code at the time of construction, but do not comply with Saf-FM 304 (NFPA 101). Saf-C 6000 gives the authority to the local fire marshal to issue violations for existing conditions that do not comply, regardless of whether work is taking place in the building.

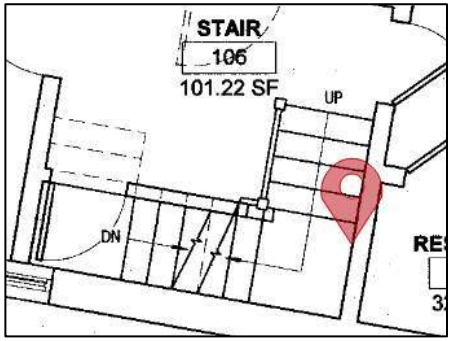
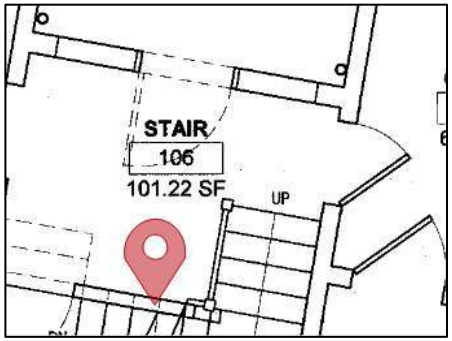
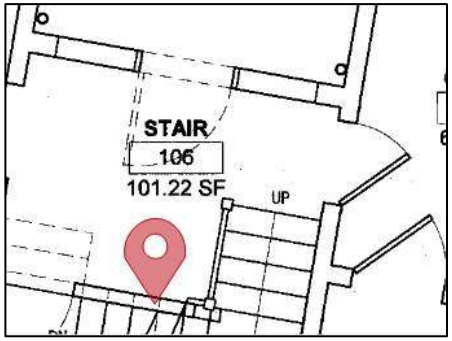
Category 3 - Existing conditions that do not comply with the New Hampshire Building Code and could be required to be corrected as part of future work depending upon the scope of work.

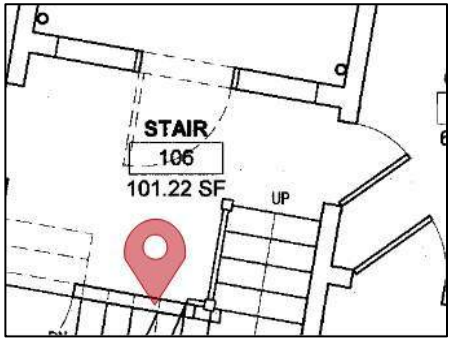
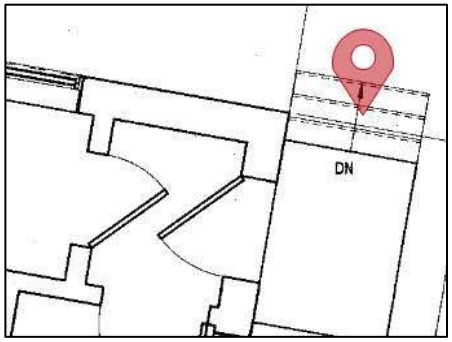
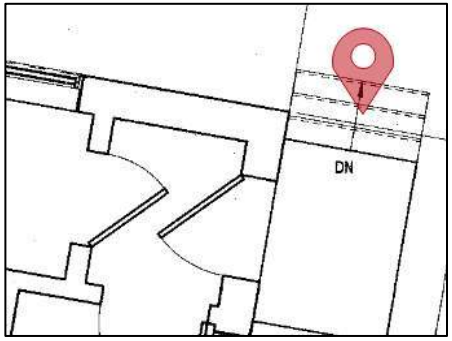
Category 1			
#	**Existing Condition & Recommendation**	**Location**	**Picture**
1.	The treads on the stairs are damaged at select locations. Stair treads and risers are required to be of uniform size and shape (NHSBC 1011.5.4). The stair treads could be repaired where damaged.		
2.	The corridor doors throughout the building were observed to be non-rated. Corridors and corridor doors in buildings without a sprinkler system are required to be 1 hour rated (NFPA 101, 26.1.3.3 and NHSBC 1020.2) 20-minute rated corridor doors could replace existing doors to resolve this condition.		
3.	The detector cap is taped to the ceiling within the vicinity of the detector. Detectors are required to be spaces and located so that they are not obstructed (NFPA 72, 17.8.3.1.2). It is recommended that the detector caps be removed from the ceiling and stored elsewhere.		

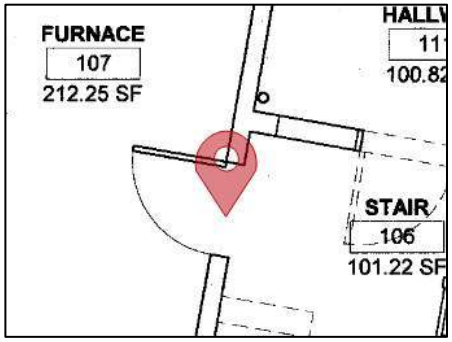
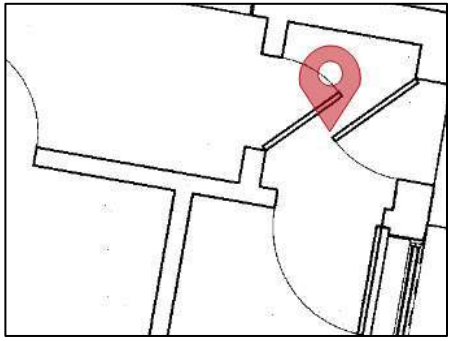
Category 2			
#	**Existing Conditions Recommendations**	**Location**	**Picture**
4.	The winter exit door is equipped with a lock. Doors are not permitted to be locked in the direction of egress (NFPPA 101, 26.2.3.5.1 & NHSBC 1010.2.4) It is recommended that this door remain unlocked from the inside, or locking hardware be installed such that it is not locked on the egress side.		
5.	The summer exit door is equipped with a flush bolt. Unlatching of any door leaf is not permitted to require more than one operation (NFPA 101, 7.2.1.5.9). It is recommended that this door remain unlocked from the inside, or locking hardware be installed such that it is not locked on the egress side.		
6.	The winter exit door is equipped with a lock. Doors are not permitted to be locked in the direction of egress (NFPPA 101, 26.2.3.5.1 & NHSBC 1010.2.4) It is recommended that this door remain unlocked from the inside, or locking hardware be installed such that it is not locked on the egress side.		

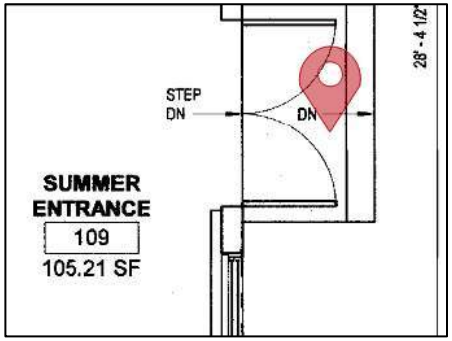
Category 2			
#	**Existing Conditions Recommendations**	**Location**	**Picture**
7.	The stair has a clear width of that is less than the minimum 36" required for existing stairs (NFPA 101, 7.2.2.2.1.1(b)). New egress stairs are required to have a minimum 44" clear width (NHSBC 1011.2). The clear width could be increased, or this condition could be reviewed with the AHJ for approval as part of future work.		
8.	No handrails are provided along the steps from the basement to the first floor. Handrails are required on both sides of all new egress stairways (NHSBC 1011.11). Handrails are permitted to be provided on one side of existing stairs (NFPA 101, 7.2.2.4.1.6). A new handrail could be installed on at least one side of the stair.		
9.	Each door leaf provides a clear opening of 26". Existing doors are required to provide a minimum clear opening of 28" (NFPA 101, 7.2.1.2.3.2). A clear opening of 32" is required for new doors (NHSBC 1010.1.1). The exit door assembly could be removed and replaced with at least one new door with a clear width of 32".		

Category 2			
#	**Existing Conditions Recommendations**	**Location**	**Picture**
10.	The headroom throughout the corridors at the Second Floor is reduced to 71" at the lowest point. The minimum ceiling height is not permitted to be less than 7 ft. in existing buildings (NFPA 101, 7.1.5). A minimum 7 ft. 6 in. ceiling height is required in new buildings (NHSBC 1003.3.1). The ceiling could be reconfigured to provide the minimum required headroom.		
11.	The headroom throughout the Stair is reduced at multiple floors below the minimum 6 ft. 8 in. permitted (NFPA 101, 7.1.5 & NHSBC 1003.3.1). At locations where this occurs, the edges of the ceiling should be provided with protection and signage indicating a low ceiling height.		

Category 3			
#	**Existing Condition & Recommendation**	**Location**	**Picture**
12.	No outside handrails are provided along the stair. Handrails are required on both sides of all new egress stairways (NHSBC 1011.11). Handrails are permitted to be provided on one side of existing stairs (NFPA 101, 7.2.2.4.1.6). Another handrail could be provided on the outside of the stair.		
13.	The handrail along the steps is interrupted by newel posts. Handrails are required to be continuous along the full length, uninterrupted by posts (NHSBC 1014.4). This requirement does not apply to existing handrails (NFPA 101, 7.2.2.4.5.7). The handrail is required to be replaced if altered, or if a change of occupancy to a higher hazard category occurs (NHEBC 801.4 & 1011.5.1).		
14.	The guard openings in the handrails were measured to be 5.5”. Openings in guards, other than approved existing guards, are required to restrict the passage of a sphere 4” in diameter (NFPA 101 7.2.2.4.6.3, NHSBC 1015.4). The guard condition is required to be addressed if altered, or if a change of occupancy to a higher hazard category occurs (NHEBC 801.4 & 1011.5.1).		

Category 3			
#	**Existing Condition & Recommendation**	**Location**	**Picture**
15.	The handrails are mounted 32" above the stair nosing. New handrails are required to be mounted 34" – 38" above the stair nosing (NHSBC 1014.2). The handrails are required to be adjusted to comply with the NHSBC if a change of occupancy to a higher hazard category occurs, or if the handrails are otherwise altered (NHEBC 1011.5.1).		
16.	Only one handrail is provided along exterior stair from the winter exit. Handrails are required on both sides of all new egress stairways (NHSBC 1011.11). Compliant handrails are required to be installed on both sides if a change of occupancy to a higher hazard category occurs, or if the handrails are otherwise altered (NHEBC 1011.5.1).		
17.	The door is not provided with landings on both sides. Landings should be provided on each side of doors at the same elevation (NFPA 101 7.2.1.3.1, NHSBC 1010.1.4) Landings at each side of the door would be required if a change of occupancy to a higher hazard category occurs, or if the handrails are otherwise altered (NHEBC 1011.5.1).		

Category 3			
#	**Existing Condition & Recommendation**	**Location**	**Picture**
18.	The guards within the stairway have a height of 33.5". Existing guards are required to have a minimum height of 36" (NFPA 101, 7.2.2.4.6.2(1)). New Guards are required to have a minimum height of 42" (NHSBC 1015.3). The openings in the guards are 4.25" - 4.5". Openings in guards, other than approved existing guards, are required to restrict the passage of a sphere 4" in diameter (NFPA 101 7.2.2.4.6.3 & NHSBC 1015.4). Compliant guards are required if a change of occupancy to a higher hazard category occurs, or if the guards are otherwise altered (NHEBC 1011.5.1).		
19.	An MEP and Storage room is located with and opening to the stair. Exit stair enclosures are not permitted to be used for any purpose that interferes with its function as a means of egress (NFPA 101, 7.1.3.2.3 & NHSBC 1022.1). This item would need to be addressed if the scope of work for future projects included the enclosure of this stair.		
20.	The current arrangement of these doors does not provide sufficient clear floor space between doors. Doors in series are required to have 48" between them plus the width of the door swinging into the space (NHSBC 1010.1.7) The doors could be rearranged so that sufficient clear floor space is provided.		

Category 3			
#	**Existing Condition & Recommendation**	**Location**	**Picture**
21.	The handrails serving the exterior steps do not extend at the bottom of the steps. Handrails are required to slope for one tread depth at the bottom (NHSBC 1014.6). Handrail extensions are required to be provided if the existing handrails are altered or if a change of occupancy to a higher hazard category occurs (NHSEBC 801.4 & 1011.5.1).		
22.	The corridor measured 32” wide at the narrowest point. Corridors are required to be at least 36” wide where the occupant load is less than 50 (NFPA 101 7.2.4.6.1, NHSBC 1020.3). The corridor width is required to be addressed if the existing handrails are altered or if a change of occupancy to a higher hazard category occurs (NHSEBC 801.4 & 1011.5.1).		

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Tighe & Bond

B.2.
Conceptual Document Cost Estimate

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Mt. Washington Summit Building

Mount Washington Rehab

2779 White Mountain Highway
North Conway, NH 03860

February 3, 2026

CONCEPTUAL DOCUMENT COST ESTIMATE

LDa-Architects

500 Harrison Avenue, Suite 3F

Boston, MA 02118

ELLANA
Construction Cost Consultants

32 Broadway, 8th Floor, New York, NY 10004

Item #	Div	Description	Quantity	Unit	Unit Price	Total $	Subtotal Trades	Notes
1		**SCOPE ITEMS - SUMMARY**						
2						**Cost Ranges**		
3					**Low**	**Medium**	**High**	
4		**Item #4.1.1 - Sherman Adams Building, Code Compliance**			200,000	234,961	$ 271,000	
5		**Item #4.1.2 - Tip Top House, Code Compliance**			33,000	38,586	$ 45,000	
6		**Item #4.1.3 - Yankee Building, Code Compliance**			79,000	91,974	$ 106,000	
7		**Item #6.1.1 - Sherman Adams Building, Exterior Enclosure**			4,170,100	4,905,915	$ 5,642,000	
8		**Item #6.1.2 - Sherman Adams Building, Space Use & Circulation**			1,462,000	1,719,586	$ 1,978,000	
9		**Item #6.1.3 - Sherman Adams Building, Systems**			1,879,000	2,210,219	$ 2,542,000	
10		**Item #6.2.1 - Tip Top House, Envelope & Structure**			216,000	253,111	$ 292,000	
11		**Item #6.2.2 - Tip Top House, Access & Interior, Maintenance**			75,000	88,196	$ 102,000	
12		**Item #6.2.3 - Tip Top House, Access & Interior, Enhancements**			24,000	27,675	$ 32,000	
13		**Item #6.3.1 - Yankee Building, Maintenance**			376,000	442,190	$ 509,000	
14		**Item #6.3.2 - Yankee Building, Enhancement**			189,000	221,869	$ 256,000	
15		**Item #6.3.3 - Yankee Building, Transformation**			-	-	$ -	
16		**Item #6.4.1 - Existing Foundations, Maintenance**			42,000	48,638	$ 56,000	
17		**Item #6.4.2 - Existing Foundations, Enhancement**			531,000	624,184	$ 718,000	
18		**Item #6.4.3 - Existing Foundations, Transformation**			4,583,000	5,390,679	$ 6,200,000	
19								
20					**Total of All Items:**	**16,297,780**		
21								
22				**Low**	**-15%**	**13,853,113**		
23				**Medium**		**16,297,780**		
24				**High**	**15%**	**18,742,447**		
27								
28	1	**Item #4.1.1 - Sherman Adams Building, Code Compliance**						
29		***Add:***						
30		Code Compliance						
31		Item 1: Repair CMU corridor wall	1	ls	750.00	750		
32		Item 2: Remove manual hold open devices	1	ea	325.00	325		
33		Item 3: Remove locks to existing door, replace hardware	1	ea	1,475.00	1,475		
34		Item 4: Remove locks to existing door, replace hardware	1	ea	1,475.00	1,475		
35		Item 5: Remove locks to existing door, replace hardware	1	ea	1,475.00	1,475		
36		Item 6: Scrape paint off existing door label	1	ea	425.00	425		
37		Item 7: Remove locks to existing door, replace hardware	1	ea	1,475.00	1,475		
38		Item 8: Remove locks to existing door, replace hardware	1	ea	1,475.00	1,475		
39		Item 9: Extend guardrails so opening is not excessive	1	loc	1,250.00	1,250		
40		Item 10: Hand rail to be added along the steps in the exit access corridor	1	loc	575.00	575		

Item #	Div	Description	Quantity	Unit	Unit Price	Total $	Subtotal Trades	Notes
41		Item 11: Install code compliant door closers to existing doors	3	ea	750.00	2,250		
42		Item 12: Remove existing door and replace with double door with one leaf atleast 32" wide	1	ea	5,500.00	5,500		
43		Item 13: Hand rail to be added along the existing ramp	1	loc	2,300.00	2,300		
44		Item 14: Assume existing stair's width is acceptable, extensive work required if it is to be increased from 35" to 44"	1	ls	-	-		
45		Item 15: Handrails to be extended	1	loc	1,150.00	1,150		
46		Item 16: Handrails to be extended	1	loc	1,150.00	1,150		
47		Item 17: Remove existing door and increase width to 32", add level landings to either side of door	1	ls	5,250.00	5,250		
48		Item 18: Remove & replace existing ramp to a 8.3% pitch	1	ls	7,500.00	7,500		
49		Item 19: Remove existing door and replace with a single hinge door	1	ls	3,500.00	3,500		
50		Item 20: Switch door hinge to opposite side	1	ls	1,200.00	1,200		
51		Item 21: Replace existing information counter to a compliant height of 36"	1	ls	6,750.00	6,750		
52		Item 22: Ramp to be replaced and handrails added to either side	1	ls	9,800.00	9,800		
53		Item 23: Landing is to be added to the bottom of the existing stair	1	ls	2,500.00	2,500		
54		Item 24: Remove & replace elevator car to extend length from 45" to 54"	1	ls	30,000.00	30,000		
55		Item 25: Create accessible path to Men's bathrooms and replace fixtures with accessible fixtures	1	ls	13,250.00	13,250		
56		Item 26: Create accessible path to Women's bathrooms and replace fixtures with accessible fixtures	1	ls	13,250.00	13,250		
57		Item 27: Add compliant door threshold and an automatic door opener	1	ls	2,125.00	2,125		
58		Item 28: Convert LAV to accessible, replace fixtures with accessible fixtures	1	ls	8,250.00	8,250		
59		Item 29: Convert park staff bathroom to accessible, replace fixtures with accessible fixtures	1	ls	18,500.00	18,500		
60								
61						**SUB TOTAL**	**$**	**144,925**
62					Mark Ups	62.1%	**$**	**90,036**
63		**TOTAL: Item #4.1.1 - Sherman Adams Building, Code Compliance w/ Mark-Ups**					**$**	**234,961**
64								
65	2	**Item #4.1.2 - Tip Top House, Code Compliance**						
66		***Add:***						
67		Code Compliance						
68		Item 1: Landing is to be altered at existing entry way	1	ls	3,750.00	3,750		
69		Item 2: Front door hardware to be removed and replaced with panic hardware	1	ls	1,900.00	1,900		
70		Item 3: Guardrails to be added to both sides of existing sloped ramp	1	loc	14,400.00	14,400		
71		Item 4: Transition from ramp to door is to be-worked so there is no step	1	ls	3,750.00	3,750		
72								
73						**SUB TOTAL**	**$**	**23,800**
74					Mark Ups	62.1%	**$**	**14,786**
75		**TOTAL: Item #4.1.2 - Tip Top House, Code Compliance w/ Mark-Ups**					**$**	**38,586**
76								
77	3	**Item #4.1.3 - Yankee Building, Code Compliance**						

Item #	Div	Description	Quantity	Unit	Unit Price	Total $	Subtotal Trades	Notes
78		***Add:***						
79		Code Compliance						
80		Item 1: Repair damaged treads on existing stair	1	ls	3,250.00	3,250		
81		Item 2: Replace existing corridor doors with 20minute fire rated doors	2	ea	3,750.00	7,500		
82		Item 3: Store smoke detector cap apart from smoke detector	1	ea	105.00	105		
83		Item 4: Remove locks to existing door, replace hardware	1	ea	1,475.00	1,475		
84		Item 5: Remove locks to existing door, replace hardware	1	ea	1,475.00	1,475		
85		Item 6: Remove locks to existing door, replace hardware	1	ea	1,475.00	1,475		
86		Item 7: Assume existing stair's width is acceptable, extensive work required if it is to be increased from existing to 36"	1	ls	-	-		
87		Item 8: Hand rail to be added along existing stair	1	loc	2,300.00	2,300		
88		Item 9: Remove existing door and increase width to 32", add level landings to either side of door	1	ls	5,250.00	5,250		
89		Item 10: Remove and replace existing ceilings to increase required headspace. Assume heights above existing ceilings provide adequate space	1	loc	5,000.00	5,000		
90		Item 11: Ceiling edges at staircase to have protective signage indicating low ceiling height	1	ls	1,950.00	1,950		
91		Item 12: Hand rail to be added along the steps within staircase	1	loc	2,300.00	2,300		
92		Item 13: Remove and replace hand rail to be continuous along the staircase	1	loc	3,450.00	3,450		
93		Item 14: Hand rail openings too large, to be addressed in above item	1	loc		incl. above		
94		Item 15: Hand rail height to be 34"-38", to be addressed in above item	1	loc		incl. above		
95		Item 16: Hand rail to be added to exterior stair	1	ls	2,250.00	2,250		
96		Item 17: Landing is to be added to the bottom of the existing exterior stair	1	ls	3,000.00	3,000		
97		Item 13: Remove and replace hand rail to be continuous along the staircase 36" height	1	loc	3,450.00	3,450		
98		Item 19: Stair to remain as is, not to be enclosed	1	ls	-	-		
99		Item 20: Re-arrange existing doors for sufficient clear floor space	2	ea	5,500.00	11,000		
100		Item 21: Handrails to be extended, exterior	1	loc	1,500.00	1,500		
101		Item 22: Corridor width assumed acceptable, extensive work required if to change	1	ls	-	-		
102								
103						**SUB TOTAL**	**$ 56,730**	
104					Mark Ups	62.1%	**$ 35,244**	
105		**TOTAL: Item #4.1.3 - Yankee Building, Code Compliance w/ Mark-Ups**					**$ 91,974**	
106								
107	4	**Item #6.1.1 - Sherman Adams Building, Exterior Enclosure**						
108		***Add:***						
109		Maintenance						
110		Replace observation deck roofing.	16,750	sf	55.00	921,250		
111		Replace both chimneys.	2	ea	18,500.00	37,000		
112		Replace roof pavers, assume 30% of roof area	5,025	sf	35.00	175,875		
113		Replace or repair roof guardrails.	610	lf	115.00	70,150		
114		Re-parge concrete walls.	7,120	sf	40.00	284,800		
115		Correct the path of stormwater off the generator barn roof.	300	sf	50.00	15,000		Confirm generator barn roof SF

Item #	Div	Description	Quantity	Unit	Unit Price	Total $	Subtotal Trades	Notes
116		Replace tower door.	1	ea	5,500.00	5,500		
117		Re-seal ground level windows.	1	ls	31,150.00	31,150		
118		Replace lower-level windows.	1	ls	35,880.00	35,880		
119								
120		Enhancement						
121		Built-in benches around the rebuilt chimneys.	1	ls	26,000.00	26,000		
122		Educational signage along the repaired or replaced guardrail.	1	ls	850.00	850		
123		Example native species installations among the new roof pavers.	1	ls	15,100.00	15,100		
124		Added exterior insulation.	1	ls	35,600.00	35,600		
125		New ground floor windows.	1	ls	245,640.00	245,640		
126		New air-lock at tower door.	1	ls	1,200.00	1,200		
127								
128		Transformation						
129		Addition on the roof with an accessible route to access it.	1,500	SF	750.00	1,125,000		Confirm addition SF
130								
131						**SUB TOTAL**	**$ 3,025,995**	
132					Mark Ups	62.1%	**$ 1,879,920**	
133		**TOTAL: Item #6.1.1 - Sherman Adams Building, Exterior Enclosure w/ Mark-Ups**					**$ 4,905,915**	
134								
135	5	**Item #6.1.2 - Sherman Adams Building, Space Use & Circulation**						
136		***Add:***						
137		Maintenance						
138		Improve main entry visibility & accessibility in coordination with landscape & site circulation.	200	sf	165.00	33,000		Cut new openings for glazing
139		Relocate vehicles stored inside the entry doors during peak times.	1	ls	-	no cost		Move vehicles.
140		Encourage use of lower-level entry and restrooms.	1	ls	1,500.00	1,500		Provide signage to bathrooms
141		Audit signs and eliminate redundant/outdated signs.	1	ls	7,500.00	7,500		Allowance
142		Ease flow of visitors through busy dining and gift shop spaces – test system of self-checkout food service.	1	ls	30,000.00	30,000		(2) self-check out stations
143		Build permanent storage such as cabinets to keep food service and retail boxes out of hallways.	1	ls	11,250.00	11,250		Cabinetry allowance
144		Reconfigure museum entries to provide proper accessible clearances and an even egress path.	1	ls	22,500.00	22,500		(3) Entries
145		Refresh staff quarters finishes and furnishings.	1	ls	82,500.00	82,500		
146								
147		Enhancement						
148		Expand the main entry capacity by providing an awning at the main entry to extend the covered area.	1,050	SF	150.00	157,500		Confirm awning SF
149		Enhance lower level entrance and visitor spaces to lessen the load on the ground level by providing:						

Item #	Div	Description	Quantity	Unit	Unit Price	Total $	Subtotal Trades	Notes
150		- New stairs to the lower level entry	1	ls	20,000.00	20,000		Allowance
151		- Improving lower level restroom ventilation and plumbing	1	ls	18,750.00	18,750		Allowance
152		- Improving pack-up room ventilation, clarifying space signage and the layout of program spaces.	1	ls	35,625.00	35,625		Allowance
153		- Clarifying space signage and the layout of program spaces.	1	ls	5,075.00	5,075		Allowance
154		Create consistent signage throughout the building, with a clear state park identity.	1	ls	51,450.00	51,450		Allowance
155		Reorganize food services & gift shop spaces by moving the gift shop to a more prominent location, providing new separated access for food services and gift shop. (See Recommendation Diagrams)	1	ls	363,000.00	363,000		Allowance
156		Add storage as part of the space reorganization.	1	ls	9,000.00	9,000		Allowance
157		Add office spaces as part of space reorganization.	1	ls	7,500.00	7,500		Allowance
158								
159		Transformation						
160		Provide additional entries to the building, potentially from a reenvisioned roof.	1	ls	17,000.00	17,000		(2) New entries
161		Separate the service lobby from public interior stairs and elevator.	1	ls	9,000.00	9,000		New partitions to create seperation
162		Relocate the pack-up room elsewhere on site and expand the lower level restrooms.	1	ls	15,750.00	15,750		Relocation TBD
163		Provide additional restrooms elsewhere on site.	1	ls	26,250.00	26,250		
164		Install interactive and modifiable digital signage to provide more flexibility for messaging.	1	ls	3,750.00	3,750		(1) Digital signage, allow
165		Expand food service and gift shop spaces beyond the ground floor by relocating the gift shop to a roof addition, expanding the kitchen, food service and dining into former gift shop area. (See Recommendation Diagrams)	1	ls	132,750.00	132,750		Allowance, 2,655 SF
166								
167						**SUB TOTAL**	**$ 1,060,650**	
168					Mark Ups	62.1%	**$ 658,936**	
169		**TOTAL: Item #6.1.2 - Sherman Adams Building, Space Use & Circulation w/ Mark-Ups**					**$ 1,719,586**	
170								
171	6	**Item #6.1.3 - Sherman Adams Building, Systems**						
172		***Add:***						
173		Maintenance						
174		Replace identified MEP equipment due to age						
175		HVAC						
176		- Radiation	1	ls	90,100.00	90,100		Allowance, size and scope required
177		- Hot water piping	1	ls	32,200.00	32,200		Allowance, size and scope required
178		- Observatory boiler system	1	ls	82,320.00	82,320		Allowance, size and scope required
179		- Exhaust fans.	1	ls	18,100.00	18,100		Allowance, size and scope required
180		Plumbing						
181		- Piping	1	ls	38,600.00	38,600		Allowance, size and scope required
182		- Anti-scalds	1	ls	7,800.00	7,800		Allowance, size and scope required
183		- Backflow	1	ls	5,200.00	5,200		Allowance, size and scope required
184		- Hot water to upstairs rest rooms.	1	ls	19,300.00	19,300		Allowance, size and scope required

Item #	Div	Description	Quantity	Unit	Unit Price	Total $	Subtotal Trades	Notes
185		Electrical						
186		- Replace outdated distribution panels.	1	ls	128,630.00	128,630		Allowance, size and scope required
187								
188		Enhancement						
189		Design HVAC system for future electrification.	1	ls	154,350.00	154,350		Allowance, size and scope required
190		Add makeup air system and mechanical ventilation.	1	ls	257,250.00	257,250		Allowance, size and scope required
191		Create Fire Department connections from the existing domestic water tanks to allow emergency connections.	1	ls	45,000.00	45,000		Allowance
192		Design a limited capacity sprinkler system working closely with AHJ (Authority having Jurisdiction).	1	ls	154,350.00	154,350		Allowance
193								
194		Transformation						
195		Install a hybrid fuel source heat pump for heating.	1	ls	180,075.00	180,075		Allowance
196		Install outdoor unit in a somewhat sheltered location.	1	ls	150,000.00	150,000		Allowance
197		Lower operating costs vs fuel oil alone (by approximately 20% lower)	1	ls		incl. above		Size and scope required
198		Reduced carbon footprints.	1	ls		incl. above		Size and scope required
199								
200						**SUB TOTAL**	**$ 1,363,275**	
201					Mark Ups	62.1%	**$ 846,944**	
202		**TOTAL: Item #6.1.3 - Sherman Adams Building, Systems w/ Mark-Ups**					**$ 2,210,219**	
203								
204	7	**Item #6.2.1 - Tip Top House, Envelope & Structure**						
205		***Add:***						
206		Maintenance						
207		Replace roofing.	1,680	sf	55.00	92,400		
208		Replace windows, especially on west elevation.	1	ls	33,120.00	33,120		
209		Replace exterior trim, especially on west elevation.	1	ls	5,400.00	5,400		
210		Add additional structural connections at identified roof framing conditions.	1	ls	25,200.00	25,200		Allowance
211								
212						**SUB TOTAL**	**$ 156,120**	
213					Mark Ups	62.1%	**$ 96,991**	
214		**TOTAL: Item #6.2.1 - Tip Top House, Envelope & Structure w/ Mark-Ups**					**$ 253,111**	
215								
216	8	**Item #6.2.2 - Tip Top House, Access & Interior, Maintenance**						
217		***Add:***						
218		Maintenance						
219		Provide virtual walkthrough of historic building interior for those who cannot traverse the non-accessible entry.	1	ls		by others		By others

Item #	Div	Description	Quantity	Unit	Unit Price	Total $	Subtotal Trades	Notes
220		Conduct exploratory demolition to determine the existing wall assembly and floor assembly and identify if there is a vapor retarder.	1	ls	1,750.00	1,750		Allowance
221		Identify where water is getting into the interior through the walls.	1	ls	2,250.00	2,250		
222		Restart the existing HVAC system to raise interior temperature and lower dew point.	1	ls	50,400.00	50,400		Allowance
223								
224						**SUB TOTAL**	**$ 54,400**	
225					Mark Ups	62.1%	**$ 33,796**	
226		**TOTAL: Item #6.2.2 - Tip Top House, Access & Interior, Maintenance w/ Mark-Ups**					**$ 88,196**	
227								
228	9	**Item #6.2.3 - Tip Top House, Access & Interior, Enhancements**						
229		***Add:***						
230		Enhancement						
231		Provide an accessible entry compatible with the historic structure. This may include leaving the front entry door on hold-opens, installing a new automatic opener	1	ls	1,850.00	1,850		Allowance
232		Coordinate building access with accessible site circulation and parking.	1	ls		NIC		Size and scope required
233		Install a vapor retarder if it is found to be lacking.	1	ls	6,720.00	6,720		Allowance
234		Install a monitoring system for moisture and interior air quality.	1	ls	8,500.00	8,500		Allowance
235								
236						**SUB TOTAL**	**$ 17,070**	
237					Mark Ups	62.1%	**$ 10,605**	
238		**TOTAL: Item #6.2.3 - Tip Top House, Access & Interior, Enhancements w/ Mark-Ups**					**$ 27,675**	
239								
240	10	**Item #6.3.1 - Yankee Building, Maintenance**						
241		***Add:***						
242		Maintenance						
243		Repair heavily spalled & damaged concrete on ground floor.	1,680	sf	25.00	42,000		
244		Replace & continue to maintain missing and damaged shingles.	6,830	sf	15.00	102,450		
245		Replace and protect windows in poor condition.	1	ls	46,575.00	46,575		
246		Replace low-sloped membrane roof above the third floor that appears to be leaking.	120	sf	66.00	7,920		
247		Repair damage from water leaks on upper floors.	1	ls	11,000.00	11,000		
248		Repair Martin Fireproofing floor panels that are heavily cracked and spalled.	1	ls	28,900.00	28,900		Assume 25% of total SF
249		Repair ad-hoc, notched, structural members on third floor.	1	ls	33,900.00	33,900		
250								
251						**SUB TOTAL**	**$ 272,745**	
252					Mark Ups	62.1%	**$ 169,445**	
253		**TOTAL: Item #6.3.1 - Yankee Building, Maintenance w/ Mark-Ups**					**$ 442,190**	

Item #	Div	Description	Quantity	Unit	Unit Price	Total $	Subtotal Trades	Notes
254								
255	11	**Item #6.3.2 - Yankee Building, Enhancement**						
256		***Add:***						
257		Enhancement						
258		Invest in improvements to existing buildings to be more usable, such as provide water services.	1	ls	10,400.00	10,400		Incoming water service from Sherman Adams building, allow
259		Enclose the primary stairwell for code compliant egress.	1	ls	13,500.00	13,500		Allowance
260		Provide fire-rated corridor walls and doors.	1	ls	38,500.00	38,500		Allowance
261		Rectify headroom deficiencies throughout second floor.	1	ls	28,250.00	28,250		Allowance
262		Provide sprinkler protection.	1	ls	46,200.00	46,200		Allowance
263								
264						**SUB TOTAL**	**$ 136,850**	
265					Mark Ups	62.1%	**$ 85,019**	
266		**TOTAL: Item #6.3.2 - Yankee Building, Enhancement w/ Mark-Ups**					**$ 221,869**	
267								
268	12	**Item #6.3.3 - Yankee Building, Transformation**						
269		***Add:***						
270		Transformation						
271		Replacement or large-scale phased renovation.	1	ls		NIC		Size and scope required
272								
273						**SUB TOTAL**	**$ -**	
274					Mark Ups	62.1%	**$ -**	
275		**TOTAL: Item #6.3.3 - Yankee Building, Transformation w/ Mark-Ups**					**$ -**	
276								
277	13	**Item #6.4.1 - Existing Foundations, Maintenance**						
278		***Add:***						
279		Maintenance						
280		Remove former Powerhouse foundations.	1	ls	25,000.00	25,000		Allowance
281		Make safe former WMTV foundations so they do not pose a risk to pedestrians	1	ls	5,000.00	5,000		Allowance
282								
283						**SUB TOTAL**	**$ 30,000**	
284					Mark Ups	62.1%	**$ 18,638**	
285		**TOTAL: Item #6.4.1 - Existing Foundations, Maintenance w/ Mark-Ups**					**$ 48,638**	
286								
287	14	**Item #6.4.2 - Existing Foundations, Enhancement**						
288		***Add:***						
289		Enhancement						
290		Create accessible viewing platform in this area to capture views on the southwest side of the summit.	1	ls	385,000.00	385,000		Allowance for deck only, no enclosure

Item #	Div	Description	Quantity	Unit	Unit Price	Total $	Subtotal Trades	Notes
291								
292						**SUB TOTAL**	**$ 385,000**	
293					Mark Ups	62.1%	**$ 239,184**	
294		**TOTAL: Item #6.4.2 - Existing Foundations, Enhancement w/ Mark-Ups**					**$ 624,184**	
295								
296	15	**Item #6.4.3 - Existing Foundations, Transformation**						
297		***Add:***						
298		Transformation						
299		Consider a new structure with roof access for viewing on the location of former foundations. Remove & rebuild maintenance building	1	ls	3,325,000.00	3,325,000		New building at viewing deck
300								
301						**SUB TOTAL**	**$ 3,325,000**	
302					Mark Ups	62.1%	**$ 2,065,679**	
303		**TOTAL: Item #6.4.3 - Existing Foundations, Transformation w/ Mark-Ups**					**$ 5,390,679**	
304								

APPENDIX C
Fuel Tanks Rough Order of Magnitude Cost for Upgrades

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Mount Washington State Park – Fuel Tank Replacement - Rough Order of Magnitude

TO: Patrick Hummel – Park Supervisor

FROM: Tighe & Bond

DATE: November 11, 2025

Executive Summary

Tighe & Bond has evaluated potential replacement options for Mount Washington State Park's (MWSP) five (5) aboveground storage tanks (AST) at their facility on the summit of Mt Washington located in Sargent's Purchase, New Hampshire. MWSP currently stores kerosene fuel oil for heating various buildings throughout the mountain summit facilities.

Tighe & Bond has reviewed the existing equipment and facility layout and developed this preliminary assessment for replacement of the existing tanks and appurtenances, which includes rough order of magnitude conceptual construction budgets for the project. We recommend that MWSP replace the existing ASTs with three (3) new 30,000-gallon ASTs to store kerosene. As detailed in this memorandum, we suggest that three (3) new fuel tanks be installed in the same general area as the existing ASTs.

Preliminary opinions of cost developed for the proposed project are summarized in this memorandum, and detailed Opinions of Probable Construction Cost (OPCC) are attached. Based on our review, which includes removal of the existing ASTs and installation of above or underground storage tanks, the estimated costs are summarized in the table below.

A more detailed summary of what is included with each option can be seen in the Preliminary Construction Costs section.

Table ES-1
Summary of Prices

OPCC Options	Price
Option 1A – Five (5) New 20,000-gallon ASTs	$3,100,000
Option 1B – Three (3) New 30,000-gallon ASTs	$2,900,000
Option 2A – Five (5) New 20,000-gallon USTs	$4,100,000
Option 2B – Three (3) New 30,000-gallon USTs	$3,900,000

Project Background

MWSP operates five (5) horizontal, cylindrical, single-wall steel, 20,000-gallon aboveground storage tanks (ASTs) storing kerosene for fueling on-site boilers to heat multiple facilities at the summit. Two (2) out of the (5) five tanks are currently out of service and will not be repaired. The tanks are set in a concrete secondary containment dike which is in poor condition and in need of maintenance. The three (3) operating tanks are connected to a series of pipe runs that connect to day tanks located inside multiple buildings that feed the boilers. See table ES-2 below for a schedule of overall fuel storage and associated heating equipment.

Table ES-2
Tank Roster

Facility	Tank Capacity (Gallons)	Quantity	Construction Material	Associated Boilers
Tank Farm (AST 1-5)	20,000	5	Single-Walled Steel Tank	N/A, Piped to AST 12
Sherman Adams Building (AST 15 & 19)	275	2	Double-Walled Steel Tank	Two (2) The H.B. Smith Co, Inc. Model No. B79-123 One (1) Smith Cast Iron Boilers: Model No. HE-03
Tip Top House (AST 18A & 18B)	165	2	Double-Walled Steel Tank	One (1) Lennox Industries: Model No. OF 12-185
Yankee Building (AST 17)	250	1	Double-Walled Steel Tank	Two (2) Furnaces Model No. Undetermined
Generator Housing Shed (AST 12)	1,000	1	Double-Walled Steel Tank	N/A, Piped to AST 15, 17, 18A, 18B, 19, EGEN-1 & EGEN 2

Tighe & Bond has been tasked to review the current fuel storage systems on site and make recommendations for improvements to all the tank systems, with the main focus on the replacement of the five (5) larger storage tanks.

Records provided by MWSP confirm a steady consumption of kerosene at the site and indicate that approximately 13,500 gallons were consumed in 2023. Also provided was the consumption of kerosene during the previous winter months, which was just under 11,000-gallons.

Due to the location of these tanks and the severe weather conditions of the summit, it is imperative that the larger tanks are filled with enough fuel to heat the facilities for several months during the peak winter months. MWSP would like to investigate options to replace the five (5) 20,000-gallon ASTs with adequately sized tanks to meet their kerosene consumption needs.

1. Site Conditions

The project site is located on MWSP property at the summit of Mount Washington in Sargent's point, New Hampshire. The existing fuel tanks are located 0.1 miles northwest of Mount Washington Observatory building, near the Mount Washington Auto Road. The tanks are north of the new wastewater treatment facility that was recently completed.

The nearest NHDES wetland areas to the project site are Hermit Lake approximately 1.1 miles southeast and Lake of the Clouds approximately 2.4 miles southwest of the project site. A NHDES Wetlands map is included in Figure 1.

Mount Washington is known for its severe weather conditions, including high winds in excess of 100 mph, heavy precipitation of rain and snow, and extreme cold.

2. Anticipated Fuel Storage Needs

Required fuel storage for the equipment was based on fuel consumption for a 5-month winter period. Table 2-1 summarizes anticipated fuel use.

Table 2-1
Estimated Fuel Storage Needs for MWSP Equipment

Equipment Manufacturer	Equipment	Quantity	Consumption Rate[1] (Gallons/Hour)	Estimated 5-Month Consumption (gallons)
Lennox Industries: Model No. OF 12-185	Boiler	1	1.35	2,612
The H.B. Smith Co, Inc. Model No. B79-123	Boiler	2	1.3	2,515
Smith Cast Iron Boilers: Model No. 19HE-03	Boiler	3	2.6	5,029
Undetermined	Furnace	2	5.66-23.22[2]	6,584
Milton CAT Olympian 07 Model No. D200P3	Emergency Generator	2	8.9	66,216
			Total:	82,956

Notes:
1. *2023-2024 Fuel consumption data was provided by MWSP staff & equipment manuals.*
2. *Consumption rate is temperature dependent.*
3. *Assuming all equipment is running at the same time for a 5-month period.*

Based on maximum fuel consumption rates, three (3) 30,000-gallon tanks would be adequate as a replacement to the current ASTs that are dedicated to the fuel station. It should be noted that the Fire Code limits the maximum storage capacity to 95% of the tank volume. As such, each of the tanks will be limited to a maximum available capacity of 28,500-gallons.

3. Replacement Options

Multiple fuel tank replacement options were reviewed to determine the optimal placement and orientation for MWSP and its current operations. Aboveground and underground tank placements were assessed.

3.1 Under and Aboveground Tank Placement

There are five (5) horizontal, cylindrical 20,000-gallon aboveground existing fuel storage tanks located inside a concrete containment dike, northeast of the Sherman Adams building. Two (2) of the 20,000-gallon tanks are currently out of service. The placement of the new tanks is presumed to be generally in the same location as the existing tanks.

ASTs can be easier to maintain as inspection of the tanks and related systems can be completed visually, and any tank leaks can be noticed quickly. However, aboveground tanks can be an attractive target for vandalism, are generally more susceptible to weather damage and accidents and may be considered visually unappealing.

The current fuel piping and pump configurations have been designed for aboveground fuel storage that allows the five (5) tanks to fuel multiple day tanks located throughout the summit facilities. A transition to underground fuel storage would require a more comprehensive design and construction effort to evaluate and replace interior piping and pumps due to the anticipated elevation loss of the underground storage tanks

The installation of a UST may result in lower maintenance costs. For example, the UST manways can be installed on an elevated concrete pad to reduce exposure to road salt and landscaping impacts.

A fiberglass UST is recommended over steel as fiberglass is resistant to corrosion. However, fiberglass tanks are typically longer and may require a larger installation footprint. In either situation, the tanks would be double walled construction.

3.2 Tank Orientation

As described in Section 1, to replace the current ASTs with similar or larger capacity tanks above or underground, the replacement tanks should be oriented horizontally. The new tanks could be placed in a similar location to the current tanks noted in Figure 3. Table 3-1 shows example tank capacities, diameters, and lengths of replacement options.

Table 3-1
Aboveground and Belowground Tank Capacities and Dimensions

Existing Aboveground, Horizontal			
Tank Capacity	**Construction Material**	**Tank Diameter**	**Tank Length**
20,000 gallons	Single Walled Steel Tank	10’-6”	30’-10
Proposed Aboveground, Horizontal			
Tank Capacity	**Construction Material**	**Tank Diameter**	**Tank Length**
20,000 gallons	DW Steel (UL 142)	10’-0”	34’-0”
30,000 gallons	DW Steel (UL 142)	10’-6”	46’-6”
Proposed Underground, Horizontal			
Tank Capacity	**Construction Material**	**Tank Diameter**	**Tank Length**
20,000 gallons	DW Fiberglass	10’-6”	37’-5.5”
30,000 gallons	DW Fiberglass	10’-6”	54’-3”

3.3 Tank Management System

Currently, Mt. Washington summit operations do not utilize a tank management system. Operators rely on associated clock level gauges and manually stick the tanks for fuel levels during filling operations. A new digital tank management system should be considered as a superior means of gauging tank capacity.

3.4 Tank Canopy

A canopy option was explored to provide additional protection from the elements for the new aboveground storage tank farm. Canopies are often found at vehicle fueling operations but not typically at bulk storage tank farms. Due to the extremely high wind loads, extreme weather conditions, and logistical challenges posed by the site's location, it is our opinion to avoid installing a canopy. However, if desired, an additional cost of approximately $430,000 has been estimated for the construction of a 30-foot by 80-foot canopy with six (6) columns. The cost for the canopy was not applied to our analysis of construction costs.

4. Preliminary Construction Costs

Tighe & Bond originally developed four (4) options for consideration. The Opinion of Probable Construction Costs (OPCC) for upgrading the tank farm have been developed. The costs were developed based on previous experience in similar tank replacement projects as well as discussions with contractors and suppliers to discuss the logistics and special considerations that the site requires. The four (4) options for OPCC are listed below:

OPCC Option 1A – AST Installation

- Removal of five (5) 20,000-gallon ASTs
- Installation of five (5) 20,000-gallon UL 142 ASTs
- Tank monitoring equipment
- Leak detection equipment
- Above/underground piping installation
- Site Work

OPCC Option 1B – AST Installation

- Removal of five (5) 20,000-gallon ASTs
- Installation of three (3) 30,000-gallon UL 142 ASTs
- Tank monitoring equipment
- Leak detection equipment
- Above/underground piping installation
- Site Work

OPCC Option 2A – UST Installation

- Removal of five (5) 20,000-gallon ASTs
- Installation of five (5) 20,000-gallon fiberglass USTs
- Tank monitoring equipment
- Leak detection equipment
- Underground piping installation
- Site Work

OPCC Option 2B – UST Installation

- Removal of five (5) 20,000-gallon ASTs
- Installation of three (3) 30,000-gallon fiberglass USTs
- Tank monitoring equipment
- Leak detection equipment
- Underground piping installation
- Site Work

The following is an engineer's Opinion of Probable Construction Cost (OPCC). Tighe & Bond has no control over the cost or availability of labor, equipment or materials, or over market conditions or the Contractor's method of pricing, and that the estimates of probable construction costs are made on the basis of Tighe & Bond's professional judgment and

experience. Tighe & Bond makes no guarantee nor warranty, expressed or implied, that the bids or the negotiated cost of the Work will not vary from this estimate of the Probable Construction Cost.

The OPCC does not include the following:

- Development of site survey plans for existing layout
- Geotechnical and civil professional engineering services and fees
- Remediation services should contaminated material be found
- Local and State permitting
- Contractor oversight

The OPCCs for the four (4) options are included in Attachment B. A summary of the estimated costs is below in Table 4-1 and Table 4-2.

OPCC Option 1A – Aboveground Storage Tank Installation

Table 4-1
Summary of OPCC – Five (5) AST Installation

Activity Description	Estimated Cost
1. Contractor mobilization, bonding, and insurance	$110,000
2. AST and Piping Removal	$480,000
3. Site Work	$770,000
4. Replacement Tanks and Equipment	$1,000,000
5. Electrical	$90,000
Subtotal (Rounded to Nearest $10,000)	**$2,445,000**
6. 10% General Conditions	$245,000
7. 15% Contingency	$367,500
Total (Rounded to Nearest $100,000)	**$3,100,000**

OPCC Option 1B – Aboveground Storage Tank Installation

Table 4-2
Summary of OPCC – Three (3) AST Installation

Activity Description	Estimated Cost
1. Contractor mobilization, bonding, and insurance	$110,000
2. AST and Piping Removal	$480,000
3. Site Work	$700,000
4. Replacement Tanks and Equipment	$940,000
5. Electrical	$90,000
Subtotal (Rounded to Nearest $10,000)	**$2,320,000**
6. 10% General Conditions	$232,000
7. 15% Contingency	$348,000
Total (Rounded to Nearest $100,000)	**$2,900,000**

OPCC Option 2A – Underground Storage Tank Installation

Table 4-3
Summary of OPCC – Five UST Installation

Activity Description	Estimated Cost
1. Contractor mobilization, bonding, and insurance	$160,000
2. AST and Piping Removal	$480,000
3. Site Work	$1,500,000
4. Replacement Tanks and Equipment	$1,030,000
5. Electrical	$90,000
Subtotal (Rounded to Nearest $10,000)	**$3,260,000**
6. 10% General Conditions	$326,000
7. 15% Contingency	$489,000
Total (Rounded to Nearest $100,000)	**$4,100,000**

OPCC Option 2B – Underground Storage Tank Installation

Table 4-1
Summary of OPCC – Three UST Installation

Activity Description	Estimated Cost
1. Contractor mobilization, bonding, and insurance	$150,000
2. AST and Piping Removal	$480,000
3. Site Work	$1,360,000
4. Replacement Tanks and Equipment	$990,000
5. Electrical	$90,000
Subtotal (Rounded to Nearest $10,000)	**$3,070,000**
6. 10% General Conditions	$307,000
7. 15% Contingency	$460,500
Total (Rounded to Nearest $100,000)	**$3,900,000**

5. Regulatory Compliance

MWSP will be required to appropriately decommission and remove the fuel tank prior to the installation of any replacement tank. Depending on the type of replacement tank, different regulatory requirements apply, as detailed in this section.

5.1 Tank Permitting and Licensing

Three (3) separate regulating agencies are responsible for permitting and licensing of fuel storage tanks:

- **New Hampshire Department of Environmental Services (DES) -** Permitting the installation of storage tanks and for issuing permits for the storage of flammable and combustible liquids
- **Jackson Fire Department** – Permitting the installation of storage tank and for issuing permits for the storage of flammable and combustible liquids either above or underground
- **Jackson Town Council** – Licensing property for the storage of flammable and combustible liquids either above or underground
    - Licensing is renewed annually in the form of a Registration

Tighe & Bond has assumed that the tanks are properly permitted and licensed with the appropriate town departments. Replacement of the ASTs with larger capacity aboveground tanks would likely require that the existing license be amended, which would require a public hearing.

5.2 AST Regulatory Compliance

5.2.1 Spill Prevention, Control, and Countermeasure Plan

Aboveground storage tanks that contain fuels and oils are required to be included in MWSP's SPCC Plan. SPCC requirements for ASTs can be found in EPA regulations 40 CFR Part 112, Oil Pollution Prevention. Regularly inspecting the tanks, pipes, and associated equipment are required activities in a SPCC Plan. Shop fabricated tanks are subject to integrity testing requirements. Steel Tank Institute (STI) SP001 Standard for the Inspection of Aboveground Storage Tanks checklist may be used to satisfy EPA SPCC requirements. Underground storage tanks have no SPCC requirements. SPCC Plans are required to be updated every 5 years and signed by a Professional Engineer.

5.3 UST Regulatory compliance

UST design and regulatory requirements are defined in New Hampshire regulation Env-Or 400. Compliance documentation is completed through the online UST Data Management System, OneStop or by mail. Prior to UST installation, an installation application with subsequent site plans, shall be reviewed by a New Hampshire PE and International Code Council (ICC) certified UST installation contractor and signed by the owner, and ultimately submitted by mail to NHDES for approval. Once approved by the NHDES, the UST can be installed. Once installation of the UST is completed, UST tank owners must sign and submit a UST registration form at the time of the final installation inspection is completed by the NHDES. The registration includes owner contact information, description of the UST system, description of UST components, and description of owner financial responsibilities and shall be submitted to the OneStop website.

In addition to the installation application and registration, certified Class A, B, and C UST Operators must be assigned to each UST installed. The NHDES requires Class A and B Operators to pass an online exam in order to become certified. Class C Operators must be trained by a Class A or B Operator. Further, monthly and annual inspections by a Class A or B Operator are required. If an impressed current cathodic protection system is installed, inspections are required every 2 months.

6. Operation and Maintenance Costs

Analysis of the operational and maintenances costs can be found in Table 6-1 below:

Cost Item	**Frequency**	**Current five (5) 20,000-gallon AST Operational and Maintenance costs for the next 20 years**
Monthly Inspections	Monthly (240)	Maintenance Annual Salary
Annual Inspections	Annual (20)	Maintenance Annual Salary
Formal External Inspections (STI Inspection Intervals)	Every 20 Years (1x)	$4,500 per tank ($22,500 in total)
Formal Internal Inspections (NHDES Inspection Intervals)	Every 10 Years (2x)	$10,000 per tank ($100,000 in total)
SPCC Plan Updates/Review	Every 5 Years (4x)	$7,500 per Plan ($30,000 in total)
Paint/Coating Maintenance	Every 10 Years (2x)	$25,000-$35,000 per tank per coating period ($250,000-$350,000 in total)
Misc. Repairs/Maintenance	As Needed	$20,000 – $50,000 per tank ($100,000-$250,000 in total)
Containment Area Updates	As Needed	$100,000-$200,000
	Subtotal (Rounded to Nearest $10,000	**$610,000 - $960,000**
	Total	**$960,000 + Maintenance Salary**

7. Recommended Next Steps

To achieve both a) the desired extended winter season fuel storage and b) the elimination of environmental and safety concerns related to the almost 80-year old single-wall steel tanks, we recommend the existing fuel tanks at MWSP's facility be replaced with:

1. Three (3) 30,000-gallon double-walled steel ASTs that are compatible with kerosene;

Tighe & Bond recommends that MWSP obtain site survey plans prior to conducting any engineering design or commencing construction activities. A site survey plan will aid in determining required setbacks and spacing from existing facilities. Additionally, any construction or design drawings of the existing fuel tank farm should be obtained as it will provide guidance on proper tank removal procedures.

Enclosures:

Attachment A - Figures

- Figure 1. Project Location

Attachment B – Opinion of Probable Construction Costs

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

Project: **Mt. Washington - Fuel Tank Replacement**
Location: **Sargent's Point, NH**
Option 1A: **Five (5) 20,000-gallon ASTs**

Estimate Type:	Conceptual		Construction	Prepared By:	Tom Heller
	Preliminary Design		Change Order	Date Prepared:	11/11/2025
	Design Development		% Complete	T&B Project No.:	N51140002

Item No.	Description	Qty	Units	Material/Installed Cost	
				$/Unit	Total
	Contractor Mobilization, bonding, and insurance				
	Mobilization (5%)	LS	1	$ 116,440.00	$ 116,440
	AST & Piping Removal				
	AST Cleaning and residual fuel/sludge disposal	EA	5	$ 6,500	$ 32,500
	Demolition of piping	LS	5	$ 5,000	$ 25,000
	AST Removal, transportation and disposal	EA	5	$ 8,000	$ 40,000
	Electrical Demolition	LS	5	$ 9,000	$ 45,000
	Tank Contianment Demo	LS	1	$ 300,000	$ 300,000
	Pump House Demo	EA	2	$ 16,250	$ 32,500
	Site Work				
	Backfill	CY	150	$ 100	$ 15,000
	Trench	LF	100	$ 20	$ 2,000
	Asphalt Paving	SY	675	$ 70	$ 47,250
	Concrete Pad for AST	CY	100	$ 300	$ 30,000
	Small Bollards	EA	20	$ 800	$ 16,000
	Crane Rental	DAY	8	$ 20,000	$ 160,000
	Tank Transportation to Summit	EA	14	$ 20,000	$ 280,000
	Manual Labor	DAY	35	$ 6,200	$ 217,000
	Replacement Tank and Equipment AST				
	20,000 Gallon AST w/Stairs & Platform	EA	5	$ 84,500	$ 422,500
	Piping & Fittings	LS	1	$ 20,000	$ 20,000
	Large Mouth Medium Burial Poly Sump	EA	1	$ 1,000	$ 1,000
	Fill Port Spill Containment Box	EA	1	$ 2,000	$ 2,000
	Temporary Tank Rental (15,000-gallon)	DAY	60	$ 5,000	$ 300,000
	30' x 80' 6 Column Canopy (Optional)	EA	0	$ 430,000	$ -
	Pump House Installation (Pumps included)	EA	1	$ 250,000	$ 250,000
	Electrical				
	Interstitial leak detection sensors - Double Walled Pipe	EA	1	$ 2,250	$ 2,250
	Interstitial leak detection sensors - Tank	EA	5	$ 1,000	$ 5,000
	Veeder root TLS 450	EA	1	$ 12,500	$ 12,500
	High Level Alarm	EA	1	$ 1,300	$ 1,300
	Conduit and cable	ALLOW	2	$ 15,000	$ 30,000
	Miscellaneous equipment	ALLOW	2	$ 20,000	$ 40,000
BASE BID SUBTOTAL - Option 1A					**$ 2,446,000**
				Estimate Contingency (10%)	$ 245,000
				Material & Bidding Contingency (15%)	$ 367,000
				Opinion of Probable Construction Cost[1]	**$ 3,058,000**

NOTES:

[1] This is an engineer's Opinion of Probable Construction Cost (OPCC). Tighe & Bond has no control over the cost or availability of labor, equipment or materials, or over market conditions or the Contractor's method of pricing, and that the estimates of probable construction costs are made on the basis of Tighe & Bond's professional judgment and experience. Tighe & Bond makes no guarantee nor warranty, expressed or implied, that the bids or the negotiated cost of the Work will not vary from this estimate of the Probable Construction Cost.

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

Project: **Mt. Washington - Fuel Tank Replacement**
Location: **Sargent's Point, NH**
Option 1B: **Three (3) 30,000-gallon ASTs**

Estimate Type: Conceptual / Preliminary Design / Design Development

Construction / Change Order / % Complete

Prepared By: Tom Heller
Date Prepared: 11/11/2025
T&B Project No.: N51140002

Item No.	Description	Qty	Units	Material/Installed Cost	
				$/Unit	Total
	Contractor Mobilization, bonding, and insurance				
	Mobilization (5%)	LS	1	$ 109,565.00	$ 109,565
	AST & Piping Removal				
	AST Cleaning and residual fuel/sludge disposal	EA	5	$ 6,500	$ 32,500
	Demolition of piping	LS	5	$ 5,000	$ 25,000
	AST Removal, transportation and disposal	EA	5	$ 8,000	$ 40,000
	Electrical Demolition	LS	5	$ 9,000	$ 45,000
	Tank Contianment Demo	LS	1	$ 300,000	$ 300,000
	Pump House Demo	EA	2	$ 16,250	$ 32,500
	Site Work				
	Backfill	CY	150	$ 100	$ 15,000
	Trench	LF	100	$ 20	$ 2,000
	Asphalt Paving	SY	675	$ 70	$ 47,250
	Concrete Pad for AST	CY	90	$ 300	$ 27,000
	Small Bollards	EA	20	$ 800	$ 16,000
	Crane Rental	DAY	8	$ 20,000	$ 160,000
	Transportation to Summit	EA	12	$ 20,000	$ 240,000
	Manual Labor	DAY	30	$ 6,200	$ 186,000
	Replacement Tank and Equipment AST				
	30,000 Gallon AST w/Stairs & Platform	EA	3	$ 121,000	$ 363,000
	Pipe & Fittings	LS	1	$ 18,000	$ 18,000
	Large Mouth Medium Burial Poly Sump	EA	1	$ 1,000	$ 1,000
	Fill Port Spill Containment Box	EA	1	$ 2,000	$ 2,000
	Temporary Tank Rental (15,000-gallon)	DAY	60	$ 5,000	$ 300,000
	30' x 80' 6 Column Canopy (Optional)	EA	0	$ 430,000	$ -
	Pump House Installation (Pumps included)	EA	1	$ 250,000	$ 250,000
	Electrical				
	Interstitial leak detection sensors - Double Walled Pipe	EA	1	$ 2,250	$ 2,250
	Interstitial leak detection sensors - Tank	EA	3	$ 1,000	$ 3,000
	Veeder root TLS 450	EA	1	$ 12,500	$ 12,500
	High Level Alarm	EA	1	$ 1,300	$ 1,300
	Conduit and cable	ALLOW	2	$ 15,000	$ 30,000
	Miscellaneous equipment	ALLOW	2	$ 18,000	$ 36,000
BASE BID SUBTOTAL - Option 1A					**$ 2,301,000**
				Estimate Contingency (10%)	$ 231,000
				Material & Bidding Contingency (15%)	$ 346,000
				Opinion of Probable Construction Cost[1]	**$ 2,878,000**

NOTES:

[1] This is an engineer's Opinion of Probable Construction Cost (OPCC). Tighe & Bond has no control over the cost or availability of labor, equipment or materials, or over market conditions or the Contractor's method of pricing, and that the estimates of probable construction costs are made on the basis of Tighe & Bond's professional judgment and experience. Tighe & Bond makes no guarantee nor warranty, expressed or implied, that the bids or the negotiated cost of the Work will not vary from this estimate of the Probable Construction Cost.

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

Project: **Mt. Washington - Fuel Tank Replacement**
Location: **Sargent's Point, NH**
Option 1A: **Five (5) 20,000-gallon USTs**

Estimate Type:	Conceptual		Construction	Prepared By:	Tom Heller
	Preliminary Design		Change Order	Date Prepared:	11/11/2025
	Design Development		% Complete	T&B Project No.:	N51140002

Item No.	Description	Qty	Units	Material/Installed Cost	
				$/Unit	Total
	Contractor Mobilization, bonding, and insurance				
	Mobilization (5%)	LS	1	$ 154,415.00	$ 154,415
	AST & Piping Removal				
	AST Cleaning and residual fuel/sludge disposal	EA	5	$ 6,500	$ 32,500
	Demolition of piping	EA	5	$ 5,000	$ 25,000
	AST Removal, transportation and disposal	EA	5	$ 8,000	$ 40,000
	Electrical Demolition	EA	5	$ 9,000	$ 45,000
	Tank Contianment Demo	LS	1	$ 300,000	$ 300,000
	Pump House Demo	EA	2	$ 16,250	$ 32,500
	Site Work				
	Backfill Material	CY	1300	$ 250	$ 325,000
	Excavatation	EA	4	$ 100,000	$ 400,000
	Trench	LF	100	$ 20	$ 2,000
	Asphalt Paving	SY	675	$ 70	$ 47,250
	Concrete Pad for AST	CY	120	$ 300	$ 36,000
	Crane Rental	DAY	8	$ 20,000	$ 160,000
	Transportation to Summit	EA	14	$ 20,000	$ 280,000
	Manual Labor	DAY	40	$ 6,200	$ 248,000
	Replacement Tank and Equipment AST				
	20,000 Gallon UST w/Deadman	EA	5	$ 91,000	$ 455,000
	Pipe Fittings	LS	1	$ 16,000	$ 16,000
	Large Mouth Medium Burial Poly Sump	EA	4	$ 1,000	$ 4,000
	Temporary Tank Rental (15,000-gallon)	DAY	60	$ 5,000	$ 300,000
	Pump House Installation (Pumps included)	EA	1	$ 250,000	$ 250,000
	Electrical				
	Interstitial leak detection sensors - Double Walled Pipe	EA	1	$ 2,250	$ 2,250
	Interstitial leak detection sensors - Tank	EA	4	$ 1,000	$ 4,000
	Veeder root TLS 450	EA	1	$ 12,500	$ 12,500
	High Level Alarm	EA	1	$ 1,300	$ 1,300
	Conduit and cable	ALLOW	2	$ 15,000	$ 30,000
	Miscellaneous equipment	ALLOW	2	$ 20,000	$ 40,000
BASE BID SUBTOTAL - Option 1A					**$ 3,243,000**
				Estimate Contingency (10%)	$ 325,000
				Material & Bidding Contingency (15%)	$ 487,000
				Opinion of Probable Construction Cost[1]	**$ 4,055,000**

NOTES:

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ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

Project: **Mt. Washington - Fuel Tank Replacement**
Location: **Sargent's Point, NH**
Option 1A: **Three (3) 30,000-gallon USTs**

Estimate Type: Conceptual / Preliminary Design / Design Development

Construction / Change Order / % Complete

Prepared By: Tom Heller
Date Prepared: 11/11/2025
T&B Project No.: N51140002

Item No.	Description	Qty	Units	Material/Installed Cost	
				$/Unit	Total
	Contractor Mobilization, bonding, and insurance				
	Mobilization (5%)	LS	1	$ 145,315.00	$ 145,315
	AST & Piping Removal				
	AST Cleaning and residual fuel/sludge disposal	EA	5	$ 6,500	$ 32,500
	Demolition of piping	EA	5	$ 5,000	$ 25,000
	AST Removal, transportation and disposal	EA	5	$ 8,000	$ 40,000
	Electrical Demolition	EA	5	$ 9,000	$ 45,000
	Tank Contianment Demo	LS	1	$ 300,000	$ 300,000
	Pump House Demo	EA	2	$ 16,250	$ 32,500
	Site Work				
	Backfill Material	CY	1300	$ 250	$ 325,000
	Excavatation	EA	3	$ 100,000	$ 300,000
	Trench	LF	100	$ 20	$ 2,000
	Asphalt Paving	SY	675	$ 70	$ 47,250
	Concrete Pad for AST	CY	120	$ 300	$ 36,000
	Crane Rental	DAY	8	$ 20,000	$ 160,000
	Transportation to Summit	EA	12	$ 20,000	$ 240,000
	Manual Labor	DAY	40	$ 6,200	$ 248,000
	Replacement Tank and Equipment AST				
	30,000 Gallon UST w/Deadman	EA	3	$ 139,000	$ 417,000
	Pipe Fittings	LS	1	$ 16,000	$ 16,000
	Large Mouth Medium Burial Poly Sump	EA	3	$ 1,000	$ 3,000
	Temporary Tank Rental (15,000-gallon)	DAY	60	$ 5,000	$ 300,000
	Pump House Installation (Pumps included)	EA	1	$ 250,000	$ 250,000
	Electrical				
	Interstitial leak detection sensors - Double Walled Pipe	EA	1	$ 2,250	$ 2,250
	Interstitial leak detection sensors - Tank	EA	5	$ 1,000	$ 5,000
	Veeder root TLS 450	EA	1	$ 12,500	$ 12,500
	High Level Alarm	EA	1	$ 1,300	$ 1,300
	Conduit and cable	ALLOW	2	$ 15,000	$ 30,000
	Miscellaneous equipment	ALLOW	2	$ 18,000	$ 36,000
BASE BID SUBTOTAL - Option 1A					**$ 3,052,000**
				Estimate Contingency (10%)	$ 306,000
				Material & Bidding Contingency (15%)	$ 458,000
				Opinion of Probable Construction Cost[1]	**$ 3,816,000**

NOTES:

[1] This is an engineer's Opinion of Probable Construction Cost (OPCC). Tighe & Bond has no control over the cost or availability of labor, equipment or materials, or over market conditions or the Contractor's method of pricing, and that the estimates of probable construction costs are made on the basis of Tighe & Bond's professional judgment and experience. Tighe & Bond makes no guarantee nor warranty, expressed or implied, that the bids or the negotiated cost of the Work will not vary from this estimate of the Probable Construction Cost.

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APPENDIX D
Public Opinion Survey Reports

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Tighe & Bond

D.1.
Mt. Washington Visitors Survey

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University of New Hampshire

The Survey Center

Mt. Washington Visitors Survey

Prepared by:
Sean P. McKinley, M.A.
Zachary S. Azem, M.A.

The Survey Center
University of New Hampshire
November, 2025

The University of New Hampshire
Survey Center

The UNH Survey Center is an independent, non-partisan academic survey research organization and division of the UNH College of Liberal Arts.

The Survey Center conducts telephone, mail, web, and intercept surveys, as well as focus groups and other qualitative research for university researchers, government agencies, public non-profit organizations, private businesses and media clients.

Our senior staff have over 50 years experience in designing and conducting custom research on a broad range of political, social, health care, and other public policy issues.

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Introduction

The University of New Hampshire Survey Center conducted a survey on behalf of the Mount Washington State Park to better understand the experiences of recent visitors and their opinions regarding future planning at the park. Postcards containing a QR link to the survey were distributed by Mount Washington State Park staff between September 2024 and October 2025. Overall, 152 individuals completed the survey. The following figures display survey results for each question. Appendix A contains detailed tabular results, Appendix B contains the open-ended responses, and Appendix C contains the survey instrument. Due to rounding, percentages may not sum to 100%.

Executive Summary

Past Experience & Knowledge of Mt. Washington

About half of responding visitors were making their first visit to Mount Washington State Park, particularly those under the age of thirty. Overall, just over half of responding visitors were aware before their visit that the summit of Mount Washington is a state park. Most who had previously visited were aware of this, but only just over a third of first-time visitors were aware.

Planning for Most Recent Trip

Most responding visitors say they reached the summit using the Cog Railway or the Auto Road, while about one in seven hiked to the summit as part of a day trip or an overnight trip. When asked why they decided to visit Mount Washington State Park, responding visitors most often mention a desire to enjoy the scenery or view, to have a fun experience with friends or family, or to enjoy the natural environment.

Most Recent Visit Experience

Most responding visitors say that they stayed at the Mount Washington State Park for two hours or less, while only one in ten stayed for more than four hours. Majorities report visiting the Sherman Adams Visitor Center, taking pictures at the summit sign, visiting the rooftop terrace, and walking around the park lands and surrounding trails. Most who visited the Sherman Adams Visitor Center used the restroom and visited the Gift Shop there, while less than a quarter asked for information or sent mail from the Post Office. Most responding visitors were happy with the amount of time they spent at the park, while three in ten wish they had had more time to spend there, particularly those who arrived via the Cog Railway. A majority, particularly those who reached the summit as part of a hiking day trip, felt that it was very or somewhat crowded in the park during their most recent visit.

Responding visitors are very positive in their assessment of the park's staff as well as their signage and wayfinding, while smaller majorities rate the environmental education and accessibility highly. Overall, most would recommend visiting the park. When asked what they liked most about the park, respondents by far most often mention the views or nature. When asked what they would like to see changed about the park, respondents most often would like more time at the summit, better amenities, better crowd management, more signage, and lower prices.

Future Planning at Mount Washington State Park

About six in ten respondents say they would like to see more environmental and historical education at Mount Washington State Park, while just under half would like more conservation education. When asked for their opinion on future planning regarding the Visitor Center, respondents are split, with one in eight preferring a new building, three in ten preferring renovation or expansion of the existing building, and one-third preferring no changes at all. Most respondents say the park should prioritize environmental conservation rather than development and improvement of the site and a majority would support the park limiting the number of visitors at any one time. Majorities think it is very or somewhat important for the park to add informational educational exhibits and programming, improving site accessibility and wayfinding, providing multi-lingual information, and adding more visitor-orientated staff. Among those who reached the summit by the Cog Railway or Auto Road, only about a quarter were aware before they purchased their ticket that it did not include a fee for entering the park. Nearly half of respondents say they would be willing to pay a maximum of $2-$5 to enter the Sherman Adams Building if a nominal fee were charged to entrants.

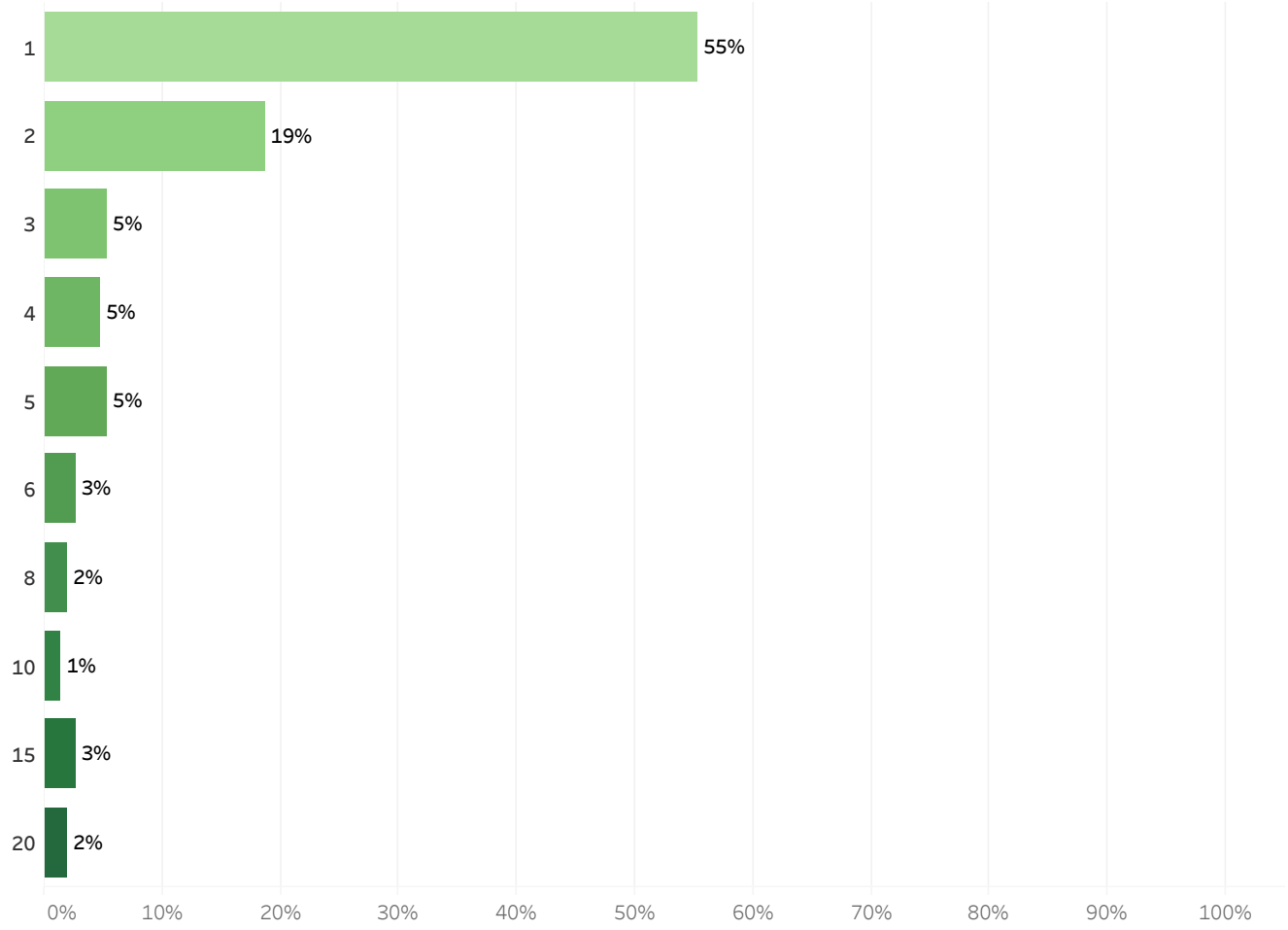
Demographics

A majority of responding visitors are women and most have a college degree or more education. Just over a quarter of respondents are under the age of thirty while just over a quarter are aged 60 or older. Most have a household income of $100,000 or more. Visitors are most likely to come from Massachusetts, Northeastern states outside of New England, and the South.

Past Experience & Knowledge of Mt. Washington State Park

Fifty-five percent of respondents say they have visited Mount Washington State Park only once, 19% have visited twice, 5% each have visited three, four, or five times, and 11% have visited more than five times.

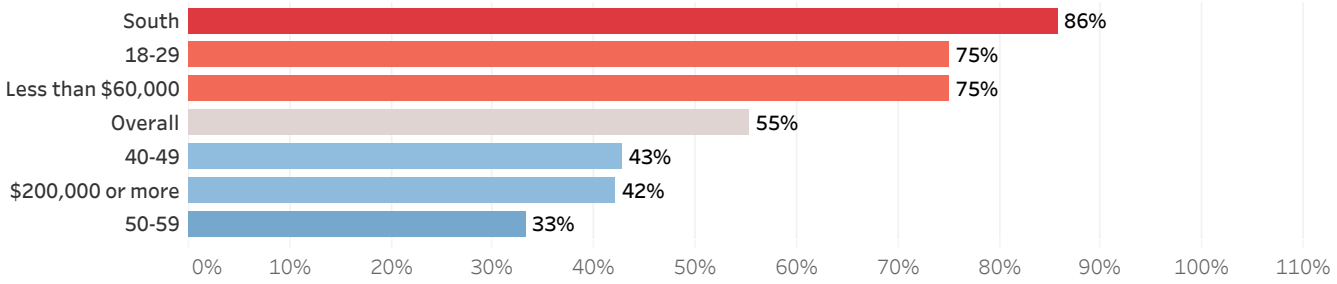
Figure 1a: About how many times have you ever visited Mount Washington State Park including your most recent visit?



Respondents who visited from a Southern state, those aged 18-29, and those with a household income below $60,000 are more likely than others to say that they have visited Mount Washington State Park only once. Those aged 40-59 and those with a household income of $200,000 or more are less likely to have visited only once.

Figure 1b: About how many times have you ever visited Mount Washington State Park including your most recent visit? - by Demographics

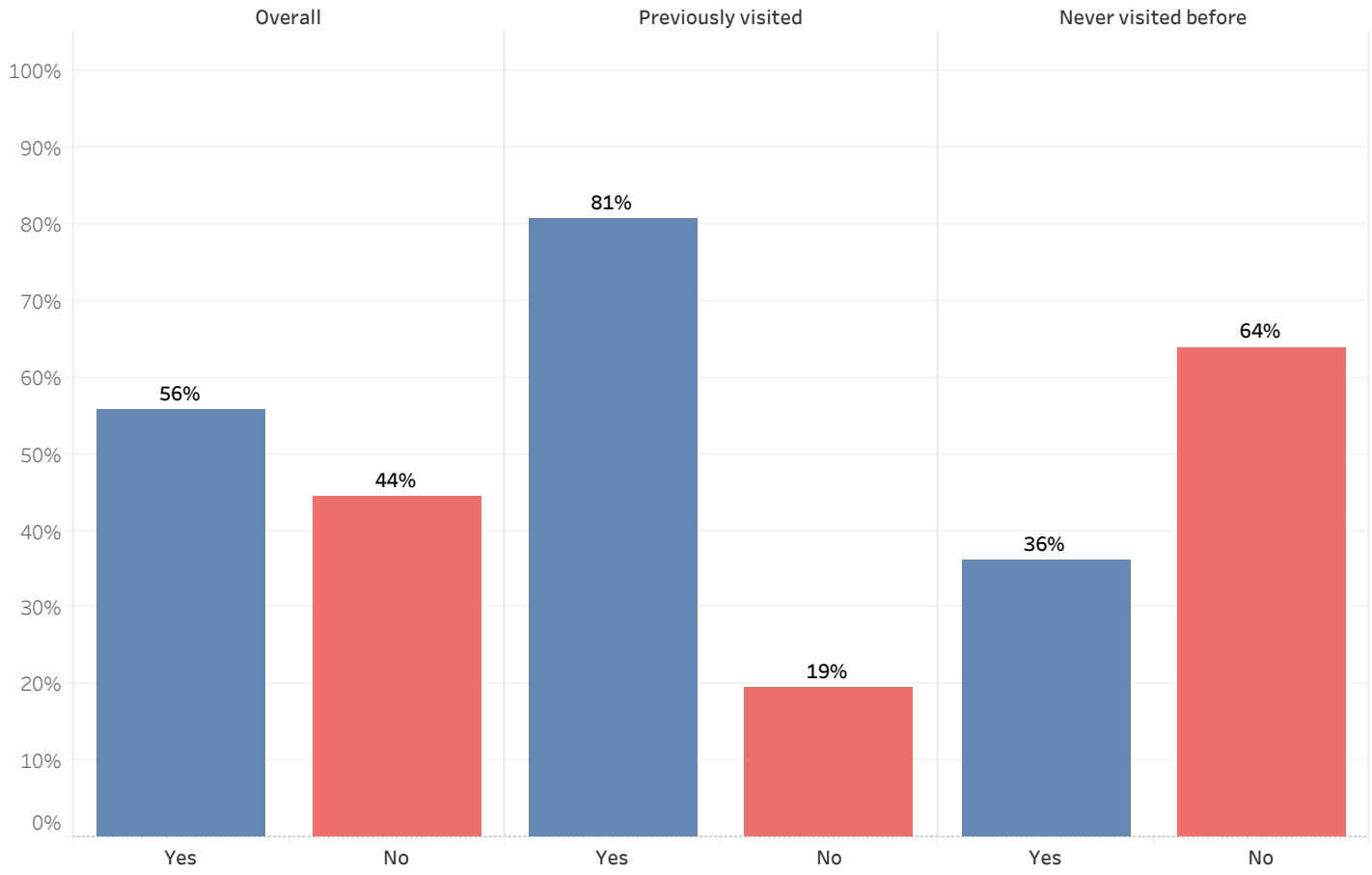
1



Before visiting, just over half of respondents (56%) say that they were aware that the summit of Mount Washington is a state park while 44% were not aware of this.

