

ORIGINAL

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SECRETARY OF THE
COMMISSION

2017 MAY 22 P 3:13

May 12, 2017

The Commonwealth of Massachusetts

William Francis Galvin, Secretary of the Commonwealth

Massachusetts Historical Commission

REGULATORY COMMISSION

Kimberly D. Bose
Secretary

Federal Energy Regulatory Commission

888 First St NE Room 1A

Washington DC 20426

RE: Gardners Falls Hydroelectric Project, Buckland and Shelburne, MA.
Unit No. 2 Tailrace Structure Repair Project. MHC# RC.3216. FERC# 2334.

Dear Secretary Bose:

The Massachusetts Historical Commission (MHC), office of the State Historic Preservation Officer, have received a Project Notification Form (PNF), a USGS locus map, and a plan and drawing, for the Unit No. 2 Tailrace Structure Repair Project, received by the MHC on May 1, 2017. A copy of the materials received by the MHC is enclosed.

The PNF indicates that the project requires approval by the Federal Energy Regulatory Commission.

Additional information is required by the MHC to review and comment on the project.

The undertaking at Unit No. 2 is the structure known historically as the Gardners Falls Powerhouse Station (MHC #BUC.159), within the historic area known as the Gardner's Falls Hydroelectric Power Station (BUC.C). The historic structure and area are included in the MHC's Inventory of Historic Assets of the Commonwealth, and meet the National Register of Historic Places Criteria of Eligibility (36 CFR Part 60). A copy of the MHC inventory form for the Powerhouse Station is also enclosed.

The plan and drawing submitted is a site and subsurface exploration location plan. It shows a grey shaded area, keyed as "limits of sinkhole per October 2014 report." The PNF describes the undertaking as construction of new tailrace pipe and associated infrastructure. The plan does not clearly show proposed conditions, and the MHC cannot determine what effect the undertaking may have on the historic structure.

- Please provide the MHC with scaled project plans showing existing and proposed conditions. Materials submitted to the MHC should measure no larger than 11" x 17".
- Please provide the FERC's determination of effect (36 CFR 800.5) for the undertaking on the historic structure's significant historic and architectural characteristics.
- The Buckland Historical Commission as a local government agency may wish to be a consulting party (36 CFR 800.2(c)(3)). The MHC recommends that FERC determine if the Buckland Historical Commission wishes to be a consulting party, and if so, to provide them the information and determination for their review and comment.

The complete name and mailing address of the project proponent was not indicated on the PNF. Review of the MHC's files indicates that FERC issued orders on January 5 and March 9, 2017, regarding a

220 Morrissey Boulevard, Boston, Massachusetts 02125

(617) 727-8470 • Fax: (617) 727-5128

www.sec.state.ma.us/mhc

proposed transfer of license. The MHC cannot determine if the undertaking is proposed by the current or proposed licensee.

- Please provide the MHC the contact name and complete mailing address of the proponent of the proposed undertaking.

Review of the MHC's files indicates that the annual Cultural Resources Monitoring Reports for 2014 to 2016 have not been received by the MHC.

- Please have the licensee submit the 2014 to 2016 Cultural Resources Monitoring Reports to the MHC.

Thank you for your assistance. The MHC looks forward to review and comment on FERC's findings and determination for the undertaking.

These comments are offered to assist in compliance with the *Programmatic Agreement- Gardners Falls Hydroelectric Power Project*, the *Cultural Resources Management Plan for the Gardners Falls Hydroelectric Project*, and Section 106 of the National Historic Preservation Act of 1966, as amended (36 CFR 800). Please contact me if you have any questions or need more information.

Sincerely,



Edward L. Bell
Deputy State Historic Preservation Officer
Massachusetts Historical Commission

Enclosures

xc w/enclosure: Buckland Historical Commission

xc w/o encl.: Mark Bedard, Daniel O'Connell's Sons, Inc.

950 CMR: OFFICE OF THE SECRETARY OF THE COMMONWEALTH

RECEIVED

MAY 01 2017

APPENDIX A
MASSACHUSETTS HISTORICAL COMMISSION
220 MORRISSEY BOULEVARD
BOSTON, MASS. 02125
617-727-8470, FAX: 617-727-5128

MASS. HIST. COMM

B3216

PROJECT NOTIFICATION FORM

Project Name: Gardner Falls Hydroelectric Facility Unit No. 2 Tailrace Structure Repair Project

Location / Address: 15 Gardner Falls Road

City / Town: Buckland, Massachusetts

Project Proponent

Name: Same as Above

Address: _____

City/Town/Zip/Telephone: _____

Agency license or funding for the project (list all licenses, permits, approvals, grants or other entitlements being sought from state and federal agencies).

Agency Name**Type of License or funding (specify)**

Federal Energy Regulatory Commission (FERC)

Project Description (narrative):

Construction of new tailrace pipe at Gardner Falls Hydroelectric Facility. See attached plans.

Does the project include demolition? If so, specify nature of demolition and describe the building(s) which are proposed for demolition.

No Demolition.

Does the project include rehabilitation of any existing buildings? If so, specify nature of rehabilitation and describe the building(s) which are proposed for rehabilitation.

No new or rehab'd buildings. Construction of a new tailrace pipe.

Does the project include new construction? If so, describe (attach plans and elevations if necessary).

New tailrace pipe and associated infrastructure. See attached plans.

950 CMR: OFFICE OF THE SECRETARY OF THE COMMONWEALTH

APPENDIX A (continued)

To the best of your knowledge, are any historic or archaeological properties known to exist within the project's area of potential impact? If so, specify.

Historic and Native American properties and artifacts are located in the vicinity of the project; however, No historic or archaeological properties are located within the project impact. No historic or archaeological properties will be disturbed during construction activities.

What is the total acreage of the project area?

Woodland _____ acres
Wetland _____ acres
Floodplain _____ acres
Open space _____ acres
Developed 0.5 acres

Productive Resources:
Agriculture _____ acres
Forestry _____ acres
Mining/Extraction _____ acres
Total Project Acreage 0.5 acres

What is the acreage of the proposed new construction? 0.5 acres

What is the present land use of the project area?

Gardner Falls Hydroelectric Facility

Please attach a copy of the section of the USGS quadrangle map which clearly marks the project location.

This Project Notification Form has been submitted to the MHC in compliance with 950 CMR 71.00.

Signature of Person submitting this form: [Signature] Date: 4/27/16

Name: Mark Bedard, Daniel O'Connell's Sons, Inc.

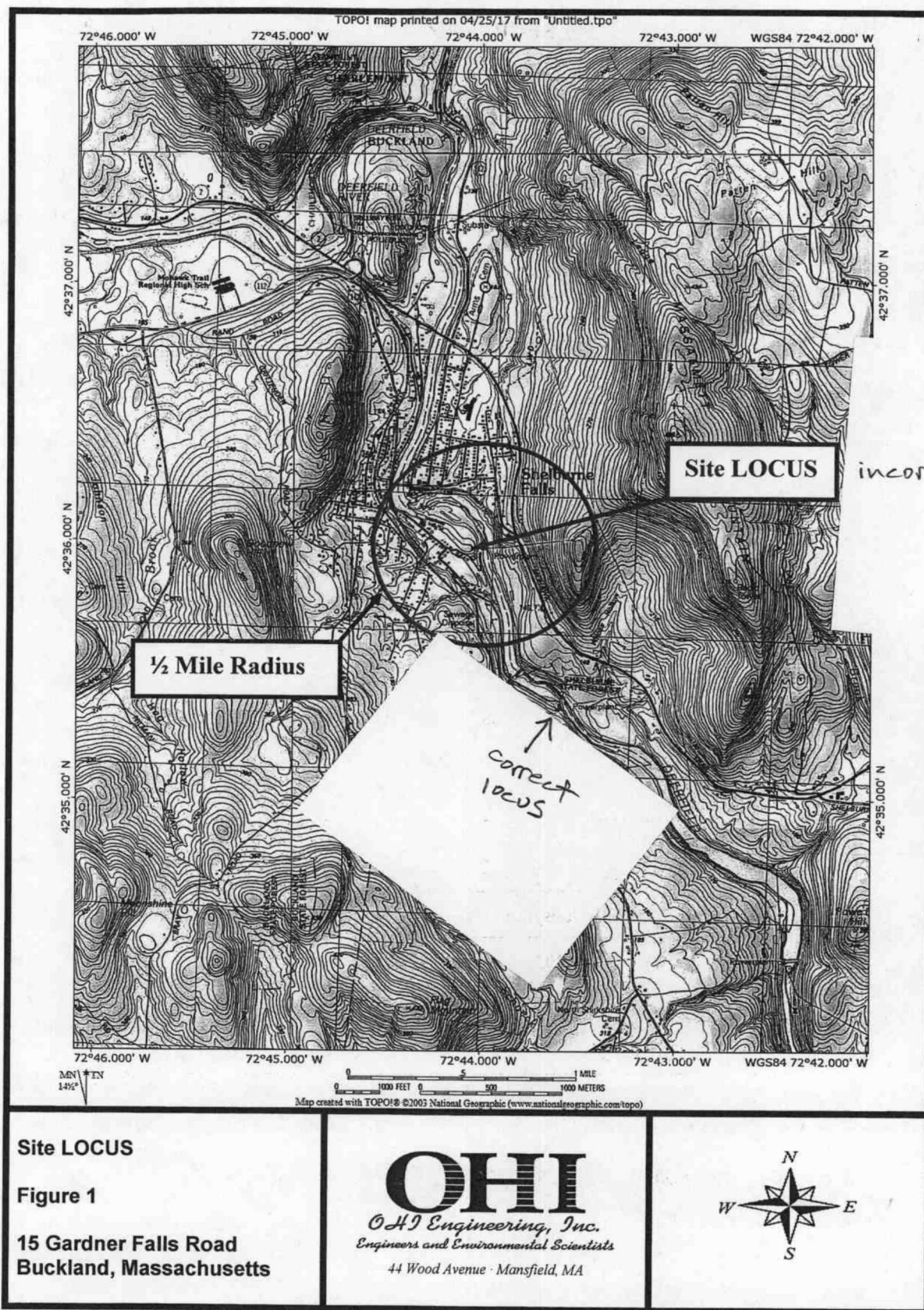
Address: 1000 Franklin Village Drive, Ste# 205

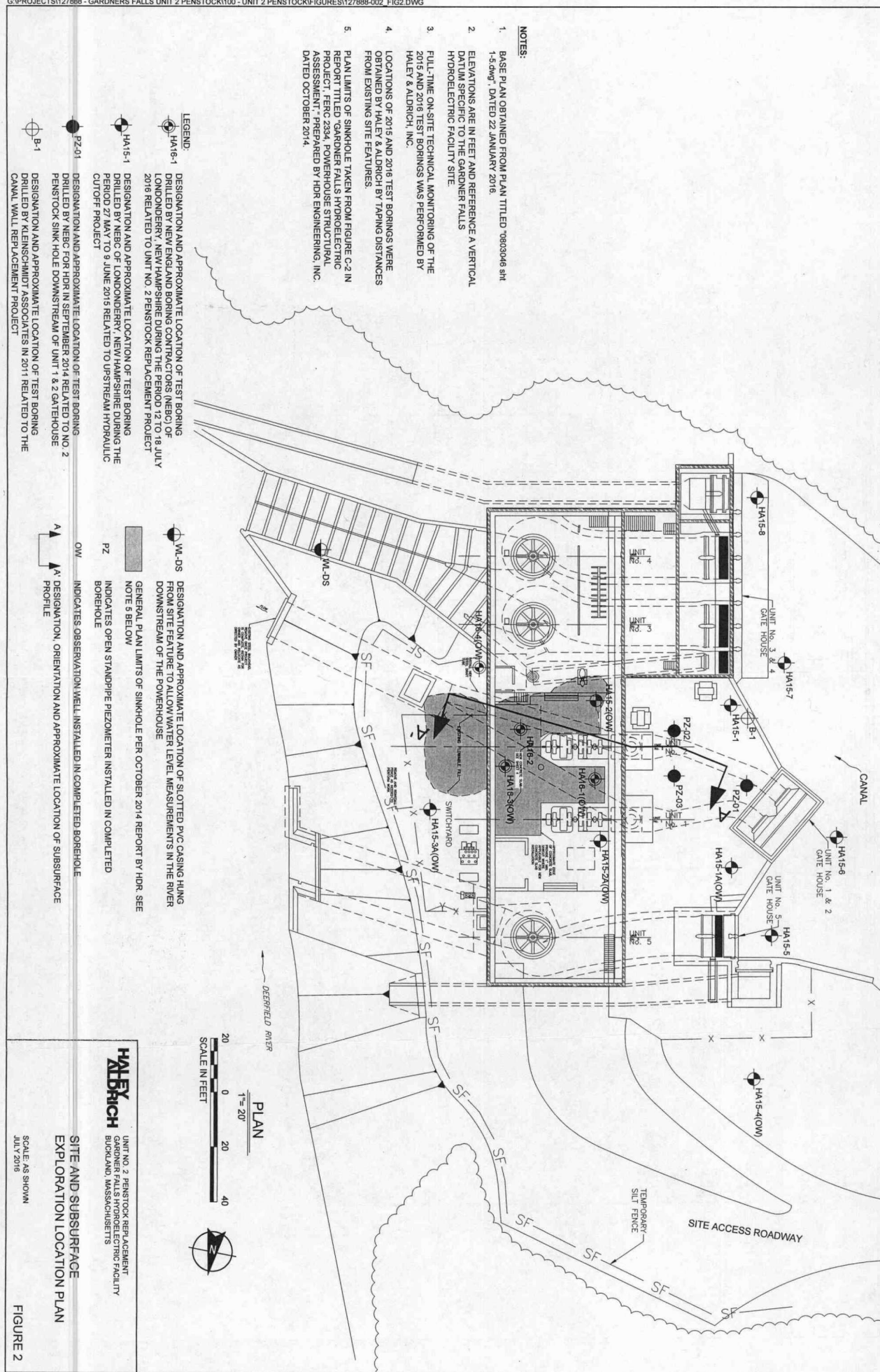
City/Town/Zip: Franklin, Massachusetts 02038

