Cultural Landscape Report
and Environmental Assessment
Livermore Falls, Grafton County, New Hampshire

Prepared for
State of New Hampshire
Department of Resources and Economic Development
Division of Parks and Recreation

Prepared by
Gray & Pape, Inc.
60 Valley Street
Providence, Rhode Island 02909

December 22, 2015

Table of Contents

List of Figures

Part I

Chapter 1: Introduction

Management Summary

The Livermore Falls State Forest is located in the towns of Campton, Holderness, and Plymouth, Grafton County, New Hampshire. Managed by the New Hampshire Department of Resources and Economic Development, Division of Parks and Recreation (NHDRED), the property encompasses approximately 134 acres of wooded land and recreational sites acquired by the New Hampshire Forestry Commission in 1916 (Figures 1 and 2). An additional 44.34-acre section of land, acquired in 1992 with Land Conservation Investment Program funding, includes the falls themselves and an industrial village dating from the late nineteenth and early twentieth century, as well as the remains of New Hampshire's first fish hatchery.

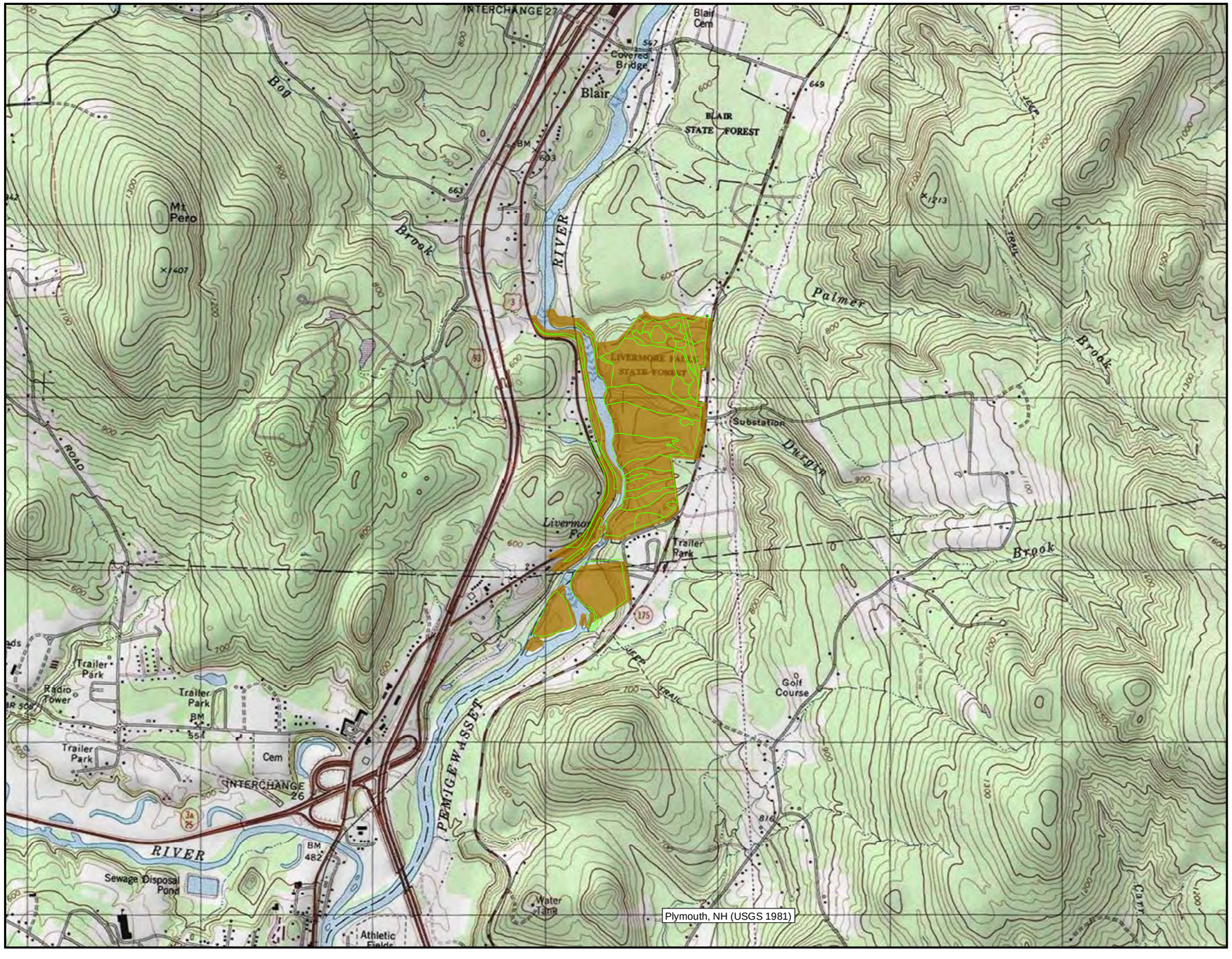
Following the signing of a Memorandum of Agreement in 2006[1], NHDRED conveyed management responsibility of 29.8 acres of Livermore Falls State Forest to the New Hampshire Fish and Game Department (NHF&G). The 29.8-acre section of land lies within the towns of Holderness, Campton, and Plymouth, and includes the industrial village and the site of the former state fish hatchery. The NHF&G works cooperatively with NHDRED to protect the historic and scenic site, as well as to provide access to the river bank for angling and car-top boat access.

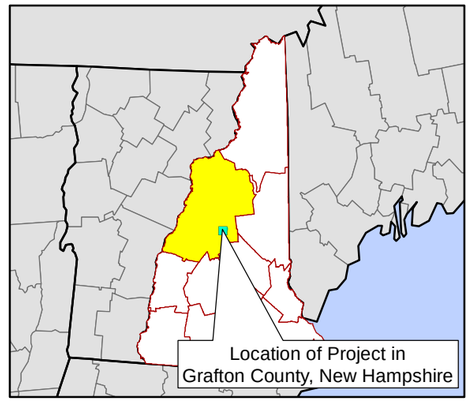
Prior to the current study, no formal inventory of historical resources within Livermore Falls State Forest had been performed. A 2014 property survey, prepared by NHDRED, includes a number of historic foundations, but these have not been accurately measured, mapped, or identified.

This CLR employs a holistic approach to the analysis of the historic site, identifying general landscape characteristics and associated features that define the historical character of the property. The CLR is intended to serve two important functions. It will serve as the principal treatment document for cultural landscapes at Livermore Falls, and will also serve as the primary tool for long-term management of those landscapes. The CLR establishes preservation goals for the cultural landscape that are grounded in research, inventory, documentation, and analysis and evaluation of the landscape's characteristics and associated features. It provides the basis for making sound decisions about management, treatment, and use.[2]

[1] New Hampshire Department of Economic Development, "Memorandum of Agreement between the New Hampshire Department of Recreation and Economic Development and the New Hampshire Department of Fish and Game" (Concord, New Hampshire: New Hampshire Department of Economic Development, 2006).

[2] Robert R. Page, Cathy A. Gilbert, and Susan A. Dolan, *A Guide to Cultural Landscape Reports: Contents, Process, and Techniques* (Washington, DC: National Park Service, 1998), 3–4.





LEGEND

- Livermore Falls State Forest
- Forest Stands

0 500 1000 Meters

0 2000 4000 Feet

N W E S

Location of Project in
Grafton County,
New Hampshire

GRAY & PAPE, INC.
ARCHAEOLOGY · HISTORY · HISTORIC PRESERVATION

Figure 1

1928, USGS Topographic Map Showing Location of
the Livermore Falls State Forest

GRAY & PAPE, INC.
ARCHAEOLOGY · HISTORY · HISTORIC PRESERVATION

Figure 2

Scope of Work and Methodology

The purpose of this project is to complete a Cultural Landscape Report (CLR) for the Livermore Falls State Forest located in the towns of Campton, Holderness and Plymouth, New Hampshire. The CLR will serve as the primary document used by the New Hampshire Division of Parks and Recreation to guide the treatment and use of the cultural landscape.

The CLR is divided into two parts. Part I includes sections regarding the Site History, Existing Conditions, and Analysis and Evaluation of cultural landscape characteristics. The Site History provides a historical description of the landscape and all significant characteristics and features based upon research and historical documentation. It is largely focused upon the period after Euroamerican settlement, but acknowledges the pre-contact history of the region by Native Americans. The Existing Conditions section describes the landscape, as it currently exists, including characteristics such as land use, vegetation, circulation, and structures. It is based upon both site research and field surveys. The Analysis and Evaluation section compares findings from the site history and existing conditions to identify the significance of landscape characteristics and features within the context of the landscape as a whole. Historic integrity is evaluated to determine if the characteristics and features that defined the landscape during the historical period remain extant.

Specific issues to be addressed in Part I, as outlined in the project's scope of work, include:

- documentation of how the landscape has changed over time (including impacts of vegetation on historical views);

Part II of the CLR includes a discussion of Treatments. This section describes a preservation strategy for long-term management of the cultural landscape based upon its significance, existing condition, and use. It includes a discussion of general management objectives for the property, as documented in planning studies and other management documents. It offers a range of schematic alternatives, with a preferred treatment alternative.

The vertical files of the Campton Historical Society feature a number of historical photographs and documents related to the history of the industries that operated near the falls during the nineteenth and twentieth century. These resources provided the information necessary to develop a chronology of construction and land use within the Livermore Falls State Forest.

To document existing conditions within the Livermore State Forest, Gray & Pape personnel conducted site visits in January and May of 2015. Gray & Pape personnel visited the Campton Historical Society and the special collections room of Plymouth State University's Lamson Library. Research material found at these repositories was instrumental in developing historical contexts, as well as providing information specific to the industries of the Livermore Falls Gorge. The Campton Historical Society, in particular, provided historical photographs of the gorge and its neighboring community. These photographs, in conjunction with oral interview transcripts, newspapers, and local histories, helped facilitate the development of a timeline for the various industrial activities that transpired in the gorge over the years.

Study Boundaries

The Livermore Falls State Forest contains approximately 178 acres. The New Hampshire Forestry Commission acquired approximately 134 acres, located north of the falls in 1916. An additional 44.34 acres, including the falls and the area downstream from the falls, was acquired in 1992 using Land Conservation Investment Program funds. The property is comprised of numerous irregularly-shaped parcels located along the east and west sides of the Pemigewasset River, south of Campton and north of Plymouth (Figures 1 and 2). Much of the property is located between the east bank of the river and Old Livermore Falls Road. No standing buildings are extant within the property. The only known structural remains are concentrated near the falls at the southern end of the property. The falls provided waterpower for numerous industries, including grist mills, pulp mills, a shingle mill, and a tannery. The state also used the site to build its first fish hatchery.

Summary of Findings

Historical research revealed that much of the Livermore Falls State Forest property has remained undeveloped throughout the historical period. While logging activities have transpired north and east of the falls, no residential, commercial, or industrial development has occurred in this area.[3] Livermore Falls Gorge, however, has a long history of industrial activity. Because the falls lent themselves well to the generation of waterpower, the gorge proved attractive to enterprising industrialists. From the earliest period of Euroamerican settlement, the falls provided a power source for the processing of grain and wool. These early mills later gave way to industrial pursuits that served a market outside of the local area, including pulp milling. The milling activity at the falls spawned a small village on the east bank of the river, south of the falls. Located in the river bottom, the community came to be known as the "Hollow." The Hollow was the site of numerous mills, a tannery, and a state fish hatchery. These pursuits, in turn, fostered the construction of dwellings, a boarding house, stores, a schoolhouse, and many outbuildings.

Treatment Alternatives

The primary recommended treatment for the Livermore Falls State Forest landscape is preservation. This recommendation emphasizes preservation of existing forms, materials, and integrity through stabilization, preservation maintenance, and repair of historic materials and features. This alternative seeks to maintain the existing program of preservation and maintenance.

[3] New Hampshire Division of Forests and Lands, Forester, Robert Hardy, interview at Livermore Falls, January 29, 2015.

Chapter 2: Site History

Environmental Background

The Livermore Falls area was subject to glaciation during the last period of glacial ice. Consequently, much of its current physiography, hydrology, soils, and floral and faunal regimes were influenced by the actions of the glaciers and their modifications of the landscape.

The last glacial advance of the Pleistocene was called the Wisconsin stage, and it is this stage that is responsible for the majority of the landscape features present today in New Hampshire. During the Wisconsin stage the entire state of New Hampshire was covered in ice as much as one mile thick. The Wisconsin stage ice sheet began to retreat around 22,000 years before present (B.P.) and began to expose the land that became New Hampshire by around 16,000 B.P. By approximately 13,500 B.P., the glacial ice had completely retreated from New Hampshire.[4]

As the ice retreated, melting waters formed large glacial lakes at the margins of the glaciers. Glacial till, an unconsolidated mix of clay- to boulder-size particles, covered much of the landscape. Specific glacial landforms, such as moraines, eskers, and drumlins, were also deposited at this time. The modern drainage patterns of New Hampshire were directly influenced by glacial activity, as new valleys were carved and others filled with glacial sediments.

Following the retreat of the glacial ice, the Merrimack River valley witnessed a succession of glacial lakes, each located at a higher elevation than the last. Palmer Brook, at the northern boundary of the State Forest, appears to have acted as, or even formed as, a channel for glacial meltwaters to enter the Pemigewasset valley and Lake Franklin.[5] The modern Livermore Falls were formed at the time of this lake's water release, carving their way down through the lake bottom sediments and till to the bedrock over which the falls now flow.

Soils within the project area began forming directly after the glacial retreat. Up to six soil series types can be found within the project area, with two, the Colton and Adams soil series, representing more than 80 percent of all soils found in the project area. Both of these soils are Spodosols, a soil type found typically in environments dominated by acidic soils caused by millennia of pine tree growth. As such, these soils are generally stable and have likely been forming, relatively undisturbed, since the retreat of the last glacier.

Modern stream courses developed in the beds of the drained glacial lakes or in their own channels. The modern river flows south, from its origin at Profile Lake in Franconia Notch State Park, for approximately seventy miles to its confluence within the Winnipesauke River in

[4] John C. Ridge, "The Quaternary Glaciation of Western New England with Correlations to Surrounding Areas," in J. Ehlers and P.L. Gibberd, eds., *Quaternary Glaciations – Extent and Chronology, Part II*. San Diego, CA: Elsiever Inc., 2004.

[5] Daniel J. Tinkham, John A. Brooks, and Mark B Wingsted, *Surficial Geologic Map of the Plymouth Quadrangle Grafton County, New Hampshire.* Surficial Geologic Map, Open-File Series GOE-084-02400-SMOF. New Hampshire Geological Survey, NH Department of Environmental Services, Concord, New Hampshire, 2013.

Franklin, New Hampshire. South of this confluence, the two streams become the Merrimack River.

Between approximately 14,500 and 14,000 B.P., a sharp warming trend occurred, followed by a cooler period that lasted into the early part of the Holocene. The tundral vegetation regime that followed the retreat of the glaciers was replaced by a mixed conifer and northern hardwoods regime dominated by white pine. After about 10,000 B.P., warming trends began again and lasted until approximately 6,000 B.P., when essentially modern climatic conditions became established. Vegetation in the region of the project area assumed the modern mix of oak-hickory and spruce-fir forest seen up to modern times.[6] The modern floodplain segments of the project area fall within either a sugar maple-silver maple-white ash forest community or a balsam fir community. The sugar maple-silver maple-white ash forest community may also contain American elm and black cherry, as well as poison ivy, ostrich and sensitive ferns, bellwort, and northern short husk grass. The balsam fir community may contain red and silver maple, black cherry, red oak, and white pine, as well as ostrich, northern lady, royal and sensitive ferns, bellwort, northern short husk grass, white turtlehead, bluejoint, and dwarf raspberry.[7]

After the final retreat of glacial ice, plants and animals began colonizing the newly exposed land. At this period, around 14,000 B.P., many North American megafuna were still extant. Stag moose, giant beaver, mastodon, among many others, inhabited the fresh land along with many of the still extant smaller animals. By around 10,000 B.P., many, if not most, megafauna were extinct along with smaller animals, ill- equipped to survive in an ice-free environment. Some migrated north, like the caribou herds, following the retreating ice and tundra environments. Predatory species, such as black bear, wolf, coyote, and mountain lion claimed the top spots on the food chain. Moose, deer, turkey, opossum, snakes, and rabbits inhabited the woodlands and fields. Lakes and streams were occupied by beavers, otters, turtles, ducks, geese, loons, and salmon, among many others. Little change occurred in the types of birds, fish, and animals present in the area, even with the presence of Native American groups, until the arrival of historical settlers who profoundly affected the environment and the creatures who inhabited it.

A 1960 NDRED appraisal of the entire forest area found that hemlock was the dominant tree species, followed closely by white pine, and more distantly by red oak and white birch. A later DRED study for biomass harvesting of a 24-acre section of the forest trees found white pine to be the most prevalent tree, followed distantly by red oak, hemlock, white birch, and red pine. This later study indicated that this stand was weeded shortly after state acquisition in 1916 to favor white pine and hemlock.

---

[6] Eric C. Grimm and George L Jacobson, "Late-Quaternary Vegetation History of the Eastern United States," in A. R. Gillespie, S. C. Porter, and B. F. Atwater, eds. *The Quaternary Period in the United States*, (San Diego, CA: Elsiever Inc., 2004.

[7] Dan Sperduto and Ben Kimball, *The Nature of New Hampshire: Natural Communities of the Granite State*. Durham: University of New Hampshire Press, 2011.

Native American Overview

Previous studies have identified six Native American sites within the study area. Three appear to contain cultural deposits from the Archaic period, while at least two contain Woodland period artifacts. While no Paleoindian sites were found within the study area, such cultural period sites are found in the wider region, such as at the Weir Beach site located less than 16 miles to the southeast.

The majority of Native American sites within the general area of Livermore Falls State Forest are located in lowlands next to water sources, generally near to a major river or lake shore. Some of the best recorded Archaic sites in the state are found next to falls on the Merrimack River. As the project area contains one of the largest falls on the Pemigewasset River, and as a large, approximately 15-acre, floodplain segment is directly associated with the falls, it is likely that Native Americans utilized the project area. Both Archaic and Woodland cultural remains are located less than 1.6 miles downstream on the Pemigewasset, and it is likely that Native American sites in the project area could have similar cultural deposits. The project area contains significant post-glacial alluvial sedimentary deposits, indicating a strong likelihood that Native American (pre-Contact) sites could be buried deeply below the current ground surface. It is also possible that stratified cultural sites could exist, as these have been observed downstream at Site NH 19-1.

Previously identified Native American sites in the immediate vicinity of Livermore Falls are concentrated at the confluence of the Pemigewasset and Baker rivers, less than 1.6 miles downstream from Livermore Falls. A historical period Native American village, known as Asquamchumauke (destroyed in 1712) was located at the confluence of the Pemigewasset and the Baker.

Given the presence of a documented village site less than two miles from Livermore Falls, it appears likely that the Native American presence in the immediate vicinity of the falls would have been largely seasonal and temporary in nature. It seems likely that during spawning season, Native Americans would have used the floodplain river bottoms, today known as the Hollow, immediately below the falls on the east bank of the river, as a location to procure and process salmon and other fish seeking their upstream spawning grounds.