Among those who visited the state park prior to their most recent visit (N=67), 81% were aware before visiting that the summit is a state park while only 19% were not aware of this. By contrast, among those who had not previously visited the state park (N=83), only 36% were aware that the summit is a state park while 64% were not.

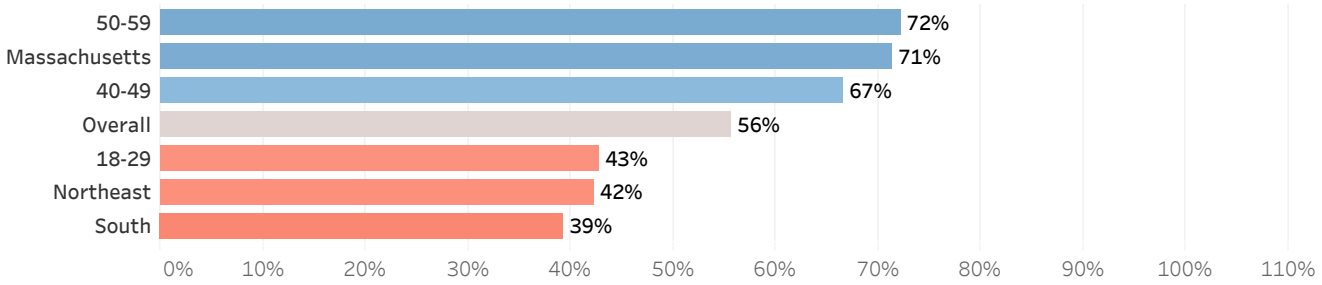
Figure 2a: Before you visited, were you aware that the summit of Mount Washington is a state park?



Respondents aged 40-59 and those who visited from Massachusetts are more likely than others to say that they were aware before visiting that the summit of Mount Washington is a state park. Those who visited from a Southern state or from a Northeastern state outside of New England and those aged 18-29 are less likely to have been aware of this.

Figure 2b: Before you visited, were you aware that the summit of Mount Washington is a state park? - by Demographics

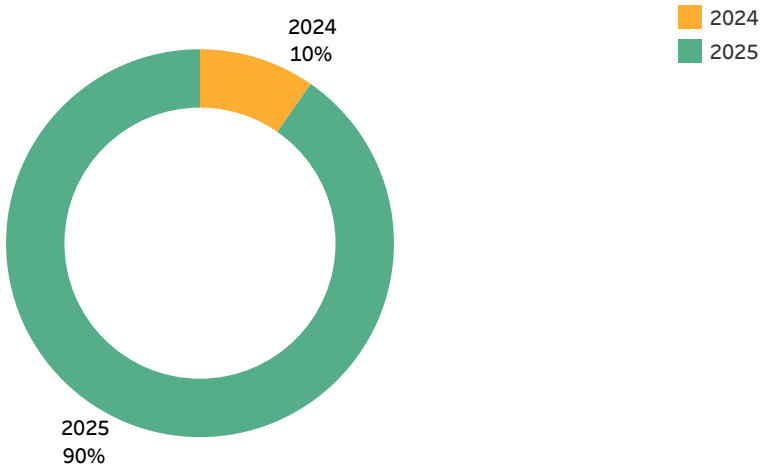
Yes



Planning for Most Recent Trip

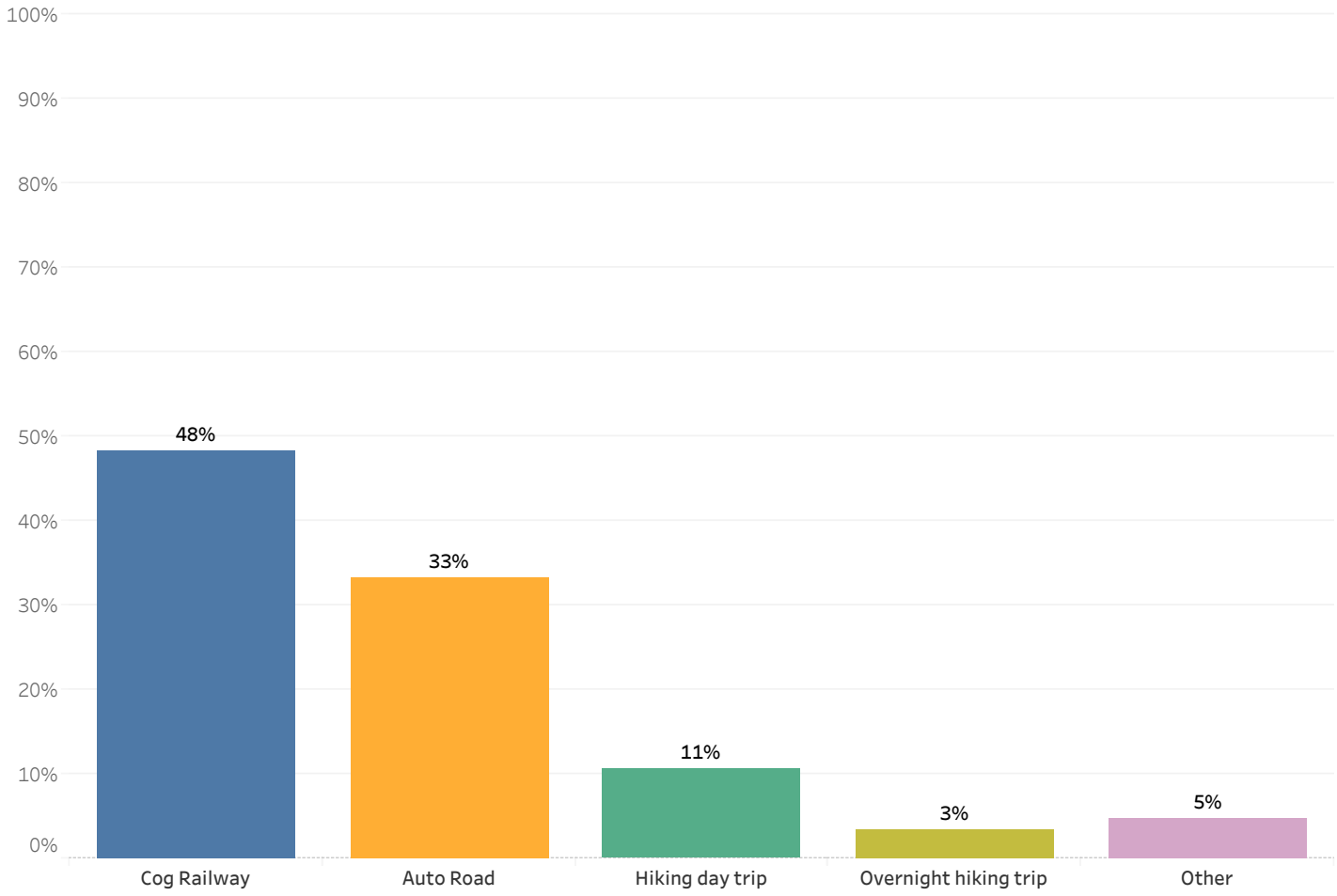
Ten percent of respondents say that they visited Mount Washington State Park most recently in 2024 while 90% visited most recently in 2025.

Figure 3: Year of Visit



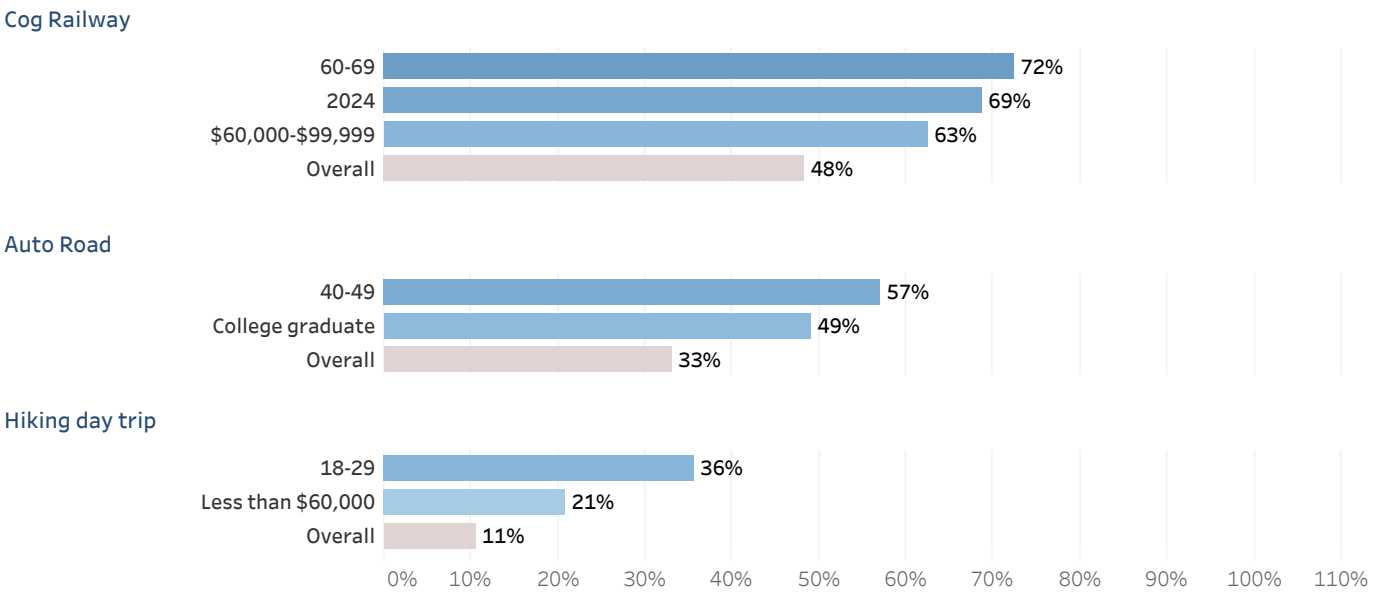
Forty-eight percent of respondents got to Mount Washington State Park via the Cog Railway, 33% got there using the Auto Road, 11% got there as part of a hiking day trip, 3% got there as part of an overnight hiking trip, and 5% got there another way.

Figure 4a: How did you get to Mount Washington State Park?



- Respondents aged 60-69, those who visited most recently in 2024, and those with a household income between $60,000 and $99,999 are more likely than others to say that they got to Mount Washington State Park using the Cog Railway.
- Respondents aged 40-49 and college graduates are more likely than others to say that they got to Mount Washington State Park using the Auto Road.
- Respondents aged 18-29 and those with a household income below $60,000 are more likely than others to say that they got to Mount Washington State Park as park of a hiking day trip.

Figure 4b: How did you get to Mount Washington State Park? - by Demographics



Nearly two-thirds (65%) say that they decided to visit Mount Washington State Park in order to enjoy the scenery or view, while about half decided to visit to have a fun experience with friends or family (51%) or to enjoy the natural environment (48%) and slightly fewer visited to reach the highest peak in the Northeastern U.S. (41%) or to ride the Cog Railway (40%). Less than a quarter of respondents say that they decided to visit Mount Washington State Park for exercise or recreation (21%), to learn about the history of the area (17%), to drive to the top or get the "This Car Climbed Mt. Washington" bumper sticker (9%), as part of an organized tour (2%), or for another reason (12%).

Figure 5a: Why did you decide to visit Mount Washington State Park? (Select all that apply)

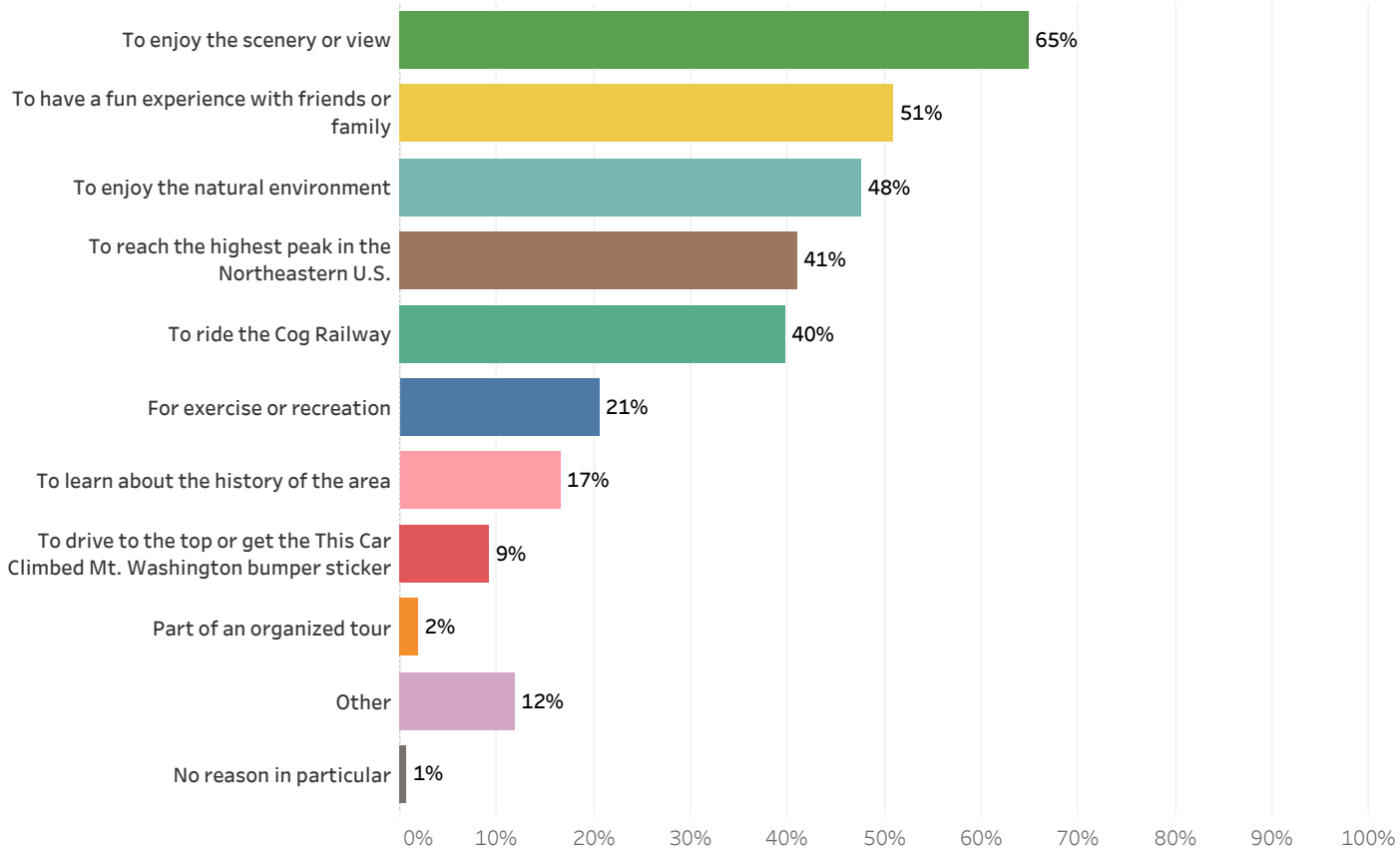


Figure 5b: Why did you decide to visit Mount Washington State Park? (Select all that apply) - Other - Selected Quotations

"Appalachian Trail"

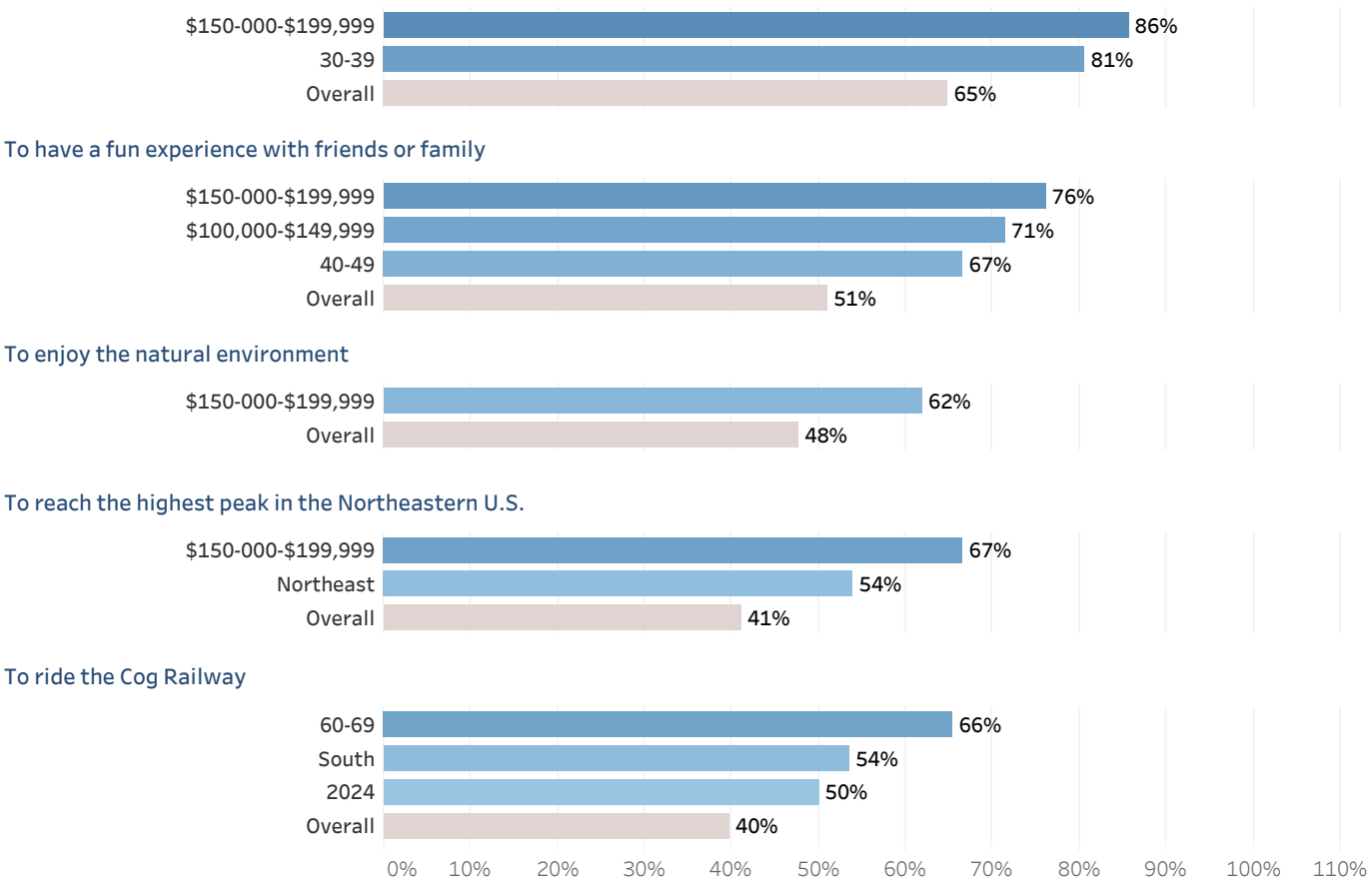
"Driver for son in bike race up Mt Washington"

"In memory of my dad who loved this spot"

"Research/conservation volunteer with AMC for the day"

- Respondents with a household income between $150,000 and $199,999 and those aged 30-39 are more likely than others to say that they decided to visit Mount Washington State Park to enjoy the scenery or view.
- Respondents with a household income between $100,000 and $199,999 and those aged 40-49 are more likely than others to say that they decided to visit Mount Washington State Park to have a fun experience with friends or family.
- Respondents with a household income between $150,000 and $199,999 are more likely than others to say that they decided to visit Mount Washington State Park to enjoy the natural environment.
- Respondents with a household income between $100,000 and $199,999 and those who visited from a Northeastern state outside of New England are more likely than others to say that they decided to visit Mount Washington State Park to reach the highest peak in the Northeastern U.S.
- Respondents aged 60-69, those who visited from a Southern state, and those whose most recent visit was in 2024 are more likely than others to say that they decided to visit Mount Washington State Park to ride the Cog Railway.

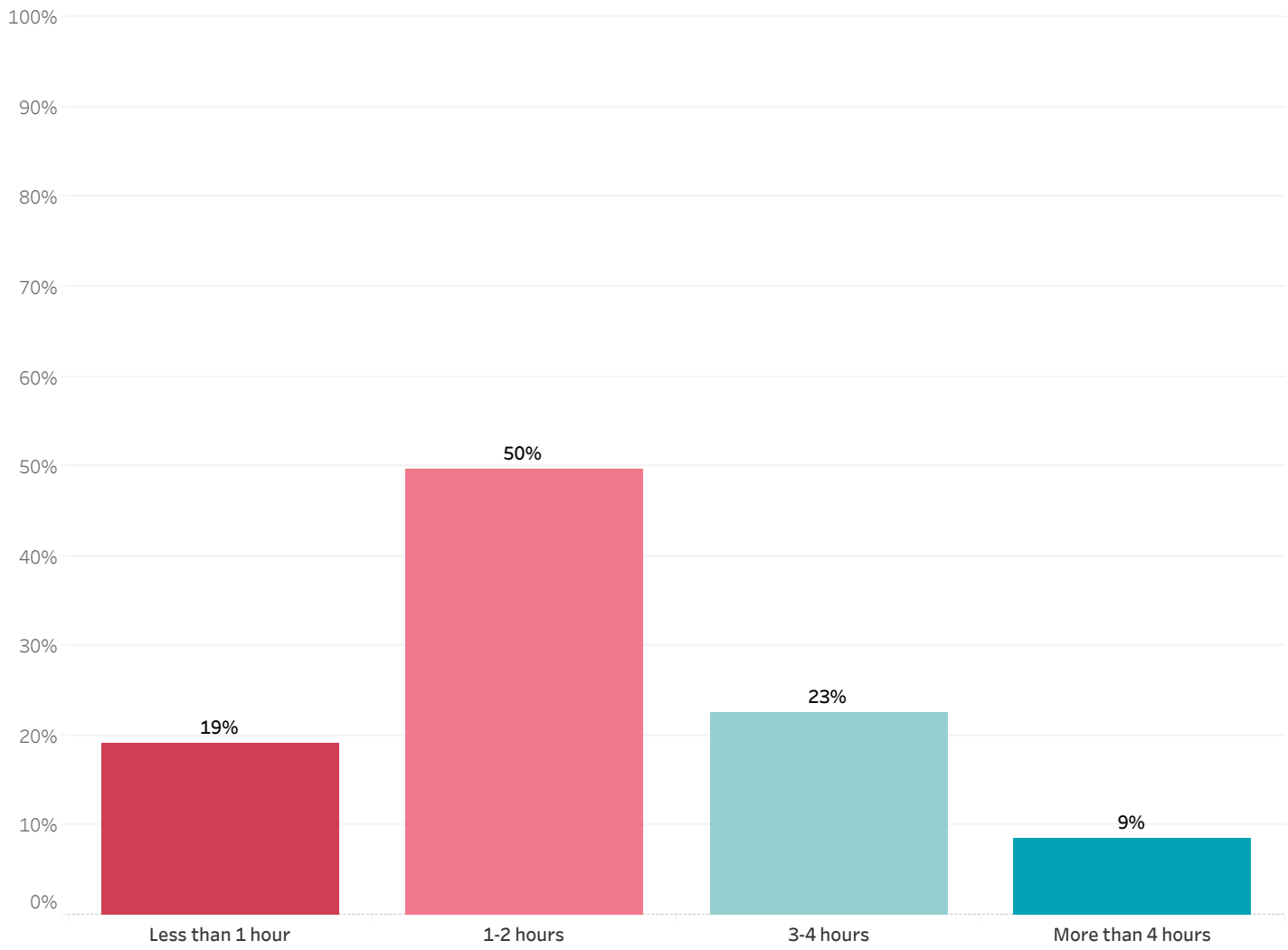
Figure 5c: Why did you decide to visit Mount Washington State Park? (Select all that apply) - by Demographics



Most Recent Visit Experience

Nineteen percent of respondents say that they stayed at Mount Washington State Park for less than an hour, 50% stayed for 1-2 hours, 23% stayed for 3-4 hours, and 9% stayed for more than 4 hours.

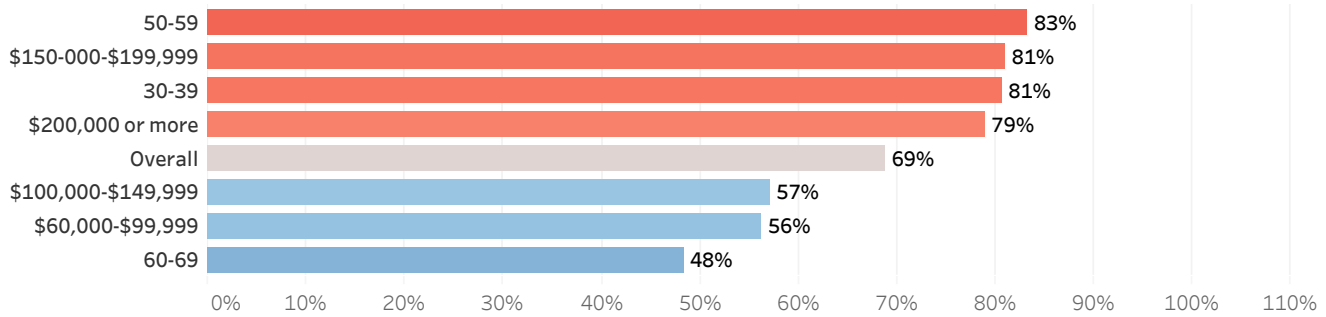
Figure 6a: Approximately how long did you stay at Mount Washington State Park?



Respondents aged 30-39 or 50-59 and those with a household income of $150,000 or more are more likely than others to say that they stayed at Mount Washington State Park for 2 hours or less. Those aged 60-69 and those with a household income between $60,000 and $149,999 are less likely to have stayed for 2 hours or less.

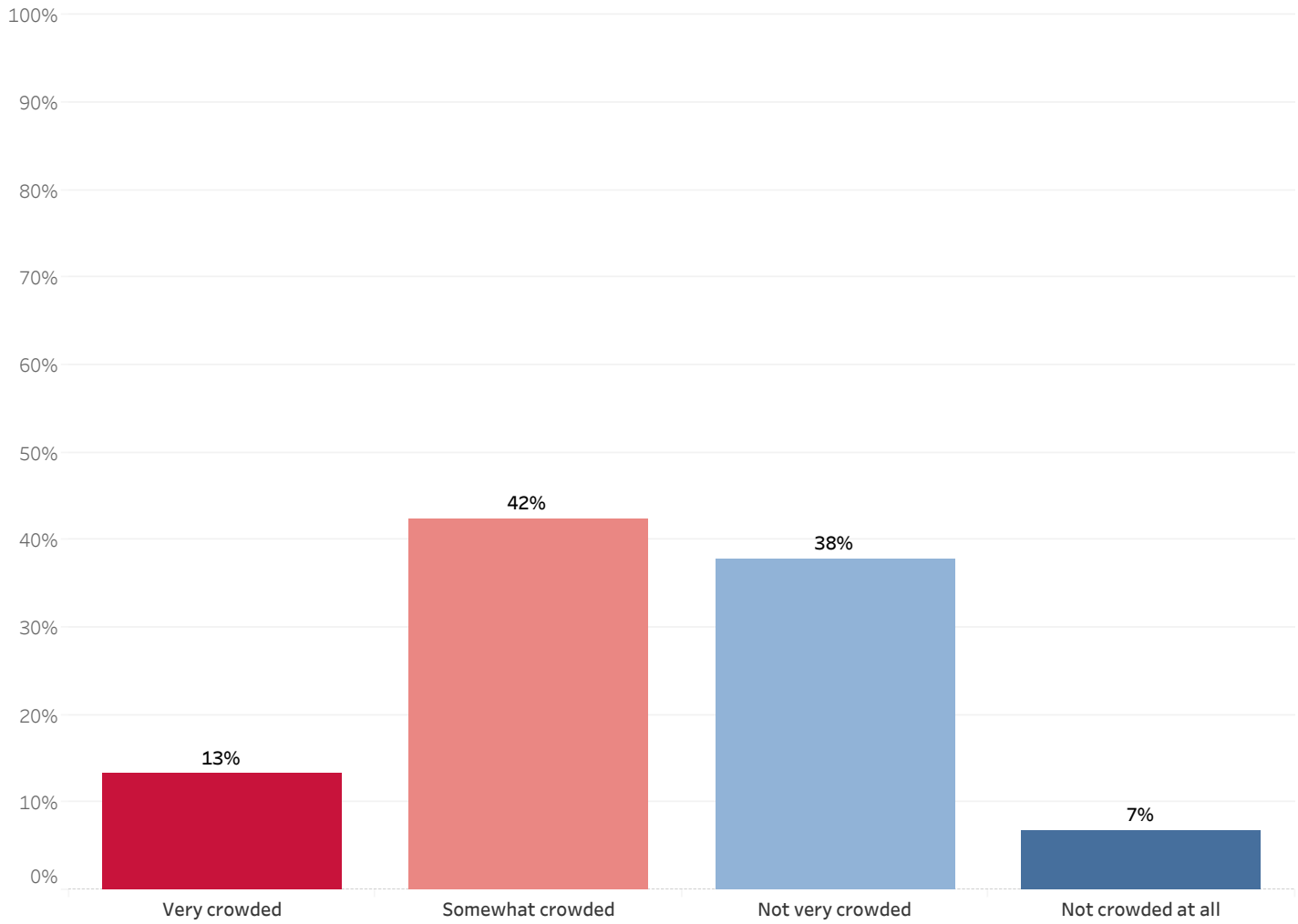
Figure 6b: Approximately how long did you stay at Mount Washington State Park? - by Demographics

2 hours or less



Thirteen percent of respondents felt that it was very crowded during their most recent visit to Mount Washington State Park, 42% say it was somewhat crowded, 38% say it was not very crowded, and 7% say it was not crowded at all.

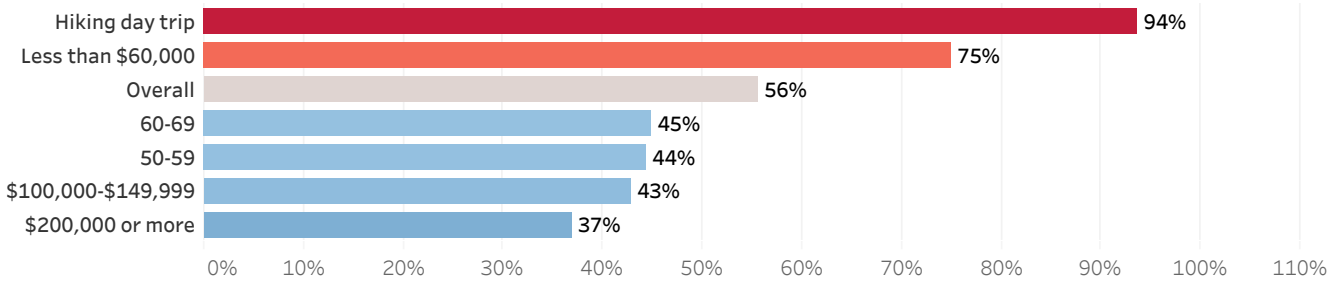
Figure 7a: And how crowded did you feel it was during your visit to Mount Washington State Park?



Respondents who got to the summit as part of a hiking day trip and those with a household income below $60,000 are more likely than others to have felt that it was very or somewhat crowded during their most recent visit to Mount Washington State Park. Those with a household income between $100,000 and $149,999 or of $200,000 or more and those aged 50-69 are less likely to say it was very or somewhat crowded.

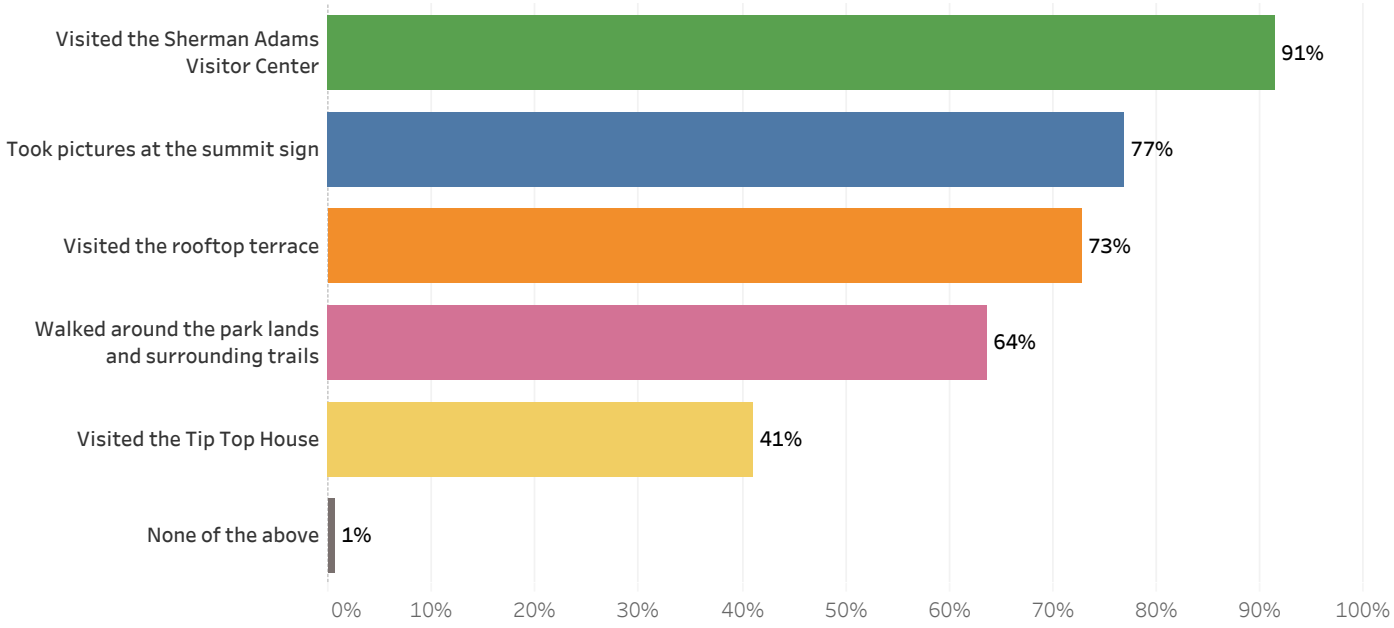
Figure 7b: And how crowded did you feel it was during your visit to Mount Washington State Park? - by Demographics

Very or somewhat crowded



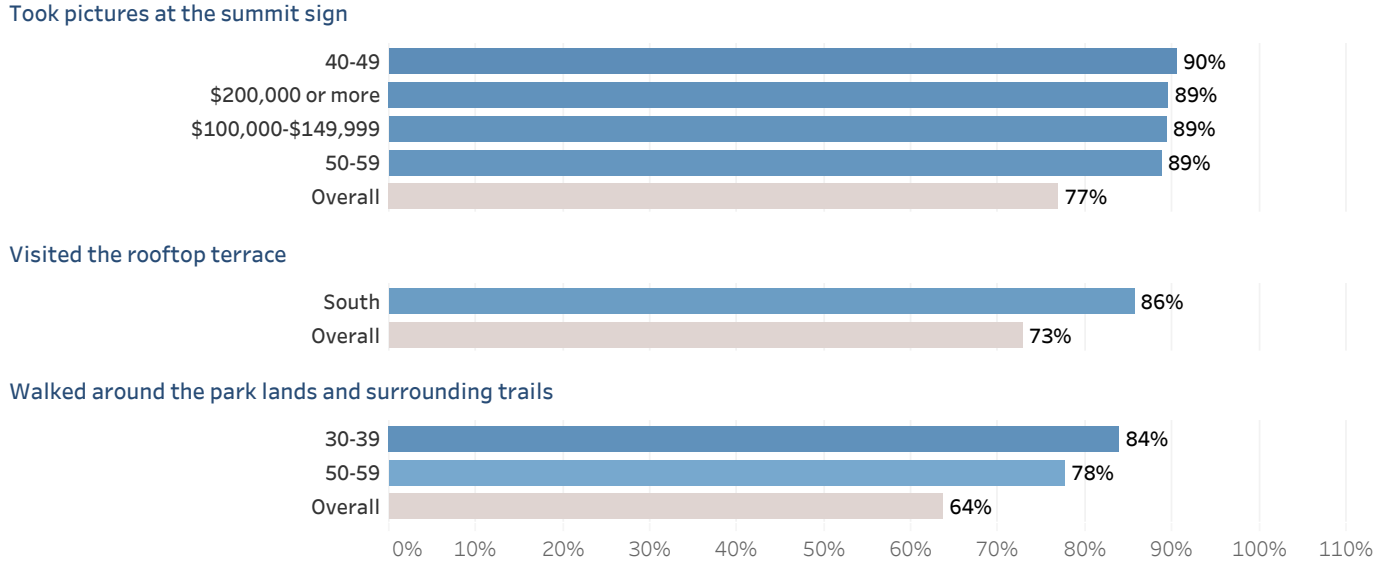
While at Mount Washington State Park, 91% of respondents say that they visited the Sherman Adams Visitor Center, 77% took pictures at the summit sign, 73% visited the rooftop terrace, 64% walked around the park lands and surrounding trails, 41% visited the Tip Top House, and 1% did none of these things.

Figure 8a: Which of the following did you do while at Mount Washington State Park? (Select all that apply)



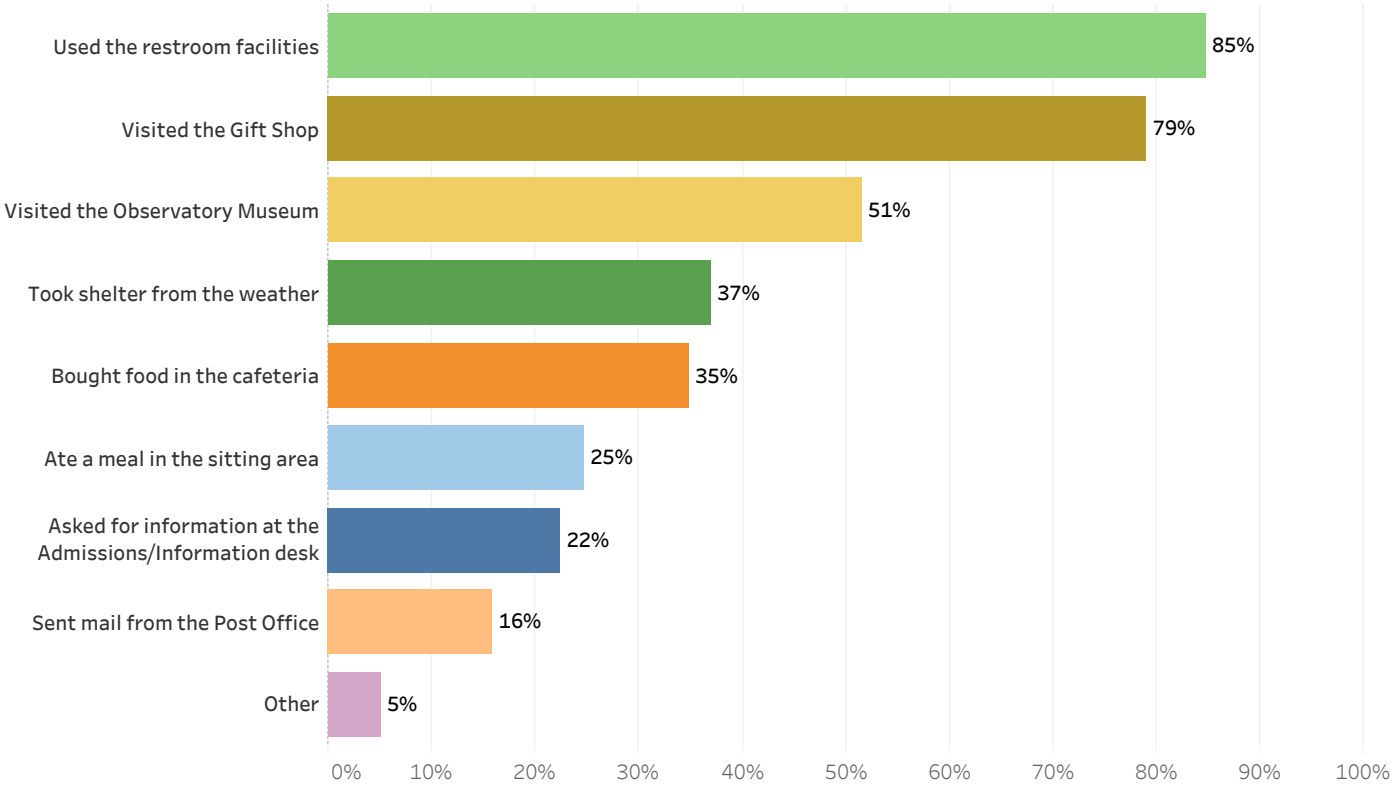
- Respondents aged 40-59 and those with a household income between $100,000 and $149,999 or of $200,000 or more are more likely than others to say that they took pictures at the summit sign while at Mount Washington State Park.
- Respondents who visited from a Southern state are more likely than others to say that they visited the rooftop terrace while at Mount Washington State Park.
- Respondents aged 30-39 or 50-59 are more likely than others to say that they walked around the park lands and surrounding trails while at Mount Washington State Park.

Figure 8b: Which of the following did you do while at Mount Washington State Park? (Select all that apply) - by Demographics



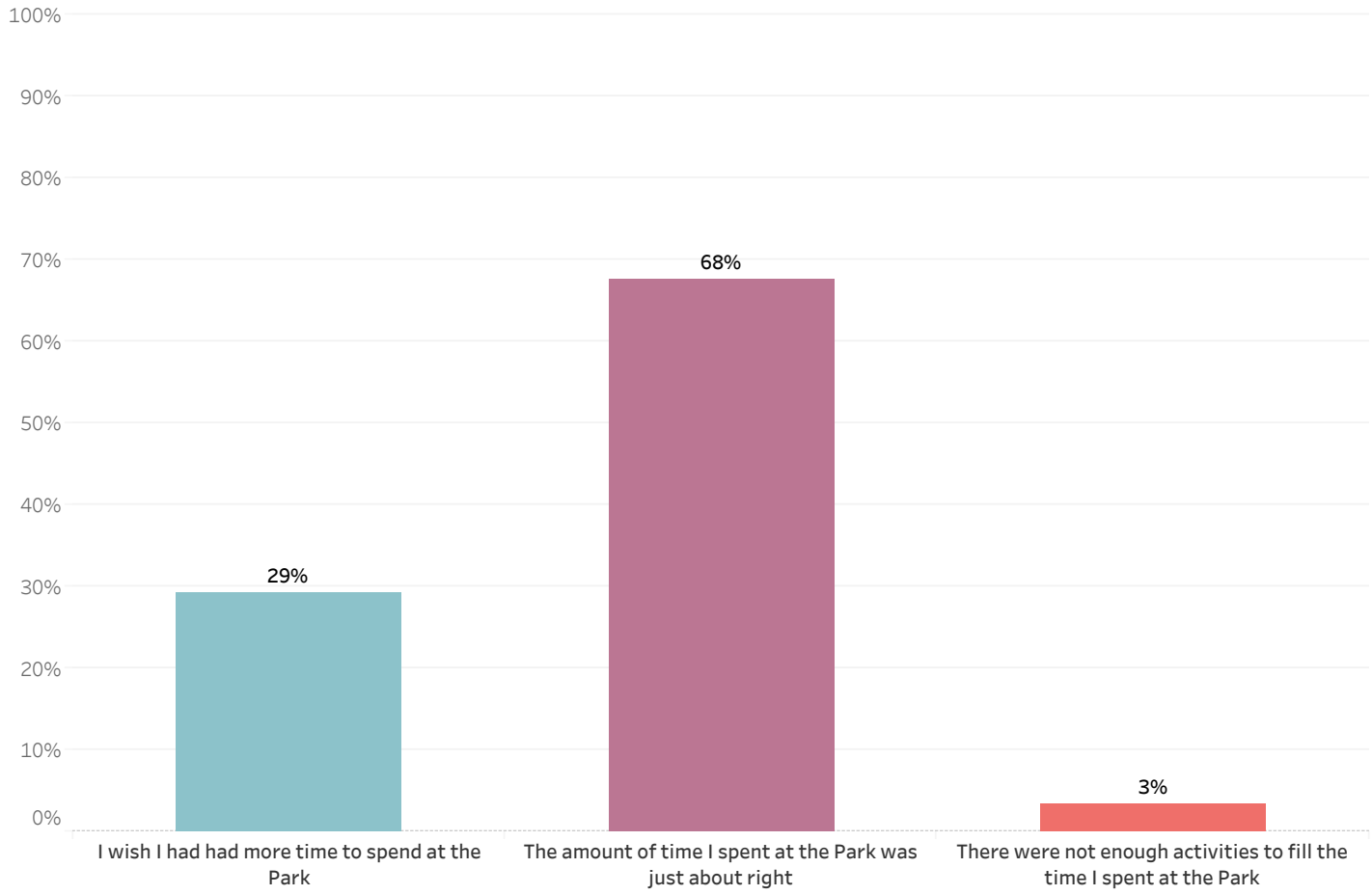
Among those who visited the Sherman Adams Visitor Center while at Mount Washington State Park (N=138), 85% used the restroom facilities, 79% visited the Gift Shop, and 51% visited the Observatory Museum. Less than half of those who visited the Sherman Adams Visitor Center took shelter there from the weather (37%), bought food in the cafeteria (35%), ate a meal in the sitting area (25%), asked for information at the Admissions/Information desk (22%), sent mail from the Post Office (16%), or did something else (5%) while visiting there.

Figure 9: Which of the following did you do while visiting the Sherman Adams Visitor Center? (Select all that apply)



Three in ten respondents (29%) say that they wish they had had more time to spend at the Park, more than two-thirds (68%) say that the amount of time they spent at the Park was just about right, and only 3% say that there were not enough activities to fill the time they spent at the park.

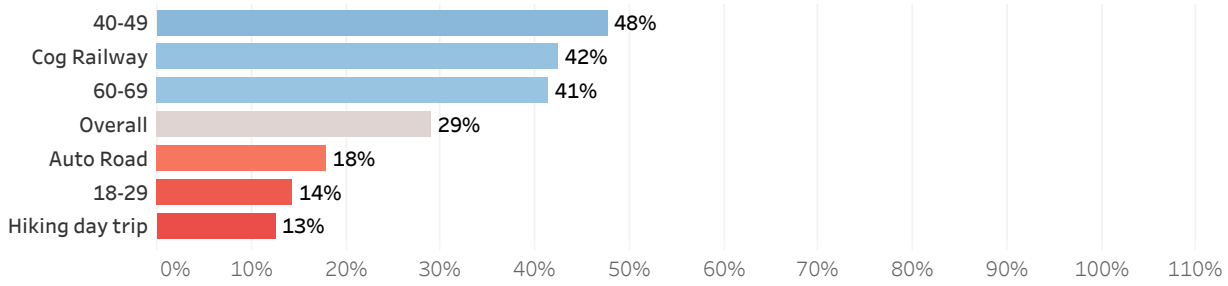
Figure 10a: Which of the following best describes the amount of time you spent at Mount Washington State Park?



Respondents aged 40-49 or 60-69 and those who got to the summit via the Cog Railway are more likely than others to say that they wish they had had more time to spend at the Park. Those who got to the summit via the Auto Road or as part of a hiking day trip and those aged 18-29 are less likely to say this is true for them.

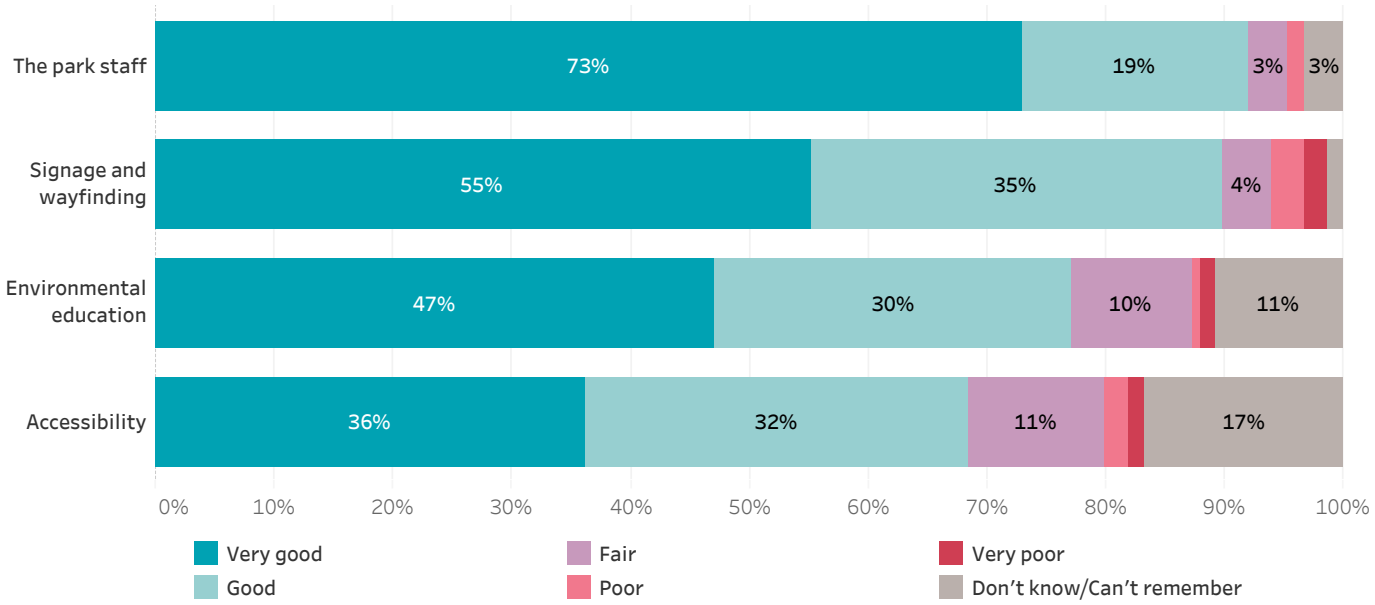
Figure 10b: Which of the following best describes the amount of time you spent at Mount Washington State Park? - by Demographics

I wish I had had more time to spend at the Park



The vast majority of respondents (92%) rate the park staff at Mount Washington State Park as very good (73%) or good (19%), 3% rate them as fair, only 1% rate them as poor, and 3% don't know or can't remember. A similar proportion rate the park's signage and wayfinding as very good or good (90%), 77% rate the environmental education as very good or good, and 68% rate the park's accessibility as very good or good.

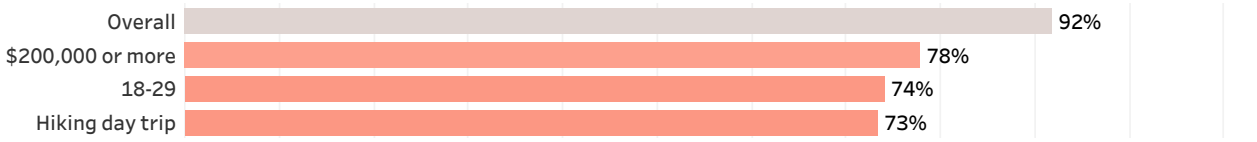
Figure 11a: How would you rate the following aspects of the Mount Washington State Park?



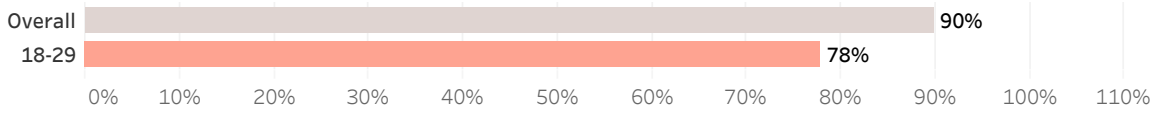
- Respondents who got to the summit as part of a hiking day trip, those aged 18-29, and those with a household income of $200,000 or more are less likely than others to rate the park staff at Mount Washington State Park as very good or good.
- Respondents aged 18-29 are less likely than others to rate the signage and wayfinding at Mount Washington State Park as very good or good.

Figure 11b: Rate following aspects of Mount Washington State Park as very good or good - by Demographics

The park staff



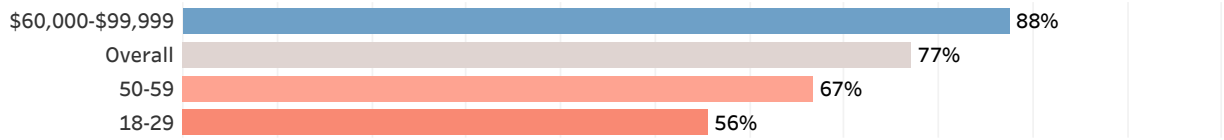
Signage and wayfinding



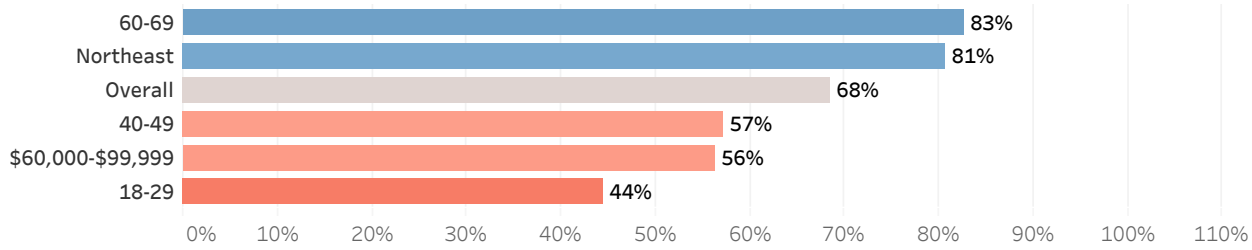
- Respondents with a household income between $60,000 and $99,999 are more likely than others to rate the environmental education at Mount Washington State Park as very good or good. Those aged 18-29 or 50-59 are less likely to rate the environmental education as very good or good.
- Respondents aged 60-69 and those who visited from a Northeastern state outside of New England are more likely than others to rate the accessibility at Mount Washington State Park as very good or good. Those aged 18-29 or 40-49 and those with a household income between $60,000 and $99,999 are less likely to rate the accessibility as very good or good.

Figure 11c: Rate following aspects of Mount Washington State Park as very good or good - by Demographics

Environmental education



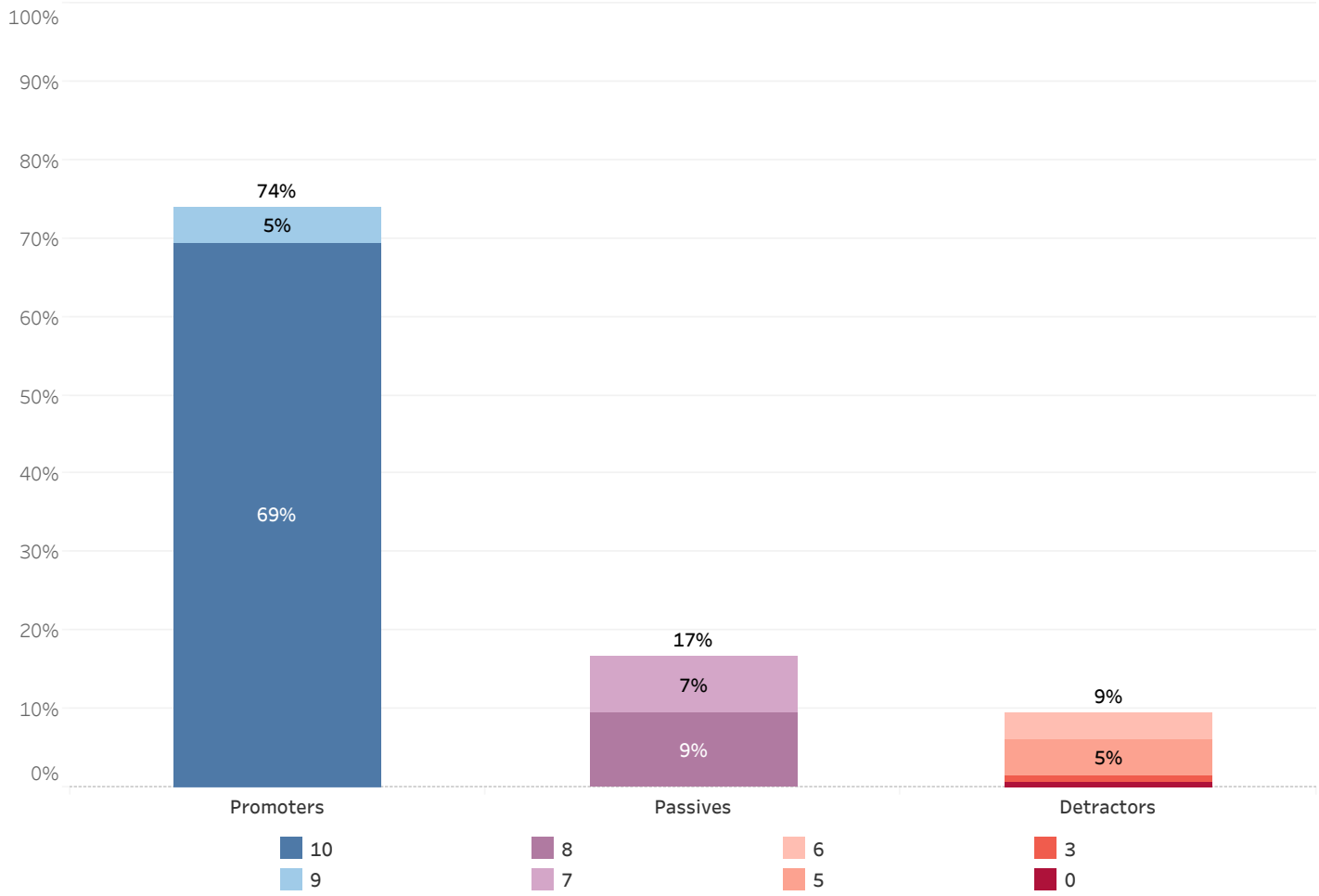
Accessibility



Respondents were asked to place themselves on a scale gauging their likelihood of recommending going to Mount Washington State Park to a friend or family member where 10 equals "definitely would" and 0 equals "definitely not."

According to Net Promoter Score parameters, 74% of respondents are active promoters (those who gave a score of 9 or 10), 17% are passives (those who gave a score of 7 or 8), and 9% are detractors (those who gave a score between 0 and 6), yielding a Net Promoter Score (% Promoters - % Detractors) of +65.

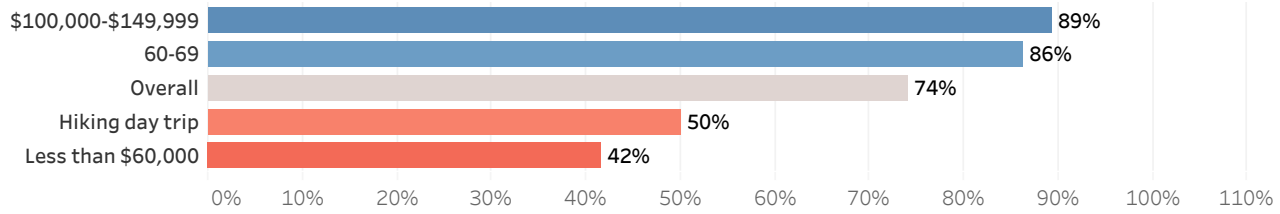
Figure 12a: On a scale from 0 to 10, where 0 is definitely not and 10 is definitely would, how likely are you to recommend going to Mount Washington State Park to a friend or family member in the future?



Respondents with a household income between $100,000 and $149,999 and those aged 60-69 are more likely than others to be promoters of going to Mount Washington State Park to a friend or family member. Those who got to the summit as part of a hiking day trip and those with a household income below $60,000 are less likely to be promoters.

Figure 12b: On a scale from 0 to 10, where 0 is definitely not and 10 is definitely would, how likely are you to recommend going to Mount Washington State Park to a friend or family member in the future? - by Demographics

Promoters



Sixty-one percent of respondents say that what they liked best about Mount Washington was the views or nature, while less than 10% each say they liked the Cog Railway (7%), the facilities or amenities (6%), the weather (5%), the history or education (4%), or the summit itself (2%), while 13% mention something else they liked most about Mount Washington State Park.

Figure 13a: What do you like best about the Mount Washington State Park? (coded)

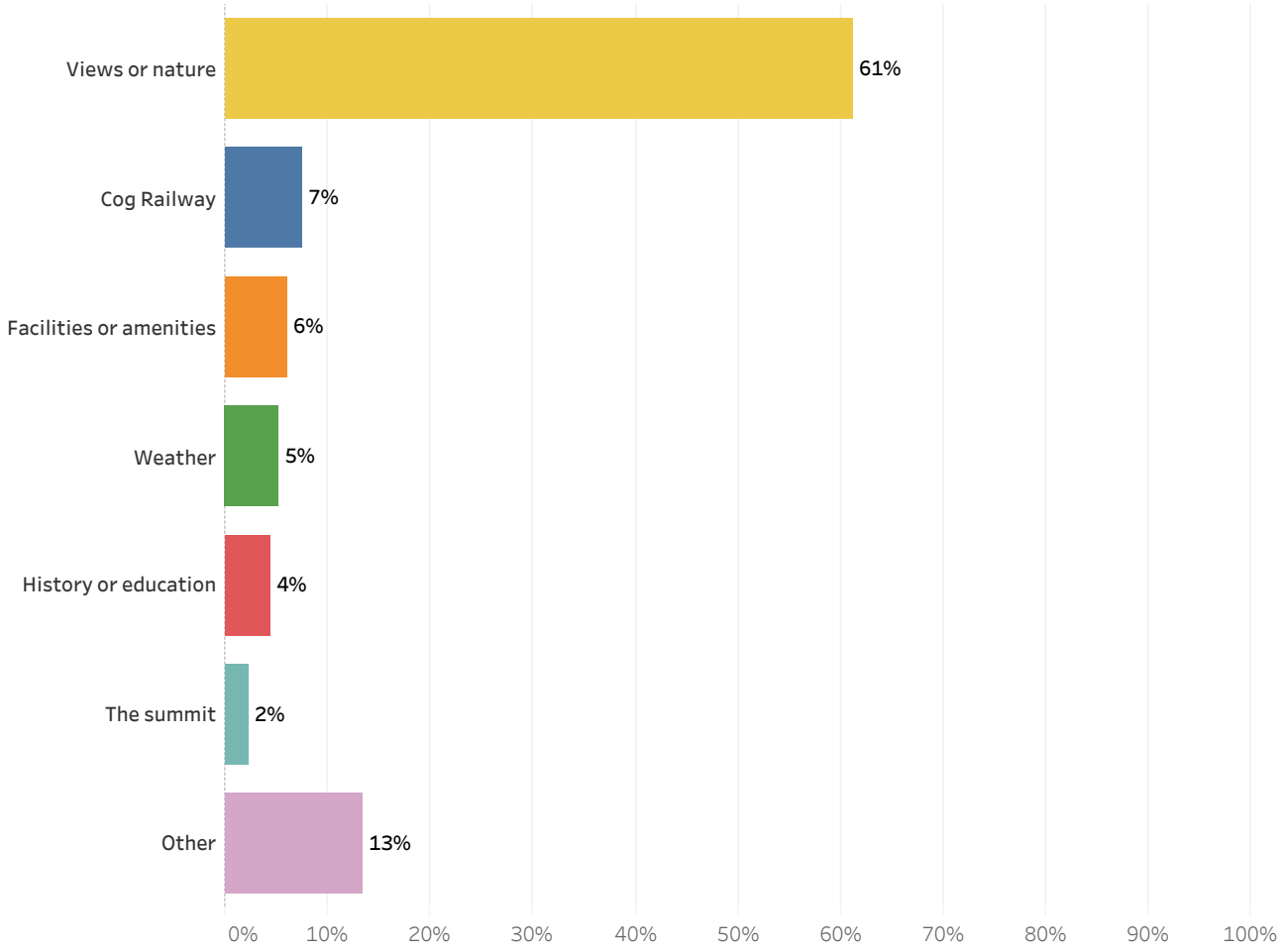


Figure 13b: What do you like best about the Mount Washington State Park? (coded) - Other - Selected Quotations

"Visiting my own backyard. Granite Stater here"

"Alpine Garden"

"The road race"

When asked what they would want to change about Mount Washington State Park, 10% of respondents say they wanted more time, 9% would like better amenities, 8% each would like better management of crowds or more signage, and 7% want lower prices. Five percent or less would like to see more education, 4% want better safety infrastructure, and 2% want to remove the auto road and/or Cog Railway. Seventeen percent would change something else, 27% would not change anything, and 2% don't know or are unsure.

Figure 14a: Other than the weather, if you could change anything about Mount Washington State Park, what would it be? (coded)

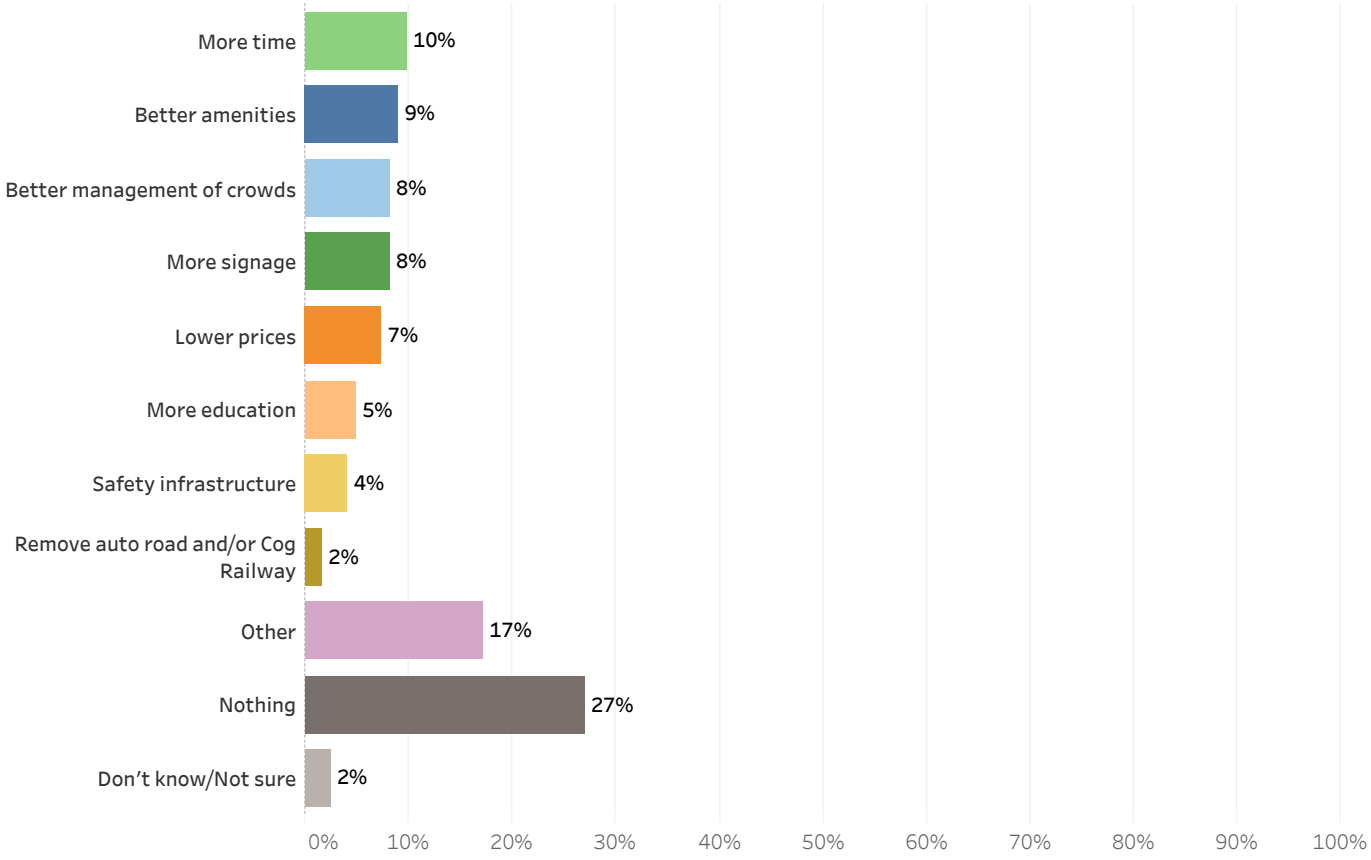


Figure 14b: Other than the weather, if you could change anything about Mount Washington State Park, what would it be? (coded) - Other - Selected Quotations

"Achieve a better balance between the summit as a peak for hikers and a tourist destination for drivers/cog railway passengers"

"I don't want to change the weather! I wish people picked up more of their trash. I also saw the gift shop use plastic bags, but maybe that person brought their own bag. They should only have reusable bags or a no bag option."

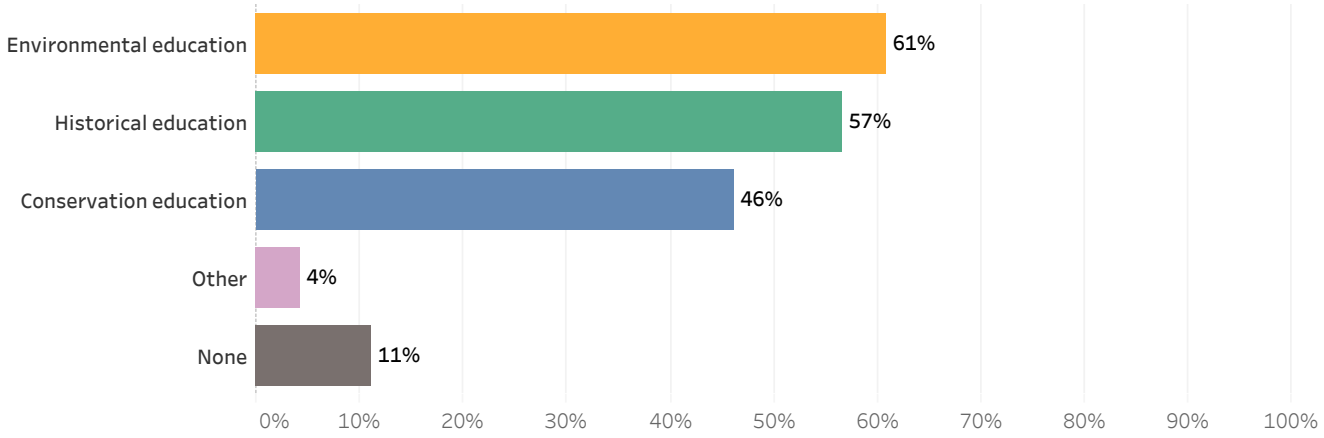
"I with the windows in the visitor center were lower so you could sit in a chair and look out at the landscape."

"More cohesive management, more funding for conservation Visitor center open later - we missed our chance"

Future Planning at Mount Washington State Park

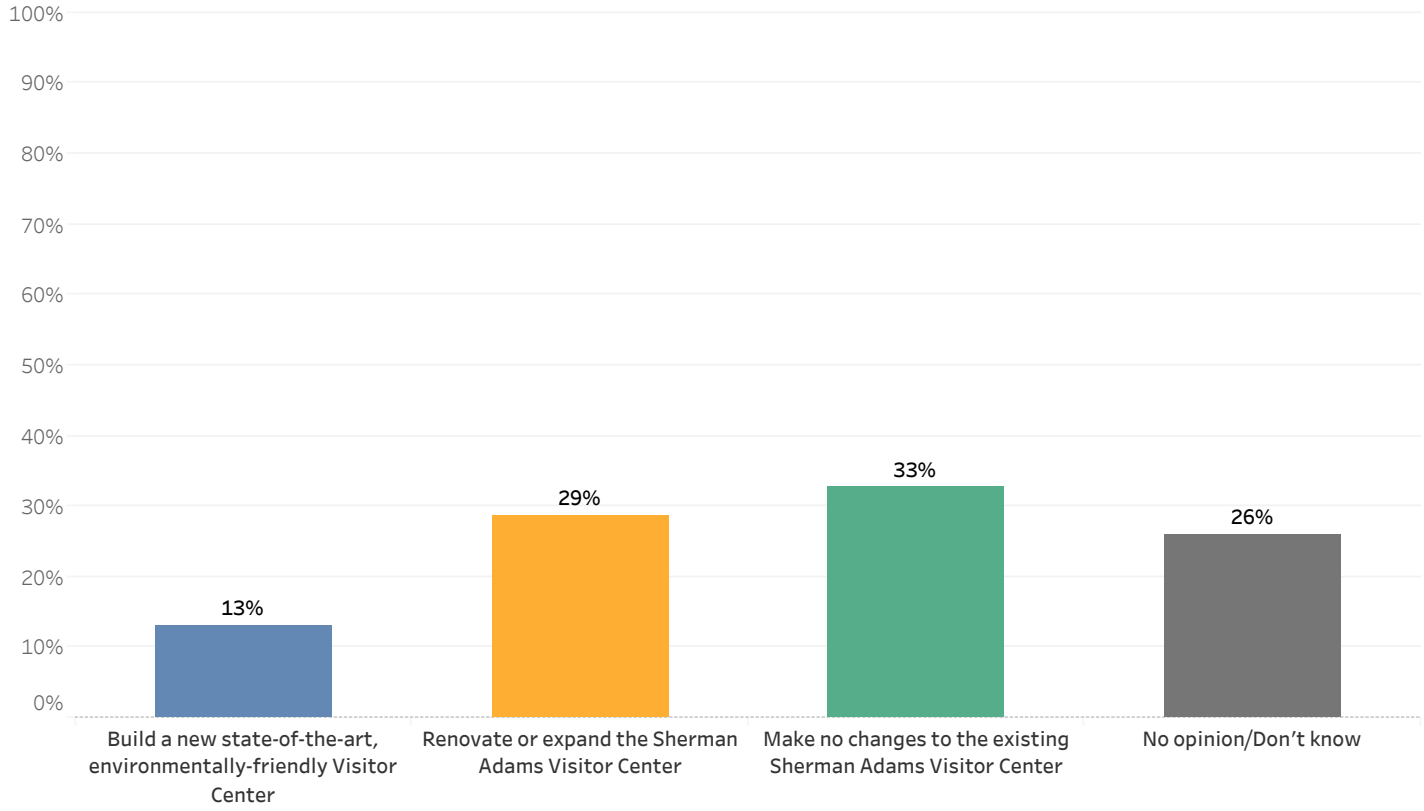
Six in ten respondents say that they would like to see more environmental education (61%) at Mount Washington State Park, 57% would like to see more historical education, and 46% would like to see more conservation education. Four percent of respondents would like to see more of another type of education while 11% would not like to see more of any type of education at Mount Washington State Park.

Figure 15: Which types of educational experiences would you like to see more of at Mount Washington State Park? (Select all that apply)



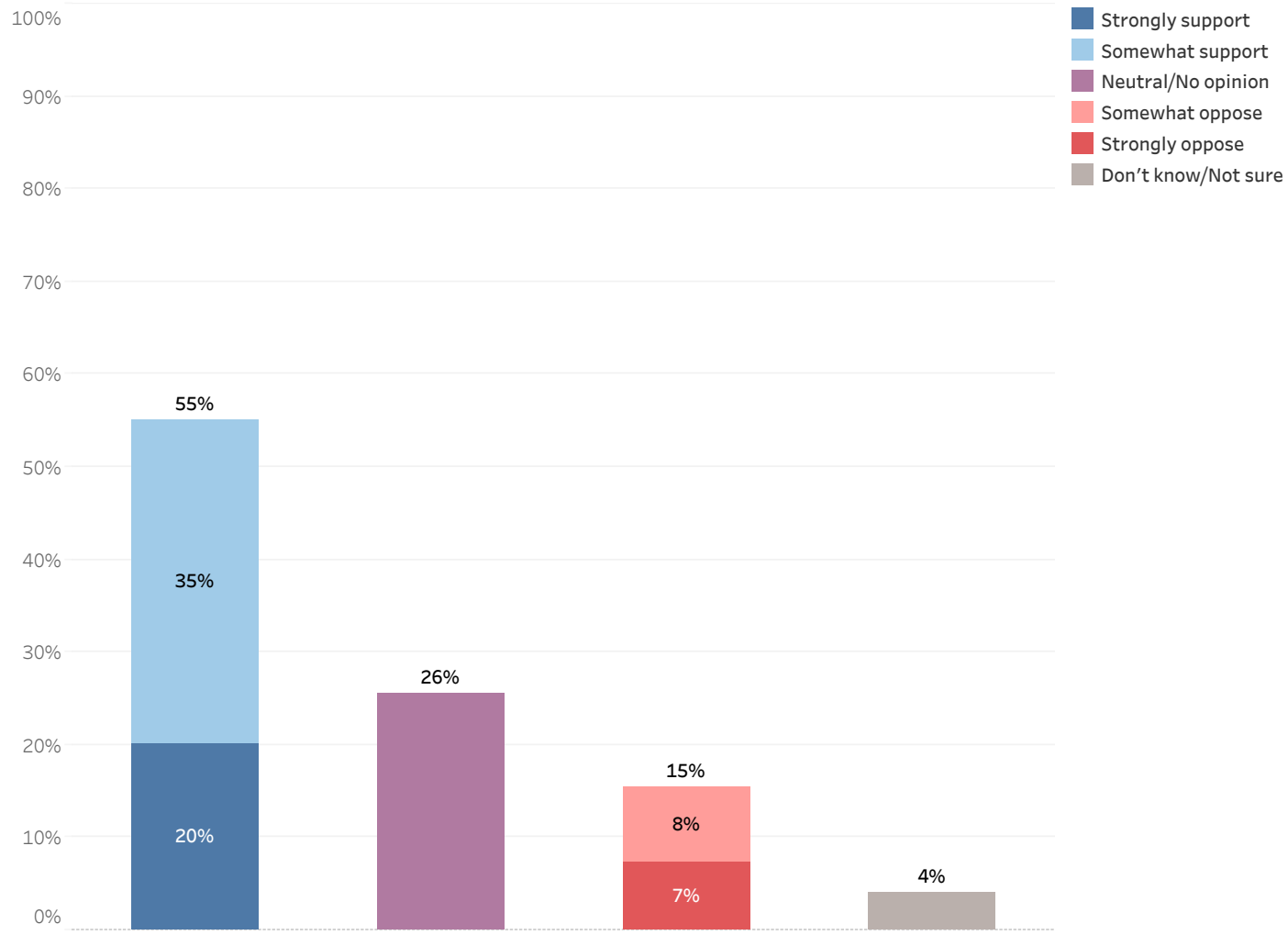
When asked what they think the stewards of Mount Washington State Park should do regarding the Visitor Center, 13% of respondents believe they should build a new state-of-the-art, environmentally-friendly Visitor Center, 29% believe they should renovate or expand the Sherman Adams Visitor Center, 33% believe they should make no changes to the existing Sherman Adams Visitor Center, and 26% have no opinion or don't know.