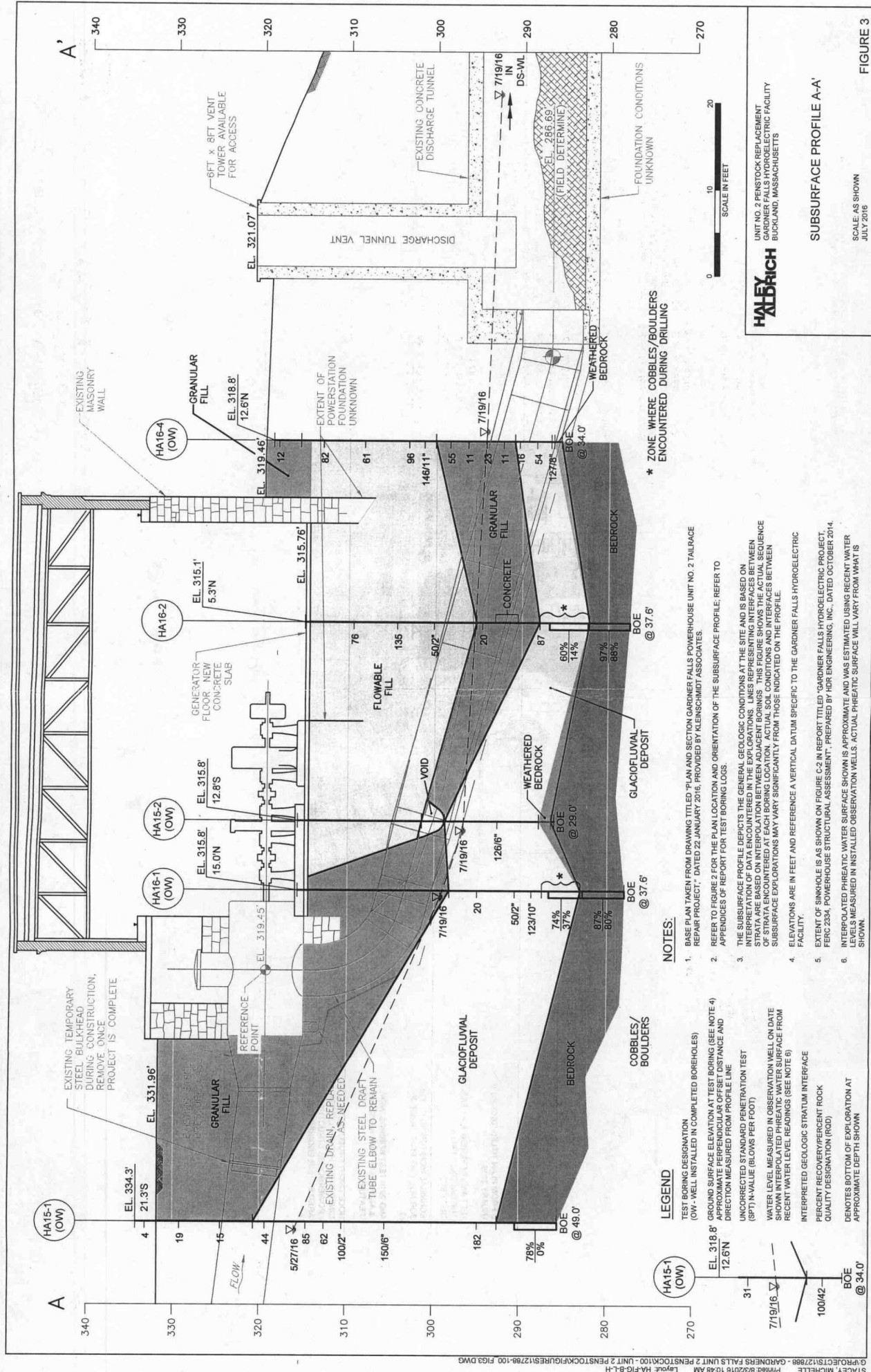
Telephone: 413.540.1408 Ext 1408

REGULATORY AUTHORITY

950 CMR 71.00: M.G.L. c. 9, §§ 26-27C as amended by St. 1988, c. 254.







SUBSURFACE PROFILE A-A'

SCALE: AS SHOWN
JULY 2016

FIGURE 3

HALEY ALDRICH
UNIT NO. 2 PENSTOCK REPLACEMENT
GARDNER FALLS HYDROELECTRIC FACILITY
BUCKLAND, MASSACHUSETTS

Massachusetts Cultural Resource Information System

Scanned Record Cover Page

Inventory No: BUC.159
Historic Name: Gardners Falls Powerhouse Station
Common Name:
Address: Old Conway Rd
Gardner Falls Station Rd
City/Town: Buckland
Village/Neighborhood: Shelburne Falls
Local No:
Year Constructed: 1904
Architect(s):
Architectural Style(s): Classical Revival
Use(s): Power House; Utilities Other
Significance: Architecture; Engineering
Area(s): BUC.C: Gardner's Falls Hydroelectric Power Station
Designation(s):
Building Materials(s): Roof: Tar, Built-up
Wall: Brick; Stone, Cut



The Massachusetts Historical Commission (MHC) has converted this paper record to digital format as part of ongoing projects to scan records of the Inventory of Historic Assets of the Commonwealth and National Register of Historic Places nominations for Massachusetts. Efforts are ongoing and not all inventory or National Register records related to this resource may be available in digital format at this time.

The MACRIS database and scanned files are highly dynamic; new information is added daily and both database records and related scanned files may be updated as new information is incorporated into MHC files. Users should note that there may be a considerable lag time between the receipt of new or updated records by MHC and the appearance of related information in MACRIS. Users should also note that not all source materials for the MACRIS database are made available as scanned images. Users may consult the records, files and maps available in MHC's public research area at its offices at the State Archives Building, 220 Morrissey Boulevard, Boston, open M-F, 9-5.

Users of this digital material acknowledge that they have read and understood the MACRIS Information and Disclaimer (<http://mhc-macris.net/macrisdisclaimer.htm>)

Data available via the MACRIS web interface, and associated scanned files are for information purposes only. THE ACT OF CHECKING THIS DATABASE AND ASSOCIATED SCANNED FILES DOES NOT SUBSTITUTE FOR COMPLIANCE WITH APPLICABLE LOCAL, STATE OR FEDERAL LAWS AND REGULATIONS. IF YOU ARE REPRESENTING A DEVELOPER AND/OR A PROPOSED PROJECT THAT WILL REQUIRE A PERMIT, LICENSE OR FUNDING FROM ANY STATE OR FEDERAL AGENCY YOU MUST SUBMIT A PROJECT NOTIFICATION FORM TO MHC FOR MHC'S REVIEW AND COMMENT. You can obtain a copy of a PNF through the MHC web site (www.sec.state.ma.us/mhc) under the subject heading "MHC Forms."

Commonwealth of Massachusetts
Massachusetts Historical Commission
220 Morrissey Boulevard, Boston, Massachusetts 02125
www.sec.state.ma.us/mhc

This file was accessed on: Friday, May 12, 2017 at 12:32 PM

BUC.159.

RM B - BUILDING

AREA

FORM NO.

MASSACHUSETTS HISTORICAL COMMISSION
80Y STON STREET
STO MA 02116

RECEIVED

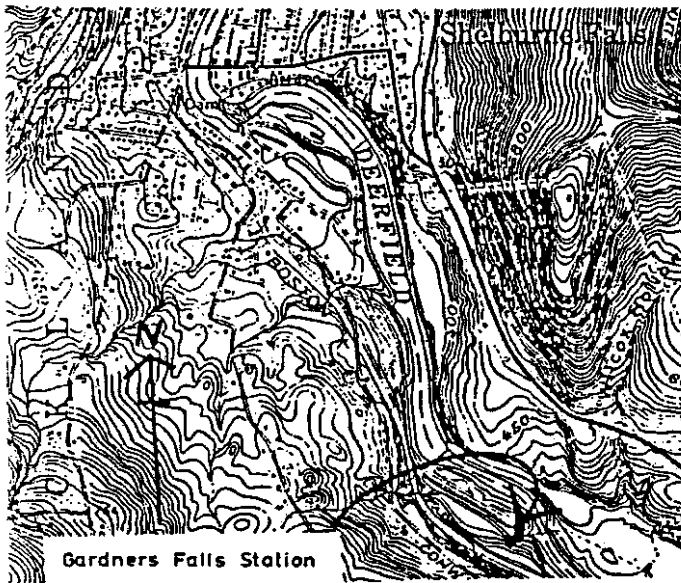
MAR 9 1990

MASS. HIST. COMM.

Photo (3"x3" or 3"x5", black and white) Indicate address of property on back of photo. Staple to left side of form.

see attached

Topographic Map: Draw map showing property's location relation to nearest cross streets and/or geographical features. Indicate all buildings near inventoried property and nearest persons on(s).
Indicate north see attached site plan

REFERENCE $6^{\circ} 86.5E$; $47^{\circ} 17.5N$

QUADRANGLE Shelburne Falls, Mass.

E 1" = 2000 ft.

Town Buckland

Address Gardner's Falls Station Road

aka "Old Conway Road"

Historic Name Gardner's Falls Station
(powerhouse)

Use: Present Hydroelectric Power Generation

Original same

DESCRIPTION

Date 1904 (original stone building)

Source Federal Power Commission Application
of Western Massachusetts Electric Co.
for License for Constructed Major Project
December 1962Style Renaissance Revival-Early
20th Century American Industrial

Architect Unknown

Exterior Wall Fabric Stone/Brick

Outbuildings Two (2) Wood frame

Major Alterations (with dates)

1913-New brick wall system addition, new roof
1924-Increased building length

Condition Good/well maintained

Moved NA Date NA

Acreage Gardner's Falls Station is on 50+ acres

Setting On Deerfield River in a rural wooded,
steeply sloping gorge; 1+ mile downstream of
the Village centers of Buckland and Shelburne
Falls.

Recorded by W. H. Robison, J. O. Borne

Organization Northeast Utilities

Date 11/1/1989

Buc. 159

NATIONAL REGISTER CRITERIA STATEMENT (if applicable)

This project is located more than 1 mile southeast of the Shelburne Falls National Historic District.

ARCHITECTURAL SIGNIFICANCE Describe important architectural features and evaluate in terms of other buildings within the community. The Gardners Falls Station Powerhouse is a classic example of Renaissance Revival - Early American Industrial architecture.

The building's most important architectural features lie in its facade. The cornice & frieze details are ungarnished Renaissance examples of its ancient Roman model. The expression of structure through the use of pilasters and arched window openings is present giving the possible notion of an arcade. The height of the rusticated base helps in creating that illusion. The building which is located more than a mile from the center of the Village of Buckland and Shelburne Falls, is not a "signature" building of the community. It does, however allow the "village fabric" to continue to flourish at this location on the river.

HISTORICAL SIGNIFICANCE Explain the role owners played in local or state history and how the building relates to the development of the community.

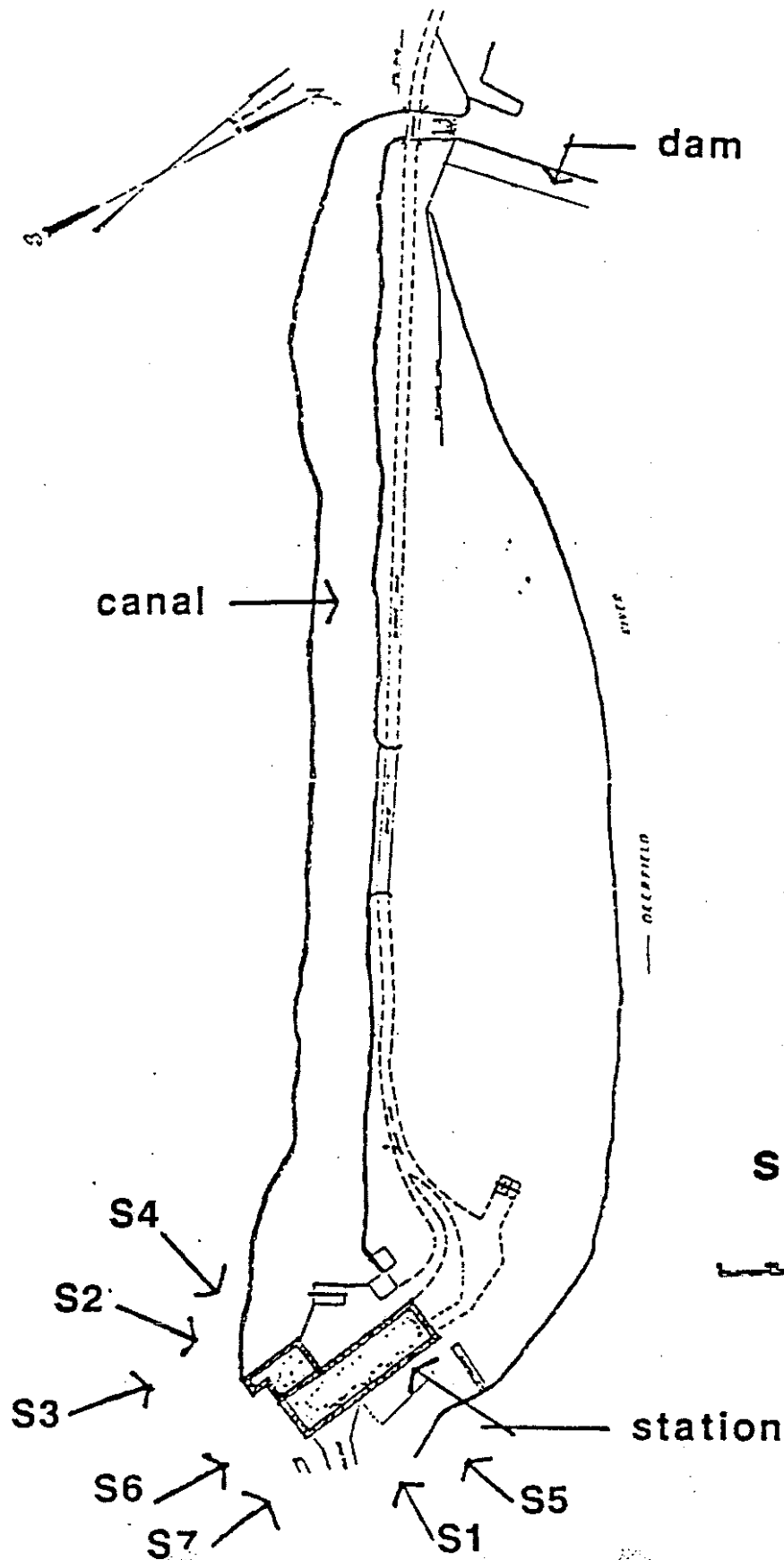
Gardners Falls Station was conceived by the Greenfield Electric Light and Power Company (GELPCO) at a time when hydroelectric power generation was a developing, new technology. The facility was constructed in 1904 for the purpose of producing electricity for use by the residents of Greenfield, and probably by other nearby municipalities such as Buckland and Shelburne Falls. In 1911, GELPCO acquired the Shelburne Falls Electric Light and Power Company which first provided electricity to the town of Shelburne Falls in 1897 and used a water wheel driver generator. In 1908 this system was changed to a steam powered generator which was located in a new brick building south of the Thayer Block. The steam plant was closed in 1911 when electricity was brought in from the Gardners Falls plant.