Seasonal flooding of the Hollow, combined with nearly two hundred years of Euroamerican use of the area for industrial, agricultural, and residential purposes, is likely to have disturbed or otherwise compromised any extant Native American sites in the area. Nevertheless, the presence of Native American cultural resources in this area of the State Forest cannot be dismissed.

Historical Period Overview

The earliest settlers in New Hampshire were dependent on waterways for transportation. New Hampshire's first three towns, Portsmouth, Dover, and Exeter, were all accessible by boat. Road construction in New Hampshire did not occur on any significant level until the late eighteenth century, when settlements had grown large enough to warrant additional means of transportation. These early roads created the basic transportation routes that remain in existence to the present.

By the early nineteenth century, Concord had emerged as the transportation hub of New Hampshire, with roads extending from the city to the major population centers of the state.[8]

For much of its early history, the fur trade dominated the New Hampshire economy. Until about the mid-1700s, beaver pelts served as the primary unit of trade between colonists and London. However, by the mid-eighteenth century, hunters had eradicated the beaver in New Hampshire. As the fur trade dwindled, increasing development transformed the landscape, with agriculture and logging dominating the economy. From about 1810 to 1840, sheep raising occurred on a large scale in southern New Hampshire. By 1850, two-thirds of New Hampshire had been converted to farmland. Much of this transition occurred in the southern part of the state, while the White Mountains and North Country remained largely in public ownership during the mid-nineteenth century. The sheep industry steadily declined after the Civil War.[9]

Logging also played a significant role in New Hampshire's early history. In the age of large sailing ships, New Hampshire's large white pines were prized as masts. Timber removal commenced as early as the 1600s and lasted through the turn of the twentieth century. The ample forests of New Hampshire also supported a robust tanning industry, which utilized the bark of hemlock, ash, and chestnut trees.[10]

During the early 1800s, Nicholas G. Norcross was the undisputed lumber king of the northeast. He built a sawmill on the Merrimack River in Lowell, Massachusetts. It was a large mill for the period and consumed significant quantities of logs in its series of water-powered gang saws. Norcross eventually had to search further and further to find timber. His land agent, Samuel Walker, went up the Pemigewasset River Valley, and purchased the 80,000-acre Elins Grant at the head waters of the East Branch of the Pemigewasset, above the site where Lincoln village was later built. Norcross' loggers moved in and began logging the Pemigewasset headwaters during the winter of 1844–45, seeking choice white pine, plus some of the spruce near the river.[11]

During the spring of 1846, the river drivers initiated the first movement of pine logs as they prodded the timber into the swollen Pemigewasset River for the long trip down to Lowell. Norcross' Merrimack River Lumber Company employed a winter crew of 150 men and 35 oxen. Records show that, in 1852, loggers drove 10–12 million board feet of timber down the river. The river drivers removed much of the white pine in this manner.[12] It was a dangerous job that no doubt required great nerve. An early photograph of log drivers at Livermore Falls reveals the innumerable dangers that confronted these hearty men (Figure 3).

---

[8] William L. Taylor, *At What Cost? Shaping the Land We Call New Hampshire*, edited by Richard Ober (Concord, New Hampshire: New Hampshire Historical Society and the Society for the Protection of New Hampshire, 1992), 26.

[9] Carol R. Foss, "Wildlife in a Changing Landscape*," At What Cost? Shaping the Land We Call New Hampshire*, edited by Richard Ober (Concord, New Hampshire: New Hampshire Historical Society and the Society for the Protection of New Hampshire, 1992), 18.

[10] Foss, "Wildlife in a Changing Landscape*,"* 19.

[11] Gove, *Logging Railroads along the Pemigewasset River*, 1.

[12] Gove, *Logging Railroads along the Pemigewasset River*, 1.

White pine remained the preferred species until after the Civil War era, when numbers declined in the Pemigewasset Valley. Lumbermen from down-country then turned their eyes toward red spruce as a replacement for white pine. Red spruce soon became the "jewel" of the valley. When red spruce numbers declined, the river drivers' days were numbered. The last river drive held by the Merrimack River Lumber Company on the Pemigewasset River occurred about 1883. Following the death of Nicholas Norcross in 1860, the heirs, principally Charles Saunders, began to phase out their logging activity along the Pemigewasset and sold off the timberland.[13]

Figure 3. River drivers moving logs over Livermore Falls, ca. 1860.

In 1867, New Hampshire passed a law that required the sale of all the state's public lands. At low cost, timber companies and speculators quickly acquired large tracts of public lands in the White Mountains and North Country. The construction of railroads in the region provided lumber companies with an efficient method for moving logs to mills. From the late 1860s to 1900, lumber production in New Hampshire tripled. During this period, loggers devastated the state's forests, leaving vast expanses of clear-cut landscape. The unusable timber, which littered the landscape, posed a serious fire threat. From 1886 to 1923, the state suffered numerous severe forest fires, with some 200,000 acres burned. The denuded hillsides then lay exposed to heavy

[13] Gove, *Logging Railroads along the Pemigewasset River*, 2.

rains, which eroded the landscape. The effects of this process remain evident to this day in fire and log skidding scars.[14]

Given the state's vast timber reserves, it comes as no surprise that lumber and paper industries have contributed significantly to the economy of New Hampshire. As early as the colonial era, sawmills, gristmills, and cider mills constituted the bulk of the region's industrial output. The state's first paper mill commenced operations in 1793.[15] By 1936, lumber mills and paper mills accounted for approximately 20 percent of employment in New Hampshire. At the same time, New Hampshire was the eighth largest producer of paper and wood pulp manufacturing in the country.[16]

As a result of the increased usage of waterways for mills and the construction of dams to harness this waterpower, spawning fish, including Atlantic salmon, significantly declined. In 1876, the Fisheries Commission of Massachusetts joined New Hampshire to create a hatchery for salmon, shad, and trout. The state fish and game department built a hatch house at Livermore Falls in 1877. By 1879, salmon captured at the Livermore Falls hatchery were producing 100,000 eggs per year. Despite best efforts, this restoration process came to an end about 1907. Industrial development along waterways, poor weather conditions, and a lack of fish passage facilities in dams hindered the return of salmon.[17]

The devastation of New Hampshire's forests and fisheries sparked development of a preservation movement aimed at better managing the state's natural resources. Looking to preserve the scenic beauty of the White Mountains, the New Hampshire Forestry and Recreation Department began acquiring tracts of forest during the early twentieth century. Among these acquisitions was a 130-acre tract of land in Campton, Holderness, and Plymouth Townships, Grafton County. Named the Livermore Falls State Forest, the property remains under state management.

Campton

The origins of Campton date to October 9, 1761, when either Jabez Spencer, or possibly Christopher Holmes, and 63 others received a charter for 28,000 acres north of the towns of Plymouth and Holderness (Figure 4). Incorporation of the township occurred on January 5, 1767. Because the surveyors built their camps on what would become the town, they named it Camptown. They later shortened the name to Campton. On June 27, 1860, Plymouth annexed a portion of Campton. Seven years later, Campton annexed a portion of Thornton.[18]

---

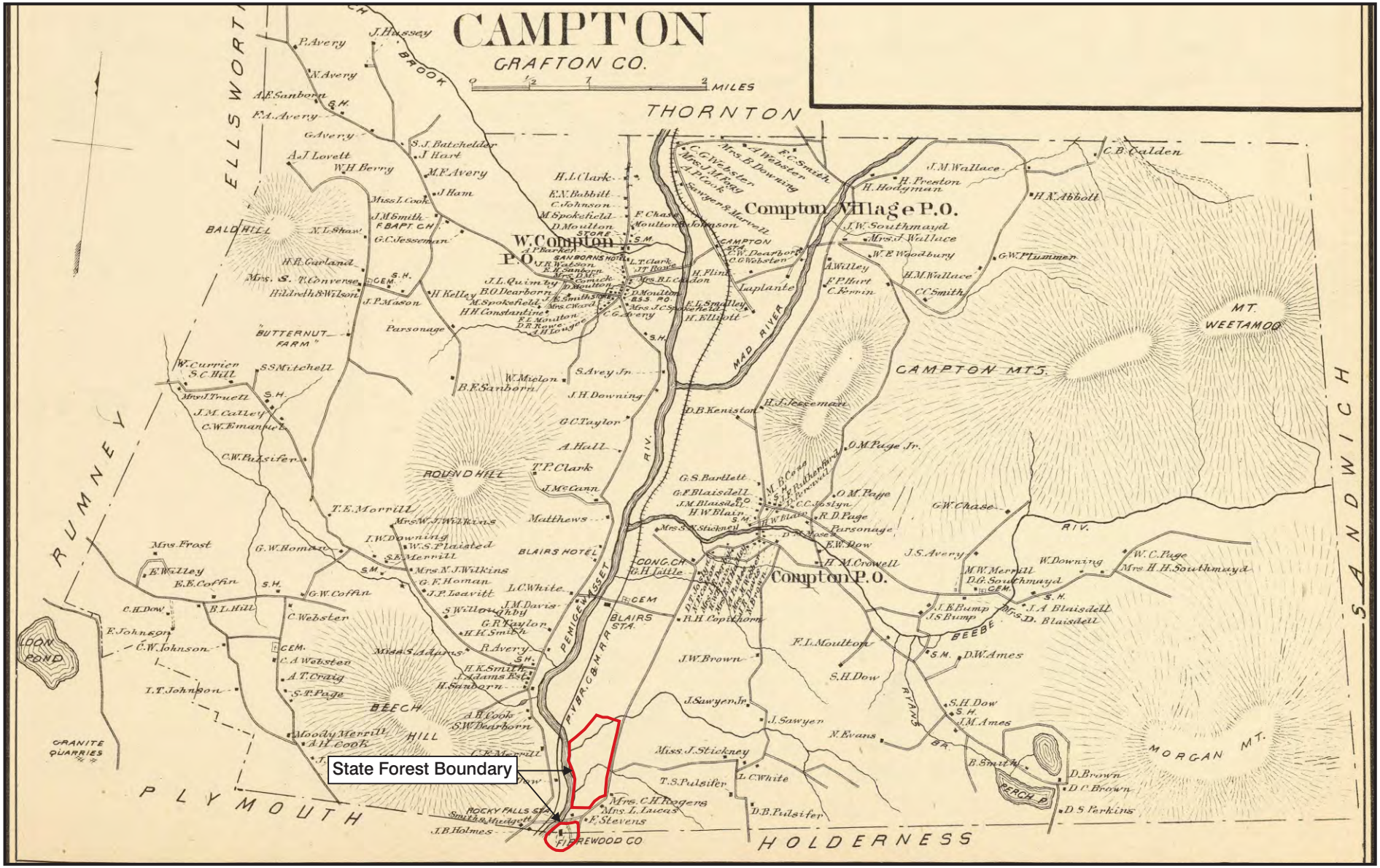
[14] Foss, "Wildlife in a Changing Landscape*,"* 19.

[15] Gove, *Logging Railroads along the Pemigewasset River*, 2.

[16] Works Progress Administration, *Guide to New Hampshire* (Washington, D.C.: Works Progress Administration, 1938)

[17] Lawrence Stolte, Forgotten Salmon of the Merrimack (Boston, Massachusetts: Department of the Interior, Northeast Region, 1981), 72.

[18] Hamilton Child, *Gazetteer of Grafton County, New Hampshire, 1709–1886* (Syracuse, New York: Hamilton Child, 1886), 197.



1892, Grafton County Atlas Showing Livermore Falls State Forest in Campton and Holderness Townships

Campton's settlers arrived in the area from Connecticut, Massachusetts, and the southern part of New Hampshire.[19] Campton's terrain varies from fertile valleys to mountainous ridges. The Pemigewasset River flows through the center of town and Livermore Falls is located near the southern border of the township.

Among the first residents of Campton, Moses Little settled at the falls of the Pemigewasset in 1769. At the falls, he built a number of mills, including a grist mill and fulling mill. Little also owned at least one store. When Little died in 1797, his heirs divided his property. Little's son, James, inherited his father's mills and house. Upon James Little's death in 1812, Arthur Livermore, son of Samuel Livermore, purchased the property. Livermore continued to maintain mills at the falls until his death in 1853. The former Little and Livermore estate became the property of Charles Durgin, who later sold to Joseph Holmes.[20]

Plymouth

Appointed the first royal governor of New Hampshire by King George III, Governor Benning Wentworth acquired vast holdings of land in northern New Hampshire and Vermont. Wentworth envisioned a region where colonial shipping merchants could invest in land grants. Upon the fall of Quebec in 1759, Wentworth sent surveyors to block out six-mile-square townships along the banks of the lakes and rivers (Figure 5). About 1761, proprietors organized corporations that received grants of 70 townships. Among these early townships were Rumney and Groton, then named Cockermouth.[21]

In 1762, a number of proprietors obtained a grant for what they named Plymouth. About 50 other investors staked claims within the grant. Governor Wentworth claimed 500 acres in Plymouth. In the summer of 1762, a few pioneers explored the grant and selected a number of sites for future homes. On July 15, 1763, Governor Wentworth granted a charter for the town of Plymouth.[22] Located at the confluence of the Baker and Pemigewassett Rivers, Plymouth consisted of little more than a few cabins. The following winter, preparations were made to remove families to the new town site. After the resolution of numerous land boundary disputes, Plymouth encompassed 16,256 acres, of which, 10,103 acres were classified as improved.[23]

Surveyors for Plymouth prepared three separate tracts of lots for each Proprietor. Each of the tracts included five-and-a-half acres of grassy meadow, a sixteen-acre lot of interval,[24] and two fifty-acre lots of upland. On December 20, 1763, proprietors met at Parker's Inn at Dunstable, Massachusetts, to draw lots at random. Eighteen proprietors drew their lots and relocated to Plymouth.[25]

---

19 Child, *Gazetteer of Grafton County, New Hampshire, 1709–1886*, 197.

20 No author cited, "Livermore Falls Section of Campton," (Campton, New Hampshire: unpublished, ND), 1.

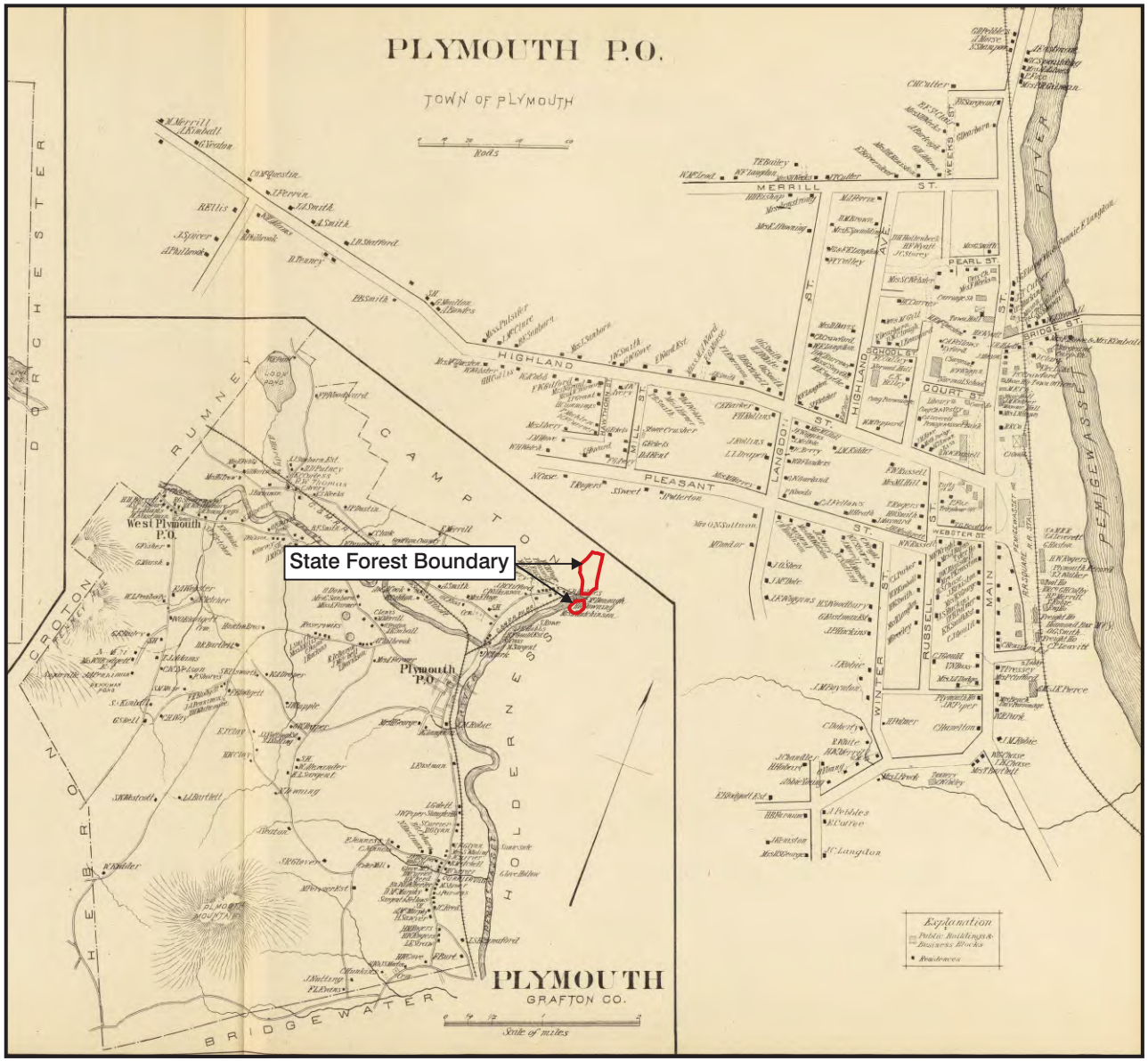
21 Speare, *Twenty Decades in Plymouth, New Hampshire, 1763–1963*, 8.

22 *Ibid.*

23 Child, *Gazetteer of Grafton County, New Hampshire, 1709–1886*, 577.

24 Interval land is composed of alluvial deposits created by brooks and rivers when they flood during the spring and autumn.