Figure 16: Which of the following do you think the stewards of Mount Washington State Park should do regarding the Visitor Center?



A majority of respondents (55%) would strongly (20%) or somewhat (35%) support Mount Washington State Park limiting the number of visitors present at any one time, 26% are neutral, 15% somewhat (8%) or strongly (7%) oppose doing this, and 4% don't know or are unsure.

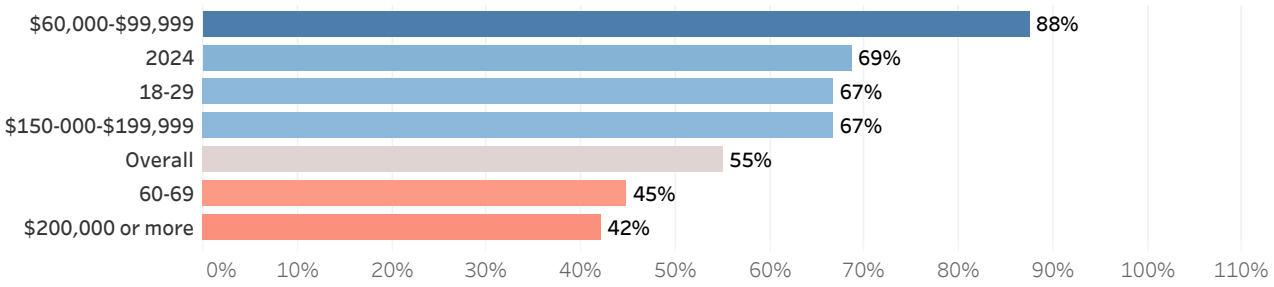
Figure 17a: Would you support or oppose Mount Washington State Park limiting the number of visitors present at any one time?



Respondents with a household income between $60,000 and $99,999 or between $150,000 and $199,999, those who most recently visited in 2024, and those aged 18-29 are more likely than others to support limiting the number of visitors present at any one time. Those with a household income of more than $200,000 and those aged 60-69 are less likely to support doing this.

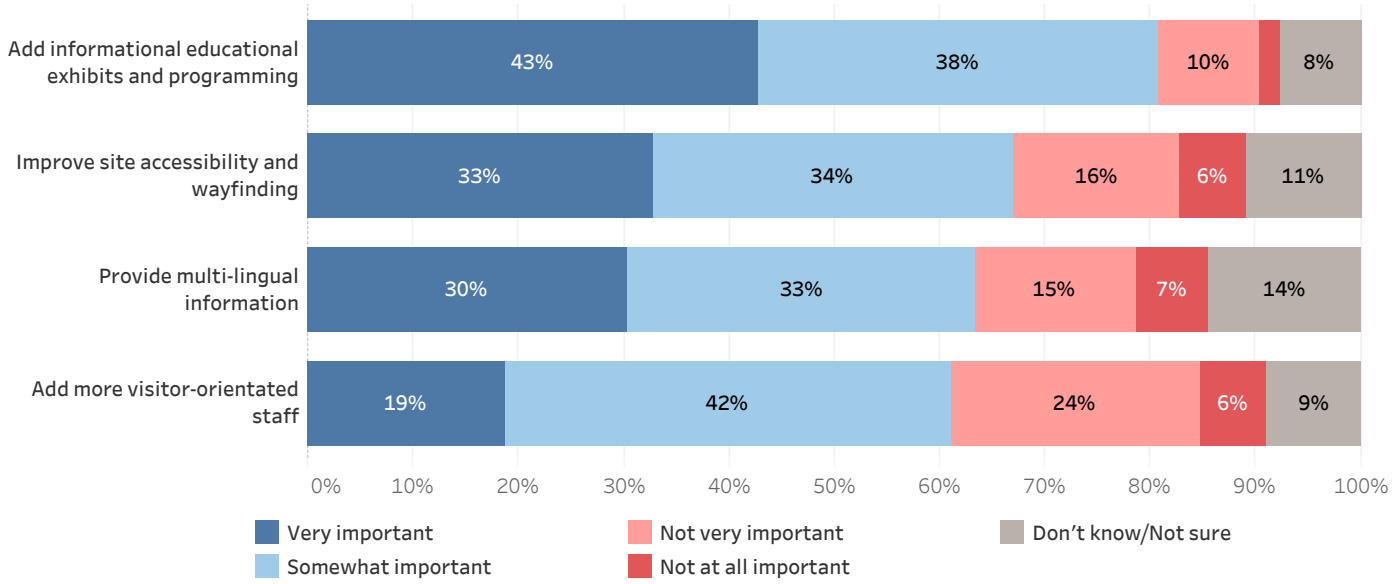
Figure 17b: Would you support or oppose Mount Washington State Park limiting the number of visitors present at any one time? - by Demographics

Support



Most respondents (81%) think it is very (43%) or somewhat (38%) important for the Mount Washington State Park to add informational educational exhibits and programming, 12% think this is not very important (10%) or not at all important (2%), and 8% don't know or are unsure. Two-thirds (67%) think it is very or somewhat important for the park to improve site accessibility and wayfinding, 63% think it is very or somewhat important to provide multi-lingual information, and 61% think it is very or somewhat important to add more visitor-orientated staff.

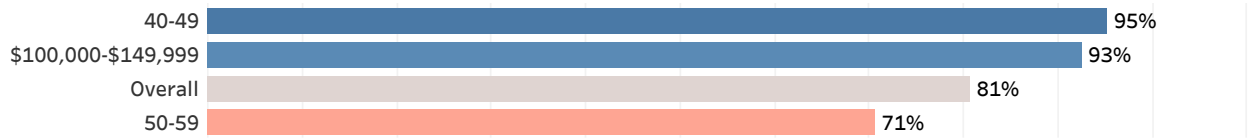
Figure 18a: How important do you think it is for the Mount Washington State Park to do the following things?



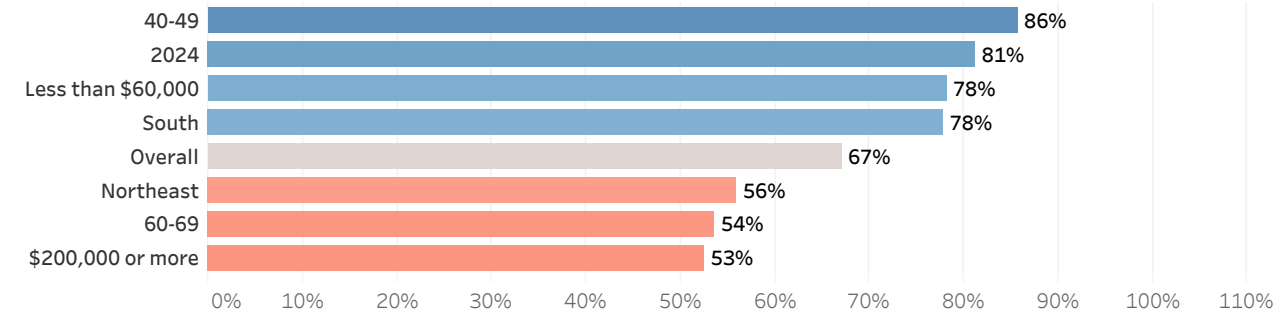
- Respondents aged 40-49 and those with a household income between $100,000 and $149,999 are more likely than others to say it is very or somewhat important for Mount Washington State Park to add information edcuational exhibits and programming. Those aged 50-59 are less likely to say that this is very or somewhat important.
- Respondents aged 40-49, those who last visited in 2024, those with a household income below $60,000, and those who visited from a Southern state are more likely than others to say it is very or somewhat important for Mount Washington State Park to improve site accessibility and wayfinding. Those with a household income of $200,000 or more, those aged 60-69, and those who visited from a Northeastern state outside of New England are less likely to say that this is very or somewhat important.

Figure 18b: Consider important for Mount Washington State Park to do following - by Demographics

Add informational educational exhibits and programming



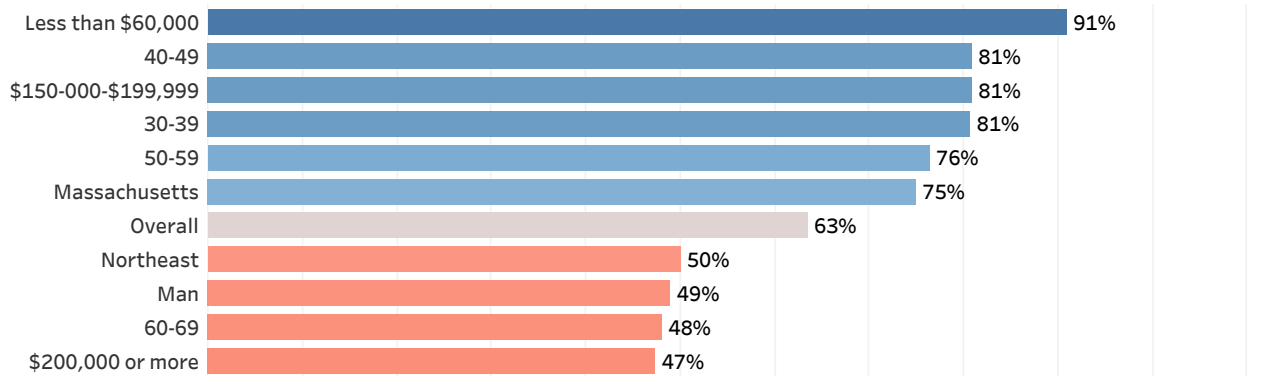
Improve site accessibility and wayfinding



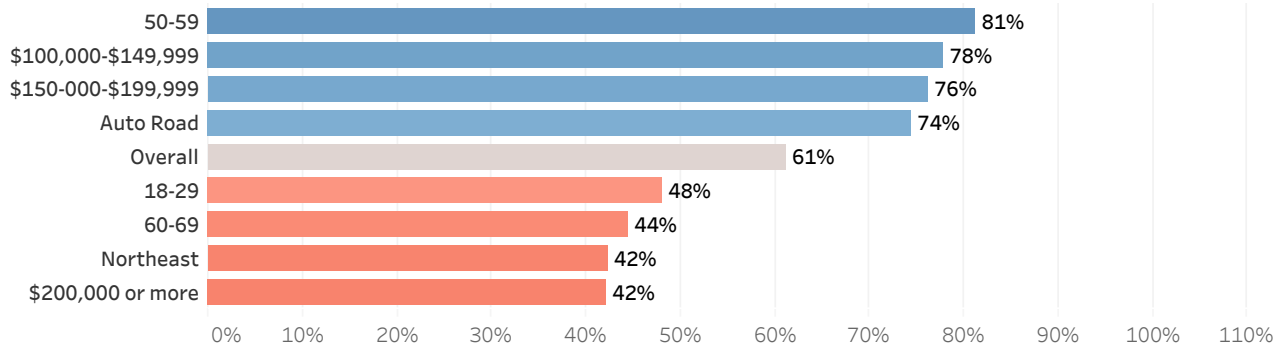
- Respondents with a household income below $60,000, aged 30-59, those with a household income between $150,000 and $199,999, and those who visited from Massachusetts are more likely than others to say it is very or somewhat important for Mount Washington State Park to provide multi-lingual information. Those with a household income of $200,000 or more, those aged 60-69, men, and those who visited from a Northeastern state outside of New England are less likely to say that this is very or somewhat important.
- Respondents aged 50-59, those with a household income between $100,000 and $199,999, and those who got to the summit via the Auto Road are more likely than others to say it is very or somewhat important for Mount Washington State Park to add more visitor-orientated staff. Those with a household income of $200,000 or more, those who visited from a Northeastern state outside of New England, and those aged 18-29 or 60-69 are less likely to say that this is very or somewhat important.

Figure 18c: Consider important for Mount Washington State Park to do following - by Demographics

Provide multi-lingual information

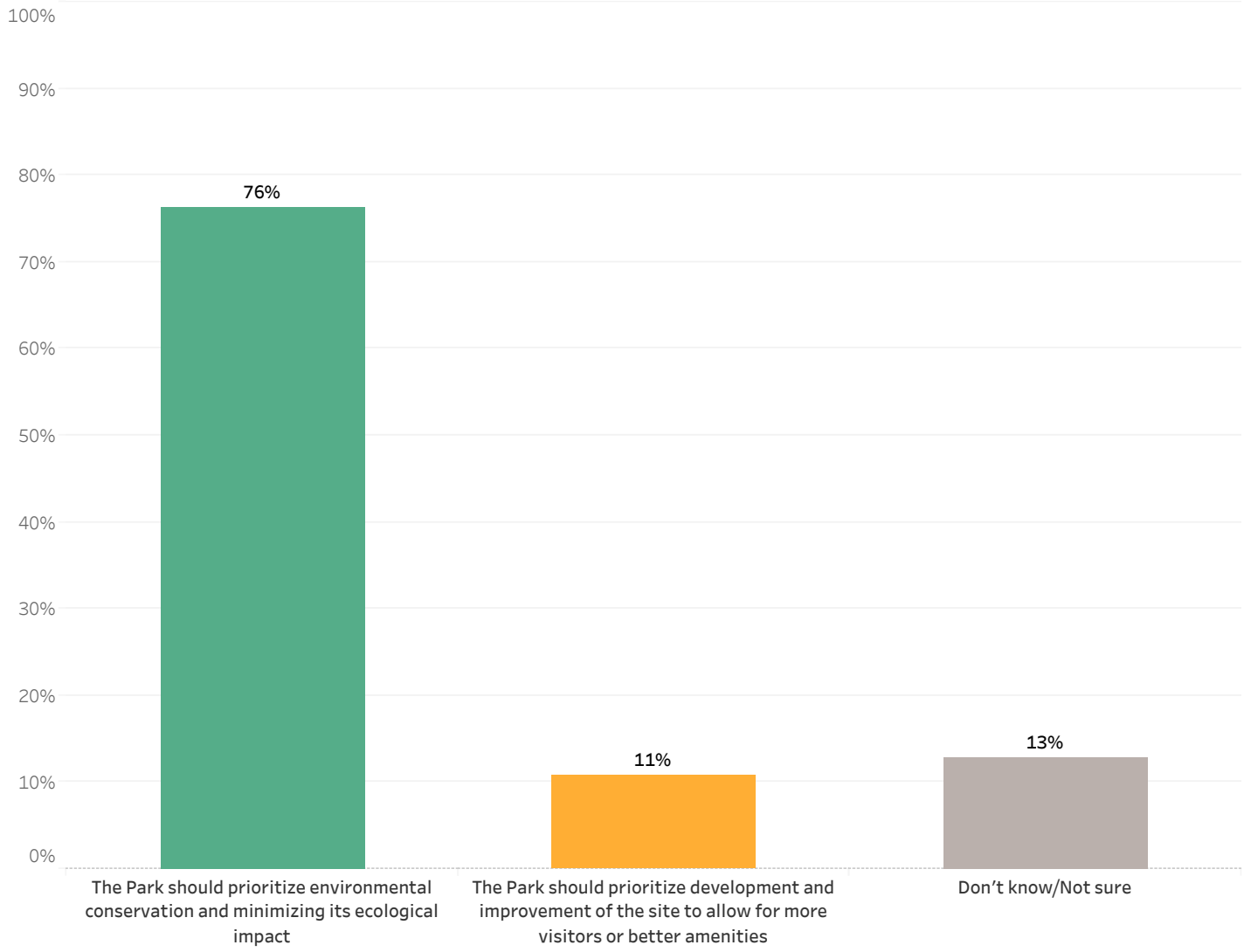


Add more visitor-orientated staff



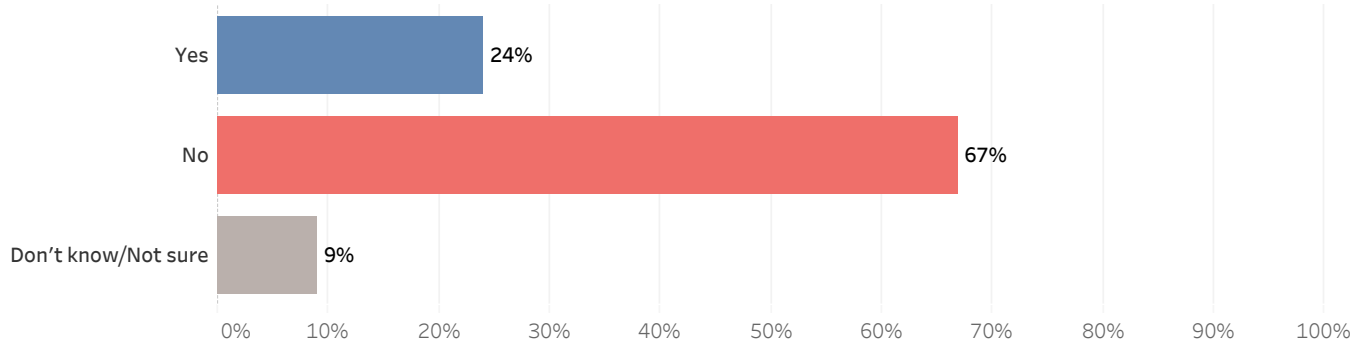
Three-quarters of respondents (76%) say that if forced to choose, they would prefer that the Park prioritize environmental conservation and minimizing its ecological impact, 11% say that if forced to choose, they would prefer the Park priortize development and improvement of the site to allow for more visitors or better amenities, and 13% don't know or are unsure.

Figure 19: Which of the following comes closest to your opinion regarding development and conservation at Mount Washington State Park?



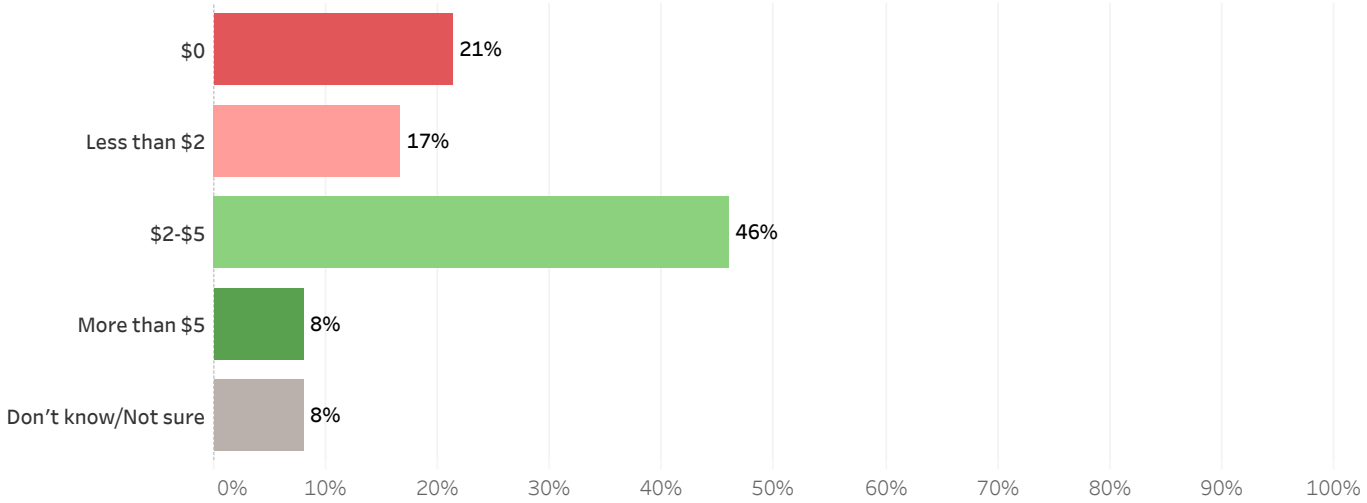
A quarter of respondents (24%) who got to the summit via the Cog Railway or Auto Road were aware before they purchased their Cog Railway or Auto Road ticket that the cost of their ticket did not include any fee for entering Mount Washington State Park. Two-thirds (67%) who got to the summit that way were not aware before buying their ticket that it did not include a fee for entering the park while 9% don't know or are unsure.

Figure 20: The cost of your ticket for the [Cog Railway/Auto Road] did not include any fee for entering Mount Washington State Park. Were you aware of this before you purchased the [Cog Railway/Auto Road] ticket?



If visitors to Mount Washington State Park were required to pay a per-person nominal fee to enter the Sherman Adams Building, 21% say they would not be willing to pay anything, 17% would be willing to pay less than $2, 46% would be willing to pay $2-$5, 8% would be willing to pay more than $5, and 8% don't know or are unsure how much they would be willing to pay to enter the Sherman Adams Building.

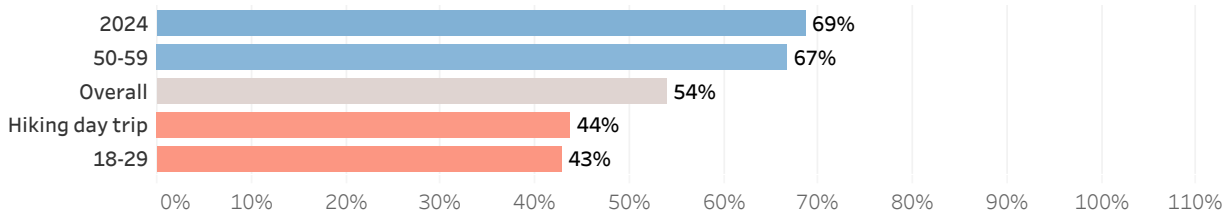
Figure 21a: If visitors to Mount Washington State Park were required to pay a per-person nominal fee to enter the Sherman Adams Building, what is the most you would be willing to pay?



Respondents who most recently visited in 2024 and those aged 50-59 are more likely than others to be willing to pay $2 or more to enter the Sherman Adams Building. Those aged 18-29 and those who got to the summit as part of a hiking day trip are less likely to be willing to pay this much.

Figure 21b: How much willing to pay in per-person fee to enter Sherman Adams Building - by Demographics

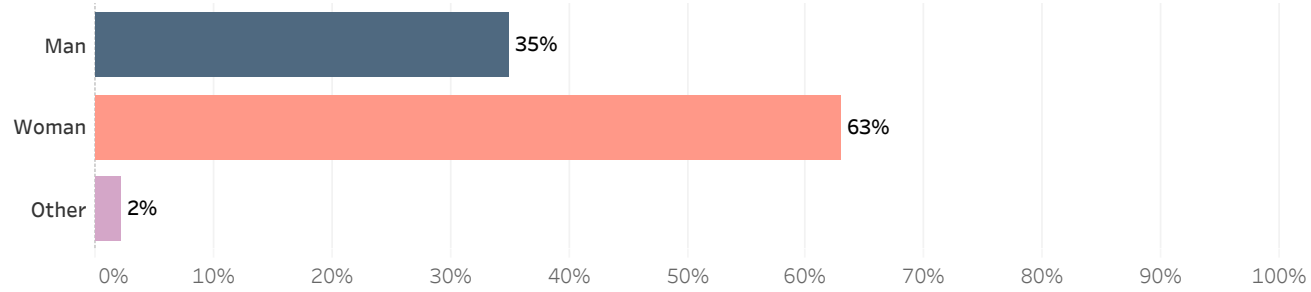
$2 or more



Demographics

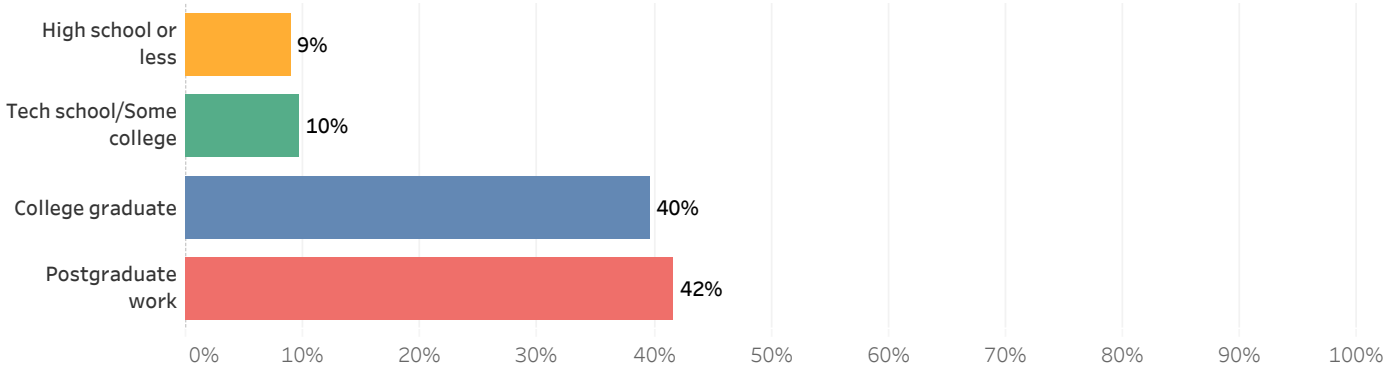
Sixty-three percent of respondents describe themselves as a woman, 35% identify as a man, and 2% identify another way or in multiple ways.

Figure 22: Which of the following describes your gender?



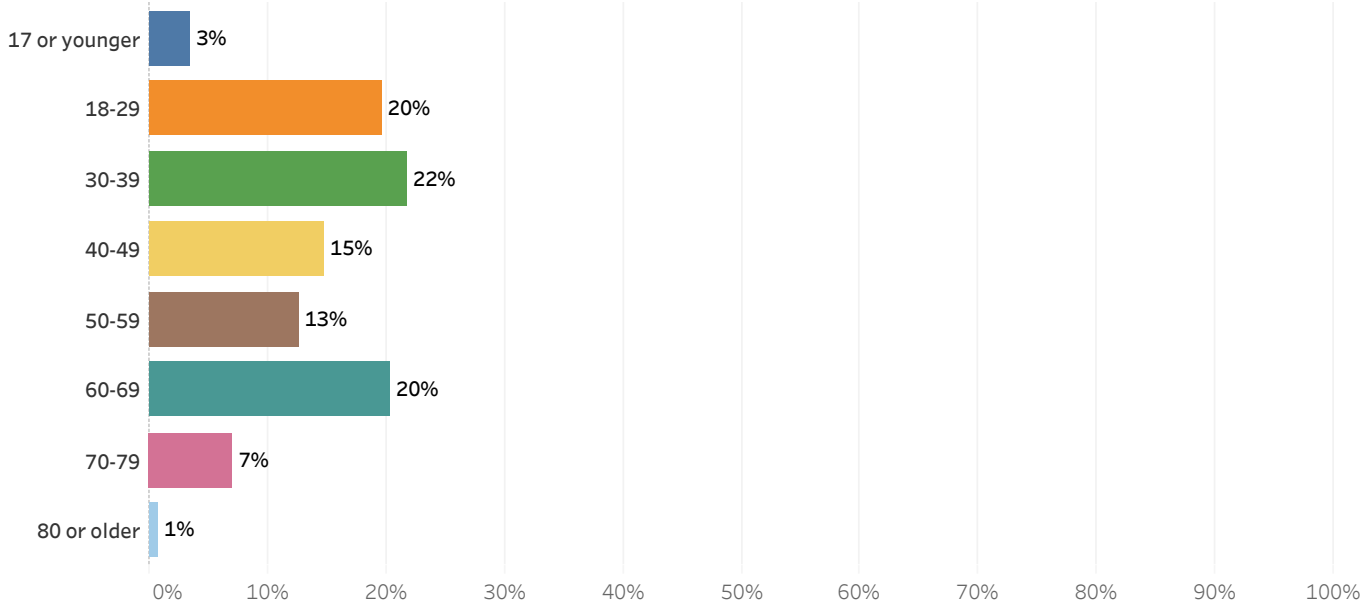
Only 9% of respondents have a high school education or less, 10% attended technical school or have some college education, 40% are college graduates, and 42% have completed postgraduate work.

Figure 23: What is the highest grade in school or level of education that you've completed or gotten credit for?



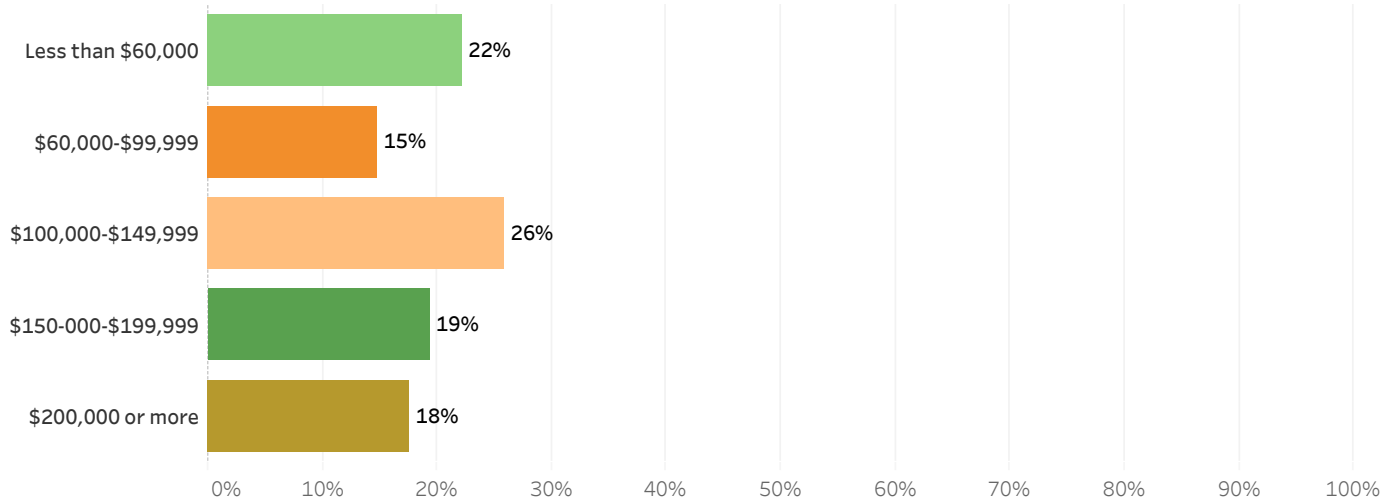
Only 3% of respondents are aged 17 or younger, 20% are aged 18-29, 22% are aged 30-39, 15% are aged 40-49, 13% are aged 50-59, 20% are aged 60-69, 7% are aged 70-79, and only 1% are aged 80 or older.

Figure 24: And what is your current age?



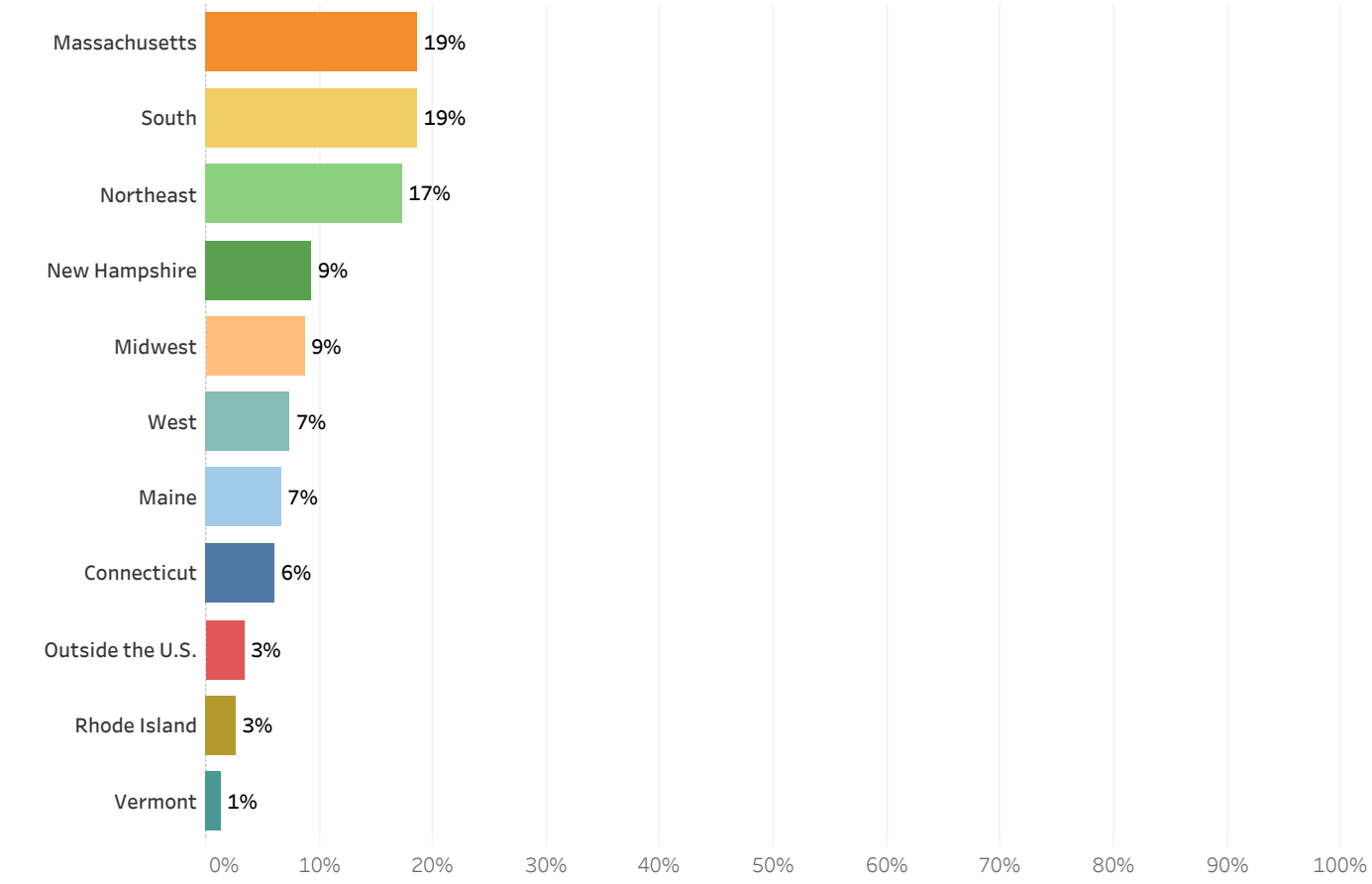
Ten percent of respondents say they have a household income below $40,000, 12% have a household income between $40,000 and $59,999, 15% have a household income between $60,000 and $99,999, 26% have a household income between $100,000 and $149,999, 19% have a household income between $150,000 and $199,999, and 18% have a household income of more than $200,000.

Figure 25: How much total income did you and your household receive in 2023, not just from wages or salaries but from all sources, that is, before taxes and other deductions were made?



Nineteen percent of respondents each currently live in Massachusetts or a Southern state, 17% live in a Northeastern state outside of New England, 9% each live in New Hampshire or a Midwestern state, 7% each live in a Western state or Maine, 6% live in Connecticut, 3% each live outside of the United States or in Rhode Island, and 1% live in Vermont.

Figure 26: Where do you currently live? (grouped)



Appendix A

Q3: About how many times have you ever visited Mount Washington State Park including your most recent visit?

		1	2	3-4	5-9	10 or more	N
OVERALL	Overall	55%	19%	10%	10%	6%	150
State/Region	Massachusetts	46%	25%	11%	11%	7%	28
	Northeast	52%	28%	4%	12%	4%	25
	South	86%	7%	7%	0%	0%	28
Gender	Man	48%	26%	8%	14%	4%	50
	Woman	60%	16%	11%	6%	8%	89
Education	College graduate	50%	23%	11%	11%	5%	56
	Postgraduate work	63%	12%	12%	3%	10%	60
Age	18-29	75%	11%	4%	11%	0%	28
	30-39	55%	19%	10%	16%	0%	31
	40-49	43%	19%	19%	10%	10%	21
	50-59	33%	22%	22%	6%	17%	18
	60-69	61%	21%	0%	11%	7%	28
Household Income	Less than $60,000	75%	8%	13%	0%	4%	24
	$60,000-$99,999	56%	6%	6%	19%	13%	16
	$100,000-$149,999	57%	18%	11%	14%	0%	28
	$150-000-$199,999	50%	20%	15%	5%	10%	20
	$200,000 or more	42%	21%	11%	11%	16%	19
Previous Visits	Previously visited	0%	42%	22%	22%	13%	67
	Never visited before	100%	0%	0%	0%	0%	83
How Reached Summit	Auto Road	52%	20%	6%	12%	10%	50
	Cog Railway	61%	18%	13%	7%	1%	72
	Hiking day trip	50%	13%	13%	19%	6%	16

Q2: Before you visited, were you aware that the summit of Mount Washington is a state park?

		Yes	No	N
OVERALL	Overall	56%	44%	151
State/Region	Massachusetts	71%	29%	28
	Northeast	42%	58%	26
	South	39%	61%	28
Gender	Man	64%	36%	50
	Woman	50%	50%	90
Education	College graduate	56%	44%	57
	Postgraduate work	55%	45%	60
Age	18-29	43%	57%	28
	30-39	55%	45%	31
	40-49	67%	33%	21
	50-59	72%	28%	18
	60-69	52%	48%	29
Household Income	Less than $60,000	46%	54%	24
	$60,000-$99,999	63%	38%	16
	$100,000-$149,999	64%	36%	28
	$150-000-$199,999	57%	43%	21
	$200,000 or more	53%	47%	19
Previous Visits	Previously visited	81%	19%	67
	Never visited before	36%	64%	83
How Reached Summit	Auto Road	58%	42%	50
	Cog Railway	52%	48%	73
	Hiking day trip	56%	44%	16

Q1: Year of Visit

		2024	2025	N
OVERALL	Overall	10%	90%	145
State/Region	Massachusetts	4%	96%	27
	Northeast	8%	92%	24
	South	14%	86%	28
Gender	Man	13%	87%	46
	Woman	9%	91%	88
Education	College graduate	9%	91%	56
	Postgraduate work	15%	85%	59
Age	18-29	4%	96%	28
	30-39	3%	97%	30
	40-49	5%	95%	21
	50-59	11%	89%	18
	60-69	10%	90%	29
Household Income	Less than $60,000	4%	96%	24
	$100,000-$149,999	0%	100%	28
	$150-000-$199,999	19%	81%	21
	$200,000 or more	11%	89%	19
Previous Visits	Previously visited	9%	91%	65
	Never visited before	9%	91%	79
How Reached Summit	Auto Road	6%	94%	48
	Cog Railway	14%	86%	69
	Hiking day trip	6%	94%	16

Q6: How did you get to Mount Washington State Park?

		Auto Road	Cog Railway	Hiking day trip	Overnight hiking trip	Other	N
OVERALL	Overall	33%	48%	11%	3%	5%	151
State/Region	Massachusetts	32%	43%	11%	4%	11%	28
	Northeast	31%	38%	19%	12%	0%	26
	South	36%	57%	7%	0%	0%	28
Gender	Man	30%	52%	12%	0%	6%	50
	Woman	36%	44%	10%	6%	4%	90
Education	College graduate	49%	30%	12%	5%	4%	57
	Postgraduate work	22%	58%	13%	3%	3%	60
Age	18-29	21%	32%	36%	7%	4%	28
	30-39	35%	48%	10%	6%	0%	31
	40-49	57%	29%	0%	0%	14%	21
	50-59	39%	39%	11%	6%	6%	18
	60-69	24%	72%	0%	0%	3%	29
Household Income	Less than $60,000	29%	42%	21%	0%	8%	24
	$60,000-$99,999	25%	63%	6%	0%	6%	16
	$100,000-$149,999	32%	50%	11%	4%	4%	28
	$150-000-$199,999	43%	33%	14%	5%	5%	21
	$200,000 or more	26%	47%	11%	11%	5%	19
Previous Visits	Previously visited	36%	42%	12%	3%	7%	67
	Never visited before	31%	53%	10%	4%	2%	83

Q7: Why did you decide to visit Mount Washington State Park? (Select all that apply)

		For exercise or recreation	Part of an organized tour	To drive to the top or get the This Car Climbed Mt. Washington bumper sticker	To enjoy the natural environment	To enjoy the scenery or view
OVERALL	Overall	21%	2%	9%	48%	65%
State/Region	Massachusetts	14%	0%	7%	54%	57%
	Northeast	27%	0%	12%	50%	73%
	South	11%	4%	18%	43%	61%
Gender	Man	20%	2%	8%	44%	62%
	Woman	22%	2%	11%	50%	68%
Education	College graduate	30%	2%	18%	49%	63%
	Postgraduate work	17%	3%	7%	47%	68%
Age	18-29	46%	0%	7%	54%	57%
	30-39	16%	3%	16%	52%	81%
	40-49	33%	0%	24%	52%	71%
	50-59	17%	6%	6%	44%	50%
	60-69	7%	0%	0%	38%	66%
Household Income	Less than $60,000	33%	0%	4%	50%	63%
	$60,000-$99,999	13%	19%	13%	31%	50%
	$100,000-$149,999	18%	0%	11%	54%	71%
	$150-000-$199,999	33%	0%	10%	62%	86%
	$200,000 or more	16%	0%	11%	47%	68%
Previous Visits	Previously visited	24%	1%	10%	45%	55%
	Never visited before	18%	2%	8%	51%	72%
How Reached Summit	Auto Road	16%	2%	28%	52%	76%
	Cog Railway	7%	3%	0%	42%	59%
	Hiking day trip	88%	0%	0%	63%	69%

Q7: Why did you decide to visit Mount Washington State Park? (Select all that apply)

		To have a fun experience with friends or family	To learn about the history of the area	To reach the highest peak in the Northeastern U.S.	To ride the Cog Railway	Other	No reason in particular	N
OVERALL	Overall	51%	17%	41%	40%	12%	1%	151
State/Region	Massachusetts	39%	21%	39%	29%	14%	0%	28
	Northeast	54%	12%	54%	31%	12%	4%	26
	South	46%	14%	36%	54%	0%	0%	28
Gender	Man	40%	12%	46%	46%	16%	0%	50
	Woman	58%	20%	41%	36%	9%	1%	90
Education	College graduate	54%	18%	40%	28%	12%	0%	57
	Postgraduate work	48%	18%	40%	48%	12%	0%	60
Age	18-29	43%	11%	50%	25%	11%	0%	28
	30-39	58%	23%	45%	39%	13%	3%	31
	40-49	67%	19%	38%	33%	14%	0%	21
	50-59	50%	11%	39%	33%	11%	0%	18
	60-69	31%	17%	34%	66%	14%	0%	29
Household Income	Less than $60,000	33%	13%	38%	38%	17%	0%	24
	$60,000-$99,999	31%	19%	25%	38%	19%	0%	16
	$100,000-$149,999	71%	21%	50%	39%	7%	0%	28
	$150-000-$199,999	76%	10%	67%	33%	5%	0%	21
	$200,000 or more	47%	16%	37%	42%	16%	0%	19
Previous Visits	Previously visited	48%	13%	34%	33%	18%	1%	67
	Never visited before	53%	19%	47%	45%	7%	0%	83
How Reached Summit	Auto Road	48%	12%	40%	0%	16%	0%	50
	Cog Railway	53%	23%	37%	81%	4%	1%	73
	Hiking day trip	44%	13%	69%	0%	19%	0%	16

Q4: Approximately how long did you stay at Mount Washington State Park?

		Less than 1 hour	1-2 hours	3-4 hours	More than 4 hours	N
OVERALL	Overall	19%	50%	23%	9%	151
State/Region	Massachusetts	36%	29%	18%	18%	28
	Northeast	12%	62%	19%	8%	26
	South	21%	57%	21%	0%	28
Gender	Man	16%	56%	18%	10%	50
	Woman	20%	47%	24%	9%	90
Education	College graduate	16%	53%	23%	9%	57
	Postgraduate work	22%	50%	20%	8%	60
Age	18-29	25%	54%	4%	18%	28
	30-39	19%	61%	13%	6%	31
	40-49	5%	57%	33%	5%	21
	50-59	22%	61%	17%	0%	18
	60-69	21%	28%	41%	10%	29
Household Income	Less than $60,000	17%	58%	13%	13%	24
	$60,000-$99,999	19%	38%	31%	13%	16
	$100,000-$149,999	14%	43%	29%	14%	28
	$150-000-$199,999	24%	57%	14%	5%	21
	$200,000 or more	16%	63%	21%	0%	19
Previous Visits	Previously visited	21%	51%	22%	6%	67
	Never visited before	18%	48%	23%	11%	83
How Reached Summit	Auto Road	4%	60%	28%	8%	50
	Cog Railway	29%	45%	22%	4%	73
	Hiking day trip	25%	50%	6%	19%	16

Q5: And how crowded did you feel it was during your visit to Mount Washington State Park?

		Very crowded	Somewhat crowded	Not very crowded	Not crowded at all	N
OVERALL	Overall	13%	42%	38%	7%	151
State/Region	Massachusetts	11%	54%	32%	4%	28
	Northeast	15%	38%	35%	12%	26
	South	11%	43%	39%	7%	28
Gender	Man	12%	44%	36%	8%	50
	Woman	12%	39%	42%	7%	90
Education	College graduate	12%	42%	40%	5%	57
	Postgraduate work	15%	38%	42%	5%	60
Age	18-29	11%	54%	29%	7%	28
	30-39	10%	45%	35%	10%	31
	40-49	19%	33%	48%	0%	21
	50-59	11%	33%	44%	11%	18
	60-69	10%	34%	45%	10%	29
Household Income	Less than $60,000	13%	63%	17%	8%	24
	$60,000-$99,999	0%	50%	44%	6%	16
	$100,000-$149,999	14%	29%	54%	4%	28
	$150-000-$199,999	10%	43%	43%	5%	21
	$200,000 or more	11%	26%	53%	11%	19
Previous Visits	Previously visited	12%	42%	40%	6%	67
	Never visited before	14%	42%	36%	7%	83
How Reached Summit	Auto Road	12%	38%	44%	6%	50
	Cog Railway	10%	41%	42%	7%	73
	Hiking day trip	25%	69%	6%	0%	16

Q8: Which of the following did you do while at Mount Washington State Park? (Select all that apply)

		Took pictures at the summit sign	Visited the rooftop terrace	Visited the Sherman Adams Visitor Center	Visited the Tip Top House	Walked around the park lands and surrounding trails	None of the above	N
OVERALL	Overall	77%	73%	91%	41%	64%	1%	151
State/Region	Massachusetts	82%	61%	96%	36%	68%	0%	28
	Northeast	81%	65%	96%	31%	73%	0%	26
	South	75%	86%	100%	39%	54%	0%	28
Gender	Man	82%	70%	90%	40%	58%	0%	50
	Woman	78%	73%	91%	42%	68%	1%	90
Education	College graduate	81%	70%	89%	44%	65%	0%	57
	Postgraduate work	73%	68%	97%	35%	67%	2%	60
Age	18-29	79%	61%	89%	43%	68%	0%	28
	30-39	74%	71%	94%	42%	84%	0%	31
	40-49	90%	81%	95%	48%	67%	0%	21
	50-59	89%	78%	100%	50%	78%	0%	18
	60-69	72%	83%	90%	41%	34%	3%	29
Household Income	Less than $60,000	67%	75%	92%	29%	67%	4%	24
	$60,000-$99,999	50%	69%	81%	31%	63%	0%	16
	$100,000-$149,999	89%	79%	93%	43%	64%	0%	28
	$150-000-$199,999	86%	52%	90%	43%	62%	0%	21
	$200,000 or more	89%	63%	95%	37%	63%	0%	19
Previous Visits	Previously visited	79%	79%	94%	36%	61%	0%	67
	Never visited before	75%	69%	89%	46%	66%	1%	83
How Reached Summit	Auto Road	76%	78%	90%	60%	76%	0%	50
	Cog Railway	77%	74%	90%	36%	49%	1%	73
	Hiking day trip	81%	63%	94%	25%	75%	0%	16

Q9: Which of the following did you do while visiting the Sherman Adams Visitor Center? (Select all that apply)

		Asked for information at the Admissions/ Information desk	Ate a meal in the sitting area	Bought food in the cafeteria	Sent mail from the Post Office	Took shelter from the weather
OVERALL	Overall	22%	25%	35%	16%	37%
State/Region	Massachusetts	30%	33%	48%	7%	44%
	Northeast	40%	12%	36%	20%	32%
	South	11%	14%	21%	21%	39%
Gender	Man	27%	27%	33%	11%	40%
	Woman	21%	23%	34%	16%	34%
Education	College graduate	27%	20%	35%	20%	37%
	Postgraduate work	21%	29%	34%	16%	31%
Age	18-29	28%	24%	24%	8%	36%
	30-39	24%	28%	38%	10%	34%
	40-49	25%	45%	60%	25%	35%
	50-59	22%	11%	22%	28%	22%
	60-69	19%	12%	27%	15%	54%
Household Income	Less than $60,000	14%	18%	23%	23%	36%
	$100,000-$149,999	15%	38%	46%	12%	27%
	$150-000-$199,999	32%	16%	32%	11%	32%
	$200,000 or more	28%	22%	44%	0%	56%
Previous Visits	Previously visited	24%	32%	41%	13%	38%
	Never visited before	22%	19%	30%	18%	35%
How Reached Summit	Auto Road	20%	22%	31%	20%	27%
	Cog Railway	15%	20%	35%	17%	47%

Q9: Which of the following did you do while visiting the Sherman Adams Visitor Center? (Select all that apply)

		Used the restroom facilities	Visited the Gift Shop	Visited the Observatory Museum	Other	N
OVERALL	Overall	85%	79%	51%	5%	138
State/Region	Massachusetts	89%	78%	44%	0%	27
	Northeast	84%	88%	52%	4%	25
	South	75%	86%	54%	11%	28
Gender	Man	87%	78%	51%	2%	45
	Woman	85%	83%	54%	6%	82
Education	College graduate	92%	84%	53%	4%	51
	Postgraduate work	79%	74%	48%	9%	58
Age	18-29	80%	92%	36%	12%	25
	30-39	90%	83%	48%	0%	29
	40-49	95%	80%	65%	10%	20
	50-59	83%	78%	50%	0%	18
	60-69	85%	65%	65%	0%	26
Household Income	Less than $60,000	77%	86%	64%	5%	22
	$100,000-$149,999	88%	81%	58%	4%	26
	$150-000-$199,999	89%	84%	42%	5%	19
	$200,000 or more	89%	83%	56%	6%	18
Previous Visits	Previously visited	87%	70%	54%	5%	63
	Never visited before	82%	86%	50%	5%	74
How Reached Summit	Auto Road	89%	93%	62%	0%	45
	Cog Railway	83%	68%	50%	6%	66

Q10: Which of the following best describes the amount of time you spent at Mount Washington State Park?

		I wish I had had more time to spend at the Park	The amount of time I spent at the Park was just about right	There were not enough activities to fill the time I spent at the Park	N
OVERALL	Overall	29%	68%	3%	151
State/Region	Massachusetts	29%	68%	4%	28
	Northeast	23%	73%	4%	26
	South	36%	64%	0%	28
Gender	Man	26%	72%	2%	50
	Woman	31%	64%	4%	90
Education	College graduate	26%	72%	2%	57
	Postgraduate work	33%	62%	5%	60
Age	18-29	14%	86%	0%	28
	30-39	19%	74%	6%	31
	40-49	48%	48%	5%	21
	50-59	28%	72%	0%	18
	60-69	41%	59%	0%	29
Household Income	Less than $60,000	29%	71%	0%	24
	$60,000-$99,999	31%	63%	6%	16
	$100,000-$149,999	32%	68%	0%	28
	$150-000-$199,999	24%	71%	5%	21
	$200,000 or more	21%	68%	11%	19
Previous Visits	Previously visited	27%	70%	3%	67
	Never visited before	31%	65%	4%	83
How Reached Summit	Auto Road	18%	80%	2%	50
	Cog Railway	42%	52%	5%	73
	Hiking day trip	13%	88%	0%	16

Q11a: How would you rate the following aspects of the Mount Washington State Park? The park staff

		Very good	Good	Fair	Poor	Don't know/Can't remember	N
OVERALL	Overall	73%	19%	3%	1%	3%	148
State/Region	Massachusetts	71%	21%	4%	0%	4%	28
	Northeast	77%	15%	8%	0%	0%	26
	South	65%	23%	0%	4%	8%	26
Gender	Man	69%	18%	8%	2%	2%	49
	Woman	74%	20%	1%	1%	3%	88
Education	College graduate	73%	21%	2%	2%	2%	56
	Postgraduate work	71%	20%	3%	0%	5%	59
Age	18-29	59%	15%	11%	7%	7%	27
	30-39	74%	23%	0%	0%	3%	31
	40-49	65%	25%	5%	0%	5%	20
	50-59	83%	17%	0%	0%	0%	18
	60-69	86%	14%	0%	0%	0%	28
Household Income	Less than $60,000	59%	32%	5%	0%	5%	22
	$60,000-$99,999	88%	6%	0%	0%	6%	16
	$100,000-$149,999	79%	18%	0%	0%	4%	28
	$150-000-$199,999	67%	24%	5%	5%	0%	21
	$200,000 or more	67%	11%	11%	6%	6%	18
Previous Visits	Previously visited	76%	21%	2%	0%	2%	66
	Never visited before	70%	17%	5%	2%	5%	81
How Reached Summit	Auto Road	76%	20%	0%	2%	2%	49
	Cog Railway	72%	21%	3%	1%	3%	72

Q11b: How would you rate the following aspects of the Mount Washington State Park? Signage and wayfinding

		Very good	Good	Fair	Poor	Very poor	Don't know/Can't remember	N
OVERALL	Overall	55%	35%	4%	3%	2%	1%	147
State/Region	Massachusetts	36%	46%	7%	4%	7%	0%	28
	Northeast	60%	28%	4%	4%	0%	4%	25
	South	56%	41%	0%	0%	4%	0%	27
Gender	Man	56%	33%	4%	4%	2%	0%	48
	Woman	53%	35%	5%	2%	2%	2%	88
Education	College graduate	58%	30%	4%	0%	5%	4%	57
	Postgraduate work	51%	40%	5%	4%	0%	0%	57
Age	18-29	41%	37%	11%	7%	4%	0%	27
	30-39	58%	32%	6%	0%	0%	3%	31
	40-49	52%	33%	5%	5%	5%	0%	21
	50-59	61%	33%	0%	0%	0%	6%	18
	60-69	68%	25%	0%	4%	4%	0%	28
Household Income	Less than $60,000	36%	50%	5%	9%	0%	0%	22
	$60,000-$99,999	50%	44%	6%	0%	0%	0%	16
	$100,000-$149,999	67%	26%	4%	0%	4%	0%	27
	$150-000-$199,999	52%	29%	14%	0%	5%	0%	21
	$200,000 or more	68%	21%	0%	0%	5%	5%	19
Previous Visits	Previously visited	56%	32%	6%	2%	2%	3%	66
	Never visited before	54%	38%	3%	4%	3%	0%	80
How Reached Summit	Auto Road	63%	31%	4%	0%	0%	2%	49
	Cog Railway	52%	39%	4%	1%	3%	0%	71

Q11c: How would you rate the following aspects of the Mount Washington State Park? Accessibility

		Very good	Good	Fair	Poor	Very poor	Don't know/Can't remember	N
OVERALL	Overall	36%	32%	11%	2%	1%	17%	149
State/Region	Massachusetts	29%	43%	14%	0%	0%	14%	28
	Northeast	50%	31%	0%	8%	0%	12%	26
	South	37%	33%	7%	0%	4%	19%	27
Gender	Man	40%	36%	12%	2%	2%	8%	50
	Woman	33%	32%	11%	2%	1%	20%	88
Education	College graduate	34%	27%	9%	4%	2%	25%	56
	Postgraduate work	32%	38%	13%	2%	2%	13%	60
Age	18-29	30%	15%	11%	4%	4%	37%	27
	30-39	35%	39%	19%	0%	0%	6%	31
	40-49	14%	43%	19%	0%	5%	19%	21
	50-59	41%	35%	0%	0%	0%	24%	17
	60-69	59%	24%	3%	7%	0%	7%	29
Household Income	Less than $60,000	17%	43%	4%	4%	4%	26%	23
	$60,000-$99,999	19%	38%	19%	0%	0%	25%	16
	$100,000-$149,999	43%	21%	18%	0%	0%	18%	28
	$150-000-$199,999	30%	45%	5%	5%	0%	15%	20
	$200,000 or more	53%	16%	11%	0%	5%	16%	19
Previous Visits	Previously visited	32%	35%	11%	3%	0%	20%	66
	Never visited before	39%	30%	12%	1%	2%	15%	82
How Reached Summit	Auto Road	37%	37%	12%	0%	0%	14%	49
	Cog Railway	37%	34%	14%	3%	1%	11%	73

Q11d: How would you rate the following aspects of the Mount Washington State Park? Environmental education

		Very good	Good	Fair	Poor	Very poor	Don't know/Can't remember	N
OVERALL	Overall	47%	30%	10%	1%	1%	11%	149
State/Region	Massachusetts	32%	39%	14%	0%	4%	11%	28
	Northeast	58%	27%	8%	0%	0%	8%	26
	South	59%	22%	4%	4%	0%	11%	27
Gender	Man	49%	35%	10%	0%	2%	4%	49
	Woman	45%	27%	11%	1%	1%	15%	89
Education	College graduate	46%	23%	14%	2%	2%	14%	57
	Postgraduate work	44%	36%	8%	0%	2%	10%	59
Age	18-29	30%	26%	11%	4%	0%	30%	27
	30-39	52%	35%	6%	0%	0%	6%	31
	40-49	48%	29%	19%	0%	5%	0%	21
	50-59	50%	17%	17%	0%	0%	17%	18
	60-69	57%	29%	7%	0%	4%	4%	28
Household Income	Less than $60,000	32%	45%	5%	0%	5%	14%	22
	$60,000-$99,999	44%	44%	6%	0%	0%	6%	16
	$100,000-$149,999	43%	36%	7%	0%	4%	11%	28
	$150-000-$199,999	43%	33%	19%	0%	0%	5%	21
	$200,000 or more	58%	16%	5%	5%	0%	16%	19
Previous Visits	Previously visited	48%	22%	18%	0%	0%	12%	67
	Never visited before	46%	37%	4%	1%	2%	10%	81
How Reached Summit	Auto Road	58%	26%	10%	0%	0%	6%	50
	Cog Railway	46%	35%	10%	1%	1%	7%	72

Q13: On a scale from 0 to 10, where 0 is definitely not and 10 is definitely would, how likely are you to recommend going to Mount Washington State Park to a friend or family member in the future?

		0	3	5	6	7	8	9	10	Don't know/ Not sure	N
OVERALL	Overall	1%	1%	5%	3%	7%	9%	5%	69%	1%	151
State/Region	Massachusetts	0%	0%	4%	7%	14%	7%	14%	54%	0%	28
	Northeast	0%	0%	4%	4%	4%	12%	0%	77%	0%	26
	South	0%	4%	4%	0%	7%	7%	4%	75%	0%	28
Gender	Man	2%	2%	6%	4%	8%	14%	4%	60%	0%	50
	Woman	0%	0%	2%	3%	7%	8%	6%	73%	1%	90
Education	College graduate	0%	0%	5%	4%	9%	9%	7%	67%	0%	57
	Postgraduate work	2%	2%	3%	3%	8%	7%	3%	70%	2%	60
Age	18-29	0%	0%	11%	7%	11%	7%	14%	50%	0%	28
	30-39	0%	0%	0%	6%	6%	16%	3%	68%	0%	31
	40-49	5%	0%	5%	0%	5%	10%	5%	71%	0%	21
	50-59	0%	0%	0%	0%	17%	0%	6%	78%	0%	18
	60-69	0%	0%	3%	3%	3%	3%	0%	86%	0%	29
Household Income	Less than $60,000	4%	4%	8%	13%	21%	8%	0%	42%	0%	24
	$60,000-$99,999	0%	0%	6%	0%	0%	13%	13%	69%	0%	16
	$100,000-$149,999	0%	0%	0%	0%	4%	7%	7%	82%	0%	28
	$150-000-$199,999	0%	0%	14%	0%	10%	10%	5%	62%	0%	21
	$200,000 or more	0%	0%	0%	11%	11%	5%	5%	63%	5%	19
Previous Visits	Previously visited	0%	1%	4%	1%	6%	13%	6%	67%	0%	67
	Never visited before	1%	0%	5%	5%	8%	6%	4%	70%	1%	83
How Reached Summit	Auto Road	0%	0%	8%	6%	4%	10%	6%	66%	0%	50
	Cog Railway	0%	1%	1%	3%	5%	8%	3%	77%	1%	73
	Hiking day trip	0%	0%	13%	0%	19%	19%	6%	44%	0%	16

Q14#: What do you like best about the Mount Washington State Park? (coded)

		Cog Railway	Facilities or amenities	History or education	The summit	Views or nature	Weather	Other	N
OVERALL	Overall	7%	6%	4%	2%	61%	5%	13%	134
State/Region	Massachusetts	8%	8%	0%	8%	56%	4%	16%	25
	Northeast	0%	4%	4%	0%	65%	9%	17%	23
	South	8%	12%	8%	0%	56%	8%	8%	25
Gender	Man	7%	5%	5%	2%	53%	7%	21%	43
	Woman	6%	8%	4%	3%	65%	5%	10%	80
Education	College graduate	10%	4%	4%	2%	67%	8%	6%	52
	Postgraduate work	8%	12%	8%	4%	52%	6%	12%	52
Age	18-29	0%	15%	4%	0%	62%	8%	12%	26
	30-39	12%	0%	8%	0%	64%	0%	16%	25
	40-49	5%	5%	0%	11%	68%	0%	11%	19
	50-59	6%	6%	11%	0%	56%	17%	6%	18
	60-69	16%	4%	0%	4%	60%	4%	12%	25
Household Income	Less than $60,000	5%	16%	5%	0%	58%	0%	16%	19
	$100,000-$149,999	4%	4%	8%	0%	71%	4%	8%	24
	$150-000-$199,999	5%	0%	0%	5%	58%	11%	21%	19
	$200,000 or more	6%	0%	11%	0%	61%	17%	6%	18
Previous Visits	Previously visited	5%	3%	7%	5%	62%	7%	11%	61
	Never visited before	10%	8%	3%	0%	61%	3%	15%	72
How Reached Summit	Auto Road	0%	2%	2%	0%	84%	2%	9%	45
	Cog Railway	15%	5%	3%	3%	52%	5%	17%	65

Q15#: Other than the weather, if you could change anything about Mount Washington State Park, what would it be? (coded)

		Better amenities	Better management of crowds	Lower prices	More education	More signage	More time
OVERALL	Overall	9%	8%	7%	5%	8%	10%
State/Region	Massachusetts	14%	18%	5%	14%	9%	0%
	Northeast	14%	5%	10%	0%	10%	10%
	South	0%	5%	5%	0%	11%	21%
Gender	Man	3%	10%	10%	5%	13%	13%
	Woman	11%	7%	5%	5%	7%	10%
Education	College graduate	8%	4%	10%	2%	8%	6%
	Postgraduate work	9%	16%	4%	2%	9%	16%
Age	18-29	21%	0%	13%	8%	8%	4%
	30-39	14%	10%	5%	0%	5%	10%
	40-49	13%	13%	6%	0%	6%	13%
	50-59	0%	13%	0%	0%	13%	19%
	60-69	0%	7%	7%	7%	11%	7%
Household Income	Less than $60,000	5%	10%	10%	0%	20%	5%
	$100,000-$149,999	20%	0%	5%	0%	5%	20%
	$150-000-$199,999	6%	0%	13%	0%	13%	13%
	$200,000 or more	6%	11%	11%	6%	0%	0%
Previous Visits	Previously visited	13%	13%	8%	5%	10%	7%
	Never visited before	5%	3%	7%	5%	7%	13%
How Reached Summit	Auto Road	5%	5%	15%	3%	8%	0%
	Cog Railway	10%	7%	5%	7%	5%	20%

Q15#: Other than the weather, if you could change anything about Mount Washington State Park, what would it be? (coded)

		Remove auto road and/or Cog Railway	Safety infrastructure	Nothing	Other	Don't know/Not sure	N
OVERALL	Overall	2%	4%	27%	17%	2%	122
State/Region	Massachusetts	0%	5%	23%	14%	0%	22
	Northeast	0%	5%	33%	14%	0%	21
	South	0%	5%	26%	21%	5%	19
Gender	Man	5%	3%	33%	5%	3%	40
	Woman	0%	5%	23%	23%	3%	73
Education	College graduate	2%	8%	22%	28%	2%	50
	Postgraduate work	2%	0%	27%	13%	2%	45
Age	18-29	0%	4%	21%	21%	0%	24
	30-39	0%	5%	29%	24%	0%	21
	40-49	0%	6%	19%	13%	13%	16
	50-59	6%	6%	19%	25%	0%	16
	60-69	0%	4%	44%	11%	0%	27
Household Income	Less than $60,000	0%	5%	30%	15%	0%	20
	$100,000-$149,999	0%	0%	30%	15%	5%	20
	$150-000-$199,999	13%	0%	31%	6%	6%	16
	$200,000 or more	0%	0%	33%	28%	6%	18
Previous Visits	Previously visited	3%	3%	18%	20%	0%	61
	Never visited before	0%	5%	35%	15%	5%	60
How Reached Summit	Auto Road	0%	13%	28%	21%	3%	39
	Cog Railway	0%	0%	27%	15%	3%	59

Q12: Which types of educational experiences would you like to see more of at Mount Washington State Park? (Select all that apply)

		Conservation education	Environmental education	Historical education	None	Other	N
OVERALL	Overall	46%	61%	57%	11%	4%	143
State/Region	Massachusetts	44%	63%	48%	4%	0%	27
	Northeast	38%	58%	38%	21%	8%	24
	South	44%	68%	64%	8%	4%	25
Gender	Man	38%	47%	47%	17%	9%	47
	Woman	50%	66%	65%	8%	2%	86
Education	College graduate	56%	65%	60%	9%	0%	55
	Postgraduate work	41%	60%	59%	12%	9%	58
Age	18-29	37%	67%	41%	11%	0%	27
	30-39	43%	57%	50%	20%	3%	30
	40-49	47%	68%	58%	5%	11%	19
	50-59	67%	83%	72%	0%	0%	18
	60-69	46%	50%	69%	12%	4%	26
Household Income	Less than $60,000	70%	65%	61%	0%	9%	23
	$60,000-$99,999	56%	81%	63%	6%	0%	16
	$100,000-$149,999	46%	73%	50%	12%	0%	26
	$150-000-$199,999	32%	53%	53%	21%	0%	19
	$200,000 or more	44%	39%	78%	11%	6%	18
Previous Visits	Previously visited	55%	66%	60%	11%	5%	65
	Never visited before	39%	57%	53%	12%	4%	77
How Reached Summit	Auto Road	40%	53%	60%	15%	2%	47
	Cog Railway	49%	62%	58%	7%	4%	71

Q16: Which of the following do you think the stewards of Mount Washington State Park should do regarding the Visitor Center?

		Build a new state-of-the-art, environmentally-friendly Visitor Center	Renovate or expand the Sherman Adams Visitor Center	Make no changes to the existing Sherman Adams Visitor Center	No opinion/Don't know	N
OVERALL	Overall	13%	29%	33%	26%	147
State/Region	Massachusetts	7%	39%	36%	18%	28
	Northeast	20%	20%	28%	32%	25
	South	7%	25%	32%	36%	28
Gender	Man	14%	27%	31%	29%	49
	Woman	11%	31%	36%	22%	88
Education	College graduate	14%	30%	33%	23%	57
	Postgraduate work	10%	29%	34%	26%	58
Age	18-29	18%	14%	43%	25%	28
	30-39	7%	33%	37%	23%	30
	40-49	24%	43%	24%	10%	21
	50-59	22%	17%	22%	39%	18
	60-69	4%	29%	32%	36%	28
Household Income	Less than $60,000	21%	25%	21%	33%	24
	$60,000-$99,999	6%	44%	38%	13%	16
	$100,000-$149,999	22%	19%	33%	26%	27
	$150-000-$199,999	5%	24%	38%	33%	21
	$200,000 or more	11%	39%	33%	17%	18
Previous Visits	Previously visited	18%	33%	26%	23%	66
	Never visited before	9%	25%	38%	29%	80
How Reached Summit	Auto Road	10%	33%	35%	22%	49
	Cog Railway	11%	34%	25%	30%	71

Q17: Would you support or oppose Mount Washington State Park limiting the number of visitors present at any one time?

		Strongly support	Somewhat support	Neutral/No opinion	Somewhat oppose	Strongly oppose	Don't know/Not sure	N
OVERALL	Overall	20%	35%	26%	8%	7%	4%	149
State/Region	Massachusetts	11%	50%	21%	4%	14%	0%	28
	Northeast	19%	35%	35%	8%	0%	4%	26
	South	19%	30%	37%	7%	4%	4%	27
Gender	Man	22%	28%	26%	8%	8%	8%	50
	Woman	19%	37%	27%	8%	8%	1%	89
Education	College graduate	25%	35%	23%	9%	7%	2%	57
	Postgraduate work	17%	38%	25%	7%	10%	3%	60
Age	18-29	22%	44%	19%	4%	11%	0%	27
	30-39	23%	35%	29%	3%	6%	3%	31
	40-49	10%	48%	14%	10%	19%	0%	21
	50-59	22%	28%	28%	17%	0%	6%	18
	60-69	21%	24%	34%	14%	0%	7%	29
Household Income	Less than $60,000	43%	13%	35%	4%	4%	0%	23
	$60,000-$99,999	19%	69%	6%	0%	6%	0%	16
	$100,000-$149,999	11%	36%	39%	7%	7%	0%	28
	$150-000-$199,999	24%	43%	14%	5%	10%	5%	21
	$200,000 or more	16%	26%	37%	11%	11%	0%	19
Previous Visits	Previously visited	18%	33%	22%	10%	12%	4%	67
	Never visited before	22%	36%	28%	6%	4%	4%	81
How Reached Summit	Auto Road	22%	31%	24%	10%	10%	2%	49
	Cog Railway	15%	40%	29%	8%	3%	5%	73

Q18a: How important do you think it is for the Mount Washington State Park to do the following things? Add informational educational exhibits and programming

		Very important	Somewhat important	Not very important	Not at all important	Don't know/Not sure	N
OVERALL	Overall	43%	38%	10%	2%	8%	145
State/Region	Massachusetts	39%	43%	18%	0%	0%	28
	Northeast	42%	38%	8%	0%	12%	26
	South	48%	30%	0%	4%	19%	27
Gender	Man	33%	40%	15%	4%	8%	48
	Woman	49%	38%	7%	1%	5%	87
Education	College graduate	48%	27%	14%	0%	11%	56
	Postgraduate work	44%	42%	5%	3%	5%	59
Age	18-29	30%	44%	11%	4%	11%	27
	30-39	48%	35%	10%	0%	6%	31
	40-49	48%	48%	5%	0%	0%	21
	50-59	53%	18%	18%	6%	6%	17
	60-69	46%	29%	11%	0%	14%	28
Household Income	Less than $60,000	50%	32%	9%	0%	9%	22
	$100,000-$149,999	52%	41%	4%	0%	4%	27
	$150-000-$199,999	29%	52%	10%	0%	10%	21
	$200,000 or more	37%	47%	5%	5%	5%	19
Previous Visits	Previously visited	43%	45%	6%	2%	5%	65
	Never visited before	42%	33%	13%	3%	10%	79
How Reached Summit	Auto Road	48%	33%	8%	2%	8%	48
	Cog Railway	40%	41%	9%	3%	7%	70

Q18b: How important do you think it is for the Mount Washington State Park to do the following things? Improve site accessibility and wayfinding

		Very important	Somewhat important	Not very important	Not at all important	Don't know/Not sure	N
OVERALL	Overall	33%	34%	16%	6%	11%	146
State/Region	Massachusetts	21%	46%	25%	7%	0%	28
	Northeast	32%	24%	16%	12%	16%	25
	South	41%	37%	4%	4%	15%	27
Gender	Man	20%	41%	18%	10%	10%	49
	Woman	41%	32%	14%	3%	9%	87
Education	College graduate	32%	36%	16%	4%	13%	56
	Postgraduate work	35%	38%	8%	10%	8%	60
Age	18-29	41%	30%	11%	7%	11%	27
	30-39	26%	45%	10%	6%	13%	31
	40-49	43%	43%	10%	5%	0%	21
	50-59	29%	35%	18%	6%	12%	17
	60-69	32%	21%	25%	7%	14%	28
Household Income	Less than $60,000	48%	30%	13%	0%	9%	23
	$100,000-$149,999	33%	37%	15%	7%	7%	27
	$150-000-$199,999	24%	48%	19%	5%	5%	21
	$200,000 or more	16%	37%	21%	16%	11%	19
Previous Visits	Previously visited	30%	38%	17%	5%	11%	66
	Never visited before	34%	32%	15%	8%	11%	79
How Reached Summit	Auto Road	31%	42%	10%	8%	8%	48
	Cog Railway	32%	34%	18%	6%	10%	71

Q18c: How important do you think it is for the Mount Washington State Park to do the following things? Add more visitor-orientated staff

		Very important	Somewhat important	Not very important	Not at all important	Don't know/Not sure	N
OVERALL	Overall	19%	42%	24%	6%	9%	144
State/Region	Massachusetts	14%	54%	18%	7%	7%	28
	Northeast	15%	27%	31%	12%	15%	26
	South	26%	30%	22%	4%	19%	27
Gender	Man	8%	49%	24%	10%	8%	49
	Woman	25%	40%	24%	5%	7%	85
Education	College graduate	18%	36%	25%	7%	13%	55
	Postgraduate work	19%	46%	27%	3%	5%	59
Age	18-29	7%	41%	22%	15%	15%	27
	30-39	16%	45%	26%	3%	10%	31
	40-49	10%	57%	24%	5%	5%	21
	50-59	31%	50%	13%	6%	0%	16
	60-69	22%	22%	41%	4%	11%	27
Household Income	Less than $60,000	32%	36%	14%	5%	14%	22
	$100,000-$149,999	19%	59%	19%	0%	4%	27
	$150-000-$199,999	5%	71%	14%	0%	10%	21
	$200,000 or more	21%	21%	32%	21%	5%	19
Previous Visits	Previously visited	17%	45%	25%	6%	6%	64
	Never visited before	19%	41%	23%	6%	11%	79
How Reached Summit	Auto Road	19%	55%	13%	9%	4%	47
	Cog Railway	23%	39%	26%	4%	9%	70

Q18d: How important do you think it is for the Mount Washington State Park to do the following things? Provide multi-lingual information

		Very important	Somewhat important	Not very important	Not at all important	Don't know/Not sure	N
OVERALL	Overall	30%	33%	15%	7%	14%	145
State/Region	Massachusetts	29%	46%	14%	7%	4%	28
	Northeast	19%	31%	23%	8%	19%	26
	South	26%	33%	11%	7%	22%	27
Gender	Man	18%	31%	24%	12%	14%	49
	Woman	37%	35%	10%	3%	14%	86
Education	College graduate	32%	41%	13%	4%	11%	56
	Postgraduate work	31%	31%	10%	8%	20%	59
Age	18-29	22%	33%	22%	11%	11%	27
	30-39	45%	35%	10%	0%	10%	31
	40-49	29%	52%	10%	10%	0%	21
	50-59	35%	41%	12%	0%	12%	17
	60-69	26%	22%	19%	7%	26%	27
Household Income	Less than $60,000	45%	45%	5%	0%	5%	22
	$100,000-$149,999	37%	33%	19%	4%	7%	27
	$150-000-$199,999	29%	52%	5%	5%	10%	21
	$200,000 or more	21%	26%	21%	16%	16%	19
Previous Visits	Previously visited	32%	32%	12%	6%	17%	65
	Never visited before	28%	34%	18%	8%	13%	79
How Reached Summit	Auto Road	35%	35%	13%	6%	10%	48
	Cog Railway	26%	33%	17%	6%	19%	70

Q19: Which of the following comes closest to your opinion regarding development and conservation at Mount Washington State Park?

		The Park should prioritize development and improvement of the site to allow for more visitors or better amenities	The Park should prioritize environmental conservation and minimizing its ecological impact	Don't know/Not sure	N
OVERALL	Overall	11%	76%	13%	148
State/Region	Massachusetts	14%	79%	7%	28
	Northeast	12%	65%	23%	26
	South	4%	81%	15%	26
Gender	Man	16%	68%	16%	50
	Woman	9%	81%	10%	88
Education	College graduate	9%	82%	9%	56
	Postgraduate work	10%	76%	14%	59
Age	18-29	11%	79%	11%	28
	30-39	10%	81%	10%	31
	40-49	10%	71%	19%	21
	50-59	17%	72%	11%	18
	60-69	11%	78%	11%	27
Household Income	Less than $60,000	4%	96%	0%	23
	$60,000-$99,999	0%	88%	13%	16
	$100,000-$149,999	11%	82%	7%	28
	$150-000-$199,999	10%	81%	10%	21
	$200,000 or more	17%	78%	6%	18
Previous Visits	Previously visited	12%	73%	15%	67
	Never visited before	10%	79%	11%	80
How Reached Summit	Auto Road	10%	73%	16%	49
	Cog Railway	13%	75%	13%	71
	Hiking day trip	6%	88%	6%	16

Q20: The cost of your ticket for the [Cog Railway/Auto Road] did not include any fee for entering Mount Washington State Park. Were you aware of this before you purchased the [Cog Railway/Auto Road] ticket?

		Yes	No	Don't know/Not sure	N
OVERALL	Overall	24%	67%	9%	121
State/Region	Massachusetts	24%	71%	5%	21
	Northeast	17%	72%	11%	18
	South	24%	60%	16%	25
Gender	Man	24%	71%	5%	41
	Woman	21%	68%	11%	71
Education	College graduate	27%	68%	5%	44
	Postgraduate work	15%	75%	10%	48
Age	30-39	15%	77%	8%	26
	40-49	22%	72%	6%	18
	60-69	26%	63%	11%	27
Household Income	Less than $60,000	41%	53%	6%	17
	$100,000-$149,999	17%	74%	9%	23
	$150-000-$199,999	25%	75%	0%	16
Previous Visits	Previously visited	23%	69%	8%	52
	Never visited before	24%	66%	10%	68
How Reached Summit	Auto Road	20%	73%	6%	49
	Cog Railway	26%	63%	11%	72

Q21: If visitors to Mount Washington State Park were required to pay a per-person nominal fee to enter the Sherman Adams Building, what is the most you would be willing to pay?