The Gardners Falls Station was the first "large" hydroelectric facility located on the Deerfield River, although there were many small hydromechanical (sawmills, gristmills) developments which preceeded it. Its significance is that it represents one in a sequence of events in the historical development of the Deerfield River as a water power resource.

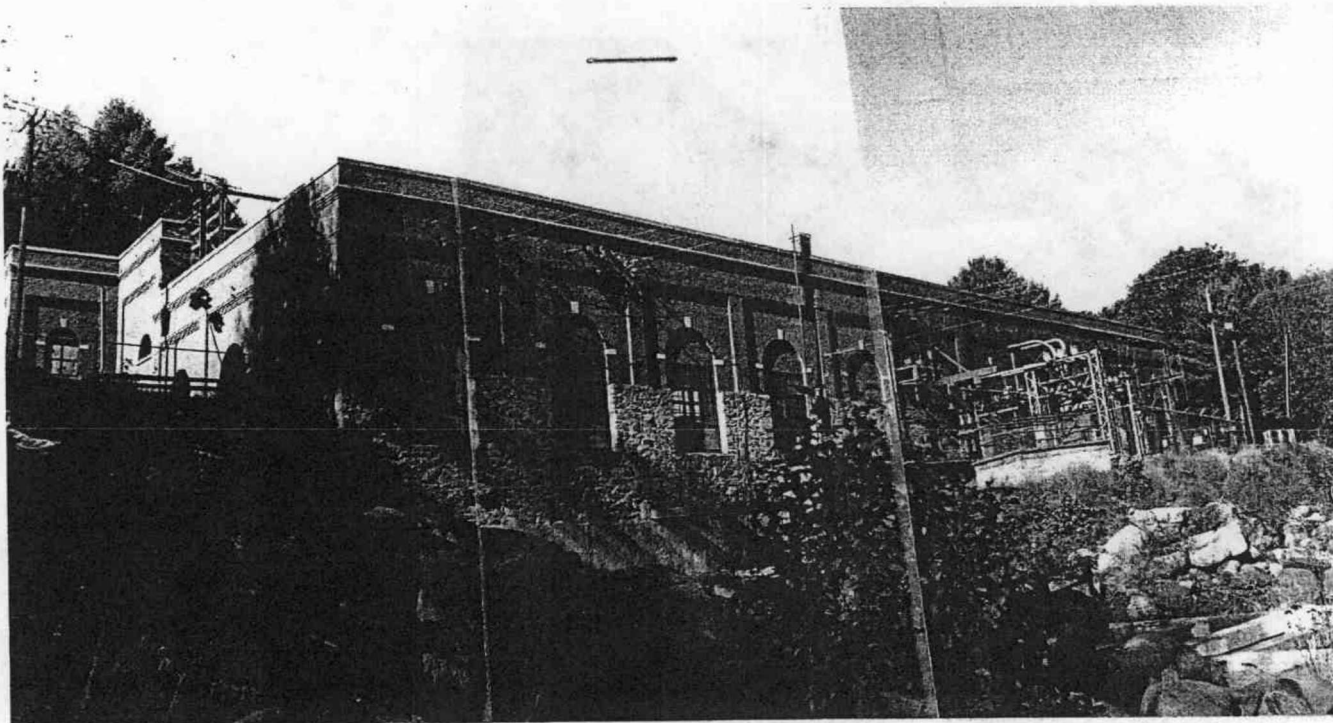
BIBLIOGRAPHY and/or REFERENCES

Wettt, Robert E. 100th Anniversary of Western Massachusetts Electric Company
Ly, Herbert A. Water Over the Dam. - Unpublished, undated paper by Mr. Moody, circa 1950.
Western Massachusetts Electric Co. Federal Power Commission Application of WMECO for License for
Constructed Major Product:- Gardners Falls Development, December 1962.