25 Speare, *Twenty Decades in Plymouth, New Hampshire, 1763–1963*, 9.



1892, Grafton County Atlas Showing Livermore Falls State Forest in Campton, Holderness, and Plymouth Townships

During this early settlement period, the proprietors engaged in disputes over taxation. As the King and Parliament collided with the Colonies, mob violence raged in Boston and, occasionally, in Portsmouth. A sympathizer with the colonies, Samuel Livermore relocated to Holderness to escape political tensions in Plymouth.[26]

Within a year of the town's settlement, a ferry was established across the river. The ferry provided transportation to and from Holderness, the nearest settlement to Plymouth. Within ten years of the town's founding, local residents invested in the first major road to traverse the township. Organized by Jacob Bailey of Newburyport, Vermont, and John Hazen of Haverhill, Massachusetts, the Coos Road connected Newburyport to the sea coast. Abutting land owners were obliged to cut a path within six months of notice or forfeit their land. Surviving records indicate that more than 100 land owners failed to build their section of road, thereby forfeiting their land. Nevertheless, by 1767, the road was open from David Webster's tavern to West Plymouth. For the next 40 years, Coos Road served as the primary trade route through Plymouth. New England farm products travelled eastward to the sea, while salt and imported goods from abroad made the return trip. Highland Street currently occupies the old Coos Road alignment.[27]

In 1768, residents of Plymouth built the town's first meetinghouse. It consisted of a log building located at the foot of Ward Hill. It took another three years for residents to furnish the building. Split logs set atop legs made of saplings served as seating. Men and women sat on either side of a central aisle. A rude desk served as the pulpit. Because no fireplace could possibly heat an interior space built to seat 100 or more people, no attempt was made to warm the building. If winter temperatures were too severe, services were cancelled. The meetinghouse lot probably served as the first cemetery for the community. Road construction during the late 1930s uncovered field stones that appeared to resemble grave markers. The original meetinghouse remained in use until about 1787, when the town elected to erect a more modern frame building.[28]

By the late 1700s, many of the early log buildings had been replaced with frame structures. More often than not, these early frame buildings stood one story in height and featured steep roofs that extended down to the tops of the windows. They included a large chimney located off center of the ridgeline. The first colonial type house in Plymouth dated to 1781, when Enoch Ward and his neighbors erected the Emerson House.[29]

By the early to mid-nineteenth century, the area surrounding Plymouth was attracting tourists. Numerous summer resorts dotted the west side of the mountains. While on tour of the White Mountains during the spring of 1864, American author Nathaniel Hawthorne passed away in a hotel in Plymouth.[30]

---

26 *Ibid.*

27 Speare, *Twenty Decades in Plymouth, New Hampshire, 1763–1963*, 8.

28 *Ibid*., 11

29 *Ibid*., 25.

30 Child, *Gazetteer of Grafton County, New Hampshire, 1709–1886*, 577.

Throughout the nineteenth century, Plymouth was home to a number of industries, including a large lumber mill, grist mill, marble and granite shops, and several tanneries, which specialized in making glove stock. One of the more prominent industries in Plymouth was that of glove manufacturing. Alvah McQuesten operated a tannery at the foot of Ward Hill.[31]

Holderness

The northwest corner of Holderness Township extends into the southern end of the Livermore Falls State Forest (Figure 6 and Figure 7). Located in the southeast corner of Grafton County, the western boundary of Holderness Township lies immediately east of Plymouth Township and directly south of Campton Township.

The formation of the township dates to October 24, 1761, when Major John Wentworth received a charter for what was then named New Holderness. Named in honor of the Earl of Holderness, the township encompassed 24,921 acres. At the time of its formation, the township lay within the borders of Stafford County. Grafton County annexed New Holderness in September 1782; an act that did not receive official approval until July 1, 1868. By a town vote on June 12, 1816, residents removed "New" from the township's name.[32]

Holderness has long been known for its natural beauty. The township boasts picturesque mountains, valleys, and natural lakes. One of the prominent residents of Holderness, Samuel Livermore, established his settlement by 1775. Livermore became proprietor of two-thirds of the town. He served as judge-advocate in the Admiralty court and Attorney General from 1769 to 1774. Following independence from England, Livermore served as a member of the Continental Congress, as Chief Justice of New Hampshire, and lastly as a United States Senator. While in Holderness, his permanent residence, he built a saw mill, a grist mill, and a large mansion that he lived in until his death in 1803.[33]

By 1880, Holderness had a population of 703 people. By the mid-1880s, three saw mills were in operation within the township. Enoch Cosin built a saw and shingle mill in 1856 and Smellie & McKeen's steam-powered saw mill opened in 1884 in the southwestern corner of Holderness. S.C. Heath & Sons operated a tannery on the east bank of the Pemigewasset River from 1875 until 1895 when it burned, along with a small pulp mill.[34]

Livermore Falls State Forest and Livermore Falls Gorge lie within the intersection of Campton, Holderness, and Plymouth Townships, Grafton County, New Hampshire. The Livermore Falls Gorge and most of the state forest, is located on the Campton side of the line. A small portion of the southern end of the property is located in Holderness and Plymouth (Figures 1 and 2).

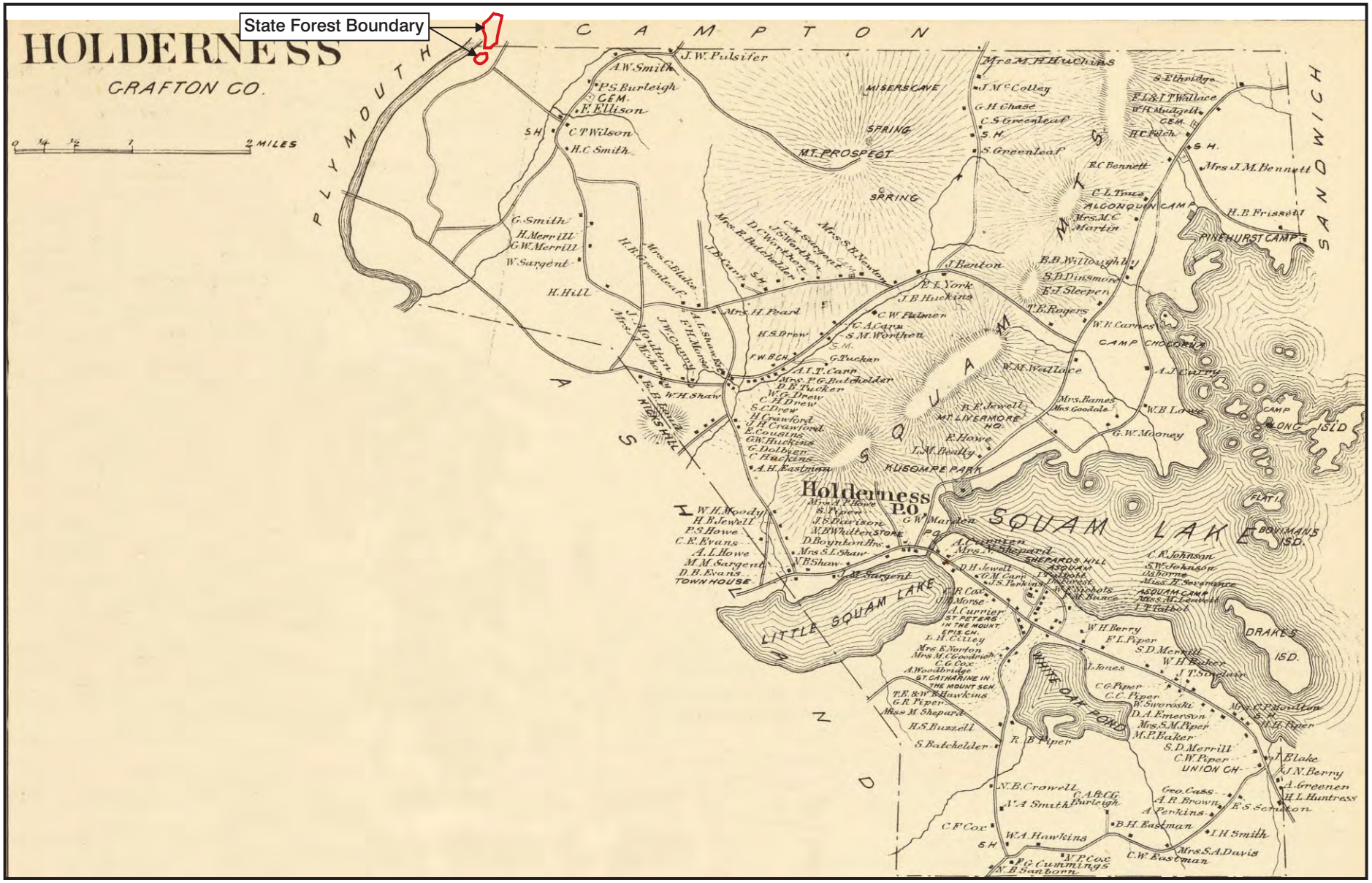
---

[31] *Ibid*.

[32] Child, *Gazetteer of Grafton County, New Hampshire, 1709–1886*, 391.

[33] Harold A. Webster, "The Honorable Samuel Livermore" (Plymouth, New Hampshire: Plymouth Record, 1936), 1.

[34] Child, *Gazetteer of Grafton County, New Hampshire, 1709–1886*, 392.



1892, Grafton County Atlas Showing Livermore Falls State Forest in Holderness, Campton, and Plymouth Townships

Euroamerican settlement in the area occurred as early as 1769, when Moses Little purchased the falls and surrounding property. With an abundance of waterpower delivered by the falls, Little's property made an ideal mill site. He erected a house on the west side of the river and soon after erected both a saw mill and a gristmill near the falls.[35] Although Judge Arthur Livermore acquired the property about 1812, the site remained known as Little Falls well into the nineteenth century. It appears as such on town documents as late as 1837.[36] The name Livermore Falls likely caught on gradually. Although the property has changed hands numerous times since Livermore's death in 1853, the area remains known as Livermore Falls.

The waterpower at the falls site attracted numerous industries over the years, including a tannery, shingle mill, and a number of pulp mills. The historical record of milling activity is incomplete, but it appears that the first of the Livermore Falls pulp mills was built in 1888 by Arthur Homans.[37] His mill burned during its first year of operation. A second pulp mill, built by the Fibrewood Company, opened for business the following year. Located on the east side of the river, the Fibrewood Company remained in operation until the early 1890s, when it too succumbed to fire. The most significant of these enterprises entered service in 1901, when lumber baron J. E. Henry erected a large pulp mill on the west side of the river, just upstream from the former Fibrewood mill.[38] After clear-cutting much of the timber in the area, Henry sold his mill to the Parker Young Company in 1917. The mill changed hands a number of times before closing unexpectedly in 1953. The mill's dam remained intact until 1973, when it was destroyed by a flood.[39]

By the early twentieth century, years of unregulated deforestation had left much of the surrounding landscape in ruins. Lumber barons, such as J. E. Henry, acquired vast tracts of timber, which they felled for lumber and pulp for paper. Concerned for the scenic beauty and long-term sustainability of the lumber industry, the State of New Hampshire began acquiring tracts of timber to prevent further destruction of the state's natural resources. In 1916, the New Hampshire Forestry & Recreation Department acquired much of the current Livermore State Forest property (Figure 8).

In 1977, the New Hampshire legislature established the Livermore Falls Gorge Study Commission. The 11-member commission was tasked with determining the feasibility of obtaining Livermore Falls Gorge for the State of New Hampshire. The commission's report included data describing the property bounds, natural assets, recreational and scenic values,

---

[35] No author cited, "Livermore Falls Section of Campton" (Campton, New Hampshire: unpublished, ND), 1.

[36] Town of Campton, "Letter to the Court of Common Pleas for the County of Grafton" (Campton, New Hampshire: Town of Campton, 1838), 1.

[37] G. V. Durgin, "History of Livermore Falls," 1.

[38] *Ibid*., 2–3.

[39] United States Federal Energy Regulatory Commission, "Livermore Falls Hydroelectric Environmental Impact Statement" (Washington, D.C.: Federal Energy Regulatory Commission, 1990), 6–7.

public access, potential impact of public use on surrounding communities, fair market value of the property, historical values, and any additional information deemed necessary to complete the study.[40]

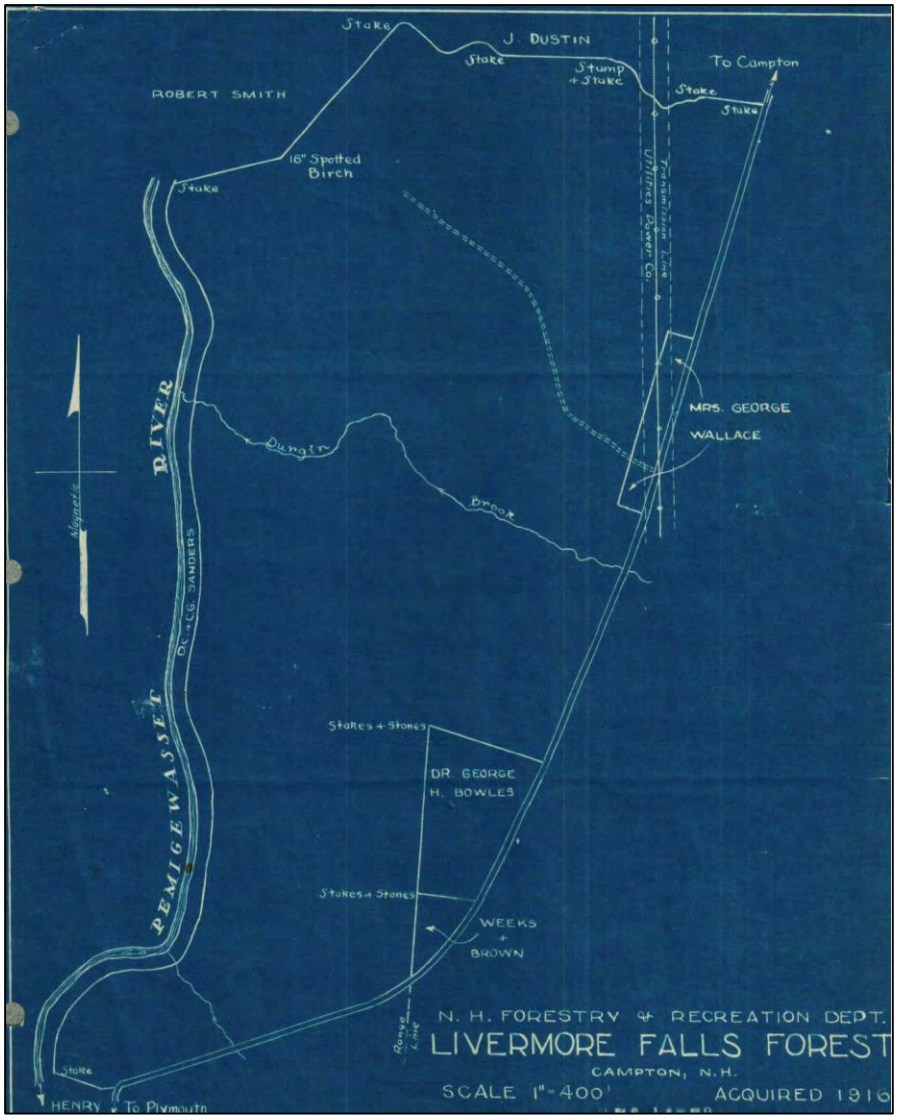


Figure 7. Livermore Falls Forest survey, 1916.

The commission considered numerous potential uses of the Livermore Falls Gorge. Among these were low-head electrical hydropower, do nothing, park and recreation area, scenic area, development of historical aspects, and a natural study area. The commission concluded that state ownership would probably mean passive usage, as the Livermore Falls State Forest adjoins the property. Technical assistance offered by the U.S. Bureau of Outdoor Recreation, as well as the

[40] Livermore Falls Gorge Study Commission, "Minutes of First Meeting" (Campton, New Hampshire: Campton Town Office, 1978), 1.

Department of Energy (DOE), resulted in a DOE expression of interest in supplying assistance for construction of a dam.[41]

The commission's report included responses to each of the charges laid out in the commission's enabling legislation. In terms of property bounds, the commission concluded that the land encompassing the gorge included approximately 46 acres owned by the Livermore Falls Corporation, 50 acres owned by the North Stratford Company, and a railroad right-of-way owned by the State of New Hampshire. Secondly, the natural assets of the area included the gorge itself, the sub-environments, or that area that includes the streambed and the cliff sides, as well as the flow of water through the gorge. Thirdly, the recreational and scenic values of the gorge included photography, painting, sketching, geology, and other natural sciences for school and college classes. Fourthly, the commission found that public access to the site remained limited to the railroad right-of-way on the west side of the gorge. However, visitors to the site frequently trespassed on privately-owned land adjacent to the gorge. This was a concern to the adjacent property owners, who were concerned about the liability that public access might create.[42]

On August 14, 1992, the New Hampshire Land Conservation Investment Program (LCIP) acquired 41.8 acres from the Livermore Falls Corporation. The deal included two miles of frontage on both banks of the Pemigewasset River in the gorge area, as well as 2.54 acres along New Hampshire Route 3. The frontage on Route 3 provided access to the gorge. The new acquisition connected to the existing Livermore Falls State Forest on the east side of the river. The ruins of the J. E. Henry and Sons pulp mill were included in the sale. NHDRED was tasked with managing the new property.[43]

Mills of Livermore Falls

Ideally suited for generating waterpower, Livermore Falls had a long history of milling activity prior to the early 1950s. About 1769, Moses Little settled on a tract of land that included what would soon be known as Little Falls. He quickly recognized the potential of this plot of real estate, and erected a grist mill, fulling mill, and possibly a saw mill and carding mill. Robert Shepard is also reported to have built and operated a fulling mill at the falls about this time or soon after. Shepard's mill sat atop a ledge at the edge of the river, but its precise location remains unknown. Moses Little died in 1797, and his mills passed to his son James. James may have already been operating a linseed oil mill at the falls when he inherited his father's property. James continued his father's milling activities for another 15 years, when he passed away. Arthur Livermore then acquired the property and continued the milling business. In 1820, all of the mills, including Little's stone mill dam, were washed out in a severe flood. By this date, a small

---

41 *Ibid*.

42 *Ibid*.

43 State of New Hampshire, Land Conservation Investment Program, official letter to NHDRED Commissioner Stephen K. Rice (Concord, New Hampshire: New Hampshire, Land Conservation Investment Program, 1992), 1.

community of about ten houses existed near the mill sites. The neighborhood, known locally as the Hollow, included two stores and a schoolhouse.[44]

Information on milling activity during the mid-nineteenth century is lacking, but it appears that Livermore continued to maintain his mills, possibly until his death in 1853. Not until the late nineteenth century do the mills of Livermore Falls again appear in the written record. The first of these was built by Arthur Homans, who initiated work on a pulp mill about May 1888 (Figures 9–11). By early November, his mill was grinding pulp. However, Homans' mill operated for less than a year. A fire in February 1889 destroyed the building and all its equipment (Figure 12).

Figure 8. Arthur Homans' pulp mill, ca. November 1888, facing south.

[44] G. V. Durgin, "History of Livermore Falls," 1.

Figure 9. Arthur Homans' pulp mill, ca. November 1888, facing north.

Figure 10. Arthur Homans' pulp mill, ca. November 1888, facing southeast.