		$0	Less than $2	$2-$5	More than $5	Don't know/Not sure	N
OVERALL	Overall	21%	17%	46%	8%	8%	150
State/Region	Massachusetts	21%	29%	43%	4%	4%	28
	Northeast	23%	15%	42%	8%	12%	26
	South	7%	25%	50%	11%	7%	28
Gender	Man	24%	14%	44%	6%	12%	50
	Woman	22%	18%	46%	9%	6%	90
Education	College graduate	19%	18%	51%	7%	5%	57
	Postgraduate work	23%	18%	42%	8%	8%	60
Age	18-29	32%	21%	39%	4%	4%	28
	30-39	26%	16%	39%	13%	6%	31
	40-49	19%	19%	38%	10%	14%	21
	50-59	11%	22%	61%	6%	0%	18
	60-69	21%	7%	52%	10%	10%	29
Household Income	Less than $60,000	25%	21%	50%	0%	4%	24
	$60,000-$99,999	6%	25%	50%	13%	6%	16
	$100,000-$149,999	25%	11%	50%	7%	7%	28
	$150-000-$199,999	24%	14%	48%	10%	5%	21
	$200,000 or more	37%	16%	32%	16%	0%	19
Previous Visits	Previously visited	27%	13%	45%	9%	6%	67
	Never visited before	17%	20%	48%	6%	10%	82
How Reached Summit	Auto Road	20%	20%	51%	4%	4%	49
	Cog Railway	23%	12%	44%	12%	8%	73
	Hiking day trip	19%	25%	38%	6%	13%	16

Appendix B

Q6_97_TEXT: "How did you get to Mount Washington State Park?" - Other - Text

- Appalachian Trail
- From base of Madison/ and person 2 Auto Road
- Hiking just up
- Hiking up, picked up by car at summit
- MWOBS shuttle
- Utv
- We hiked up and rode the cog railway down

Q7_97_TEXT: "Why did you decide to visit Mount Washington State Park?" - Other - Text

- Appalachian Trail
- Awesome utv ride will do again and again
- Driver for son in bike race up Mt Washington
- For personal reasons I hike mount Washington around this time every year
- Getaway weekend with my spouse
- huntingtons ravine
- Husband's second attempt to hike 7 peaks
- I have dreamed of coming to the more extreme place on Earth/US. Now I did.
- In memory of my dad who loved this spot
- My partner was hiking and I don't hike. I needed something to do
- Observatory volunteer
- part of a meeting.
- Peakbagging + meeting thru hiker
- Research/conservation volunteer with AMC for the day
- Sunrise special cog rail
- This ATV climbed mount washington sticker
- This Time was to watch the sunset
- Yearly tradition

Q9_97_TEXT: "Which of the following did you do while visiting the Sherman Adams Visitor Center?" - Other - Text

- Observatory tour
- Rest, recover from hike up
- Spoke with a MW Observatory volunteer
- Tried to send mail but we had no cash and it was closed :(

- Volunteered in observatory
- Wanted to do more but time did not allow
- We were on the last train, so the gift shop and museum were closed. We would have visited the gift shop.

Q12_97_TEXT: "Which types of educational experiences would you like to see more of at Mount Washington State Park?" - Other - Text

- I think there also needs to be some educating given to the people using the auto road to respect the alpine tundra and not walk on it. Every year I see someone doing this.
- Information about the science & scientific instruments
- Interaction with the weather station, science of weather. Info about the Appalachian Trail - so fund to walk on it at the top!
- To enjoy and learn about te cog
- Weather related information

Q14: "What do you like best about the Mount Washington State Park?" - Text

- All of it.
- Alpine Garden
- Beautiful fall foliage
- Beautiful scenery
- Beautiful scenery home to mountain plant and animal species
- Beautiful views
- Being able to ride the train to the top
- Being at the summit.
- Cog railroad
- Cog Train
- Environment
- Everything
- Excellence of facilities.
- Experience and the views
- Extreme weather!
- facilities
- Facilities at the summit
- Filling up water bottle, bathroom
- Food, bathroom, and water stop for hiking
- Great hiking trails and views
- hikes

- Hiking and summit
- hiking in nature
- History and views
- how andrew dow died
- I loved the museum downstairs! It was the perfect balance of information and had a wide range of topics.
- I've hiked at twice, drive up twice and took the Cog up. Love the views, Love the fresh air, Love being so close to the clouds.
- It is a unique environment and experience
- It's cool
- It's uniqueness as the not just the highest peak in the north east but I love the weather extremes and being in an alpine zone.
- It's very pretty
- lots of things to do
- Majestic beauty
- Most everything. I/we needed and used the handicapped parking. Just got a sticker. Getting around was a slight challenge and we were limited w/o it we would have missed out on much more.
- Mountain
- Natural beauty and views
- Nimbus :)
- Observation deck, the views
- Railway, National weather service museum
- Scenery
- Scenery and Cog Train narration
- Scenic view
- Snow
- Story of extreme.weather!
- Stunning 365 views
- The accessibility
- The Amazing views, history, and staff
- The beautiful landscape (Alpine zone is my favorite) and fresh air. The views, of course!
- The beautiful terrain and scenery
- The beauty and local hikes
- The beauty of it, how the summit is accessible to everyone
- The beauty, just the experience of being there.
- The brakemen were knowledgeable and friendly. We had several opportunities to ask questions.
- The cog

- The Cog Railway and the engineer/driver/docent.
- The cog train and the education
- The cog train, conductor, and the clear beautiful windy day.
- The crazy cool winter terrain at the top!!
- The educational information at the summit. It's nice to learn about the weather and what the observatory does.
- The entire experience
- The feeling of being free
- The history, views
- The museum
- The nature and the people who just like me, want to be up there with it.
- The potential view
- The presidential traverse! And the views in the fall
- The road race
- The road, the scenery, and the crazy weather!
- the scenery
- The scenery
- The snow!
- The summit
- The summit
- The view
- The view
- The view
- The view
- The view - sooo beautiful. Also, the personnel on the train ride were extremely knowledgeable, we took away interesting information
- The view and food
- The view and park staff.
- The view and the absolutely perfect weather day we had!!!! It was so special
- the views
- the views
- The views
- The views
- The views
- The views
- The views
- The views
- The views
- The views

- The views
- The views
- The views
- The views
- The views
- The views + the fact that important climate data is measured here
- The views and connection to history!
- The views and fresh air
- The views and hot food
- The views are amazing.
- The views from the observatory
- The views were great!
- The views, education, history
- The views, the history, the height
- The views!
- The views.
- The views..the history
- The weather
- To flex that I’m up in the sky
- Train ride and narration
- View
- View
- View
- View
- Views
- Views
- Views
- Views
- Views
- Views
- Views
- Views
- Views
- Views
- Views
- Views
- Views
- Views
- Views from top; the experience
- Views were amazing! Loved it was preserved and clean.

- Visiting my own backyard. Granite Stater here
- Walking around the summit and being on the Appalachian Trail.
- We came for the sunrise cog tour, it was beautiful
- Weather information

Q15: "Other than the weather, if you could change anything about Mount Washington State Park, what would it be?" - Text

- Achieve a better balance between the summit as a peak for hikers and a tourist destination for drivers/cog railway passengers
- Adding more gluten free hot options, one GF soup would be amazing. For example chicken and vegetable soup with rice of GF chili with cornstarch or cornmeal instead of flour
- Additional time on top
- Although would be difficult to change, it was quite steep going up haha
- An ATM and a person to take photos at the peak so the long isn't so long. Also, more accessible walking paths at the summit. And offering snow globes!
- BEERS AT THE SUMMIT PLEASE!!! My friends and I thought there would be beers at the summit center. Would have been nice to responsibly enjoy an alcoholic beverage while taking in the wondrous beauty of the summit.
- better signage for hikers
- Better signage of what states you're viewing.
- Better trail markers on the hike up
- better trail markings for huntington ravine, got lost few times along with other hikers
- Bigger seats on the train, more time at the summit
- Conservation education
- cost to drive up the mountain
- Crowd control for photos at the summit
- Don't know
- Eliminate cog railway and auto road
- Even though I wanted to share the Cog Rail experience with friends after many years since ladt taking it (3rd time in my life by Cog), I found that the numbers of people that the Cog brings creates crowding. Suggest that Iterpretive staff be pisitioned outdoors (if possible) to provide key messaging (3 points). Topics- State Park role, AT and Crawford Path, unique alpine tundra environment, conservation- where does summit water/power come from?/sewage treatment, trash removal.
- Gard rails on the auto road
- Gift shop prices too high.
- Guard rails
- Guard rails on the auto road

- Have more time at the observatory with maybe an educational movie
- I didn't use the various binoculars but I am assuming they are not polarized? Because of the clouds and haze if they are not adding such a lens that could be flipped down could be nice especially to see the foliage forests more clearly and w/greater contrast…? This foliage was really washed out because of all the humidity/mist in the area? Say about 5 pm w/sunset @ 6:30? Thx
- I don't want to change the weather! I wish people picked up more of their trash. I also saw the gift shop use plastic bags, but maybe that person brought their own bag. They should only have reusable bags or a no bag option. I want it conserved and they should get rid of the cog railway and auto road. I hate standing in line behind people who did not hike. I was it preserved forever and not had any commercial profit.
- I want to see the cat
- I with the windows in the visitor center were lower so you could sit in a chair and look out at the landscape. Now their sills are too high to be able to do that - a bummer for my elderly mom who wasn't able to walk around the top, and sat inside (which she was happy to do) but couldn't enjoy the view.
- I'd remove the private road and the cog railway and let it restore to natural and remove other privately owned parts of the mountain and make sure its fully public for national park use. I'd let them build a small fire road for access to the weather station so that important science would continue.
- It's very cool here I wouldn't change anything
- It's so expensive to drive, why the hell is it 36 per person that's absurd
- Less gift shops because there are like five of them up at the sumit
- Let us know beforehand when the money rock is coming up, and where to look.
- Limit the number of people who can come by car/train so it's less crowded
- Limiting the number of people at the summit on any given day. I feel it has become so overrun with tourists that it takes away from the serenity of the tallest peak in New England. Also prioritizing hikers to take pictures at the sign.
- Longer on the mountain after going up
- lower fees on the auto road
- Make it more accessible. Most surfaces except the terrace were very rocky. My husband has a walker and was unable to see much other than in the visitor center.
- Make it warmer in the visitor center
- Manage crowds better
- Maybe a better cafe or bigger museum, bigger sizes for plus size people
- More cohesive management, more funding for conservation Visitor center open later - we missed our chance
- More emphasis on natural sciences
- More flexibility on time at top
- More food options

- More information about what to expect at the top of the mountain when at summit base, such as what buildings are there to visit. Additionally, making the road for cars wider so two cars could pass in opposite directions at any given point on the road
- More informational signs & information.
- More interpretive signage -environment, wildlife, history
- more low vision accessibility. my father is blind and i didn't see much in regards to audio experiences at the summit.
- More seating
- More staff to answer questions (and staff to be excited to answer questions)
- More things to discover during a day trip
- More time allowed at the top- visiting the gift shops, doing the observatory tour, and using the restroom was all we had time for; we wish we could have gotten a snack and visited the museum.
- More time between railway arrival and departure
- More time for a Ranger led tour. Couldn’t even get to the museum because we only had 45 minutes or meet the next train.
- More time on top if come by RR; cheaper RR fares
- My mom said you should add a Starbucks
- My proximity!
- N/A
- N/A
- Na
- no
- No
- No cars
- None
- None
- None
- None
- Not one thing
- Not sure
- nothing
- nothing
- Nothing
- Nothing
- Nothing
- Nothing
- Nothing
- Nothing

- Nothing
- Nothing
- Nothing
- Nothing
- Nothing
- Nothing
- Nothing
- Nothing
- Nothing
- Nothing at all. It’s perfect!
- Nothing keep up the good work
- Nothing needs changing
- Nothing, it’s amazing!
- Nothing, we truly enjoyed it as it was
- nothing!
- Nothing! It was a nice hike up and a good reward to warm up out of the rain with the museum!
- Nothing.
- Nothing.
- Offer an option to extend time on the mountain.
- Open Tip Top house back up.
- Perfect
- Prettier
- prices
- Prices but that's like the weather
- Railings
- Reduce the flow of people. Steady stream from the cog is a lot of people.
- Reduce the number of cog trains so as to reduce the number of people
- Reduced cost for seniors; better audio in exhibits; more healthful food in cafeteria.
- Road
- See how they measure the wind speed.
- Sell ice cream
- Short trails to noteworthy sites.
- Signage on the Tucker man Ravine trail.
- Surely would NOT change the weather!!
- That I could live closer and visit more often
- The amount of people. It felt too crowded and there were many lines (food, summit) that prevented us from doing everything we wanted to.
- The bugs were less great

- The cost to take the auto road is exorbitant and out of line with the cost of visiting other state and national parks
- The layout of the building was v inefficient, creating lots of bottlenecks where people blocked the way for others
- The tip house to be open to see inside
- Time
- Timed entry by advanced reservation for all visitors.
- To stay longer than one hour at the top when riding the Cog railway
- Too many rocks! Just kidding! Actually it would be nice to ba able to accommodate more people on the train or know about the shuttle service - my husband was hiking from Madison to pierce today- but decided not to as it was very strenuous. I drove to the cog train station to meet him but everything was sold out. So I drove around the mountain and took the auto road to the summit. However, I think you also provide shuttle service for hikers? I didn't know this was an option and would have been a much better option to do that instead of driving 2 hours to pick him up.
- Tour of weather station
- Unsure
- Updated facilities and more emphasis on education
- Very buggy
- Very high food prices… tea $5!
- Visitors need to be gently reminded of what areas NOT to climb/go. Perhaps some additional signage around the given areas.
- Wider auto road

Q23: "Other than the weather, if you could change anything about Mount Washington State Park, what would it be?" - Text

- Canada
- Canada
- Netherlands
- Pontypridd wales uk
- UK

Q25_97_TEXT: "Which of the following describes your gender?" - Other - Text

- *No responses*

Appendix C

Mt. Washington Visitors Survey - 2024

Start of Block: INTRO Block

INTRO
Mount Washington State Park is planning for the future and we need your input to better understand how we can be better stewards of the site and improve your experience there!

The survey should take between 5 and 10 minutes to complete. This survey is being administered by the University of New Hampshire Survey Center on behalf of the Mount Washington State Park. The UNH Survey Center will keep your responses confidential and you may refuse to answer any questions or stop taking the survey at any time. If you choose to enter the drawing at the end of the survey, your contact information will be entered in a different system than your survey answers. If you have any questions or concerns, please email nhparks@dncr.nh.gov or call 603-271-3556. If you have any technical difficulties accessing the survey, please contact Sean McKinley (sean.mckinley@unh.edu) at the UNH Survey Center. Please select "Begin" below to begin the survey.

End of Block: INTRO Block

Start of Block: Block 1

Q1intro Mount Washington State Park is 58.8 acres at the summit of Mount Washington To the best of your recollection, when was the most recent time you visited Mount Washington State Park at the summit of Mount Washington?

Q1 Enter a date:

_____

Page Break

Q2 Before you visited, were you aware that the summit of Mount Washington is a state park?

- Yes (1)
- No (2)

Page Break

Q3
About how many times have you ever visited Mount Washington State Park including your most recent visit?
(Please enter a whole number only. If unsure, please estimate)

_____

Page Break

Q4 For this survey, please think about your most recent visit to Mount Washington State Park. Approximately how long did you stay at Mount Washington State Park?

- Less than 1 hour (1)
- 1-2 hours (2)
- 3-4 hours (3)
- More than 4 hours (4)
- Don't know/Can't remember (98)

Q5 And how crowded did you feel it was during your visit to Mount Washington State Park?

- ○ Very crowded (1)
- ○ Somewhat crowded (2)
- ○ Not very crowded (3)
- ○ Not crowded at all (4)
- ○ Don't know/Can't remember (98)

Page Break

Q6 How did you get to Mount Washington State Park?

- ○ Cog Railway (1)
- ○ Auto Road (2)
- ○ Hiking day trip (hiking from the mountain's base and back in one day) (3)
- ○ Overnight hiking trip (4)
- ○ Other (Please specify) (97) _____
- ○ Don't know/Can't remember (98)

Page Break

Q7 Why did you decide to visit Mount Washington State Park? (Please select all that apply)

- [ ] To reach the highest peak in the Northeastern U.S. (1)
- [ ] To enjoy the scenery or view (2)
- [ ] To learn about the history of the area (3)
- [ ] To enjoy the natural environment (4)
- [ ] To drive to the top or get the "This Car Climbed Mt. Washington" bumper sticker (5)
- [ ] Part of an organized tour (6)
- [ ] For exercise or recreation (7)
- [ ] To have a fun experience with friends or family (8)
- [ ] To ride the Cog Railway (9)
- [ ] Other (Please specify) (97) _____
- [ ] ⊗ No reason in particular (96)

Page Break

Q8 Which of the following did you do while at Mount Washington State Park? (Please select all that apply)

- ☐ Visited the Sherman Adams Visitor Center (1)
- ☐ Visited the Tip Top House (2)
- ☐ Visited the rooftop terrace (3)
- ☐ Took pictures at the summit sign (4)
- ☐ Walked around the park lands and surrounding trails (5)
- ☐ ⊗ None of the above (96)

Page Break

Display this question:

If Q8 = 1

Q9 Which of the following did you do while visiting the Sherman Adams Visitor Center? (Please select all that apply)

- ☐ Bought food in the cafeteria (1)
- ☐ Ate a meal in the sitting area (2)
- ☐ Used the restroom facilities (3)
- ☐ Took shelter from the weather (4)
- ☐ Asked for information at the Admissions/Information desk (5)
- ☐ Sent mail from the Post Office (6)
- ☐ Visited the Gift Shop (7)
- ☐ Visited the Observatory Museum (8)
- ☐ Other (Please specify) (97) _____
- ☐ ⊗ Nothing in particular (96)

Page Break

Q10 Which of the following **best** describes the amount of time you spent at Mount Washington State Park?

- ○ There were not enough activities to fill the time I spent at the Park (1)
- ○ The amount of time I spent at the Park was just about right (2)
- ○ I wish I had had more time to spend at the Park (3)
- ○ Don't know/Can't remember (98)

Page Break

Q11 How would you rate the following aspects of the Mount Washington State Park?

	Very good (1)	Good (2)	Fair (3)	Poor (4)	Very poor (5)	Don't know/Not applicable (98)
The park staff (Q11a)	○	○	○	○	○	○
Signage and wayfinding (Q11b)	○	○	○	○	○	○
Accessibility (Q11c)	○	○	○	○	○	○
Environmental education (Q11d)	○	○	○	○	○	○

Page Break

Q12 Which of the following types of educational experiences, if any, would you like to see more of at Mount Washington State Park? (Please select all that apply)

- ☐ Environmental education (e.g. learning about alpine plants, wildlife, and geology, etc.) (1)
- ☐ Conservation education (e.g. learning about how to protect and preserve ecological resources, etc.) (2)
- ☐ Historical education (e.g. learning about the history of Mt. Washington and past land uses, etc.) (3)
- ☐ Other (Please specify) (97) _____
- ☐ ⊗ None (96)

Page Break

Q13 On a scale from 0 to 10, where 0 is “definitely not” and 10 is “definitely would,” how likely are you to recommend going to Mount Washington State Park to a friend or family member in the future?

- 0 - Definitely Not (0)
- 1 (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 (7)
- 8 (8)
- 9 (9)
- 10 - Definitely Would (10)
- Don't know/Not sure (98)

Page Break

Q14 What do you like best about the Mount Washington State Park?

_____

_____

_____

_____

_____

Q15 Other than the weather, if you could change anything about Mount Washington State Park, what would it be?

_____

_____

_____

_____

_____

Page Break

Q16 Thinking about future planning at Mount Washington State Park... Which of the following do you think the stewards of Mount Washington State Park should do regarding the Visitor Center?

- Build a new state-of-the-art, environmentally-friendly Visitor Center (1)
- Renovate or expand the Sherman Adams Visitor Center (2)
- Make no changes to the existing Sherman Adams Visitor Center (3)
- No opinion/Don't know (98)

Q17 Would you support or oppose Mount Washington State Park limiting the number of visitors present at any one time?

- ○ Strongly support (1)
- ○ Somewhat support (2)
- ○ Neutral/No opinion (3)
- ○ Somewhat oppose (4)
- ○ Strongly oppose (5)
- ○ Don't know/Not sure (98)

Page Break

Q18 How important do you think it is for the Mount Washington State Park to do the following things?

	Very important (1)	Somewhat important (2)	Not very important (3)	Not at all important (4)	Don't know/Not sure (98)
Add informational educational exhibits and programming (Q18a)	○	○	○	○	○
Improve site accessibility and wayfinding (Q18b)	○	○	○	○	○
Add more visitor-orientated staff (Q18c)	○	○	○	○	○
Provide multi-lingual information (Q18d)	○	○	○	○	○

Page Break

Q19 Which of the following **comes closest** to your opinion regarding development and conservation at Mount Washington State Park?

- The Park should prioritize development and improvement of the site to allow for more visitors or better amenities (1)
- The Park should prioritize environmental conservation and minimizing its ecological impact (2)
- Don't know/Not sure (98)

Page Break

Display this question:

If Q6 = 1

Or Q6 = 2

Q20 The cost of your ticket for the ${Q6/ChoiceGroup/SelectedChoices} did not include any fee for entering Mount Washington State Park. Were you aware of this before you purchased the ${Q6/ChoiceGroup/SelectedChoices} ticket?

- Yes (1)
- No (2)
- Don't know/Not sure (98)

Page Break

Q21 If visitors to Mount Washington State Park were required to pay a per-person nominal fee to enter the Sherman Adams Building, what is **the most** you would be willing to pay?

- ○ $0 (1)
- ○ Less than $2 (2)
- ○ $2-$5 (3)
- ○ More than $5 (7)
- ○ Don't know/Not sure (98)

End of Block: Block 1

Start of Block: Demos Block

Q22 Now just a few final questions about you.

Where do you currently live?

▼ Alabama (1) ... Outside the United States (57)

Display this question:
If Q22 = 57

Q23 In which country do you currently live?

_____

Page Break

Display this question:
If Q22 = 29

Q24a
In which town or city do you live?

▼ Acworth (1) ... Other (997)

Display this question:
If Q22 = 45

Q24b In which town or city do you live?

▼ Addison (1) ... Other (248)

Display this question:
If Q22 = 19

Q24c In which town or city do you live?

▼ Abbot (1) ... Other (490)

Display this question:
If Q22 = 21

Q24d In which town or city do you live?

▼ Abington (1) ... Other (352)

Display this question:
If Q22 = 7

Q24e In which town or city do you live?

▼ Andover (1) ... Other (171)

Display this question:
If Q22 = 39

Q24f In which town or city do you live?

▼ Barrington (1) ... Other (40)

Page Break

Q25
Which of the following describes your gender?
(Please select all that apply)

- ☐ Woman (1)
- ☐ Man (2)
- ☐ Transgender (3)
- ☐ Non-Binary (4)
- ☐ Agender/I don't identify with any gender (5)
- ☐ Other (Please specify) (97) _____
- ☐ ⊗ Prefer not to say (99)

Q26 What is the highest grade in school or level of education that you've completed or gotten credit for?

- Eighth grade or less (1)
- Some high school (2)
- High school graduate (includes G.E.D.) (3)
- Technical school (4)
- Some college (5)
- College graduate (6)
- Postgraduate work (7)
- Don't know/Not sure (98)
- Prefer not to say (99)

Page Break

Display this question:

If Q2 , 1 Is Not Displayed

Q27
And what is your current age?
(Please enter a number only)

_____

Q27NEW And what is your current age?

- 17 or younger (1)
- 18 - 29 (2)
- 30 - 39 (3)
- 40 - 49 (4)
- 50 - 59 (5)
- 60 - 69 (6)
- 70 - 79 (7)
- 80 or older (8)

Q28 How much **total** income did you and your household receive in 2023, not just from wages or salaries but from **all** sources, that is, before taxes and other deductions were made?

- Less than $39,999 (1)
- $40,000-$59,999 (2)
- $60,000-$99,999 (3)
- $100,000-$149,999 (4)
- $150,000-$199,999 (5)
- More than $200,000 (6)
- Don't know/Not sure (98)
- Prefer not to say (99)

End of Block: Demos Block

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Tighe & Bond

D.2.
Mt. Washington General Public Survey December 2025

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University of New Hampshire

The Survey Center

Mt. Washington General Public Survey
December 2025

Prepared by:
Sean P. McKinley, M.A.
Zachary S. Azem, M.A.

The Survey Center
University of New Hampshire
December, 2025

The University of New Hampshire
Survey Center

The UNH Survey Center is an independent, non-partisan academic survey research organization and division of the UNH College of Liberal Arts.

The Survey Center conducts telephone, mail, web, and intercept surveys, as well as focus groups and other qualitative research for university researchers, government agencies, public non-profit organizations, private businesses and media clients.

Our senior staff have over 50 years experience in designing and conducting custom research on a broad range of political, social, health care, and other public policy issues.

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Introduction

The University of New Hampshire Survey Center conducted a survey on behalf of the Mount Washington State Park to better understand the opinions and experiences of New Hampshire residents regarding Mount Washington State Park, other State Parks in New Hampshire, and their general recreational habits. Granite State Panel members were sent an invitation to complete the survey and 1,297 New Hampshire residents completed the survey online between December 4 and December 8, 2025, yielding a response rate of 35%. The margin of sampling error for the survey is +/- 2.7 percent (see Technical Report for further details).

The following figures display survey results for each question. Appendix A contains detailed tabular results, Appendix B contains the open-ended responses, and Appendix C contains the survey instrument. Due to rounding, percentages may not sum to 100%.

Executive Summary

Experience & Knowledge of Mount Washington State Park

More than three-quarters of New Hampshire residents have been to Mount Washington, with most visiting the summit. One-fifth of state residents have not visited the mountain at all, most often citing time, distance, a lack of interest, or a preference for other locations as the reasons why. Four in five state residents know that the summit of Mount Washington is a state park and a majority know that the Mt. Washington Auto Road and Mount Washington Cog Railway are privately owned and operated, but most do not know that the cost of tickets for them do not include a fee for entering the park at the summit.

Among those who have visited Mount Washington, nearly half say their most recent visit was within the past five years and nearly half reached the summit by using the Auto Road while a quarter rode the Cog Railway. Visitors most often say they decided to come to have a fun experience with friends or family or to enjoy the scenery or view. Nearly three-quarters would highly recommend a visit to others, and more than four-fifths are likely to visit again in the future. Those who say they are unlikely to visit again most often say they feel this way because they have already seen it, have a physical disability, are unlikely to be in the area again, or didn't enjoy their experience.

Future Planning at Mount Washington

Half of Granite Staters have no opinion on future planning for the Visitor Center at Mount Washington State Park, and a plurality feel that $2-$5 would be a fair amount to pay to enter if an entrance fee were required. State residents are about equally split on whether to pursue a public-private partnership or use state or federal funds to address the Yankee Building. Most state residents agree that investment in facilities improvements at Mount Washington is a worthwhile use of public funds and that state funds should be used to support the maintenance of State Park facilities throughout the state. The vast majority believe that Mount Washington is an asset to the state and that tourists visiting the mountain contribute to the economy.

Generally speaking, two-thirds of New Hampshire residents believe Mount Washington State Park should prioritize environmental conservation while less than a fifth believe the Park should prioritize development and improvement of the site. Regarding alpine tundra conservation, majorities support enhancing visitor education, defining the edges of pedestrian areas, creating an alpine garden, and widening existing trails, while more than four-fifths agree that spending to protect the alpine environment is a good use of public funds. Six in ten Granite Staters would support Mount Washington State Park limiting the number of visitors present at any one time while one in six would oppose such a step.

Organizational Use of State Parks

The vast majority of New Hampshire residents believe that nonprofit organizations should be allowed to use State Parks in New Hampshire for fundraising events, but a majority believe they should be required to pay a fee for doing so. Most also believe that for-profit organizations should be able to hold fundraising events at State Parks, but nearly all say they should be required to pay a fee and one in six state residents believe they should not be allowed to use State Parks for this purpose at all.

Parks and Recreation

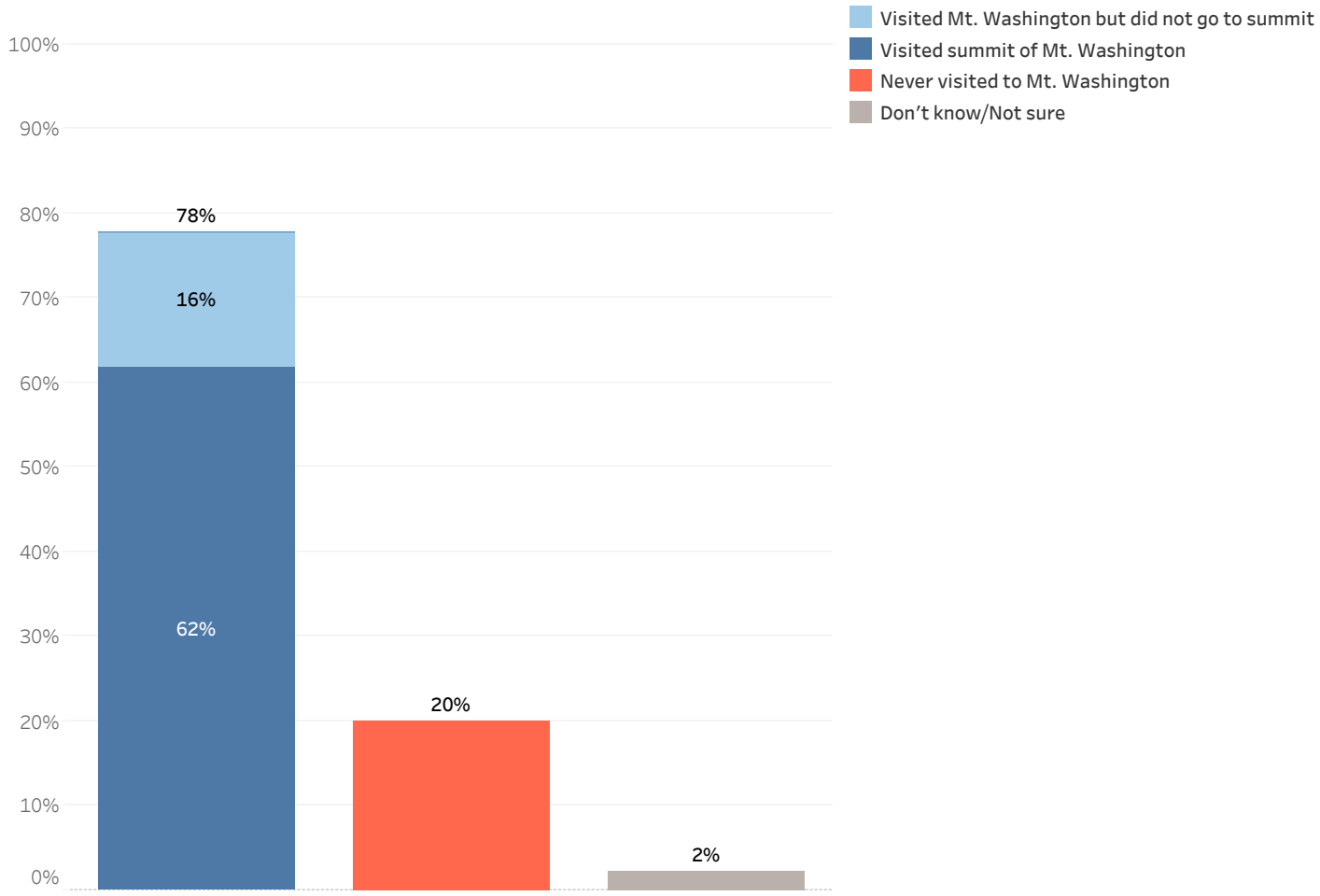
One in six Granite Staters say that they visit a New Hampshire State Park at least monthly, while one in five visit less than annually or not at all. Six in ten visitors are generally satisfied with the fees they pay to enter State Parks while only one in twelve are dissatisfied. Enjoying the natural environment, enjoying the scenery or view, having a fun experience with friends or family, and exercise or recreation are the most common reasons Granite Staters visit State Parks, and the most common activities visitors participate in while there include hiking or walking, visiting historical sites, and swimming. Those who rarely or never visit State Parks most often cite a lack of time, no parks being close by, or parks being too crowded as the reason. In terms of improvements at New Hampshire State Parks, residents' highest preferences would be for environmental or ecological restoration, a back to basics approach with more nature and fewer amenities, or historical preservation.

Overall, just over six in ten Granite Staters say that they understand very or somewhat well what the Division of Parks and Recreation does, while one-third do not understand very well or not well at all. Granite Staters give the Division of Parks and Recreation high marks on environmental conservation in the state, as well as its management of state parks, campgrounds, state beaches, and other areas.

Experience & Knowledge of Mount Washington State Park

Seventy-eight percent of New Hampshire residents say that they have visited the summit of Mount Washington (62%) or have visited Mount Washington but did not go to the summit (16%). Twenty percent say they have never visited Mount Washington while 2% don't know or are unsure if they have ever visited.

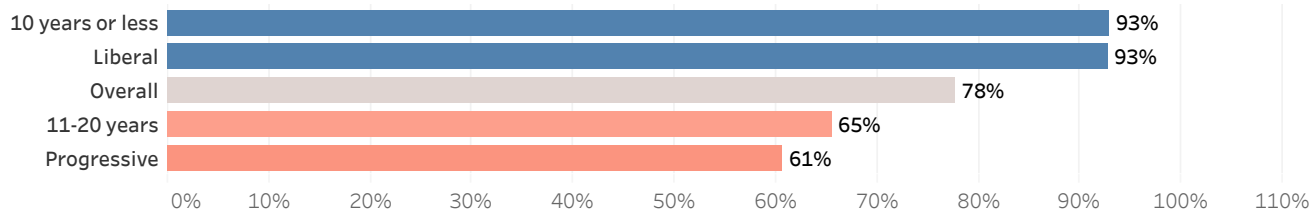
Figure 1a: Have you ever visited Mount Washington in the White Mountains of New Hampshire?



Those who have lived in New Hampshire for 10 years or less and self-described liberals are more likely than others to say that they have visited the summit of Mount Washington or visited Mount Washington but did not go to the summit. Self-described progressives and those who have lived in New Hampshire for 11-20 years are less likely to have ever visited Mount Washington.

Figure 1b: Have you ever visited Mount Washington in the White Mountains of New Hampshire? - by Demographics

Visited summit of Mt. Washington or visited Mt. Washington but did not go to summit



Among those who have never visited Mount Washington (N=259), 40% say they have never visited because they haven't had the time, 19% say Mount Washington is too far away, and 17% each say they are not interested in activities there or they prefer visiting other locations. Few say they have never visited Mount Washington because they have a physical disability (3%), because they believe Mount Washington is too crowded (3%), or for another reason (4%), while 20% say they haven't visited for no reason in particular.

Figure 2a: Why have you never visited Mount Washington? (Please select all that apply)

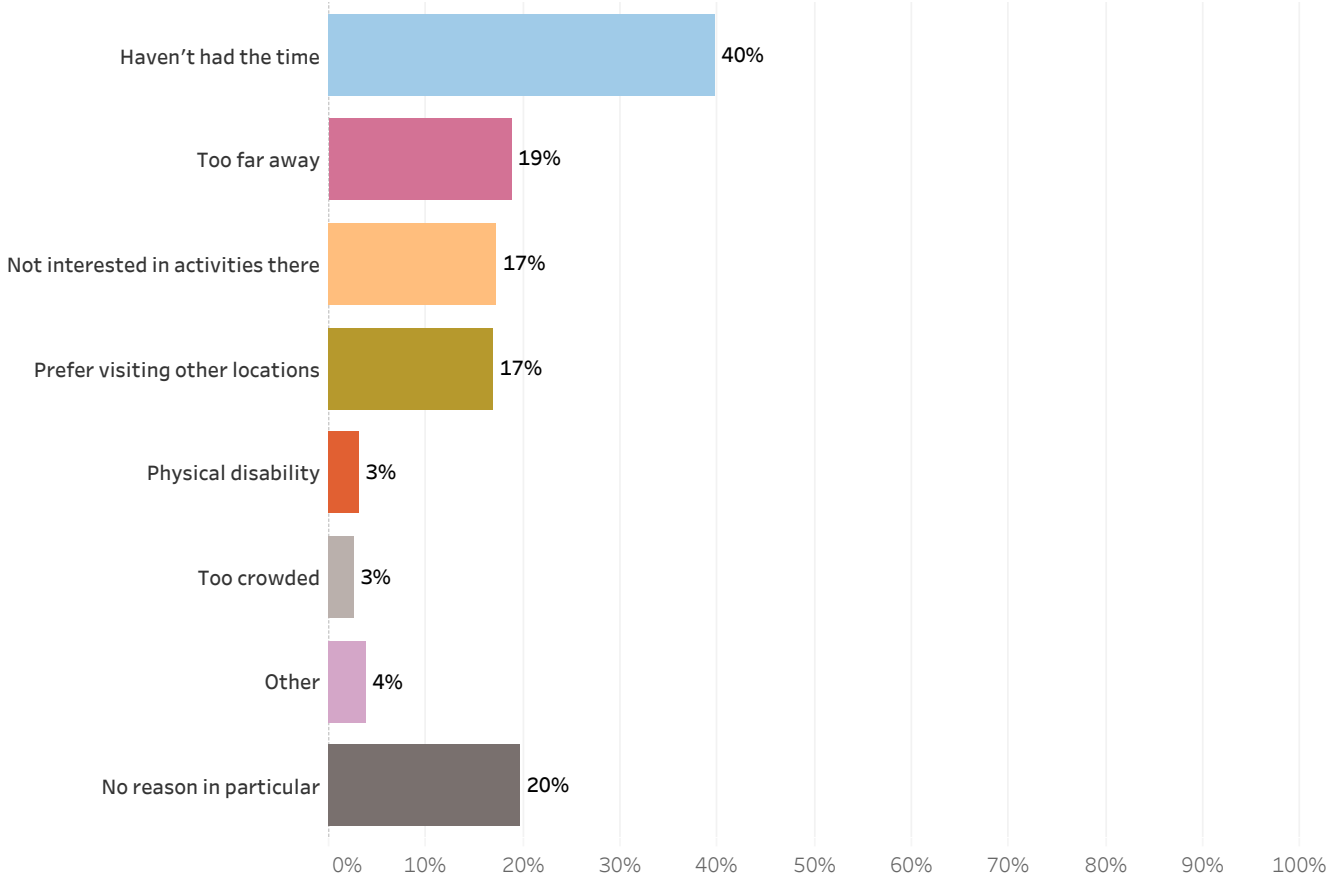


Figure 2b: Why have you never visited Mount Washington? (Please select all that apply) - Other - Selected Quotations

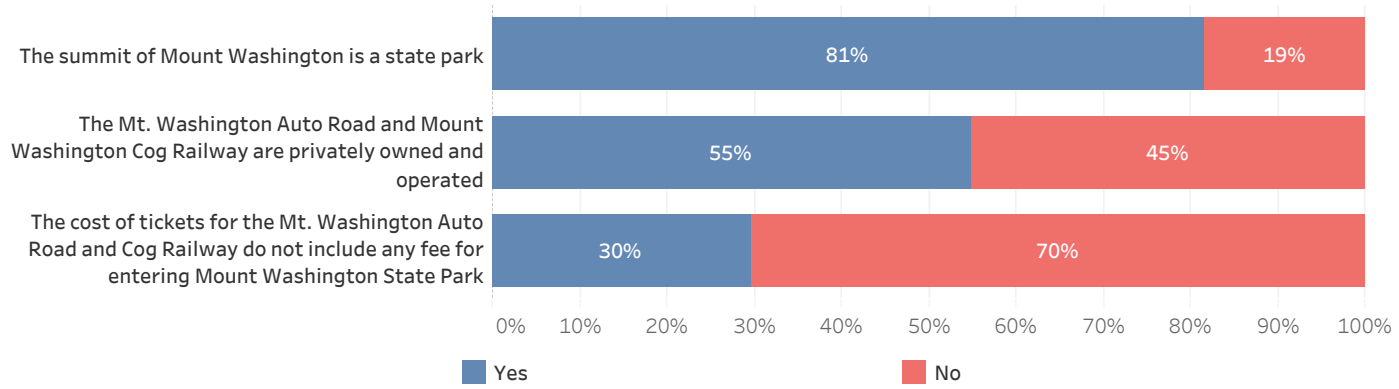
"Cannot afford"

"Feels too physically daunting"

"Plan to, Covid got in the way"

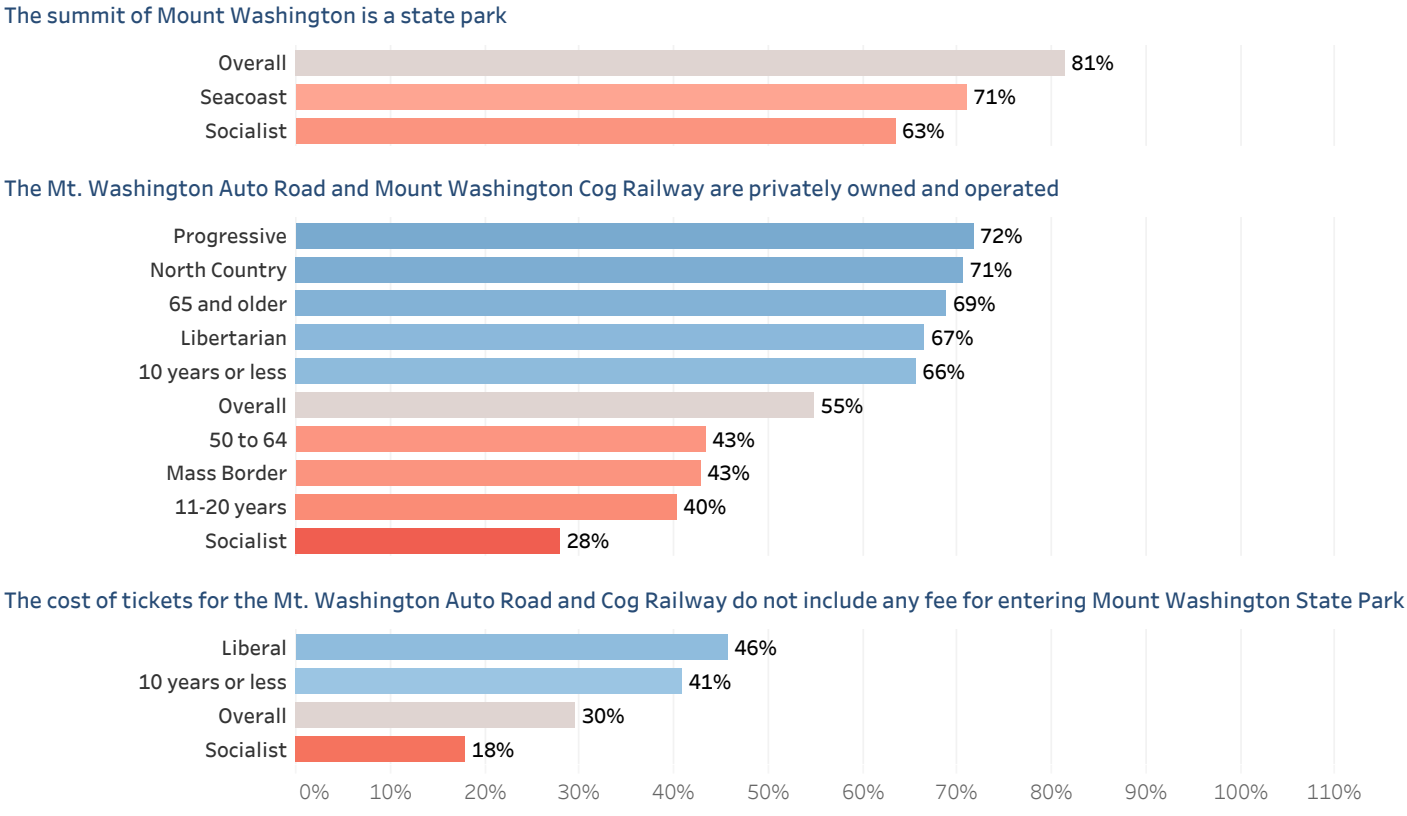
Four in five New Hampshire residents (81%) say that they were previously aware that the summit of Mount Washington is a state park, just over half (55%) were aware that the Mount Washington Auto Road and Mount Washington Cog Railway are privately owned and operated, and three in ten (30%) were aware that the cost of tickets for the Mount Washington Auto Road and Cog Railway do not include any fee for entering Mount Washington State Park.

Figure 3a: Before today, were you aware that...



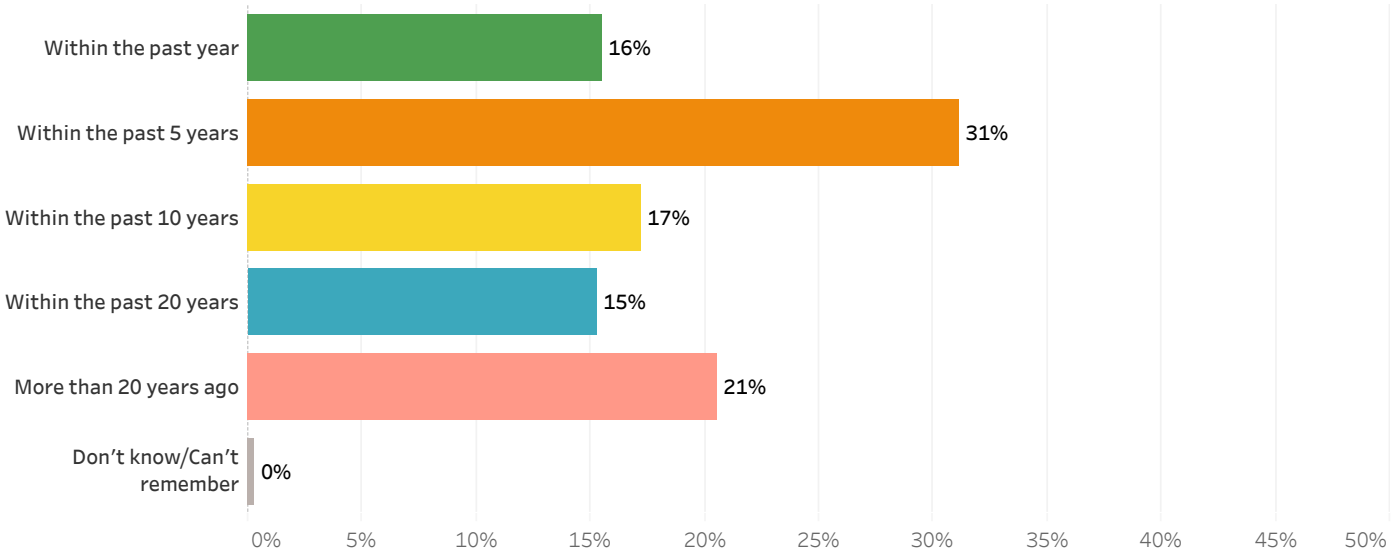
- Self-described socialists and Seacoast residents are less likely than others to say that they were previously aware that the summit of Mount Washington is a state park.
- Self-described progressives and libertarians, North Country residents, those aged 65 and older, and those who have lived in New Hampshire for 10 years or less are more likely than others to say that they were previously aware that the Mt. Washington Auto Road and Mount Washington Cog Railway are privately owned and operated. Self-described socialists, those who have lived in New Hampshire for 11-20 years, Massachusetts Border residents, and those aged 50 to 64 are less likely to have previously been aware of this.
- Self-described liberals and those who have lived in New Hampshire for 10 years or less are more likely than others to have previously been aware that the cost of tickets for the Mt. Washington Auto Road and Cog Railway do not include any fee for entering Mount Washington State Park. Self-described socialists are less likely to have previously been aware of this.

Figure 3b: Before today, were you aware that... - by Demographics



Among those who have previously visited Mount Washington State Park (N=803), 16% say they most recently visited within the past year, 31% last visited within the past 5 years, 17% last visited within the past 10 years, 15% last visited within the past 20 years, 21% last visited more than 20 years ago, and less than 1% don't know or can't remember.

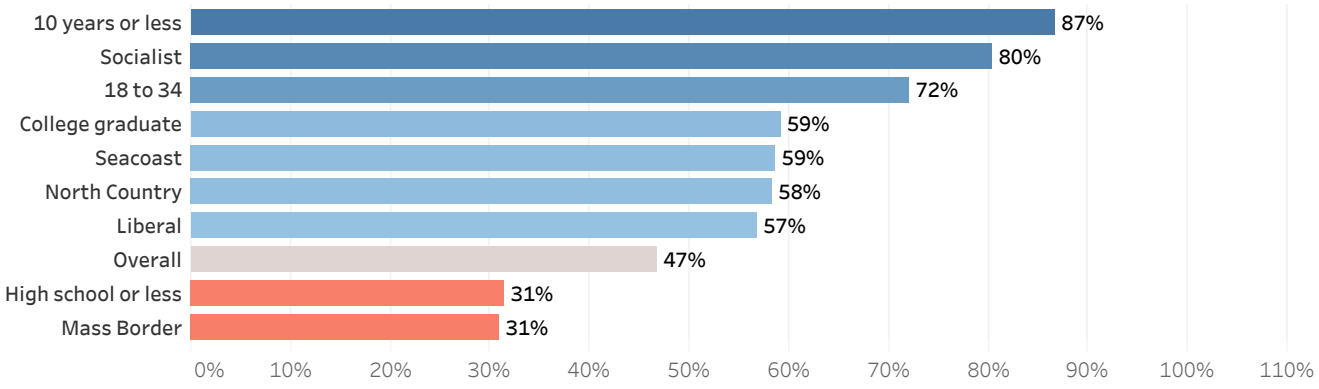
Figure 4a: To the best of your recollection, when was the most recent time you visited Mount Washington State Park?



Among those who have previously visited Mount Washington State Park, those who have lived in New Hampshire for 10 years or less, self-described socialists and liberals, those aged 18 to 34, college graduates, and Seacoast and North Country residents are more likely than others to say they last visited within the past 5 years or within the past year. Massachusetts Border residents and those with a high school education or less are less likely to have last visited within the past 5 years or within the past year.

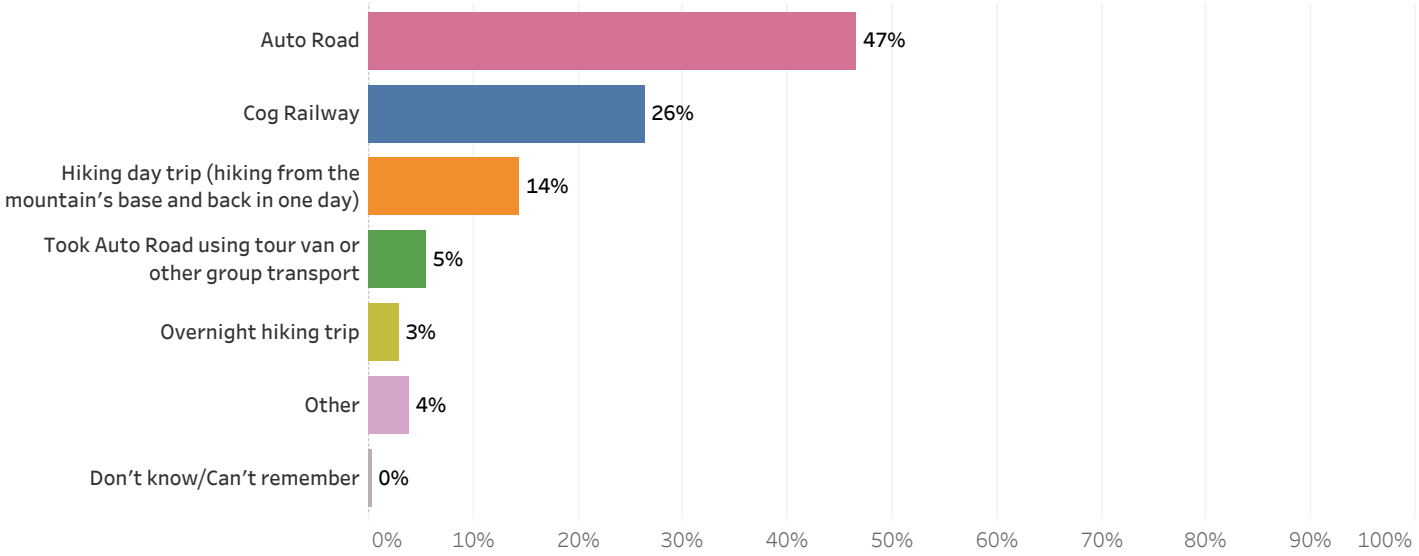
Figure 4b: To the best of your recollection, when was the most recent time you visited Mount Washington State Park? - by Demographics

Within the past 5 years or within the past year



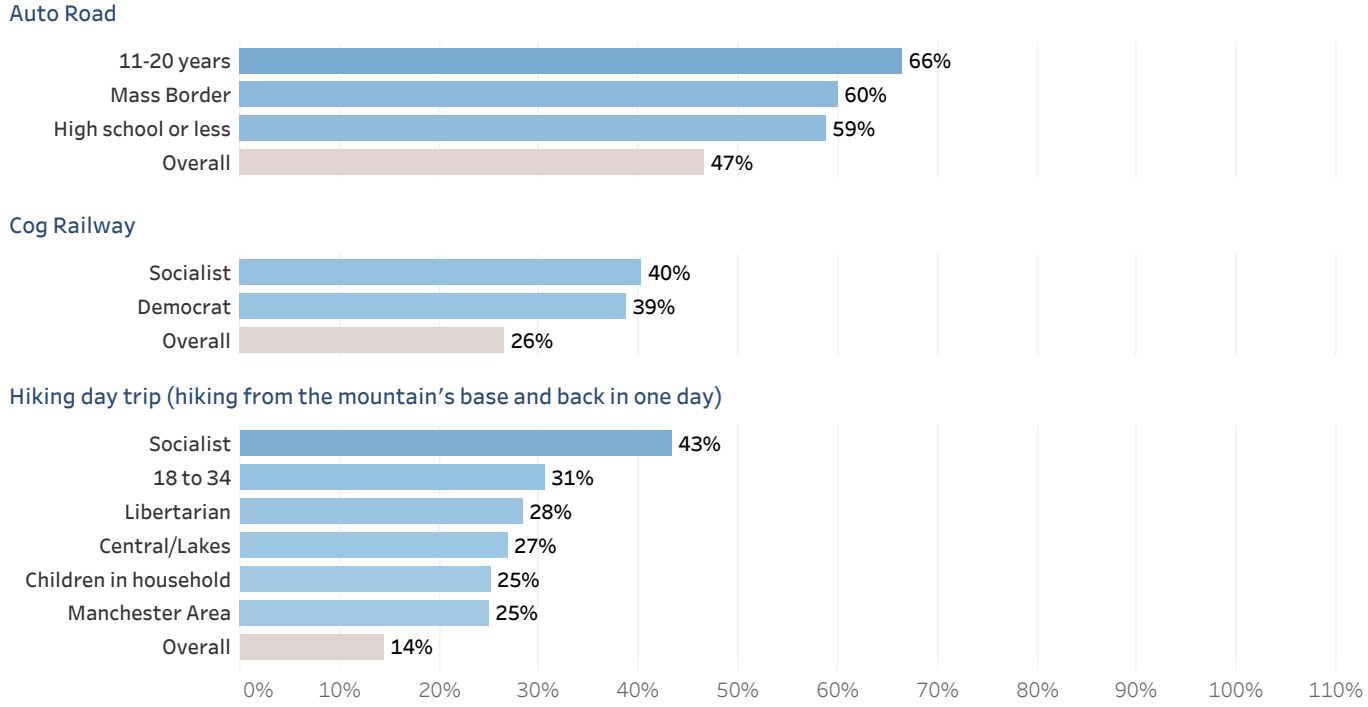
Among those who have previously visited Mount Washington State Park, nearly half (47%) say that they got to Mount Washington State Park via the Auto Road, 26% got to the park via the Cog Railway, and 14% got to the park though a hiking day trip. Few got to the park by taking the Auto Road using a tour van or other group transportation (5%), through an overnight hiking trip (3%), or through another means (4%), while less than 1% don't know or can't remember.

Figure 5a: How did you get to Mount Washington State Park?



- Among those who have previously visited Mount Washington State Park, those who have lived in New Hampshire for 11-20 years, Massachusetts Border residents, and those with a high school education or less are more likely than others to have gotten to Mount Washington State Park via the Auto Road.
- Among those who have previously visited Mount Washington State Park, Seacoast residents and self-identified Democrats are more likely than others to have gotten to Mount Washington State Park via the Cog Railway.
- Self-described socialists and libertarians, those aged 18 to 34, Central/Lakes Region and Manchester Area residents, and those with children in their household are more likely than others to have gotten to Mount Washington State Park via a hiking day trip.

Figure 5b: How did you get to Mount Washington State Park? - by Demographics



Among those who have previously visited Mount Washington State Park, 64% say they decided to visit Mount Washington State Park to have a fun experience with friends or family, 58% visited to enjoy the scenery or view, and 39% visited to enjoy the natural environment. Less than a quarter say they decided to visit Mount Washington State Park to reach the highest peak in the Northeastern U.S. (23%), for exercise or recreation (19%), to ride the Cog Railway (19%), to drive to the top or get the "This Car Climbed Mt. Washington" bumper sticker (10%), to learn about the history of the area (9%), as part of an organized tour (4%), or for another reason (9%), while less than 1% say they visited for no reason in particular.

Figure 6a: Why did you decide to visit Mount Washington State Park? (Please select all that apply)

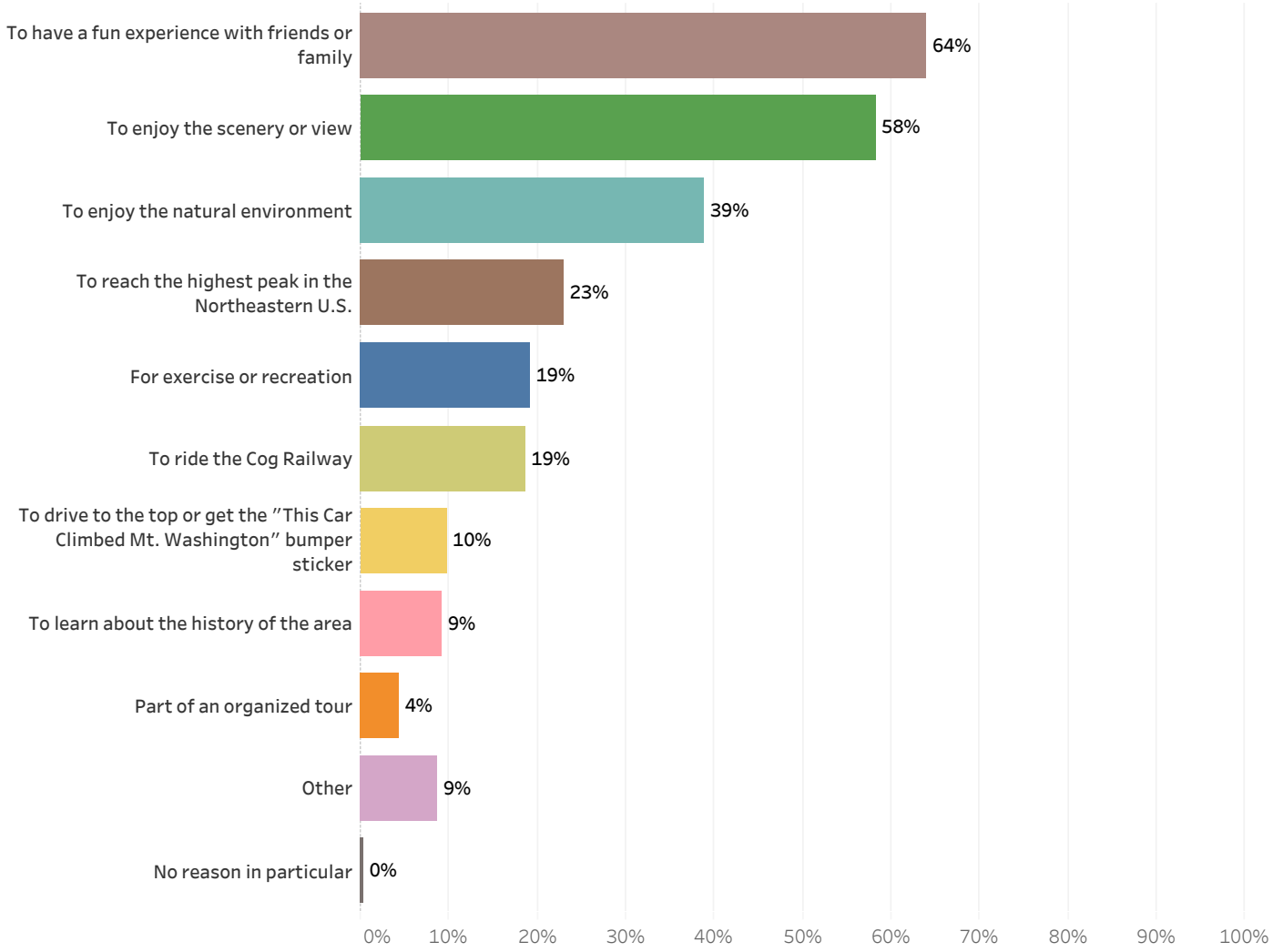


Figure 6b: Why did you decide to visit Mount Washington State Park? (Please select all that apply) - Other - Selected Quotations

"As a parent for a school trip."

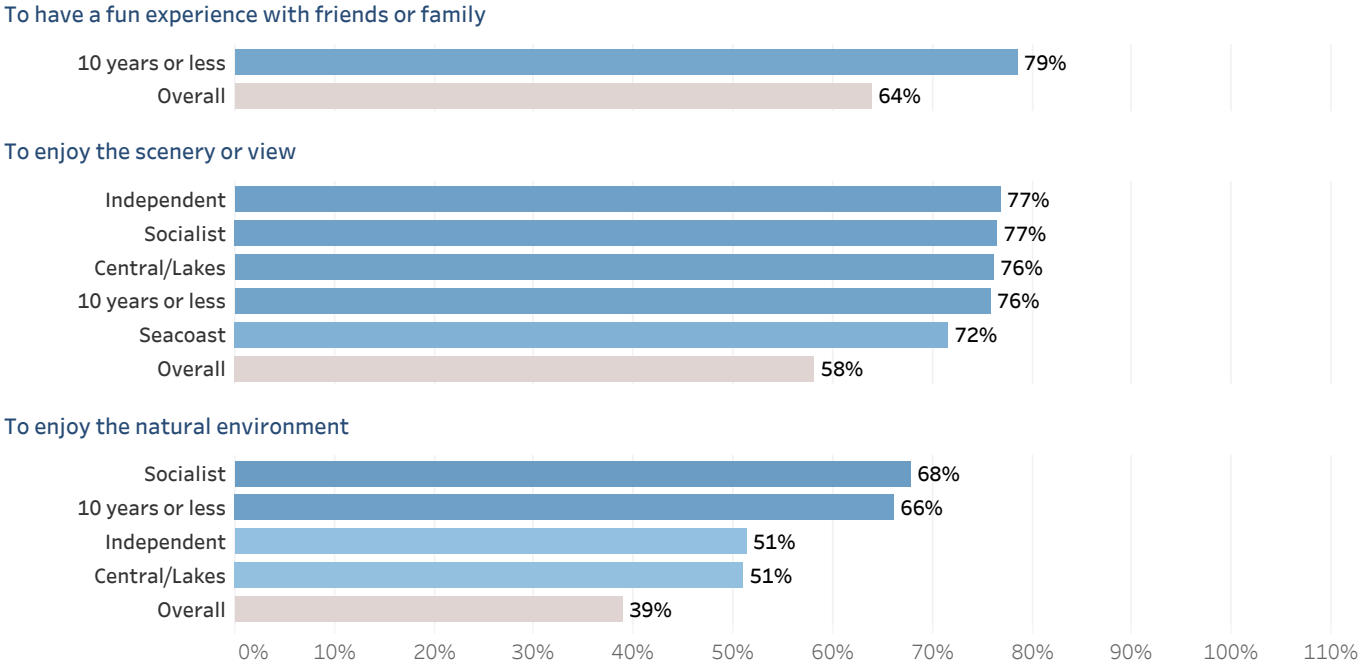
"Coverage for road race."

"Laconia Motorcycle Week ride"

"Skiing"

- Among those who have previously visited Mount Washington State Park, those who have lived in New Hampshire for 10 years or less are more likely than others to say they decided to visit Mount Washington State Park to have a fun experience with friends or family.
- Among those who have previously visited Mount Washington State Park, self-identified Independents, self-described socialists, Central/Lakes Region and Seacoast residents, and those who have lived in New Hampshire for 10 years or less are more likely than others to say they decided to visit Mount Washington State Park to enjoy the scenery or view.
- Among those who have previously visited Mount Washington State Park, self-described socialists, those who have lived in New Hampshire for 10 years or less, self-identified Independents, and Central/Lakes Region residents are more likely than others to say they decided to visit Mount Washington State Park to enjoy the natural environment.

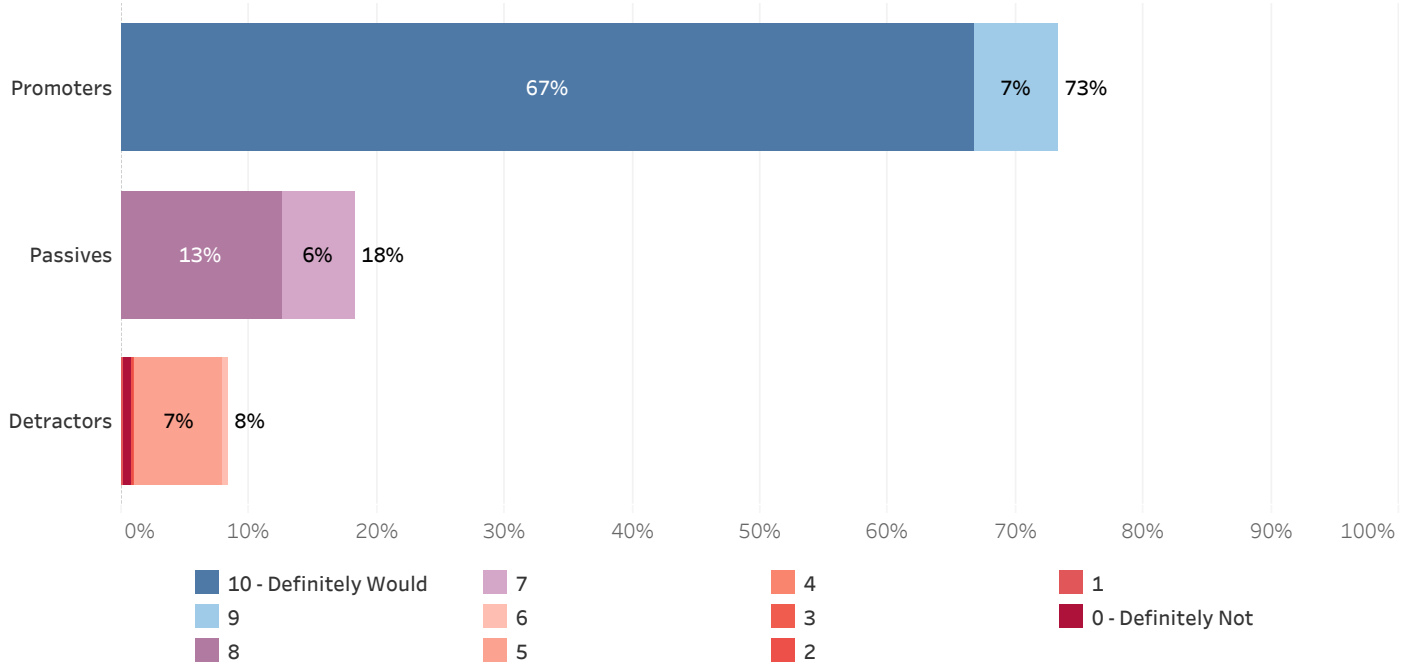
Figure 6c: Why did you decide to visit Mount Washington State Park? (Please select all that apply) - by Demographics



Those who have previously visited Mount Washington State Park were asked to place themselves on a scale gauging their likelihood of recommending going to Mount Washington State Park to a friend or family member where 10 equals "definitely would" and 0 equals "definitely not."

According to Net Promoter Score parameters, 73% are active promoters (those who gave a score of 9 or 10), 18% are passives (those who gave a score of 7 or 8), and 8% are detractors (those who gave a score between 0 and 6), yielding a Net Promoter Score (% Promoters - % Detractors) of +65.

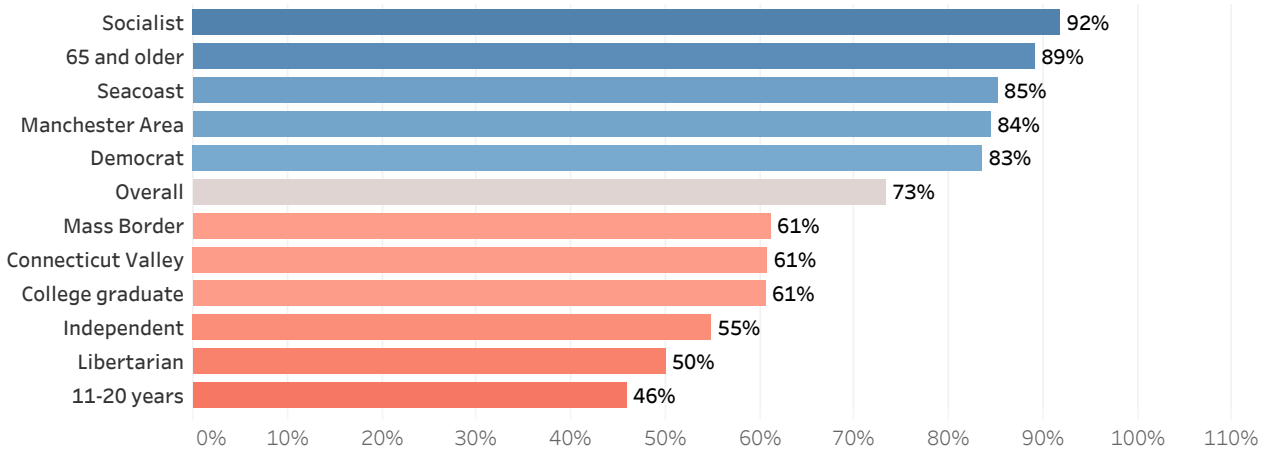
Figure 7a: On a scale from 0 to 10, where 0 is “definitely not” and 10 is “definitely would,” how likely are you to recommend going to Mount Washington State Park to a friend or family member in the future?



Among those who have previously visited Mount Washington State Park, self-described socialists, those aged 65 and older, Seacoast and Manchester Area residents, and self-identified Democrats are more likely than others to be promoters of going to Mount Washington State Park to a friend or family member. Those who have lived in New Hampshire for 11-20 years, self-described libertarians, self-described Independents, college graduates, and Connecticut Valley and Massachusetts Border residents are less likely to be promoters.

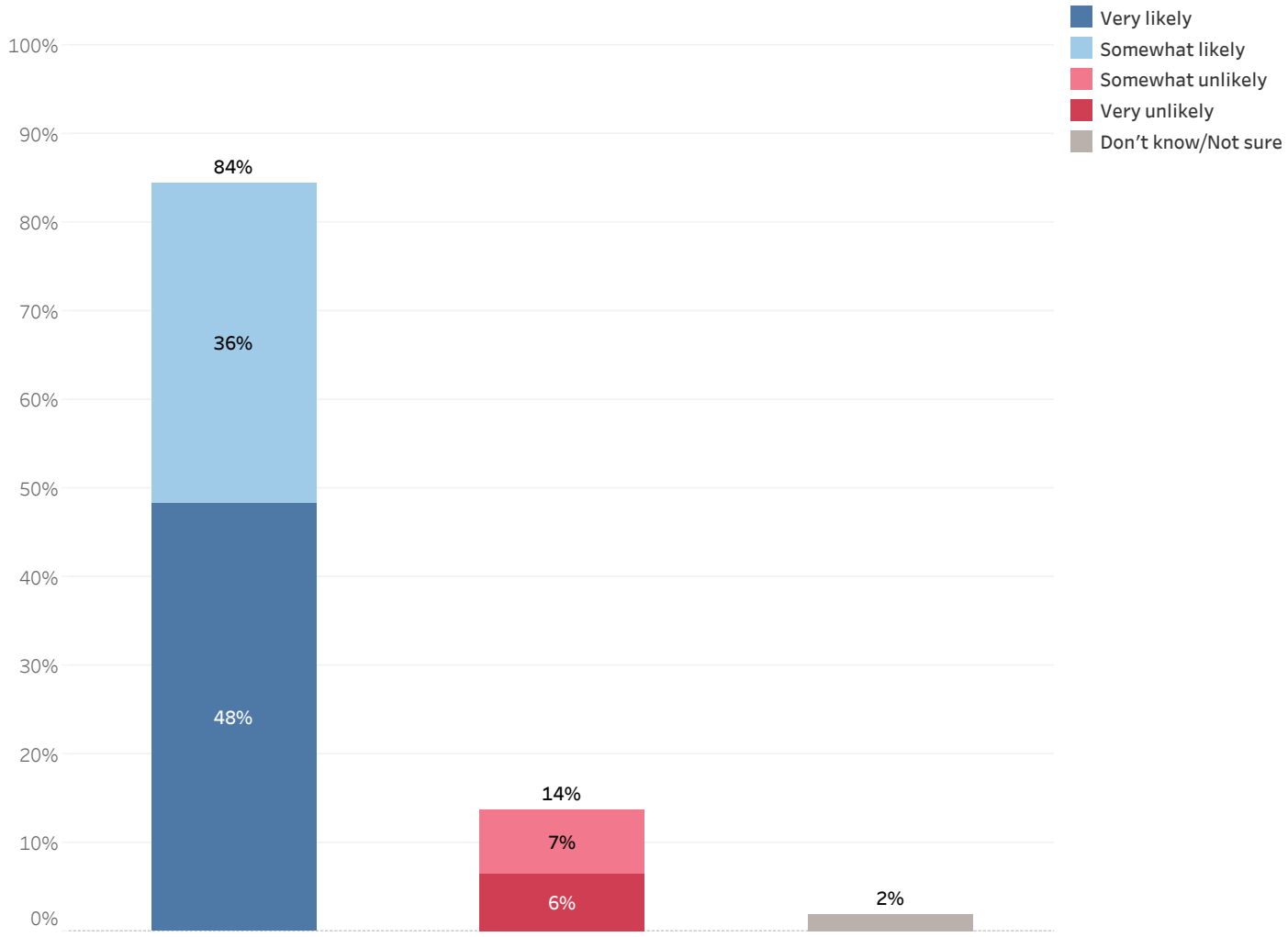
Figure 7b: On a scale from 0 to 10, where 0 is “definitely not” and 10 is “definitely would,” how likely are you to recommend going to Mount Washington State Park to a friend or family member in the future? - by Demographics

Promoters



Among those who have previously visited Mount Washington State Park, 84% say that they are very (48%) or somewhat (36%) likely to visit Mount Washington State Park in the future, only 14% say they are somewhat (7%) or very (6%) unlikely to visit again, and 2% don't know or are unsure.

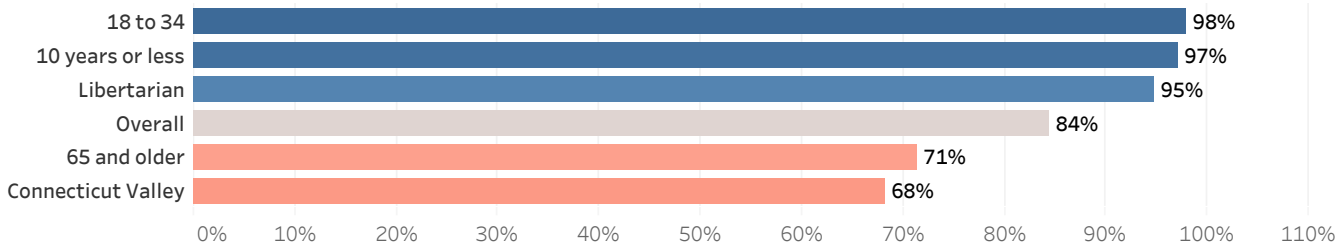
Figure 8a: How likely are you to visit Mount Washington State Park in the future?



Among those who have previously visited Mount Washington State Park, those aged 18 to 34, those who have lived in New Hampshire for 10 years or less, and self-described libertarians are more likely than others to say they are very or somewhat likely to visit Mount Washington State Park in the future. Connecticut Valley residents and those aged 65 and older are less likely than others to say to be very or somewhat likely to visit in the future.

Figure 8b: How likely are you to visit Mount Washington State Park in the future? - by Demographics

Very or somewhat likely



Among those who say they are unlikely to visit Mount Washington State Park (N=106), 21% say they are unlikely to visit because they have seen it before, 15% cite a physical disability, 14% say they are unlikely to be in the area again, and 13% didn't enjoy their experience there. Less than 10% say they are unlikely to visit Mount Washington State Park because it is too crowded (9%), the cost is too high (8%), they want to visit other locations (7%), it was crowded (2%), or for another reason (24%), while 15% cite no reason in particular.