BUC.159

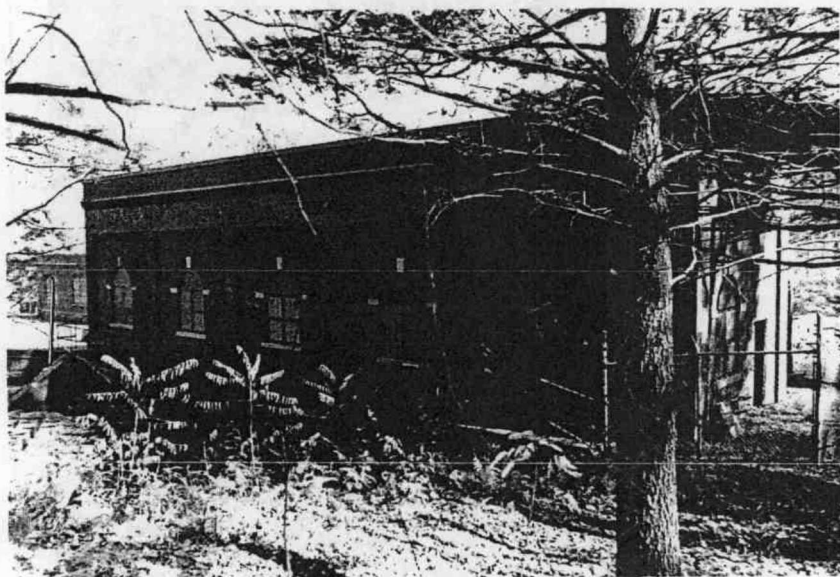


site plan



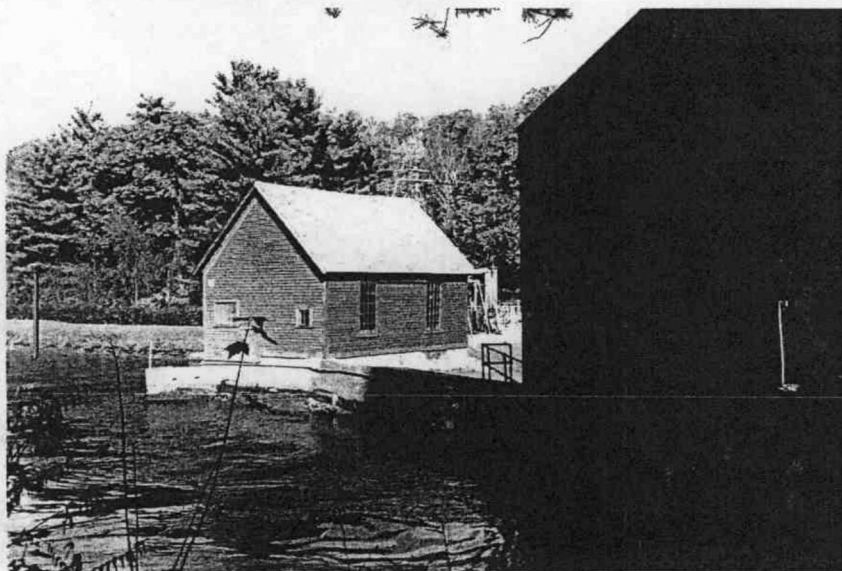
S1

east facade



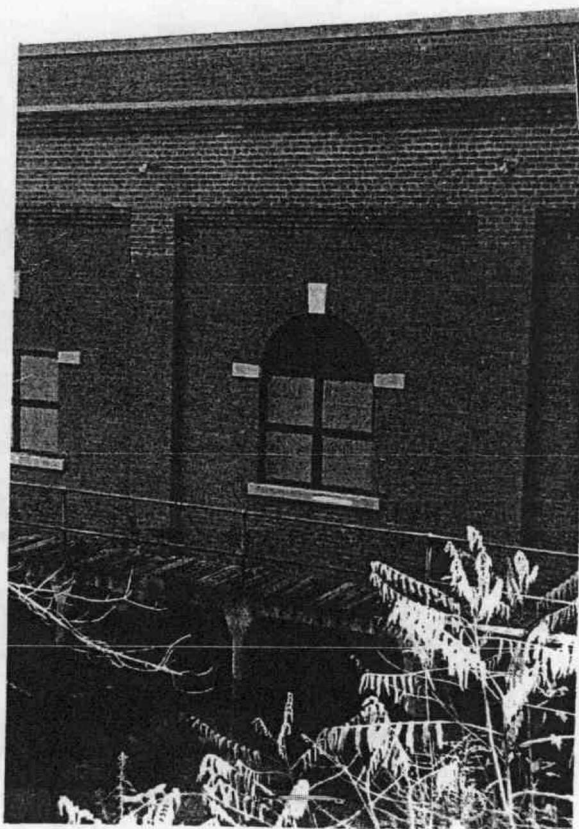
partial west facade

S2



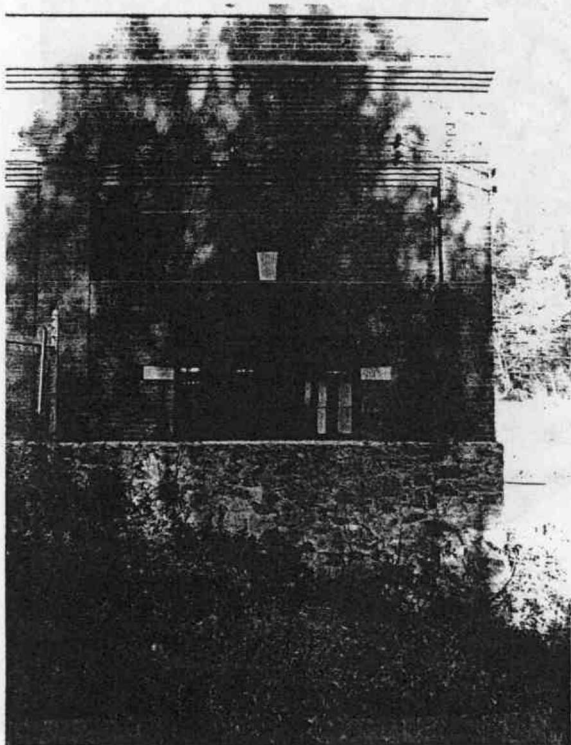
S3

out building - west of station



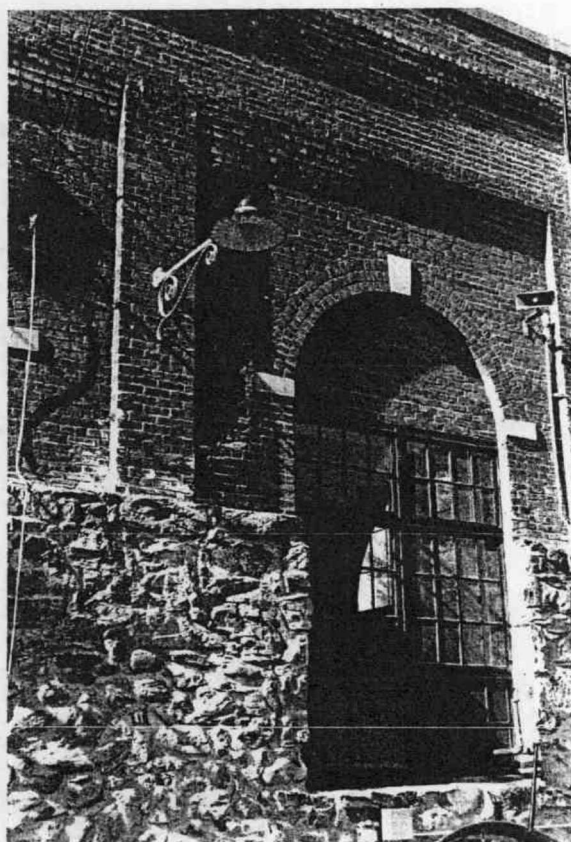
S4

west facade - detail



south facade - detail

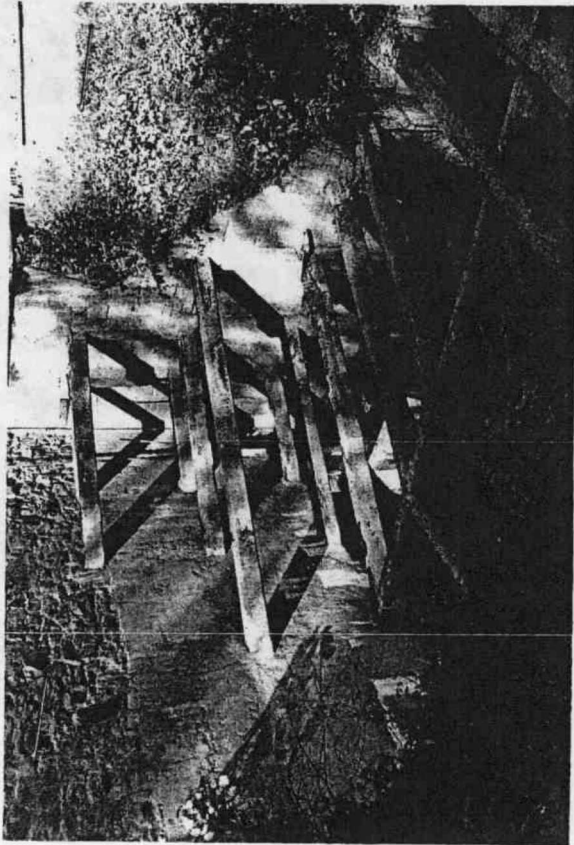
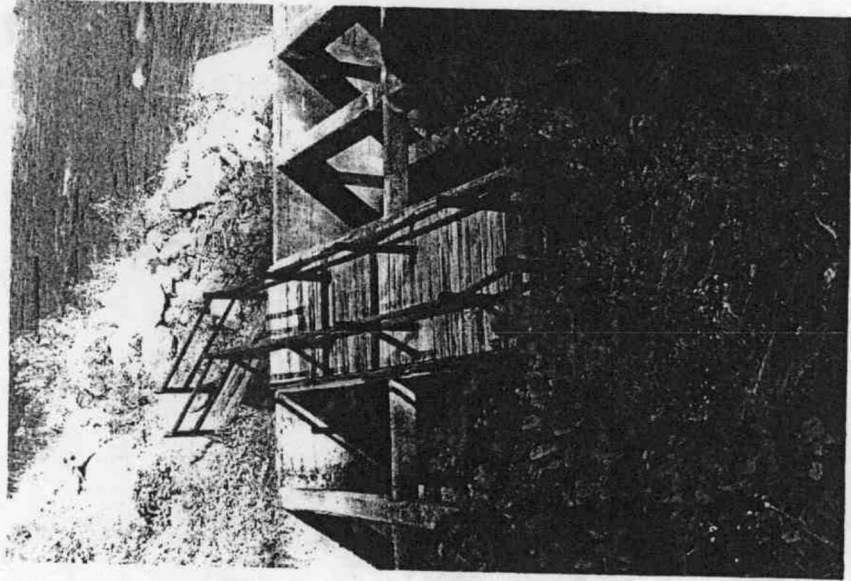
S6



S5

east facade - detail

Buc.159



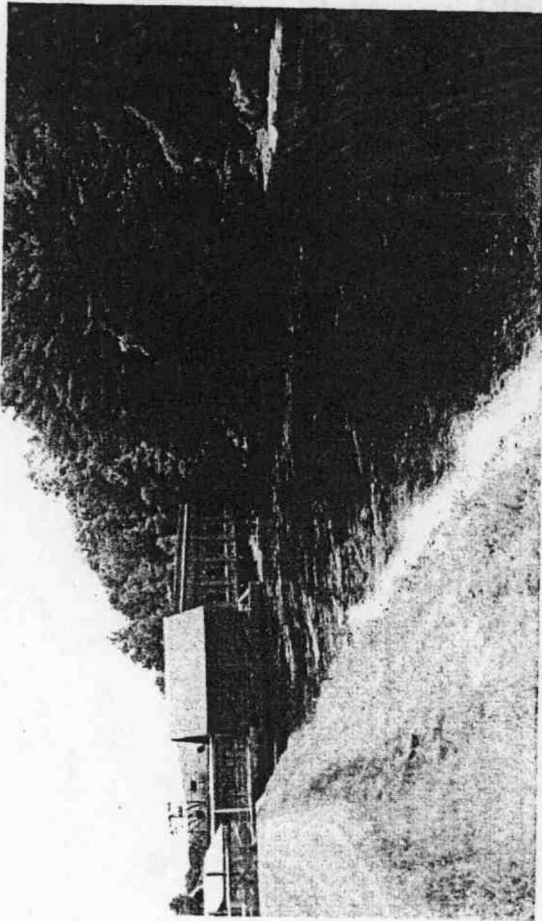
view of open tail race S7



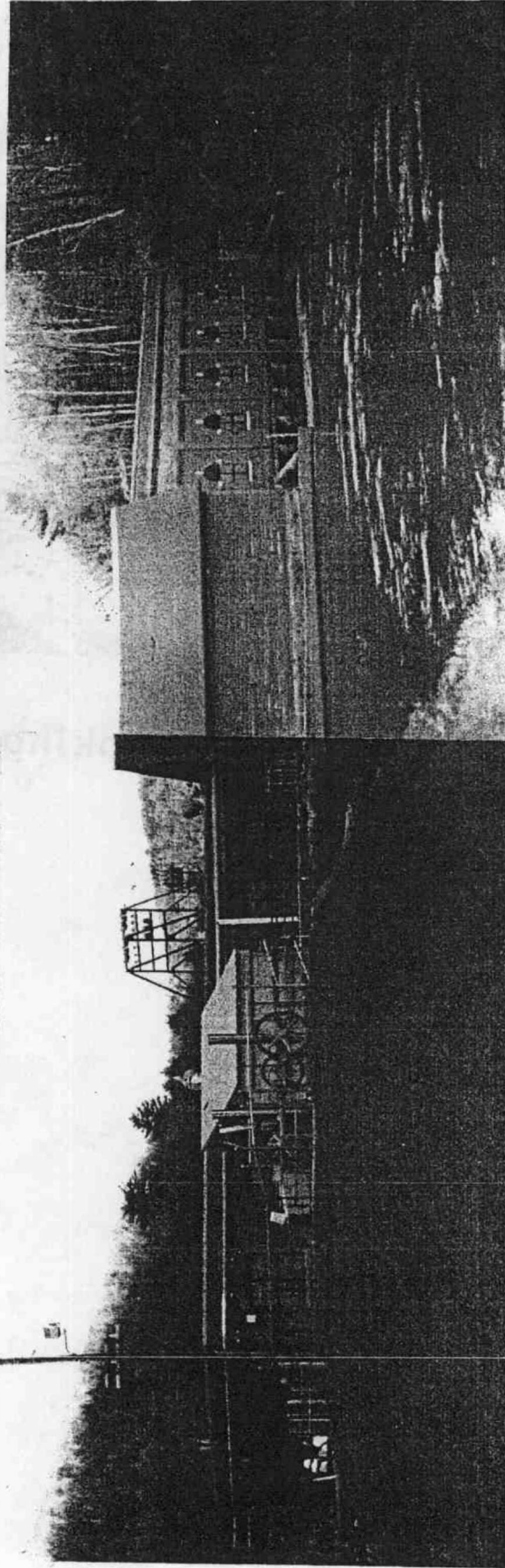
the dam - looking west

D2

BUC 159



11. LOWER CANAL AREA NEAR POWERHOUSE.



12. UPSTREAM FACE OF POWERHOUSE.

MACRIS
MAPS 2.0 beta[About](#) | [Help](#) | [Disclaimer](#)

Address or MHC#

[Bing](#) [MassDOT](#) [Street View](#)

Available Layers

Base Layer

- ☐ OpenStreetMap
- ☐ No Base Map
- ☐ USGS Orthos (NAIP)
- ☐ USGS Orthos (Partial Cr
- ☐ USGS Topos
- ☒ USGS Topos (ArcGIS)
- ☐ NOAA Charts
- ☐ MassGIS Quad Maps
- ☐ MassGIS Elevation Colo
- ☐ MassGIS Shaded Relief

Legend

MHC Inventory Points

- Nat'l Register of Historic Places
- ★ Preservation Restriction
- ▲ Local Historic District
- ▲ NRHP and LHD
- Inventoried Property

Archaeology Login

Username:

Password:

MACRIS #: **BUC.159**

Name: Gardner Falls Powerhouse Station

Address: Old Conway Rd

Type: Building

Designations: ,

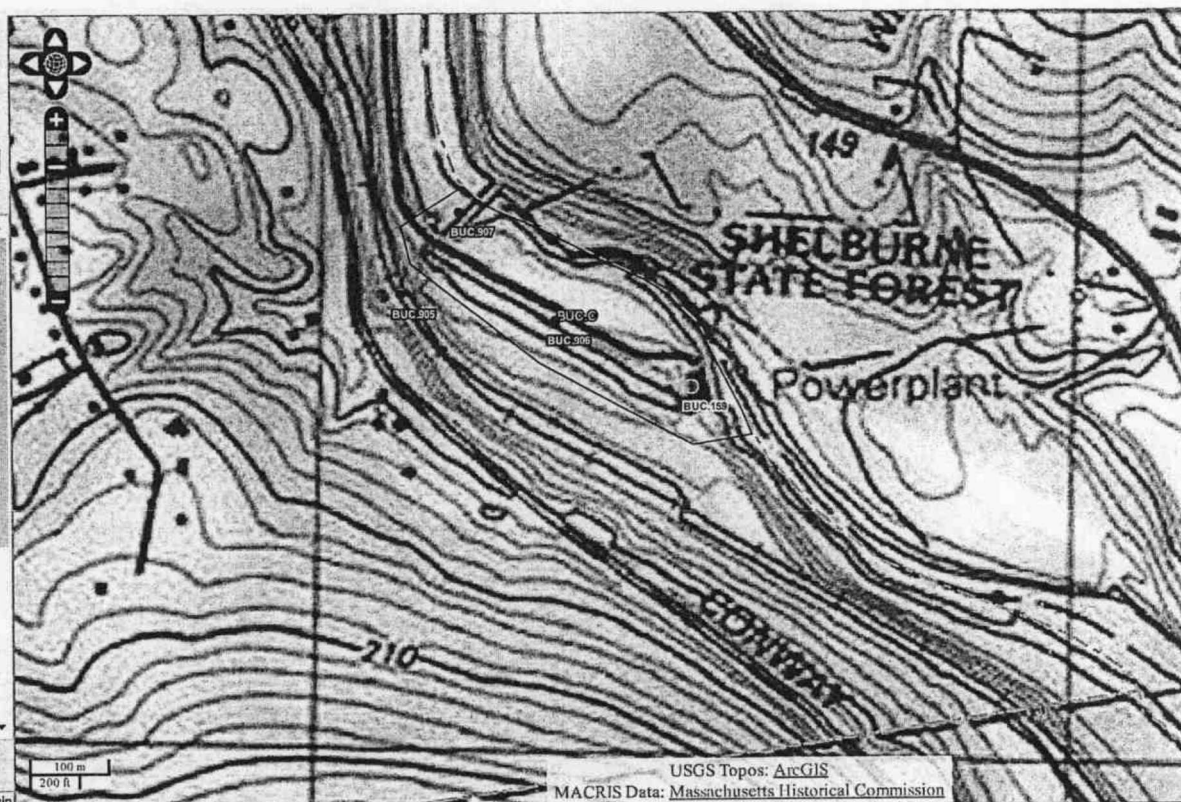
Use Types: Power House; Utilities Other;

Construction Year: 1904

Architectural Style: Classical Revival;

Maker:

Significance: Architecture; Engineering;

[Key to designation codes](#)

Historic Inventory Points (1)

Historic Inventory Areas

Demolished?	MACRIS #	Historic Name	Common Name	Address	Designations	Archit
	BUC.159	Gardners Falls Powerhouse Station		Old Conway Rd		Cla

[Export to Excel...](#) [Export to Excel..](#)

Document Content(s)

14594569.TIF.....1



Nautilus Hydro, LLC

15 Agawam Ave
West Springfield, MA 01089
413-730-4721
Fax 413-730-4769

June 20, 2017

VIA E-FILING

Kimberly Bose, Secretary
Federal Energy Regulatory Commission
888 1st Street, NE, Room 1A
Washington, DC 20426

Gardner Falls Project FERC No. 2334
Annual Report of Cultural Resources Activities for years 2014, 2015 and 2016

Dear Secretary:

Nautilus Hydro, LLC (Nautilus Hydro) owns and operates the Gardner Falls Hydroelectric Project (No. 2334) located on the Deerfield River in Massachusetts. The Cultural Resource Management Plan (CRMP) for the project requires an annual report of certain cultural resource activities for the project. This report complies with the CRMP, approved by the Federal Energy Regulatory Commission (FERC) on November 17, 1998, and Section II paragraph D of the Programmatic Agreement (PA), and is intended to cover the years 2014, 2015 and 2016.

Originally Chapter 5 of the CRMP required an annual inspection of two potentially eligible archaeological sites, one a so called "pre-historic rock shelter" and the other a "foundation site." However after a historic flood on August 28, 2011, there were no longer signs of the Gardner Falls pre-historic rock shelter. This was documented in a letter to FERC, dated February 29, 2017, a copy of which was provided to MHC. As a result, the previous owner of the Gardner Falls project, Essential Power Massachusetts LLS (EPMA), submitted a letter dated May 1, 2012 to MHC requesting elimination of the requirement for the licensee to conduct monitoring and annual reporting of the Gardner's Falls pre-historic rock shelter since it no longer exists. MHC concurred with EPMA's request by letter to FERC dated May 17, 2012. EPMA sent a subsequent letter to FERC, dated June 4, 2012, requesting that the CRMP for Gardner Falls Project be amended to no longer include references to the potential pre-historic rock shelter on pages 14 and 34 of the CRMP. To date, FERC has not responded to this request.