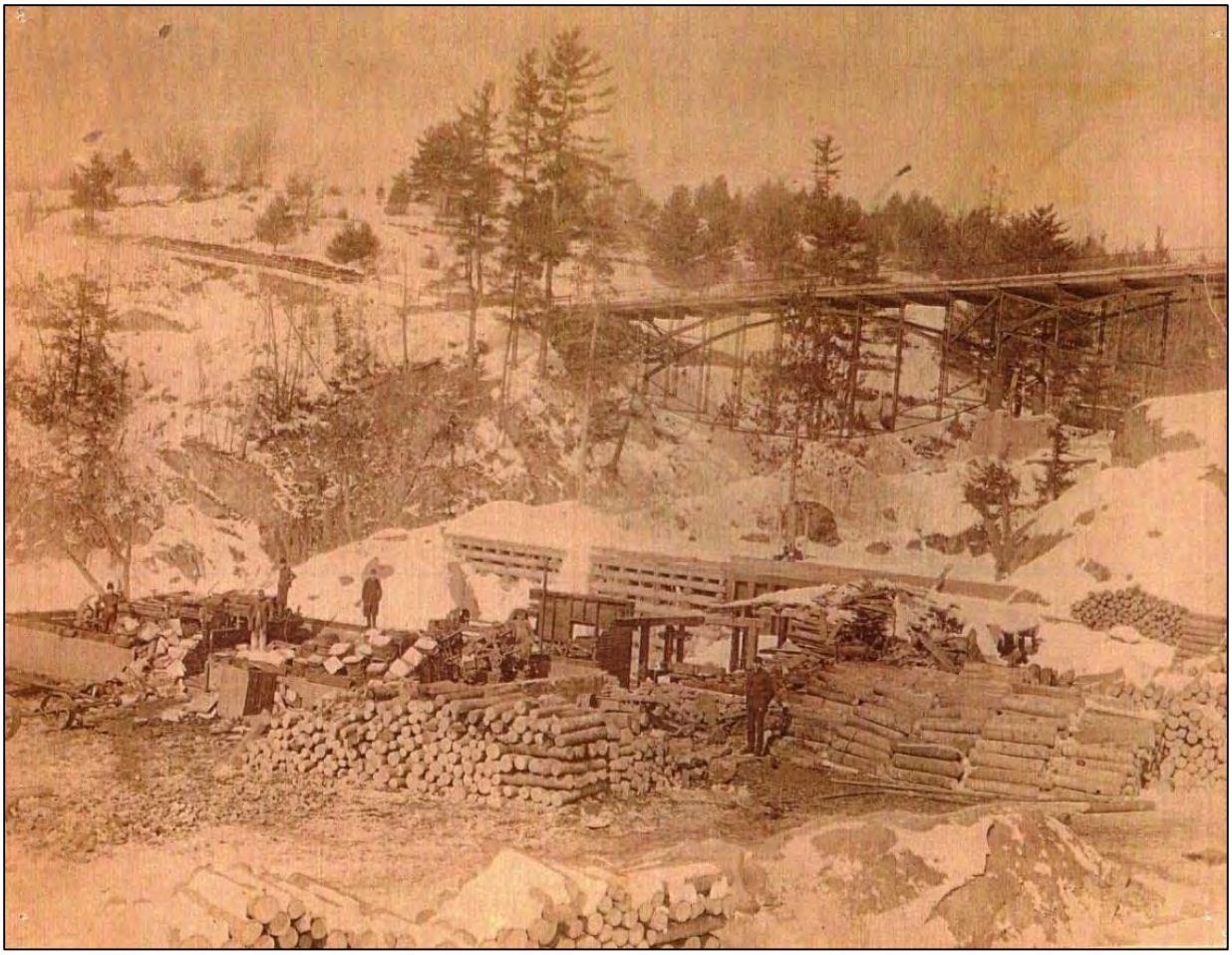


Figure 11. Ruins of Arthur Homans' pulp mill, 1889.

By early August 1889, Alden and Woods had completed plans for a new pulp mill at Livermore Falls (Figure 13). Called Fibrewood Company, the mill's main building measured 45 x 80 feet and stood three stories in height (Figure 14). The boiler house measured 45 x 50 feet and stood two stories in height. Fibrewood utilized a portion of the existing Homans mill foundation to support their powerhouse. The new mill was slightly larger than Homans'. The cost of construction was estimated at about $16,000, and required approximately 90 days to complete.[45] By April 1890, Fibrewood was receiving orders for pulp caskets. Much like Homan's milling operation, however, the Fibrewood Company met with early disaster. In late October, the mill's new dry house burned. Not to be deterred, the company quickly built a new dry house and was soon back in operation. The company continued to manufacture pulp caskets and soon added carriage panels to its inventory. It employed from 25 to 30 individuals.[46] A number of these people were photographed at the south side of the mill (Figure 15).

[45] *Plymouth Record*, "Plans for the Factory of the Fibrewood Company" (Plymouth, New Hampshire: Plymouth Record, 1888), 1.

[46] *Ibid*.

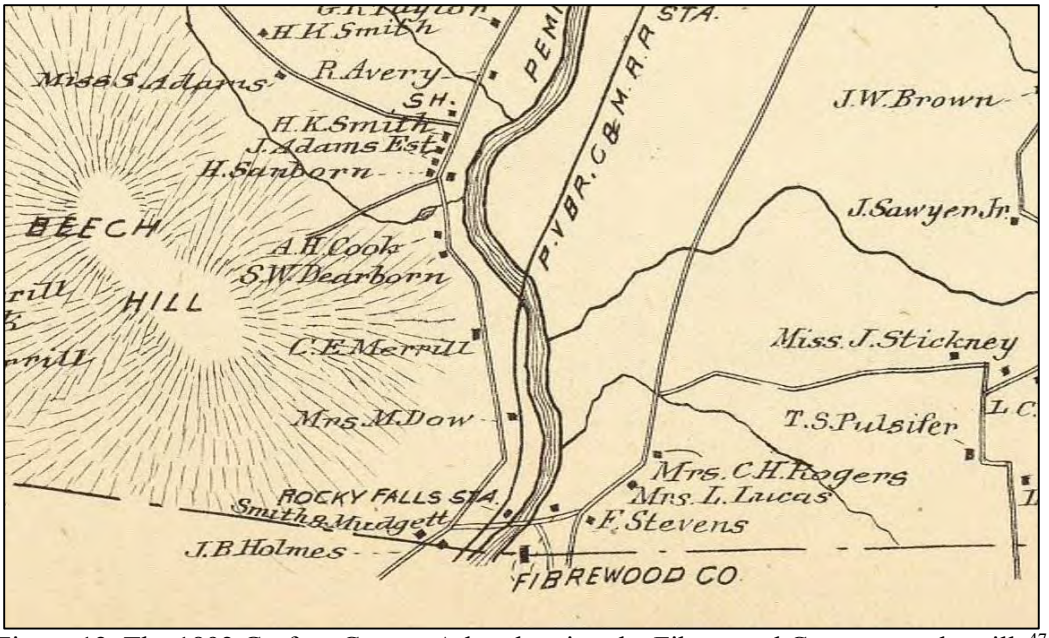


Figure 12. The 1892 Grafton County Atlas showing the Fibrewood Company pulp mill. [47]


Figure 13. Fibrewood Company and Eastern Lignoid Company pulp mills, ca. 1893.

[47] D.H. Hurd, *Town and City Atlas of the State of New Hampshire* (Boston, Massachusetts: D. H. Hurd & Company, 1892), 213.

Figure 14. Workers at the Fibrewood Company pulp mill, ca. 1890.

Pressed pulp caskets were in demand during the early 1890s. The Eastern Lignoid Casket Company, incorporated in February 1893, established a mill next to the Fibrewood Company. It is not clear if this was a branch or subsidiary of Fibrewood or an entirely separate entity. A newspaper article from June 1, 1893, noted that the company had sold 12 carloads of pulp in a week and were now in the process of pressing caskets.[48]

Fibrewood and Eastern Lignoid met their end in late July or early August 1894, when fire destroyed the mill or mills, as well as the nearby Dearborn Brothers Tannery. The local paper noted that neither Eastern Lignoid nor Fibrewood had been very successful, but both had provided employment to local residents.[49] The loss of these businesses marked the end of milling operations at Livermore Falls until about 1901, when J. E. Henry & Sons completed its pulp mill on the west side of the river, opposite and upstream of the former Fibrewood and Eastern Lignoid Casket Company mills. No new mills were built on the east side of the falls after 1901. The loss of these businesses appears to have ended the history of industry in the Hollow. However, the small village likely survived for years, as a number of workers for the J. E. Henry & Sons pulp mill reportedly resided in the Hollow.[50]

---

[48] *Plymouth Record*, "Eastern Lignoid Casket Company," (Plymouth, New Hampshire: Plymouth Record, 1893), 1.

[49] *Plymouth Record*, "Eastern Lignoid Casket Company Fire" (Plymouth, New Hampshire: Plymouth Record, 1894), 1.

[50] G. V. Durgin, "History of Livermore Falls," 2.

J. E. Henry and Sons Pulp Mill

The most enduring mill of Livermore Falls was that of J. E. Henry & Sons. The company acquired the mill site about 1899. The property was located on the west side of the river, upstream of the former Fibrewood Company mill. Precisely when the mill commenced operations remains unclear. One newspaper report indicates that J. E. Henry & Sons intended to have the mill up and running by September of 1899 (Plymouth Record 1899). However, another article, dated April 14, 1901, stated that the company intended to build the mill that coming summer.[51] Yet a third report, from the Campton town report, indicates that the town assessed the mill for the first time on April 1, 1901. The town assessed the building at a value of $45,800, which suggests that it was standing at that date, if not fully operational.[52]

When completed, the Henry & Sons pulp mill stood five stories tall (Figures 16–18). The foundation of the mill's powerhouse, headwall, and western wall foundation consisted of uncoursed white granite. The stone came from a local quarry, the location of which remains unknown at this time. The upper walls of the mill consisted of brick construction with structural iron cross members providing lateral support.[53]

A timber crib dam, located immediately upstream of the mill, provided the necessary waterpower for driving the mill's machinery. The water flowed through a headrace on the upstream side of the mill then dropped down through a group of three turbines before exiting the tailrace at the downstream side of the building. Machinery within the mill included a pair of grinders for making pulp from wood. The mill also included a presser for forming the pulp into mats, which were then shipped by rail to the paper mill at Lincoln. In addition to waterpower, the mill maintained a steam engine for powering various pieces of machinery. Bark and wood ends from the debarking process provided a ready-made fuel source for the steam engine's boiler. Electric-powered pumps moved the pulp from the lower levels of the mill to the upper floors, where the presser compacted and folded the pulp into mats. The wood used in the pulping process arrived at the mill in two to four foot lengths. Both the wood for the pulping process, and the finished mats of pulp, arrived and departed the mill via the adjacent Pemigewasset Valley Branch of the Boston & Maine Railroad.[54]

---

[51] *Plymouth Record*, "J. E. Henry and Sons to Erect a Sulphite Pulp Mill this coming summer" (Plymouth, New Hampshire: Plymouth Record, 1901), 1.

[52] G. V. Durgin, "History of Livermore Falls," 3.

[53] United States Federal Energy Regulatory Commission, "Livermore Falls Hydroelectric Environmental Impact Statement" (Washington, D.C.: Federal Energy Regulatory Commission, 1990), 6–7.

[54] *Ibid*.

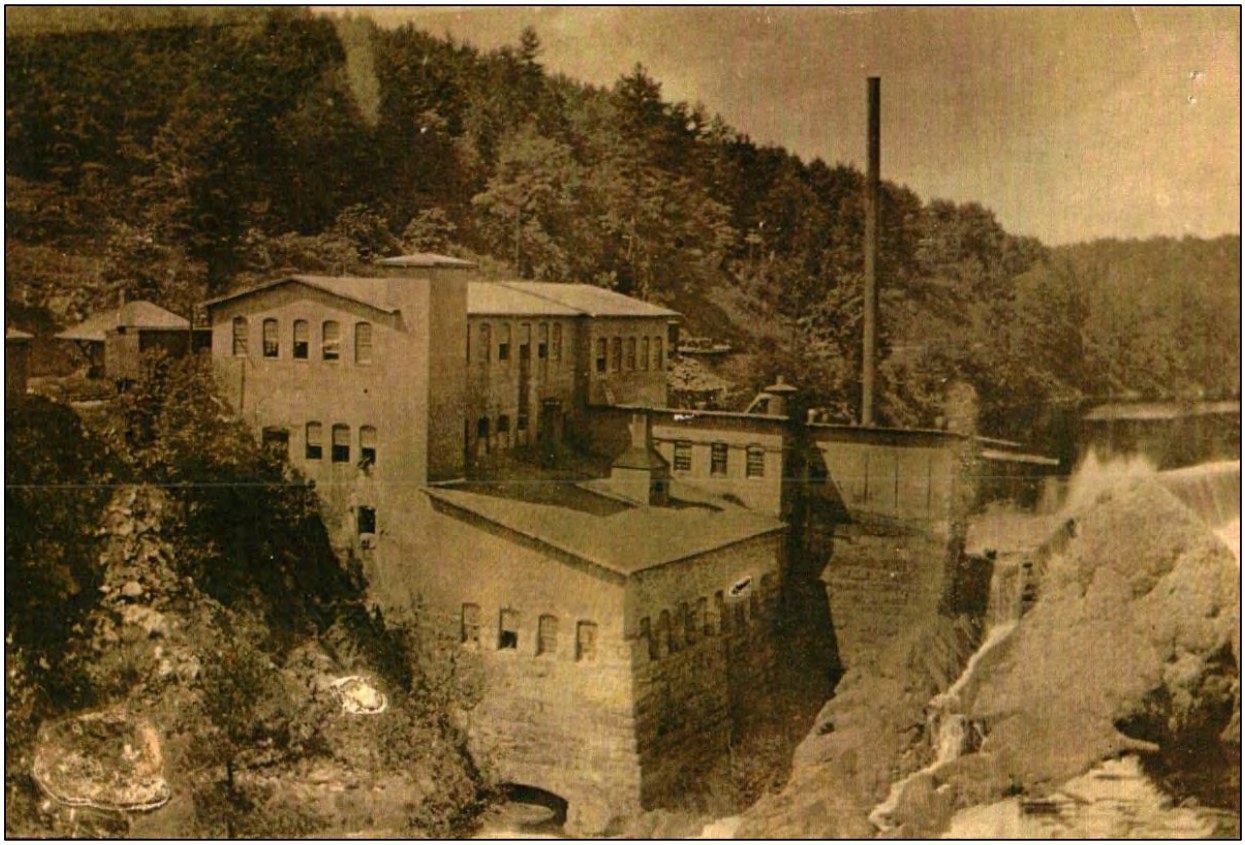


Figure 15. J. E. Henry and Sons pulp mill, ca. 1910.

In 1917, Henry and Sons sold the mill to Parker & Young. Parker & Young operated the mill until 1946, when they sold it to Marcalus Manufacturing Company, Inc. Marcalus entered bankruptcy in April 1949. The corporation that owned the mill property renamed it the Franconia Paper Corporation. In 1953, Franconia closed the mill without notice. The company cited rising costs due to the manufacture of pulp at a remote location removed from the paper mill.[55]

Throughout its history, the number of employees at the mill varied from about 17 to 32 hands. The mill typically operated 24 hours a days with three shifts of eight hours.[56] To provide additional employment during the Great Depression, the mill temporarily switched to four shifts of six hours. Working around the clock, the mill could process about one boxcar load of pulp per day. It operated year round, but low water sometimes forced temporary shutdowns. During these periods, the men either made repairs to the machinery or went to work in the paper mill at Lincoln.[57]

---

[55] *Ibid*., 7

[56] *Ibid*.

[57] Mike O'Donnell, "An Oral History of the Plymouth Banks and the Parker Young Pulp Company" (Plymouth, New Hampshire: Plymouth State University, 1973), 6.

Figure 16. J. E. Henry and Sons pulp mill under Parker and Young ownership, May 29, 1923.

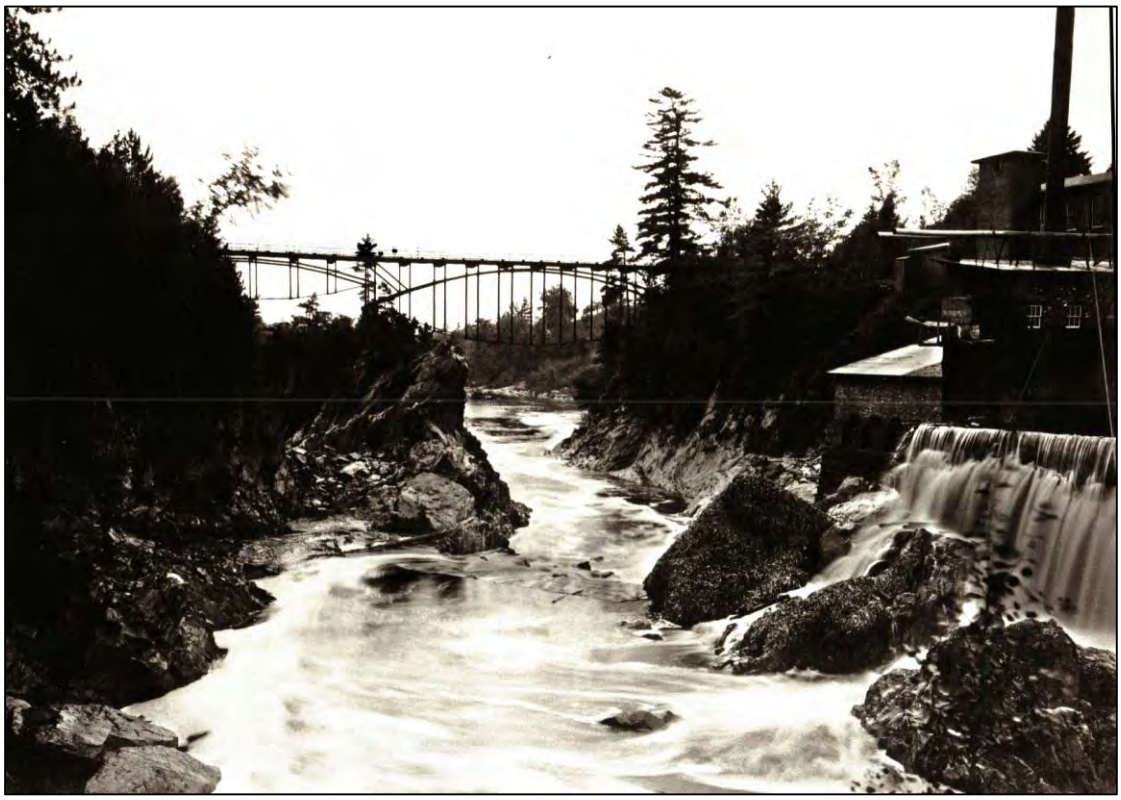


Figure 17. J. E. Henry and Sons pulp mill and the Pumpkinseed Bridge, ca. 1910.