Figure 9a: Why are you unlikely to visit Mount Washington State Park again in the future? (Please select all that apply)

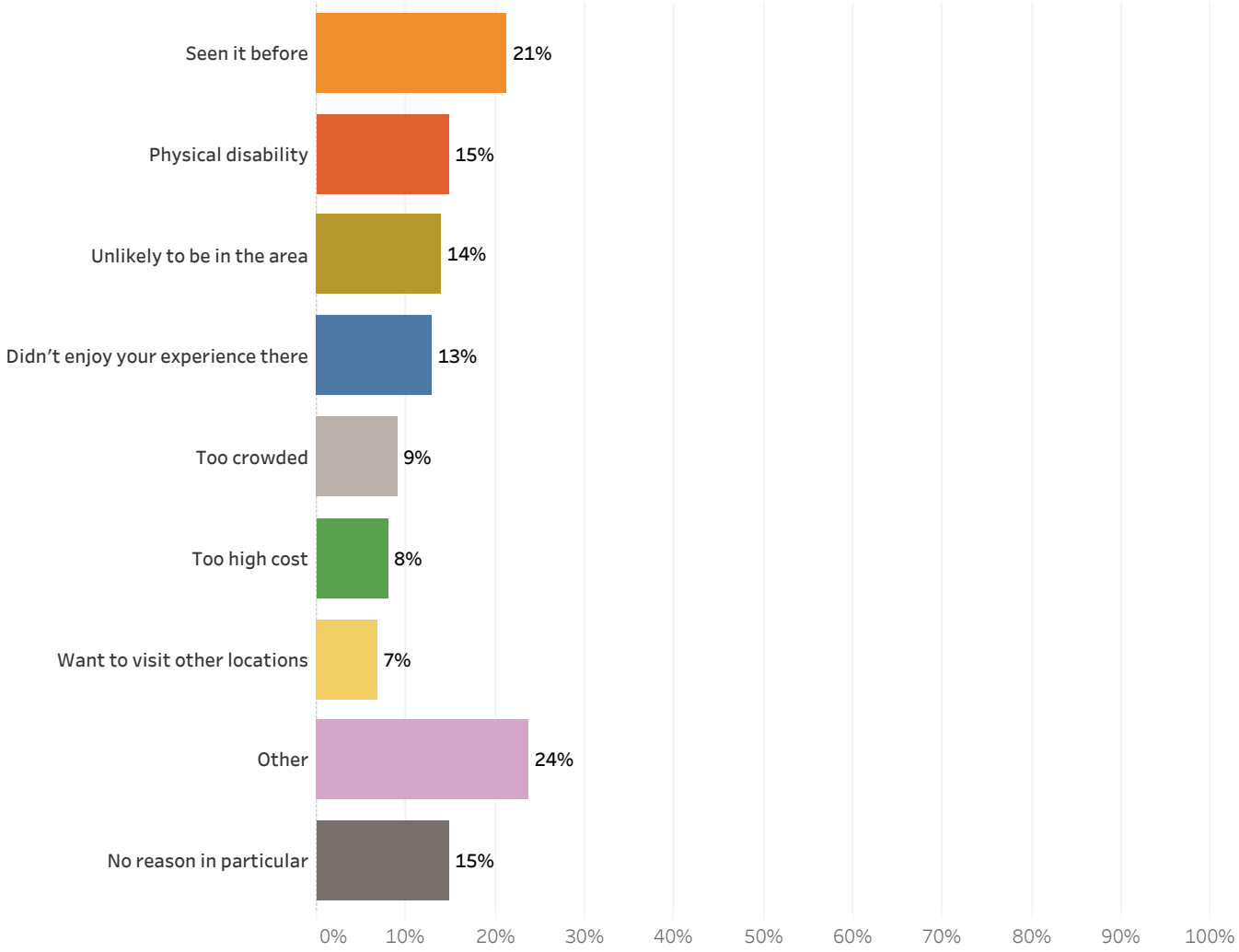


Figure 9b: Why are you unlikely to visit Mount Washington State Park again in the future? (Please select all that apply) - Other - Selected Quotations

"Advanced age"

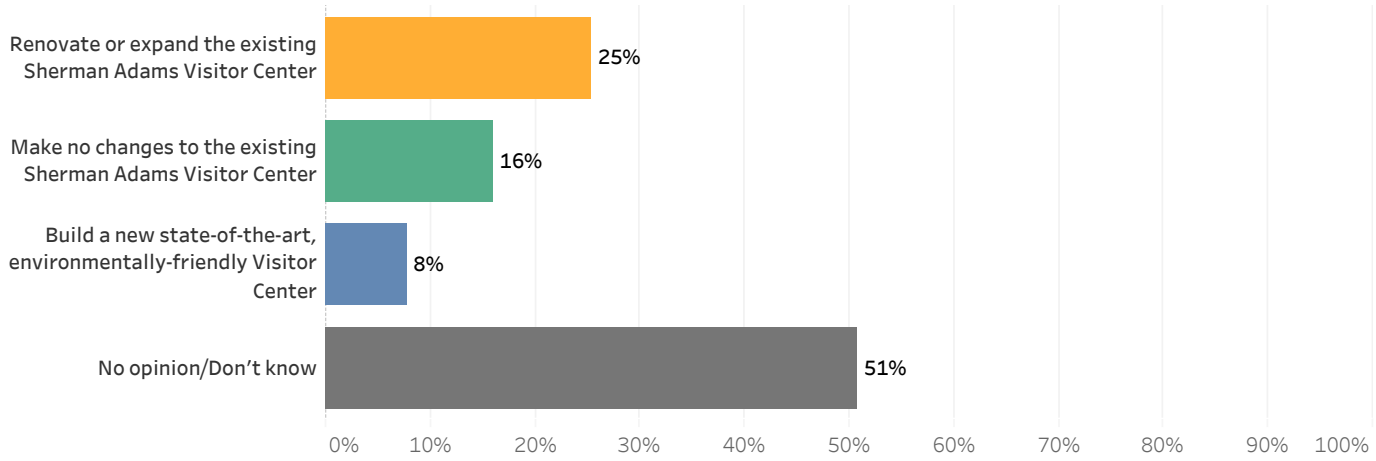
"I'm a winter hikes, I believe the park is closed."

"The weather and visibility was terrible and it was a terrifying drive with no place to turn around. The ranger at the base of the mountain should have warned us. At the time there were no guard rails on the side of the mountain."

Future Planning at Mount Washington

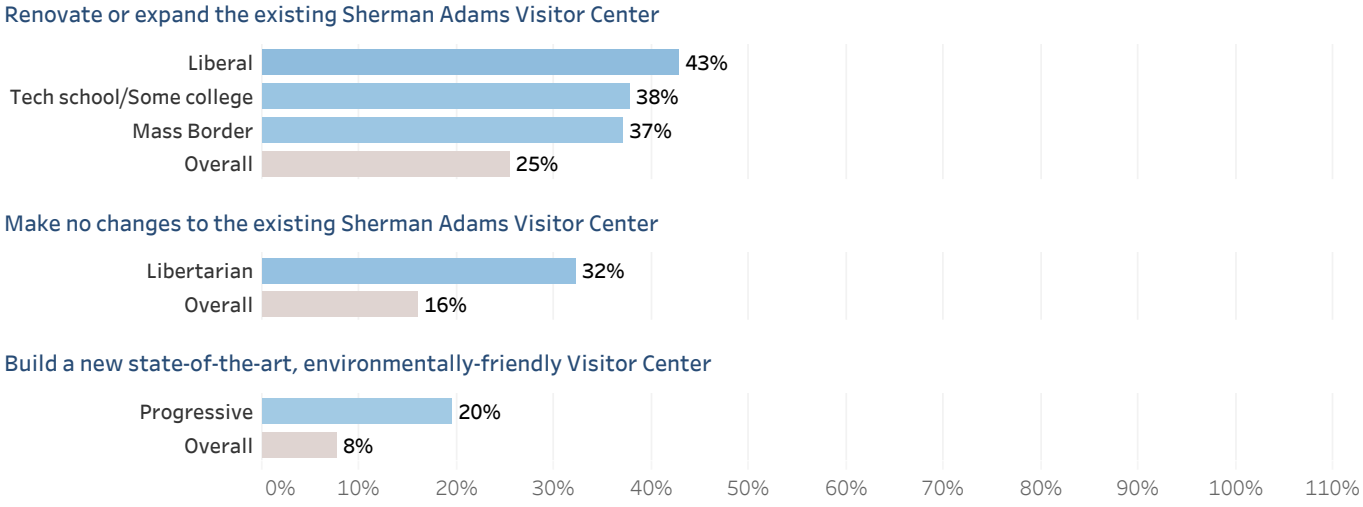
Thinking about future planning at Mount Washington State Park, 25% of New Hampshire residents believe that the stewards of the park should renovate or expand the existing Sherman Adams Visitor Center, 16% think the stewards should make no changes to the existing Sherman Adams Visitor Center, 8% think the stewards should build a new state-of-the-art environmentally-friendly Visitor Center, and half (51%) don't know or have no opinion on the matter.

Figure 10a: Which of the following do you think the stewards of Mount Washington State Park should do regarding the Visitor Center?



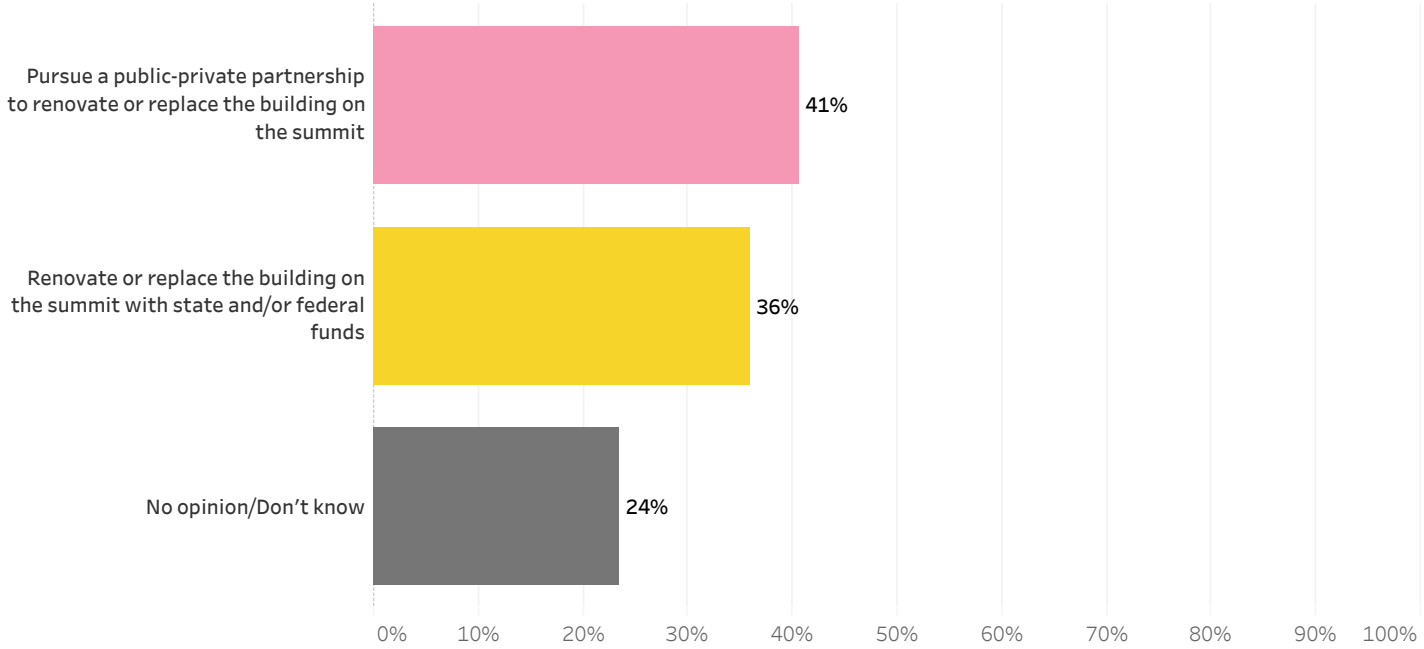
- Self-described liberals, those who attended technical school or have some college education, and Massachusetts Border residents are more likely than others to believe that the stewards of Mount Washington State Park should renovate or expand the existing Sherman Adams Visitor Center.
- Self-described libertarians are more likely than others to believe that the stewards of Mount Washington State Park should make no changes to the existing Sherman Adams Visitor Center.
- Self-described progressives are more likely than others to believe that the stewards of Mount Washington State Park should build a new state-of-the-art environmentally-friendly Visitor Center.

Figure 10b: Which of the following do you think the stewards of Mount Washington State Park should do regarding the Visitor Center? - by Demographics



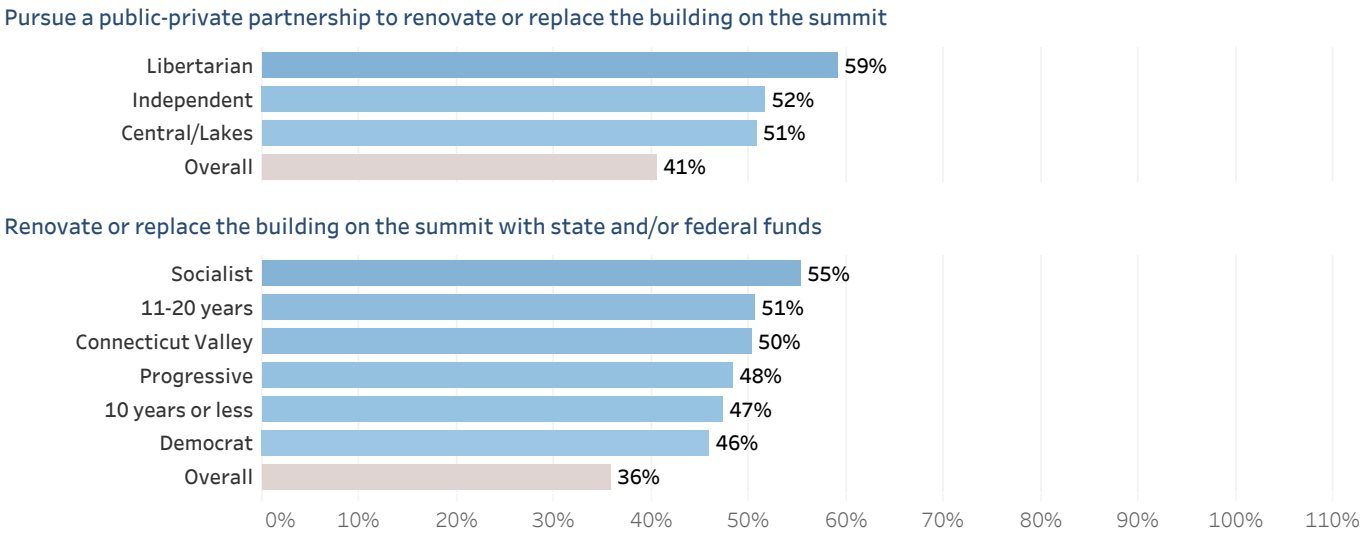
Forty-one percent of New Hampshire residents believe that the state should address the Yankee Building at the summit of Mount Washington by pursuing a public-private partnership to renovate or replace the building on the summit, 36% believe the state should renovate or replace the building on the summit with state and/or federal funds, and 24% don't know or have no opinion on the matter.

Figure 11a: The Yankee Building was built on the summit in the 1940s and currently houses both private and public telecommunications equipment and is in need of significant repairs and / or replacement. Generally speaking, how do you think the state should address the Yankee Building?



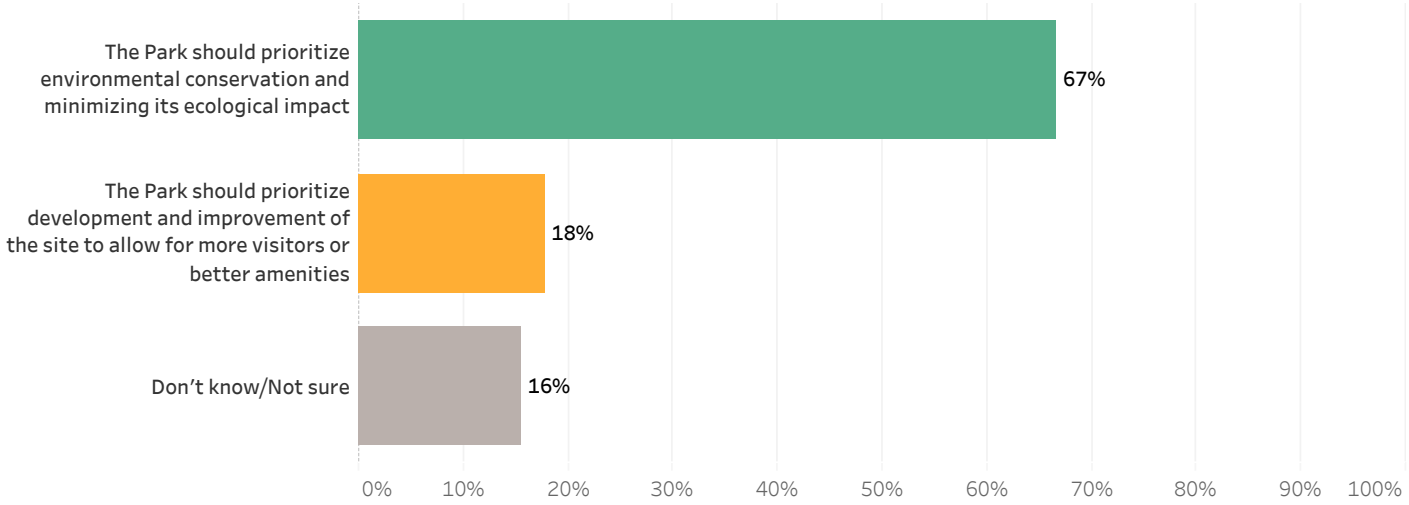
- Self-described libertarians, self-identified Independents, and Central/Lakes Region residents are more likely than others to believe that the state should address the Yankee Building by pursuing a public-private partnership to renovate or replace the building on the summit.
- Self-described socialists and progressives, those who have lived in New Hampshire for 20 years or less, Connecticut Valley residents, and self-identified Democrats are more likely than others to believe that the state should address the Yankee Building by renovating or replacing the building on the summit with state and/or federal funds.

Figure 11b: The Yankee Building was built on the summit in the 1940s and currently houses both private and public telecommunications equipment and is in need of significant repairs and / or replacement. Generally speaking, how do you think the state should address the Yankee Building? - by Demographics



Generally speaking, two-thirds of New Hampshire residents (67%) say that the Park should prioritize environmental conservation and minimizing its ecological impact, 18% believe the Park should prioritize development and improvement of the site to allow for more visitors or better amenities, and 16% don't know or are unsure.

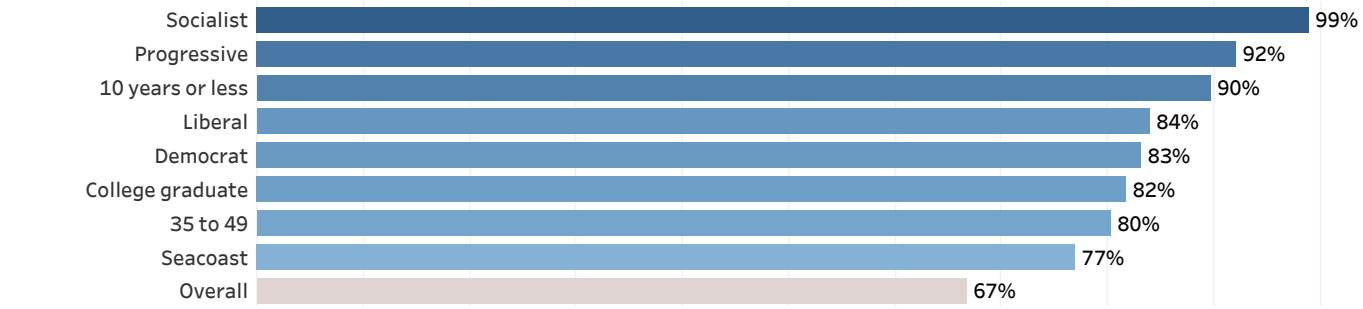
Figure 12a: Which of the following comes closest to your opinion regarding development and conservation at Mount Washington State Park?



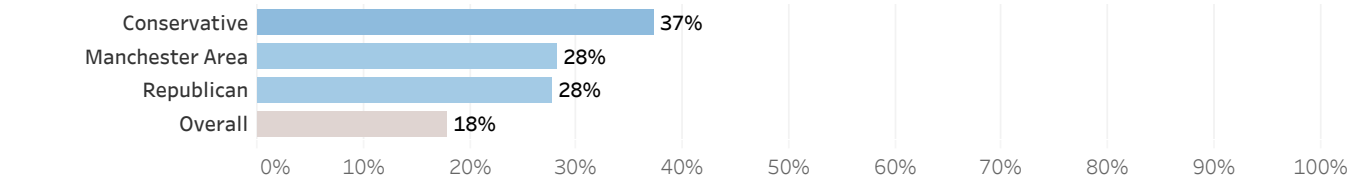
- Self-described socialists, progressives, and liberals, those who have lived in New Hampshire for 10 years or less, self-identified Democrats, college graduates, those aged 35 to 49, and Seacoast residents are more likely than others to say that the Park should prioritize environmental conservation and minimizing its ecological impact.
- Self-described conservatives, Manchester Area residents, and self-identified Republicans are more likely than others to say that the Park should prioritize development and improvement of the site to allow for more visitors or better amenities.

Figure 12b: Which of the following comes closest to your opinion regarding development and conservation at Mount Washington State Park? - by Demographics

The Park should prioritize environmental conservation and minimizing its ecological impact

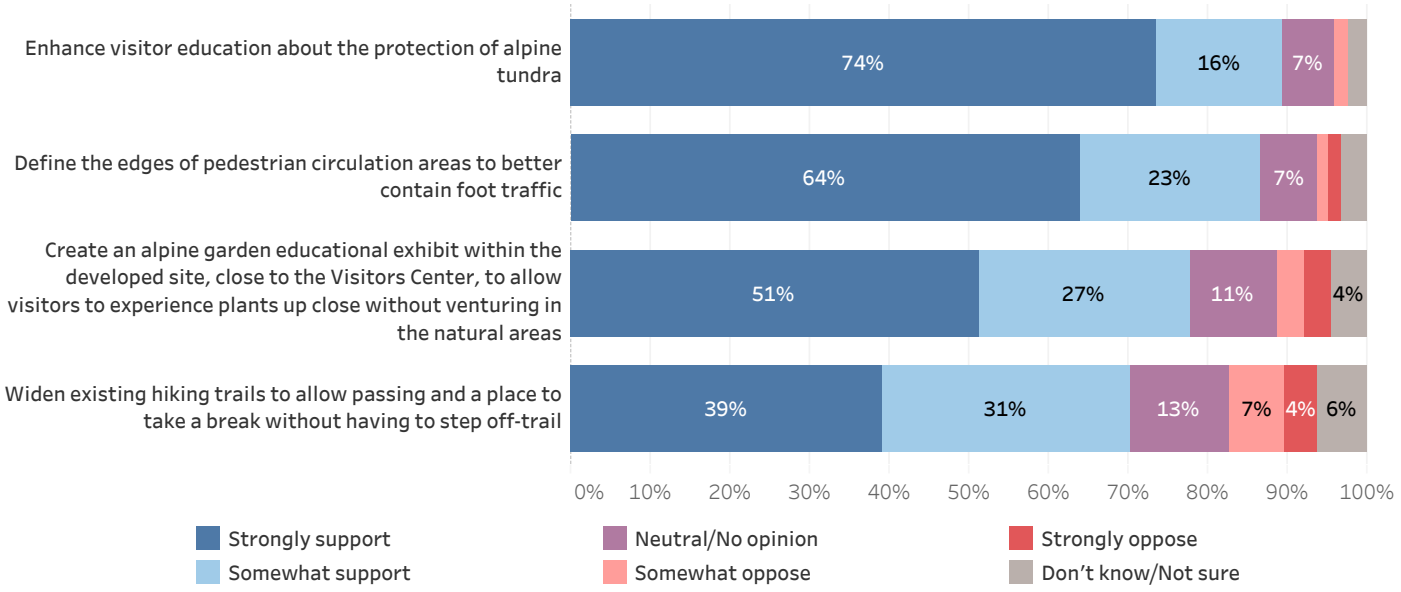


The Park should prioritize development and improvement of the site to allow for more visitors or better amenities



Nine in ten New Hampshire residents (89%) say that they would strongly (74%) or somewhat (16%) support enhancing visitor education about the protection of alpine tundra to help protect and restore alpine tundra at the summit, 7% are neutral or have no opinion on this action, 2% somewhat (2%) or strongly (<1%) oppose this action, and 2% don't know or are unsure. Seven in eight Granite Staters (87%) support defining the edges of pedestrian circulation areas to better contain foot traffic, 78% support creating an alpine garden educational exhibit within the developed site, close to the Visitors Center, to allow visitors to experience plants up close without venturing into the natural areas, and 70% would support widening existing trails to allow passing and a place to take a break without having to step off-trail.

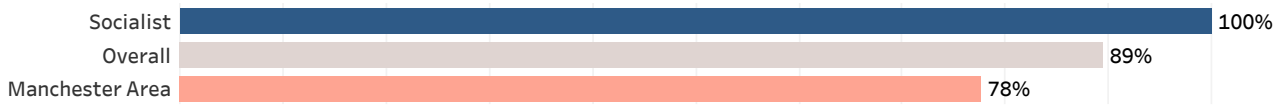
Figure 13a: Alpine tundra vegetation disturbed by trampling can take decades to recover naturally. At Mount Washington State Park, off-trail travel by hikers and visitors can damage this rare ecosystem. Generally speaking, would you support or oppose the following actions to help protect and restore alpine tundra at the summit?



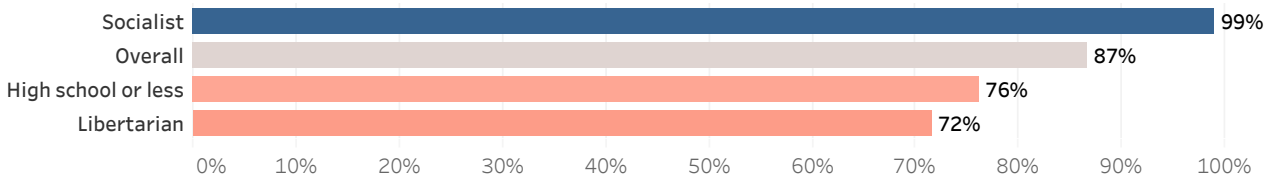
- Self-described socialists are more likely than others to support enhancing visitor education about the protection of alpine tundra while Manchester Area residents are less likely to support doing this.
- Self-described socialists are more likely than others to support defining the edges of pedestrian circulation areas to better contain foot traffic while self-described libertarians and those with a high school education or less are less likely to support doing this.

Figure 13b: Generally speaking, would you support or oppose the following actions to help protect and restore alpine tundra at the summit? - by Demographics

Enhance visitor education about the protection of alpine tundra



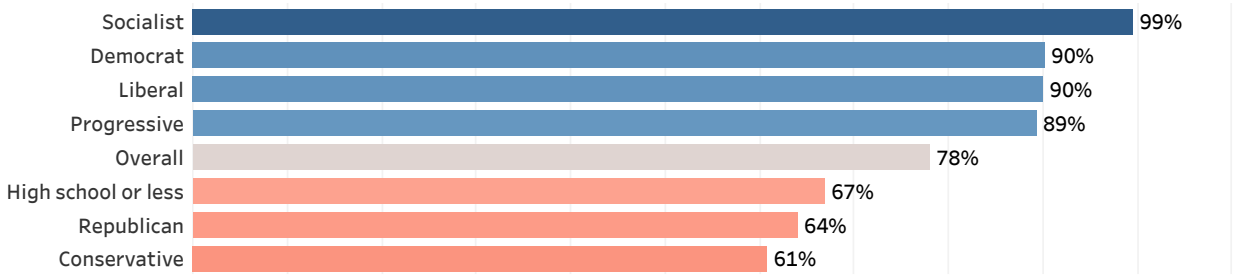
Define the edges of pedestrian circulation areas to better contain foot traffic



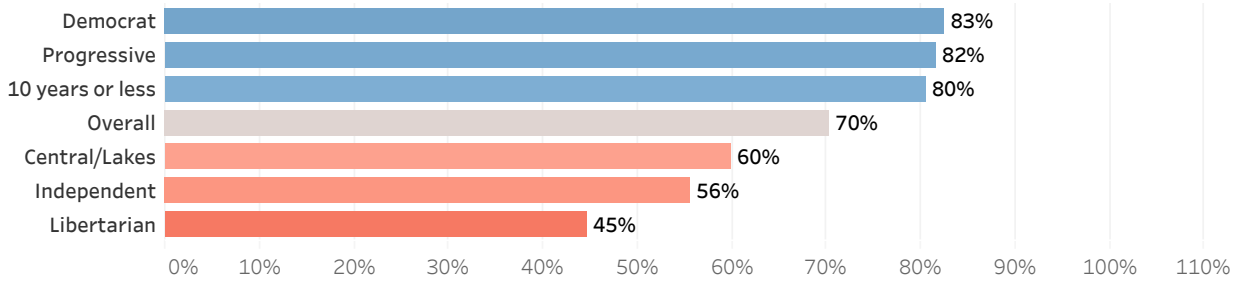
- Self-described socialists, liberals, and progressives and self-identified Democrats are more likely than others to support creating an alpine garden educational exhibit within the developed site, close to the Visitors Center. Self-described conservatives, self-identified Republicans, and those with a high school education or less are less likely to support doing this.
- Self-identified Democrats, self-described progressives, and those who have lived in New Hampshire for 10 years or less are more likely than others to support widening existing hiking trails to allow passing and a place to take a break without having to step off trail. Self-described libertarians, self-identified Independents, and Central/Lakes Region residents are less likely to support doing this.

Figure 13c: Generally speaking, would you support or oppose the following actions to help protect and restore alpine tundra at the summit? - by Demographics

Create an alpine garden educational exhibit within the developed site, close to the Visitors Center, to allow visitors to experience plants up close without venturing in the natural areas

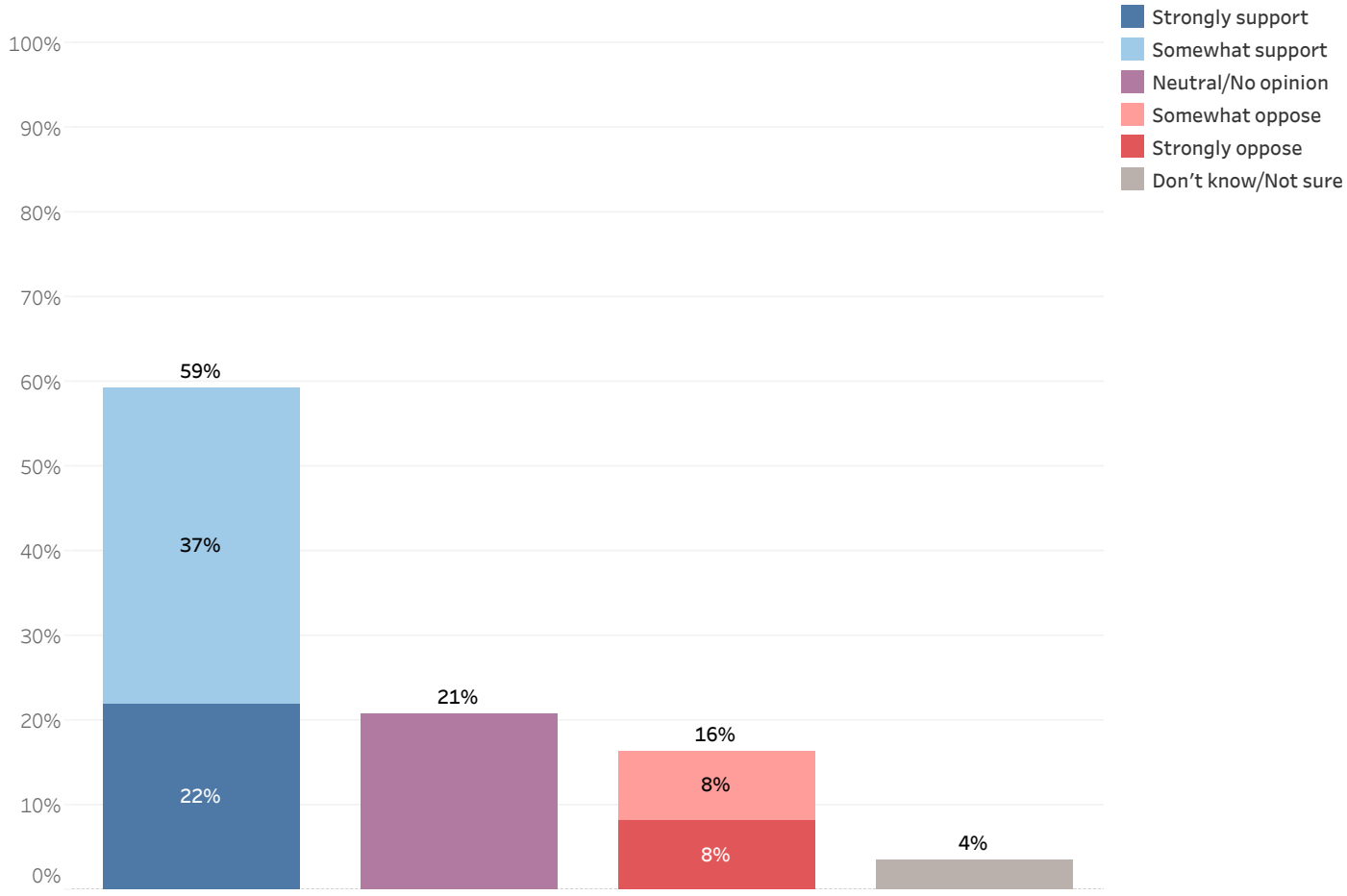


Widen existing hiking trails to allow passing and a place to take a break without having to step off-trail



Six in ten New Hampshire residents (59%) would strongly (22%) or somewhat (37%) support Mount Washington State Park limiting the number of visitors present at any one time. Twenty-one percent of state residents are neutral or have no opinion on the matter, 16% strongly (8%) or somewhat (8%) oppose doing this, and 4% don't know or are unsure.

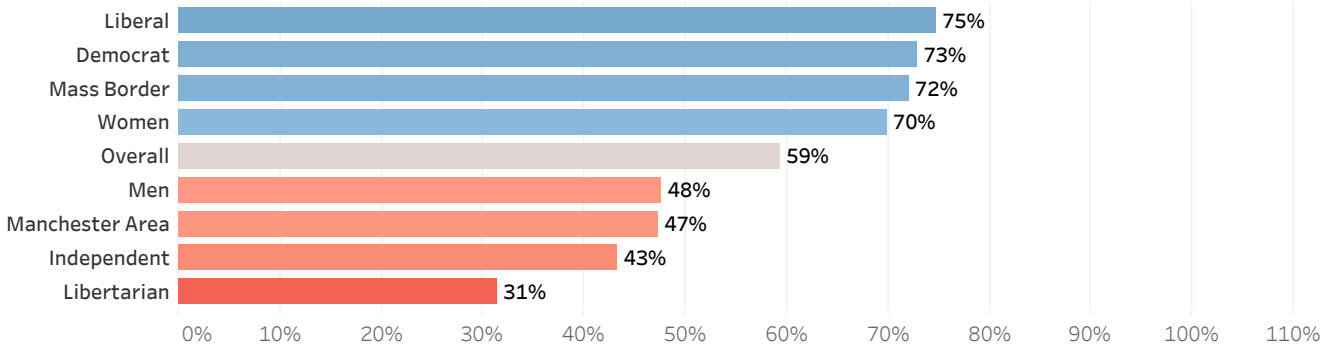
Figure 14a: Would you support or oppose Mount Washington State Park limiting the number of visitors present at any one time?



Self-described liberals, self-identified Democrats, Massachusetts Border residents, and women are more likely than others to support Mount Washington State Park limiting the number of visitors present at any one time. Self-described libertarians, self-identified Independents, Manchester Area residents, and men are less likely to support doing this.

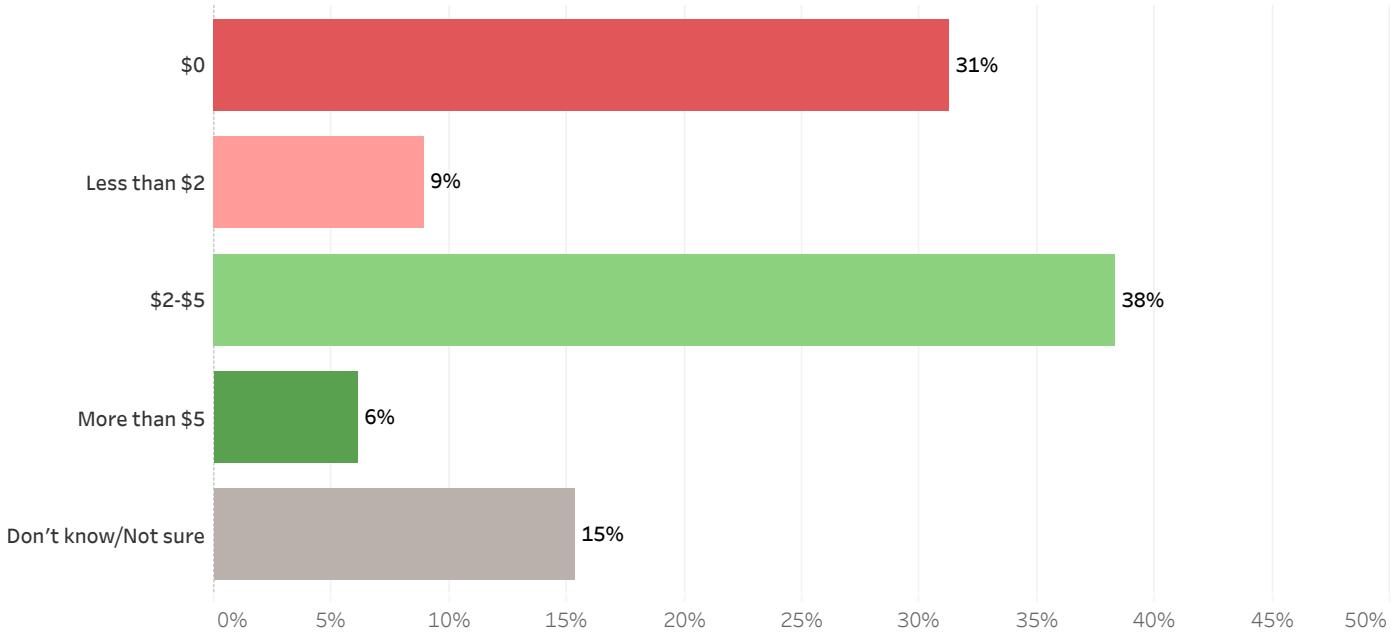
Figure 14b: Would you support or oppose Mount Washington State Park limiting the number of visitors present at any one time? - by Demographics

Support



Visitors to the Sherman Adams Visitor Center are not currently required to pay a fee to enter the building. If Mount Washington State Park did require visitors to pay a fee to enter the Sherman Adams Building, 31% believe that no fee at all would be fair, 9% believe than less than $2 would be a fair amount, 38% believe that $2-$5 would be a fair amount, only 6% believe that more than $5 would be a fair amount, and 15% don't know or are unsure.

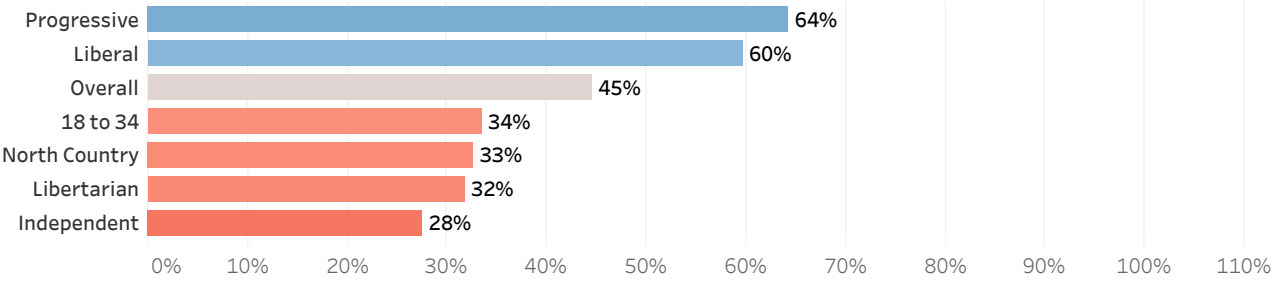
Figure 15a: The Sherman Adams building, a modern summit building in Mount Washington State Park, houses The Sherman Adams Visitor Center, a cafeteria, restrooms, gift shops, the Mount Washington Observatory and its museum. Visitors are not currently required to pay a fee to enter the building. If Mount Washington State Park did require visitors to pay a fee to enter the Sherman Adams Building, what would be a fair amount in your opinion?



Self-described progressives and liberals are more likely than others to say that $2 or more would be a fair amount for visitors to pay to enter the Sherman Adams Visitors Center if an entry fee were required. Self-identified Independents, self-described libertarians, North Country residents, and those aged 18 to 34 are less likely than others to say that $2 or more would be a fair amount to pay.

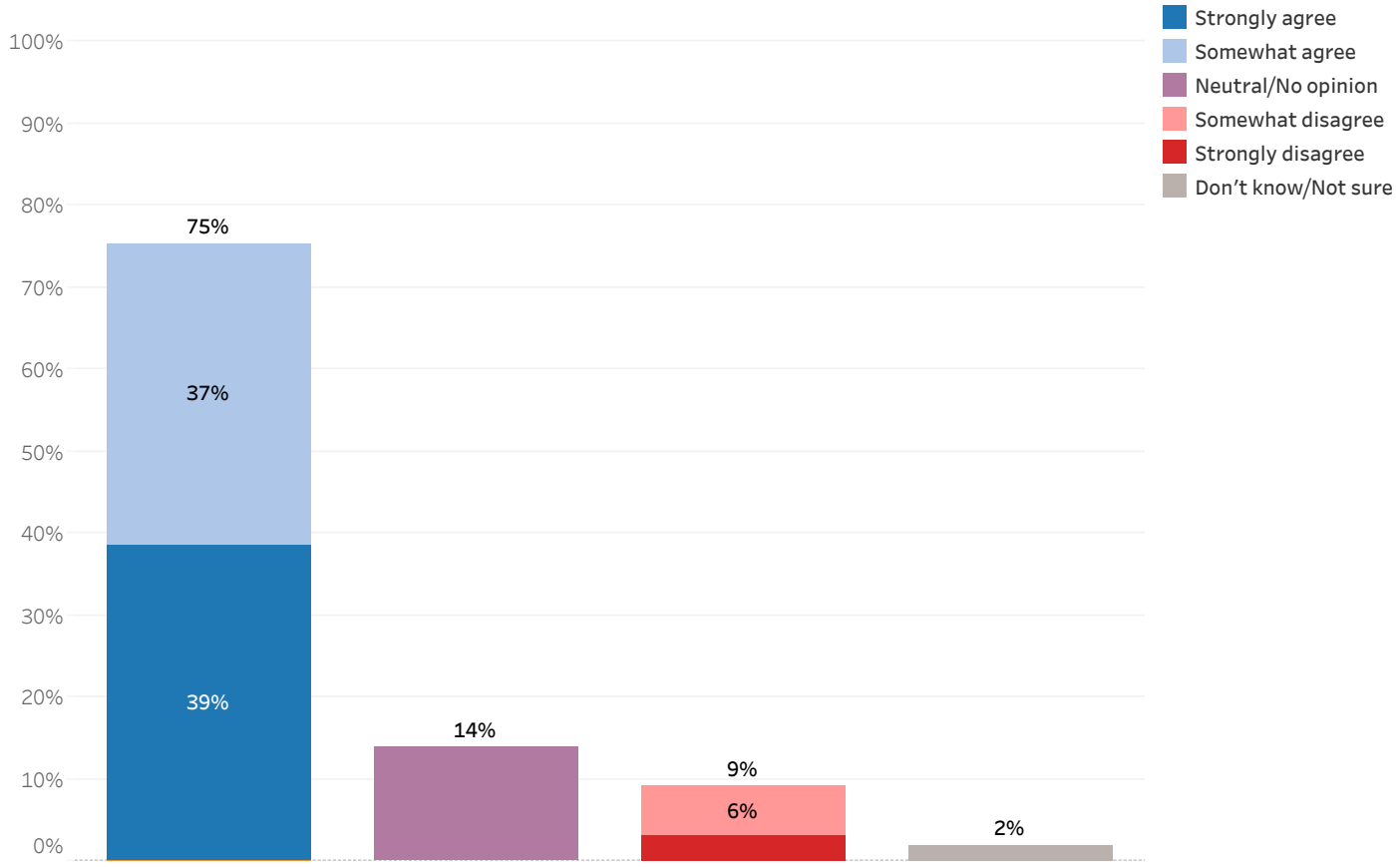
Figure 15b: If Mount Washington State Park did require visitors to pay a fee to enter the Sherman Adams Building, what would be a fair amount in your opinion? - by Demographics

$2 or more



Three-quarters of New Hampshire residents (75%) strongly (39%) or somewhat (37%) agree that investment in Mount Washington facilities improvements is a worthwhile use of public funds, 14% are neutral or have no opinion on this statement, only 9% somewhat (6%) or strongly (3%) disagree, and 2% don't know or are unsure.

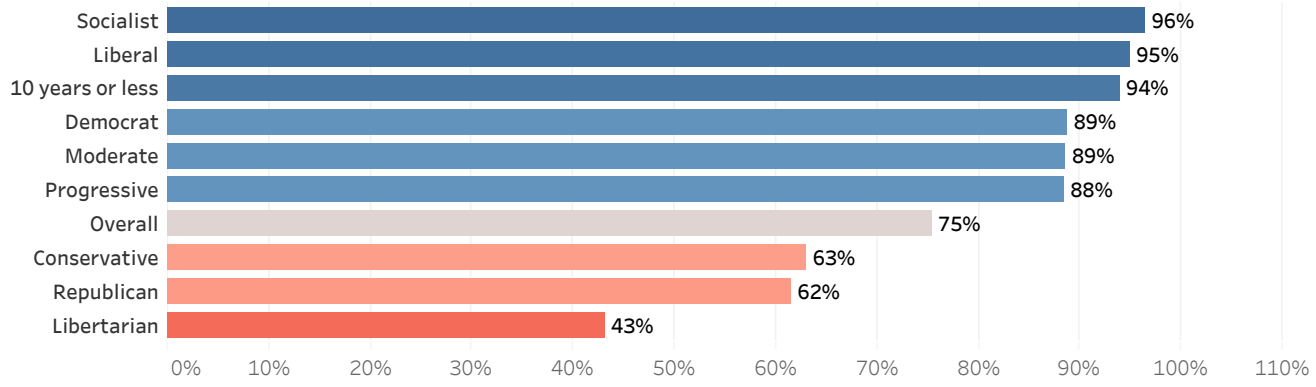
Figure 16a: Generally speaking, do you agree or disagree with the following statements about Mount Washington? - Investment in Mount Washington facilities improvements is a worthwhile use of public funds



Self-described socialists, liberals, moderates, and progressives, those who have lived in New Hampshire for 10 years or less, and self-identified Democrats are more likely than others to agree that investment in Mount Washington facilities improvements is a worthwhile use of public funds. Self-described libertarians and conservatives and self-identified Republicans are less likely to agree with this.

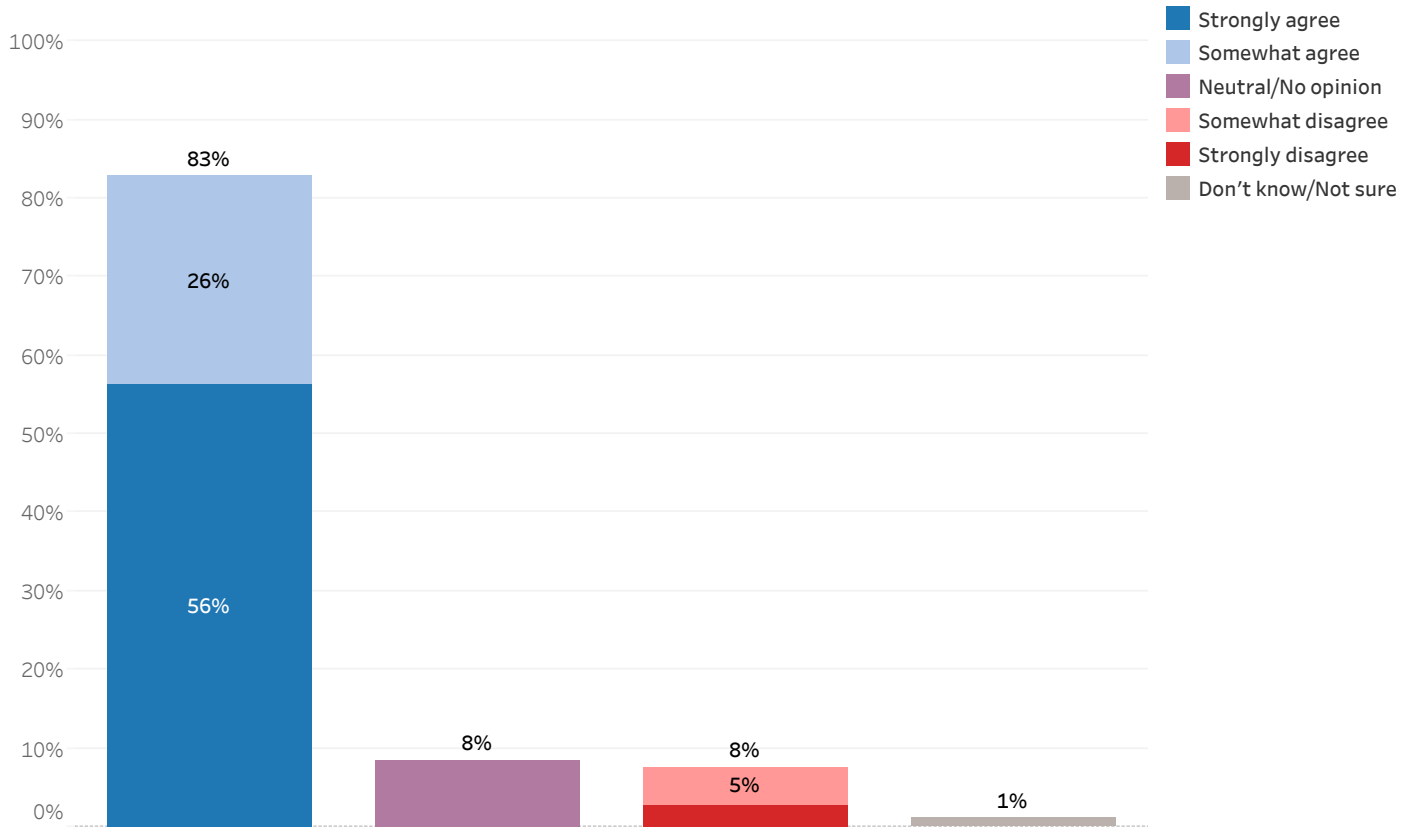
Figure 16b: Generally speaking, do you agree or disagree with the following statements about Mount Washington? - Investment in Mount Washington facilities improvements is a worthwhile use of public funds - by Demographics

Agree



Eighty-three percent of New Hampshire residents strongly (56%) or somewhat (26%) agree that investment in active protection of the sensitive alpine environment in the White Mountains is a worthwhile use of public funds, 8% are neutral or have no opinion on this statement, only 8% somewhat (5%) or strongly (3%) disagree, and 1% don't know or are unsure.

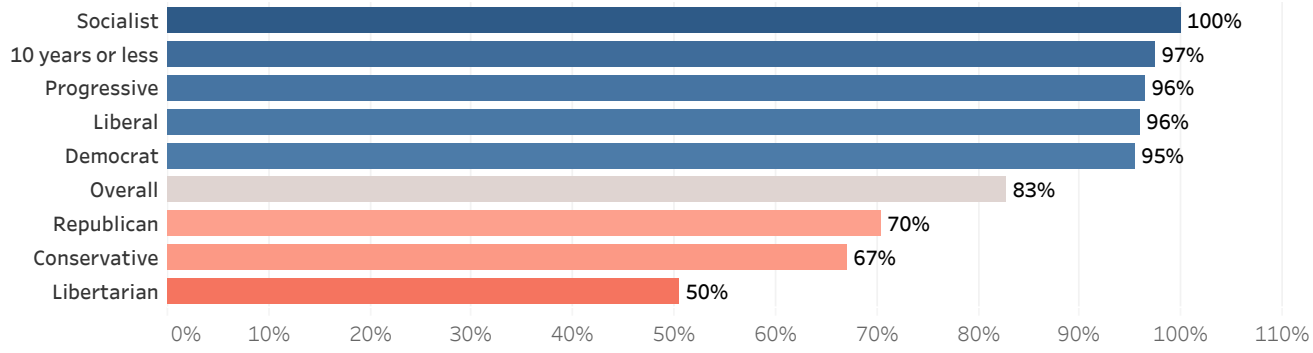
Figure 17a: Generally speaking, do you agree or disagree with the following statements about Mount Washington? - Investment in active protection of the sensitive alpine environment in the White Mountains is a worthwhile use of public funds



Self-described socialists, progressives, and liberals, those who have lived in New Hampshire for 10 years or less, and self-identified Democrats are more likely than others to agree that investment in active protection of the sensitive alpine environment in the White Mountains is a worthwhile use of public funds. Self-described libertarians and conservatives and self-identified Republicans are less likely to agree with this.

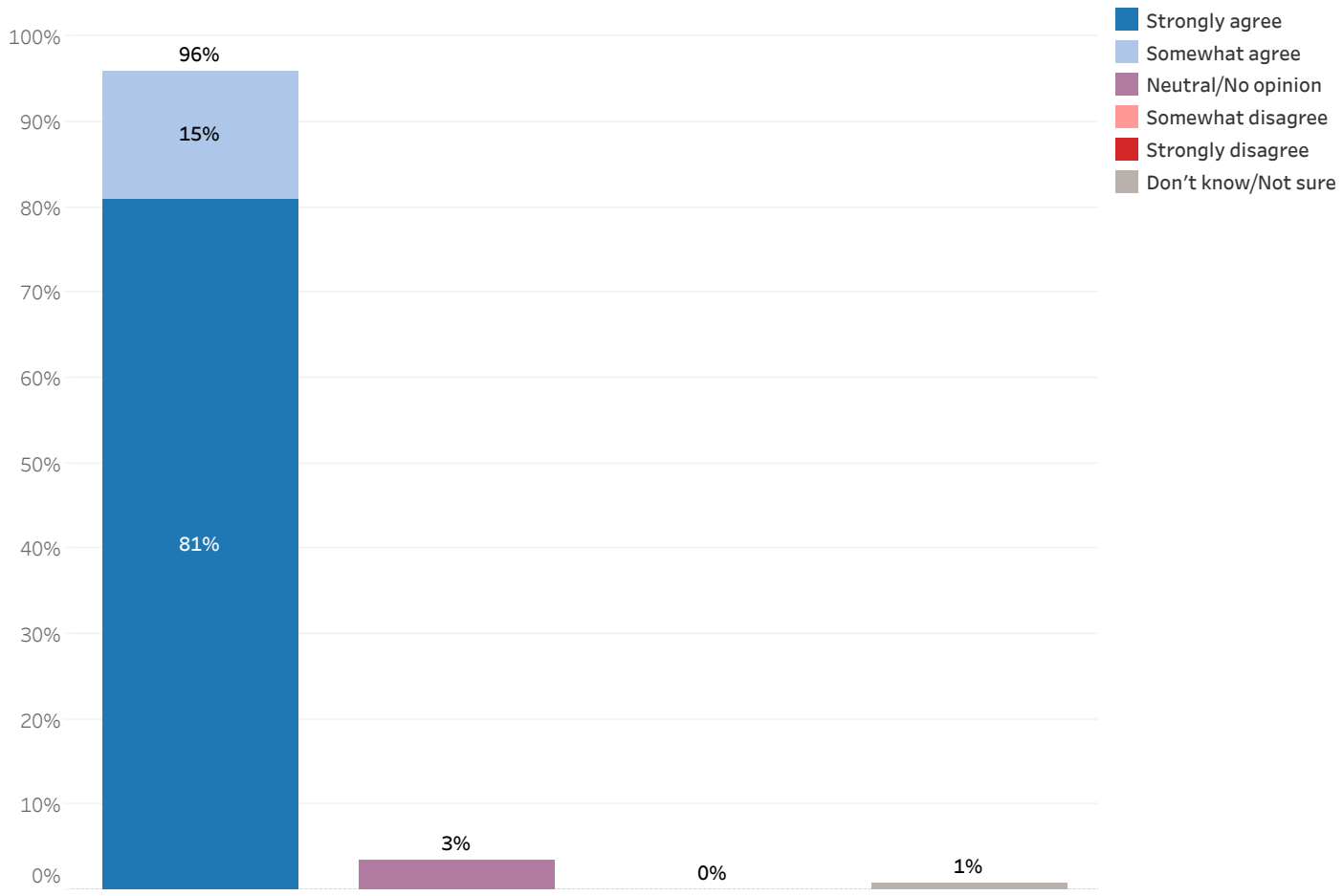
Figure 17b: Generally speaking, do you agree or disagree with the following statements about Mount Washington? - Investment in active protection of the sensitive alpine environment in the White Mountains is a worthwhile use of public funds - by Demographics

Agree



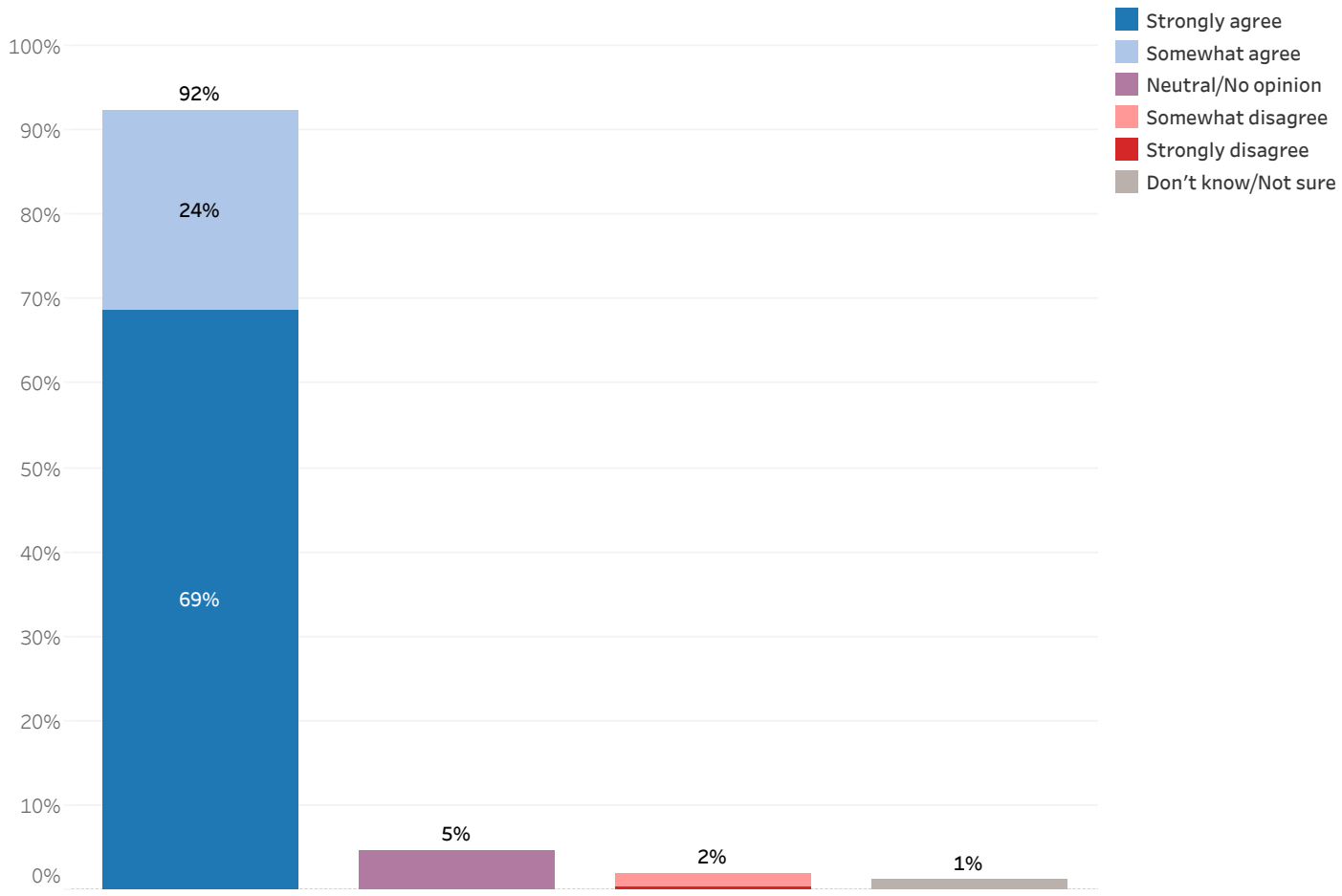
Nearly all New Hampshire residents (96%) strongly (81%) or somewhat (15%) agree that Mount Washington is an important asset for New Hampshire, 3% are neutral or have no opinion on this statement, less than 1% somewhat (<1%) or strongly (<1%) disagree, and 1% don't know or are unsure.

Figure 18: Generally speaking, do you agree or disagree with the following statements about Mount Washington? - Mount Washington is an important asset for New Hampshire



More than nine in ten New Hampshire residents (92%) strongly (69%) or somewhat (24%) agree that tourists visiting Mount Washington contribute to the New Hampshire economy, 5% are neutral or have no opinion on this statement, only 2% somewhat (2%) or strongly (<1%) disagree, and 1% don't know or are unsure.

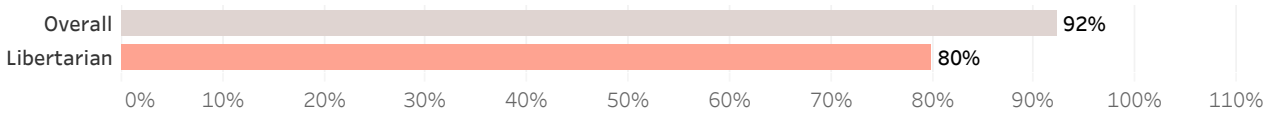
Figure 19a: Generally speaking, do you agree or disagree with the following statements about Mount Washington? - Tourists visiting Mount Washington contribute to the New Hampshire economy



Self-described libertarians are less likely than others to agree that tourists visiting Mount Washington contribute to the New Hampshire economy.

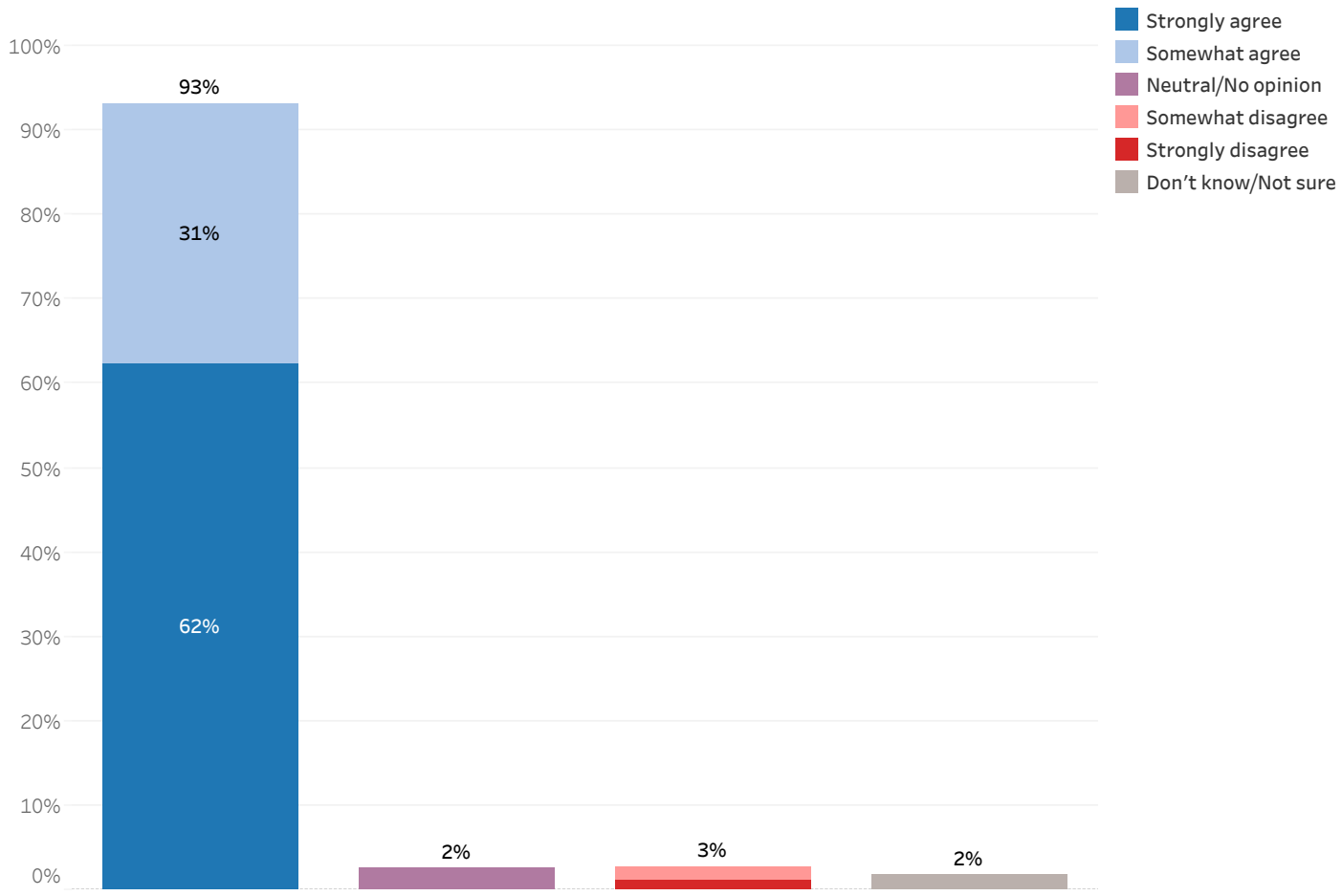
Figure 19b: Generally speaking, do you agree or disagree with the following statements about Mount Washington? - Tourists visiting Mount Washington contribute to the New Hampshire economy - by Demographics

Agree



The vast majority of New Hampshire residents (93%) strongly (62%) or somewhat (31%) agree that state funds should be used to support the maintenance of State Park facilities. 2% are neutral or have no opinion on this, only 3% somewhat (2%) or strongly (1%) disagree, and 2% don't know or are unsure.

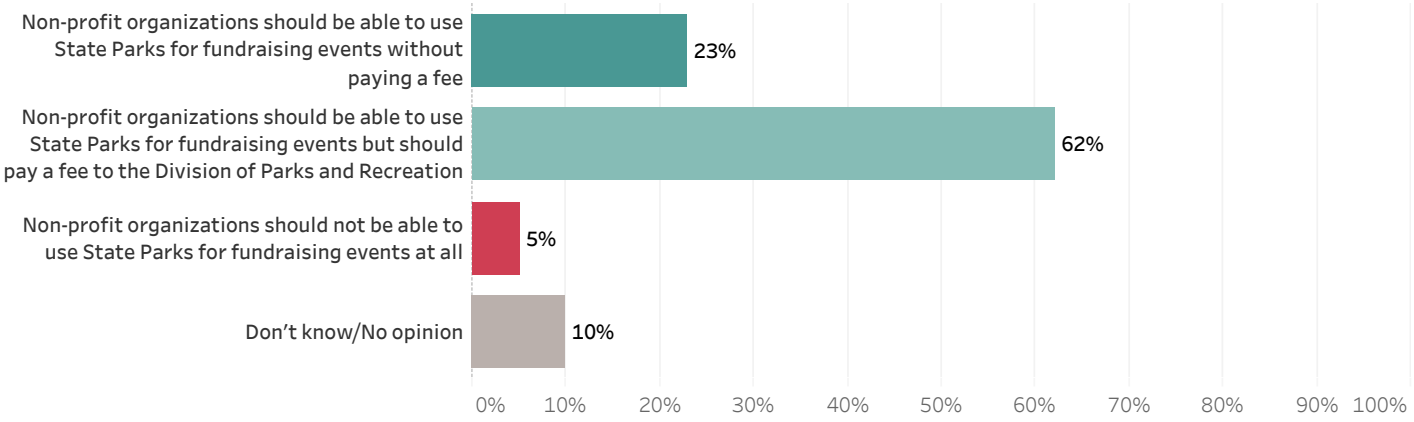
Figure 20: Thinking about State Parks in New Hampshire in general...Do agree or disagree that state funds should be used to support the maintenance of State Park facilities?



Organization Use of State Parks

Nearly a quarter of New Hampshire residents (23%) say that non-profit organizations should be able to use State Parks for fundraising events without paying a fee, 62% believe non-profit organizations should be able to use State Parks for fundraising events but should pay a fee to the Division of Parks and Recreation, 5% believe non-profit organizations should not be able to use State Parks for fundraising events at all, and 10% don't know or have no opinion.

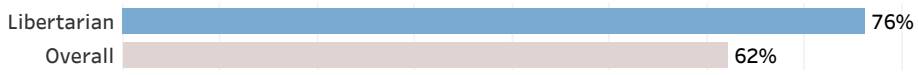
Figure 21a: In your opinion, which of the following best describes your opinion about non-profit organizations' use of State Parks in New Hampshire?



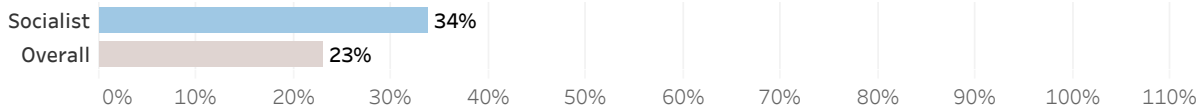
- Self-described libertarians are more likely than others to say that non-profit organizations should be able to use State Parks for fundraising events but should pay a fee to the Division of Parks and Recreation.
- Self-described socialists are more likely than others to say that non-profit organizations should be able to use State Parks for fundraising events without paying a fee.

Figure 21b: In your opinion, which of the following best describes your opinion about non-profit organizations' use of State Parks in New Hampshire? - by Demographics

Non-profit organizations should be able to use State Parks for fundraising events but should pay a fee to the Division of Parks and Recreation

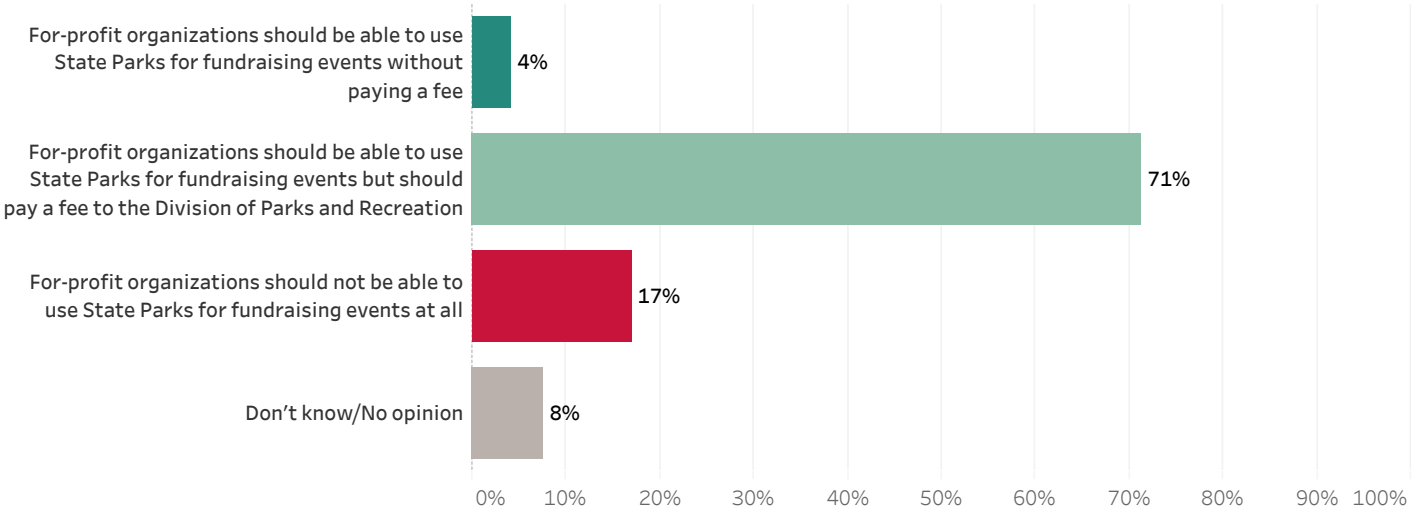


Non-profit organizations should be able to use State Parks for fundraising events without paying a fee



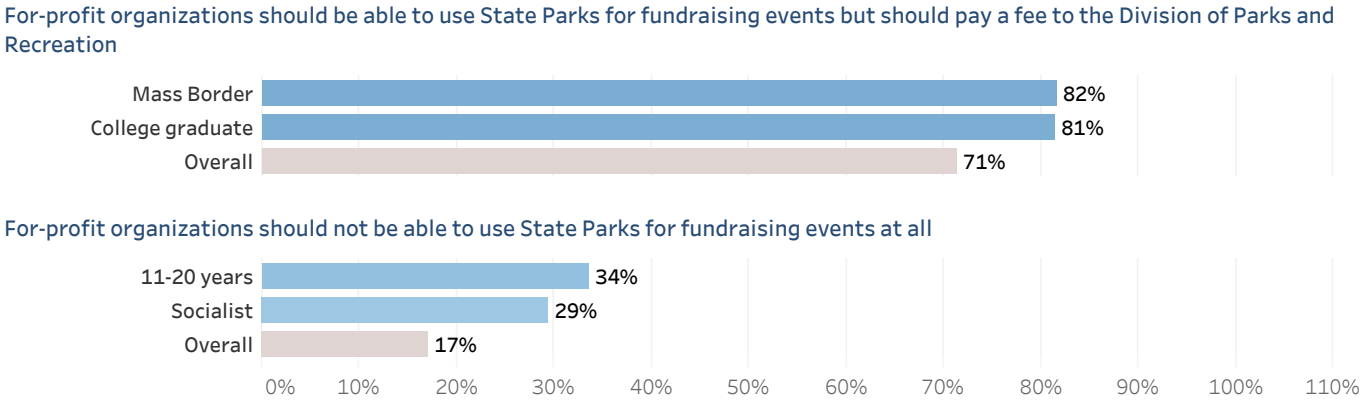
Only 4% of New Hampshire residents say that for-profit organizations should be able to use State Parks for fundraising events without paying a fee, 71% believe for-profit organizations should be able to use State Parks for fundraising events but should pay a fee to the Division of Parks and Recreation, 17% believe for-profit organizations should not be able to use State Parks for fundraising events at all, and 8% don't know or have no opinion.

Figure 22a: In your opinion, which of the following best describes your opinion about for-profit organizations' use of State Parks in New Hampshire?



- Massachusetts Border residents and college graduates are more likely than others to say that for-profit organizations should be able to use State Parks for fundraising events but should pay a fee to the Division of Parks and Recreation.
- Those who have lived in New Hampshire for 11-20 years and self-described socialists are more likely than others to say that for-profit organizations should not be able to use State Parks for fundraising events at all.

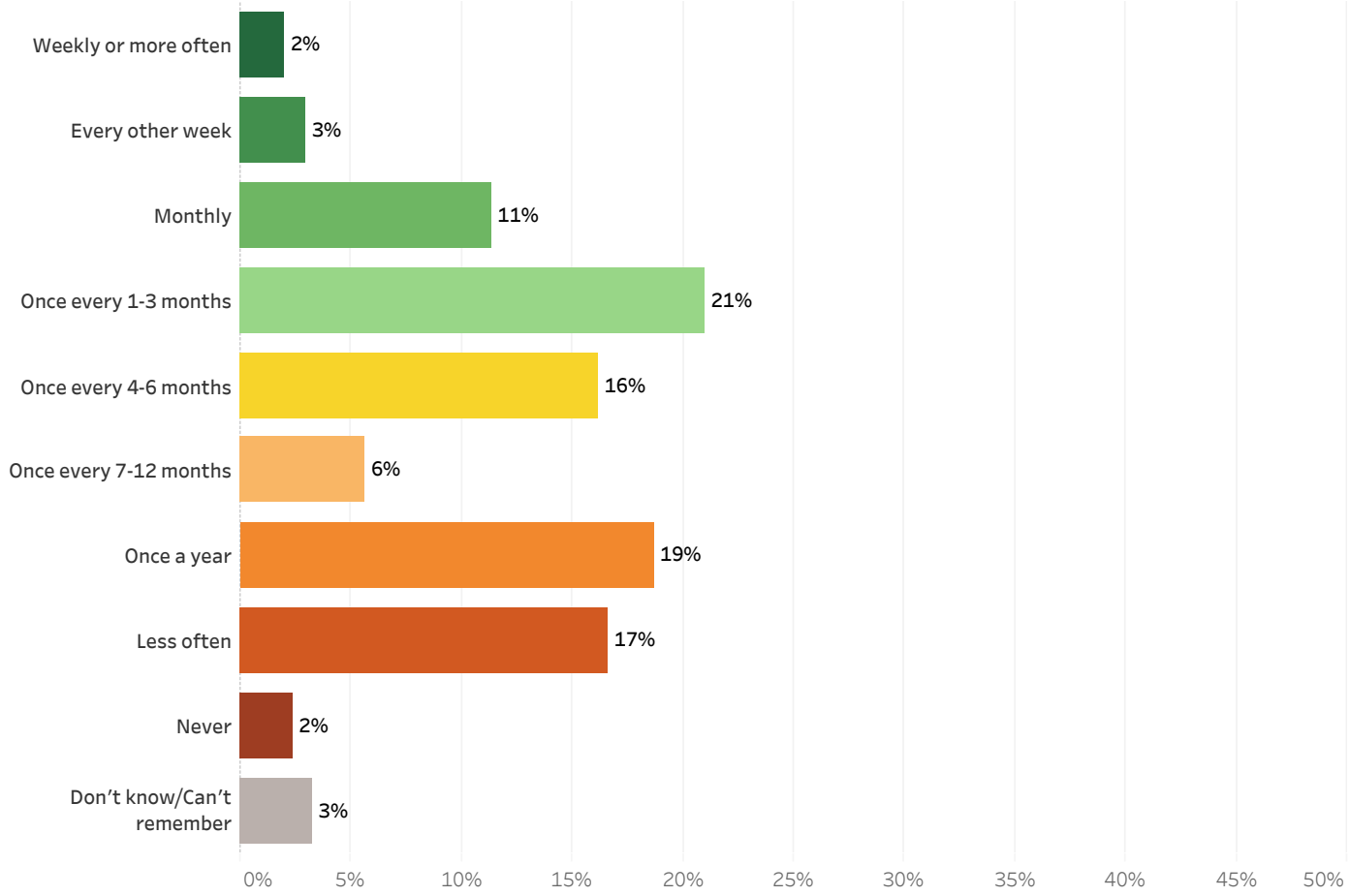
Figure 22b: In your opinion, which of the following best describes your opinion about for-profit organizations' use of State Parks in New Hampshire? - by Demographics



Parks and Recreation

Two percent of New Hampshire residents say that they visit any New Hampshire State Park weekly or more often, 3% visit every other week, 11% visit monthly, 21% visit once every 1-3 months, 16% visit once every 4-6 months, 6% visit once every 7-12 months, 19% visit once a year, 17% visit less often, 2% never visit State Parks, and 3% don't know or can't remember.

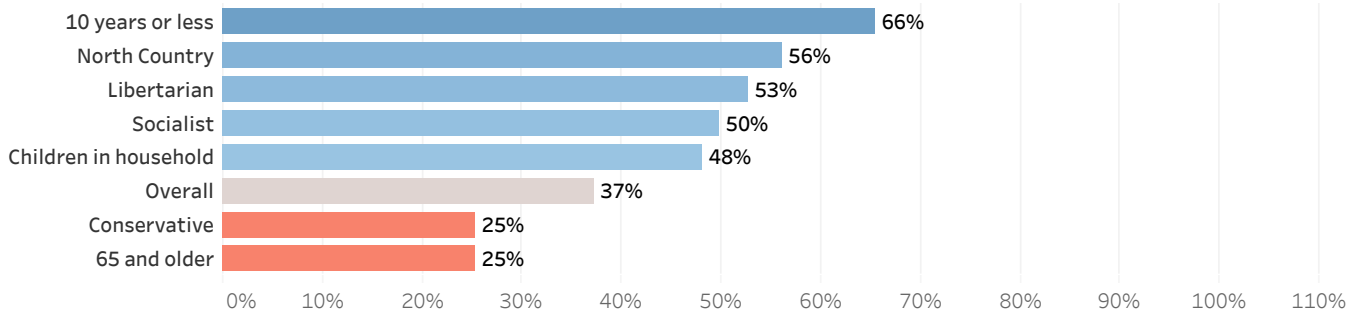
Figure 23a: About how often would you say that you visit any New Hampshire State Park?



Those who have lived in New Hampshire for 10 years or less, North Country residents, self-described libertarians and socialists, and those with children in their household are more likely than others to say that they visit New Hampshire State Parks once every 1-3 months or more often. Those aged 65 and older and self-described conservatives are less likely to say that they visit New Hampshire State Parks that frequently.