On June 15, 2017, FERC staff provided to Nautilus Hydro by electronic mail a copy of a letter sent to FERC by MHC, dated May 12, 2017, by which MHC informed FERC, among other things, that MHC did not have in its files copies of the annual reports for 2014, 2015, and 2016 required by the CRMP in respect of the foundation site. Upon review of its files, Nautilus Hydro has determined that these reports were mistakenly not provided. Nautilus Hydro apologizes for this oversight. On June 16, 2017, Nautilus Hydro conducted a visual inspection of the foundation site and took photographs of it (see attached photo). The foundation site, which is located on the Gardner Falls Project impoundment, was in a condition similar to prior periods with no evidence of new erosion, looting or vandalism not previously recorded and reported. Per above, annual reports with respect to the pre-historic rock shelter ceased following the 2011 flood with the concurrence of MHC.

Per the CRMP and PA, we are also forwarding a copy of this letter to the Massachusetts Historical



Nautilus Hydro, LLC

15 Agawam Ave
West Springfield, MA 01089
413-730-4721
Fax 413-730-4769

Commission. If you have any questions, please contact me at (413) 730-4721 (email: kimmarsili@cogentrix.com).

Sincerely,

General Manager
Gardner Falls Station

Attachment: Photos from Site Inspection
cc: John Collins V.P. Asset Management Cogentrix.



Nautilus Hydro, LLC

15 Agawam Ave
West Springfield, MA 01089
413-730-4721
Fax 413-730-4769

**PHOTO OF
GARDNER'S FALLS FOUNDATION**



Document Content(s)

P-2334 Gardner Falls Annual Rpt CultRsrs 2014-2016.PDF.....1

FEDERAL ENERGY REGULATORY COMMISSION
Washington, D. C. 20426

OFFICE OF ENERGY PROJECTS

Project No. 2334-000 – Massachusetts
Gardner Falls Project
Nautilus Hydro, LLC

Ms. Brona Simon
State Historic Preservation Officer
Massachusetts Historical Commission
220 Morrissey Boulevard
Boston, MA 02125

June 21, 2017

Subject: Repairs at the Gardners Falls Hydroelectric Project

Dear Ms. Simon:

This letter concerns repairs that are planned at the Gardner Falls Project No. 2334.¹ The Gardner Falls Project is located on the Deerfield River in Franklin County, Massachusetts.

On May 1, 2017, Nautilus Hydro, LLC (licensee), notified you that they intend to repair the concrete floor in the project's powerhouse and replace the project's tailrace pipe. Repairs are needed because the tailrace pipe collapsed creating a sinkhole that also damaged the powerhouse floor. By letter dated May 12, 2017, you said this work needs to be reviewed pursuant to section 106 of the National Historic Preservation Act. You asked for a scaled plan and drawing of the licensee's proposal, a determination of effect for the undertaking, and you asked the Commission to consult with your office and the Buckland Historical Commission.

Background

On September 4, 1996, we executed a Programmatic Agreement (PA) with your office to protect and manage the Gardner Falls Project which was listed in the National Register of Historic Places in 1990.² In order to comply with the stipulations included in

¹ 79 FERC ¶ 61,007 (1997). On January 5, 2017, the Commission issued an Order Approving Transfer of License. *Essential Power Massachusetts, LLC, Natilus Hydro, LLC*, 158 FERC ¶ 62,009 (2017).

Project No. 2334-000

- 2 -

the PA, the licensee worked with your office to develop a Cultural Resources Management Plan (CRMP) that was approved by the Commission on November 17, 1998.³

The CRMP includes, in part, a list of activities that would and would not have the potential to affect historic buildings, structures, and archaeological resources at the project. Specifically, chapter 4 of the CRMP allows the licensee to make in-kind replacement of hydroelectric equipment and allows earthmoving and construction activities in areas having low archaeological sensitivity. The CRMP allows the licensee to make such repairs and engage in earthmoving and construction as long as the work is in-kind.

The licensee proposes to replace the concrete floor of the powerhouse with similar concrete and to replace the tailrace pipe with a pipe of the same size and material as the original. All work would be completed either inside the powerhouse or immediately adjacent to the powerhouse in previously disturbed areas. These repairs are necessary to restore operation of the project and are covered by the project's approved CRMP. Therefore, no further consultation is necessary for this work pursuant to the stipulations agreed upon in the CRMP. Nevertheless, Commission staff are available anytime to discuss this work. Please contact Jennifer Polardino if you have any questions or should you wish to discuss this further.

Thank you for your letter concerning this project. If you have any questions concerning this letter, please contact Jennifer Polardino at Jennifer.Polarдино@ferc.gov or (202) 502-6437.

Sincerely,



Steve Hocking, Chief
Environmental and Project Review Branch
Division of Hydropower Administration
and Compliance

² Signatories to the PA included the Commission, your office, and the Advisory Council on Historic Preservation. The licensee was a concurring party.

³ *Consolidated Edison Energy Massachusetts, LLC*, 85 FERC ¶ 62,110 (1998).

Project No. 2334-000

- 3 -

cc:

Mr. Edward L. Bell
Deputy State Historic Preservation Officer
Massachusetts Historical Commission
220 Morrissey Boulevard
Boston, MA 02125

Mr. Kim Marsili
Station Manager
15 Agawam Ave
West Springfield, MA 01089

Document Content(s)

p-2334-000.PDF.....1

FEDERAL ENERGY REGULATORY COMMISSION
Washington, D. C. 20426

OFFICE OF ENERGY PROJECTS

Project No. 2334-051— Massachusetts
Gardner Falls Project
Nautilus Hydro, LLC

July 19, 2017

Mr. Kim Marsili
Station Manager
15 Agawa, Ave
West Springfield, MA 01089

Subject: Annual Cultural Resources Management Plan Monitoring Report – Article 408

Dear Mr. Marsili:

This letter acknowledges receipt of your annual cultural resources monitoring report for the years 2014, 2015 and 2016 filed June 21, 2017 for the Gardner Falls Project.¹ You filed the report pursuant to license Article 408 and the project's Programmatic Agreement (PA).² Section II(D) of the PA requires you to file a report with the Commission and the Massachusetts State Historic Preservation Office (Massachusetts SHPO) of activities conducted under the project's approved Cultural Resources Management Plan (CPMP).³

In your report, you say you conducted a visual inspection of the foundation site of the Gardner Falls impoundment on June 16, 2017. In your assessment, you found no evidence of new erosion, looting, or vandalism. Your report includes a photograph of the foundation in your report. However, it is not clear from your filing if you are monitoring the site annually pursuant to your CRMP. In addition, you are required by your approved CRMP to implement an archaeological monitoring program to ensure you meet adequate site protection and preservations measures.

¹ 79 FERC ¶ 61,007 (1997). On January 5, 2017, the Commission issued an Order Approving Transfer of License. *Essential Power Massachusetts, LLC, Natilus Hydro, LLC*, 158 FERC ¶ 62,009 (2017).

² Signatories to the PA included the Commission, your office, and the Advisory Council on Historic Preservation. The licensee was a concurring party.

³ *Consolidated Edison Energy Massachusetts, LLC*, 85 FERC ¶ 62,110 (1998).

Project No. 2334-051

- 2 -

The CRMP also requires you to inform the general public about the general significance of historic structures and archaeological sites at the project. It is unclear whether you have worked to inform the public of the historic significance of the project through signage, pamphlets, and educational materials for general distribution. In your next report, you must discuss any efforts to promote the public interpretation of historic properties at the project.

In your report, you said you filed a request to amend your CRMP on June 4, 2012 to remove the requirement to monitor and report on the status of a pre-historic shelter at the project and did not receive a response from the Commission. On January 7, 2013, we approved your request to amend the CRMP because flooding from Tropical Storm Irene washed away the rock shelter.⁴ You no longer have to monitor and report on this pre-historic site.

Your June 21, 2017 filing satisfies your CRMP's annual reporting requirement for monitoring years 2014, 2015, and 2016. Your next filing is due by April 4, 2018. We note that your next 10-year update to the CRMP is also due on April 4, 2018. If you have any questions regarding this matter, please contact Jennifer Polardino at (202) 502-6437 or jennifer.polardino@ferc.gov.

Sincerely,



(For) Steve Hocking, Chief
Environmental and Project Review Branch
Division of Hydropower Administration
and Compliance

⁴ *Consolidated Edison Energy Massachusetts, LLC*, 142 FERC ¶ 62,004 (2013).

Document Content(s)

p-2334-051.PDF.....1

Nautilus Hydro, LLC
c/o Hull Street Energy, LLC
4920 Elm Street
Bethesda, MD 20814

June 11, 2018

John Spain, PE
Federal Energy Regulatory Commission
Division of Dam Safety and Inspection
New York Regional Office
19 West 34th Street, Suite 400
New York, NY 10001

SUBJECT: RE: P-2334-MA
2018 Ten Year Update to Cultural Resources Management Plan

Dear Mr. Spain:

Nautilus Hydro, LLC is the owner of the Gardners Falls Hydroelectric Project (No. P-2334) located on the Deerfield River in Massachusetts. As owners, we are supposed to file a ten-year update to the cultural resource management plan for the project. Enclosed please find the ten year update to the plan.

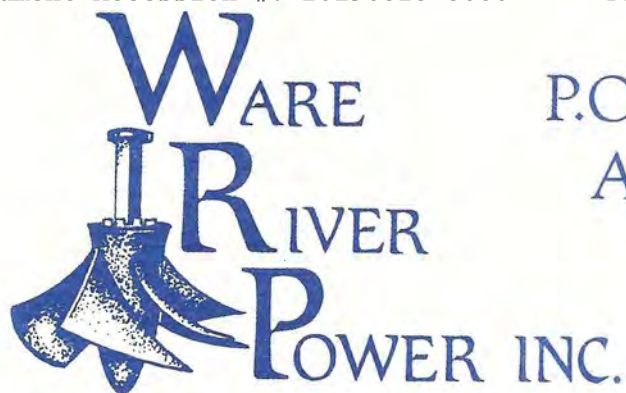
If you have any questions, please do not hesitate to contact me at 240-800-3218.

Sincerely,

A handwritten signature in black ink, appearing to read 'M Willis', with a long horizontal flourish extending to the right.

Matthew Willis
Authorized Representative
Nautilus Hydro, LLC

cc: Katherine Adnams



P.O.BOX 512
ALLEN DRIVE
BARRE, MA
01005 (978) 355-4575

June 4, 2018

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 1st Street, NE, Room 1A
Washington DC 202426

Gardners Falls Project FERC No. 2334

Dear Secretary:

Hull Street Energy recently purchased, and FERC approved the transfer, of the Gardners Falls Hydro Electric Project, FERC No. 2334 located on the Deerfield River in Franklin County, MA. Hull Street recently procured the services of Ware River Power Inc. to operate and maintain this facility. No operational changes have been made as a result of this transfer.

Regarding the recently transferred license issued to Gardner Falls Hydro Electric Project in April of 1997, following consultation with the Massachusetts State Historical Preservation Office ("SHPO"), a Cultural Resource Management Plan ("CRMP"), was drafted and was approved by FERC on November 17, 1998.

The CRMP for Gardner Falls, as approved by SHPO, included a recommendation that the CRMP "should be updated at least every 10 years to remain current with the changes to the cultural resources inventory and National Register of historic properties contained within the Gardner Falls Project." This letter is intended to serve as an update for the last ten years of the CRMP.

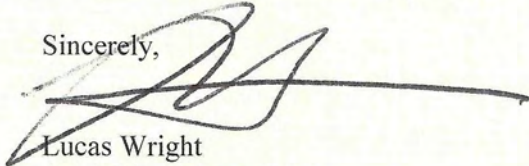
There has been only one significant change to the area in the last decade that would change the current CRMP. The only change that has occurred was the well documented damage inflicted by Tropical Storm Irene, a historic flooding event. The following excerpt comes from the attached documentation sent to FERC of the events following the flood:

"On August 28, 2011 a historic flood caused by 10-inches of rain from Tropical Storm Irene devastated the area near the Gardners Falls project located in Franklin County, MA in the Town of Buckland, across the river from the Town of Shelburn (Attachment 1). On February 10, 2012, an employee of EP Energy conducted the annual visual site inspection of two potentially eligible archaeological sites located on the Gardners Falls impoundment. The Gardners Falls old stone foundation was found intact and documented in the attached photo (Attachment 2). However, due to the historic flooding of the Deerfield River caused by Tropical Storm Irene, the riverbank in the Gardners Falls impoundment has changed dramatically. The EP Energy employee was unable to find any sign of the Gardners Falls cave. He documented the changes with a series of photographs along the riverbank highlighting scouring, washouts and the general change in the view in an effort to document this new situation."

The Gardners Falls cave was eventually removed from the CRMP with permission from the Massachusetts State Historic Preservation Office (see attached letter) and is no longer part of the current CRMP.

In summary, with the exception of the removal of the above-mentioned Gardners Falls Cave structure from the CRMP, no historic properties have been discovered or altered within the Gardners Falls project boundaries as a result of any actions or operations of the project. Ware River Power will continue to monitor the project for any changes going forward and will make changes and update FERC on any changes to the plan as necessary.

Sincerely,

A handwritten signature in black ink, appearing to read 'Lucas Wright', with a long horizontal stroke extending to the right.

Lucas Wright
Ware River Power Inc.



ORIGINAL

The Commonwealth of Massachusetts
William Francis Galvin, Secretary of the Commonwealth
Massachusetts Historical Commission

P-2334

May 17, 2012

Kimberly D. Bose
Secretary
Federal Energy Regulatory Commission
888 First St NE Room 1A
Washington DC 20426

FILED
SECRETARY OF THE
COMMISSION
2012 MAY 29 A 9:37
FEDERAL ENERGY
REGULATORY COMMISSION

RE: Gardners Falls Hydroelectric Project, Buckland and Shelburne, MA.
MHC# RC.3216. FERC# 2334.