Following the mill's closure, the property transferred to the Livermore Falls Corporation. In January 1979, Livermore Falls Corporation sold the property to North Stratford Equipment Corporation. The mill itself had been heavily vandalized in the years following its closure. During the early 1960s or 1970s, someone salvaged the red bricks that comprised the mill's walls, leaving only the granite foundation and brick headwall. The timber crib dam that provided the reservoir for the mill's waterpower succumbed to a flood in 1973. Using Land Conservation Investment Program funding, in 1992, the state acquired a 44.34-acre section of land that included the remains of the former J. E. Henry and Sons pulp mill.[58]

Tannery

According to period newspaper reports, a tannery was located immediately east of the Fibrewood Company pulp mill in the Hollow. Little information is available for the history of this business, but Heath & Sons may have built the tannery about 1875. At some point, they sold the business to the Dearborn Brothers, who operated it until it burned in 1894.[59] A photograph from about the 1870s or early 1880s possibly shows the tannery, but it is not clear which building in the photograph housed the business. The tannery is reported to have relied heavily on deer hides, and a number of men in the photograph can be seen holding sheets of leather (Figure 19). Along with the Fibrewood Company and the Eastern Lignoid Casket Company, the Dearborn Brothers Tannery burned in late July or early August of 1894.[60] The Dearborn brothers did not rebuild their tannery.

Of note is the large stack of what appears to be slabs of wood, at the left side of the photograph. The tanning process used tanbark from hemlock and other species. The pile of material does not appear to be tanbark, but the resolution of the image does not allow for precise identification. One possibility is that the slabs are shingles or, more likely, blanks for making shingles. As discussed below, one or two local histories mention that a shingle mill operated at Livermore Falls. Its precise location, however, remains uncertain at present.

---

58 United States Federal Energy Regulatory Commission, 7.

59 *Plymouth Record*, "Eastern Lignoid Casket Company Fire" (Plymouth, New Hampshire: Plymouth Record, 1894), 1.

60 *Ibid*.

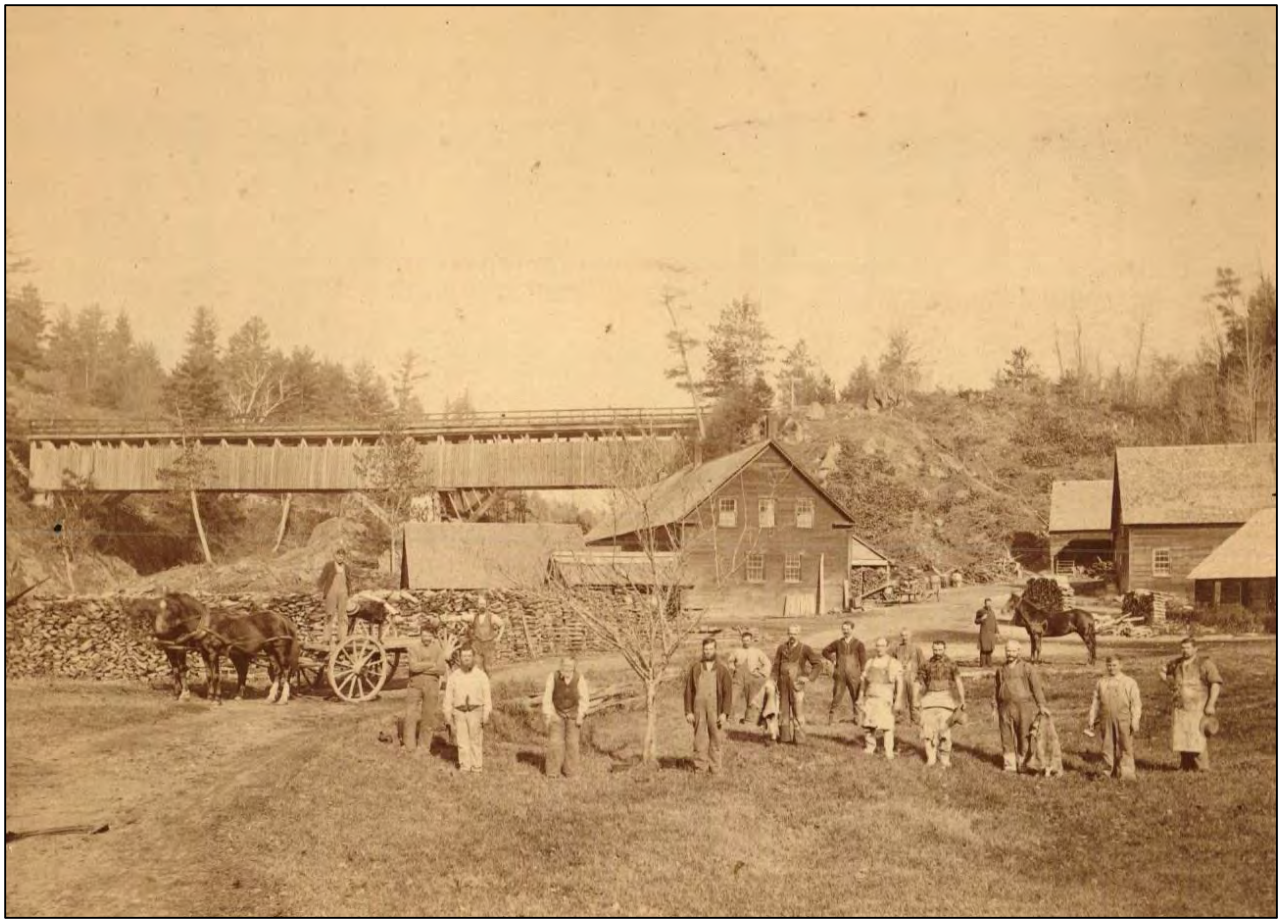


Figure 18. Tanners from the Heath and Sons/Dearborn Brothers Tannery, ca 1880.

Shingle Mill

A number of local histories mention a shingle mill in relation to Livermore Falls, but they do not elaborate or cite sources. To date, no evidence for the mills' existence has been discovered, but no reason could be found to believe that it did not exist. A shingle mill need not necessarily be a large operation, as the shingle machines of the day were often compact. They could be operated in an open-air setting or housed in a shed or larger building, depending on the scale of the enterprise. Figure 19 possibly shows the shingle mill, and possibly some of its workers, but no identifying marks are present on the image to provide further clues. If the shingle mill was water-powered, then the larger, two-story building toward the center of the photograph might have housed the mill. The location and orientation of this building is consistent with later photos of Homans' pulp mill (Figures 10–12). Homans oriented his mill building to align with the mill dam at the rear of the building. A flume connected the outlet in the dam with the powerhouse under the mill. The building in Figure 19 might have been oriented in the same manner for the same reason. Indeed, Homans may have simply built his mill atop the previous building's foundations to take advantage of a preexisting power source. The Fibrewood Company did precisely this when they built their mill atop the ruins of Homans' mill. Given the frequency of fires suffered by the industries of Livermore Falls, the shingle mill could have suffered a similar fate prior to the arrival of Homans.

State Fish Hatchery

During the early to mid-1800s, industrial development along New England's rivers drastically impacted Atlantic salmon runs. Dams, built across rivers to harness waterpower for mills, prevented salmon from returning to their spawning beds. The number of salmon in the Merrimack River dwindled from a preindustrial estimate of 26,820 to extinction by 1850. In response, Massachusetts and New Hampshire organized a Fisheries Commission in 1865. The Commission's aim was to restore Atlantic salmon to the Merrimack.[61]

In January of 1874, the New England Commissioners of Fisheries began discussions regarding construction of a hatchery near the headwaters of the Connecticut or Merrimack River. Over the next two years, the idea evolved into a joint operation between the Fisheries Commissioners of Massachusetts and the New Hampshire Fish and Game Commission. The two agencies began searching for an appropriate site for the hatch house, and in August 1877, agreed to erect the facility at the springs at Livermore Falls. William Tomkinson leased a six-acre parcel to the two states for a ten-year period.[62]

Construction of the hatch house began immediately and by October 1877, the hatchery was ready to receive its first batch of salmon eggs. Located just inside the town of Holderness, the hatchery included a hatch house and holding pond (Figure 20). The hatch house was a small, front-gabled, wood frame building (Figure 21). The hatchery relied on a two-inch iron pipe to deliver water from the spring to the hatching-troughs (Figure 22). A dam, built across the opening of the spring, created holding ponds for spring water. Not knowing if the spring water was suitable for hatching fish, the builders devised a contingency plan using river water. They extended a four-inch iron pipe from a nearby flume to the holding ponds at the springs.[63]

The fisheries commissions planned to net adult salmon at the falls and then transplant them into the holding ponds (Figures 23–24). Upon maturation, workers would artificially spawn the fish. When the hatchery was completed in 1877, however, no Atlantic salmon eggs were available. The first eggs hatched at the facility came from Chinook salmon of the Sacramento River in California. These eggs were destined for the Baker, Pemigewasset, and Contoocook Rivers.[64]

---

[61] New Hampshire Fish and Game Department, "Livermore Falls" (Concord, New Hampshire: New Hampshire Fish and Game Department, ND).

[62] Lawrence Stolte, 61.

[63] *Ibid*., 62

[64] *Ibid*.

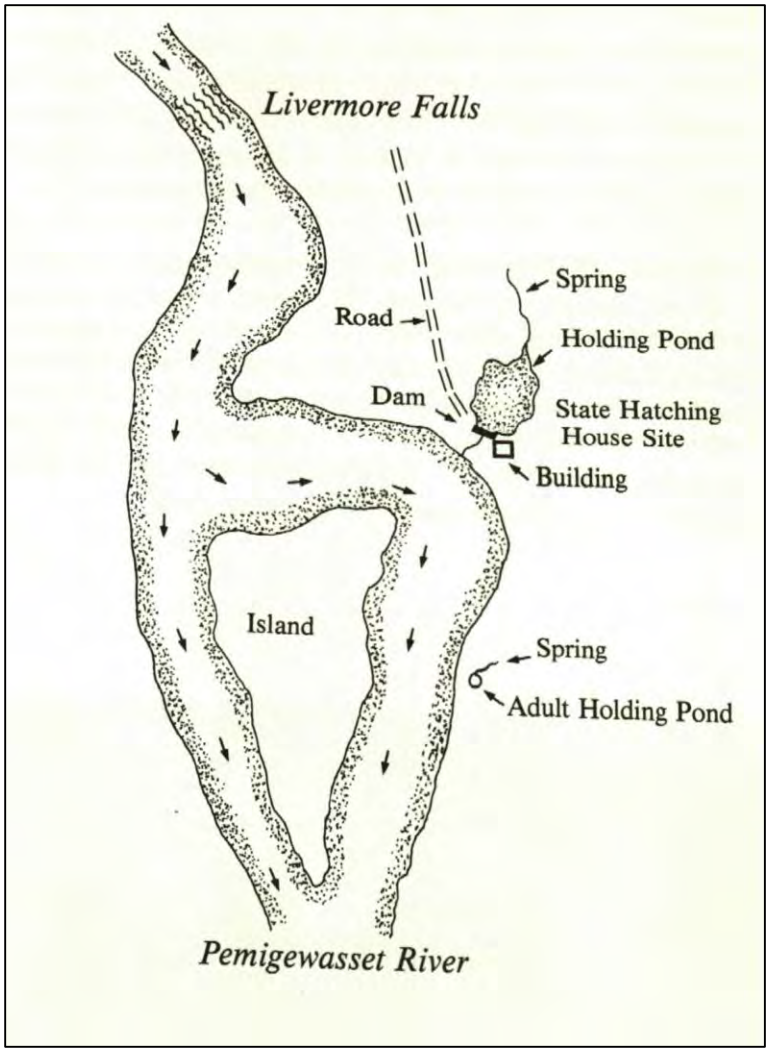


Figure 19. Site plan of the state fish hatchery at Livermore Falls.

The fish hatchery suffered a fire on the afternoon of March 3, 1888. The result of a defective flue, the fire destroyed the hatch house and all the eggs within. The Fish and Game Commission decided to rebuild the hatchery and by August of 1888, construction was underway. Twice the size of the original, the new hatch house had a capacity of 2,000,000 eggs.[65]

The results of this early attempt to restore Atlantic salmon runs proved less than ideal. Despite the passage of laws requiring the installation of fish ladders at each dam site, the hatchery salmon failed to return in significant numbers. Periods of drought and floods hampered the salmons' recovery, as did pollution, siltation, and a lack of adequate fish passage facilities. The Livermore Falls fish hatchery remained in service until about 1907, when the state relocated it to Laconia. [66]

---

[65] *Ibid*.

[66] New Hampshire Fish and Game Department, "Annual Report of the Fish Commissioners of New Hampshire" (Concord, New Hampshire: New Hampshire Fish and Game Department, 1904), 3.

Figure 20. State fish hatchery at Livermore Falls, ca. 1880.

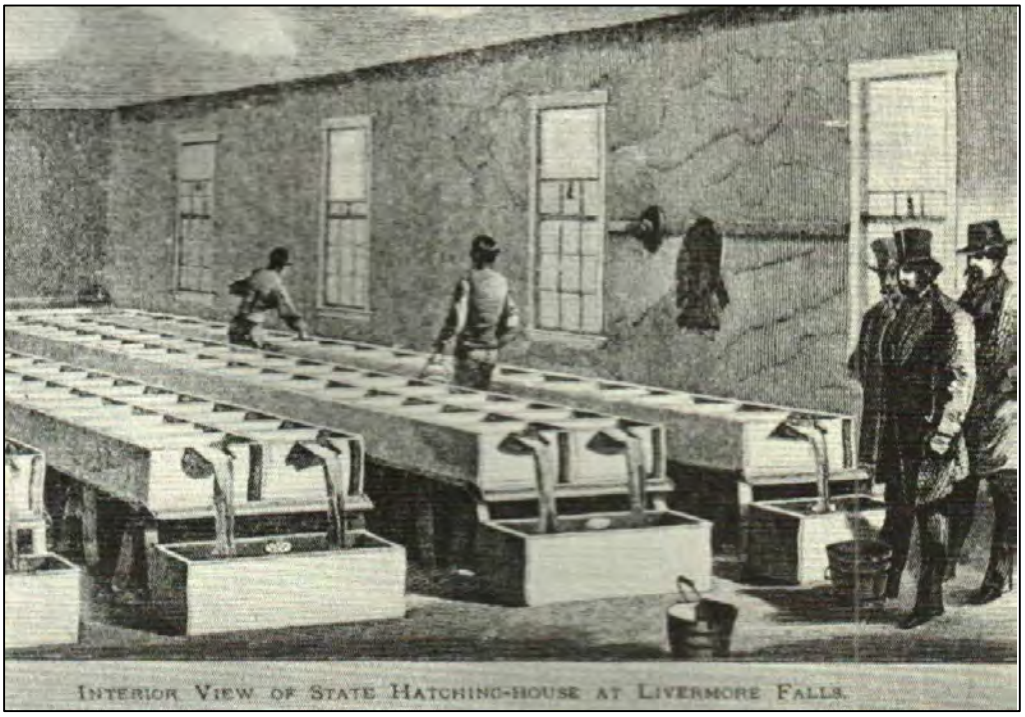


Figure 21. Site plan of the state fish hatchery at Livermore Falls.

Figure 22. State hatchery salmon nets in the Pemigewasset River, ca. 1900.

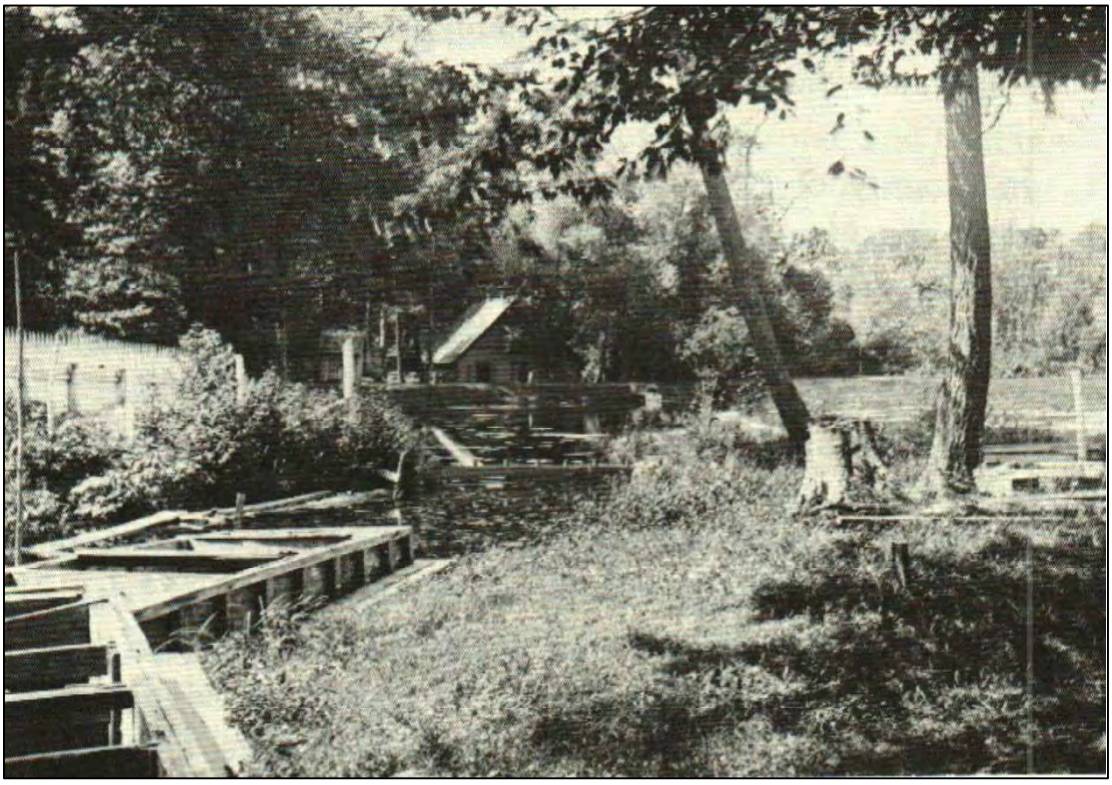


Figure 23. State fish hatchery, ca. 1900.

Bridges of Livermore Falls

Owing to the short lifespan of early wooden bridges, Livermore Falls Gorge has seen a number of bridges since the initial settlement period in the late eighteenth century. The first of these structures entered service about 1788. Paid for by subscription, this early bridge consisted of a portion of Little's stone mill dam and a wooden span that extended from the end of the dam to the opposite bank of the river. It featured a path wide enough for the simultaneous passage of two carriages. The wooden portion of this structure decayed within a few years, forcing local residents to finance its replacement. The replacement bridge survived until about 1820, when it too reached the end of its service life. Judge Arthur Livermore, then the owner of the mills at Little Falls, built the replacement bridge. The town paid Livermore $500 for the structure, which he warrantied for 16 years, "against all destruction save by fire."[67] Livermore's bridge survived only a few days before a severe flood in October 1820 carried away the new bridge, the stone dam, and the mills.