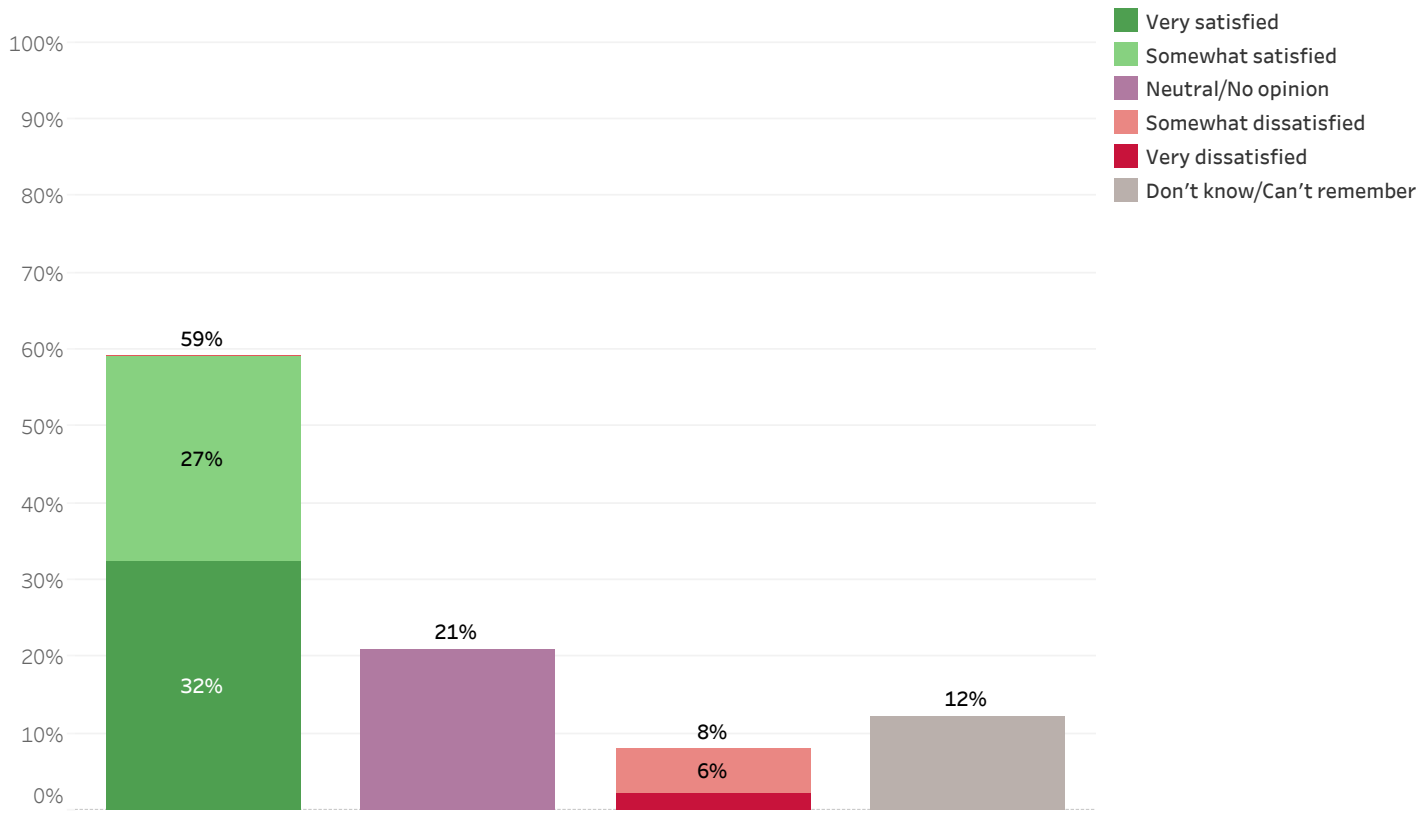
Figure 23b: About how often would you say that you visit any New Hampshire State Park? - by Demographics

Once every 1-3 months or more often



Among those who do not say that they never visit New Hampshire State Parks (N=1,304), 59% say they are generally very (32%) or somewhat (27%) satisfied with the fees they pay to enter New Hampshire State Parks, 21% are neutral or have no opinion on this, 8% are somewhat (6%) or very (2%) dissatisfied with the fees they pay, and 12% don't know or can't remember.

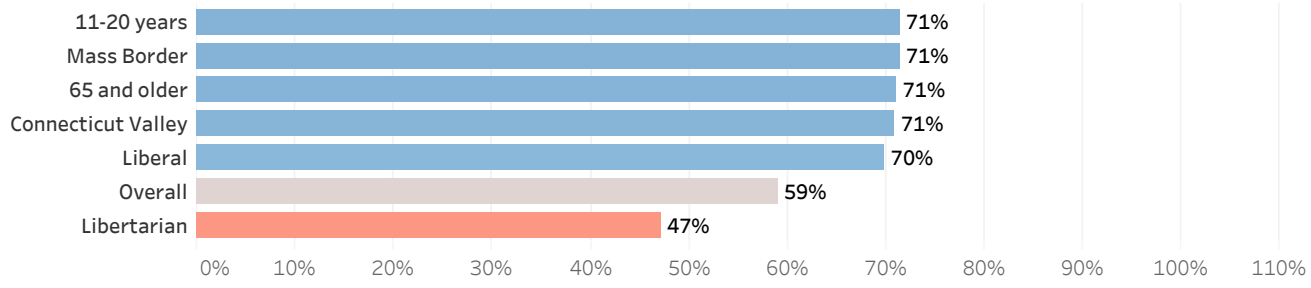
Figure 24a: Generally speaking, are you satisfied or dissatisfied with the fees you pay to enter New Hampshire State Parks?



Those who have lived in New Hampshire for 11-20 years, Massachusetts Border and Connecticut Valley residents, those aged 65 and older, and self-described liberals are more likely than others to say they are very or somewhat satisfied with the fees they pay to enter New Hampshire State Parks. Self-described libertarians are less likely to be satisfied with this.

Figure 24b: Generally speaking, are you satisfied or dissatisfied with the fees you pay to enter New Hampshire State Parks? - by Demographics

Very or somewhat satisfied



Among those who do not say that they never visit New Hampshire State Parks, 69% say they visit New Hampshire State Parks to enjoy the natural environment, 68% visit to enjoy the scenery or view, 63% visit to have a fun experience with friends or family, and 48% visit for exercise or recreation. Fewer respondents say they visit New Hampshire State Parks for education or out of curiosity (20%), camping (15%), or something else (3%), while 3% mention no reason in particular.

Figure 25a: Generally speaking, why did you decide to visit New Hampshire State Parks? (Please select all that apply)

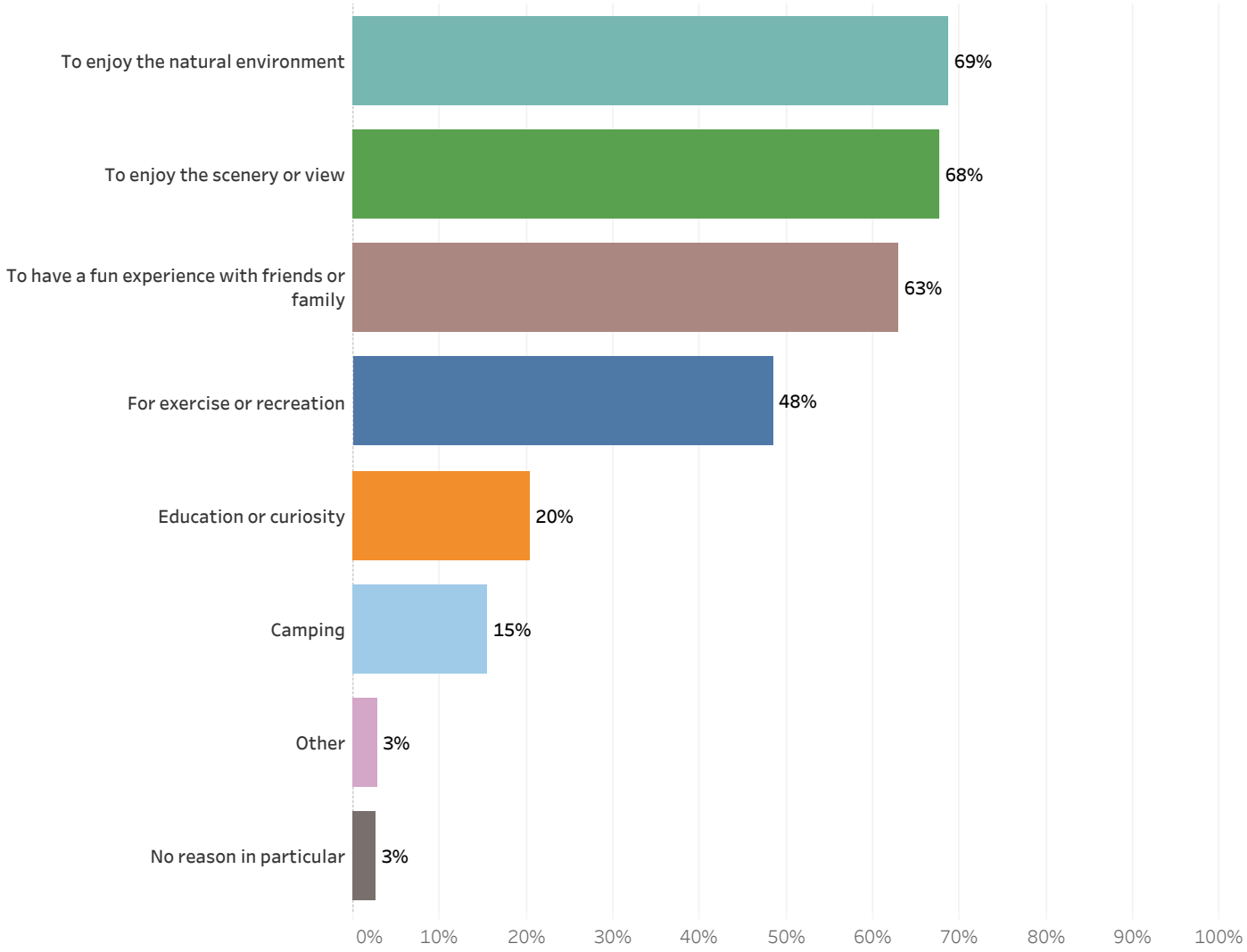


Figure 25b: Generally speaking, why did you decide to visit New Hampshire State Parks? (Please select all that apply) - Other - Selected Quotations

"Access to 4x4 Truck Trails"

"Beaches in summer"

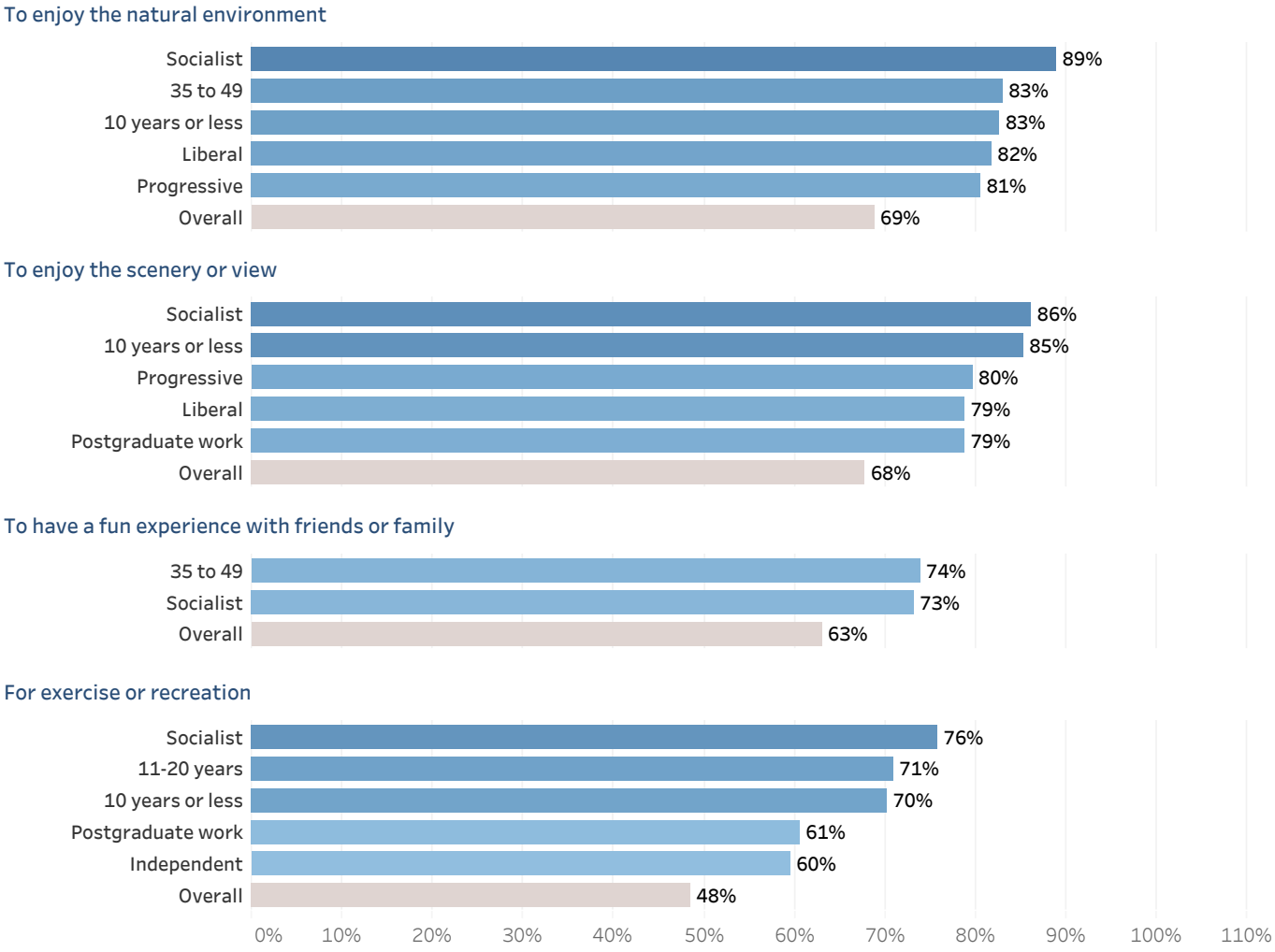
"Birding"

"Quiet contemplation"

"Work related"

- Among those who do not say that they never visit New Hampshire State Parks, self-described socialists, liberals, and progressives, those aged 35 to 49, and those who have lived in New Hampshire for 10 years or less are more likely than others to say that they visit New Hampshire State Parks to enjoy the natural environment.
- Among those who do not say that they never visit New Hampshire State Parks, self-described socialists, progressives, and liberals, those who have lived in New Hampshire for 10 years or less, and those who have completed postgraduate work are more likely than others to say that they visit New Hampshire State Parks to enjoy the scenery or view.
- Among those who do not say that they never visit New Hampshire State Parks, those aged 35 to 49 and self-described socialists are more likely than others to say they visit New Hampshire State Parks to have a fun experience with friends or family.
- Among those who do not say that they never visit New Hampshire State Parks, self-described socialists, those who have lived in New Hampshire for 20 years or less, those who have completed postgraduate work, and self-identified Independents are more likely than others to say they visit New Hampshire State Parks for exercise or recreation.

Figure 25c: Generally speaking, why did you decide to visit New Hampshire State Parks? (Please select all that apply) - by Demographics



Among those who rarely or never visit New Hampshire State Parks (N=486), 45% say they rarely or never visit because they don't have enough leisure time, while 24% say that none are close by. Less than one-fifth say that they rarely or never visit because State Parks are too crowded (17%), due to a physical disability (10%), because they are not interested in activities available there (9%), because they prefer other locations (9%), because the fees are too high (3%), because the parks are not kept in good condition (<1%), due to another reason (8%), or for no reason in particular (13%).

Figure 26a: Generally speaking, why do you rarely or never visit New Hampshire State Parks? (Please select all that apply)

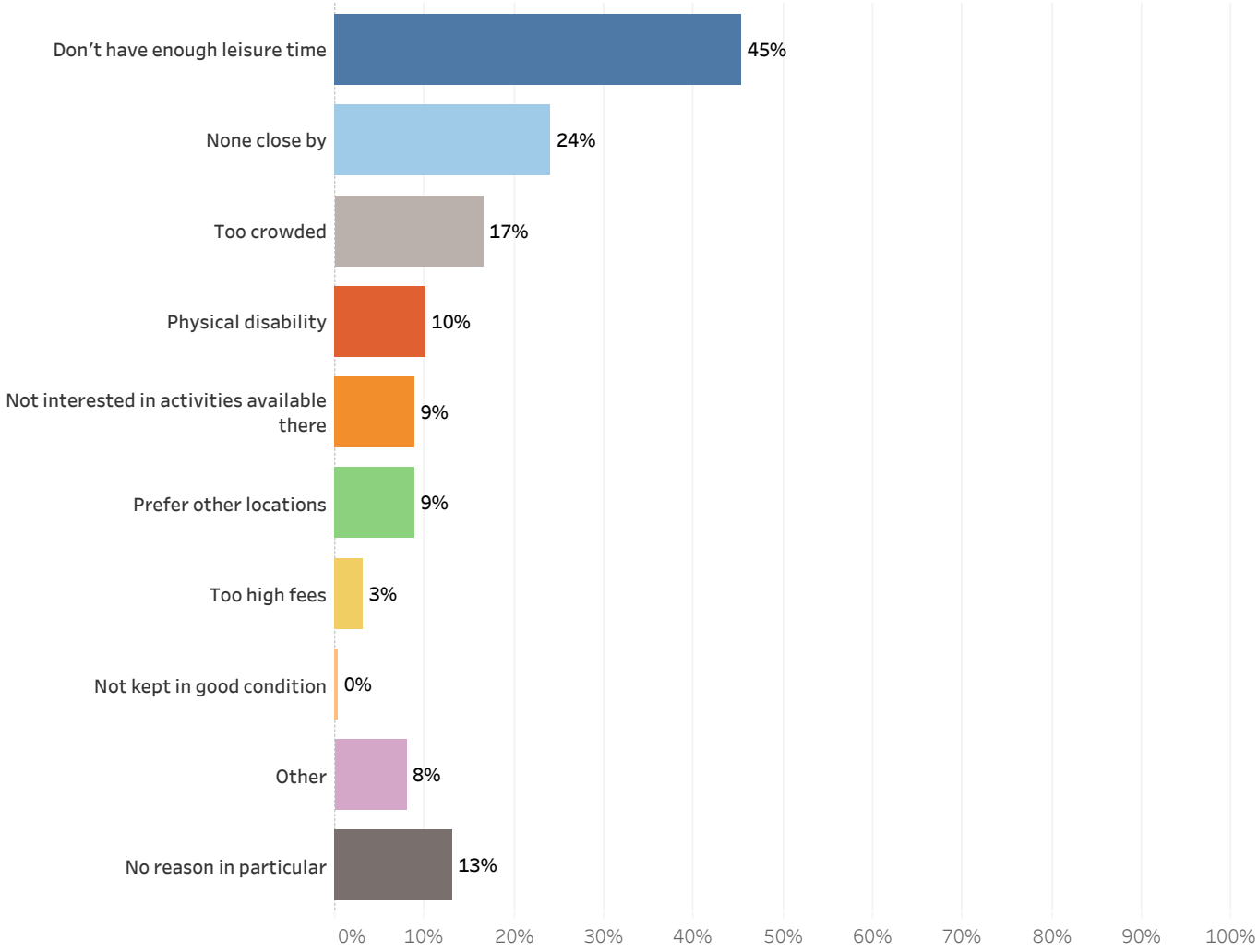


Figure 26b: Generally speaking, why do you rarely or never visit New Hampshire State Parks? (Please select all that apply) - Other - Selected Quotations

"Age - I visited quite a bit when I was younger"

"Currently touring other state parks"

"I have easy access to local town and county areas for hiking, XC skiing, etc."

"I have family that lives on lakes so I don't really see a need to go"

"It's been too hot in the summer"

"Not sure what there are for state parks"

Among those who do not say that they never visit New Hampshire State Parks, three-quarters say they typically hike or walk when visiting New Hampshire State Parks, 45% visit historical sites, and 38% swim. Fewer visitors say that activities they typically do at New Hampshire State Parks include camping (22%) fishing (15%), birding (11%), biking (11%), participating in nature programs (8%), downhill skiing (8%), OHRVing (6%), cross-country/nordic skiing (3%), equestrian (1%), or some other activity (6%), while 6% say they do not do anything in particular when visiting State Parks.

Figure 27a: Which of the following types of activities do you typically do when visiting New Hampshire State Parks? (Please select all that apply)

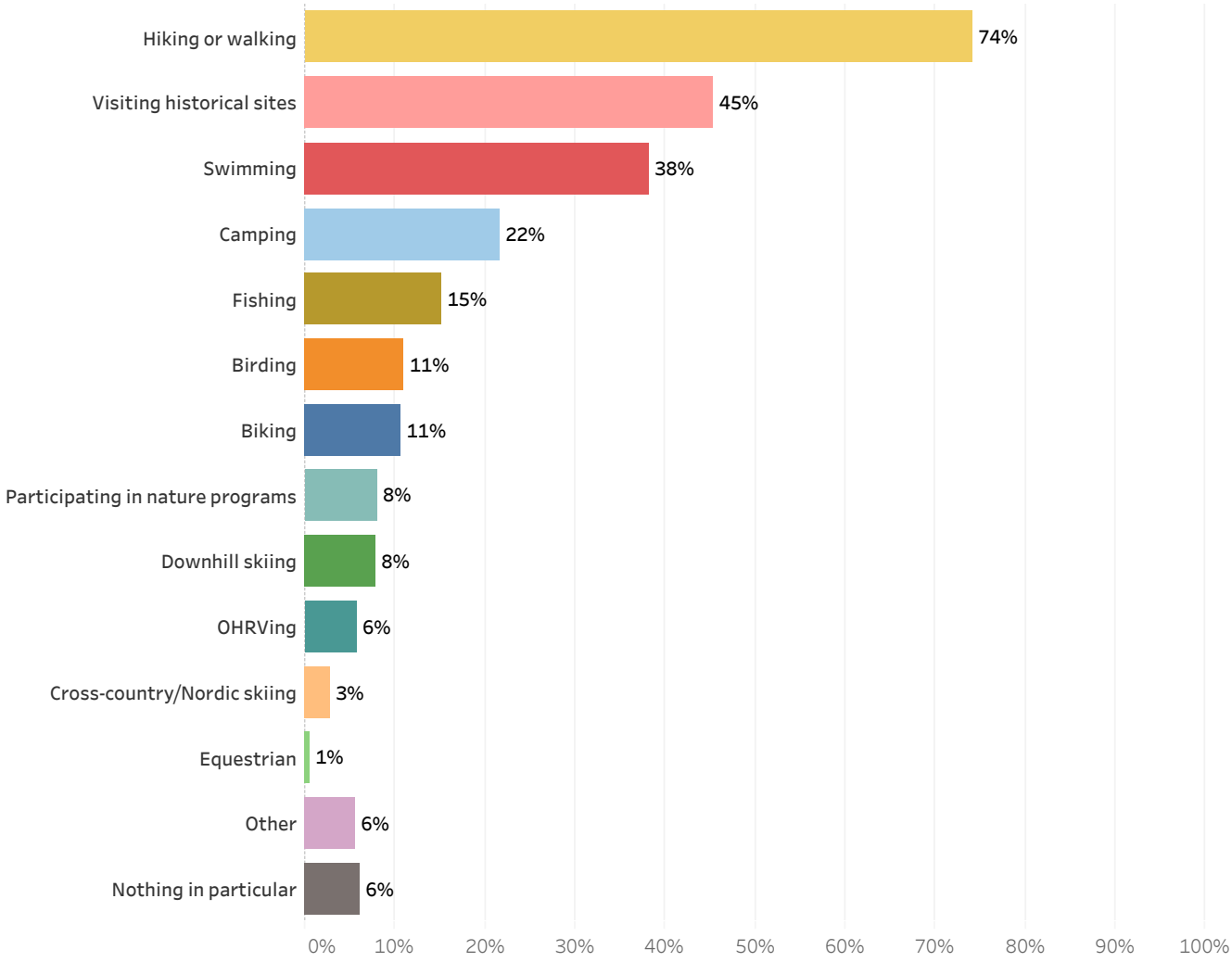


Figure 27b: Which of the following types of activities do you typically do when visiting New Hampshire State Parks? (Please select all that apply) - Other - Selected Quotations

"Canoeing, kayaking"

"Hunting"

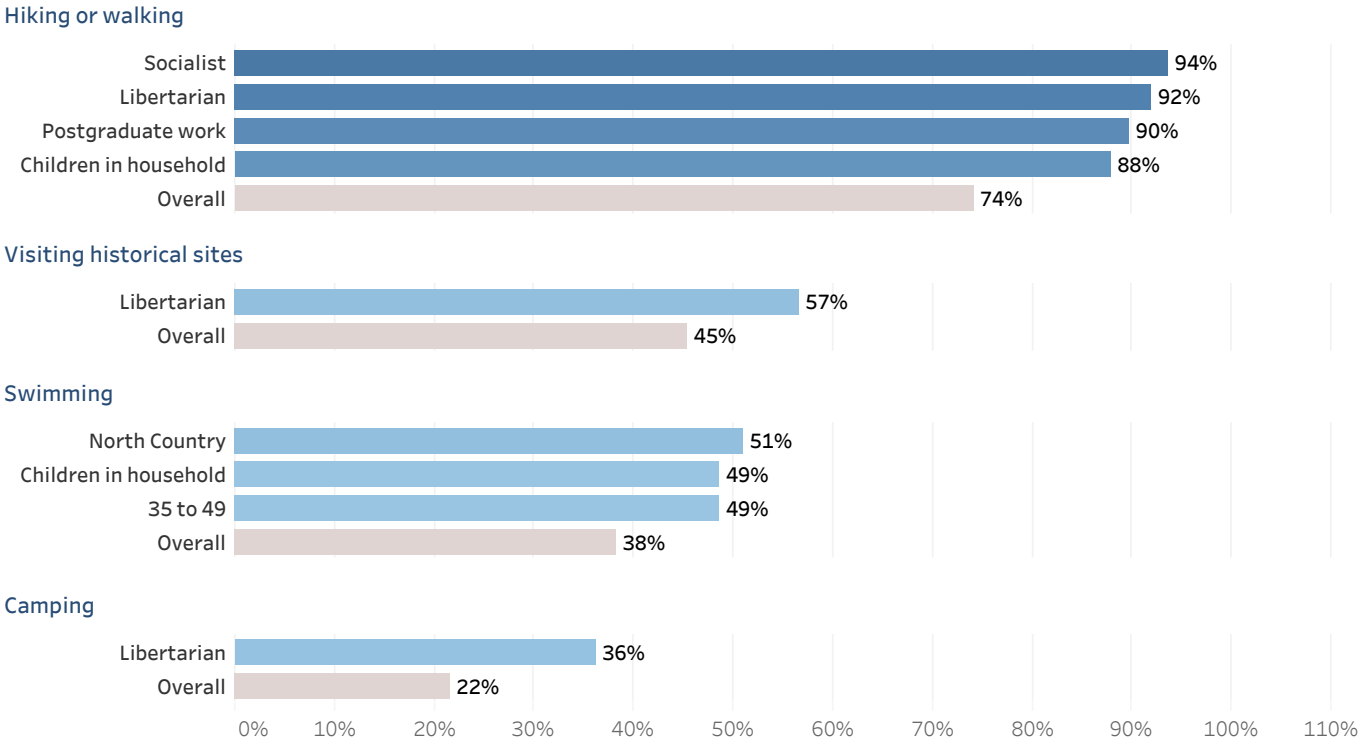
"Photography"

"Rock and Ice Climbing"

"Snowshoeing"

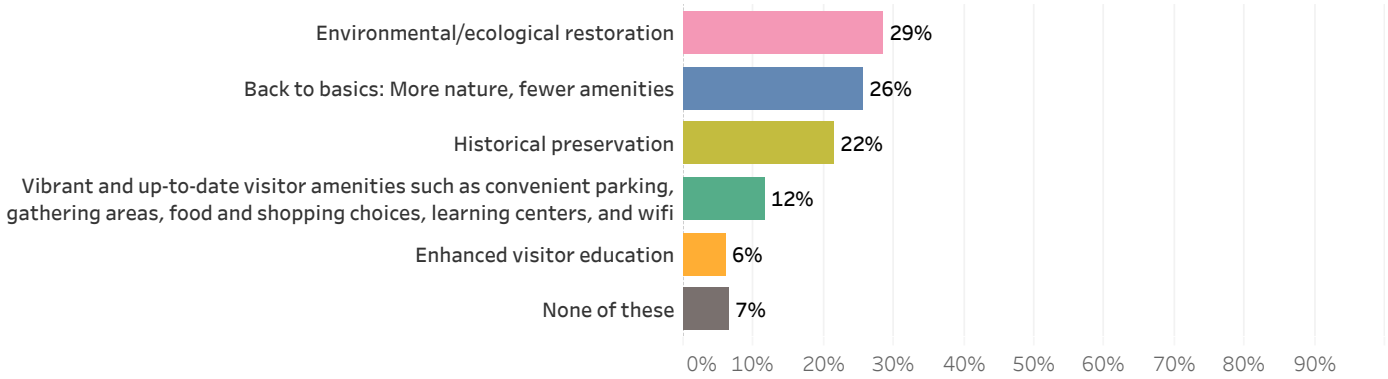
- Among those who do not say that they never visit New Hampshire State Parks, self-described socialists and libertarians, those who have completed postgraduate work, and those with children in their household are more likely than others to say that they typically hike or walk when visiting New Hampshire State Parks.
- Among those who do not say that they never visit New Hampshire State Parks, self-described libertarians are more likely than others to say that they typically visit historical sites when visiting New Hampshire State Parks.
- Among those who do not say that they never visit New Hampshire State Parks, North Country residents, those with children in their household, and those aged 35 to 49 are more likely than others to say that they typically swim when visiting New Hampshire State Parks.
- Among those who do not say that they never visit New Hampshire State Parks, self-described libertarians are more likely than others to say that they typically camp when visiting New Hampshire State Parks.

Figure 27c: Which of the following types of activities do you typically do when visiting New Hampshire State Parks? (Please select all that apply) - by Demographics



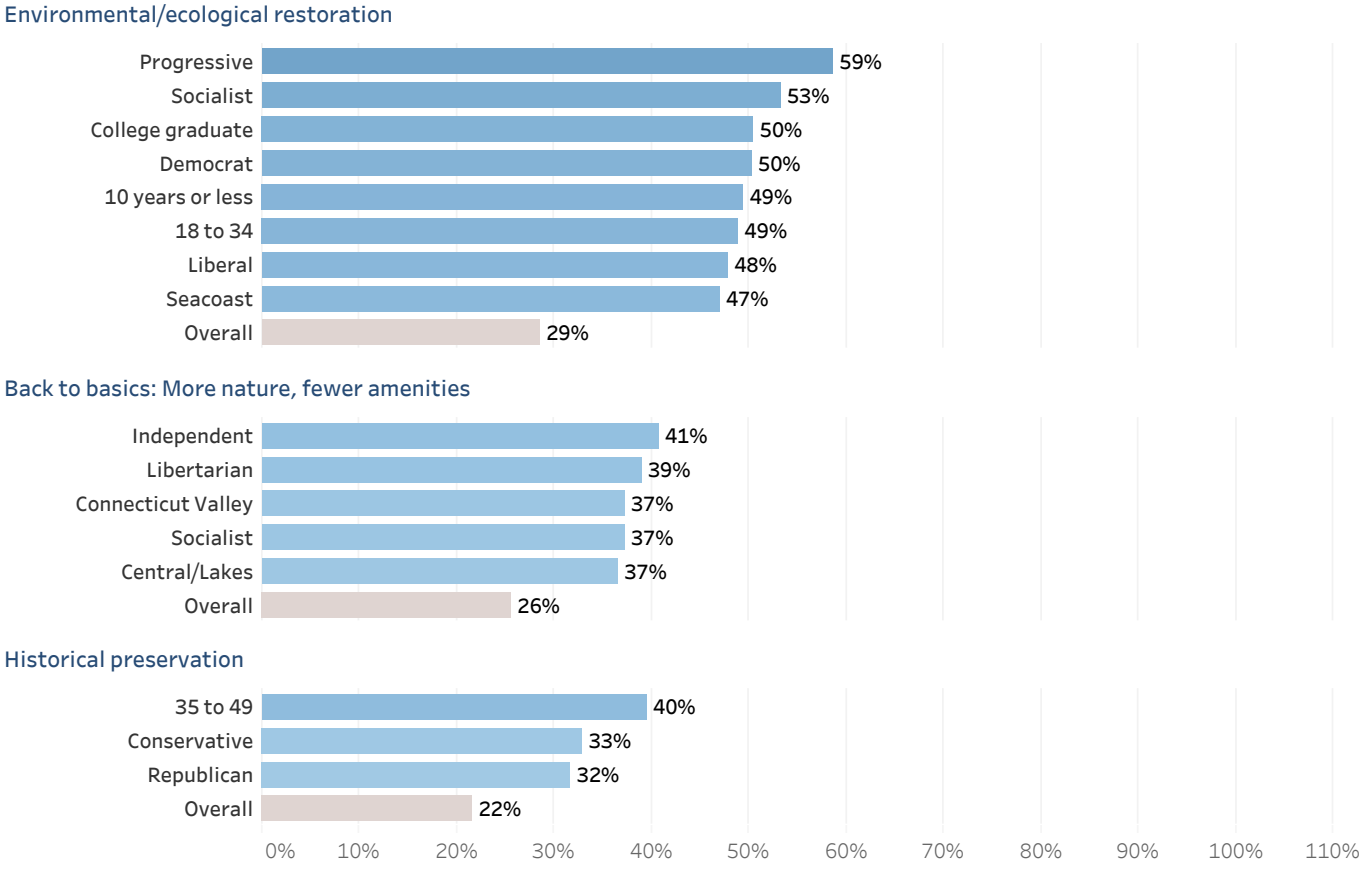
When asked what improvements they would most like to see at New Hampshire State Parks, 29% of New Hampshire residents say they would like environmental or ecological restoration, 26% prefer back to basics, with more nature and fewer amenities, 22% would like to see historical preservation, 12% want vibrant and up-to-date visitor amenities, 6% would like enhanced visitor education, and 7% do not want any of these improvements.

Figure 28a: Generally speaking, what improvements would you most like to see at New Hampshire state parks?



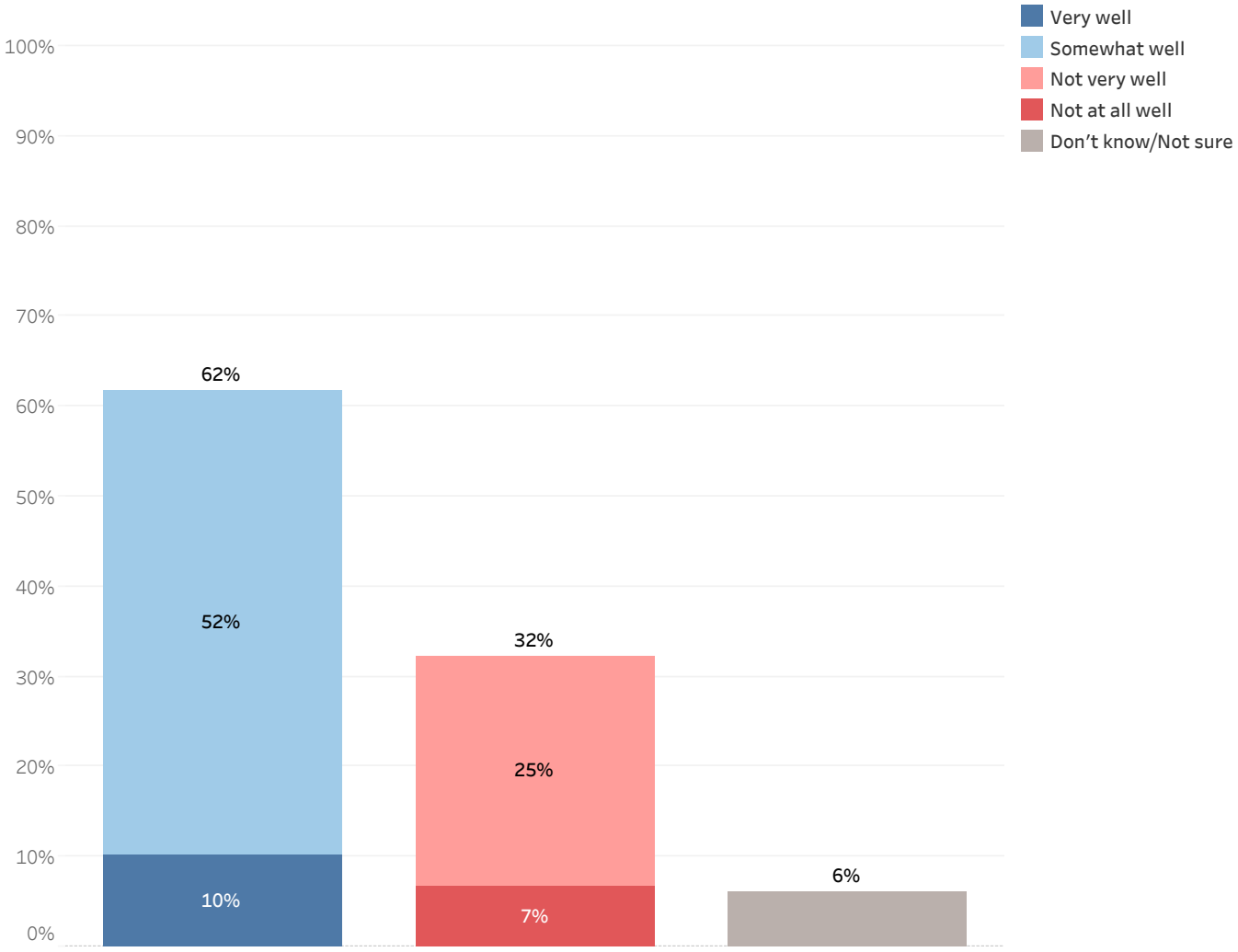
- Self-described progressives, socialists, and liberals, college graduates, self-identified Democrats, those who have lived in New Hampshire for 10 years or less, those aged 18 to 34, and Seacoast residents are more likely than others to prioritize environmental or ecological restoration.
- Self-identified Independents, self-described libertarians and socialists, and Connecticut Valley and Central/Lakes Region residents are more likely than others to prioritize a back to basics approach.
- Those aged 35 to 49, self-described conservatives, and self-identified Republicans are more likely than others to prioritize historical preservation.

Figure 28b: Generally speaking, what improvements would you most like to see at New Hampshire state parks? - by Demographics



Sixty-two percent of New Hampshire residents feel that they understand what the New Hampshire Division of Parks and Recreation does very (10%) or somewhat (52%) well, 32% understand what they do not very well (25%) or not at all well (7%), and 6% don't know or are unsure.

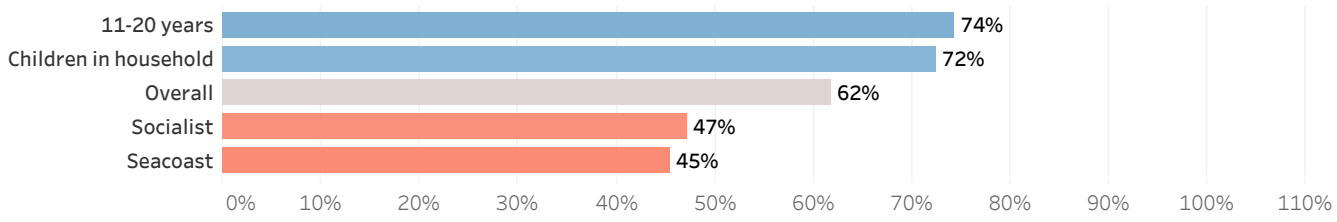
Figure 29a: How well do you feel that you understand what the New Hampshire Division of Parks and Recreation does?



Those who have lived in New Hampshire for 11-20 years and those with children in their household are more likely than others to feel that they understand what the New Hampshire Division of Parks and Recreation does very or somewhat well. Seacoast residents and self-described socialists are less likely to feel that they understand very or somewhat well.

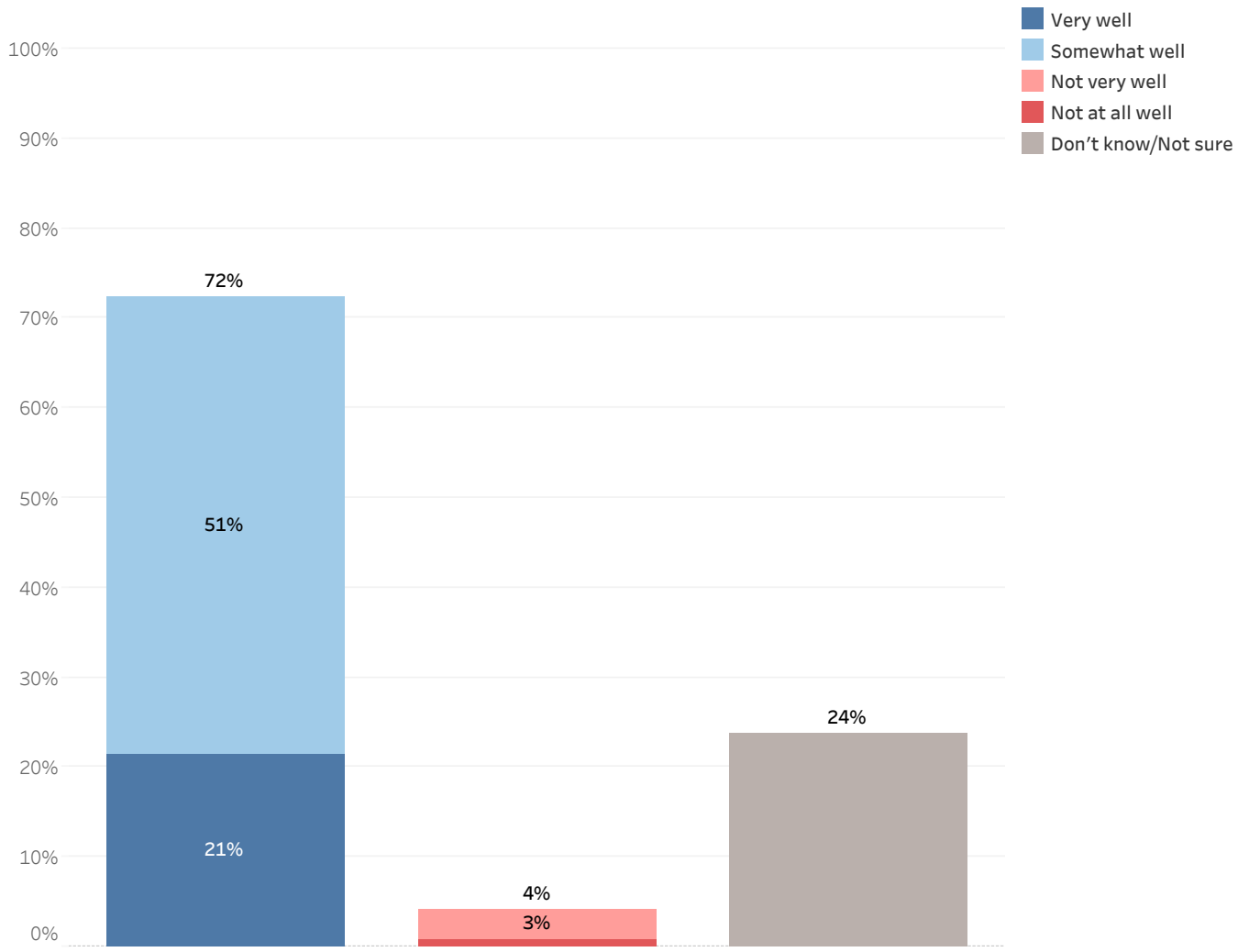
Figure 29b: How well do you feel that you understand what the New Hampshire Division of Parks and Recreation does? - by Demographics

Very or somewhat well



Seventy-two percent of New Hampshire residents think the New Hampshire Division of Parks and Recreation manages environmental conservation very (21%) or somewhat (51%) well in the state, only 4% think they manage environmental conservation not very well (3%) or not at all well (1%), and 24% don't know or are unsure.

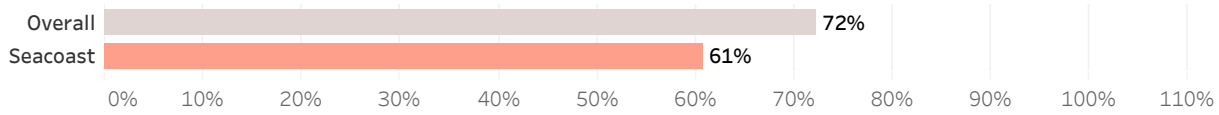
Figure 30a: Generally speaking, how well do you think the New Hampshire Division of Parks and Recreation manages environmental conservation in the state?



Seacoast residents are less likely than others to think the New Hampshire Division of Parks and Recreation manages environmental conservation very or somewhat well.

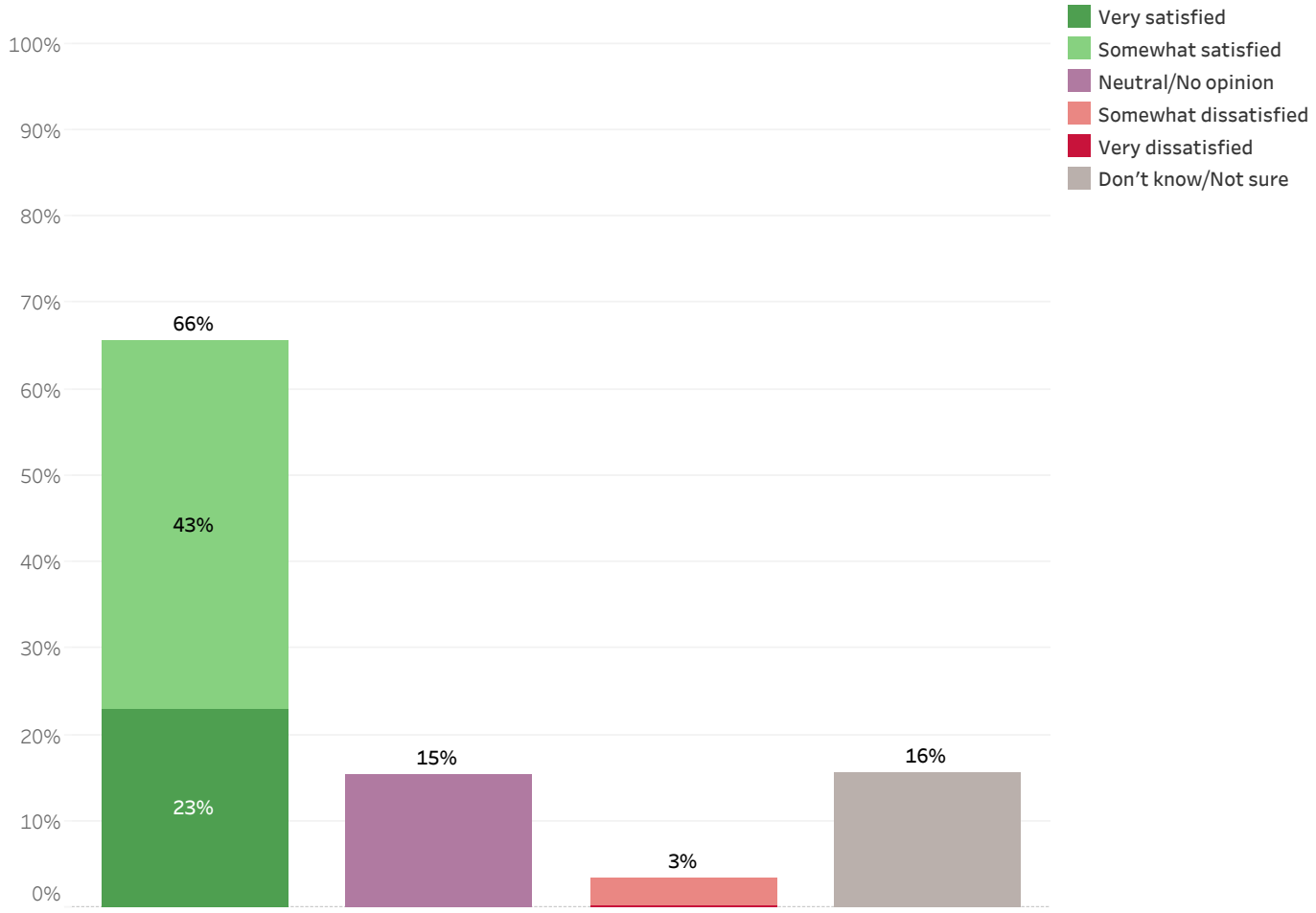
Figure 30b: Generally speaking, how well do you think the New Hampshire Division of Parks and Recreation manages environmental conservation in the state? - by Demographics

Very or somewhat well



Two-thirds of New Hampshire residents (66%) are very (23%) or somewhat (43%) satisfied with the way the New Hampshire Division of Parks and Recreation manages the state parks, campgrounds, state beaches, and other areas under its management. Fifteen percent are neutral or have no opinion on this, only 3% are somewhat (3%) or very (<1%) dissatisfied, while 16% don't know or are unsure.

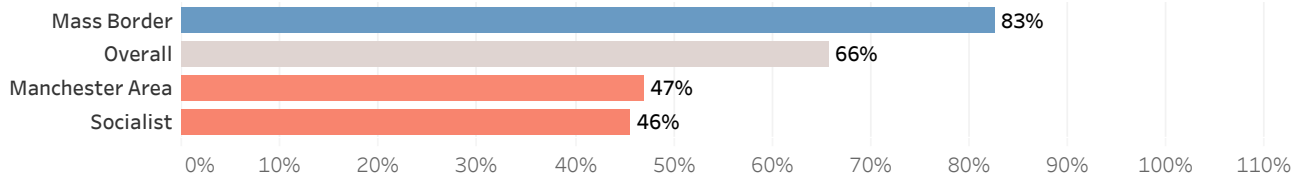
Figure 31a: Generally speaking, are you satisfied or dissatisfied with the way the New Hampshire Division of Parks and Recreation manages the state parks, campgrounds, state beaches, and other areas under its management?



Massachusetts Border residents are more likely than others to be very or somewhat satisfied with the way the New Hampshire Division of Parks and Recreation manages the state parks, campgrounds, state beaches, and other areas under its management. Self-described socialists and Manchester Area residents are less likely to be very or somewhat satisfied.

Figure 31b: Generally speaking, are you satisfied or dissatisfied with the way the New Hampshire Division of Parks and Recreation manages the state parks, campgrounds, state beaches, and other areas under its management? - by Demographics

Very or somewhat satisfied



Technical Report

How the Sample Was Selected

The 2025 Mt. Washington General Public Survey was a web-based survey of Granite State Panel members. The Granite State Panel, which is the New Hampshire panel within the States of Opinion Project, is part of an effort by the University of New Hampshire Survey Center to investigate new ways of gathering and understanding the opinion of New Hampshire residents. Panel members are recruited by calling a random sample of landlines and cellular telephones, texting a random sample of cellular telephones, or mailing a random sample of addresses in the state and inviting the recipient to take a short survey. At the conclusion of the survey, recipients were asked if they would like to participate in more surveys and provide an email address or cell phone number. Respondents under the age of 18, non-New Hampshire residents, and seasonal residents who are not registered to vote in New Hampshire were excluded from this survey and did not receive an invitation to join the panel. For each survey which they complete, panel members are entered into drawings to earn rewards, such as gift cards.

When Data Was Collected

An invitation email or text message was sent to Granite State Panel members on December 4th, 2025. Two reminders were sent to non-responders and the survey was completely closed on the morning of December 8th. One thousand, two hundred and ninety-seven (1,297) Granite State Panel members completed the survey. The response rate to the 2025 Mt. Washington General Public Survey is 35%.

Weighting of Data

Data were weighted by respondent sex, age, education, and region of the state to targets from the most recent American Community Survey (ACS) conducted by the U.S. Census Bureau, as well as party registration levels provided by the New Hampshire Secretary of State and to 2024 election results in New Hampshire. In addition to potential sampling error, all surveys have other potential sources of non-sampling error including question order effects, question wording effects, and non-response. Due to rounding, percentages may not sum to 100%. The number of respondents in each demographic below may not equal the number reported in cross-tabulation tables as some respondents choose not to answer some questions.

Sampling Error

The 2025 Mt. Washington General Public Survey, like all surveys, is subject to sampling error due to the fact that all residents in the area were not interviewed. For those questions asked of five hundred (500) or so respondents, the error is +/-4.4%. For those questions where fewer than 500 persons responded, the sampling error can be calculated as follows:

$$Sampling\ Error = \pm 1.96\sqrt{\frac{P(1-P)}{N}}$$

Where P is the percentage of responses in the answer category being evaluated and N is the total number of persons answering the particular question.

For example, suppose you had the following distribution of answers to the question, "Should the state spend more money on road repair even if that means higher taxes?" Assume 1,000 respondents answered the question as follows:

YES	47%
NO	48%
DON'T KNOW	5%

The sampling error for the "YES" percentage of 47% would be

$$\pm 1.96\sqrt{\frac{47(53)}{1000}} = \pm 3.1\%$$

for the "NO" percentage of 48% it would be

$$\pm 1.96\sqrt{\frac{48(52)}{1000}} = \pm 3.1\%$$

and for the "DON'T KNOW" percentage of 5% it would be

$$\pm 1.96\sqrt{\frac{5(95)}{1000}} = \pm 1.4\%$$

In this case we would expect the true population figures to be within the following ranges:

YES	43.9% - 50.1% (i.e., 47% ±3.1%)
NO	44.9% - 51.1% (i.e., 48% ±3.1%)
DON'T KNOW	3.6% - 6.4% (i.e., 5% ±1.4%)

The margin of sampling error for the 2025 Mt. Washington General Public Survey is +/-2.7 percent.

Design Effect

These MSE's have not been adjusted for design effect. The design effect for the survey is 2.3%. To learn more about the Granite State Panel and the States of Opinion Project, please visit our website https://cola.unh.edu/unh-survey-center/projects/states-opinion-project. For more information about the methodology used in the 2025 Mt. Washington General Public Survey, contact Dr. Andrew Smith at (603) 862-2226 or by email at andrew.smith@unh.edu.

Appendix A

Q1: Have you ever visited Mount Washington in the White Mountains of New Hampshire?

		Visited summit of Mt. Washington	Visited Mt. Washington but did not go to summit	Never visited to Mt. Washington	Don't know/Not sure	N
Overall	December 2025	62%	16%	20%	2%	1,297
Gender of Respondent	Men	68%	14%	17%	2%	639
	Women	58%	18%	21%	3%	640
Age of Respondent	18 to 34	45%	26%	24%	5%	329
	35 to 49	60%	15%	24%	1%	261
	50 to 64	70%	12%	17%	2%	376
	65 and older	70%	12%	17%	1%	327
Level of Education	High school or less	66%	6%	26%	2%	442
	Tech school/Some college	61%	24%	15%		355
	College graduate	59%	21%	15%	5%	301
	Postgraduate work	58%	16%	23%	3%	196
Children in Household	Children in household	60%	18%	19%	3%	331
	No children in household	63%	15%	20%	2%	948
Household Income	Less than $45,000	50%	20%	29%	1%	139
	$45,000 - $74,999	58%	7%	32%	4%	232
	$75,000 - $99,999	73%	13%	11%	4%	153
	$100,000 - $149,999	64%	18%	18%	0%	290
	$150,000 or more	67%	20%	13%	0%	232
Years Lived in NH	10 years or less	61%	32%	7%	0%	99
	11-20 years	50%	15%	35%		151
	More than 20 years	64%	14%	19%	3%	1,047
Region of State	Central/Lakes	64%	13%	23%	1%	227
	Connecticut Valley	61%	18%	18%	3%	155
	Manchester Area	63%	10%	24%	2%	220
	Mass Border	58%	22%	18%	3%	355
	North Country	80%	5%	15%	0%	137
	Seacoast	53%	21%	22%	4%	199
Party ID	Democrat	52%	22%	21%	4%	562
	Independent	67%	15%	17%	0%	179
	Republican	70%	9%	20%	1%	543
Political Ideology	Socialist	48%	26%	25%		104
	Progressive	41%	20%	32%	7%	174
	Liberal	63%	30%	7%	0%	138
	Moderate	75%	10%	14%	1%	301
	Conservative	67%	10%	21%	2%	367
	Libertarian	67%	6%	27%		93

Q2: Why have you never visited Mount Washington? (Please select all that apply)

		Haven't had the time	Not interested in activities there	Physical disability	Prefer visiting other locations
Overall	December 2025	40%	17%	3%	17%
Gender of Respondent	Men	55%	25%	1%	8%
	Women	27%	13%	5%	20%
Age of Respondent	18 to 34	53%	18%		24%
	35 to 49	55%		2%	5%
	50 to 64	28%	22%	2%	28%
	65 and older	17%	30%	9%	7%
Level of Education	High school or less	31%	22%	5%	29%
	Tech school/Some college	47%	2%	2%	4%
	College graduate	47%	24%	1%	4%
	Postgraduate work	46%	17%	2%	15%
Children in Household	Children in household	30%	13%	1%	17%
	No children in household	41%	19%	4%	18%
Household Income	Less than $45,000	45%	11%	10%	21%
	$45,000 - $74,999	30%	19%	4%	26%
	$100,000 - $149,999	23%	28%	1%	19%
	$150,000 or more	46%	14%	1%	8%
Years Lived in NH	11-20 years	62%	8%	3%	25%
	More than 20 years	34%	20%	3%	15%
Region of State	Central/Lakes	31%	18%	0%	32%
	Connecticut Valley	10%	5%		5%
	Manchester Area	73%	7%	3%	0%
	Mass Border	36%	30%	10%	20%
	Seacoast	24%	24%	0%	30%
Party ID	Democrat	35%	16%	1%	16%
	Independent	45%	11%	4%	25%
	Republican	42%	22%	5%	16%
Political Ideology	Socialist	59%	15%		13%
	Progressive	62%	9%	1%	19%
	Moderate	32%	44%	1%	6%
	Conservative	22%	9%	7%	21%

Q2: Why have you never visited Mount Washington? (Please select all that apply)

		Too crowded	Too far away	Other	No reason in particular	N
Overall	December 2025	3%	19%	4%	20%	259
Gender of Respondent	Men	0%	29%	5%	10%	107
	Women	5%	13%	3%	29%	137
Age of Respondent	18 to 34		23%	1%	8%	78
	35 to 49	5%	36%		35%	63
	50 to 64	1%	5%	7%	14%	62
	65 and older	4%	8%	10%	26%	56
Level of Education	High school or less		27%	3%	13%	115
	Tech school/Some college	4%	21%	5%	36%	53
	College graduate	8%	7%	4%	14%	46
	Postgraduate work	3%	8%	5%	23%	45
Children in Household	Children in household	4%	15%	1%	35%	64
	No children in household	2%	21%	5%	15%	188
Household Income	Less than $45,000	6%	5%	2%	4%	41
	$45,000 - $74,999	1%	20%	2%	23%	73
	$100,000 - $149,999	5%	16%	2%	23%	52
	$150,000 or more	2%	13%	6%	21%	30
Years Lived in NH	11-20 years	2%	42%	1%	9%	52
	More than 20 years	2%	13%	4%	23%	200
Region of State	Central/Lakes	4%	0%	2%	13%	51
	Connecticut Valley	2%	3%	9%	70%	28
	Manchester Area		57%		20%	53
	Mass Border	1%	18%	2%	4%	63
	Seacoast	7%	11%	7%	19%	43
Party ID	Democrat	4%	14%	6%	30%	119
	Independent	3%	35%	3%	10%	31
	Republican	2%	20%	2%	12%	106
Political Ideology	Socialist		33%	2%	21%	27
	Progressive	8%	37%	5%	3%	56
	Moderate	2%	15%	8%	8%	42
	Conservative	2%	2%	4%	35%	76

Q4a: Before today, were you aware that... - The summit of Mount Washington is a state park

		Yes	No	N
Overall	December 2025	81%	19%	1,295
Gender of Respondent	Men	80%	20%	639
	Women	82%	18%	639
Age of Respondent	18 to 34	78%	22%	329
	35 to 49	86%	14%	261
	50 to 64	83%	17%	376
	65 and older	80%	20%	326
Level of Education	High school or less	83%	17%	442
	Tech school/Some college	79%	21%	353
	College graduate	80%	20%	301
	Postgraduate work	84%	16%	196
Children in Household	Children in household	81%	19%	331
	No children in household	81%	19%	946
Household Income	Less than $45,000	71%	29%	139
	$45,000 - $74,999	80%	20%	232
	$75,000 - $99,999	80%	20%	153
	$100,000 - $149,999	82%	18%	290
	$150,000 or more	86%	14%	232
Years Lived in NH	10 years or less	88%	12%	97
	11-20 years	78%	22%	151
	More than 20 years	81%	19%	1,047
Region of State	Central/Lakes	88%	12%	227
	Connecticut Valley	83%	17%	155
	Manchester Area	80%	20%	221
	Mass Border	83%	17%	355
	North Country	84%	16%	137
	Seacoast	71%	29%	197
Party ID	Democrat	79%	21%	562
	Independent	76%	24%	179
	Republican	86%	14%	541
Political Ideology	Socialist	63%	37%	104
	Progressive	83%	17%	174
	Liberal	84%	16%	138
	Moderate	83%	17%	302
	Conservative	83%	17%	365
	Libertarian	83%	17%	93

Q4b: Before today, were you aware that... - The Mt. Washington Auto Road and Mount Washington Cog Railway are privately owned and operated

		Yes	No	N
Overall	December 2025	55%	45%	1,294
Gender of Respondent	Men	63%	37%	638
	Women	46%	54%	638
Age of Respondent	18 to 34	51%	49%	329
	35 to 49	59%	41%	260
	50 to 64	43%	57%	376
	65 and older	69%	31%	325
Level of Education	High school or less	53%	47%	442
	Tech school/Some college	45%	55%	353
	College graduate	65%	35%	301
	Postgraduate work	61%	39%	195
Children in Household	Children in household	51%	49%	331
	No children in household	56%	44%	946
Household Income	Less than $45,000	64%	36%	138
	$45,000 - $74,999	36%	64%	231
	$75,000 - $99,999	70%	30%	152
	$100,000 - $149,999	53%	47%	290
	$150,000 or more	69%	31%	232
Years Lived in NH	10 years or less	66%	34%	99
	11-20 years	40%	60%	151
	More than 20 years	56%	44%	1,044
Region of State	Central/Lakes	61%	39%	226
	Connecticut Valley	46%	54%	154
	Manchester Area	55%	45%	220
	Mass Border	43%	57%	355
	North Country	71%	29%	137
	Seacoast	64%	36%	198
Party ID	Democrat	57%	43%	559
	Independent	53%	47%	179
	Republican	53%	47%	543
Political Ideology	Socialist	28%	72%	104
	Progressive	72%	28%	173
	Liberal	54%	46%	137
	Moderate	60%	40%	301
	Conservative	53%	47%	366
	Libertarian	67%	33%	93

Q4c: Before today, were you aware that... - The cost of tickets for the Mt. Washington Auto Road and Cog Railway do not include any fee for entering Mount Washington State Park

		Yes	No	N
Overall	December 2025	30%	70%	1,293
Gender of Respondent	Men	33%	67%	638
	Women	25%	75%	638
Age of Respondent	18 to 34	29%	71%	329
	35 to 49	28%	72%	261
	50 to 64	30%	70%	374
	65 and older	32%	68%	325
Level of Education	High school or less	29%	71%	442
	Tech school/Some college	33%	67%	351
	College graduate	26%	74%	301
	Postgraduate work	30%	70%	195
Children in Household	Children in household	24%	76%	331
	No children in household	32%	68%	944
Household Income	Less than $45,000	28%	72%	138
	$45,000 - $74,999	15%	85%	230
	$75,000 - $99,999	24%	76%	152
	$100,000 - $149,999	30%	70%	290
	$150,000 or more	41%	59%	232
Years Lived in NH	10 years or less	41%	59%	99
	11-20 years	23%	77%	151
	More than 20 years	30%	70%	1,043
Region of State	Central/Lakes	33%	67%	226
	Connecticut Valley	28%	72%	155
	Manchester Area	24%	76%	220
	Mass Border	25%	75%	354
	North Country	35%	65%	136
	Seacoast	37%	63%	198
Party ID	Democrat	31%	69%	559
	Independent	23%	77%	179
	Republican	31%	69%	542
Political Ideology	Socialist	18%	82%	104
	Progressive	27%	73%	173
	Liberal	46%	54%	138
	Moderate	32%	68%	301
	Conservative	29%	71%	365
	Libertarian	31%	69%	93

Q5: To the best of your recollection, when was the most recent time you visited Mount Washington State Park?

		Within the past year	Within the past 5 years	Within the past 10 years	Within the past 20 years	More than 20 years ago	Don't know/Can't remember	N
Overall	December 2025	16%	31%	17%	15%	21%	0%	803
Gender of Respondent	Men	15%	34%	19%	10%	22%	0%	434
	Women	16%	27%	15%	21%	19%	0%	368
Age of Respondent	18 to 34	20%	52%	6%	10%	11%		150
	35 to 49	18%	29%	17%	17%	19%	0%	157
	50 to 64	12%	28%	21%	17%	21%		262
	65 and older	14%	23%	20%	14%	27%	1%	230
Level of Education	High school or less	16%	15%	18%	18%	32%	1%	293
	Tech school/Some college	16%	39%	14%	11%	19%	0%	216
	College graduate	10%	49%	15%	16%	10%	0%	178
	Postgraduate work	20%	31%	24%	13%	12%	0%	114
Children in Household	Children in household	23%	28%	21%	16%	11%		200
	No children in household	13%	33%	15%	15%	24%	0%	593
Household Income	Less than $45,000	8%	17%	24%	5%	46%		69
	$45,000 - $74,999	27%	22%	14%	13%	23%	0%	134
	$75,000 - $99,999	11%	30%	17%	24%	18%		111
	$100,000 - $149,999	21%	37%	16%	7%	19%		185
	$150,000 or more	17%	47%	15%	9%	11%		157
Years Lived in NH	10 years or less	31%	56%	9%	3%	1%		60
	11-20 years	8%	29%	17%	5%	41%	0%	76
	More than 20 years	15%	29%	18%	17%	20%	0%	667
Region of State	Central/Lakes	13%	37%	20%	22%	8%	0%	146
	Connecticut Valley	9%	29%	31%	4%	27%	1%	95
	Manchester Area	17%	39%	18%	9%	17%		139
	Mass Border	14%	17%	16%	17%	36%		204
	North Country	25%	33%	10%	26%	6%		110
	Seacoast	17%	42%	10%	10%	19%	2%	106
Party ID	Democrat	13%	36%	17%	19%	15%	1%	295
	Independent	9%	45%	19%	17%	10%	0%	120
	Republican	19%	24%	16%	12%	28%		379
Political Ideology	Socialist	11%	70%	10%	3%	7%		50
	Progressive	19%	34%	14%	21%	12%		71
	Liberal	21%	35%	19%	10%	14%		86
	Moderate	10%	31%	15%	23%	21%	0%	225
	Conservative	24%	21%	19%	12%	25%		246
	Libertarian	7%	44%	31%	11%	7%		62

Q6: How did you get to Mount Washington State Park?

		Auto Road	Cog Railway	Hiking day trip (hiking from the mountain's base and back in one day)	Overnight hiking trip	Took Auto Road using tour van or other group transport	Other	Don't know/Can't remember	N
Overall	December 2025	47%	26%	14%	3%	5%	4%	0%	803
Gender of Respondent	Men	49%	23%	16%	2%	4%	6%	0%	434
	Women	44%	31%	13%	4%	7%	2%	0%	368
Age of Respondent	18 to 34	31%	22%	31%	5%	9%	3%		150
	35 to 49	41%	33%	18%	5%	4%			157
	50 to 64	56%	26%	9%	1%	4%	5%		262
	65 and older	49%	26%	8%	3%	7%	6%	1%	230
Level of Education	High school or less	59%	22%	7%	1%	4%	6%	1%	293
	Tech school/Some college	42%	28%	23%	1%	3%	3%		216
	College graduate	42%	25%	15%	6%	8%	4%	0%	178
	Postgraduate work	32%	36%	17%	7%	7%	1%		114
Children in Household	Children in household	34%	28%	25%	6%	4%	3%		199
	No children in household	50%	27%	11%	2%	6%	4%	0%	593
Household Income	Less than $45,000	63%	15%	6%	5%	8%	3%		69
	$45,000 - $74,999	43%	22%	21%	6%	4%	5%		134
	$75,000 - $99,999	28%	46%	12%	3%	5%	6%		111
	$100,000 - $149,999	52%	18%	23%	1%	5%	1%		185
	$150,000 or more	42%	30%	11%	4%	5%	8%	0%	157
Years Lived in NH	10 years or less	45%	23%	13%	1%	17%	1%		60
	11-20 years	66%	18%	7%	5%	2%	1%		76
	More than 20 years	44%	28%	15%	3%	5%	5%	0%	667
Region of State	Central/Lakes	48%	15%	27%	4%	1%	5%		145
	Connecticut Valley	44%	33%	8%	7%	2%	7%		95
	Manchester Area	31%	34%	25%	0%	7%	3%		139
	Mass Border	60%	24%	5%	0%	9%	2%	0%	204
	North Country	36%	31%	13%	2%	9%	9%		110
	Seacoast	50%	27%	9%	8%	3%	0%	2%	106
Party ID	Democrat	39%	39%	10%	4%	5%	2%	1%	295
	Independent	42%	17%	21%	2%	9%	9%		120
	Republican	54%	20%	16%	1%	5%	4%		379
Political Ideology	Socialist	13%	40%	43%	2%	1%			50
	Progressive	35%	34%	14%	12%	2%	2%		71
	Liberal	43%	27%	8%	3%	18%	1%	0%	86
	Moderate	52%	36%	6%	1%	2%	3%		225
	Conservative	51%	18%	17%	1%	6%	7%		246
	Libertarian	47%	22%	28%	2%	2%			62

Q7: Why did you decide to visit Mount Washington State Park? (Please select all that apply)

		For exercise or recreation	Part of an organized tour	To drive to the top or get the "This Car Climbed Mt. Washington" bumper sticker	To enjoy the natural environment	To enjoy the scenery or view	To have a fun experience with friends or family
Overall	December 2025	19%	4%	10%	39%	58%	64%
Gender of Respondent	Men	19%	2%	8%	39%	58%	64%
	Women	19%	7%	12%	40%	58%	64%
Age of Respondent	18 to 34	41%	6%	7%	36%	53%	63%
	35 to 49	22%	13%	15%	37%	53%	61%
	50 to 64	12%	2%	7%	44%	61%	67%
	65 and older	12%	1%	10%	37%	61%	62%
Level of Education	High school or less	10%	7%	9%	36%	59%	63%
	Tech school/Some college	25%	0%	15%	35%	58%	59%
	College graduate	22%	6%	10%	48%	59%	69%
	Postgraduate work	27%	3%	4%	39%	54%	68%
Children in Household	Children in household	31%	10%	2%	38%	47%	59%
	No children in household	16%	3%	12%	40%	61%	66%
Household Income	Less than $45,000	6%	1%	6%	26%	36%	67%
	$45,000 - $74,999	26%	3%	27%	37%	65%	63%
	$75,000 - $99,999	15%	23%	2%	29%	43%	48%
	$100,000 - $149,999	27%	0%	6%	48%	61%	68%
	$150,000 or more	20%	2%	7%	39%	60%	68%
Years Lived in NH	10 years or less	18%	11%	25%	66%	76%	79%
	11-20 years	18%		4%	23%	43%	53%
	More than 20 years	19%	4%	9%	38%	58%	64%
Region of State	Central/Lakes	30%	4%	7%	51%	76%	71%
	Connecticut Valley	18%	0%	17%	33%	37%	57%
	Manchester Area	30%	6%	8%	28%	44%	55%
	Mass Border	7%	1%	12%	36%	62%	71%
	North Country	15%	16%	0%	44%	52%	50%
	Seacoast	20%	1%	15%	44%	72%	73%
Party ID	Democrat	17%	10%	5%	43%	56%	64%
	Independent	30%	0%	7%	51%	77%	68%
	Republican	17%	2%	14%	31%	54%	62%
Political Ideology	Socialist	57%		3%	68%	77%	74%
	Progressive	23%	1%	7%	49%	53%	62%
	Liberal	19%	10%	2%	43%	61%	62%
	Moderate	7%	9%	6%	39%	59%	69%
	Conservative	16%	2%	10%	24%	47%	50%
	Libertarian	36%	0%	14%	49%	58%	69%

Q7: Why did you decide to visit Mount Washington State Park? (Please select all that apply)

		To learn about the history of the area	To reach the highest peak in the Northeastern U.S.	To ride the Cog Railway	Other	No reason in particular	N
Overall	December 2025	9%	23%	19%	9%	0%	798
Gender of Respondent	Men	9%	23%	19%	9%	0%	433
	Women	10%	23%	18%	8%	0%	364
Age of Respondent	18 to 34	7%	14%	17%	3%		150
	35 to 49	7%	29%	20%	5%		153
	50 to 64	11%	23%	20%	14%	0%	262
	65 and older	9%	23%	17%	7%	1%	230
Level of Education	High school or less	7%	20%	14%	12%	1%	293
	Tech school/Some college	10%	21%	22%	7%		215
	College graduate	12%	25%	19%	7%	0%	173
	Postgraduate work	7%	28%	24%	6%	0%	113
Children in Household	Children in household	4%	23%	14%	5%		195
	No children in household	11%	23%	20%	9%	0%	592
Household Income	Less than $45,000	4%	9%	8%	12%		69
	$45,000 - $74,999	10%	16%	16%	8%		134
	$75,000 - $99,999	10%	19%	16%	4%	0%	111
	$100,000 - $149,999	11%	29%	15%	13%		184
	$150,000 or more	7%	28%	25%	7%	1%	153
Years Lived in NH	10 years or less	12%	42%	20%			60
	11-20 years	3%	11%	17%	24%		76
	More than 20 years	10%	23%	19%	8%	0%	662
Region of State	Central/Lakes	9%	26%	12%	5%		141
	Connecticut Valley	7%	15%	22%	21%	0%	95
	Manchester Area	13%	24%	25%	4%	0%	139
	Mass Border	12%	25%	20%	10%	1%	204
	North Country	6%	18%	13%	13%		110
	Seacoast	6%	28%	20%	3%		106
Party ID	Democrat	13%	26%	24%	7%	1%	294
	Independent	8%	16%	12%	8%		120
	Republican	6%	23%	17%	9%		375
Political Ideology	Socialist	16%	31%	36%	7%		50
	Progressive	12%	21%	30%	5%		71
	Liberal	17%	36%	15%	3%		86
	Moderate	9%	26%	20%	4%	1%	224
	Conservative	5%	15%	14%	14%		241
	Libertarian	8%	42%	19%	3%		62

Q8: On a scale from 0 to 10, where 0 is "definitely not" and 10 is "definitely would," how likely are you to recommend going to Mount Washington State Park to a friend or family member in the future?

		0 - Definitely Not	1	2	3	4	5
Overall	December 2025	1%	0%	0%	0%	0%	7%
Gender of Respondent	Men	1%	0%			0%	9%
	Women		0%	0%	0%	0%	4%
Age of Respondent	18 to 34						6%
	35 to 49						4%
	50 to 64	2%		0%	0%	0%	13%
	65 and older		0%	0%		0%	3%
Level of Education	High school or less	2%					12%
	Tech school/Some college		0%			0%	1%
	College graduate		0%	0%	1%	0%	8%
	Postgraduate work			0%		0%	1%
Children in Household	Children in household						11%
	No children in household	1%	0%	0%	0%	0%	4%
Household Income	Less than $45,000						1%
	$45,000 - $74,999					0%	1%
	$75,000 - $99,999		0%	0%			2%
	$100,000 - $149,999			0%	1%		6%
	$150,000 or more	4%	0%			0%	2%
Years Lived in NH	10 years or less						10%
	11-20 years						16%
	More than 20 years	1%	0%	0%	0%	0%	6%
Region of State	Central/Lakes			0%			11%
	Connecticut Valley	6%				0%	20%
	Manchester Area				1%		3%
	Mass Border			0%			6%
	North Country		0%			0%	1%
	Seacoast		1%			0%	3%
Party ID	Democrat		0%	0%		0%	3%
	Independent	5%				0%	16%
	Republican		0%		0%		8%
Political Ideology	Socialist						1%
	Progressive					0%	6%
	Liberal		0%	0%		0%	4%
	Moderate			0%	0%	0%	8%
	Conservative						5%
	Libertarian		1%				15%

Q8: On a scale from 0 to 10, where 0 is "definitely not" and 10 is "definitely would," how likely are you to recommend going to Mount Washington State Park to a friend or family member in the future?

		6	7	8	9	10 - Definitely Would	N
Overall	December 2025	0%	6%	13%	7%	67%	798
Gender of Respondent	Men	0%	5%	16%	5%	62%	431
	Women	0%	6%	8%	8%	73%	367
Age of Respondent	18 to 34		13%	12%	4%	66%	150
	35 to 49		3%	25%	9%	59%	155
	50 to 64	1%	6%	13%	6%	59%	262
	65 and older	1%	2%	5%	7%	82%	228
Level of Education	High school or less		3%	10%	6%	67%	293
	Tech school/Some college	0%	3%	15%	4%	76%	213
	College graduate	1%	14%	16%	6%	55%	178
	Postgraduate work	1%	6%	11%	12%	69%	112
Children in Household	Children in household	0%	9%	14%	6%	60%	200
	No children in household	0%	5%	12%	7%	70%	588
Household Income	Less than $45,000		2%	2%	8%	86%	68
	$45,000 - $74,999	0%	4%	17%	6%	71%	134
	$75,000 - $99,999	1%	9%	13%	9%	66%	111
	$100,000 - $149,999	0%	5%	21%	7%	60%	184
	$150,000 or more	0%	4%	13%	4%	73%	157
Years Lived in NH	10 years or less		13%	3%	10%	63%	60
	11-20 years	0%	4%	34%	4%	42%	75
	More than 20 years	0%	5%	11%	6%	70%	663
Region of State	Central/Lakes	1%	3%	13%	3%	69%	145
	Connecticut Valley	0%	3%	9%	2%	58%	94
	Manchester Area	1%	8%	3%	13%	71%	139
	Mass Border	0%	4%	28%	2%	59%	204
	North Country	0%	13%	4%	10%	72%	108
	Seacoast		5%	6%	11%	74%	105
Party ID	Democrat	0%	6%	7%	6%	77%	293
	Independent	0%	9%	16%	4%	51%	120
	Republican	0%	4%	16%	8%	63%	377
Political Ideology	Socialist	0%	4%	3%	8%	84%	50
	Progressive	0%	11%	9%	11%	64%	71
	Liberal	0%	9%	8%	2%	76%	86
	Moderate	1%	4%	7%	5%	74%	224
	Conservative		5%	12%	10%	68%	243
	Libertarian	0%		33%	4%	46%	62

Q9: How likely are you to visit Mount Washington State Park in the future?