Dear Secretary Bose:

Staff of the Massachusetts Historical Commission (MHC), office of the State Historic Preservation Officer, have reviewed the information prepared by Kleinschmidt Associates, dated May 1, 2012, on behalf of EP Energy Management LLC, the licensee for the project referenced above.

The MHC concurs with the licensee's request for the Federal Energy Regulatory Commission to eliminate the requirement for the licensee to conduct monitoring and annual reporting of the historic area that no longer exists, and to amend the Cultural Resource Management Plan and/or Programmatic Agreement as needed.

These comments are offered to assist in compliance with the *Programmatic Agreement- Gardners Falls Hydroelectric Power Project*, the *Cultural Resources Management Plan for the Gardners Falls Hydroelectric Project*, and Section 106 of the National Historic Preservation Act of 1966, as amended (36 CFR 800). Please do not hesitate to contact Edward L. Bell of my staff if you have any questions.

Sincerely,

Brona Simon
State Historic Preservation Officer
Executive Director
Massachusetts Historical Commission

xc: Chris Tomichuk, Kleinschmidt Associates



ORIGINAL

The Commonwealth of Massachusetts
William Francis Galvin, Secretary of the Commonwealth
Massachusetts Historical Commission

P-2334

May 17, 2012

Kimberly D. Bose
Secretary
Federal Energy Regulatory Commission
888 First St NE Room 1A
Washington DC 20426

FILED
SECRETARY OF THE
COMMISSION
2012 MAY 29 A 9:37
FEDERAL ENERGY
REGULATORY COMMISSION

RE: Gardners Falls Hydroelectric Project, Buckland and Shelburne, MA.
MHC# RC.3216. FERC# 2334.

Dear Secretary Bose:

Staff of the Massachusetts Historical Commission (MHC), office of the State Historic Preservation Officer, have reviewed the information prepared by Kleinschmidt Associates, dated May 1, 2012, on behalf of EP Energy Management LLC, the licensee for the project referenced above.

The MHC concurs with the licensee's request for the Federal Energy Regulatory Commission to eliminate the requirement for the licensee to conduct monitoring and annual reporting of the historic area that no longer exists, and to amend the Cultural Resource Management Plan and/or Programmatic Agreement as needed.

These comments are offered to assist in compliance with the *Programmatic Agreement- Gardners Falls Hydroelectric Power Project*, the *Cultural Resources Management Plan for the Gardners Falls Hydroelectric Project*, and Section 106 of the National Historic Preservation Act of 1966, as amended (36 CFR 800). Please do not hesitate to contact Edward L. Bell of my staff if you have any questions.

Sincerely,

Brona Simon
State Historic Preservation Officer
Executive Director
Massachusetts Historical Commission

xc: Chris Tomichuk, Kleinschmidt Associates

Document Content(s)

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Power now generation™

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, DC 20426

RE: Gardners Falls Project, FERC No. 2334, Cultural Resources Management Plan

Dear Secretary Bose:

On April 4, 1997, the Commission issued a license for the continued operation of the Gardner's Falls Hydroelectric Project, FERC No. 2334, located on the Deerfield River in Franklin County, Massachusetts, to Western Massachusetts Electric Company (WEMCO). Pursuant to Article 408 of the License and in accordance with a Programmatic Agreement (PA) among the Commission, the Massachusetts Historical Commission, and the Advisory Council on Historic Preservation signed in 1996, and following consultation with the Massachusetts State Historic Preservation Office (SHPO), the Licensee filed with the Commission a Cultural Resources Management Plan (CRMP) on June 2, 1998. On November 17, 1998 the Commission issued an order approving the CRMP.

The current licensee, EP Energy Massachusetts LLC (formally NAEA Energy Massachusetts, LLC) owns and operates the Gardners Falls Hydroelectric Project. The CRMP for the project requires an annual report of cultural resource activities. On February 29, 2012, in compliance with the FERC-approved CRMP and Section II(D) of the PA, the 2012 Annual Report of Cultural Resources Activities was submitted to your office. As discussed in this February 29, 2012 submittal, the Gardners Falls potential prehistoric rock shelter was destroyed by an historical flood event due to 10 inches of rain from Tropical Storm Irene. Significant flooding of the Deerfield River dramatically changed the banks of the Gardners Falls impoundment and there has been no sign of the potential prehistoric rock shelter since.

FERC staff replied that while the licensee provided the Commission with an explanatory narrative, documentary photographs, and documentary newspaper articles, an actual request to amend the Gardners Falls CRMP to eliminate reference to the potential prehistoric rock shelter is required once the changes are approved by the Massachusetts Historical Commission (MHC) and documentation of consultation between the MHC and the licensee is completed. FERC staff further indicated after consultation with you, the licensee will need to file a request to amend its CRMP to delete the Gardners Falls potential prehistoric rock shelter as a monitoring item.

On May 17, 2012, EP Energy Massachusetts LLC received a letter documenting consultation with the MHC. The MHC concurred with the request to eliminate the requirement to conduct monitoring and annual reporting of the potential prehistoric rock shelter which no longer exists (Attachment 1).

EP Energy Massachusetts LLC requests that the CRMP for the Gardners Falls Project that was approved by the FERC on November 17, 1998 be amended to no longer include reference to the potential prehistoric rock shelter, as referenced on pages 14 and 34. Specifically, the CRMP identifies the cave on page 14 as a *"potential prehistoric rock shelter...situated on the east side of the river at the lower end of the impoundment."* It further states on page 34 that the licensee should implement a monitoring plan to determine the presence, effects, and extent of any existing or ongoing impacts to the *"potential prehistoric rock shelter"* on an annual basis.

We anticipate that this letter, as well as any correspondence regarding approval of the requested changes, will satisfy amendment requirements and relieve the Licensee of any further responsibilities with regards to the potential prehistoric rock shelter.

Sincerely,



Kim Marsili
Station Manager

cc: Brona Simon, MHC
cc: John Bahrs, VP, PGS. Essential Power LLC™
cc: Patrick Brown, Director Compliance Essential Power LLC™

ATTACHMENT 1



The Commonwealth of Massachusetts
William Francis Galvin, Secretary of the Commonwealth
Massachusetts Historical Commission

May 17, 2012

Kimberly D. Bose
Secretary
Federal Energy Regulatory Commission
888 First St NE Room 1A
Washington DC 20426

RE: Gardners Falls Hydroelectric Project, Buckland and Shelburne, MA.
MHC# RC.3216. **FERC# 2334.**

Dear Secretary Bose:

Staff of the Massachusetts Historical Commission (MHC), office of the State Historic Preservation Officer, have reviewed the information prepared by Kleinschmidt Associates, dated May 1, 2012, on behalf of EP Energy Management LLC, the licensee for the project referenced above.

The MHC concurs with the licensee's request for the Federal Energy Regulatory Commission to eliminate the requirement for the licensee to conduct monitoring and annual reporting of the historic area that no longer exists, and to amend the Cultural Resource Management Plan and/or Programmatic Agreement as needed.

These comments are offered to assist in compliance with the *Programmatic Agreement- Gardners Falls Hydroelectric Power Project*, the *Cultural Resources Management Plan for the Gardners Falls Hydroelectric Project*, and Section 106 of the National Historic Preservation Act of 1966, as amended (36 CFR 800). Please do not hesitate to contact Edward L. Bell of my staff if you have any questions.

Sincerely,

A handwritten signature in cursive script, appearing to read "Brona Simon".

Brona Simon
State Historic Preservation Officer
Executive Director
Massachusetts Historical Commission

xc: Chris Tomichak, Kleinschmidt Associates

Document Content(s)

P-2334 Gardners Falls CRMP Letter.PDF.....1-4

Document Content(s)

FERC 10 year update CRMP 20180611.PDF.....1

Nautilus Hydro, LLC
c/o Hull Street Energy, LLC
4920 Elm Street
Bethesda, MD 20814

June 11, 2018

John Spain, PE
Federal Energy Regulatory Commission
Division of Dam Safety and Inspection
New York Regional Office
19 West 34th Street, Suite 400
New York, NY 10001

SUBJECT: RE: P-2334-MA
2018 Annual Report of Cultural Resources Activities

Dear Mr. Spain:

Nautilus Hydro, LLC is the owner of the Gardners Falls Hydroelectric Project (No. P-2334) located on the Deerfield River in Massachusetts. As owners, we are required to file an annual report of cultural resource activities for the project. Enclosed please find the copy of the annual report for 2018.

If you have any questions, please do not hesitate to contact me at 240-800-3218.

Sincerely,



Matthew Willis
Authorized Representative
Nautilus Hydro, LLC

cc: Katherine Adnams



P.O. BOX 512
ALLEN DRIVE
BARRE, MA
01005 (978) 355-4575

April 30, 2018

Kimberly Bose, Secretary
Federal Energy Regulatory Commission
888 1st Street, NE, Room 1A
Washington, DC 20426

Gardners Falls Project FERC No. 2334
2018 Annual Report of Cultural Resources Activities

Dear Secretary:

Hull Street Energy owns and Ware River Power Inc., operates the Gardners Falls Hydroelectric Project (No. 2334) located on the Deerfield River, Massachusetts. The Cultural Resource Management Plan (CRMP) for the project requires an annual report of cultural resource activities for the project. This report complies with the CRMP, approved by the Federal Energy Regulatory Commission (FERC) on November 17, 1998, and Section II paragraph D of the Programmatic Agreement (PA).

On March 29th I conducted a visual site inspection of the project boundaries and took a photograph of the foundation site (see attached photo). The site, which is located on the Gardners Falls impoundment, was in good condition with no evidence of change from what we have on record.

Per the CRMP and PA, we are also forwarding a copy of this letter to the Massachusetts Historical Commission. If you have any questions, please contact me at the number above or by email at LWright@wareriverpower.com.

Lucas Wright



Ware River Power Inc.



Photo of Gardner Falls Historic Foundation March 2018

Document Content(s)

FERC Annual Update CRMP 2018.PDF.....1

ORIGINAL



P.O. Box 512
20 Common Street
Barre, MA 01005
Phone: (978) 355-4575

May 24, 2019

Kimberly Bose, Secretary
Federal Energy Regulatory Commission
888 1st Street, NE, Room 1A
Washington, DC 20426

Gardners Falls Project FERC No. 2334
2018 Annual Report of Cultural Resources Activities

Dear Secretary:

Hull Street Energy owns and Ware River Power Inc., operates the Gardners Falls Hydroelectric Project (No. 2334) located on the Deerfield River, Massachusetts. The Cultural Resource Management Plan (CRMP) for the project requires an annual report of cultural resource activities for the project. This report complies with the CRMP, approved by the Federal Energy Regulatory Commission (FERC) on November 17, 1998, and Section II paragraph D of the Programmatic Agreement (PA).

On March 29th I conducted a visual site inspection of the project boundaries and took a photograph of the foundation site (see attached photo). The site, which is located on the Gardners Falls impoundment, was in good condition with no evidence of change from what we have on record.

Per the CRMP and PA, we are also forwarding a copy of this letter to the Massachusetts Historical Commission. If you have any questions, please contact me at the number above or by email at LWright@wareriverpower.com.

Sincerely,

A handwritten signature in black ink, appearing to read 'LWright'.

Lucas Wright
Ware River Power Inc.

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SECRETARY OF THE
COMMISSION
2019 JUN 10 P 3 07
FEDERAL ENERGY
REGULATORY COMMISSION



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P.O. Box 512
20 Common Street
Barre, MA 01005
Phone: (978) 355-4575

May 24, 2019

Kimberly Bose, Secretary
Federal Energy Regulatory Commission
888 1st Street, NE, Room 1A
Washington, DC 20426

Gardners Falls Project FERC No. 2334
2018 Annual Report of Cultural Resources Activities

Dear Secretary:

Hull Street Energy owns and Ware River Power Inc., operates the Gardners Falls Hydroelectric Project (No. 2334) located on the Deerfield River, Massachusetts. The Cultural Resource Management Plan (CRMP) for the project requires an annual report of cultural resource activities for the project. This report complies with the CRMP, approved by the Federal Energy Regulatory Commission (FERC) on November 17, 1998, and Section II paragraph D of the Programmatic Agreement (PA).

On March 29th I conducted a visual site inspection of the project boundaries and took a photograph of the foundation site (see attached photo). The site, which is located on the Gardners Falls impoundment, was in good condition with no evidence of change from what we have on record.

Per the CRMP and PA, we are also forwarding a copy of this letter to the Massachusetts Historical Commission. If you have any questions, please contact me at the number above or by email at LWright@wareriverpower.com.

Sincerely,

A handwritten signature in black ink, appearing to be "LWright", written over a horizontal line.

Lucas Wright
Ware River Power Inc.



Document Content(s)

CRMP Annual Update 2019.PDF.....1

ORIGINAL



P.O. Box 512
20 Common Street
Barre, MA 01005
Phone: (978) 355-4575

April 8, 2020

Kimberly Bose, Secretary
Federal Energy Regulatory Commission
838 1st Street, NE, Room 1A
Washington, DC 20426

FILED
SECRETARY OF THE
COMMISSION
2020 APR 13 P 2:42
FEDERAL ENERGY
REGULATORY COMMISSION

Gardner Falls Project FERC No. 2334
2019 Annual Report of Cultural Resources Activities

Dear Secretary:

Hull Street Energy owns and Ware River Power Inc., operates the Gardner Falls Hydroelectric Project (No. 2334) located on the Deerfield River, Massachusetts. The Cultural Resource Management Plan (CRMP) for the project requires an annual report of cultural resource activities for the project. This report complies with the CRMP, approved by the Federal Energy Regulatory Commission (FERC) on November 17, 1998, and Section II paragraph D of the Programmatic Agreement (PA).