By June 1822, Livermore was in the process of rebuilding his mills. A new bridge, however, had yet to be built. A petition to the General Court of the State of New Hampshire, dated June 3, 1822, reveals that the town of Campton was in search of funding to build a toll bridge at the falls. Estimated to cost $1,400 or $1,500, the small town of Campton did not have the means to finance such a project. The Selectmen of Campton hoped the court would pass legislation in favor of appropriating the necessary capital to build the bridge.[68]

Nearly one year to the day following the selectmen's petition to the court, a group of local residents sent a petition to the court requesting that the state not grant Campton the right to build a toll bridge at the falls. The petitioners were in favor of a free bridge.[69] The petitioners appear to have gotten their way, as the new bridge, completed in 1823, was free. Known as Livermore Bridge, this wooden structure measured 255 feet long and cost $900 to build. Like its predecessors, the Livermore Bridge had a short service life. Within about 14 years, the timber was in poor condition and in need of replacement. Due to the high cost of lumber, residents were reluctant to make the investment, but they eventually found the money needed to rebuild the bridge. At a cost of $2,000, they completed a new bridge ca. 1839.[70]

How long the 1839 bridge survived remains unknown. A gap exists in the written record between 1839 and about 1869, when a new bridge was under construction. Given that these wooden bridges averaged about 15 years of service, it is possible that another bridge might have been built about 1855, but this remains speculation. The bridge erected in 1869 appears in at least two photographs (Figures 18 and 25). Figure 25 reveals that this was a wooden, Howe deck truss. A comparison to Figure 18 reveals that the builders eventually covered the truss timbers with

---

[67] Selectmen of Campton, "Petition to the Honorable General Court of the State of New Hampshire" (Campton, New Hampshire: Town of Campton, 1822), 1.

[68] *Ibid*.

[69] Inhabitants of Campton and Inhabitants of Holderness, "Petition to the Honorable General Court of the State of New Hampshire" (Campton, New Hampshire, Town of Campton, 1823), 1.

[70] Selectmen of Campton, untitled itemized list of bridge expenses (Campton, New Hampshire: Town of Campton, 1840), 1.

protective planking, as was the standard procedure of the day. This bridge survived until 1884, when officials determined that the bridge was "insufficient and out of repair."[71]

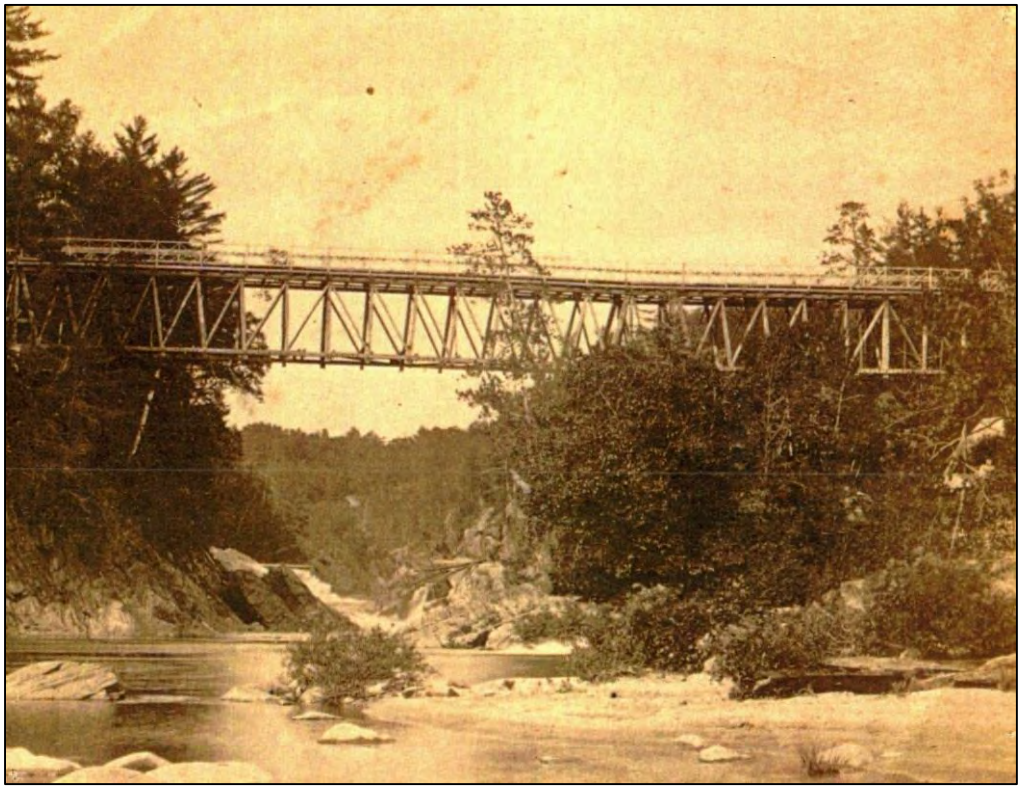


Figure 24. The wooden truss bridge prior to the pumpkin seed bridge, ca. 1875.

Following a legal hearing over the cost of maintenance and repairs for what would be the last of the wooden bridges at Livermore Falls, the towns of Campton, Holderness, and Plymouth each contributed to the cost of a new bridge. The town's bridge committee hired the Berlin Iron Bridge Company of East Berlin, Connecticut (Figure 26) to design and erect a new bridge. The firm was well known for their patented lenticular truss bridges. A lenticular truss is, essentially, a Pratt truss with curved upper and lower chords. Built of wrought iron, the new bridge at Livermore Falls spanned the gorge at a height 103 feet above the Pemigewasset River (Figures 27–30). It featured two deck spans that totaled 263 feet in length.[72]

[71] Alan J. Lutenegger and Amy B. Cerato, "Old Iron Bridge Across Livermore Falls Gorge" (Concord, New Hampshire: State of New Hampshire Department of Transportation, 2013), 1.

[72] *Ibid*.

Figure 25. Berlin Iron Bridge Company letterhead, 1897.

Like other bridges built by the Berlin Iron Bridge Company, the Livermore Falls bridge would have been prefabricated at the company's shops in East Berlin. Following specifications provided by the customer, fabricators machined the necessary parts of the bridge. Loaded aboard railroad cars, the parts traveled to the nearest railhead for delivery to the customer. Once moved to the erection site, bridge builders assembled the pieces atop the awaiting abutments and piers. At Livermore Falls, the builders anchored the bridge supports into camptonite, an unusual schist found at Livermore Falls.[73]

[73] Alan Lutenneger and Amy B. Cerato, 1.

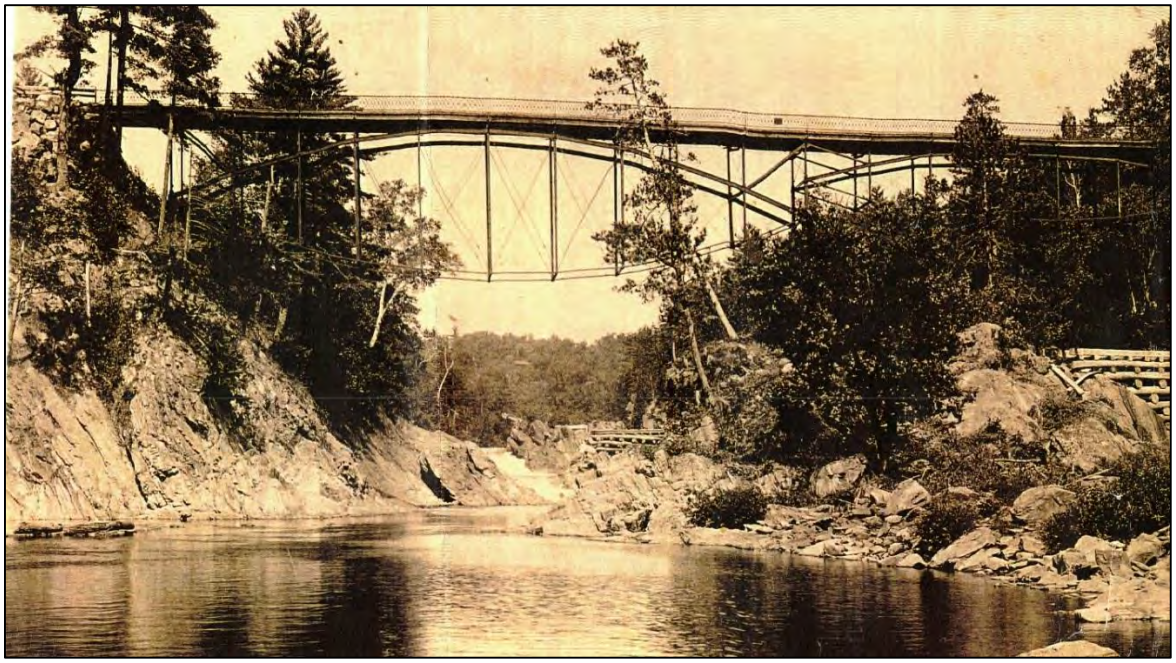


Figure 26. The Pumpkinseed Bridge, ca. 1890.

Figure 27. Pumpkinseed Bridge and the Fibrewood Company pulp mill to the far right, ca. 1890.

Figure 28. Pumpkinseed Bridge and the J. E. Henry and Sons pulp mill, ca. 1910.

Figure 29. Pumpkinseed Bridge, facing east, ca. 1930.

The towns of Campton, Holderness, and Plymouth each contributed to the bridge's maintenance. As the size and weight of automobiles increased over time, the bridge's owners determined that it was necessary to limit the number of vehicles on the bridge at any given time. In 1953, Lester

Mitchell narrowed the bridge to one lane by moving the railings closer together. Mitchell removed the original railings at this time. In 1959, the state department of transportation deemed the bridge unsafe and permanently closed it to traffic. A scrap dealer cut the east span and dropped it into the gorge. He also removed some of the remaining railings and the decking.[74]

[74] United States Federal Energy Regulatory Commission, 7.

Chapter 3: Existing Conditions

Land Use

The mountainous topography of Livermore Falls and the surrounding environs significantly limited the scale of agriculture in the area. With an abundance of soft and hard timber, lumbering and paper manufacturing dominated the local economy from the mid-nineteenth century through the mid-twentieth century.

When the state acquired the property in 1916, the forestry department took measures to promote the growth of white pine and hemlock. Numerous tracts of these trees have been sold and harvested since 1916. Some illegal harvesting of timber has occurred on a limited scale. In 1952, loggers illegally cut timber resulting in timber trespass litigation. Thinning of the property to promote healthy timber growth continued through the 1960s. Records indicate that in 1966, the Neighborhood Youth Corp weeded and thinned the forest.[75] Cultivation of desirable trees remains an ongoing activity, as does the harvest of timber within the state forest.

With the abundance of waterpower at the falls, milling operations of various types have come and gone since the late eighteenth century. The Hollow, south of the falls, hosted the largest concentration of businesses in the area. Precisely how many people resided there at any one time remains uncertain, but the community was large enough to require at least two stores and a school. With the closure of the former J. E. Henry & Sons pulp mill in 1953, all industrial activity in the gorge ceased.

With the closure of the mill, the falls became available for other uses. Among the numerous possible uses discussed by the Livermore Falls Gorge Study commission was a proposal to harness the waterpower of the falls to produce electricity. The site was considered conducive to generating electricity, and the Department of Energy expressed interest in assisting with the construction of a dam.[76] In 1990, the North Stratford Equipment Corporation studied the feasibility of building a hydroelectric facility in the gorge. The project, however, never progressed beyond preliminary investigations. In 1991, State Senator Mark Hounsel entered HB 674, which eliminated the possibility of building dams on the Pemigewasset River. This measure stopped any further attempts to build a hydroelectric plant at the falls. National Hydro President Robert L. Winship voiced his objection to the Pemigewasset River hearings, but the measure remains in place, thereby ending the future of hydropower at Livermore Falls.

Today, the primary uses of Livermore Falls State Forest consist of timber harvesting and recreation. The gorge is a significant scenic attraction. In a postindustrial society, the gorge's best assets are its natural scenic beauty and its capacity to support wildlife, including the potential return of Atlantic salmon.

---

[75] New Hampshire Division of Parks and Recreation, "New Hampshire Biomass Harvest Study" (Concord, New Hampshire: New Hampshire Division of Parks and Recreation, ND), 1.

[76] Livermore Falls Gorge Study Commission, 1.

Topography

The local topography is characterized by steep mountainous terrain. Granite outcroppings and cliffs are common, making the landscape rugged. The gorge itself is comprised of an unusual schist, known as camptonite. Soils consist of Merrimack gravelly sandy loam, with Hinckly gravelly fine sandy loam comprising the remainder of soils in the area. The soils are well drained, which contributes to the overall health of the surrounding forest.

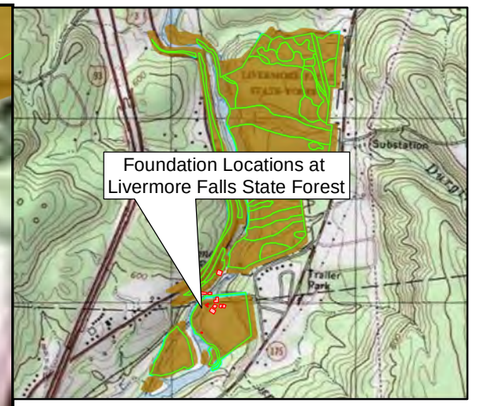
The numerous deep ravines and creek valleys within the state forest may have been a contributing factor to the lack of development north and east of the falls. No evidence of cellar holes or wells is present in this area, which suggests that it was not a desirable location for either agriculture or residential development.

Foundations

Fieldwork revealed visible remains of one foundation on the west side of the river within the gorge and eight stone foundations on the east side of the river within the Hollow area south of the gorge (Figure 31). All foundation remains within Livermore Falls State Forest are concentrated at the southern end of the property. These stone remains comprise all that survives of the industries and residences that once occupied the area in or near the gorge. With the exception of the J. E. Henry & Son pulp mill, all the observed foundations consist of uncoursed rubble stone construction. The more modern and substantially-built, J. E. Henry & Son Mill features a cut, uncoursed white granite foundation. The foundations vary in condition from largely intact to only partially visible. Soil and vegetation now cover many of them, leaving only a faint outline on the landscape. Other foundations may be entirely buried or deteriorated and are no longer visible.

The most prominent of the ruins are that of the J. E. Henry & Sons pulp mill, located on the west side of the gorge, north of the Pumpkinseed Bridge (Foundation 1, Figure 31). Following the mill's closure in the 1950s, vandals and salvors removed the upper portions of the mill, eventually leaving only the granite foundation of the powerhouse, headwall, and portions of brickwork for the mill building (Figure 32). Shortly before the previous owner sold the property to the state in 1992, the French River Land Company salvaged the mill's two, Rodney Hunt Type 80, Francis turbines. A green energy company, French River refurbished the turbines and installed them in hydroelectric plants at Pioneer Hydro in Ware, Massachusetts and Tannery Pond in Winchendon, Massachusetts.[77]

[77] French River Land Company, *Green and Clean Power, French River Land Company's Website!* http://www.frenchriverland.com/livermore_falls.htm (accessed February 2, 2014).



Legend

- Forest Stands
- Livermore Falls State Forest
- Structures

N
W E
S

0 90 180 Meters
0 300 600 Feet

Foundation Locations at
Livermore Falls State Forest

GRAY & PAPE, INC.
ARCHAEOLOGY - HISTORY - HISTORIC PRESERVATION

Figure 30

Figure 31. Foundation of the J. E. Henry and Sons pulp mill, facing northwest.

In addition to J. E. Henry & Sons, numerous foundations are located in the Hollow on the east side of the river, south of the Pumpkinseed Bridge. The majority of these foundations are clustered at the north end of the Hollow. Toward the end of industrial activity in this area, the site was occupied by the Fibrewood and Eastern Lignoid companies, the tannery, and a number of former dwellings and their outbuildings.

Deterioration and the accumulation of soils and overgrowth make it difficult to identify specific foundations with certainty. However, a photo of this area from ca. 1889 provides some guidance as to how the main mill buildings were arranged (Figure 33). The photographer shot the photo from the Pumpkinseed Bridge. The view faces toward the southeast. The roofs of a number of houses and an outbuilding are visible behind the mill buildings to the southeast. The tannery is not visible in the photo. It was located immediately to the north and east of the Fibrewood mill building at the left of the photo. The orientation of these buildings appears to align with a number of the surviving foundations that remain extant in this area.

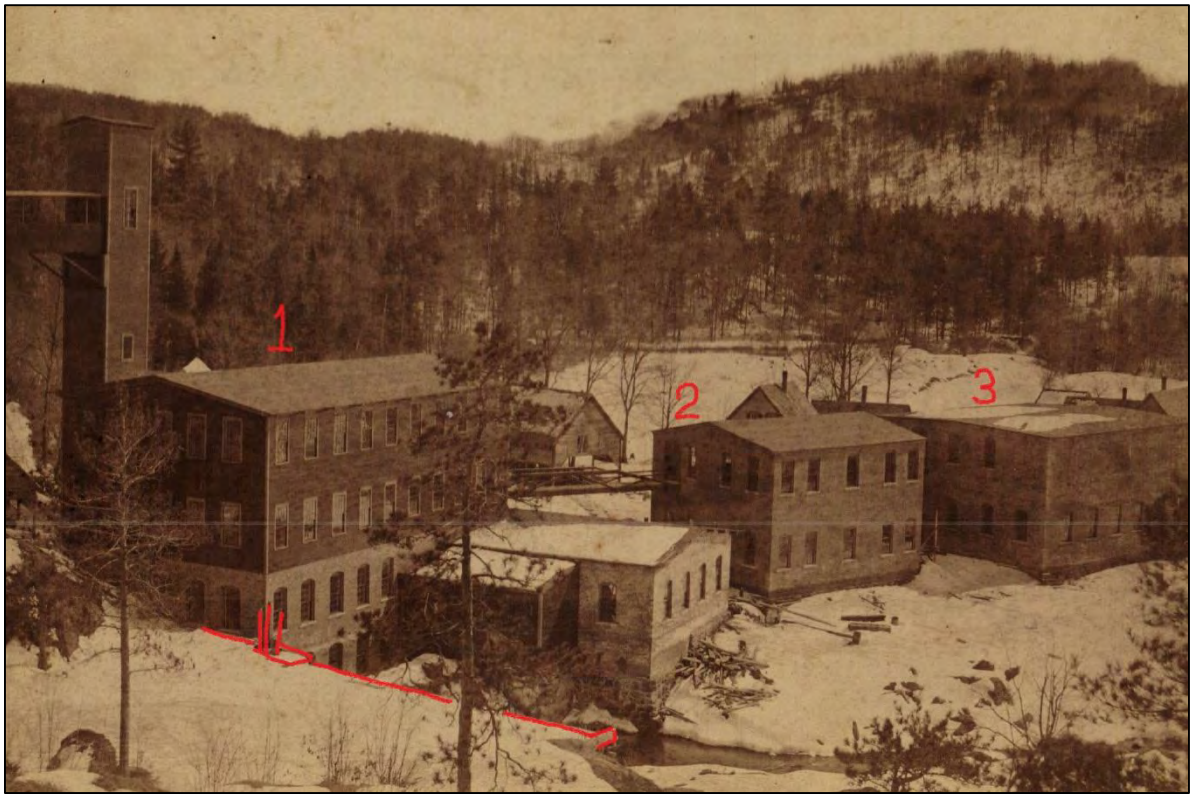


Figure 32. Photograph ca. 1889 of the Fibrewood Company pulp mill (1), boiler house (2), and the Eastern Lignoid Casket Company (3).