		Very likely	Somewhat likely	Somewhat unlikely	Very unlikely	Don't know/Not sure	N
Overall	December 2025	48%	36%	7%	6%	2%	803
Gender of Respondent	Men	46%	36%	8%	7%	3%	434
	Women	51%	36%	7%	6%	1%	368
Age of Respondent	18 to 34	62%	36%	2%			150
	35 to 49	64%	30%	3%	1%	2%	157
	50 to 64	38%	46%	8%	8%	0%	262
	65 and older	42%	30%	11%	13%	5%	230
Level of Education	High school or less	43%	35%	6%	12%	3%	293
	Tech school/Some college	51%	37%	7%	2%	2%	216
	College graduate	48%	38%	8%	4%	1%	178
	Postgraduate work	56%	32%	8%	4%	0%	114
Children in Household	Children in household	64%	24%	8%	4%		200
	No children in household	44%	41%	6%	6%	3%	592
Household Income	Less than $45,000	58%	27%	5%	9%		69
	$45,000 - $74,999	56%	36%	5%	2%	1%	134
	$75,000 - $99,999	47%	34%	2%	9%	7%	111
	$100,000 - $149,999	41%	47%	6%	3%	2%	185
	$150,000 or more	63%	24%	5%	8%	0%	157
Years Lived in NH	10 years or less	69%	28%	2%	0%	0%	60
	11-20 years	30%	46%	18%	2%	4%	76
	More than 20 years	49%	36%	6%	8%	2%	667
Region of State	Central/Lakes	39%	45%	6%	8%	3%	145
	Connecticut Valley	43%	25%	18%	8%	6%	95
	Manchester Area	56%	28%	6%	8%	1%	139
	Mass Border	39%	51%	3%	6%	0%	204
	North Country	73%	19%	6%	1%	2%	110
	Seacoast	47%	35%	10%	8%	0%	106
Party ID	Democrat	53%	33%	8%	4%	1%	294
	Independent	36%	46%	4%	13%	0%	120
	Republican	48%	35%	7%	6%	3%	379
Political Ideology	Socialist	44%	49%	7%	0%	0%	50
	Progressive	45%	42%	11%	3%	0%	71
	Liberal	61%	26%	10%	2%	0%	86
	Moderate	41%	35%	10%	10%	4%	225
	Conservative	56%	30%	4%	8%	2%	246
	Libertarian	50%	45%	2%	1%	2%	62

Q11: Which of the following do you think the stewards of Mount Washington State Park should do regarding the Visitor Center?

		Build a new state-of-the-art, environmentally-friendly Visitor Center	Renovate or expand the existing Sherman Adams Visitor Center	Make no changes to the existing Sherman Adams Visitor Center	No opinion/Don't know	N
Overall	December 2025	8%	25%	16%	51%	1,296
Gender of Respondent	Men	8%	22%	19%	51%	638
	Women	8%	29%	14%	50%	640
Age of Respondent	18 to 34	7%	24%	21%	48%	329
	35 to 49	11%	27%	17%	44%	261
	50 to 64	5%	27%	11%	57%	376
	65 and older	8%	24%	17%	51%	326
Level of Education	High school or less	6%	18%	16%	60%	441
	Tech school/Some college	9%	38%	18%	36%	355
	College graduate	8%	23%	16%	52%	301
	Postgraduate work	9%	24%	11%	56%	196
Children in Household	Children in household	10%	21%	19%	50%	331
	No children in household	7%	27%	15%	51%	947
Household Income	Less than $45,000	12%	29%	6%	53%	138
	$45,000 - $74,999	5%	27%	21%	48%	232
	$75,000 - $99,999	3%	24%	25%	48%	153
	$100,000 - $149,999	12%	19%	18%	51%	290
	$150,000 or more	11%	23%	17%	50%	232
Years Lived in NH	10 years or less	13%	34%	23%	31%	98
	11-20 years	8%	12%	8%	73%	151
	More than 20 years	7%	27%	17%	50%	1,046
Region of State	Central/Lakes	7%	15%	21%	57%	227
	Connecticut Valley	5%	19%	17%	59%	154
	Manchester Area	9%	26%	20%	45%	221
	Mass Border	9%	37%	11%	43%	355
	North Country	4%	25%	25%	46%	137
	Seacoast	10%	21%	8%	61%	199
Party ID	Democrat	12%	24%	13%	51%	561
	Independent	9%	17%	19%	55%	178
	Republican	3%	30%	18%	48%	543
Political Ideology	Socialist	15%	16%	24%	45%	104
	Progressive	20%	27%	11%	42%	174
	Liberal	8%	43%	10%	39%	138
	Moderate	8%	23%	12%	57%	300
	Conservative	3%	22%	21%	54%	367
	Libertarian	0%	15%	32%	52%	93

Q12: The Yankee Building was built on the summit in the 1940s and currently houses both private and public telecommunications equipment and is in need of significant repairs and / or replacement. Generally speaking, how do you think the state should address the Yankee Building?

		Pursue a public-private partnership to renovate or replace the building on the summit	Renovate or replace the building on the summit with state and/or federal funds	No opinion/Don't know	N
Overall	December 2025	41%	36%	24%	1,284
Gender of Respondent	Men	43%	36%	21%	631
	Women	38%	35%	27%	636
Age of Respondent	18 to 34	37%	35%	28%	329
	35 to 49	41%	41%	18%	261
	50 to 64	40%	35%	25%	370
	65 and older	45%	34%	20%	320
Level of Education	High school or less	35%	38%	28%	437
	Tech school/Some college	43%	38%	19%	350
	College graduate	42%	33%	24%	298
	Postgraduate work	45%	34%	21%	195
Children in Household	Children in household	45%	31%	25%	330
	No children in household	39%	38%	23%	936
Household Income	Less than $45,000	37%	44%	19%	136
	$45,000 - $74,999	40%	29%	31%	228
	$75,000 - $99,999	42%	31%	27%	153
	$100,000 - $149,999	46%	39%	15%	286
	$150,000 or more	55%	30%	16%	231
Years Lived in NH	10 years or less	38%	47%	15%	98
	11-20 years	28%	51%	21%	151
	More than 20 years	43%	33%	25%	1,034
Region of State	Central/Lakes	51%	23%	27%	227
	Connecticut Valley	30%	50%	20%	152
	Manchester Area	39%	33%	27%	215
	Mass Border	43%	37%	21%	353
	North Country	36%	40%	23%	134
	Seacoast	36%	39%	25%	198
Party ID	Democrat	29%	46%	25%	555
	Independent	52%	29%	19%	179
	Republican	48%	28%	23%	537
Political Ideology	Socialist	22%	55%	23%	104
	Progressive	32%	48%	19%	172
	Liberal	31%	39%	30%	138
	Moderate	42%	42%	15%	296
	Conservative	43%	26%	31%	361
	Libertarian	59%	19%	22%	93

Q13: Which of the following comes closest to your opinion regarding development and conservation at Mount Washington State Park?

		The Park should prioritize development and improvement of the site to allow for more visitors or better amenities	The Park should prioritize environmental conservation and minimizing its ecological impact	Don't know/Not sure	N
Overall	December 2025	18%	67%	16%	1,289
Gender of Respondent	Men	19%	61%	20%	632
	Women	17%	72%	12%	640
Age of Respondent	18 to 34	10%	76%	15%	329
	35 to 49	14%	80%	6%	261
	50 to 64	23%	56%	21%	374
	65 and older	24%	60%	17%	321
Level of Education	High school or less	19%	51%	31%	437
	Tech school/Some college	23%	71%	6%	353
	College graduate	11%	82%	7%	300
	Postgraduate work	16%	72%	12%	196
Children in Household	Children in household	23%	59%	17%	331
	No children in household	16%	70%	14%	940
Household Income	Less than $45,000	19%	63%	17%	138
	$45,000 - $74,999	24%	68%	8%	229
	$75,000 - $99,999	11%	76%	13%	153
	$100,000 - $149,999	23%	60%	17%	288
	$150,000 or more	18%	72%	11%	229
Years Lived in NH	10 years or less	9%	90%	1%	97
	11-20 years	16%	67%	17%	151
	More than 20 years	19%	64%	17%	1,041
Region of State	Central/Lakes	13%	69%	18%	224
	Connecticut Valley	16%	64%	20%	152
	Manchester Area	28%	60%	12%	221
	Mass Border	21%	61%	18%	355
	North Country	10%	77%	13%	136
	Seacoast	12%	77%	11%	197
Party ID	Democrat	11%	83%	6%	561
	Independent	10%	65%	25%	176
	Republican	28%	50%	22%	538
Political Ideology	Socialist	1%	99%	0%	104
	Progressive	4%	92%	4%	174
	Liberal	12%	84%	4%	138
	Moderate	14%	70%	16%	301
	Conservative	37%	41%	22%	359
	Libertarian	27%	39%	35%	93

Q14a: Alpine tundra vegetation disturbed by trampling can take decades to recover naturally. At Mount Washington State Park, off-trail travel by hikers and visitors can damage this rare ecosystem. Generally speaking, would you support or oppose the following actions to help protect and restore alpine tundra at the summit? - Widen existing hiking trails to allow passing and a place to take a break without having to step off-trail

		Strongly support	Somewhat support	Neutral/No opinion	Somewhat oppose	Strongly oppose	Don't know/Not sure	N
Overall	December 2025	39%	31%	13%	7%	4%	6%	1,289
Gender of Respondent	Men	36%	36%	15%	4%	4%	4%	635
	Women	41%	26%	10%	10%	4%	9%	637
Age of Respondent	18 to 34	30%	38%	11%	13%	5%	3%	329
	35 to 49	49%	30%	7%	6%	5%	3%	261
	50 to 64	34%	29%	18%	3%	4%	11%	373
	65 and older	47%	27%	12%	6%	3%	6%	322
Level of Education	High school or less	38%	27%	14%	5%	5%	11%	437
	Tech school/Some college	46%	29%	12%	6%	4%	2%	353
	College graduate	37%	36%	10%	7%	5%	5%	301
	Postgraduate work	33%	36%	13%	11%	3%	4%	195
Children in Household	Children in household	31%	34%	9%	16%	8%	2%	331
	No children in household	42%	30%	14%	4%	3%	7%	941
Household Income	Less than $45,000	39%	36%	19%	3%	1%	2%	137
	$45,000 - $74,999	49%	23%	4%	12%	1%	10%	232
	$75,000 - $99,999	43%	37%	5%	6%	2%	6%	153
	$100,000 - $149,999	36%	27%	16%	7%	11%	2%	287
	$150,000 or more	38%	32%	13%	8%	4%	5%	228
Years Lived in NH	10 years or less	49%	31%	3%	7%	8%	1%	98
	11-20 years	39%	34%	12%	7%	7%	2%	148
	More than 20 years	38%	31%	14%	7%	3%	7%	1,043
Region of State	Central/Lakes	34%	26%	20%	7%	4%	9%	224
	Connecticut Valley	43%	30%	14%	2%	7%	5%	155
	Manchester Area	43%	26%	11%	11%	0%	9%	219
	Mass Border	38%	36%	12%	3%	7%	3%	355
	North Country	36%	30%	5%	17%	3%	10%	135
	Seacoast	44%	34%	11%	5%	3%	3%	199
Party ID	Democrat	44%	38%	7%	5%	3%	3%	558
	Independent	25%	30%	23%	6%	12%	4%	177
	Republican	38%	24%	15%	9%	4%	10%	541
Political Ideology	Socialist	45%	23%	18%	3%	8%	3%	104
	Progressive	47%	34%	6%	6%	2%	4%	173
	Liberal	25%	52%	14%	4%	5%	1%	136
	Moderate	36%	41%	10%	5%	1%	7%	301
	Conservative	42%	22%	13%	11%	1%	11%	362
	Libertarian	20%	25%	25%	7%	20%	3%	93

Q14b: Alpine tundra vegetation disturbed by trampling can take decades to recover naturally. At Mount Washington State Park, off-trail travel by hikers and visitors can damage this rare ecosystem. Generally speaking, would you support or oppose the following actions to help protect and restore alpine tundra at the summit? - Define the edges of pedestrian circulation areas to better contain foot traffic

		Strongly support	Somewhat support	Neutral/No opinion	Somewhat oppose	Strongly oppose	Don't know/Not sure	N
Overall	December 2025	64%	23%	7%	1%	2%	3%	1,293
Gender of Respondent	Men	57%	25%	12%	1%	2%	3%	636
	Women	70%	21%	3%	1%	2%	3%	640
Age of Respondent	18 to 34	63%	26%	6%		2%	2%	329
	35 to 49	76%	16%	3%	1%	2%	3%	261
	50 to 64	56%	26%	10%	3%	0%	4%	376
	65 and older	63%	21%	9%	0%	2%	4%	324
Level of Education	High school or less	51%	26%	14%	2%	2%	5%	440
	Tech school/Some college	74%	20%	3%	0%	1%	1%	355
	College graduate	70%	21%	5%	1%	1%	3%	301
	Postgraduate work	68%	25%	3%	2%	1%	2%	195
Children in Household	Children in household	59%	26%	8%	1%	4%	2%	331
	No children in household	66%	22%	7%	2%	1%	3%	944
Household Income	Less than $45,000	62%	20%	17%	0%	1%		139
	$45,000 - $74,999	71%	20%	6%	0%	1%	3%	232
	$75,000 - $99,999	60%	32%	2%	1%		6%	153
	$100,000 - $149,999	64%	23%	7%	1%	4%	1%	289
	$150,000 or more	63%	25%	5%	2%	3%	3%	229
Years Lived in NH	10 years or less	86%	9%	3%	0%		1%	98
	11-20 years	62%	22%	9%	0%	6%	1%	151
	More than 20 years	62%	24%	7%	2%	1%	4%	1,043
Region of State	Central/Lakes	57%	28%	9%	3%	2%	1%	223
	Connecticut Valley	68%	17%	9%	2%	1%	3%	155
	Manchester Area	64%	22%	6%	0%	1%	8%	220
	Mass Border	63%	22%	9%	0%	3%	3%	355
	North Country	66%	24%	4%	2%	1%	2%	137
	Seacoast	69%	24%	5%	0%		2%	199
Party ID	Democrat	81%	14%	2%	1%	0%	2%	561
	Independent	49%	34%	3%	5%	7%	2%	177
	Republican	50%	29%	14%	1%	1%	5%	542
Political Ideology	Socialist	76%	23%	1%		1%		104
	Progressive	85%	10%	1%	1%	0%	3%	174
	Liberal	84%	11%	3%	2%		0%	138
	Moderate	55%	30%	9%	0%	0%	5%	302
	Conservative	54%	28%	12%	0%	2%	4%	363
	Libertarian	39%	33%	17%	4%	5%	2%	93

Q14c: Alpine tundra vegetation disturbed by trampling can take decades to recover naturally. At Mount Washington State Park, off-trail travel by hikers and visitors can damage this rare ecosystem. Generally speaking, would you support or oppose the following actions to help protect and restore alpine tundra at the summit? - Create an alpine garden educational exhibit within the developed site, close to the Visitors Center, to allow visitors to experience plants up close without venturing in the natural areas

		Strongly support	Somewhat support	Neutral/No opinion	Somewhat oppose	Strongly oppose	Don't know/Not sure	N
Overall	December 2025	51%	27%	11%	3%	3%	4%	1,293
Gender of Respondent	Men	51%	23%	16%	5%	1%	3%	635
	Women	51%	31%	6%	2%	6%	5%	640
Age of Respondent	18 to 34	53%	25%	10%	2%	8%	2%	329
	35 to 49	53%	33%	9%	0%	2%	3%	261
	50 to 64	47%	27%	10%	7%	1%	8%	376
	65 and older	54%	24%	13%	4%	2%	4%	324
Level of Education	High school or less	41%	26%	15%	7%	2%	9%	440
	Tech school/Some college	61%	22%	7%	2%	7%	1%	355
	College graduate	57%	30%	8%	1%	1%	3%	301
	Postgraduate work	49%	30%	12%	2%	4%	2%	195
Children in Household	Children in household	42%	33%	9%	4%	11%	1%	331
	No children in household	55%	25%	11%	3%	1%	5%	944
Household Income	Less than $45,000	52%	22%	23%	2%	1%		139
	$45,000 - $74,999	52%	21%	5%	4%	9%	10%	231
	$75,000 - $99,999	39%	43%	12%	0%	0%	6%	153
	$100,000 - $149,999	61%	22%	14%	0%	3%	1%	290
	$150,000 or more	53%	29%	9%	2%	5%	3%	229
Years Lived in NH	10 years or less	58%	20%	9%	9%	4%	0%	98
	11-20 years	64%	18%	3%	8%	6%	1%	151
	More than 20 years	49%	29%	12%	2%	3%	5%	1,044
Region of State	Central/Lakes	47%	32%	10%	0%	2%	8%	224
	Connecticut Valley	62%	20%	1%	13%	2%	3%	154
	Manchester Area	53%	17%	12%	1%	10%	8%	220
	Mass Border	53%	28%	13%	1%	2%	3%	355
	North Country	39%	43%	12%	1%	2%	2%	137
	Seacoast	52%	23%	12%	9%	2%	1%	199
Party ID	Democrat	63%	28%	6%	2%	0%	1%	561
	Independent	55%	25%	12%	1%	5%	2%	177
	Republican	38%	26%	15%	6%	6%	8%	542
Political Ideology	Socialist	84%	15%	1%				104
	Progressive	73%	16%	4%	4%	0%	3%	174
	Liberal	58%	32%	7%	1%	2%	0%	138
	Moderate	48%	29%	11%	5%	2%	5%	301
	Conservative	40%	21%	18%	5%	7%	9%	363
	Libertarian	31%	41%	20%	2%	3%	3%	93

Q14d: Alpine tundra vegetation disturbed by trampling can take decades to recover naturally. At Mount Washington State Park, off-trail travel by hikers and visitors can damage this rare ecosystem. Generally speaking, would you support or oppose the following actions to help protect and restore alpine tundra at the summit? - Enhance visitor education about the protection of alpine tundra

		Strongly support	Somewhat support	Neutral/No opinion	Somewhat oppose	Strongly oppose	Don't know/Not sure	N
Overall	December 2025	74%	16%	7%	2%	0%	2%	1,292
Gender of Respondent	Men	65%	22%	10%	0%	0%	2%	635
	Women	82%	10%	3%	3%		2%	640
Age of Respondent	18 to 34	68%	20%	5%	6%		2%	329
	35 to 49	88%	7%	4%	0%		2%	260
	50 to 64	70%	17%	10%	1%		2%	376
	65 and older	73%	17%	7%	0%	0%	3%	323
Level of Education	High school or less	69%	17%	11%			3%	439
	Tech school/Some college	74%	17%	3%	6%	0%	0%	355
	College graduate	78%	13%	5%	0%		3%	301
	Postgraduate work	76%	15%	6%	1%	0%	2%	195
Children in Household	Children in household	70%	11%	11%	7%	0%	1%	331
	No children in household	75%	17%	5%	0%	0%	2%	944
Household Income	Less than $45,000	81%	11%	8%				139
	$45,000 - $74,999	75%	8%	5%	9%	0%	3%	230
	$75,000 - $99,999	78%	14%	2%			6%	153
	$100,000 - $149,999	65%	25%	8%	0%		1%	289
	$150,000 or more	76%	13%	8%	1%	0%	2%	229
Years Lived in NH	10 years or less	85%	12%	1%	0%		0%	98
	11-20 years	68%	14%	17%			1%	151
	More than 20 years	73%	16%	6%	2%	0%	3%	1,042
Region of State	Central/Lakes	69%	27%	4%			1%	224
	Connecticut Valley	75%	10%	11%	1%		3%	155
	Manchester Area	65%	13%	6%	9%		8%	221
	Mass Border	77%	15%	7%	0%	0%	0%	354
	North Country	84%	12%	4%	0%	0%	0%	137
	Seacoast	75%	14%	9%	0%		1%	198
Party ID	Democrat	85%	12%	1%	0%	0%	1%	560
	Independent	60%	27%	11%	0%	1%	1%	177
	Republican	66%	16%	11%	4%		3%	542
Political Ideology	Socialist	77%	23%					104
	Progressive	82%	13%	1%	0%		3%	174
	Liberal	91%	6%	3%			0%	138
	Moderate	72%	17%	7%	0%	0%	5%	300
	Conservative	66%	16%	10%	6%	0%	1%	363
	Libertarian	58%	24%	15%			3%	93

Q15: Would you support or oppose Mount Washington State Park limiting the number of visitors present at any one time?

		Strongly support	Somewhat support	Neutral/No opinion	Somewhat oppose	Strongly oppose	Don't know/Not sure	N
Overall	December 2025	22%	37%	21%	8%	8%	4%	1,296
Gender of Respondent	Men	12%	36%	30%	11%	8%	4%	638
	Women	31%	39%	13%	5%	9%	3%	641
Age of Respondent	18 to 34	16%	40%	19%	7%	14%	4%	329
	35 to 49	34%	31%	22%	5%	4%	4%	260
	50 to 64	19%	42%	19%	11%	4%	5%	376
	65 and older	21%	34%	23%	9%	11%	1%	327
Level of Education	High school or less	17%	38%	26%	8%	8%	3%	442
	Tech school/Some college	23%	32%	26%	7%	10%	2%	354
	College graduate	25%	43%	12%	9%	7%	5%	301
	Postgraduate work	25%	38%	15%	10%	7%	6%	195
Children in Household	Children in household	31%	31%	13%	8%	11%	6%	331
	No children in household	19%	39%	23%	8%	7%	3%	947
Household Income	Less than $45,000	25%	36%	22%	8%	4%	4%	139
	$45,000 - $74,999	28%	37%	14%	6%	13%	3%	232
	$75,000 - $99,999	27%	42%	18%	4%	6%	3%	153
	$100,000 - $149,999	18%	35%	26%	10%	10%	1%	290
	$150,000 or more	19%	37%	19%	9%	11%	4%	232
Years Lived in NH	10 years or less	30%	39%	6%	16%	8%	0%	99
	11-20 years	16%	43%	16%	3%	8%	15%	151
	More than 20 years	22%	36%	23%	8%	8%	2%	1,047
Region of State	Central/Lakes	24%	25%	29%	12%	9%	2%	226
	Connecticut Valley	31%	20%	13%	11%	14%	12%	155
	Manchester Area	13%	34%	28%	6%	17%	1%	221
	Mass Border	17%	55%	16%	6%	5%	2%	355
	North Country	33%	31%	16%	9%	7%	3%	137
	Seacoast	23%	42%	22%	7%	1%	6%	199
Party ID	Democrat	30%	43%	16%	7%	1%	3%	562
	Independent	19%	25%	25%	12%	15%	5%	179
	Republican	15%	36%	24%	8%	13%	3%	542
Political Ideology	Socialist	24%	40%	26%	6%		4%	104
	Progressive	25%	40%	23%	9%	0%	3%	174
	Liberal	20%	54%	16%	3%	5%	1%	138
	Moderate	21%	37%	21%	9%	5%	8%	302
	Conservative	22%	36%	21%	7%	13%	1%	366
	Libertarian	16%	15%	26%	17%	21%	4%	93

Q16: The Sherman Adams building, a modern summit building in Mount Washington State Park, houses The Sherman Adams Visitor Center, a cafeteria, restrooms, gift shops, the Mount Washington Observatory and its museum. Visitors are not currently required to pay a fee to enter the building. If Mount Washington State Park did require visitors to pay a fee to enter the Sherman Adams Building, what would be a fair amount in your opinion?

		$0	Less than $2	$2-$5	More than $5	Don't know/Not sure	N
Overall	December 2025	31%	9%	38%	6%	15%	1,297
Gender of Respondent	Men	33%	8%	34%	8%	17%	639
	Women	29%	10%	42%	5%	14%	641
Age of Respondent	18 to 34	44%	7%	28%	6%	16%	329
	35 to 49	27%	14%	43%	6%	10%	261
	50 to 64	28%	6%	37%	9%	20%	376
	65 and older	26%	11%	47%	4%	13%	327
Level of Education	High school or less	28%	4%	37%	9%	22%	442
	Tech school/Some college	34%	14%	40%	3%	9%	355
	College graduate	34%	10%	39%	5%	11%	301
	Postgraduate work	31%	10%	36%	6%	18%	196
Children in Household	Children in household	34%	8%	35%	4%	19%	331
	No children in household	30%	9%	40%	7%	13%	948
Household Income	Less than $45,000	33%	7%	38%	13%	9%	139
	$45,000 - $74,999	34%	13%	33%	5%	15%	232
	$75,000 - $99,999	33%	9%	29%	3%	26%	153
	$100,000 - $149,999	33%	7%	38%	11%	10%	290
	$150,000 or more	30%	13%	42%	3%	12%	232
Years Lived in NH	10 years or less	50%	5%	39%	0%	5%	98
	11-20 years	24%	4%	31%	12%	29%	151
	More than 20 years	31%	10%	39%	6%	14%	1,047
Region of State	Central/Lakes	33%	9%	39%	3%	17%	227
	Connecticut Valley	31%	7%	40%	3%	19%	155
	Manchester Area	28%	8%	36%	6%	22%	221
	Mass Border	29%	10%	40%	13%	8%	355
	North Country	41%	6%	31%	2%	21%	137
	Seacoast	31%	11%	41%	4%	12%	199
Party ID	Democrat	23%	9%	46%	5%	17%	562
	Independent	48%	8%	25%	3%	16%	179
	Republican	34%	9%	35%	8%	14%	543
Political Ideology	Socialist	40%	3%	33%	2%	22%	104
	Progressive	17%	10%	61%	4%	8%	174
	Liberal	22%	11%	56%	4%	7%	138
	Moderate	30%	8%	37%	4%	21%	302
	Conservative	32%	5%	37%	12%	15%	367
	Libertarian	39%	13%	29%	3%	16%	93

Q17a: Generally speaking, do you agree or disagree with the following statements about Mount Washington? - Investment in Mount Washington facilities improvements is a worthwhile use of public funds

		Strongly agree	Somewhat agree	Neutral/No opinion	Somewhat disagree	Strongly disagree	Don't know/Not sure	N
Overall	December 2025	39%	37%	14%	6%	3%	2%	1,295
Gender of Respondent	Men	37%	39%	12%	6%	5%	1%	639
	Women	40%	35%	15%	6%	1%	3%	639
Age of Respondent	18 to 34	31%	40%	9%	12%	5%	3%	329
	35 to 49	48%	31%	13%	5%	0%	2%	261
	50 to 64	35%	39%	16%	5%	5%	1%	374
	65 and older	44%	34%	16%	2%	2%	1%	327
Level of Education	High school or less	29%	42%	20%	3%	6%	1%	442
	Tech school/Some college	45%	29%	13%	8%	3%	1%	354
	College graduate	40%	41%	10%	5%	1%	4%	300
	Postgraduate work	48%	32%	7%	11%	1%	2%	195
Children in Household	Children in household	41%	30%	8%	15%	3%	3%	331
	No children in household	39%	39%	15%	3%	3%	1%	946
Household Income	Less than $45,000	50%	28%	14%	3%	5%		139
	$45,000 - $74,999	39%	23%	25%	13%		1%	231
	$75,000 - $99,999	38%	28%	24%	6%	1%	4%	153
	$100,000 - $149,999	42%	36%	10%	6%	4%	1%	290
	$150,000 or more	38%	37%	9%	6%	6%	4%	231
Years Lived in NH	10 years or less	48%	46%	2%	4%	0%		99
	11-20 years	40%	36%	10%	6%	7%	1%	151
	More than 20 years	38%	36%	16%	6%	3%	2%	1,045
Region of State	Central/Lakes	24%	45%	18%	10%	2%	2%	227
	Connecticut Valley	52%	29%	9%	2%	6%	3%	155
	Manchester Area	42%	31%	12%	10%	1%	4%	219
	Mass Border	39%	36%	14%	3%	7%	0%	355
	North Country	38%	42%	12%	5%	2%	2%	137
	Seacoast	41%	37%	16%	5%	0%	1%	199
Party ID	Democrat	56%	33%	7%	2%	0%	3%	561
	Independent	27%	46%	14%	0%	12%	1%	179
	Republican	25%	37%	22%	12%	4%	1%	542
Political Ideology	Socialist	57%	39%	3%	1%			104
	Progressive	50%	39%	4%	5%	0%	3%	174
	Liberal	46%	49%	5%	0%		0%	138
	Moderate	41%	47%	9%	1%	0%	1%	302
	Conservative	34%	29%	19%	13%	4%	1%	366
	Libertarian	17%	26%	24%	17%	10%	6%	92

Q17b: Generally speaking, do you agree or disagree with the following statements about Mount Washington? - Investment in active protection of the sensitive alpine environment in the White Mountains is a worthwhile use of public funds

		Strongly agree	Somewhat agree	Neutral/No opinion	Somewhat disagree	Strongly disagree	Don't know/Not sure	N
Overall	December 2025	56%	26%	8%	5%	3%	1%	1,292
Gender of Respondent	Men	51%	30%	10%	5%	4%	1%	638
	Women	61%	24%	7%	5%	1%	2%	637
Age of Respondent	18 to 34	59%	25%	4%	9%	2%	1%	329
	35 to 49	70%	19%	6%	2%	1%	2%	261
	50 to 64	44%	37%	10%	3%	5%	1%	375
	65 and older	56%	22%	13%	5%	2%	1%	323
Level of Education	High school or less	46%	30%	13%	4%	6%	1%	442
	Tech school/Some college	61%	23%	6%	6%	2%	1%	352
	College graduate	61%	26%	8%	4%	0%	2%	300
	Postgraduate work	65%	25%	3%	5%	1%	1%	195
Children in Household	Children in household	57%	19%	8%	12%	3%	1%	331
	No children in household	56%	29%	9%	3%	2%	1%	943
Household Income	Less than $45,000	74%	13%	9%		5%		137
	$45,000 - $74,999	50%	30%	10%	9%		1%	230
	$75,000 - $99,999	60%	19%	12%	8%	1%		152
	$100,000 - $149,999	49%	34%	7%	6%	4%	0%	290
	$150,000 or more	59%	26%	5%	4%	4%	2%	232
Years Lived in NH	10 years or less	67%	30%	1%	2%			98
	11-20 years	51%	39%	2%	0%	7%	1%	151
	More than 20 years	56%	24%	10%	6%	2%	1%	1,042
Region of State	Central/Lakes	41%	41%	10%	4%	1%	2%	226
	Connecticut Valley	64%	24%	6%	2%	1%	3%	155
	Manchester Area	55%	23%	6%	14%	1%	1%	218
	Mass Border	58%	26%	6%	3%	7%	0%	353
	North Country	57%	30%	4%	4%	3%	2%	137
	Seacoast	67%	14%	18%	1%		0%	199
Party ID	Democrat	81%	15%	3%	0%		1%	559
	Independent	39%	40%	9%	3%	7%	1%	179
	Republican	36%	34%	14%	10%	4%	1%	541
Political Ideology	Socialist	83%	17%					104
	Progressive	88%	8%	0%	1%		2%	174
	Liberal	76%	20%	4%	0%			138
	Moderate	59%	31%	6%	3%	0%	1%	300
	Conservative	39%	28%	16%	11%	5%	1%	365
	Libertarian	14%	37%	22%	14%	9%	4%	92

Q17c: Generally speaking, do you agree or disagree with the following statements about Mount Washington? - Mount Washington is an important asset for New Hampshire

		Strongly agree	Somewhat agree	Neutral/No opinion	Somewhat disagree	Strongly disagree	Don't know/Not sure	N
Overall	December 2025	81%	15%	3%	0%	0%	1%	1,295
Gender of Respondent	Men	77%	20%	3%		0%	0%	639
	Women	85%	10%	4%	0%		1%	639
Age of Respondent	18 to 34	75%	18%	6%			2%	329
	35 to 49	91%	8%	0%			1%	261
	50 to 64	78%	19%	3%			1%	375
	65 and older	83%	13%	4%	0%	0%	0%	327
Level of Education	High school or less	75%	19%	6%			0%	442
	Tech school/Some college	87%	11%	2%	0%		0%	354
	College graduate	79%	15%	3%			2%	300
	Postgraduate work	86%	13%	0%		0%	1%	195
Children in Household	Children in household	79%	18%	3%			1%	331
	No children in household	81%	14%	4%	0%	0%	1%	946
Household Income	Less than $45,000	80%	16%	4%				139
	$45,000 - $74,999	84%	14%	2%			1%	231
	$75,000 - $99,999	72%	21%	7%				152
	$100,000 - $149,999	78%	19%	3%		0%	0%	290
	$150,000 or more	86%	11%	2%			1%	232
Years Lived in NH	10 years or less	91%	9%					99
	11-20 years	73%	20%	5%		0%	1%	151
	More than 20 years	81%	15%	3%	0%		1%	1,045
Region of State	Central/Lakes	70%	27%	2%			1%	227
	Connecticut Valley	76%	21%	0%			3%	155
	Manchester Area	86%	9%	4%			1%	219
	Mass Border	83%	11%	6%				354
	North Country	89%	10%	1%	0%	0%		137
	Seacoast	82%	13%	5%			1%	199
Party ID	Democrat	86%	10%	3%			1%	560
	Independent	64%	26%	8%	0%		1%	179
	Republican	81%	16%	3%		0%	0%	542
Political Ideology	Socialist	78%	22%					104
	Progressive	84%	10%	4%			3%	174
	Liberal	92%	4%	4%				138
	Moderate	81%	14%	5%			0%	301
	Conservative	84%	14%	1%	0%	0%	0%	367
	Libertarian	55%	36%	5%			4%	92

Q17d: Generally speaking, do you agree or disagree with the following statements about Mount Washington? - Tourists visiting Mount Washington contribute to the New Hampshire economy

		Strongly agree	Somewhat agree	Neutral/No opinion	Somewhat disagree	Strongly disagree	Don't know/Not sure	N
Overall	December 2025	69%	24%	5%	2%	0%	1%	1,273
Gender of Respondent	Men	67%	25%	6%	2%	0%	0%	617
	Women	70%	23%	3%	1%	1%	2%	639
Age of Respondent	18 to 34	62%	23%	8%	4%	1%	2%	329
	35 to 49	80%	13%	5%		1%	1%	241
	50 to 64	65%	31%	3%	0%	0%	1%	373
	65 and older	72%	24%	2%	1%	0%	1%	326
Level of Education	High school or less	70%	26%	2%	1%		0%	423
	Tech school/Some college	75%	18%	4%	2%		0%	353
	College graduate	61%	26%	7%	3%	0%	3%	300
	Postgraduate work	66%	24%	7%	0%	1%	2%	194
Children in Household	Children in household	68%	24%	4%	2%		1%	330
	No children in household	68%	24%	5%	1%	1%	1%	926
Household Income	Less than $45,000	72%	23%	5%				138
	$45,000 - $74,999	74%	21%	3%	0%	0%	1%	231
	$75,000 - $99,999	63%	29%	7%	0%		0%	152
	$100,000 - $149,999	65%	27%	7%	0%	0%	1%	289
	$150,000 or more	69%	23%	2%	5%	1%	1%	231
Years Lived in NH	10 years or less	72%	18%	3%	7%			98
	11-20 years	64%	30%	4%		0%	2%	151
	More than 20 years	69%	23%	5%	1%	1%	1%	1,024
Region of State	Central/Lakes	54%	37%	6%	1%	1%	1%	226
	Connecticut Valley	71%	20%	1%	5%		3%	154
	Manchester Area	75%	18%	6%	0%	0%	1%	200
	Mass Border	79%	17%	3%	0%	1%	0%	353
	North Country	63%	26%	5%	5%	1%	1%	137
	Seacoast	63%	28%	8%	0%		1%	199
Party ID	Democrat	72%	21%	5%	0%	1%	2%	560
	Independent	56%	26%	6%	10%	0%	2%	179
	Republican	69%	26%	4%	0%	0%	0%	521
Political Ideology	Socialist	66%	32%	2%			0%	104
	Progressive	62%	29%	4%	0%	1%	3%	155
	Liberal	80%	13%	5%	0%	2%	0%	138
	Moderate	70%	25%	3%	0%	0%	1%	299
	Conservative	73%	22%	3%	1%	0%	0%	366
	Libertarian	51%	29%	17%	0%		3%	92

Q18: Thinking about State Parks in New Hampshire in general...Do agree or disagree that state funds should be used to support the maintenance of State Park facilities?

		Strongly agree	Somewhat agree	Neutral/No opinion	Somewhat disagree	Strongly disagree	Don't know/Not sure	N
Overall	December 2025	62%	31%	2%	2%	1%	2%	1,295
Gender of Respondent	Men	60%	33%	1%	2%	1%	3%	637
	Women	65%	29%	3%	1%	2%	1%	641
Age of Respondent	18 to 34	66%	30%			3%	1%	329
	35 to 49	73%	26%	1%			1%	261
	50 to 64	50%	36%	6%	3%	1%	4%	376
	65 and older	63%	31%	2%	3%	0%	1%	325
Level of Education	High school or less	55%	33%	4%	4%	2%	3%	442
	Tech school/Some college	63%	32%	3%	1%	1%	1%	353
	College graduate	68%	29%	1%	0%	0%	1%	301
	Postgraduate work	69%	28%	1%	1%	0%	1%	196
Children in Household	Children in household	56%	38%	0%	1%	3%	1%	330
	No children in household	65%	28%	3%	2%	1%	1%	947
Household Income	Less than $45,000	70%	27%		1%	1%	0%	139
	$45,000 - $74,999	58%	34%	1%	4%		3%	232
	$75,000 - $99,999	70%	29%	0%	0%		1%	152
	$100,000 - $149,999	60%	33%	4%	0%	3%	0%	289
	$150,000 or more	65%	32%	1%	1%	1%	1%	232
Years Lived in NH	10 years or less	67%	31%	1%	1%		0%	99
	11-20 years	58%	34%	0%	0%	6%	1%	151
	More than 20 years	62%	30%	3%	2%	0%	2%	1,045
Region of State	Central/Lakes	44%	49%	3%	3%	0%	1%	227
	Connecticut Valley	66%	33%	0%	0%		0%	155
	Manchester Area	70%	22%	4%	0%	1%	3%	219
	Mass Border	69%	23%	2%	1%	3%	2%	355
	North Country	54%	42%	3%	0%	1%		137
	Seacoast	68%	23%	2%	4%		3%	199
Party ID	Democrat	82%	14%	2%	1%	1%	1%	561
	Independent	44%	41%	4%	3%	5%	2%	178
	Republican	48%	45%	2%	2%	0%	3%	543
Political Ideology	Socialist	79%	20%	1%				104
	Progressive	88%	11%	0%	0%	0%	0%	174
	Liberal	79%	14%	2%	3%	2%	0%	137
	Moderate	66%	30%	0%	2%	0%	1%	301
	Conservative	47%	44%	3%	3%	0%	3%	365
	Libertarian	29%	64%	2%	1%	2%	3%	93

Q19: In your opinion, which of the following best describes your opinion about non-profit organizations' use of State Parks in New Hampshire?

		Non-profit organizations should be able to use State Parks for fundraising events without paying a fee	Non-profit organizations should be able to use State Parks for fundraising events but should pay a fee to the Division of Parks and Recreation	Non-profit organizations should not be able to use State Parks for fundraising events at all	Don't know/No opinion	N
Overall	December 2025	23%	62%	5%	10%	1,290
Gender of Respondent	Men	18%	63%	7%	12%	637
	Women	27%	62%	3%	8%	636
Age of Respondent	18 to 34	27%	60%	2%	12%	329
	35 to 49	25%	63%	2%	10%	261
	50 to 64	23%	59%	8%	9%	373
	65 and older	17%	67%	7%	9%	323
Level of Education	High school or less	23%	53%	7%	17%	442
	Tech school/Some college	20%	71%	5%	4%	349
	College graduate	25%	62%	3%	9%	301
	Postgraduate work	22%	68%	6%	5%	195
Children in Household	Children in household	23%	66%	7%	3%	331
	No children in household	23%	60%	4%	13%	941
Household Income	Less than $45,000	28%	43%	6%	23%	139
	$45,000 - $74,999	26%	68%	3%	3%	231
	$75,000 - $99,999	34%	44%	6%	16%	151
	$100,000 - $149,999	17%	72%	7%	5%	286
	$150,000 or more	28%	67%	1%	4%	232
Years Lived in NH	10 years or less	31%	61%	2%	6%	98
	11-20 years	16%	66%	15%	3%	151
	More than 20 years	23%	62%	4%	11%	1,040
Region of State	Central/Lakes	23%	67%	7%	3%	226
	Connecticut Valley	15%	63%	13%	9%	154
	Manchester Area	22%	53%	3%	22%	220
	Mass Border	25%	65%	4%	6%	352
	North Country	29%	56%	1%	14%	137
	Seacoast	23%	66%	3%	9%	197
Party ID	Democrat	32%	58%	2%	8%	562
	Independent	22%	67%	4%	7%	178
	Republican	14%	64%	9%	14%	537
Political Ideology	Socialist	34%	60%		6%	104
	Progressive	23%	58%	1%	18%	174
	Liberal	30%	63%	2%	6%	138
	Moderate	25%	58%	7%	10%	301
	Conservative	15%	66%	6%	13%	363
	Libertarian	3%	76%	18%	3%	90

Q20: In your opinion, which of the following best describes your opinion about for-profit organizations' use of State Parks in New Hampshire?

		For-profit organizations should be able to use State Parks for fundraising events without paying a fee	For-profit organizations should be able to use State Parks for fundraising events but should pay a fee to the Division of Parks and Recreation	For-profit organizations should not be able to use State Parks for fundraising events at all	Don't know/No opinion	N
Overall	December 2025	4%	71%	17%	8%	1,295
Gender of Respondent	Men	1%	70%	19%	11%	639
	Women	8%	72%	16%	5%	639
Age of Respondent	18 to 34	7%	71%	16%	7%	329
	35 to 49	8%	71%	12%	9%	261
	50 to 64	1%	76%	16%	7%	375
	65 and older	2%	66%	24%	8%	326
Level of Education	High school or less	5%	65%	15%	16%	442
	Tech school/Some college	6%	70%	20%	4%	353
	College graduate	2%	81%	13%	4%	301
	Postgraduate work	1%	74%	24%	1%	195
Children in Household	Children in household	13%	70%	16%	2%	331
	No children in household	1%	71%	18%	10%	946
Household Income	Less than $45,000	1%	60%	21%	19%	139
	$45,000 - $74,999	10%	71%	16%	3%	232
	$75,000 - $99,999	12%	56%	22%	10%	152
	$100,000 - $149,999	0%	82%	15%	3%	290
	$150,000 or more	2%	83%	11%	3%	232
Years Lived in NH	10 years or less	0%	79%	17%	3%	98
	11-20 years		65%	34%	1%	150
	More than 20 years	5%	71%	15%	9%	1,046
Region of State	Central/Lakes	2%	76%	19%	3%	226
	Connecticut Valley	1%	67%	26%	6%	155
	Manchester Area	9%	57%	16%	18%	219
	Mass Border	1%	82%	11%	6%	355
	North Country	14%	63%	11%	12%	137
	Seacoast	1%	74%	21%	3%	199
Party ID	Democrat	5%	70%	21%	4%	561
	Independent	1%	79%	16%	4%	179
	Republican	5%	69%	13%	12%	541
Political Ideology	Socialist		68%	29%	2%	104
	Progressive	0%	66%	21%	13%	174
	Liberal	4%	79%	13%	4%	138
	Moderate	7%	67%	18%	8%	300
	Conservative	7%	70%	13%	11%	366
	Libertarian	3%	69%	26%	2%	93

Q21: About how often would you say that you visit any New Hampshire State Park?

		Weekly or more often	Every other week	Monthly	Once every 1-3 months	Once every 4-6 months
Overall	December 2025	2%	3%	11%	21%	16%
Gender of Respondent	Men	2%	4%	11%	21%	15%
	Women	3%	2%	12%	20%	18%
Age of Respondent	18 to 34	1%	2%	18%	24%	12%
	35 to 49	2%	4%	9%	27%	13%
	50 to 64	2%	5%	11%	20%	20%
	65 and older	2%	1%	7%	15%	19%
Level of Education	High school or less	2%	4%	5%	21%	13%
	Tech school/Some college	1%	2%	17%	16%	19%
	College graduate	4%	3%	14%	21%	16%
	Postgraduate work	1%	2%	9%	30%	18%
Children in Household	Children in household	2%	9%	15%	23%	21%
	No children in household	2%	1%	10%	21%	14%
Household Income	Less than $45,000	4%	0%	9%	20%	14%
	$45,000 - $74,999	2%	1%	23%	9%	12%
	$75,000 - $99,999	1%	1%	6%	29%	14%
	$100,000 - $149,999	2%	1%	12%	26%	20%
	$150,000 or more	2%	5%	8%	29%	16%
Years Lived in NH	10 years or less	3%	15%	26%	22%	15%
	11-20 years	2%	9%	5%	15%	5%
	More than 20 years	2%	1%	11%	22%	18%
Region of State	Central/Lakes	1%	1%	10%	25%	16%
	Connecticut Valley	0%	8%	21%	11%	10%
	Manchester Area	3%	1%	14%	18%	13%
	Mass Border	0%	0%	7%	21%	24%
	North Country	5%	8%	15%	28%	14%
	Seacoast	4%	5%	8%	23%	12%
Party ID	Democrat	3%	2%	12%	23%	15%
	Independent	2%	5%	6%	20%	19%
	Republican	1%	3%	11%	20%	16%
Political Ideology	Socialist	2%	1%	14%	34%	18%
	Progressive	4%	1%	15%	22%	15%
	Liberal	0%	5%	8%	28%	21%
	Moderate	3%	5%	6%	27%	13%
	Conservative	1%	1%	11%	12%	18%
	Libertarian	0%	0%	24%	29%	17%

Q21: About how often would you say that you visit any New Hampshire State Park?

		Once every 7-12 months	Once a year	Less often	Never	Don't know/Can't remember	N
Overall	December 2025	6%	19%	17%	2%	3%	1,297
Gender of Respondent	Men	5%	21%	16%	3%	4%	639
	Women	7%	17%	18%	1%	3%	641
Age of Respondent	18 to 34	2%	23%	10%	2%	6%	329
	35 to 49	5%	15%	20%	3%	2%	261
	50 to 64	5%	16%	18%	3%	1%	376
	65 and older	12%	21%	18%	1%	4%	328
Level of Education	High school or less	6%	21%	21%	3%	3%	442
	Tech school/Some college	2%	18%	16%	4%	3%	355
	College graduate	9%	15%	13%	0%	4%	301
	Postgraduate work	5%	17%	12%	1%	3%	196
Children in Household	Children in household	4%	15%	6%	2%	3%	331
	No children in household	6%	20%	20%	2%	3%	949
Household Income	Less than $45,000	8%	27%	10%	5%	3%	139
	$45,000 - $74,999	3%	24%	21%	4%	1%	232
	$75,000 - $99,999	6%	12%	13%	5%	13%	153
	$100,000 - $149,999	4%	17%	18%	1%	0%	290
	$150,000 or more	7%	21%	7%	3%	1%	232
Years Lived in NH	10 years or less	3%	10%	6%		0%	99
	11-20 years	4%	22%	24%	7%	7%	151
	More than 20 years	6%	19%	17%	2%	3%	1,048
Region of State	Central/Lakes	10%	24%	11%	0%	2%	227
	Connecticut Valley	7%	22%	11%	8%	1%	155
	Manchester Area	2%	12%	31%	1%	7%	221
	Mass Border	3%	21%	20%	3%	0%	355
	North Country	3%	6%	12%		9%	137
	Seacoast	10%	21%	10%	3%	4%	199
Party ID	Democrat	5%	18%	17%	1%	3%	562
	Independent	4%	23%	7%	13%	2%	179
	Republican	7%	18%	20%	1%	4%	543
Political Ideology	Socialist	4%	4%	17%		8%	104
	Progressive	4%	14%	24%	0%	0%	174
	Liberal	3%	17%	17%	0%	1%	138
	Moderate	7%	19%	12%	2%	4%	302
	Conservative	8%	27%	17%	1%	3%	367
	Libertarian	3%	13%	5%	8%	2%	93

Q22: Generally speaking, are you satisfied or dissatisfied with the fees you pay to enter New Hampshire State Parks?

		Very satisfied	Somewhat satisfied	Neutral/No opinion	Somewhat dissatisfied	Very dissatisfied	Don't know/Can't remember	N
Overall	December 2025	32%	27%	21%	6%	2%	12%	1,171
Gender of Respondent	Men	29%	28%	25%	6%	1%	10%	577
	Women	36%	26%	16%	5%	4%	14%	585
Age of Respondent	18 to 34	33%	19%	29%	4%		15%	293
	35 to 49	32%	23%	24%	8%	1%	12%	246
	50 to 64	25%	33%	17%	9%	5%	12%	341
	65 and older	40%	31%	16%	2%	1%	10%	288
Level of Education	High school or less	34%	27%	17%	5%	6%	11%	382
	Tech school/Some college	29%	27%	26%	3%	0%	14%	328
	College graduate	28%	29%	21%	12%	0%	9%	278
	Postgraduate work	42%	21%	18%	3%	0%	15%	181
Children in Household	Children in household	42%	22%	19%	9%	1%	8%	305
	No children in household	29%	29%	22%	5%	3%	13%	855
Household Income	Less than $45,000	29%	37%	21%	9%	1%	3%	123
	$45,000 - $74,999	32%	18%	16%	7%	2%	25%	214
	$75,000 - $99,999	41%	21%	19%	5%	0%	14%	135
	$100,000 - $149,999	30%	37%	23%	4%	0%	5%	267
	$150,000 or more	37%	24%	23%	4%	2%	11%	215
Years Lived in NH	10 years or less	30%	35%	21%	9%		4%	95
	11-20 years	33%	39%	10%	1%	3%	15%	114
	More than 20 years	33%	24%	22%	6%	2%	13%	962
Region of State	Central/Lakes	28%	22%	27%	10%	1%	12%	219
	Connecticut Valley	44%	27%	14%	1%	0%	14%	118
	Manchester Area	28%	28%	28%	4%	0%	12%	196
	Mass Border	39%	32%	7%	3%	5%	14%	327
	North Country	36%	15%	26%	8%	4%	10%	128
	Seacoast	21%	29%	33%	7%	0%	9%	179
Party ID	Democrat	41%	27%	18%	2%	1%	11%	510
	Independent	23%	28%	23%	13%		14%	152
	Republican	27%	26%	22%	8%	4%	13%	503
Political Ideology	Socialist	19%	31%	32%	3%		15%	95
	Progressive	30%	27%	27%	2%	1%	13%	166
	Liberal	45%	24%	23%	1%	0%	6%	123
	Moderate	36%	29%	16%	2%	7%	10%	271
	Conservative	33%	28%	20%	7%	1%	10%	343
	Libertarian	28%	19%	27%	20%		6%	83

Q23: Generally speaking, why did you decide to visit New Hampshire State Parks? (Please select all that apply)

		Camping	Education or curiosity	For exercise or recreation	To enjoy the natural environment
Overall	December 2025	15%	20%	48%	69%
Gender of Respondent	Men	17%	21%	49%	68%
	Women	15%	21%	49%	70%
Age of Respondent	18 to 34	18%	28%	57%	70%
	35 to 49	18%	29%	45%	83%
	50 to 64	15%	13%	45%	63%
	65 and older	12%	15%	47%	62%
Level of Education	High school or less	10%	11%	37%	57%
	Tech school/Some college	16%	24%	48%	77%
	College graduate	19%	23%	58%	71%
	Postgraduate work	19%	32%	61%	76%
Children in Household	Children in household	14%	26%	58%	75%
	No children in household	16%	19%	46%	66%
Household Income	Less than $45,000	14%	14%	34%	53%
	$45,000 - $74,999	13%	25%	46%	69%
	$75,000 - $99,999	18%	11%	41%	71%
	$100,000 - $149,999	18%	19%	58%	65%
	$150,000 or more	18%	27%	58%	75%
Years Lived in NH	10 years or less	18%	29%	70%	83%
	11-20 years	13%	22%	71%	67%
	More than 20 years	16%	19%	43%	68%
Region of State	Central/Lakes	17%	17%	46%	69%
	Connecticut Valley	9%	14%	52%	68%
	Manchester Area	9%	22%	45%	66%
	Mass Border	18%	23%	49%	69%
	North Country	19%	15%	45%	72%
	Seacoast	20%	27%	54%	72%
Party ID	Democrat	16%	27%	51%	78%
	Independent	15%	14%	60%	74%
	Republican	15%	15%	43%	58%
Political Ideology	Socialist	15%	41%	76%	89%
	Progressive	17%	19%	49%	81%
	Liberal	16%	39%	54%	82%
	Moderate	17%	12%	51%	71%
	Conservative	11%	11%	37%	50%
	Libertarian	29%	28%	46%	61%

Q23: Generally speaking, why did you decide to visit New Hampshire State Parks? (Please select all that apply)

		To enjoy the scenery or view	To have a fun experience with friends or family	Other	No reason in particular	N
Overall	December 2025	68%	63%	3%	3%	1,266
Gender of Respondent	Men	68%	60%	3%	2%	620
	Women	67%	65%	3%	3%	635
Age of Respondent	18 to 34	72%	61%	1%	4%	322
	35 to 49	77%	74%	3%		252
	50 to 64	64%	67%	1%	2%	366
	65 and older	59%	52%	7%	4%	322
Level of Education	High school or less	55%	62%	4%	3%	430
	Tech school/Some college	72%	59%	2%	0%	341
	College graduate	73%	64%	4%	5%	300
	Postgraduate work	79%	71%	2%	1%	193
Children in Household	Children in household	70%	69%	2%	0%	324
	No children in household	67%	61%	3%	4%	931
Household Income	Less than $45,000	59%	62%	1%	2%	132
	$45,000 - $74,999	69%	58%	9%	1%	223
	$75,000 - $99,999	49%	53%	2%	5%	145
	$100,000 - $149,999	67%	66%	1%	4%	288
	$150,000 or more	74%	67%	2%	1%	226
Years Lived in NH	10 years or less	85%	48%	1%	2%	99
	11-20 years	65%	67%	2%		140
	More than 20 years	66%	64%	3%	3%	1,027
Region of State	Central/Lakes	62%	64%	4%	2%	227
	Connecticut Valley	75%	55%	4%	3%	142
	Manchester Area	62%	62%	1%	6%	219
	Mass Border	70%	70%	1%	2%	344
	North Country	64%	43%	7%	1%	137
	Seacoast	75%	70%	4%	3%	194
Party ID	Democrat	73%	61%	2%	3%	558
	Independent	77%	64%	3%	2%	155
	Republican	59%	64%	2%	2%	540
Political Ideology	Socialist	86%	73%	0%		104
	Progressive	80%	65%	2%	2%	174
	Liberal	79%	68%	1%	4%	138
	Moderate	67%	62%	3%	3%	294
	Conservative	49%	57%	4%	2%	364
	Libertarian	72%	62%	1%	0%	85

Q2425: Generally speaking, why do you rarely or never visit New Hampshire State Parks? (Please select all that apply)

		Don't have enough leisure time	None close by	Not interested in activities available there	Not kept in good condition	Physical disability
Overall	December 2025	45%	24%	9%	0%	10%
Gender of Respondent	Men	42%	29%	10%	0%	5%
	Women	47%	19%	8%	0%	16%
Age of Respondent	18 to 34	45%	43%	17%		4%
	35 to 49	53%	45%	2%		3%
	50 to 64	61%	7%	6%	0%	9%
	65 and older	25%	10%	11%	1%	23%
Level of Education	High school or less	37%	23%	7%		13%
	Tech school/Some college	61%	26%	7%	0%	8%
	College graduate	42%	31%	15%	0%	6%
	Postgraduate work	41%	15%	11%	1%	12%
Children in Household	Children in household	52%	11%	7%		8%
	No children in household	44%	27%	9%	0%	11%
Household Income	Less than $45,000	33%	42%	3%	1%	17%
	$45,000 - $74,999	69%	20%	6%	0%	9%
	$75,000 - $99,999	35%	7%	18%	1%	5%
	$100,000 - $149,999	44%	22%	6%	0%	6%
	$150,000 or more	56%	17%	23%	0%	6%
Years Lived in NH	11-20 years	70%	27%	10%		7%
	More than 20 years	40%	24%	9%	0%	10%
Region of State	Central/Lakes	60%	25%	5%		9%
	Connecticut Valley	33%	7%	20%	0%	8%
	Manchester Area	24%	32%	7%		10%
	Mass Border	54%	38%	6%	0%	9%
	Seacoast	42%	7%	14%	1%	18%
Party ID	Democrat	45%	18%	11%	0%	16%
	Independent	39%	17%	16%		4%
	Republican	48%	33%	5%	0%	5%
Political Ideology	Progressive	35%	60%	5%	1%	4%
	Liberal	38%	12%	13%	1%	22%
	Moderate	45%	21%	13%	0%	14%
	Conservative	51%	15%	5%	0%	7%

Q2425: Generally speaking, why do you rarely or never visit New Hampshire State Parks? (Please select all that apply)

		Prefer other locations	Too crowded	Too high fees	Other	No reason in particular	N
Overall	December 2025	9%	17%	3%	8%	13%	486
Gender of Respondent	Men	12%	12%	2%	9%	12%	249
	Women	6%	22%	4%	8%	15%	229
Age of Respondent	18 to 34	10%	14%		10%	10%	117
	35 to 49	10%	30%	4%	3%	5%	99
	50 to 64	9%	14%	4%	12%	10%	137
	65 and older	8%	12%	5%	6%	23%	130
Level of Education	High school or less	9%	14%	3%	7%	13%	199
	Tech school/Some college	6%	18%	4%	10%	10%	137
	College graduate	10%	18%	5%	4%	14%	88
	Postgraduate work	11%	14%	1%	11%	19%	60
Children in Household	Children in household	19%	10%	4%	7%	9%	77
	No children in household	7%	18%	3%	8%	13%	399
Household Income	Less than $45,000	1%	13%	11%	10%	2%	56
	$45,000 - $74,999	7%	22%	3%	2%	9%	115
	$75,000 - $99,999	19%	2%	2%	1%	19%	45
	$100,000 - $149,999	15%	13%	3%	2%	19%	101
	$150,000 or more	10%	21%	1%	25%	2%	72
Years Lived in NH	11-20 years	12%	19%	2%	1%	1%	80
	More than 20 years	8%	17%	4%	9%	16%	390
Region of State	Central/Lakes	3%	10%	3%	2%	17%	80
	Connecticut Valley	11%	24%		27%	11%	63
	Manchester Area	6%	3%	3%	10%	22%	93
	Mass Border	10%	24%	0%	4%	7%	154
	Seacoast	19%	9%	3%	7%	16%	67
Party ID	Democrat	5%	15%	1%	9%	13%	198
	Independent	19%	19%	6%	19%	9%	77
	Republican	9%	18%	4%	3%	15%	206
Political Ideology	Progressive	3%	10%	3%	3%	11%	67
	Liberal	6%	14%	1%	25%	7%	47
	Moderate	6%	21%	2%	5%	11%	101
	Conservative	8%	10%	3%	2%	18%	164

Q26: Which of the following types of activities do you typically do when visiting New Hampshire State Parks? (Please select all that apply)

		Biking	Birding	Camping	Cross-country/ Nordic skiing	Downhill skiing
Overall	December 2025	11%	11%	22%	3%	8%
Gender of Respondent	Men	14%	7%	18%	2%	9%
	Women	6%	14%	25%	4%	6%
Age of Respondent	18 to 34	9%	9%	25%	1%	8%
	35 to 49	8%	15%	29%	2%	9%
	50 to 64	15%	9%	22%	4%	9%
	65 and older	9%	12%	12%	4%	5%
Level of Education	High school or less	11%	8%	15%	1%	3%
	Tech school/Some college	10%	8%	25%	2%	8%
	College graduate	10%	18%	25%	4%	12%
	Postgraduate work	11%	10%	24%	6%	11%
Children in Household	Children in household	12%	12%	30%	2%	10%
	No children in household	10%	11%	19%	3%	7%
Household Income	Less than $45,000	9%	12%	18%	3%	1%
	$45,000 - $74,999	6%	8%	26%	2%	2%
	$75,000 - $99,999	5%	12%	30%	1%	3%
	$100,000 - $149,999	7%	14%	22%	3%	10%
	$150,000 or more	19%	12%	20%	4%	18%
Years Lived in NH	10 years or less	14%	28%	17%	5%	17%
	11-20 years	12%	7%	14%	4%	3%
	More than 20 years	10%	10%	23%	2%	8%
Region of State	Central/Lakes	9%	6%	19%	2%	7%
	Connecticut Valley	22%	13%	18%	6%	11%
	Manchester Area	8%	7%	21%	1%	4%
	Mass Border	6%	13%	21%	1%	5%
	North Country	8%	11%	28%	6%	17%
	Seacoast	18%	15%	25%	4%	9%
Party ID	Democrat	14%	16%	26%	5%	8%
	Independent	11%	16%	18%	2%	10%
	Republican	8%	4%	18%	1%	7%
Political Ideology	Socialist	4%	24%	23%	2%	4%
	Progressive	15%	14%	22%	7%	6%
	Liberal	15%	25%	21%	2%	12%
	Moderate	14%	9%	27%	4%	8%
	Conservative	8%	4%	15%	1%	5%
	Libertarian	10%	6%	36%		22%

Q26: Which of the following types of activities do you typically do when visiting New Hampshire State Parks? (Please select all that apply)

		Equestrian	Fishing	Hiking or walking	OHRVing	Participating in nature programs
Overall	December 2025	1%	15%	74%	6%	8%
Gender of Respondent	Men	1%	16%	72%	5%	7%
	Women	0%	15%	76%	6%	9%
Age of Respondent	18 to 34		15%	81%	4%	7%
	35 to 49	1%	17%	80%	13%	9%
	50 to 64	1%	18%	72%	6%	7%
	65 and older	0%	11%	67%	3%	10%
Level of Education	High school or less	0%	16%	54%	9%	6%
	Tech school/Some college	0%	22%	83%	4%	7%
	College graduate	1%	10%	83%	3%	12%
	Postgraduate work	1%	8%	90%	4%	11%
Children in Household	Children in household	1%	21%	88%	10%	12%
	No children in household	0%	13%	69%	4%	7%
Household Income	Less than $45,000	0%	13%	56%	2%	11%
	$45,000 - $74,999	1%	14%	78%	8%	7%
	$75,000 - $99,999	1%	27%	69%	13%	8%
	$100,000 - $149,999	0%	14%	75%	6%	10%
	$150,000 or more	1%	16%	86%	4%	8%
Years Lived in NH	10 years or less	0%	9%	80%	1%	11%
	11-20 years	1%	11%	77%	1%	6%
	More than 20 years	0%	16%	73%	7%	8%
Region of State	Central/Lakes	0%	18%	69%	3%	4%
	Connecticut Valley	0%	7%	84%	3%	8%
	Manchester Area	1%	13%	68%	1%	9%
	Mass Border	0%	13%	78%	3%	9%
	North Country	1%	36%	73%	24%	11%
	Seacoast	1%	10%	75%	7%	10%
Party ID	Democrat	1%	13%	78%	6%	10%
	Independent	0%	12%	83%	6%	12%
	Republican	0%	19%	68%	6%	4%
Political Ideology	Socialist	1%	4%	94%	3%	8%
	Progressive	1%	9%	74%	0%	7%
	Liberal	0%	12%	82%	4%	6%
	Moderate	0%	26%	71%	11%	12%
	Conservative	1%	15%	64%	4%	2%
	Libertarian		23%	92%	18%	21%

Q26: Which of the following types of activities do you typically do when visiting New Hampshire State Parks? (Please select all that apply)

		Swimming	Visiting historical sites	Other	Nothing in particular	N
Overall	December 2025	38%	45%	6%	6%	1,266
Gender of Respondent	Men	33%	48%	5%	7%	620
	Women	42%	42%	6%	5%	635
Age of Respondent	18 to 34	43%	45%	4%	5%	322
	35 to 49	49%	50%	2%		252
	50 to 64	39%	44%	8%	9%	366
	65 and older	24%	43%	7%	9%	322
Level of Education	High school or less	41%	48%	8%	11%	430
	Tech school/Some college	37%	34%	3%	1%	341
	College graduate	38%	52%	5%	5%	300
	Postgraduate work	35%	50%	5%	5%	193
Children in Household	Children in household	49%	43%	1%	2%	324
	No children in household	34%	45%	7%	8%	931
Household Income	Less than $45,000	48%	49%	7%	4%	132
	$45,000 - $74,999	45%	35%	1%	1%	223
	$75,000 - $99,999	43%	53%	4%	9%	145
	$100,000 - $149,999	34%	40%	5%	13%	288
	$150,000 or more	35%	54%	4%	3%	226
Years Lived in NH	10 years or less	39%	49%	3%	1%	99
	11-20 years	29%	35%	1%	15%	140
	More than 20 years	39%	46%	6%	5%	1,027
Region of State	Central/Lakes	42%	43%	5%	4%	227
	Connecticut Valley	36%	36%	3%	5%	142
	Manchester Area	29%	46%	3%	9%	219
	Mass Border	34%	44%	9%	8%	343
	North Country	51%	52%	9%	1%	137
	Seacoast	44%	51%	3%	6%	194
Party ID	Democrat	42%	47%	5%	5%	558
	Independent	35%	47%	4%	7%	155
	Republican	35%	43%	6%	7%	540
Political Ideology	Socialist	41%	42%	1%	1%	104
	Progressive	41%	54%	6%	3%	174
	Liberal	33%	48%	5%	1%	138
	Moderate	38%	49%	9%	9%	294
	Conservative	38%	41%	5%	8%	364
	Libertarian	30%	57%	1%	0%	85

Q27: Generally speaking, what improvements would you most like to see at New Hampshire state parks?

		Back to basics: More nature, fewer amenities	Enhanced visitor education	Environmental/ecological restoration
Overall	December 2025	26%	6%	29%
Gender of Respondent	Men	26%	6%	23%
	Women	25%	6%	33%
Age of Respondent	18 to 34	30%	3%	49%
	35 to 49	11%	3%	26%
	50 to 64	31%	8%	22%
	65 and older	28%	9%	18%
Level of Education	High school or less	29%	5%	10%
	Tech school/Some college	33%	5%	29%
	College graduate	16%	5%	50%
	Postgraduate work	19%	11%	35%
Children in Household	Children in household	26%	7%	27%
	No children in household	26%	6%	29%
Household Income	Less than $45,000	22%	5%	40%
	$45,000 - $74,999	26%	4%	20%
	$75,000 - $99,999	24%	5%	21%
	$100,000 - $149,999	26%	8%	24%
	$150,000 or more	17%	7%	39%
Years Lived in NH	10 years or less	19%	8%	49%
	11-20 years	30%	4%	38%
	More than 20 years	26%	6%	25%
Region of State	Central/Lakes	37%	6%	22%
	Connecticut Valley	37%	3%	23%
	Manchester Area	27%	6%	22%
	Mass Border	18%	4%	31%
	North Country	21%	11%	22%
	Seacoast	19%	7%	47%
Party ID	Democrat	15%	7%	50%
	Independent	41%	5%	29%
	Republican	32%	5%	6%
Political Ideology	Socialist	37%	5%	53%
	Progressive	11%	4%	59%
	Liberal	16%	6%	48%
	Moderate	26%	8%	28%
	Conservative	28%	6%	7%
	Libertarian	39%	6%	6%

Q27: Generally speaking, what improvements would you most like to see at New Hampshire state parks?

		Historical preservation	Vibrant and up-to-date visitor amenities such as convenient parking, gathering areas, food and shopping choices, learning centers, and wifi	None of these	N
Overall	December 2025	22%	12%	7%	1,270
Gender of Respondent	Men	26%	13%	6%	633
	Women	17%	11%	7%	620
Age of Respondent	18 to 34	10%	5%	4%	324
	35 to 49	40%	13%	8%	261
	50 to 64	20%	14%	5%	363
	65 and older	20%	15%	10%	319
Level of Education	High school or less	30%	15%	10%	423
	Tech school/Some college	23%	6%	5%	354
	College graduate	12%	14%	3%	295
	Postgraduate work	16%	12%	6%	196
Children in Household	Children in household	23%	13%	5%	331
	No children in household	20%	11%	7%	922
Household Income	Less than $45,000	20%	13%		138
	$45,000 - $74,999	29%	16%	5%	227
	$75,000 - $99,999	45%	2%	2%	146
	$100,000 - $149,999	18%	12%	12%	290
	$150,000 or more	8%	17%	11%	232
Years Lived in NH	10 years or less	10%	13%	1%	99
	11-20 years	15%	4%	9%	151
	More than 20 years	24%	13%	7%	1,020
Region of State	Central/Lakes	16%	13%	6%	226
	Connecticut Valley	24%	8%	5%	154
	Manchester Area	20%	15%	10%	204
	Mass Border	29%	11%	8%	352
	North Country	30%	8%	8%	130
	Seacoast	11%	15%	2%	199
Party ID	Democrat	15%	9%	4%	547
	Independent	10%	6%	9%	179
	Republican	32%	16%	9%	530
Political Ideology	Socialist	3%	1%	0%	104
	Progressive	15%	7%	4%	174
	Liberal	10%	14%	6%	124
	Moderate	21%	10%	7%	300
	Conservative	33%	18%	8%	355
	Libertarian	31%	14%	4%	92

Q28: How well do you feel that you understand what the New Hampshire Division of Parks and Recreation does?

		Very well	Somewhat well	Not very well	Not at all well	Don't know/Not sure	N
Overall	December 2025	10%	52%	25%	7%	6%	1,297
Gender of Respondent	Men	9%	54%	28%	4%	6%	639
	Women	11%	50%	23%	10%	6%	640
Age of Respondent	18 to 34	15%	49%	20%	8%	8%	329
	35 to 49	10%	46%	34%	3%	7%	261
	50 to 64	10%	56%	23%	8%	3%	376
	65 and older	6%	54%	26%	7%	7%	327
Level of Education	High school or less	5%	62%	22%	8%	4%	442
	Tech school/Some college	17%	44%	29%	5%	5%	355
	College graduate	9%	49%	24%	8%	9%	301
	Postgraduate work	10%	46%	29%	6%	9%	196
Children in Household	Children in household	14%	58%	17%	2%	9%	331
	No children in household	9%	50%	28%	8%	5%	948
Household Income	Less than $45,000	13%	57%	24%	3%	3%	139
	$45,000 - $74,999	21%	43%	22%	11%	2%	232
	$75,000 - $99,999	8%	46%	19%	6%	21%	153
	$100,000 - $149,999	7%	57%	25%	6%	6%	290
	$150,000 or more	10%	46%	31%	7%	5%	232
Years Lived in NH	10 years or less	16%	51%	24%	4%	5%	99
	11-20 years	5%	69%	19%	4%	2%	151
	More than 20 years	10%	49%	26%	7%	7%	1,047
Region of State	Central/Lakes	8%	52%	30%	8%	2%	227
	Connecticut Valley	18%	48%	16%	9%	9%	154
	Manchester Area	20%	44%	21%	7%	8%	221
	Mass Border	6%	61%	25%	3%	4%	355
	North Country	9%	55%	28%	2%	6%	137
	Seacoast	4%	42%	33%	12%	10%	199
Party ID	Democrat	12%	51%	22%	8%	7%	562
	Independent	9%	47%	29%	7%	9%	179
	Republican	9%	54%	27%	5%	5%	543
Political Ideology	Socialist	2%	45%	32%	11%	10%	104
	Progressive	8%	45%	33%	7%	6%	174
	Liberal	8%	59%	26%	6%	1%	138
	Moderate	9%	54%	25%	4%	8%	301
	Conservative	14%	56%	19%	7%	4%	366
	Libertarian	7%	57%	21%	4%	11%	93

Q29: Generally speaking, how well do you think the New Hampshire Division of Parks and Recreation manages environmental conservation in the state?

		Very well	Somewhat well	Not very well	Not at all well	Don't know/Not sure	N
Overall	December 2025	21%	51%	3%	1%	24%	1,294
Gender of Respondent	Men	22%	54%	3%	1%	19%	637
	Women	21%	46%	3%	1%	29%	640
Age of Respondent	18 to 34	23%	51%	1%	1%	25%	329
	35 to 49	21%	49%	3%	3%	25%	261
	50 to 64	16%	57%	4%	0%	22%	376
	65 and older	27%	45%	5%	0%	23%	325
Level of Education	High school or less	22%	54%	6%		19%	440
	Tech school/Some college	24%	55%	2%		19%	355
	College graduate	15%	48%	2%	3%	32%	301
	Postgraduate work	25%	42%	2%	1%	30%	196
Children in Household	Children in household	28%	49%	1%	2%	19%	331
	No children in household	19%	51%	4%	0%	26%	946
Household Income	Less than $45,000	22%	55%	0%	0%	22%	136
	$45,000 - $74,999	31%	34%	6%	3%	26%	231
	$75,000 - $99,999	14%	43%	8%		35%	153
	$100,000 - $149,999	20%	58%	2%		19%	290
	$150,000 or more	26%	49%	1%	1%	24%	232
Years Lived in NH	10 years or less	18%	60%	2%		20%	99
	11-20 years	12%	64%	3%	0%	21%	151
	More than 20 years	23%	48%	3%	1%	24%	1,045
Region of State	Central/Lakes	18%	59%	0%		23%	227
	Connecticut Valley	32%	39%	1%	0%	28%	154
	Manchester Area	24%	48%	8%	2%	17%	221
	Mass Border	23%	54%	2%	0%	21%	355
	North Country	18%	53%	4%		26%	137
	Seacoast	15%	46%	4%	2%	33%	197
Party ID	Democrat	18%	51%	3%	1%	27%	562
	Independent	18%	54%	2%	2%	24%	179
	Republican	25%	50%	3%	1%	20%	540
Political Ideology	Socialist	7%	59%	1%	2%	31%	104
	Progressive	16%	56%	2%	0%	26%	174
	Liberal	20%	58%	7%		15%	138
	Moderate	16%	58%	5%	2%	20%	302
	Conservative	35%	42%	3%	1%	19%	364
	Libertarian	25%	46%	1%		27%	93

Q30: Generally speaking, are you satisfied or dissatisfied with the way the New Hampshire Division of Parks and Recreation manages the state parks, campgrounds, state beaches, and other areas under its management?

		Very satisfied	Somewhat satisfied	Neutral/No opinion	Somewhat dissatisfied	Very dissatisfied	Don't know/Not sure	N
Overall	December 2025	23%	43%	15%	3%	0%	16%	1,290
Gender of Respondent	Men	21%	45%	20%	3%	0%	11%	639
	Women	25%	40%	11%	4%	0%	19%	634
Age of Respondent	18 to 34	22%	34%	22%	3%		18%	329
	35 to 49	30%	39%	15%	5%	1%	9%	261
	50 to 64	19%	51%	11%	1%	0%	17%	376
	65 and older	23%	44%	14%	3%	0%	15%	321
Level of Education	High school or less	17%	48%	13%	3%		18%	436
	Tech school/Some college	28%	37%	20%	1%		13%	355
	College graduate	20%	44%	15%	6%	1%	14%	301
	Postgraduate work	30%	38%	12%	3%	0%	17%	195
Children in Household	Children in household	29%	39%	14%	6%	1%	12%	331
	No children in household	21%	44%	16%	2%	0%	16%	942
Household Income	Less than $45,000	15%	58%	12%	0%	0%	14%	138
	$45,000 - $74,999	26%	36%	18%	2%	1%	17%	231
	$75,000 - $99,999	29%	29%	16%	6%	0%	20%	153
	$100,000 - $149,999	16%	50%	21%	2%	0%	10%	287
	$150,000 or more	25%	47%	12%	5%	0%	12%	232
Years Lived in NH	10 years or less	38%	37%	6%	14%		4%	98
	11-20 years	13%	45%	16%	0%		26%	151
	More than 20 years	23%	43%	16%	3%	0%	15%	1,041
Region of State	Central/Lakes	20%	40%	23%	1%	0%	15%	227
	Connecticut Valley	28%	41%	10%	0%	0%	21%	155
	Manchester Area	20%	27%	27%	6%		20%	218
	Mass Border	26%	57%	6%	2%	0%	9%	352
	North Country	29%	40%	10%	6%	0%	14%	137
	Seacoast	17%	40%	19%	4%	1%	19%	199
Party ID	Democrat	32%	34%	13%	3%	0%	18%	556
	Independent	20%	36%	18%	5%	0%	21%	179
	Republican	16%	53%	17%	3%	0%	11%	543
Political Ideology	Socialist	15%	30%	30%	2%	2%	20%	104
	Progressive	22%	35%	27%	5%	0%	11%	174
	Liberal	37%	37%	7%	5%	0%	14%	132
	Moderate	25%	49%	10%	4%	0%	12%	301
	Conservative	20%	47%	16%	2%		15%	366
	Libertarian	23%	46%	16%			15%	93

Appendix B

Q2 Why have you never visited Mount Washington? (Please select all that apply) – Other – Please specify

- Auto road and cog railway are too expensive.
- Cannot afford
- Cost of the Cog
- Didn't want to go to Disney Land
- Don't like the cold
- Fear of heights
- Feels too physically daunting
- Haven't MADE the time, but it has been on my to do list
- Heard it’s expensive
- I am totally afraid of heights!!!
- I don't like the cold.
- I drive by often, stop and look and take pictures. But I no longer hike and I do not like heights so won't do a car nor the train.
- It's on my list of things to do.
- It’s a surprisingly long trip west to east from the Ct River!
- Never found the time
- Never had the time
- No motivation though I have hiked up to Tuckerman’s Ravine
- Not interested
- Plan to, Covid got in the way
- Proximal Inertia
- Too hard to get away
- Want to visit
- Younger daughter and her husband will visit and go with soon

Q6 Thinking about your **most recent visit**, how did you get to Mount Washington State Park? – Other – Please specify

- 22 ft box truck for work
- Another families car took me to the top.
- ATV
- ATV day
- Auto road bike week
- Auto Road by motorcycle.
- Auto road in military vehicle.
- Auto road on a motorcycle.
- Auto Road on motorcycle
- Auto Road on my own motorcycle
- Auto road when opened to four wheelers
- Auto road with own motorcycle
- Bicycle hill climb
- Company Vehicle we service equipment on top of Mt Washington
- Driven up and hiked back down
- Guest of Mt Washington PBS van
- I ran in the road race to the top.
- I was a volunteer to cook for the crew. We took the snow cat up the mountain - 137 mph winds
- Lunch rocks Tuckerman's ravine
- Motorcycle
- Motorcycle
- Motorcycle
- Motorcycle
- Motorcycle
- Motorcycle to top on road
- My Washington Bike Race
- Parent's car
- Ski touring
- Skied Tucker Mans Ravine
- Snowmobile
- Took my motorcycle up to the summit in 1994.
- Took the winter truck ride
- Winter snowcat; partway up.
- Winter trip via snow cat

Q7 Why did you decide to visit Mount Washington State Park? (Please select all that apply) – Other – Please specify

- A treat for international friends
- As a parent for a school trip.
- As one summit of the NH 4000 footers. peak bagging.
- Attend bike race
- Bag it as one of The New England 100 highest peaks!
- Because I love it there.
- Boy Scout troop hiked up
- Brought out of state guests
- Celebrate my birthday with family
- Coverage for road race.
- Family treat for first-timers
- Family trip
- Family vacation, had no choice
- Filming Good Morning America
- Had a gift certificate to the hotel
- Had a job for a day at the observatory
- Had family visiting who wanted to go by the Cog Railway.
- Hiking 48 4k footers
- Hiking the 4000 footers.
- Hiking the AT
- I am a professional climbing guide
- I grew up in Berlin, NH. We had a magnificent view from our living room window.
- I worked for the US Forest Service- Saco
- If you are from NH and have never been to the top of Mt. Washington, are you really from NH?
- In car with parents
- It’s a 4000’ er
- Job related
- Just wanted to visit again
- Laconia Motorcycle Week ride
- Lived in Littleton NH all my life and had never been up there, so figured why not!
- Meet my son at the top after a road race
- Memorial for stepdad
- Mt Washington bike race hill climb
- My daughter entered a running race

- My father was a hutman at Lakes of the Clouds in the 1940's, so it is nostalgic to visit.
- My husband was a stage driver
- My wife had never been to the top
- On a multi-day hiking/backpacking trip
- Part of a Boy Scout trip
- Part of hiking the 48 4000 footers
- Part of hiking the NH 48 4Kers
- Part of white mtn attraction booklet
- Ride volunteer for MW Road Race to give back when I ran it.
- Road race support
- See alpine garden
- Ski
- Skiing
- Snow coach
- Supporting a cyclist in a race to the summit
- The challenge-I was a backpacker
- The sunrise mornings!
- To attend memorial for 10th Mountain Division
- To bring visitors up to see the white mounts from the top
- To experience the weather
- To live in an extreme environment
- To meet participants of a race up mountain
- To revisit one of our 1973 honeymoon destinations
- To share the experience with family and visitors
- To share with visitors to NH
- To show my children the mountains and the summit
- To spend a night in the observatory
- To take a visitor from out of the country to experience the awe inspiring beauty of the White Mountains in NH
- To visit a friend who was working at the summit
- To watch a bike race
- Visiting relatives wanted to see
- Visitor wanted to go—tourism
- Volunteering bicycle race
- was a teacher and took a class
- Watching finish of road race.
- Went in the winter to ski down beside the tracks of the Cog Railway.