On April 8th, I conducted a visual site inspection of the project boundaries and took a photograph of the foundation site (see attached photo). The site, which is located on the Gardner Falls impoundment, was in good condition with no evidence of change from what we have on record.

Per the CRMP and PA, we are also forwarding a copy of this letter to the Massachusetts Historical Commission. If you have any questions, please contact me at the number above or by email at lwright@wareriverpower.com.

Sincerely,

Lucas Wright
Ware River Power Inc.



Document Content(s)

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FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, D. C. 20426

OFFICE OF ENERGY PROJECTS

Project No. 2334-051 – Massachusetts
Gardner Falls Hydroelectric Project
Nautilus Hydro, LLC

February 27, 2020

VIA FERC Service List

Mr. Randall Osteen
General Counsel
Nautilus Hydro, LLC
c/o Hull Street Energy
4290 Elm Street
Bethesda, MD 20814

Subject: Ten-Year Update to Cultural Resources Management Plan

Dear Mr. Osteen:

On May 23, 2019, you filed a ten-year update to the approved Cultural Resources Management Plan¹ (CRMP) for the Gardner Falls Hydroelectric Project, FERC No. 2334.²

The project's approved CRMP requires you to file with the Commission a ten-year update to the CRMP. In your filing, you say that the only change necessary to the CRMP is removing any requirements related to the Gardner Falls cave, a pre-historic shelter at the project. You had previously requested that removal by letter dated June 4, 2012 saying flooding from Tropical Storm Irene washed away the rock shelter. In a January 7, 2013 Order Amending Approved Cultural Resources Management Plan,³ the

¹ *Consolidated Edison Energy Massachusetts, LLC*, 85 FERC ¶ 62,110 (1998).

² *Essential Power Massachusetts, LLC, Nautilus Hydro, LLC*, 79 FERC ¶ 61,007 (1997). On January 5, 2017, the Commission issued an Order Approving Transfer of License. *Essential Power Massachusetts, LLC, Natilus Hydro, LLC*, 158 FERC ¶ 62,009 (2017).

³ *Consolidated Edison Energy Massachusetts LLC*, 142 FERC ¶ 62,004 (2013).

Project No. 2334-051

-2-

Commission approved your request to amend the CRMP and remove the monitoring requirement.

Since your request to remove the cave was previously approved by Commission staff, it is reasonable to update the CRMP to reflect that change. Therefore, in order to ensure the Commission's record contains the correct CRMP, within 60 days of the date of this letter, please file an updated CRMP with the Commission that removes the cave and any related requirements. In your filing, please reference this letter, and state that you are filing an updated copy of the approved CRMP for the Commission's record.

The Commission strongly encourages electronic filing. Please file your response using the Commission's eFiling system at <http://www.ferc.gov/docs-filing/efiling.asp>. For assistance, please contact FERC Online Support at FERCOnlineSupport@ferc.gov, (866) 208-3676 (toll free), or (202) 502-8659 (TTY). In lieu of electronic filing, please send a paper copy to: Secretary, Federal Energy Regulatory Commission, 888 First Street NE, Washington, DC 20426. The first page of any filing should include docket numbers P-2334-051. You may also register online at: <http://www.ferc.gov/docs-filing/esubscription.asp> to be notified via email of new filings and issuances related to this or other pending projects.

If you have any questions concerning this matter, please contact Jennifer Polardino by telephone at (202) 502-6437 or through email at Jennifer.Polardino@ferc.gov.

Sincerely,



Andrea Claros, Acting Chief
Environmental and Project Review Branch
Division of Hydropower Administration
and Compliance

Document Content(s)

P-2334-051.PDF.....1



Central Rivers Power

670 North Commercial Street
Manchester, NH 03101

April 24, 2020

Andrea Claros, Acting Chief
Federal Energy Regulatory Commission
Environmental and Project Review Branch/Division of Hydropower Administration and
Compliance
888 First Street NE
Washington, DC 20426

RE: FERC Project 2334-051 Gardner Falls Hydroelectric Project, Ten-Year Update to Cultural
Resources Management Plan

Dear Ms. Claros:

In response to correspondence from you dated February 27, 2020, Central Rivers Power MA, LLC (CRPMA) is submitting the ten-year update to the Cultural Resources Management Plan for the Gardner Falls Hydroelectric Project (FERC Project 2334-051) in Buckland, Massachusetts.

Changes were made to sections three and five of the original Plan to reflect the destruction of the "rockshelter" in August 2011, as part of the damage incurred by Hurricane Irene. Except for changes described relative to the rockshelter, no additional archival research or inventory of historic, cultural or archaeological resources were made as part of this update and, similarly, except for the rockshelter, no historic, cultural or archaeological edits were made to the original content of this plan. Where appropriate, updates to ownership, operating characteristics and the action plan have been made.

If you have any questions regarding the updated Plan, please call me at (978) 355-4575.

Sincerely,

Lucas Wright
Ware River Power Inc.

Enclosure

FINAL REPORT
CULTURAL RESOURCES MANAGEMENT PLAN
GARDNER FALLS PROJECT
FERC NO. 2334MA-OOI

Plan Updated by:

Berkshire Environmental Consultants, Inc.
1450 East Street – Suite 6H
Pittsfield, Massachusetts 01201
Rev. 1.0
April 2020

Originally Prepared for:

Western Massachusetts Electric Company

Originally Prepared by:

The Public Archaeology Laboratory, Inc.
210 Lonsdale Avenue
Pawtucket, Rhode Island 02860
Rev. 0.0
May 1998

Originally Prepared Under contract to:

Northeast Utilities Service Company
107 Selden Street
Berlin, Connecticut 06037

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APPENDIX D	Recent FERC Correspondence

RECORD OF CHANGES

No.	Description of Change	Sec. /Page(s)	Date	By
0.0	Initial Plan Development	Throughout	May 1998	The Public Archaeology Laboratory, Inc.
1.0	<ul style="list-style-type: none">- Cover page was updated- Record of Changes was added, and Table of Contents was updated- Section numbers were added- Section 3.0 and 5.0 were updated to reflect removal of the prehistoric rockshelter from the CRMP monitoring requirements- Edits to reflect changes in ownership and operating characteristics- Spelling, pagination and grammar were edited	Throughout	April 2020	Berkshire Environmental Consultants, Inc.

MANAGEMENT ABSTRACT

The Federal Energy Regulatory Commission (FERC) granted a license on April 4, 1997 to the Western Massachusetts Electric Company (WMECO) and its agent, Northeast Utilities Service Company (NUSCO), for the continued operation of the Gardner Falls Project in Massachusetts (FERC No. 2334). Since the original CRMP was prepared in 1998, the Gardner Falls Project (the "Project") has undergone several ownership changes. The current owner, Central Rivers Power MA, LLC (Central Rivers Power) purchased the Gardner Falls project on June 12, 2017 and the license was transferred from Essential Power Massachusetts to Nautilus Hydro, LLC (former name of Central Rivers Power). A component of the original license application process was the ratification of a Programmatic Agreement (PA) among FERC, the Advisory Council on Historic Preservation, and the Massachusetts State Historic Preservation Office (MASHPO), regarding the management of Historic Properties that may be affected by the project. As outlined in Stipulation I of the PA, the original Cultural Resource Management Plan (CRMP) was prepared for WMECO/NUSCO specifying how Historic Properties will be managed within the project's Area of Potential Effect (APE).

The Gardner Falls Project is located on the Deerfield River in Buckland and Shelburne, Massachusetts, and includes a dam, power canal, and powerhouse. The Gardner Falls facilities were determined eligible for inclusion in the National Register of Historic Places by the MASHPO in 1990. The project's area of potential impact includes (a) lands enclosed by the project boundary as delineated in the application for new license filed December 23, 1991, and (b) lands or properties outside the project boundary where project operation or project-related recreational development or use may cause changes in the character or use of Historic Properties, if any exist.

This CRMP provides a historic overview and inventory of Historic Properties within the APE; summarizes land use patterns within the APE as well as the original project uses for Historic Properties; identifies activities that will and will not impact Historic Properties; and outlines an action plan for the management of Historic Properties within the APE.

The original Action Plan outlines procedures for complying with the stipulations included in the Gardner Falls PA. The original Action Plan addresses: integration of the CRMP into the FERC relicensing master planning process; protection of Historic Properties and mitigation of unavoidable adverse effects; completion of identification of Historic Properties within the project's APE consisting of intensive archaeological survey and evaluation for proposed actions; monitoring of archaeological sites and sensitive areas; the unanticipated discovery of previously unidentified properties and human remains; and the public interpretation of historic and archaeological values of the original project.

WMECO/NUSCO consulted with the MASHPO in the preparation of the CRMP, whose comments were incorporated into the original plan.

In response to correspondence from FERC dated February 27, 2020, Central Rivers Power has updated the CRMP to reflect changes to the original CRMP. Berkshire Environmental Consultants, Inc. (BEC) completed this update to the Plan. Changes were made to sections three and five of the original Plan to reflect the destruction of the "rockshelter" in August 2011, as part of the damage incurred by Hurricane Irene. Except for changes described relative to the rockshelter, no additional archival research or inventory of historic, cultural or archaeological resources was made as part of this update and, similarly, except for the rockshelter, no historic, cultural or archaeological edits were made to the original content of this plan. Where appropriate, updates to ownership, operating characteristics and the action plan have been made.

CHAPTER 1 INTRODUCTION

1.1 Purpose and Scope

The Federal Energy Regulatory Commission (FERC) granted a license on April 4, 1997 to the Western Massachusetts Electric Company (WMECO) and its agent, Northeast Utilities Service Company (NUSCO), for the continued operation of the Gardner Falls Project in Massachusetts. A component of the license application process was the ratification of a Programmatic Agreement (PA) among FERC, the Advisory Council on Historic Preservation (ACHP), and the Massachusetts State Historic Preservation Officer (MASHPO), regarding the management of Historic Properties that may be affected by the original project. As outlined in Stipulation I of the PA, this Cultural Resource Management Plan (CRMP) was originally prepared by WMECO/NUSCO specifying how Historic Properties were to be managed within the original Project's Area of Potential Effect (APE). Since the original CRMP was prepared in 1998, the Gardner Falls Project has undergone several ownership changes. The Gardner Falls Project was purchased by Central Rivers Power MA, LLC (Central Rivers Power or Project Owner) on June 12, 2017 and the license was transferred from Essential Power Massachusetts to Nautilus Hydro, LLC (former name of Central Rivers Power MA, LLC). The Gardner Falls Project is currently operated by Ware River Power (WRP or Project Operator) under contract to Central Rivers Power.

The Gardner Falls Project is located on the Deerfield River in Buckland and Shelburne, Massachusetts, and includes a dam, power canal, and powerhouse. The Gardner Falls facilities were determined eligible for inclusion in the National Register of Historic Places by the MASHPO in 1990. The Project's APE was determined to include (a) lands enclosed by the project boundary as delineated in the application for new license filed December 23, 1991, and (b) lands or properties outside the project boundary where project operation or project-related recreational development or use may cause changes in the character or use of Historic Properties, if any exist. Historic Properties are defined as any prehistoric or historic district, site building, structure, or object included in or eligible for inclusion in the National Register of Historic Places.

1.2 Gardner Falls Project and Operations Description

The project consists of the following: (1) a 337-foot-long by 30-foot-wide concrete gravity dam with an ogee-type spillway with 2-foot-high flashboards and masonry abutments; (2) a 3,200-foot-long impoundment with approximately 21 acres of surface area at normal full pond, 190-acre-feet of gross storage, and 37.2-acre-feet of usable storage; (3) a 1300-foot-long power canal (31 feet wide and 15 feet deep); (4) a brick and concrete powerhouse equipped with four active turbines with a rated capacity of 3.58 MW; and (5) appurtenant facilities.

Central Rivers Power may fluctuate the reservoir up to 1.8 feet daily in response to river inflow and project operation. The bypassed reach is 1,400-feet-long and about 100-feet-wide. Flows to the project are regulated by releases from the Deerfield No. 3 Development of Great River Hydro, LLC's Deerfield River Project (FERC Project No. 2323), located about 3,000 feet upstream. Great River Hydro, LLC uses the upstream storage capability at the Somerset and Harriman Developments to capture high spring flows for release throughout the year. The Project utilizes flows that are released from these upstream projects in a pond-and-release mode, utilizing a 1.8-foot drawdown to match, insofar as possible, the inflows from upstream to the hydraulic capacities of the Project turbines.

The Licensee shall release from the Gardner Falls Dam a minimum flow of 150 cubic feet per second (cfs), or inflow to the project reservoir, whichever is less, for the protection and enhancement of fish resources in the bypassed reach of the Deerfield River. During those periods when inflows to the project reservoir are less than 150 cfs (usually during August and September), the Licensee shall release available water from the Project reservoir's daily storage capacity, not to exceed the 37.2-acre-feet available from a 1.8-foot drawdown, as necessary to maintain a flow of 150 cfs into the bypassed reach. The minimum flow shall be

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comprised of the total flows over the dam and flows through the downstream minimum streamflow sluice gate.

1.3 CRMP Original Objectives

The CRMP original objectives, as outlined in the PA, were to include principles and procedures to address the following:

- Completion, if necessary, of identification of Historic Properties within the Project's APE;
- Continued use and maintenance of Historic Properties;
- Protection of Historic Properties threatened by shoreline erosion, recreational developments, other project related ground disturbing activities, and vandalism;
- Mitigation of unavoidable adverse effects on Historic Properties;
- Treatment and disposition of any human remains that may be discovered, taking into account any applicable state laws and the ACHP's "Policy Statement Regarding Treatment of Human Remains and Grave Goods" (September 27, 1988);
- Discovery of previously unidentified properties during project operations;
- Public interpretation of the historic and archaeological values of the project;
- Coordination with the MASHPO and interested persons during implementation of the CRMP.