Note that the dam and the southern end of the mill pond are visible in Figure 33, albeit only upon close inspection. The pond is frozen and covered with snow. It is located between the two trees to the left of the photo. The red line marks the edge of the dam. The three vertical lines to the left of the dam mark the valve for the sluice gate that admitted water into the head race.

Of the foundations remaining in the Hollow, the largest are those of the former Fibrewood Company pulp mill. These foundations include the mill and possibly its boiler house (Foundations 2 and 3, Figure 31; buildings 1 and 2, Figure 34). Just as illustrated in the 1889 photo, the mill foundation is oriented roughly northwest to southeast (Figure 35). The northwest end of the foundation extends to the base of a steep slope. The mill was oriented toward its mill dam, which was located just northwest of the mill building. A headrace extended from the dam to the wheelhouse on the south end of the western side of the building. Figure 36 shows the entrance to the southern end of the gorge and the former location of the mill dam. The site inspection revealed no visible remains of the dam.

Figure 33. Fibreboard Company mill foundation 2, facing northwest.

Figure 34. Fibreboard Company mill foundation 2, facing northwest toward site of former mill dam.

Figure 35. Fibreboard Company mill foundation, facing southeast.

Figure 36. Eastern Lignoid Casket Company foundation, facing north.

Numerous smaller foundations are near those of the Fibreboard and Eastern Lignoid companies. These foundations possibly mark the locations of former dwellings or outbuildings. Two examples are shown in Figures 37-39. All of the foundations are built in the same manner, with uncoursed granite rubble. The builders likely utilized stone from the immediate area. It does not appear that they shaped the stone. Rather, they went to great lengths to insert numerous smaller stones wherever gaps between the large stones occurred. The foundations appear to have been dry laid, but it is possible that the mortar may have eroded away over time.

Figure 37. Unidentified foundation in the Hollow, facing west.

Figure 38. Unidentified foundation in the Hollow, facing east.

Field investigations did not reveal the location of the former state fish hatchery. According to previous studies, the hatchery was located at the southern end of the Hollow area. It utilized a spring that flows from the hillside. The state dammed the spring to provide water to the hatch house. No visible evidence of the dam, hatch house, or its supporting facilities remain. However, a large section of steel pipe is located in the spring (Figures 40 and 41). The pipe measures roughly one foot in diameter and extends an unknown distance into the bank of the spring. A large valve is attached to the end of the pipe. It remains unknown if the pipe relates to the former fish hatchery or is unrelated debris. Descriptions of the hatchery indicate that a two-inch pipe fed water from the spring to the holding ponds. If the extant pipe in the spring served the hatchery in some capacity, it might have been a later addition.

Figure 39. Steel pipe and valve near the location of the former fish hatchery.

Figure 40. Steel pipe and valve near the location of the former fish hatchery.

Vegetation

Vegetation within Livermore Falls State Forest consists largely of white pine, hemlock, red oak, and white birch. When the state purchased the property in 1916, the forestry department actively weeded the property to favor the more valuable white pine and hemlock. Additional weeding occurred in the mid-1960s.[78]

Views and Vistas

As seen in a number of early photographs of Livermore Falls Gorge, the Pumpkinseed Bridge once provided excellent vistas of the gorge. The bridge facilitated unobstructed views of the falls and the pool below the falls. The beach area south of the bridge provides an excellent vantage point from which to see the gorge. Much of the land that was occupied by industries, dwellings, and outbuildings has since reverted to forest. Consequently, the vistas have been greatly reduced in the years following the decline of the Hollow. The west side of the river, near the foundation of the former J. E. Henry & Sons pulp mill, also likely provides a good vantage point from which to view the gorge.

Archeological Features

A Phase IA Archaeological Survey of the State Forest was conducted as part of this project. The survey concluded that the State Forest has a good potential for undisturbed cultural deposits from either Native American or historical cultures. The survey identified areas of the State Forest with medium to high potential for cultural deposits. The upland forest area that represents the bulk of the State Forest east of the Pemigewasset River is considered to have moderate potential for Native American deposits, with the highest potential near the mouths of Durgin and Palmer brooks, and at floodplain locations at the northern edge of the State Forest. The steep west bank of the Pemigewasset is generally considered to be of low potential. The highest potential for archaeological remains is the floodplain area on the east bank of the river below Livermore Falls, historically known as the Hollow. Native American cultural deposits may survive in the Hollow, but approximately two hundred years of Euroamerican occupation and use of this area suggests that such deposits may be disturbed or otherwise compromised. However, a high potential for intact historical period cultural deposits is present within the Hollow.

Given the long milling tradition of Livermore Falls, it comes as no surprise that the area features numerous foundations from these former industries. Foundations from the J. E. Henry & Sons pulp mill, as well as those of the Homans pulp mill, and its Fibrewood Company successor, are evident near the west and east banks of the river in the immediate vicinity of the falls. Additional foundations in the area may include those of the Dearborn Brothers Tannery and the state's first fish hatchery. Archaeological investigations may reveal additional foundations, as numerous dwellings and outbuildings were associated with these industries and historical photographs indicate that the Hollow was a fairly sizeable community.

[78] New Hampshire Forestry and Recreation Department, 1.

Within Livermore State Forest, all known foundations are concentrated near the southern end of the property. No known evidence of construction is present outside the gorge area. Indeed, the 1892 Grafton County atlas does not depict any buildings within this area. This may have been due to the nature of the topography, which features numerous steep creek channels and ravines. It appears, therefore, that the forest north and east of the gorge remained free of historical period development following its settlement by Moses Little and his successors.

Chapter 4: Landscape Analysis and Evaluation

Introduction

The analysis and evaluation of the Livermore State Forest compares findings from the site history and existing conditions assessment to identify those landscape characteristics and associated features that have historical significance. Each landscape characteristic is analyzed based on what was present historically and what currently remains on the landscape. The historic integrity and significance of each landscape characteristic and associated feature are evaluated within the context of the broader landscape. Seven character-defining components have been documented and evaluated using National Register eligibility criteria. Based on this evaluation, cultural landscape character areas have been identified as a way to consolidate findings from the evaluation, and provide guidance for the development of treatment strategies.[79]

Statement of Significance

To date, no National Register Nomination has been prepared for Livermore Falls. However, the gorge and neighboring Hollow are clearly significant for the industrial heritage of Livermore Falls. For nearly two hundred years, the falls provided waterpower for a variety of mills and industries. The waterpower of the gorge drove water wheels and turbines, which in turn created employment for many local residents, thereby contributing to the economic development of Holderness, Campton, and Plymouth Townships. With its history of logging, milling, tanning, and salmon hatching, Livermore Falls is a veritable microcosm of New Hampshire's, and New England's, industrial history and natural resource exploitation.

Although no historical buildings survive within Livermore Falls State Forest, many of the foundations of the former mills and their supporting buildings remain. These vestiges of industry provide telling reminders of an important era in New Hampshire's development. The potential for historical archaeological features within the Hollow is high. Livermore Falls is significant as an industrial archaeology district.

Natural Systems and Features

The history of Livermore Falls is inextricably linked to the topography that created the falls and generated water power for industries. It was the falls that attracted Moses Little to the site in 1769, and it was the falls that continued to attract subsequent millers to the area. The steep granite cliffs of Livermore Falls precluded extensive development within the gorge, thereby forcing most of the mills and their supporting structures into the Hollow.

Spatial Organization

Historically, development within the Livermore Falls State Forest was concentrated at the southern end of the property, just south of the falls. The steep granite cliffs of the gorge precluded development within the gorge itself. The J. E. Henry & Sons pulp mill appears to have

[79] Page et al., *Guide to Cultural Landscape Reports: Contents, Process, and Techniques* (Washington D.C.: National Park Service, 1998), 75.

been one of the few industries located inside the gorge. Development concentrated in the Hollow on the east bank of the river, just south of the Pumpkinseed Bridge. This was the logical location for industrial development, as the timber crib dam that supplied waterpower to the mills was located on the east bank of the river, just south of the bridge. From the dam, flumes carried water to the powerhouses of the various mills.

The relatively flat landscape south and east of the dam provided a level area for construction of mill buildings, a tannery, a boarding house, dwellings, and numerous outbuildings. This area has since reverted to forest, making it difficult to visualize the once bustling community that existed here.

Land Uses and Activities

Within the historical period, land use patterns within the Livermore Falls State Forest have consisted primarily of timbering and milling activities of various forms. During the mid-nineteenth century, loggers used the Pemigewasset River to move logs downstream to mills in Concord. Loggers primarily harvested those trees nearest the riverbank, where they prodded the logs into the water for the trip down river. Following the state acquisition of the property in 1916, the New Hampshire Forestry and Recreation Department systematically weeded the property to favor white pine and hemlock.[80] The Division of Forests and Lands continues to cultivate specific species of trees within the property to optimize timber values. They oversee occasional sales of tracts of timber within the state forest.

As a natural source of waterpower, the falls attracted millers from the earliest settlement period. These enterprising individuals built dams and flumes at various locations within the gorge to impound water for driving water wheels and turbines. The historical record indicates that a wide variety of milling activities occurred at the falls, including grist, carding, fulling, and pulp manufacturing. Additional uses of waterpower at the falls possibly included shingle manufacturing and linseed oil production. Due to the constant threat of fire and floods, these businesses tended to come and go with great frequency. Nevertheless, the water power generated by the falls provided a near constant source of economic activity for the local community.

In addition to milling, Livermore Falls also supported the state's first fish hatchery. This early attempt at returning Atlantic salmon to the Merrimack River failed to deliver the desired results, but did provide valuable information regarding the difficulties of restoring the Merrimack and Pemigewasset fish stock. With the closure of the hatchery during the early twentieth century, and the closure of the former J. E. Henry & Sons pulp mill in the early 1950s, the falls became solely a scenic attraction, providing recreation for visitors.

[80] New Hampshire Forestry and Recreation Department, "New Biomass Harvesting Study, Livermore Falls State Forest, Campton, New Hampshire" (Concord, New Hampshire: New Hampshire Forestry and Recreation Department, 1966), 1.

Circulation Networks

Points of Access

Historically, access to the mills and dwellings of the gorge area occurred through two primary routes. On the east side of the river, access was provided by the extant road that leads from the visitor parking lot to the beach. This steep road was likely established early in the history of the Hollow and was also likely the only way into and out of the village. One historical photograph shows what appears to have been a footpath leading up the side of the embankment near the tannery (Figure 42). The photograph shows what looks to be a rope railing. This path would have provided pedestrians a shortcut from the tannery area to the bridge across the gorge. How long this pathway survived remains unknown. It is conceivable that similar paths existed elsewhere in the area, but no available maps or historical photographs show such paths.

Figure 41. The tannery area of the Hollow, showing foot path up the embankment, ca. 1875.

On the west side of the river, a road led from what is now Route 3, down to the J. E. Henry & Sons pulp mill. This road also provided access to Rocky Falls Station. Additionally, the old town road crossed the gorge on the Pumpkinseed Bridge. This road was critical to the movement of raw materials, machinery, and manufactured goods between the railroad on the west side of the river and the industries on the east side of the river. Moreover, it facilitated general transportation between Plymouth and Campton. Currently, a dirt parking area along the east

shoulder of Route 3 provides a point of access to this roadway, as well as a pedestrian path to the gorge.

Pedestrian Paths

Currently, visitors can access the east bank of the gorge, in what was formerly the Hollow, via the trailhead on Livermore Road. This trail consists of the original road that led down to the tannery and pulp mills. This is an unpaved and largely unimproved road. It is not open to vehicular traffic. From the southern end of the road, at least two trails lead to the beach (Figure 43). On the west side of the gorge, a small, dirt parking area off of Route 3 provides access to a pathway to the river.

Summary

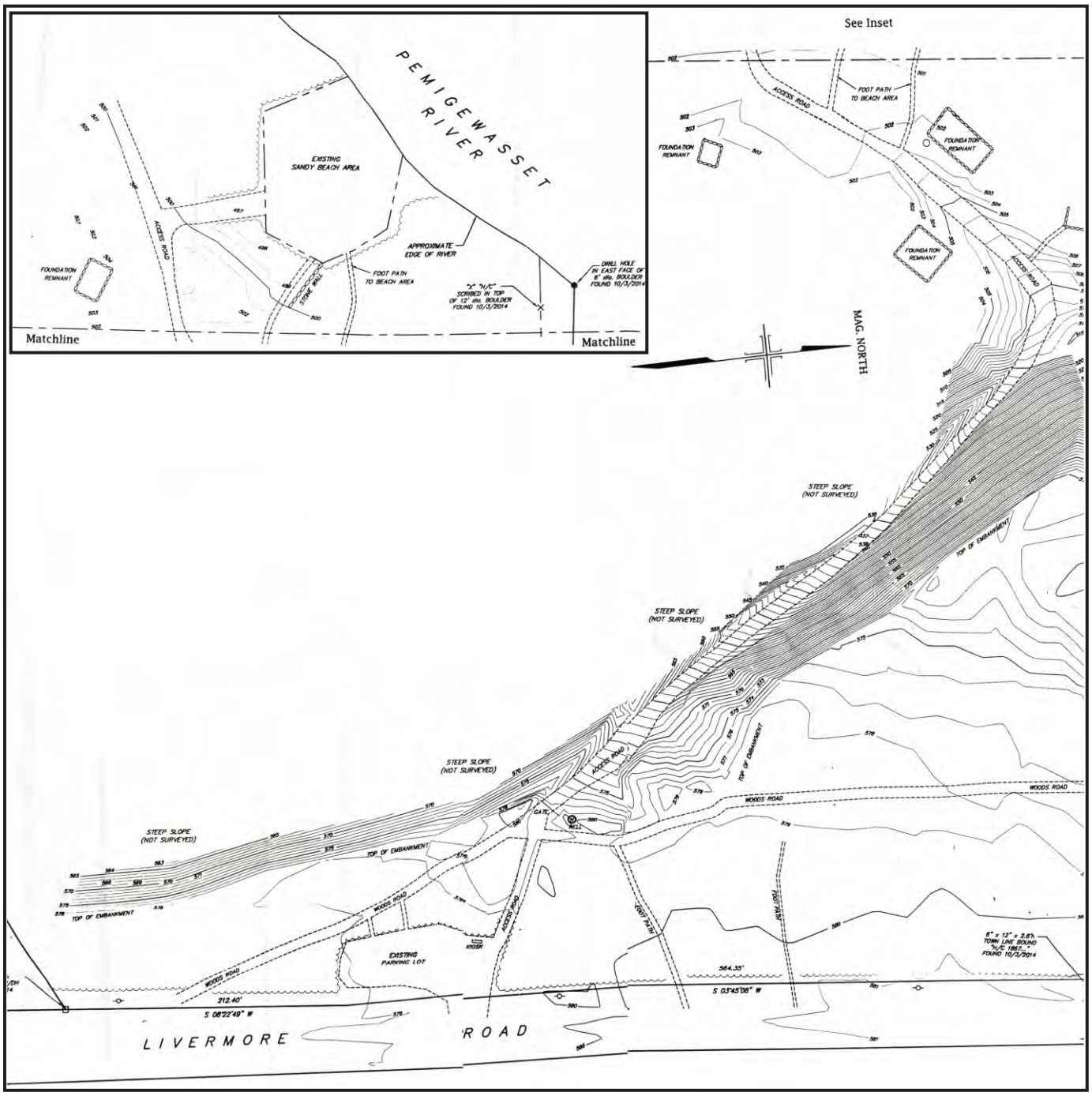
Access points into Livermore Falls State Forest remain limited to the two historical roads that once provided access to the former J. E. Henry & Sons pulp mill on the west side of the river and the pulp mills and tannery of the Hollow on the east side of the river. Currently no system of roads or trails is present within the northern portion of the state forest. In recent years, at least two, temporary access roads were created to harvest stands of timber. These unimproved access points are now largely overgrown.

Within the gorge area, the precipitous cliffs limit the number of access points to the falls. For this reason, the only routes into the gorge remain the two, historical roads formerly used to access the mill sites on the east side of the river and the J. E. Henry & Sons pulp mill on the west side of the river. The former town road that once crossed the Pumpkinseed Bridge is no longer accessible. The approach on the east side of the river is now private property, while the approach on the west side of the river has since overgrown with foliage.

Archaeological Sites

While no Native American archaeological sites have been identified within Livermore Falls State Forest, a Phase IA Archaeology Survey (2015) concluded that the State Forest has a good potential for undisturbed cultural deposits from either Native American or historical cultures. For Native American sites, the survey identified areas of the State Forest with medium to high potentials for cultural deposits. The west bank of the Pemigewasset River and the area within the river gorge are considered to have a low potential for archaeological resources because of the steep and rocky terrain. The upland forest area that represents the bulk of the State Forest north of the falls and east of the Pemigewasset River is considered to have moderate potential for Native American deposits, with the highest potential near the mouths of Durgin and Palmer brooks, and at floodplain locations at the northern edge of the State Forest.

The highest potential for archaeological remains is the floodplain area on the east bank of the river below Livermore Falls, historically known as the Hollow. Numerous foundations, cellar holes, and other evidence of historic period land use clearly indicate that this area has a high potential for intact subsurface historic period resources. The nature of the area, a floodplain located immediately downstream from a significant falls, also argues for a high potential for subsurface Native American cultural deposits. However, approximately two hundred years of



2014, Department of Recreation and Economic Development Survey
Showing the Access Road and Foundations on
East Side of River

GRAY & PAPE, INC.
ARCHAEOLOGY · HISTORY · HISTORIC PRESERVATION

Figure 42

Euroamerican occupation and use of this area suggests that such deposits may be disturbed or otherwise compromised.

It is recommended that any future ground disturbing development within the State Forest in areas identified as having moderate or high potential for intact subsurface remains in the Phase IA survey be subject to a Phase 1B archaeology survey to conclusively ascertain whether intact subsurface cultural deposits exist within the area of proposed ground disturbance.

Part II

Chapter 5: Treatment

Introduction

The treatment section of the CLR articulates a preservation strategy for long-term management of the Livermore Falls State Forest cultural landscape based upon that landscape's significance, existing conditions, and use. The preservation strategy is based upon the historical research, existing conditions, and analysis and evaluation documentation presented in Part I of the CLR.

Treatment of a cultural resource is often guided by the policies, guidelines, and standards contained in *NPS-28 Cultural Resource Management Guideline*,[81] and *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes*.[82] These documents identify four types of treatment: preservation, rehabilitation, restoration, and reconstruction. Preservation maintains a landscape in its existing state. Rehabilitation recommends some change to accommodate contemporary use. Restoration often entails removing later elements and reconstructing missing features in order to depict a landscape at a particular point in time. Reconstruction replicates a non-extant landscape through new construction.

The treatment types constitute the philosophical basis for responsible preservation practice and provide for the long-term preservation of a landscape's historic features, qualities, and materials. Specific policies, guidelines, and standards have been promulgated for each of the four treatment types. The degree of physical intervention required to maintain a cultural landscape differs between the four treatment types, with the least intervention generally required for preservation, and the greatest level of intervention required for reconstruction. As the level of physical intervention increases, NPS policies, guidelines, and standards require an increased level of documentation and justification.