- Work
- Work - trip leader for a youth program
- Work on equipment!
- Work related

Q7 Why are you unlikely to visit Mount Washington State Park again in the future? (Please select all that apply) – Other – Please specify

- Advanced age
- Age
- Age
- Age
- Aging
- Antithesis of the natural beauty of the mountains
- Been there and didn’t enjoy the ride up/down
- Drive up is scary AF
- Elderly with arthritis
- Have you seen all the flatland scissor beaks who infest the place during good weather? [expletive] that.
- I am 80 years old and don't visit the mountains any more
- I am 87 years old
- I am now 81, I have hiked it many times also 4 times by a stage. Been up the Cog once
- I have hiked it, rode Cog twice, and driven it
- I think I'm too old and out of shape to do it safely
- I'm a winter hiker, I believe the park is closed.
- I'm too old
- It’s more rewarding to physically climb it and I’ve already done that
- Knees are shot
- Maybe too old to hike it again
- My age (old) arthritis
- Once was enough; other things to see and do.
- Pretty far away
- Senior citizen
- The drive felt very unsafe at times.
- The drive up scares the hell out of me

- The weather and visibility was terrible and it was a terrifying drive with no place to turn around. The ranger at the base of the mountain should have warned us. At the time there were no guard rails on the side of the mountain
- The weather is too unpredictable
- Too old
- Too old for hiking, unlikely to take transportation to summit
- Too old to drive up, and cost of railroad
- Too old to hike and too many people
- Used to hike it, too old now!
- We will be moving to Virginia next year and won't be coming up to NH much if at all.
- We're too old to make the trip worthwhile.

Q23 Generally speaking, why did you decide to visit New Hampshire State Parks? (Please select all that apply) – Other – Please specify

- Access to 4x4 Truck Trails
- As part of a group
- ATVing
- Beach
- Beaches in summer
- Bird watching
- Birding
- Birding
- Fishing
- Fishing
- Hike with my dog
- Hunting
- I am a board member of Wentworth-Coolidge Mansion Association
- I am a professional climbing guide
- I am retired-used to visit often.
- I bike through Pillsbury St Park
- I enjoy learning about New Hampshire's non-human residents!
- I stay at park with summer camps or while instructing paddling or water rescue courses.
- Lake access
- Nice hiking trails
- Photography
- Quiet contemplation
- Rock climbing

- Ski
- State park plate gets us in for free
- Swim and relax
- Swimming and picnic
- They are one of our most important assets and I want to see them before the Republicans destroy them
- Thru travel
- To detox from Trump chaos
- To get away from people
- To see the annual craft fair at Sunapee
- Transportation to isles of shoals
- Usually to swim at a beautiful location
- Visitor wanted to go—tourism
- Volunteer for trail maintenance
- When I went this year I drove. Forty five years ago I climbed Tuckerman with my now wife and a couple of good friends.
- Work
- Work for the phone company
- Work related

Q24 Generally speaking, why do you never visit New Hampshire State Parks? (Please select all that apply) – Other – Please specify

- All I see is CT, MA, NY plates in the parking lots of these places. Nobody wants to be around these entitled snots who are more interested in taking pictures than enjoying nature. Besides, I live in Stoddard and there really isn't a place in NH more beautiful than that.
- G.D. Yahoos!!! . . .
- I have family that lives on lakes so I don’t really see a need to go

Q25 Generally speaking, why do you rarely visit New Hampshire State Parks? (Please select all that apply) – Other – Please specify

- 80 years old
- Again, advanced age, having visited in past.
- Age
- Age
- Age - I visited quite a bit when I was younger
- Age high & income low

- Aging
- Been there done that for most locations
- Busy with other activities
- Children have grown and that was the main reason for visiting
- Currently touring other state parks
- Difficulty with access due to physical issues.
- Do not go as often now that my kids are grown
- Don’t know where they are
- Elderly age, balance poor
- Family not interested
- Getting old
- Getting too old to hike alone in the woods
- Go to Maine
- Have fun at locally
- Have the same access at own home
- Health issues
- I am 88 years old and it can be too difficult for me
- I am 89 and have limited resources
- I have easy access to local town and county areas for hiking, XC skiing, etc.
- I like looking at the outdoors but not actually being outdoors.
- I live in the MWV
- I need to become more educated on what is available and where.
- I'm in my late 60's and don't get around much anymore
- It's been too hot in the summer
- Lazy, don't like winter ice
- Massholes
- My age
- My age keeps me from mountain climbing
- No longer strong or healthy enough.
- No one to go with
- No time
- Not sure what there are for state parks
- Old age
- Only go places my dogs are welcome
- Our home is in a beautiful natural area so don't feel the need to visit other places (e.g., state parks) for a healthy dose of nature.
- Retired-not able to hike like I used to

- So much to do and see in the USA
- Spend most of my outdoor time hiking in the White Mountains.
- stay local, rail trails etc.
- Too old. Went with children often in the past
- Too many competing interests and a disabled wife
- We own a lakefront property in New Hampshire and spend the majority of our time there.
- widower

Q26 Which of the following types of activities do you typically do when visiting New Hampshire State Parks? (Please select all that apply) – Other – Please specify

- Amateur radio activities
- As a campsite for summer camps.
- Backcountry skiing, running
- Beach
- Beach
- Beach
- Beaches
- Beaches
- Beaches
- Canoeing
- Canoeing, kayaking
- Canoeing/kayaking
- Cookout
- Cookout
- Crossing the notch
- Day at lake/ocean
- Different place to go
- Dog walking
- Dog walking
- Drinking
- Drive scenic
- Driving through when possible, photography.
- Enjoy lunch with a view
- Enjoy scenery, mountains, trees, animals and photography.
- Enjoying NH
- Family gathering

- Geocaching
- Hiking
- Historic preservation work (Wentworth-Coolidge Mansion)
- Hunting
- Hunting
- Hunting
- Hunting
- Hunting
- Hunting
- Hunting
- Kayak
- Kayaking
- Kayaking
- Kayaking
- Kayaking
- Kayaking
- Kayaking
- Kayaking
- Kayaking when situation permits.
- Kayaking/SUP
- Look at nature
- Looking
- Many of the activities checked now limited due to my advancing age
- Not applicable
- Off road truck trails
- Pack lunch
- Peace and quiet
- Photography
- Photography
- Photography
- Picnic
- Picnic with family or friends
- Picnic/cookout
- Picnicking
- Picnics
- Pure enjoyment
- Relaxing

- Relaxing
- Retired
- Rock and ice climbing
- Rock and ice climbing
- Rock and ice Climbing
- Rock climbing
- Shops, streams
- Sightseeing
- Site seeing
- Sketching photos
- Snow shoeing
- Snow shoeing
- Snow shoeing
- Snowmobiling
- Snowmobiling
- Snowmobiling
- Snowshoeing
- Snowshoeing
- Snowshoeing
- Snowshoeing
- Snowshoeing
- Snowshoeing
- Storm cleanup & trail maintenance
- Swim
- Swimming
- There isn't much I can do other than driving through one to enjoy the scenery.
- Trail running
- Walking dogs
- Work

Appendix C

2025 12 - Mt. Washington General Public Survey

CONSENT
You are invited to participate in a study about recreation and tourism in New Hampshire, conducted by the University of New Hampshire. Your responses will complement and inform the ongoing Mount Washington State Park Assessment and Recommendations for Improvements, a project by the New Hampshire Department of Natural and Cultural Resources (DNCR). You do not need to be familiar with Mount Washington State Park to participate in this study. We are seeking your opinion on concepts related to planning and operations of state parks in general. The use of human subjects in this project has been approved by the UNH Institutional Review Board (IRB) for the Protection of Human Subjects in Research.

- The survey will take about 10 minutes to complete.
- Participation is completely voluntary and refusal to participate will not affect you in any way.
- You may refuse to answer any questions or stop at any time.
- Your answers will be combined with the answers of residents across the state and used for research purposes only.
- Data will be kept in secured files, available only to the researchers. We will make every effort to maintain the confidentiality of the data.
- Research via the internet presents minimal risk of a breach of confidentiality. You are not anticipated to receive any direct benefits from participating in this research.

By clicking the "Yes, I'd like to participate" button below, you are indicating that you consent to participate in this study. If you prefer not to participate, please simply close this window in your browser.

If you have any questions about the survey, please contact Sean McKinley at the University of New Hampshire Survey Center, sean.mckinley@unh.edu or 603-862-2563.

If you have any questions about your rights as a research participant, you may contact Melissa McGee in UNH Research Integrity Services, melissa.mcgee@unh.edu or 603-862-2005 to discuss them.

Thank you for your participation!

Q1 Have you ever visited Mount Washington in the White Mountains of New Hampshire?

- ○ Yes (1)
- ○ No (2)
- ○ Never heard of it (96)
- ○ Don't know/Can't remember (98)

Display this question:
If Q1 = 2
Or Q1 = 96

Q2 Why have you never visited Mount Washington? (Please select all that apply)

- ☐ Not familiar with it (1)
- ☐ Haven't had the time (2)
- ☐ Too far away (3)
- ☐ Not interested in activities there (4)
- ☐ Physical disability (5)
- ☐ Prefer visiting other locations (6)
- ☐ Heard that it is too crowded (7)
- ☐ Other (Please specify) (97) _____
- ☐ No reason in particular (96)

Display this question:

If Q1 = 1

Or Q1 = 98

Q3 Have you ever gone to the top, or summit, of Mount Washington?

- Yes (1)
- No (2)
- Don't know/Can't remember (98)

Q4intro Mount Washington State Park is 58.8 acres at the summit of Mount Washington

Q4 Before today, were you aware that...

	Yes (1)	No (2)
The summit of Mount Washington is a state park (Q4a)		
The Mt. Washington Auto Road and Cog Railway are privately owned and operated (Q4b)		
The cost of tickets for the Mt. Washington Auto Road and Cog Railway do not include any fee for entering Mount Washington State Park (Q4c)		

Display this question:
If Q3 = 1

Q5 To the best of your recollection, when was the **most recent time** you visited Mount Washington State Park?

- ○ Within the past year (1)
- ○ Within the past 5 years (2)
- ○ Within the past 10 years (3)
- ○ Within the past 20 years (4)
- ○ More than 20 years ago (5)
- ○ Don't know/Can't remember (98)

Display this question:
If Q3 = 1

Q6 Thinking about your **most recent visit**, how did you get to Mount Washington State Park?

- ○ Cog Railway (1)
- ○ Took Auto Road using own car (2)
- ○ Took Auto Road using tour van or other group transportation (3)
- ○ Hiking day trip (hiking from the mountain's base and back in one day) (4)
- ○ Overnight hiking trip (5)
- ○ Other (Please specify) (97)

_____

- ○ Don't know/Can't remember (98)

Display this question:

If Q3 = 1

Q7 Why did you decide to visit Mount Washington State Park? (Please select all that apply)

- [ ] To reach the highest peak in the Northeastern U.S. (1)
- [ ] To enjoy the scenery or view (2)
- [ ] To learn about the history of the area (3)
- [ ] To enjoy the natural environment (4)
- [ ] To drive to the top or get the "This Car Climbed Mt. Washington" bumper sticker (5)
- [ ] Part of an organized tour (6)
- [ ] For exercise or recreation (7)
- [ ] To have a fun experience with friends or family (8)
- [ ] To ride the Cog Railway (9)
- [ ] Other (Please specify) (97) _____
- [ ] No reason in particular (96)

Display this question:

If Q3 = 1

Q8 On a scale from 0 to 10, where 0 is “definitely not” and 10 is “definitely would,” how likely are you to recommend going to Mount Washington State Park to a friend or family member in the future?

- 0 - Definitely Not (0)
- 1 (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 (7)
- 8 (8)
- 9 (9)
- 10 - Definitely Would (10)
- Don't know/Not sure (98)

Display this question:

If Q3 = 1

Q9 How likely are you to visit Mount Washington State Park in the future?

- Very likely (1)
- Somewhat likely (2)
- Somewhat unlikely (3)
- Very unlikely (4)
- Don't know/Not sure (98)

Display this question:

If Q3 = 1

And If

Q9 = 3

Or Q9 = 4

Q10 Why are you unlikely to visit Mount Washington State Park again in the future? (Please select all that apply)

- ☐ Unlikely to be in the area (1)
- ☐ Seen it before (2)
- ☐ Physical disability (3)
- ☐ Too crowded (4)
- ☐ Want to visit other locations (5)
- ☐ Didn't enjoy your experience there (6)
- ☐ Too high cost (7)
- ☐ Other (Please specify) (97) _____
- ☐ No reason in particular (96)

Q11 Thinking about future planning at Mount Washington State Park... Which of the following do you think the stewards of Mount Washington State Park should do regarding the Visitor Center?

- Build a new state-of-the-art, environmentally-friendly Visitor Center (1)
- Renovate or expand the existing Sherman Adams Visitor Center (2)
- Make no changes to the existing Sherman Adams Visitor Center (3)
- No opinion/Don't know (98)

Q12 The Yankee Building was built on the summit in the 1940s and currently houses both private and public telecommunications equipment and is in need of significant repairs and / or replacement. Generally speaking, how do you think the state should address the Yankee Building?

- Renovate or replace the building on the summit with state and/or federal funds (1)
- Pursue a public-private partnership to renovate or replace the building on the summit (2)
- No opinion/Don't know (98)

Q13 Which of the following comes closest to your opinion regarding development and conservation at Mount Washington State Park?

- The Park should prioritize development and improvement of the site to allow for more visitors or better amenities (1)
- The Park should prioritize environmental conservation and minimizing its ecological impact (2)
- Don't know/Not sure (98)

Q14 Alpine tundra vegetation disturbed by trampling can take decades to recover naturally. At Mount Washington State Park, off-trail travel by hikers and visitors can damage this rare ecosystem.

Generally speaking, would you support or oppose the following actions to help protect and restore alpine tundra at the summit?

	Strongly support (1)	Somewhat support (2)	Neutral/ No opinion (3)	Somewhat oppose (4)	Strongly oppose (5)	Don't know/Not sure (98)
Widen existing hiking trails to allow passing and a place to take a break without having to step off-trail (Q14a)	○	○	○	○	○	○
Define the edges of pedestrian circulation areas to better contain foot traffic (Q14b)	○	○	○	○	○	○
Create an alpine garden educational exhibit within the developed site, close to the Visitors Center, to allow visitors to experience plants up close without venturing in the natural areas (Q14c)	○	○	○	○	○	○
Enhance visitor education about the protection of alpine tundra (Q14d)	○	○	○	○	○	○

Q15 Would you support or oppose Mount Washington State Park limiting the number of visitors present at any one time?

- Strongly support (1)
- Somewhat support (2)
- Neutral/No opinion (3)
- Somewhat oppose (4)
- Strongly oppose (5)
- Don't know/Not sure (98)

Q16 The Sherman Adams building, a modern summit building in Mount Washington State Park, houses The Sherman Adams Visitor Center, a cafeteria, restrooms, gift shops, the Mount Washington Observatory and its museum. Visitors are not currently required to pay a fee to enter the building. If Mount Washington State Park did require visitors to pay a fee to enter the Sherman Adams Building, what would be a fair amount in your opinion?

- $0 (1)
- Less than $2 (2)
- $2-$5 (3)
- More than $5 (4)
- Don't know/Not sure (98)

Q17 Generally speaking, do you agree or disagree with the following statements about Mount Washington?

	Strongly agree (1)	Somewhat agree (2)	Neutral/ No opinion (3)	Somewhat disagree (4)	Strongly disagree (5)	Don't know/Not sure (98)
Investment in Mount Washington facilities improvements is a worthwhile use of public funds (Q17a)	○	○	○	○	○	○
Investment in active protection of the sensitive alpine environment in the White Mountains is a worthwhile use of public funds (Q17b)	○	○	○	○	○	○
Mount Washington is an important asset for New Hampshire (Q17c)	○	○	○	○	○	○
Tourists visiting Mount Washington contribute to the New Hampshire economy (Q17d)	○	○	○	○	○	○

Q18 Thinking about State Parks in New Hampshire in general... Do agree or disagree that state funds should be used to support the maintenance of State Park facilities?

- ○ Strongly agree (1)
- ○ Somewhat agree (2)
- ○ Neutral/No opinion (3)
- ○ Somewhat disagree (4)
- ○ Strongly disagree (5)
- ○ Don't know/Not sure (98)

Q19 Which of the following best describes your opinion about **non-profit** organizations' use of State Parks in New Hampshire?

- ○ Non-profit organizations should be able to use State Parks for fundraising events without paying a fee (1)
- ○ Non-profit organizations should be able to use State Parks for fundraising events but should pay a fee to the Division of Parks and Recreation (2)
- ○ Non-profit organizations should not be able to use State Parks for fundraising events at all (3)
- ○ Don't know/No opinion (98)

Q20 Which of the following best describes your opinion about **for-profit** organizations' use of State Parks in New Hampshire?

- ○ For-profit organizations should be able to use State Parks for fundraising events without paying a fee (1)
- ○ For-profit organizations should be able to use State Parks for fundraising events but should pay a fee to the Division of Parks and Recreation (2)
- ○ For-profit organizations should not be able to use State Parks for fundraising events at all (3)
- ○ Don't know/No opinion (98)

Q21 About how often would you say that you visit **any** New Hampshire State Park?

- ○ Weekly or more often (1)
- ○ Every other week (2)
- ○ Monthly (3)
- ○ Once every 1-3 months (4)
- ○ Once every 4-6 months (5)
- ○ Once every 7-12 months (6)
- ○ Once a year (7)
- ○ Less often (8)
- ○ Never (9)
- ○ Don't know/Can't remember (98)

Display this question:

If Q21 != 9

Q22 Generally speaking, are you satisfied or dissatisfied with the fees you pay to enter New Hampshire State Parks? (Fees for the Mt. Washington Cog Railway and Mount Washington Auto Road are not fees to enter a State Park)

- Very satisfied (1)
- Somewhat satisfied (2)
- Neutral/No opinion (3)
- Somewhat dissatisfied (4)
- Very dissatisfied (5)
- Don't know/Can't remember (98)
- Not applicable (99)

Display this question:

If Q21 != 9

Q23 Generally speaking, why did you decide to visit New Hampshire State Parks? (Please select all that apply)

- ☐ To have a fun experience with friends or family (1)
- ☐ For exercise or recreation (2)
- ☐ To enjoy the natural environment (3)
- ☐ To enjoy the scenery or view (4)
- ☐ Education or curiosity (5)
- ☐ Camping (6)
- ☐ Other (Please specify) (97) _____
- ☐ No reason in particular (96)

Display this question:

If Q21 = 9

Q24 Generally speaking, why do you never visit New Hampshire State Parks? (Please select all that apply)

- [ ] Too crowded (1)
- [ ] Too high fees (2)
- [ ] Prefer other locations (3)
- [ ] Didn't enjoy previous experiences (4)
- [ ] Physical disability (5)
- [ ] Not interested in activities available there (6)
- [ ] None close by (7)
- [ ] Not kept in good condition (8)
- [ ] Don't have enough leisure time (9)
- [ ] Other (Please specify) (97) _____
- [ ] No reason in particular (96)

Display this question:

If Q21 = 7

Or Q21 = 8

Q25 Generally speaking, why do you rarely visit New Hampshire State Parks? (Please select all that apply)

- [ ] Too crowded (1)
- [ ] Too high fees (2)
- [ ] Prefer other locations (3)
- [ ] Didn't enjoy previous experiences (4)
- [ ] Physical disability (5)
- [ ] Not interested in activities available there (6)
- [ ] None close by (7)
- [ ] Not kept in good condition (8)
- [ ] Don't have enough leisure time (9)
- [ ] Other (Please specify) (97) _____
- [ ] No reason in particular (96)

Display this question:

If Q21 != 9

Q26 Which of the following types of activities do you typically do when visiting New Hampshire State Parks? (Please select all that apply)

- ☐ Hiking or walking (1)
- ☐ Biking (2)
- ☐ Camping (3)
- ☐ Swimming (4)
- ☐ OHRVing (riding ATV's, UTV's and trail bikes) (5)
- ☐ Visiting historical sites (6)
- ☐ Equestrian (7)
- ☐ Participating in nature programs (8)
- ☐ Downhill skiing (9)
- ☐ Cross-country/Nordic skiing (10)
- ☐ Fishing (11)
- ☐ Birding (12)
- ☐ Other (Please specify) (97) _____
- ☐ Nothing in particular (96)

Q27 Generally speaking, what improvements would you **most** like to see at New Hampshire state parks?

- ○ Environmental/ecological restoration (1)
- ○ Vibrant and up-to-date visitor amenities such as convenient parking, gathering areas, food and shopping choices, learning centers, and wifi (2)
- ○ Enhanced visitor education (3)
- ○ Historical preservation (4)
- ○ Back to basics: More nature, fewer amenities (5)
- ○ None of these (96)

Q28 How well do you feel that you understand what the New Hampshire Division of Parks and Recreation does?

- ○ Very well (1)
- ○ Somewhat well (2)
- ○ Not very well (3)
- ○ Not at all well (4)
- ○ Don't know/Not sure (98)

Q29 Generally speaking, how well do you think the New Hampshire Division of Parks and Recreation manages environmental conservation in the state?

- Very well (1)
- Somewhat well (2)
- Not very well (3)
- Not at all well (4)
- Don't know/Not sure (98)

Q30 Generally speaking, are you satisfied or dissatisfied with the way the New Hampshire Division of Parks and Recreation manages the state parks, campgrounds, state beaches, and other areas under its management?

- Very satisfied (1)
- Somewhat satisfied (2)
- Neutral/No opinion (3)
- Somewhat dissatisfied (4)
- Very dissatisfied (5)
- Don't know/Not sure (98)

TOWN_NH
In which town or city do you live?

▼ Acworth (1) ... Other (997)

Display this question:
If TOWN_NH = 997

TOWN_NH_other You indicated an "other" town or city above. Which town or city is that?

_____

REGVOTE1 Are you registered to vote at your current address?

- ○ Yes (1)
- ○ No (2)
- ○ Don't know/Not sure (98)

Display this question:
If REGVOTE1 = 1

REGVOTE2_NH And what are you registered as?

- ○ Registered Democrat (1)
- ○ Registered Independent/Unaffiliated/Undeclared (2)
- ○ Registered Republican (3)
- ○ Registered Other (Please specify) (97) _____
- ○ Don't know/Not sure (98)

ZIP We have a few final questions. Although some of the following questions will be asked on every survey, most will only be asked occasionally. What is the zip code of your primary residence?

_____

GENDER Do you describe yourself as a woman, a man, or in some other way?

- ○ Woman (1)
- ○ Man (2)
- ○ Some other way (3) _____
- ○ Prefer not to say (99)

RACE Which of the following ethnic or racial groups do you identify with? (Please select all that apply)

- [ ] Native American, Inuit, or Aleut (1)
- [ ] Asian American/Pacific Islander (2)
- [ ] African American/Black/Caribbean American (3)
- [ ] Caucasian/White (4)
- [ ] Latin/Hispanic (5)
- [ ] Middle Eastern/North African (6)
- [ ] Other (Please specify) (97)

_____

- [ ] Prefer not to say (99)

D3 What is the highest grade in school or level of education that you've completed and got credit for?

- ○ Eighth grade or less (1)
- ○ Some high school (2)
- ○ High school graduate (includes G.E.D.) (3)
- ○ Technical school (4)
- ○ Some college (5)
- ○ College graduate (6)
- ○ Postgraduate work (7)
- ○ Don't know/Not sure (98)

D4a Generally speaking, do you usually think of yourself as a Republican, a Democrat, an Independent, or something else?

- Democrat (1)
- Independent (2)
- Republican (3)
- Other party (97)
- Don't know/Not sure (98)

Display this question:
If D4a = 1

D4b Would you call yourself a strong Democrat or a not very strong Democrat?

- Strong Democrat (1)
- Not very strong Democrat (2)

Display this question:
If D4a = 2
Or D4a = 97
Or D4a = 98

D4c Which party do you think of yourself as closer to?

- Democratic Party (1)
- Republican Party (2)
- Neither (96)
- Don't know/Not sure (98)

Display this question:
If D4a = 3

D4d Would you call yourself a strong Republican or a not very strong Republican?

- Strong Republican (1)
- Not very strong Republican (2)

D5 And which of the following **best** describes your political ideology?

- Socialist (1)
- Progressive (2)
- Liberal (3)
- Moderate (4)
- Conservative (5)
- Libertarian (7)
- Other (Please specify) (97) _____
- Don't know/Not sure (98)

VOTE24 In the election for President in 2024, did you vote for Kamala Harris, Donald Trump, someone else, or did you skip that election?

- Kamala Harris (1)
- Donald Trump (2)
- Someone else (97)
- Did not vote (99)
- Don't remember/Not sure (98)

D8
And what is your current age?
(Please enter a number only)

_____

MOVE1 Were you born in New Hampshire or somewhere else?

- New Hampshire (1)
- Somewhere else (2)

Display this question:
If MOVE1 = 1

MOVE2 And have you always lived in New Hampshire or have you lived elsewhere at some point in your life?

- Have always lived in New Hampshire (1)
- Have lived elsewhere (2)

Display this question:
If MOVE1 = 2
Or MOVE2 = 2

MOVE3
What state did you move to New Hampshire from?

(If you have moved to New Hampshire more than once, please enter the state you moved from most recently)

▼ Alabama (1) ... Don't know/Not sure (98)

Display this question:

If MOVE1 = 2

Or MOVE2 = 2

MOVE4 What year did you move to New Hampshire? (If you have moved to New Hampshire more than once, please enter the year in which you moved most recently)

_____

D9
How many years **in total** have you lived in New Hampshire?
(Please enter a number only. For 1 year or less, enter 1)

_____

D10 How many of the persons who currently live in your household are under 18 years of age, including babies and small children?

- None (0)
- One (1)
- Two (2)
- Three (3)
- Four (4)
- Five (5)
- Six (6)
- Seven or more (7)
- Don't know/Not sure (98)

D11 Including yourself, how many adults currently live in your household?

- One (1)
- Two (2)
- Three (3)
- Four (4)
- Five (5)
- Six (6)
- Seven or more (7)
- Don't know/Not sure (98)

D16 How much **total** income did you and your family receive in 2024, not just from wages or salaries but from **all** sources, that is, before taxes and other deductions were made?

- Less than $15,000 (Less than $1,250 per month) (1)
- $15,000-$29,999 ($1,250-$2,499 per month) (2)
- $30,000-$44,999 ($2,500-$3,749 per month) (3)
- $45,000-$59,999 ($3,750-$4,999 per month) (4)
- $60,000-$74,999 ($5,000-$6,249 per month) (5)
- $75,000-$99,999 ($6,250-$8,333 per month) (6)
- $100,000-$149,999 ($8,334-$12,499 per month) (7)
- $150,000-$199,999 ($12,500-$16,666 per month) (8)
- $200,000 and over ($16,667 and over per month) (9)
- Don't know/Not sure (98)
- Prefer not to say (99)

EMPLOY Which of the following best describes your current employment status? Are you currently...

- Employed full-time (1)
- Employed part-time (2)
- Retired or not working (3)
- Unemployed (4)
- Student (5)

OWNRENT Do you own or rent your home?

- Own home (1)
- Rent home (2)
- Not applicable (99)

VET Are you or any person in your household a member or veteran of the armed forces?

- Yes (1)
- No (2)
- Don't know/Not sure (98)

Tighe & Bond

D.3. Comparison between Mt. Washington Visitors Survey and General Opinion Survey Responses

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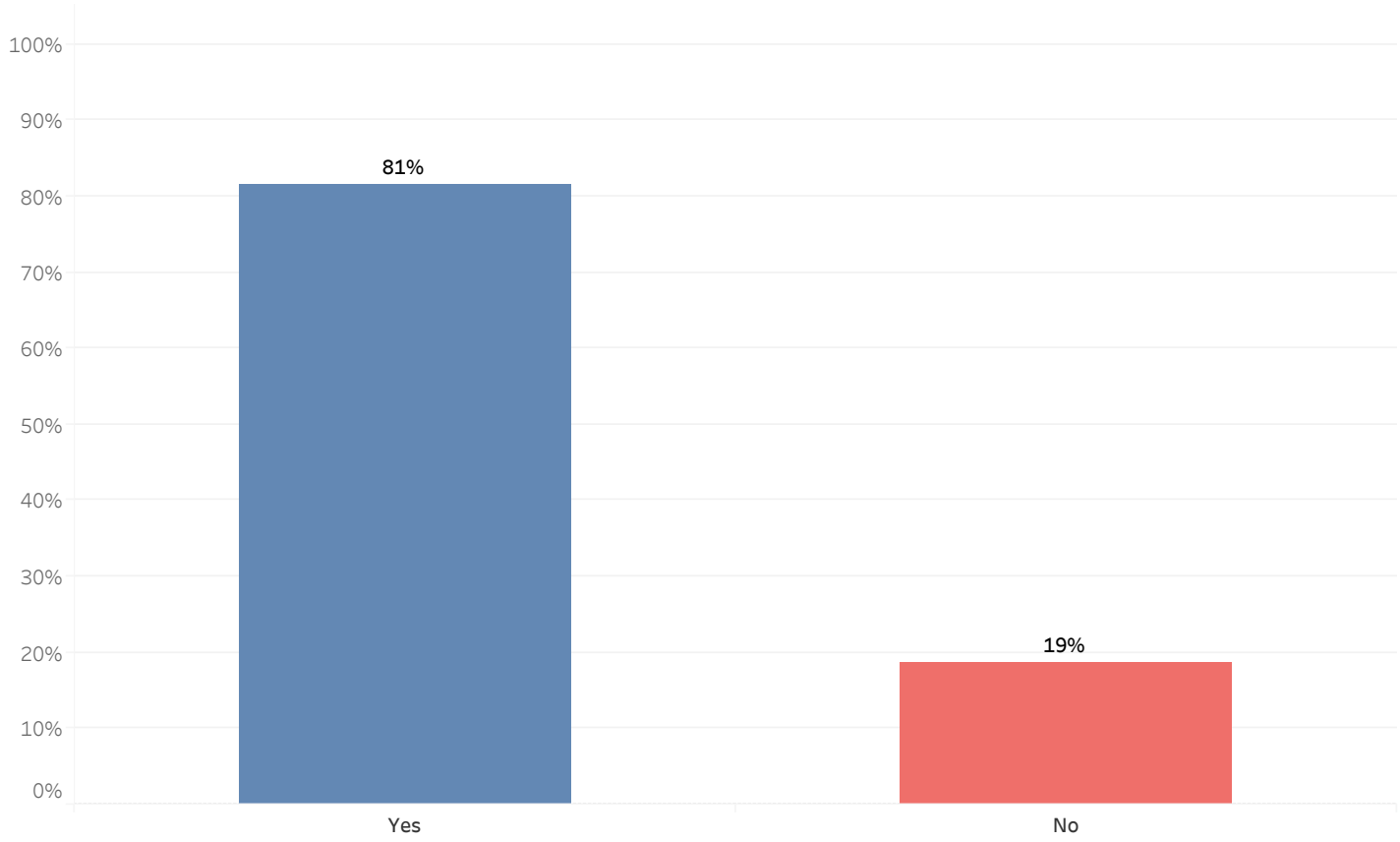
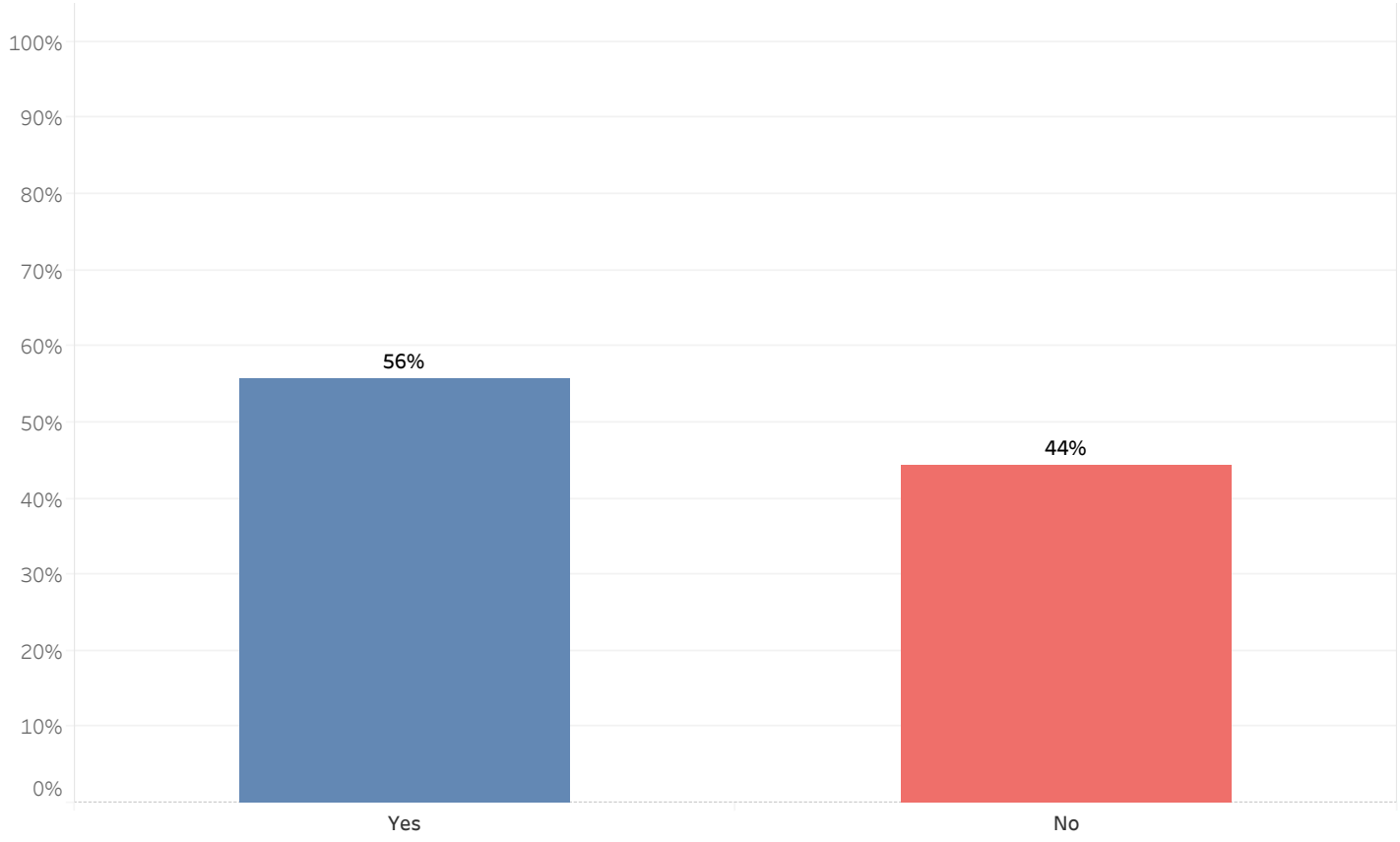
COMPARISON BETWEEN MT. WASHINGTON VISITORS SURVEY AND MT. WASHINGTON GENERAL OPINION SURVEY (DECEMBER 2025) ON QUESTIONS INCLUDED IN BOTH SURVEYS

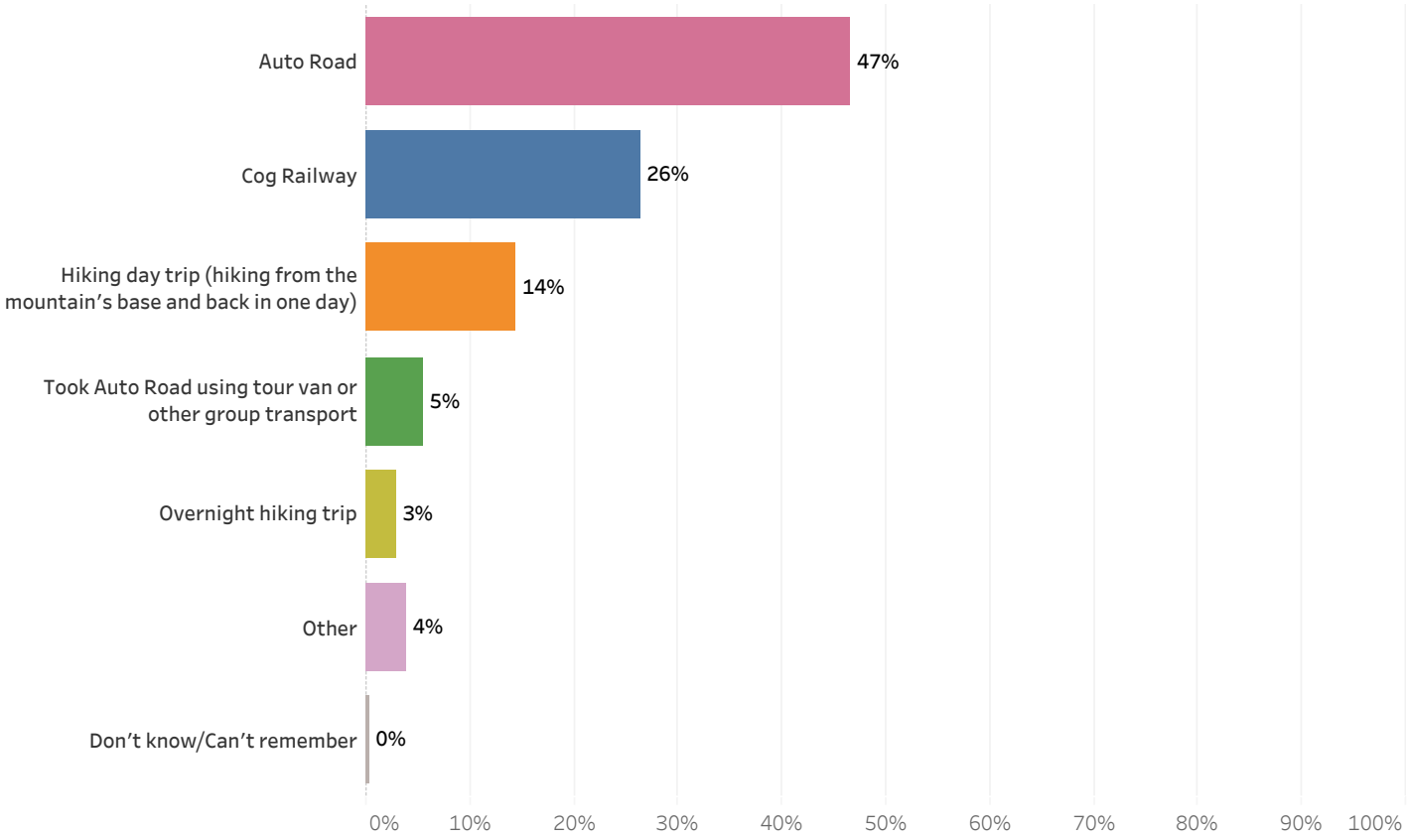
Before today, were you aware that the summit of Mount Washington is a state park? - General Public



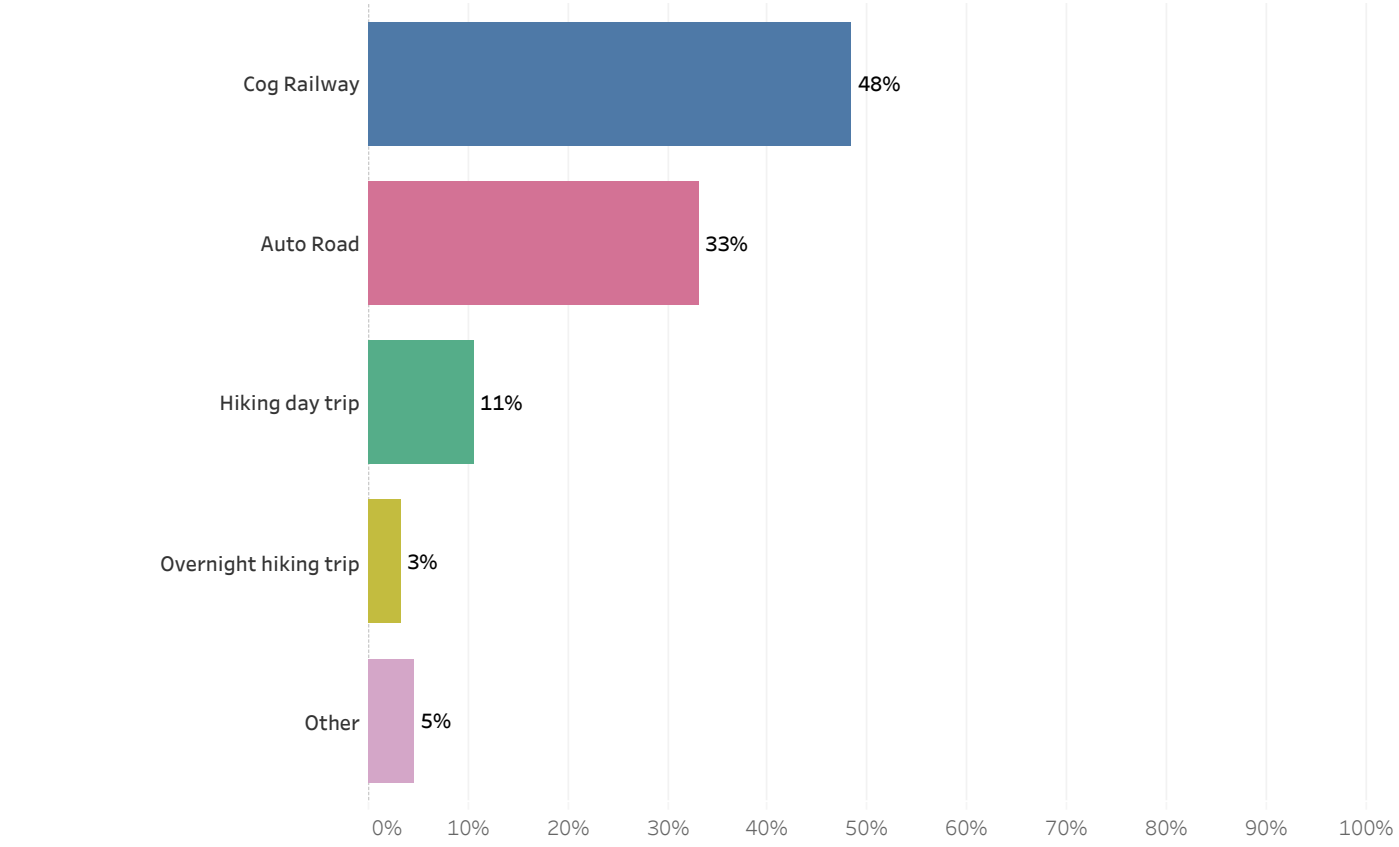
Before you visited, were you aware that the summit of Mount Washington is a state park? - Visitors



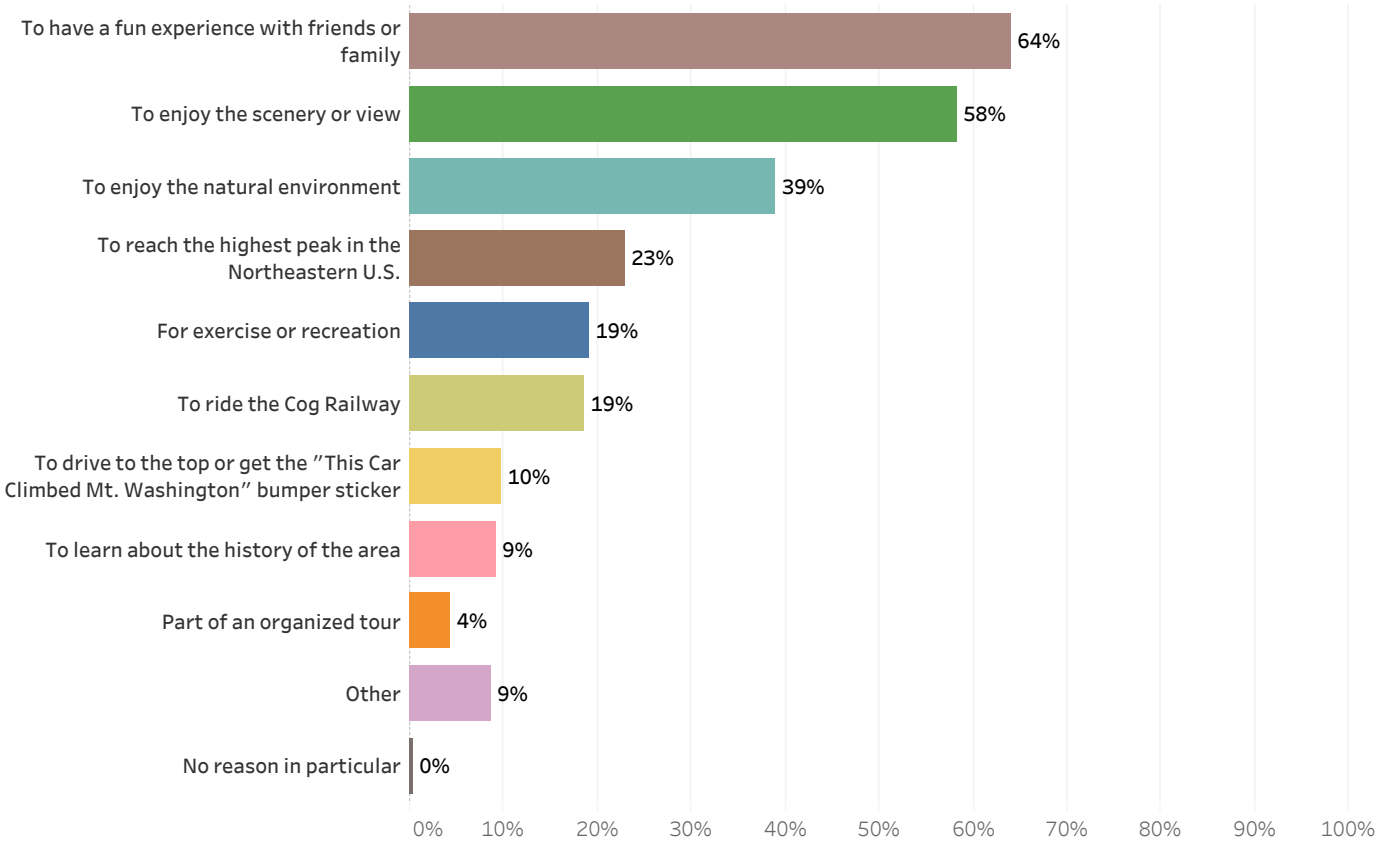
How did you get to Mount Washington State Park? - General Public



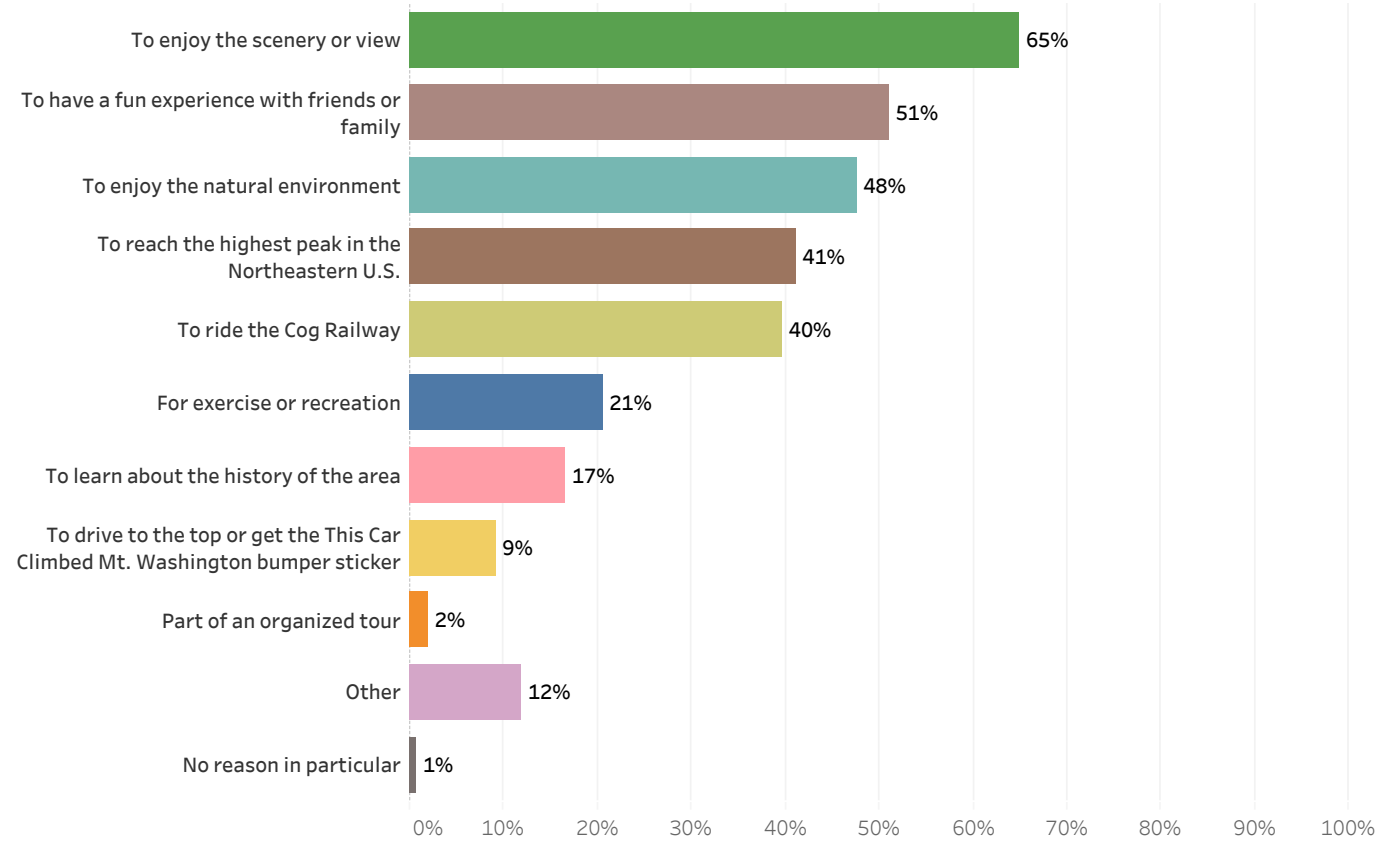
How did you get to Mount Washington State Park? - Visitors



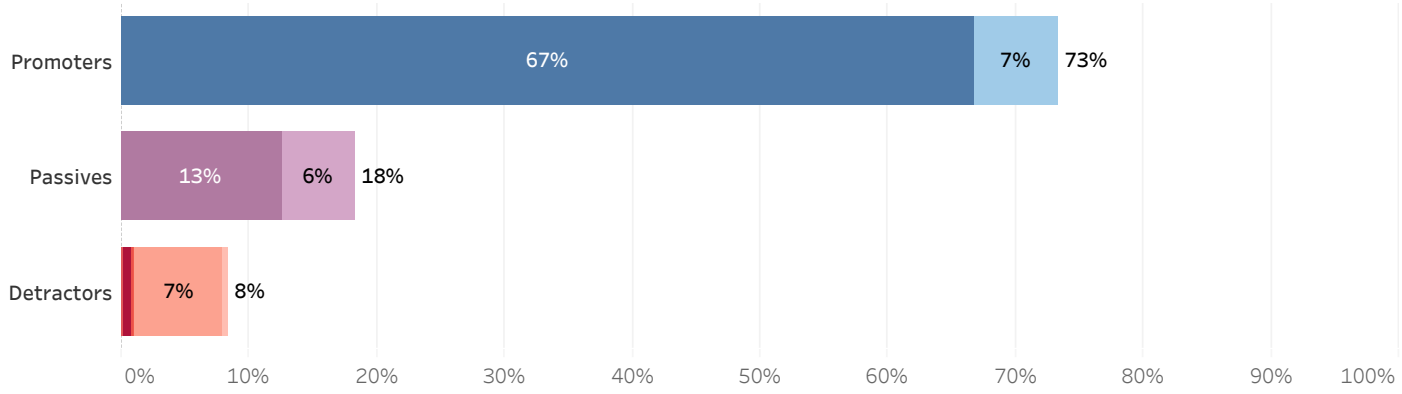
Why did you decide to visit Mount Washington State Park? (Please select all that apply) - General Public



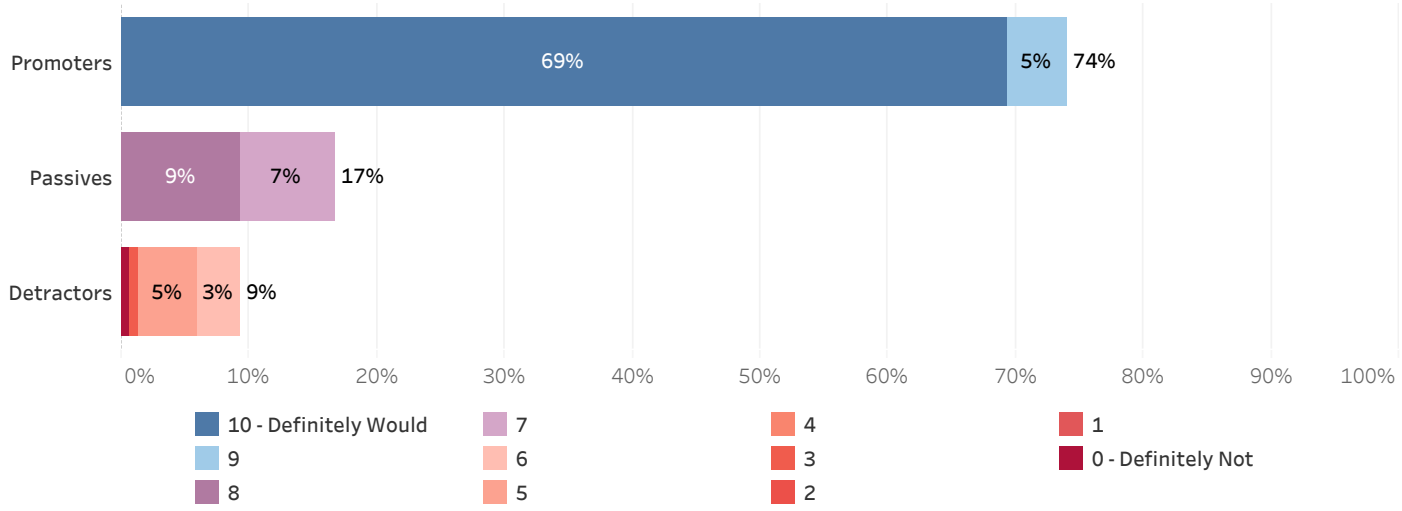
Why did you decide to visit Mount Washington State Park? (Select all that apply) - Visitors



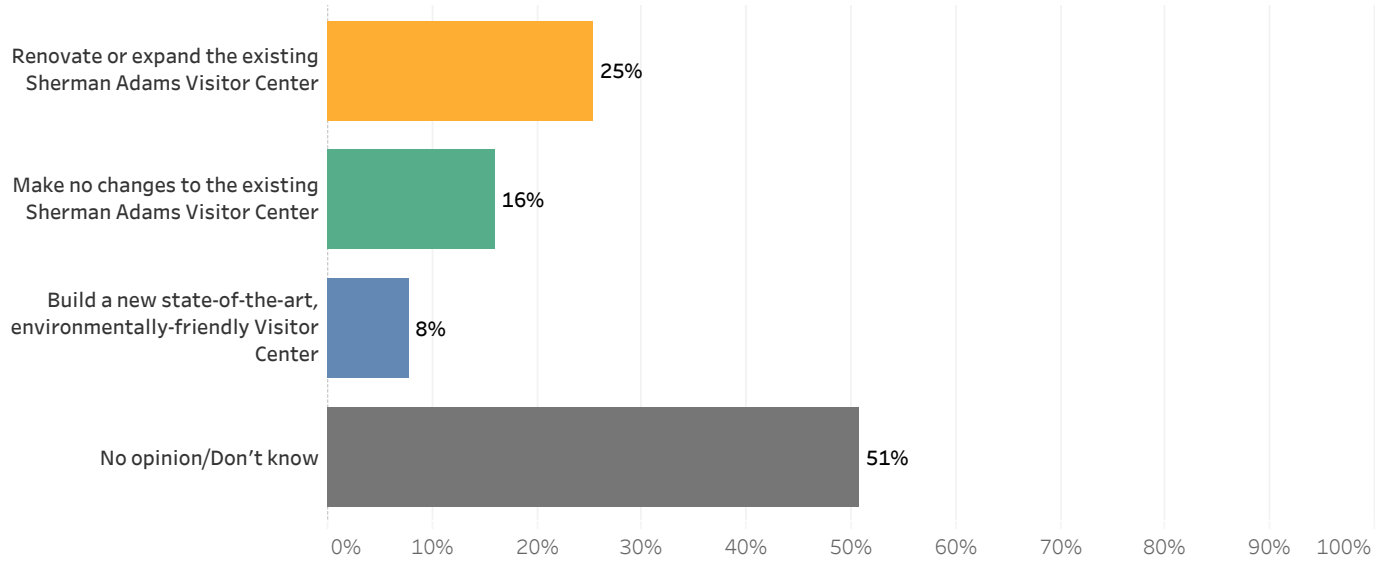
On a scale from 0 to 10, where 0 is “definitely not” and 10 is “definitely would,” how likely are you to recommend going to Mount Washington State Park to a friend or family member in the future? - General Public



On a scale from 0 to 10, where 0 is definitely not and 10 is definitely would, how likely are you to recommend going to Mount Washington State Park to a friend or family member in the future? - Visitors



Which of the following do you think the stewards of Mount Washington State Park should do regarding the Visitor Center? - General Public



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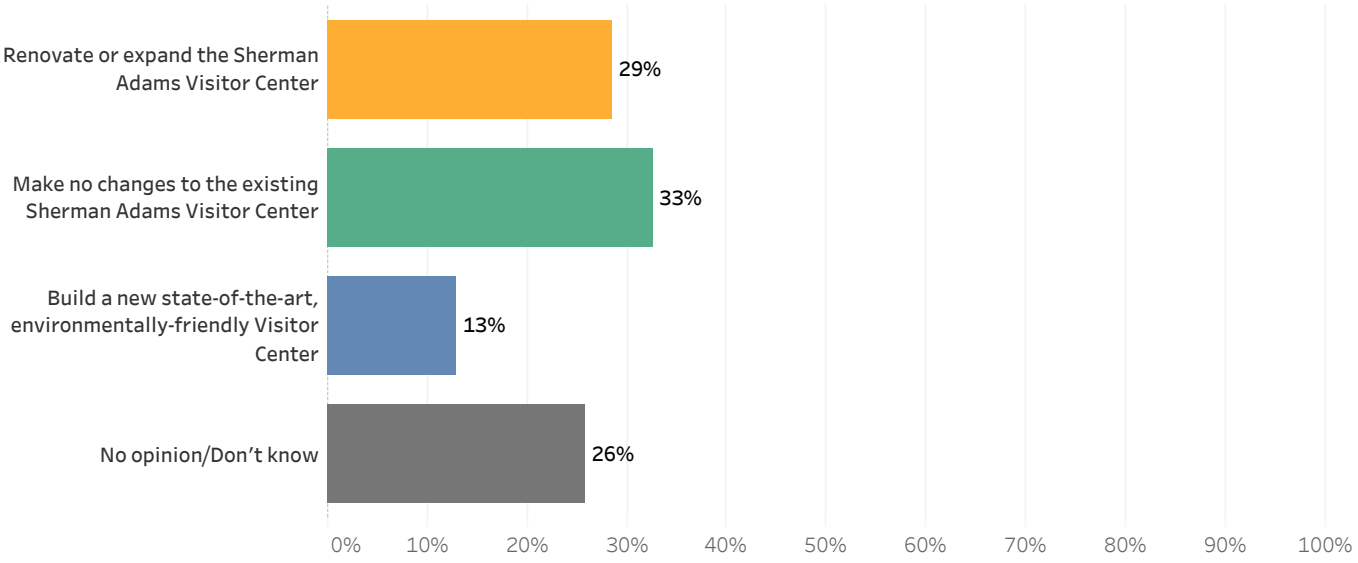
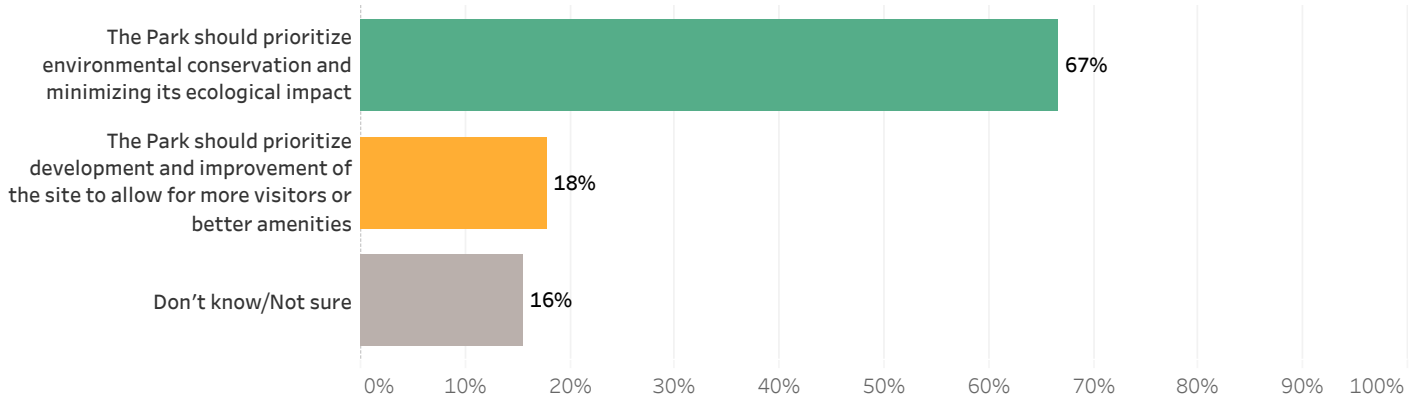


Which of the following comes closest to your opinion regarding development and conservation at Mount Washington State Park? - General Public



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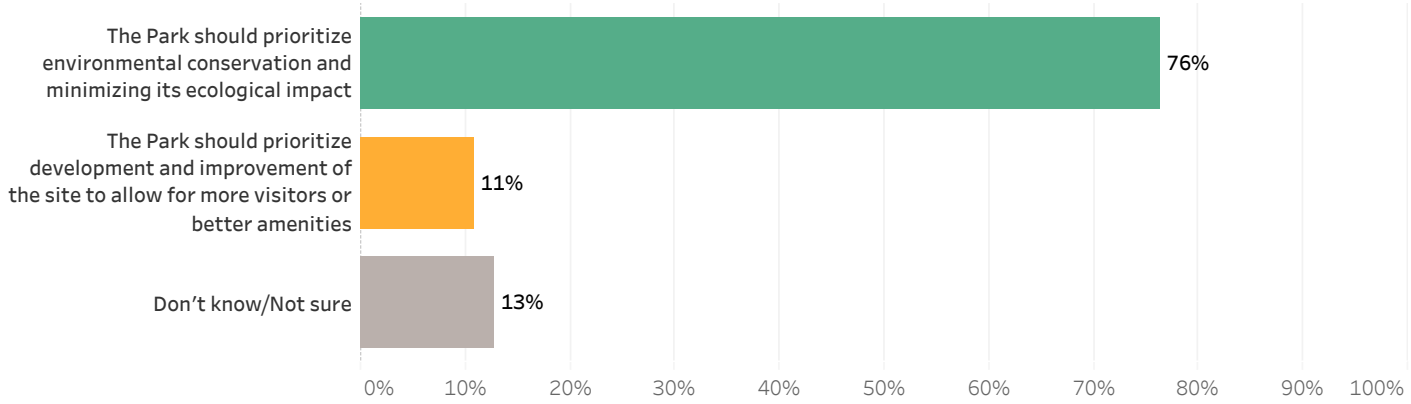
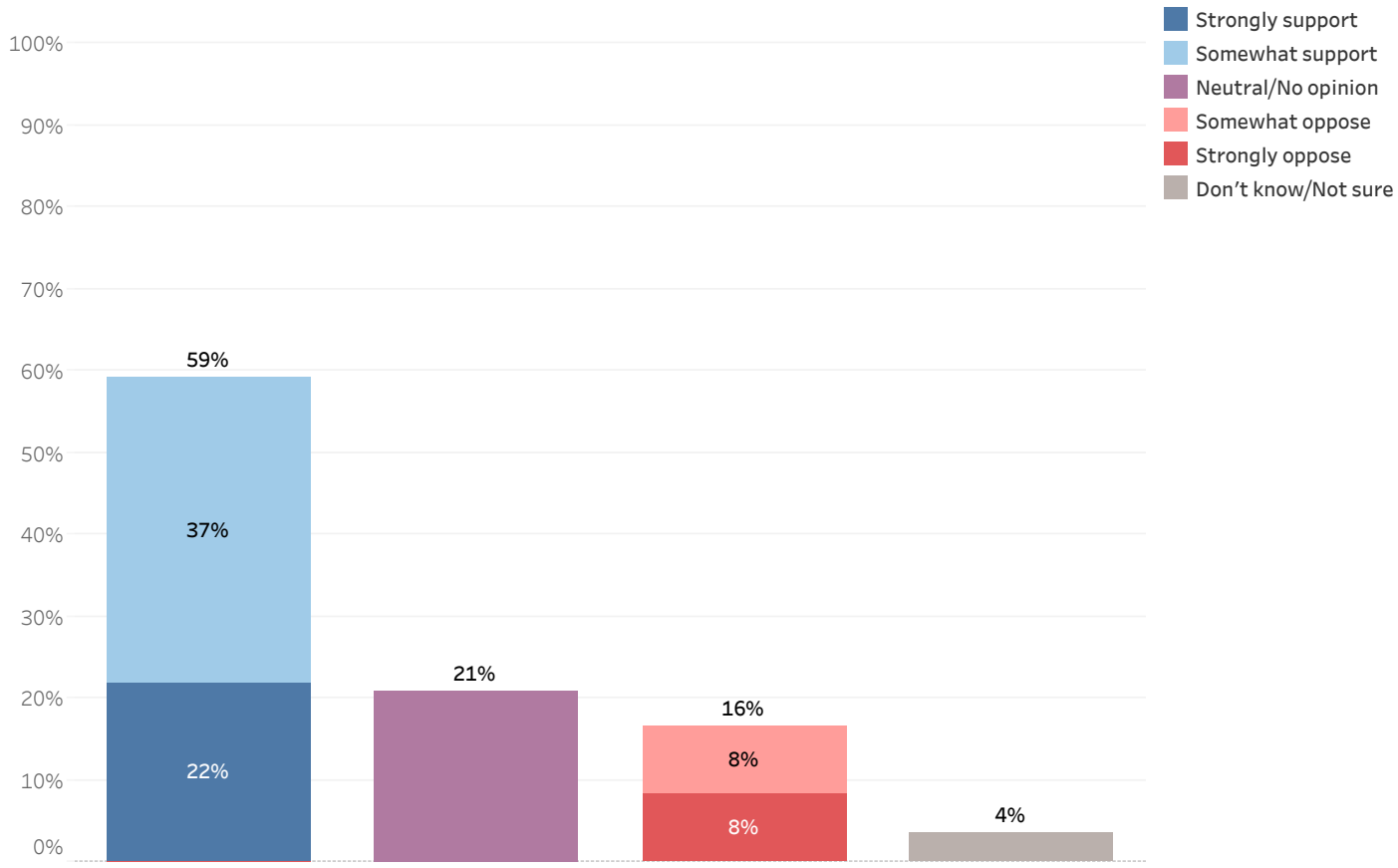


Would you support or oppose Mount Washington State Park limiting the number of visitors present at any one time? - General Public



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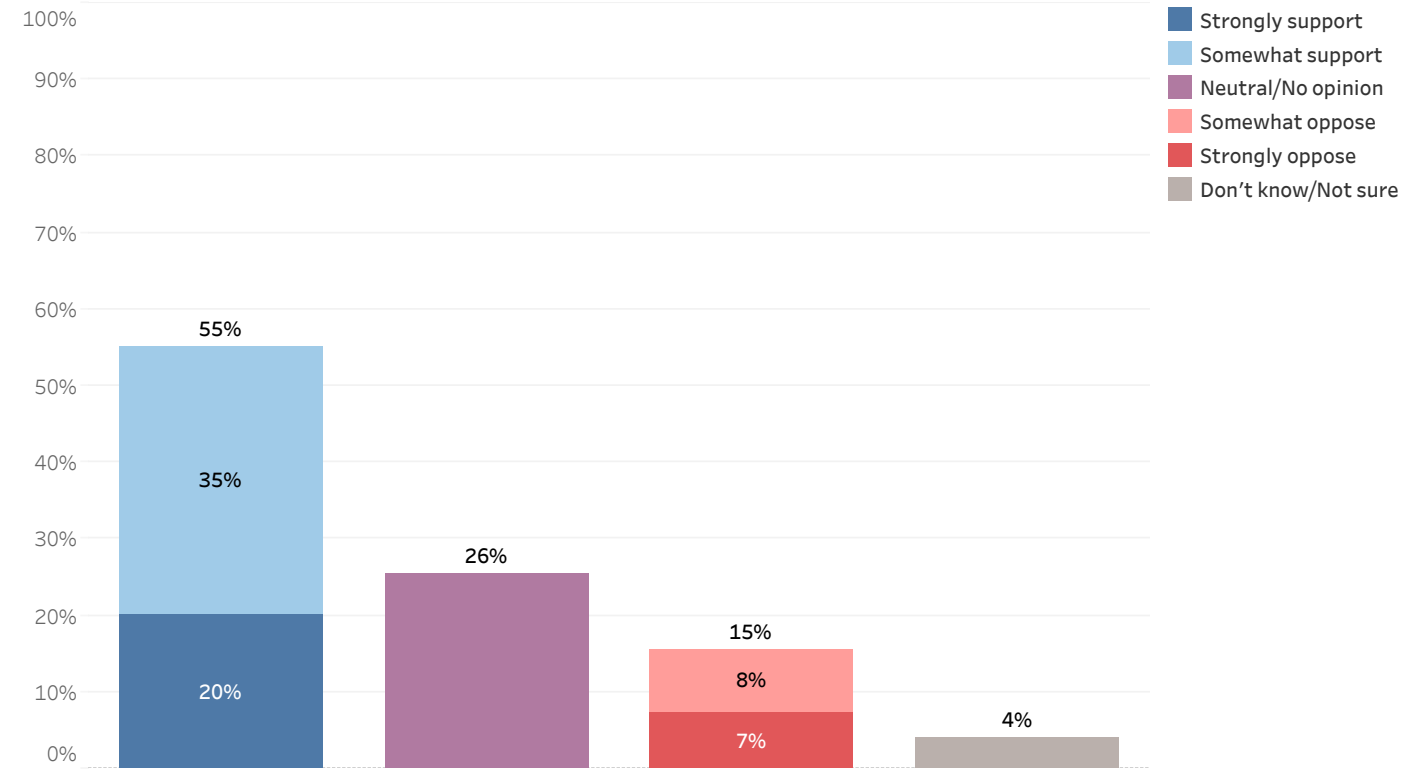
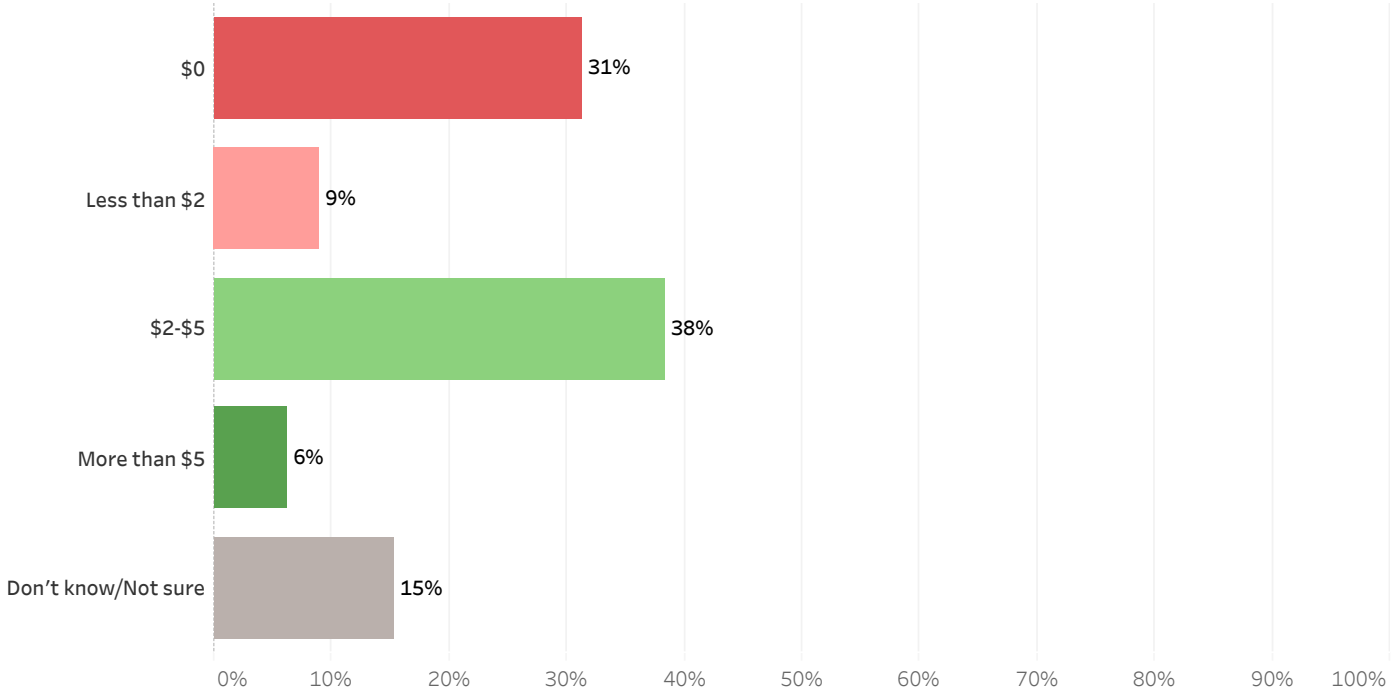
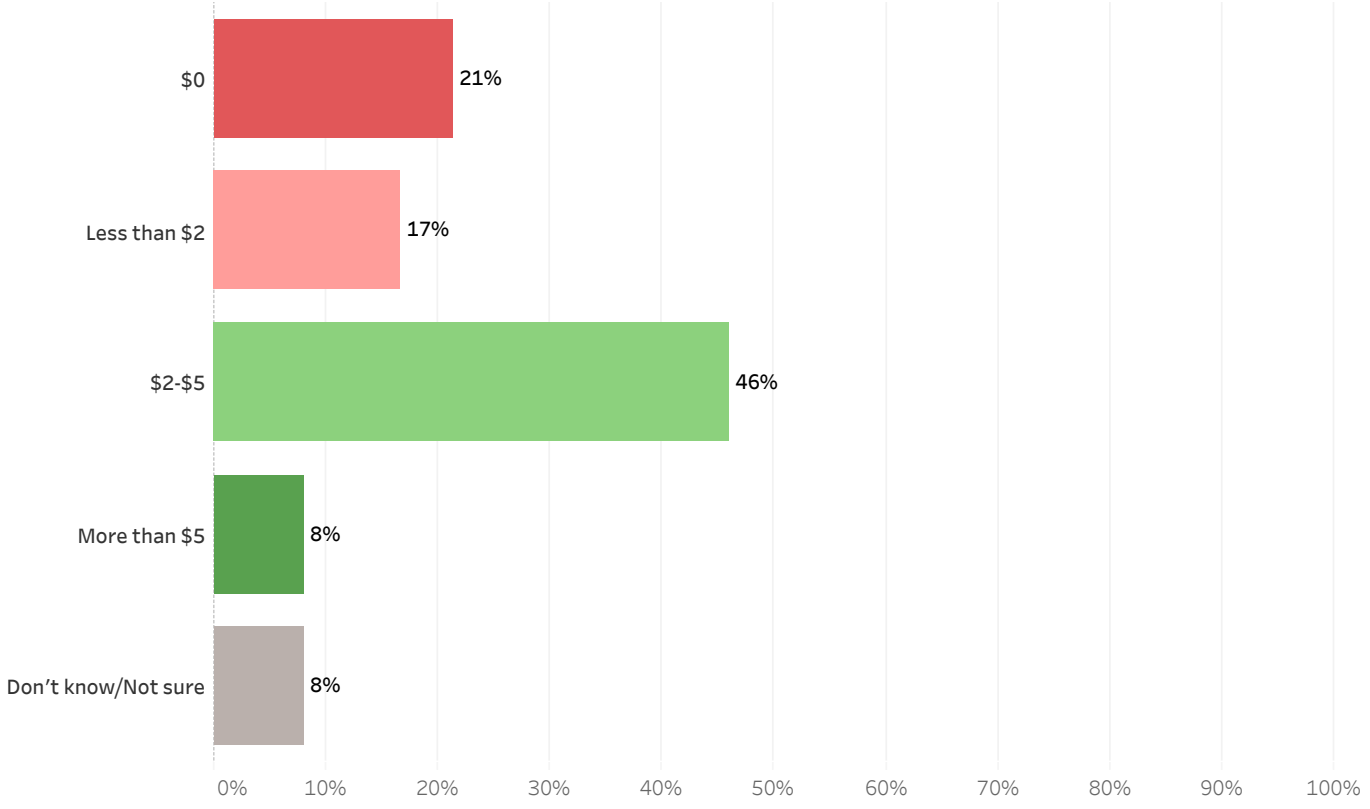


The Sherman Adams building, a modern summit building in Mount Washington State Park, houses The Sherman Adams Visitor Center, a cafeteria, restrooms, gift shops, the Mount Washington Observatory and its museum. Visitors are not currently required to pay a fee to enter the building. If Mount Washington State Park did require visitors to pay a fee to enter the Sherman Adams Building, what would be a fair amount in your opinion? - General Public



If visitors to Mount Washington State Park were required to pay a per-person nominal fee to enter the Sherman Adams Building, what is the most you would be willing to pay? - Visitors



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