Cultural Landscape Character Areas

The cultural landscape evaluation at Livermore Falls State Forest documents character-defining resources. It details key patterns, spatial relationships, and features that contribute to the historical significance of the property. Although the entire 178-acre state forest is viewed as a single cultural landscape, two areas of the property have distinct cultural landscape characteristics. These two areas are the gorge, with its falls and the ruins of the J. E. Henry and Sons pulp mill, and the Hollow, with its numerous foundations dating to the industrial era of Livermore Falls. Second and third-growth forest dominates the remainder of the property, with no visible historical period resources. The gorge and the Hollow define the overall character of the property and distinguish it from surrounding areas. Their central historical role and interpretive potential influences recommendations regarding preservation treatments,

[81] National Park Service, "NPS-28: Cultural Resource Management Guideline" (Washington, D.C.: National Park Service, 2002).

[82] Page et al.

interpretation, maintenance, and general management of the Livermore Falls State Forest cultural landscape.

Significance

For the purposes of this Cultural Landscape Report, Livermore Falls State Forest is significant as the site of nearly two hundred years of industrial, and related, human activity that have been influenced by the landscape and have shaped the landscape. It is important to note that the significance of the cultural landscape is somewhat distinct from significance as defined by the National Register of Historic Places. The entire State Forest is considered eligible for the National Register of Historic Places because of its associations with New Hampshire's conservation movement and with state-sponsored efforts to introduce scientific forestry principles that would assure sustainable yields for generations. These efforts, dating from 1916, have been historically confined to the northern portion of the forest, an area where evidence of Euroamerican settlement, occupation, and use are not visible. Archaeological sites may exist in this area of the Forest, as previously described, but the extant landscape resembles a "natural" forest, albeit a forest controlled and managed to produce marketable species.

The key areas within the State Forest associated with visible, extant evidence of human activity are the gorge of the Pemigewasset River, which channeled the river's flow and provided the waterpower upon which local industrial activity depended, and the floodplain located below the falls on the east bank of the river, known as the Hollow, which served as the site of numerous industries and associated activities over a period of nearly two centuries. As previously noted, other areas of the State Forest have the potential for significant, intact subsurface Native American and historical archaeological resources. Identification of specific archaeological resources must depend upon future investigative efforts.

Management Philosophy

The significance of Livermore Falls State Forest is manifested in the ruins of the buildings and factories that occupied the Hollow, in the historical land use patterns that remain evident, and in the remnants of the historical circulation system that united agricultural fields, residences, and mills into a cohesive community. Management of the cultural landscape focuses upon preservation and interpretation of historical features that will enrich visitor understanding of the relationships between the falls, the forest, and the industries that occupied the site for nearly 200 years.

Management Zones

The most effective means to quantify recommended treatments for the Livermore Falls State Forest landscape entails dividing the landscape into management zones. Management zones define areas of a cultural landscape that have been assigned specific treatment objectives. They are defined by the type and degree of historical integrity within the landscape and are identified in collaboration with park management in order to facilitate development of a range of treatment strategies for individual features or areas within a single property. It is important to note that this Cultural Landscape Report is intended to address the management and preservation of the landscape as currently identified and understood.

Treatment recommendations for Livermore Falls State Forest are associated with three management zones (Figure 44). Management decisions affecting one zone will naturally influence the treatment of the other zones.

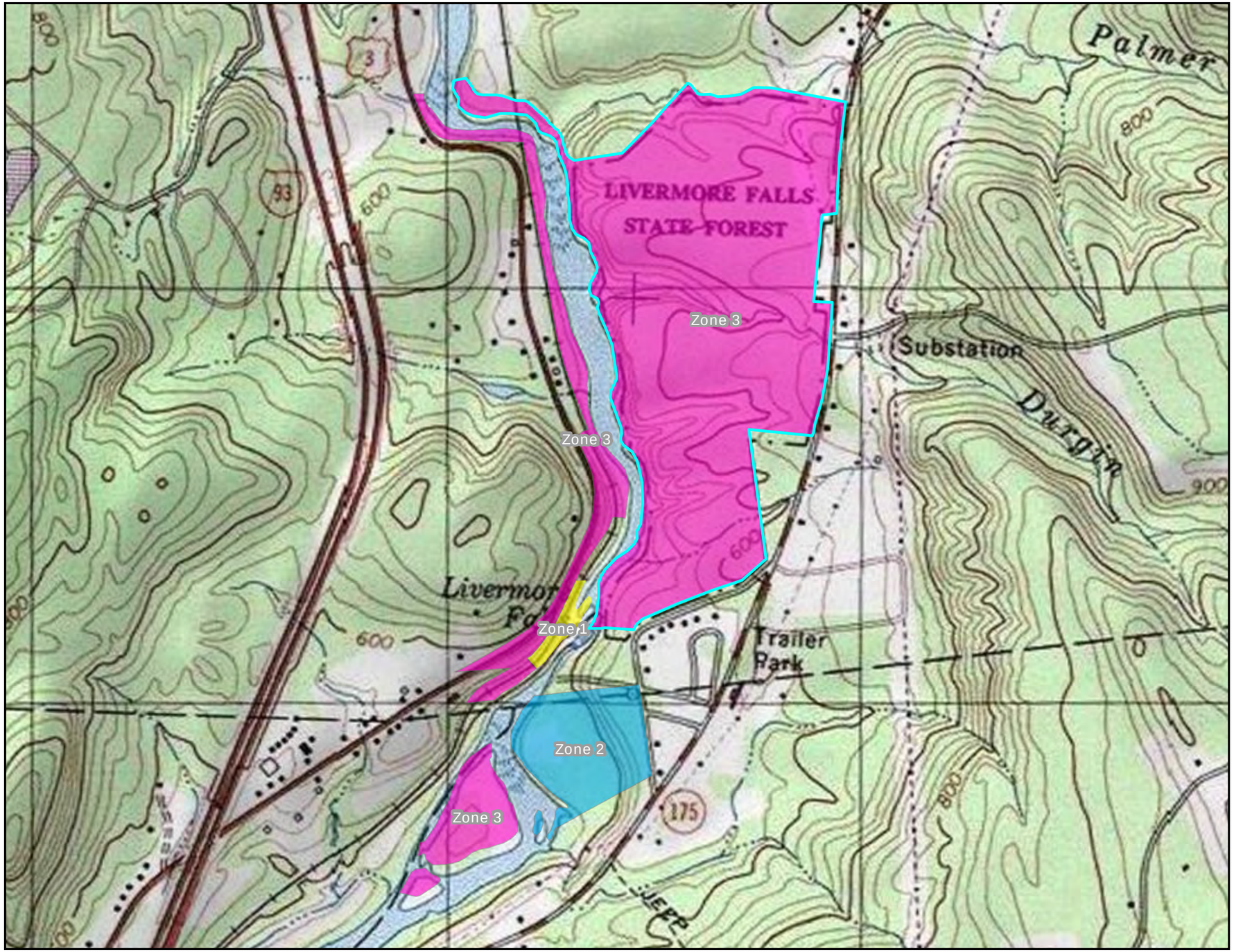
Zone I consists of the Pemigawesset River Gorge. This is an area with a high degree of historical development, significance, and integrity. The topographical features and physical characteristics of the Gorge provided the waterpower that attracted industry and residents to the Livermore Falls area. The physical characteristics of the Gorge, steep rock walls and a narrow canyon, remain intact. Recurring floods and freshets have destroyed or damaged many of the manmade waterpower control systems— dams, headraces, tail races— that directed water to the wheels and turbines of the various mills. Likewise, floods and intentional demolition have left only the stone foundations of the J. E. Henry & Sons pulp mill, the only industrial facility located within the actual gorge.

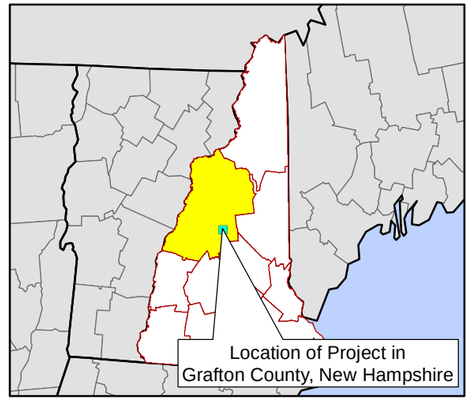
Zone II consists of the Hollow. Bounded on the west by the west bank of the Pemigawesset and on the north by the upper limits of the falls, this zone extends downstream to the southern boundary of the State Forest and east to the eastern boundary. This is an area with a high degree of historical development and significance. It served as the site of numerous mill operations, a thriving community, and the state's first fish hatchery. The integrity of this landscape zone is somewhat compromised. None of the buildings or structures that stood in the Hollow survive, though foundation walls and cellar holes are evident in numerous locations. The circulation system remains visible, but has been somewhat compromised by regeneration of the forest. Similarly, farmstead lots, fields, pastures, and other culturally created and maintained landscape features have lost their integrity due to the encroachment of the forest. While this zone no longer reflects its historical period appearance, as recorded in numerous historical photographs, it is, nevertheless, an important element of the State Forest's cultural landscape. It might best be considered an archaeological district, with both above-ground foundations and other remains, as well as a high likelihood of intact subsurface historical period cultural deposits.

Zone III consists of the remainder of the State Forest outside the Gorge and the Hollow. This zone is maintained and managed as a sustainable forest crop. No physical evidence of historical period human activity or occupation exists in this zone. As previously noted, areas of moderate and high potential for intact subsurface archaeological remains exist. These areas should be investigated if future activity within the Forest dictate ground disturbing activities in these locations. With this exception, it is assumed that this zone will continue to be maintained and operated as a state forest.

Recommended Treatment

The primary treatment recommended for the cultural landscape at Livermore Falls State Forest is preservation. Specific treatment recommendations are presented for two of the management zones defined above.





LEGEND

Livermore Falls Boundaries

- Zone 1
- Zone 2
- Zone 3

0 200 400 Meters

0 600 1200 Feet

N W E S

Boundaries of Livermore Falls and Zone Locations in Grafton County, New Hampshire

GRAY & PAPE, INC. Figure 43

ARCHAEOLOGY · HISTORY · HISTORIC PRESERVATION

Zone I: J. E. Henry & Sons Pulp Mill Foundation

All that survives of the J. E. Henry & Sons pulp mill is the granite foundation and portions of the lower brick walls. The ruins, however, are significant to the overall history of the falls and gorge. It serves as a reminder of the area's once prominent paper manufacturing industry. Having employed many local residents throughout its operating life, it was an important source of revenue for the local community. It is also visually interesting, with its uncoursed, white granite foundation. The massive masonry provides a fine example of local craftsmanship.

The pulp mill foundation is not officially open to the public, but the presence of graffiti and refuse indicate that it is likely accessed routinely by curious visitors. In its current condition, the site poses significant safety concerns to those attempting to explore the ruins. The upper perimeter of the foundation is not protected by safety railings or barriers. While preservation of the ruins requires little more than leaving the foundation as is, it is highly recommended that steps be taken to secure the perimeter against potential falls. The foundation itself does not appear to require stabilization, but it is recommended that any loose brickwork atop the foundation be removed to prevent unexpected collapses.

Upon securing the site for safety, it is recommended that interpretive signage be installed to provide a basic history of the mill and the gorge. Treating the site as a significant historical resource may provide some measure of protection against further vandalism. Periodic refuse removal will also improve the overall sense of significance for the site. Locating at least one garbage can at the head of the path leading to the foundation may reduce the amount of refuse left at the site.

Zone II: The Hollow

As with the J. E. Henry & Sons pulp mill, all that survives of the industries and residences of the Hollow are the stone foundations. These stone vestiges provide a telling reminder of the vibrant community that once existed here. Some stabilization may be required to prevent destruction of the foundations. At present, the biggest threat they encounter is the growth of trees alongside the foundation walls. As the trees grow, they gradually force the stones apart or topple the walls. Preventative maintenance in the form of tree-trimming will prolong the life of the foundations. In some instances, the foundations are too deteriorated to justify maintenance, but the larger foundations, like those of the Fibrewood and Eastern Lignoid companies, will benefit from occasional preventative maintenance.

Chapter 6: Bibliography

Child, Hamilton

1886 *Gazetteer of Grafton County*, *New Hampshire, 1709–1886*, Hamilton Child, Syracuse, New York.

Durgin, G. V.

ND "History of Livermore Falls," G. V. Durgin, Campton, New Hampshire. Located in the vertical files of the Campton Historical Society, Campton, New Hampshire.

Foss, Carol R.

1992 "Wildlife in a Changing Landscape," *At What Cost? Shaping the Land We Call New Hampshire*, edited by Richard Ober, New Hampshire Historical Society and the Society for the Protection of New Hampshire Forests, Concord, New Hampshire.

French River Land Company

2014 "Livermore Falls Web Page," *Green and Clean Power, French River Land Company's Website!*, http://www.frenchriverland.com/livermore_falls.htm. Accessed February 2, 2014.

Gove, Bill

2006 Logging Railroads along the Pemigewasset River, Bondcliff Books, Littleton, New Hampshire.

Grimm, Eric C, and George L Jacobson

2004 Late-Quaternary Vegetation History of the Eastern United States. In *The Quaternary period in the United States*, edited by A. R. Gillespie, S. C. Porter, and B. F. Atwater. Elsiever Inc., San Diego, California.

Hardy, Robert

2015 Interview with New Hampshire Division of Forests and Land, Forester, at Campton, New Hampshire, January 29.

Hurd, D.H.

1892 *Town and City Atlas of the State of New Hampshire*, D. H. Hurd & Company, Boston, Massachusetts.

Inhabitants of Holderness

1823 Petition to the Honorable General Court of the State of New Hampshire, June 2.

Livermore Falls Gorge Study Commission

1978 "Minutes of First Meeting," Livermore Falls Gorge Study Commission, Campton Town Office, Campton, New Hampshire.

"Final Report on the Purpose, Findings, and Recommendations of the Livermore Falls Gorge Study Commission," May 3, Livermore Falls Gorge Study Commission, Campton, New Hampshire.

Lutenegger, Alan J. and Amy B. Cerato

2013 "Old Iron Bridge Across Livermore Falls Gorge," State of New Hampshire, Department of Transportation, Concord, New Hampshire.

National Park Service

2002 "NPS-28: Cultural Resource Management Guideline," National Park Service, Washington, D.C.

New Hampshire Department of Economic Development

2006 Memorandum of Agreement between the New Hampshire Department of Recreation and Economic Development and the New Hampshire Department of Fish and Game, September 27, 2006, Concord, New Hampshire.

New Hampshire Division of Parks and Recreation

ND "New Hampshire Biomass Harvesting Study," Livermore Falls State Forest, Campton, New Hampshire.

New Hampshire Fish and Game Department

1904 Annual Report of the Fish Commissioners of New Hampshire, New Hampshire Fish and Game Department, Concord, New Hampshire.

1992 Letter from New Hampshire Fish and Game Department Executive Director Donald A. Normandeau, Ph.D to Department of Resources and Economic Development Commissioner Stephen K. Rice, December 21, Concord, New Hampshire.

ND "Livermore Falls History," interpretive sign for the Livermore Falls fish hatchery, New Hampshire Fish and Game Department, Concord, New Hampshire.

New Hampshire Forestry and Recreation Department

1966 "New Hampshire Biomass Harvesting Study, Livermore Falls State Forest, Campton, New Hampshire," New Hampshire Forestry and Recreation Department, Concord, New Hampshire

New Hampshire Land Conservation Investment Program

1992 "Livermore Falls Parcels," announcement of land purchase, New Hampshire Land Conservation Investment Program, Concord, New Hampshire.

No Author

ND "The Livermore Falls Section of Campton," three-page, typed paper, available at the Campton Historical Society, Campton, New Hampshire.

O'Donnell, Mike
1973 "An Oral History of the Plymouth Banks and the Parker Young Pulp Company," oral interview by Mike O'Donnell, April 25, Plymouth State University, Plymouth, New Hampshire.

Page, Robert R., Cathy A. Gilbert, and Susan A. Dolan
1998 *A Guide to Cultural Landscape Reports: Contents, Process, and Techniques*, National Park Service, Washington, DC.

Plymouth Record
1888 "Plans for the factories of the Fibrewood Company," Plymouth, New Hampshire, August 3.

1893 "Eastern Lignoid Casket Company," Plymouth, New Hampshire, July 1, 1893.

1894 "Eastern Lignoid Casket Company Fire," Plymouth, New Hampshire, August 4.

1899 "J. E. Henry and Sons," Plymouth, New Hampshire, June 10.

1901 "J. E. Henry and Sons are to Erect a Sulphite Paper Mill this coming Summer," Plymouth, New Hampshire, April 14.

Ridge, John C

2004 The Quaternary Glaciation of Western New England with Correlations to Surrounding Areas. In *Quaternary Glaciations- Extent and Chronology, Part II*, edited by J. Ehlers and P. L. Gibbard. Elsiever Inc., San Diego, California.

Selectmen of Campton
1822 Petition to the Honorable General Court of the State of New Hampshire, June 3.

1840 Untitled itemized list of bridge expenses, no day or month provided.

Spear, Eva A.
1963 Twenty Decades in Plymouth, New Hampshire, 1763–1963, Bicentennial Commission of Plymouth, Plymouth, New Hampshire.

Sperduto, Dan, and Ben Kimball

2011 *The Nature of New Hampshire: Natural Communities of the Granite State*. University of New Hampshire Press. Durham, New Hampshire.

State of New Hampshire, Land Conservation Investment Program
1992 Letter from State of New Hampshire, Land Conservation Investment Program To NHDRED Commissioner Stephen K. Rice, Concord, New Hampshire, October 26.

Stolte, Lawrence
1981 *The Forgotten Salmon of the Merrimack*, Department of the Interior, Northeast Region, Boston, Massachusetts.

Taylor, William L.
1992 A*t What Cost? Shaping the Land We Call New Hampshire*, edited by Richard Ober, New Hampshire Historical Society and the Society for the Protection of New Hampshire Forests, Concord, New Hampshire.

Tinkham, Daniel J., John A. Brooks, and Mark B Wingsted
2013 *Surficial Geologic Map of the Plymouth Quadrangle Grafton County, New Hampshire.* Surficial Geologic Map, Open-File Series GOE-084-02400-SMOF. New Hampshire Geological Survey, NH Department of Environmental Services, Concord, New Hampshire.

Town of Campton
1838 "Letter to the Court of Common Pleas for the County of Grafton," correspondence concerning the history of bridges over Little Falls, located in the vertical files of the Campton Historical Society.

Webster, Harold A.
1936 "The Honorable Samuel Livermore," Plymouth Record, Plymouth, New Hampshire, August.

Works Progress Administration
1938 Guide to Livermore Falls, Works Progress Administration, Washington, D.C.

United States Federal Energy Regulatory Commission
1990 Livermore Falls Hydroelectric Environmental Impact Statement, United States Federal Energy Regulatory Commission, Washington, D.C.