1.4 Authority

FERC issued a new license to WMECO/NUSCO to continue operating the Gardner Falls Project, Project No. 2334, as authorized by Part I of the Federal Power Act, 16 U.S.C. Sections 791(a) through 825(r) as amended. This CRMP was originally prepared to assist FERC in complying with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. 470f) which requires federal agencies to take into account the effects of their actions on Historic Properties and to consider ways of avoiding, minimizing, or mitigating adverse effects. WMECO/NUSCO and FERC consulted with the ACHP and the MASHPO pursuant to 36 CFR Section 800.13 of the ACHP's regulations (36 CFR 800) implementing Section 106.

1.5 Personnel Who Will Use the CRMP

The CRMP should be circulated and referenced by all staff of Central Rivers Power and Ware River Power who are in a position to make decisions that affect historic properties within the Gardner Falls APE. These actions include programmatic and planning decisions as well as capital improvements and ongoing operations and maintenance. Staff involved with the management of historic properties should be trained in preservation techniques, compliance requirements, and how to use and implement the CRMP.

1.6 Preparers

The Public Archaeology Laboratory, Inc. (PAL Inc.) of Pawtucket, Rhode Island assisted WMECO/NUSCO in the preparation of the original CRMP (1998). PAL Inc. staff involved in the original project include Maureen A. Cavanaugh, Preservation Planner, Suzanne G. Cherau, Senior Archaeologist, and Stephen A. Olausen, Senior Architectural Historian. At the request of Central Rivers Power (Project Owner) this plan was updated in April 2020 by Berkshire Environmental Consultants, Inc. to reflect the destruction of the rockshelter (Sections 3 and 5).

CHAPTER 2 METHODOLOGY

2.1 Goal/Strategies

The tasks associated with the preparation of the original Gardner Falls Project CRMP were 1) to identify historic contexts for and properties within the Project's APE; 2) to review land and building use patterns at the Project including routine operations that have the potential to impact Historic Properties; 3) to identify actions, projects, and undertakings over a ten-year period that may affect Historic Properties; and 4) to prepare an action plan that integrates the CRMP with other management plans for the Project, outlines intensive survey and evaluation processes for proposed actions, provides for unanticipated discoveries including human remains and previously unidentified properties, and provides for the public interpretation of the historic and archaeological values of the Project.

These tasks required both archival/background research and fieldwork for cultural resources situated within the Gardner Falls Project. The archival research and field inspection were used to compile the historic overview and inventory of cultural resources presented in Chapter 3 and to assist with the preparation of the land and building uses guide in Chapter 4 and the original action plan discussed in Chapter 5.

2.2 Archival Research/Information Sources

The archival research for archaeological resources consisted of reviewing existing information contained in the *Archaeological Reconnaissance Survey for the Gardner Falls Hydroelectric Project* (McBride 1990). The survey report contains information relating to the prehistoric and historic research contexts for the Project, recorded prehistoric and historic resources, archaeologically sensitive areas having the potential for additional prehistoric resources, and an assessment of the effects of original project operations on archaeological resource areas.

For the initial plan, information relating to land use patterns at the Gardner Falls Project, original project operations, and undertakings planned over the ten years following the development of this Plan was obtained from a variety of written sources provided by Mr. Kenneth Hodge of Northeast Utilities. These included the draft Recreational Plan contained in the Master Plan for the FERC relicensing submittal, draft Soil Erosion and Sediment Control Plan and supplemental information, and list/description of proposed recreational enhancements for the next ten years.

Information regarding the history and project uses for architectural resources within the Gardner Falls Project included a review of MASHPO files. MASHPO inventory forms existed for the dam, power canal, and powerhouse (MHC 1989). Other sources consulted included Herbert Moody, "Water Over the Dam" (n.d.), an unpublished, typescript narrative about the history of the Gardner Falls Project; and Robert E. Barrett, "The History of the Western Massachusetts Electric Company" (1986), in *The WMECO Century*, a souvenir pamphlet published to celebrate the one hundredth anniversary of the Western Massachusetts Electric Company. Additional information used to develop the historic context for the development of hydroelectric facilities on the Deerfield River was found in Programmatic Agreement among the FERC, the ACHP, and the MASHPO (1996) and *Phase 1A Cultural Resources Survey for the Relicensing of Eight Hydroelectric Developments along the Deerfield River Valley in Vermont and Massachusetts*. FERC LP. No. 2323 (Glover et. al. 1994).

2.3 Field Inspection

The original fieldwork for archaeological resources consisted of a drive over and visual inspection of archaeologically sensitive areas and existing site areas within the Gardner Falls Project. The fieldwork was used to verify the physical status of these areas described in the 1990 reconnaissance survey report. It was

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particularly important to inspect the locations of archaeological sensitive areas in proximity to the proposed recreation improvements at Wilcox Hollow and near the project dam.

Fieldwork for architectural resources consisted of a visual inspection of the historic architectural resources within the facility. The fieldwork was used to assess the condition and physical characteristics of the dam, power canal, and powerhouse in order to update the information contained on the MHC inventory forms for those properties. The interior of the powerhouse was also inspected to verify the existence of original machinery and equipment important to the interpretation of that resource as a historic property.

2.4 Analysis and Evaluation Criteria

The analysis of cultural resources within the Gardner Falls Project was based on the information contained in the Archaeological Reconnaissance Report (McBride 1990) and the MHC inventory forms for the dam, power canal, and powerhouse. This information was combined with the status of the resources collected during the 1998 field inspection to allow an evaluation of eligibility to the National Register of Historic Places. The National Register criteria for evaluation and a designation of potentially or not eligible were applied to the existing archaeological sites. The MASHPO had previously determined (April 1990) that the Gardner Falls Project dam, power canal, and powerhouse and its appurtenant buildings and structures are eligible for listing in the National Register of Historic Places. This body of data on cultural resources served as the basis for the original preparation of the CRMP and the outline plan to complete the identification and evaluation process of historic properties within the Project's APE.

2.4.1 National Register of Historic Places Evaluation Criteria

The National Register criteria are the National Park Service, Department of the Interior standards for evaluating the significance of cultural resources. The criteria are designed to guide the evaluation of potential entries to the National Register of Historic Places. At the time of writing the original report, in general, cultural resources must have been 50 years or older to qualify for the National Register, excepting those of extraordinary significance.

The National Register criteria stated that the quality of significance in American history, architecture, archaeology, engineering, and culture were present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and:

- A. that are associated with events that have made a significant contribution to the broad patterns of our history; or
- B. that are associated with the lives of persons significant in our past; or
- C. that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose component may lack individual distinction; or
- D. that have yielded or may be likely to yield information important in prehistory or history.

Most archaeological sites listed on the National Register of Historic Places have been determined eligible under Criteria A or D. For eligibility under these criteria a number of issues must be addressed, including the kinds of data contained in the site, the relative importance of research topics that can be addressed by the data, whether these data are unique or redundant, and the current state of knowledge relating to the research topic(s) (McManamon 1990:14-15). A defensible argument must establish that a site "has important legitimate associations and/or information value based upon existing knowledge and interpretations that have been made, evaluated, and accepted" (McManamon 1990:15).

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Cultural resources are linked to the criteria used in evaluating the significance of the resources through the establishment of historic contexts. A historic context is defined as follows:

At minimum, a historical context is a body of information about past events and historic processes organized by theme, place, and time. In a broader sense, an historic context is a unit of organized information about our prehistory and history according to the stages of development occurring at various times and places (NPS 1985).

Historical contexts provide an organizational format that groups information about related historical properties, based on a theme, geographic limits, and chronological period. A historical context may be developed for Native American, historic, and/or modern cultural resources. Each individual historical context is related to one or more aspects of the developmental history of an area, region, or theme (e.g., agriculture, transportation, water-power), and it identifies the significant patterns that an individual resource can represent.

Historical contexts are developed by:

- Identifying the concept, time period, and geographic limits for the context;
- Collecting and assessing existing information about these limits;
- Identifying locational patterns and current conditions of the associated property types;
- Synthesizing the information in a written narrative; and
- Identifying information needs.

"Property types" are groupings of individual sites or properties based on common physical and associative characteristics; they serve to link the concepts presented in the historical contexts with properties illustrating those ideas (NPS 1983:44719).

A summary of an area's history can be developed by a set of historical contexts. This formulation of contexts is a logical first step in the design of any archaeological survey. It is also crucial to the evaluation of individual properties in the absence of a comprehensive survey of a region (NPS 1983:9). The result is an approach that structures information collection and analyses. This approach further ties work tasks to the types and levels of information required to identify and evaluate potentially important cultural resources.

CHAPTER 3 HISTORIC OVERVIEW AND INVENTORY OF CULTURAL RESOURCES

3.1 Historic Contexts

This report section contains an overview of the prehistoric, historic, and hydroelectric contexts for the original Gardner Falls Project. More specific information can be found in the archaeological reconnaissance survey report prepared for the original project (McBride 1990). With the exception of the section entitled "Summary of Recorded Archaeological Resources", the original technical content of this chapter was not changed as part of the April 2020 update.

3.1.1 Prehistoric Context

3.1.1.1 *PaleoIndian Period (12,000 - 10,000 B.P. [before present])*

The earliest documented prehistoric occupation in the vicinity of the lower Deerfield River drainage in northwest Massachusetts dates to the PaleoIndian Period. Diagnostic fluted projectile points are reported from locations in Deerfield, Gill, and Montague in the nearby Connecticut River valley. PaleoIndian humans were the first people known to have lived in Massachusetts, exploit its resources, and settle its dynamic environments. Climatically, the region was cooler and moister than the present, but a warming trend had begun. During this period circumglacial coniferous forests, grasslands, or areas with "mosaic" vegetation began to be replaced with a closed canopy mixed deciduous hardwood forest.

3.1.1.2 *Early Archaic Period (10,000 - 7500 B.P.)*

Evidence of Early Archaic Period occupation in this area is scant in the archaeological record. Single bifurcate base projectile points, the most diagnostic stone tool artifact from this period, are recorded for locations in Deerfield and Gill. Some of the reasons for the low visibility of Early Archaic sites are the same as those for the similar scarcity of Paleo Indian remains. This includes changes in the landscape causing site destruction or burial under alluvium deposits. The area may also have been near the northern limit of habitable lands for human adaptations during this period. However, despite the relative lack of Early Archaic materials, the river valley lowlands at least would have had no severe environmental restrictions that would have made the area uninhabitable circa 9,000 years ago.

3.1.1.3 *Middle Archaic Period (7500 - 5000 B.P.)*

Middle Archaic Period sites, identified primarily on the basis of diagnostic Neville and Stark projectile points, are more numerous in the Deerfield River Valley than those of the preceding periods. This is generally true for most river drainages throughout southern New England. Sites with Middle Archaic components have been identified at the Riverside Archaeological District in Gill and one site on the south bank of the Deerfield River in Deerfield. In general, Middle Archaic sites are located in both lowland and upland sections adjacent to large rivers and small streams. The location of Middle Archaic sites in the Riverside District, a well-documented anadromous fishing area, along with the presence of abundant fish remains recovered at these sites, indicates that anadromous fish were an important part of the prehistoric diet during this period. Supplies of anadromous fish would have been most abundant in larger rivers such as the Deerfield, where the effects of fluctuations in microhabitats that can affect small tributaries would have been negligible. Concentrations of prehistoric sites near falls, rapids, and at confluences of narrower tributaries with the large rivers would be expected.

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3.1.1.4 *Late Archaic Period (5000 - 3000 B.P.)*

All three traditions (Laurentian, Small Stemmed, and Susquehanna) of the Late Archaic Period in southern New England are represented in the vicinity of the Deerfield River Valley in Massachusetts. In fact, in the lower portion of the valley, it appears that the most extensive prehistoric settlement occurred during the Late Archaic Period. Area sites with Laurentian components consist of several sites within the Riverside Archaeological District in Gill and the Fife Brook Site cluster near the confluence of Fife Brook and the west bank of the upper Deerfield River in Florida. Several of the sites identified along the lower Deerfield River in Deerfield for the Stillwater Bridge Hydroelectric Project contained diagnostic Small Stemmed, Squibnocket Triangle, and Susquehanna Broad projectile points (Mulholland et al. 1982).

Late Archaic occupations occur in a wide variety of environmental locations, including near falls, on the banks of large and small rivers and streams, on floodplain terraces, on lake bottom soils, and in upland locations. Activities present on sites include fishing and fish processing along with caching and quarrying lithic materials. Two important lithic materials, diabase (or "traprock") and steatite (or "soapstone") are known to have been quarried from source areas in the Deerfield and larger Connecticut River valleys in northwest Massachusetts. Traprock is a major component of the Holyoke and Mount Tom ranges with additional outcrops scattered up and down the valleys. This material was well-suited for use in ground stone tools needed for woodworking, quarrying, cultivation, and processing nuts and other plant foods. The steatite quarries are found further south in the Swift, Wilbraham, and Westfield River drainages. This material was used to make polished tool implements, smoking pipes, and stone bowls during the Late Archaic, Transitional Archaic, and Woodland periods.

3.1.1.5 *Woodland Period (3000 - 450 B.P.)*

The Woodland Period in the Deerfield and adjacent Connecticut River valleys is more visible in the archaeological record than any of the earlier periods. This may be due to the association of pottery with the "Woodland" Period and its presence at many of the area sites. In addition, Woodland settlement may have focused on the arable lake bottom and alluvial soils of the river valley lowlands and are thus more likely to be exposed by the plow or by floods. Excavated Woodland Period sites in the area exhibit a wide range of sizes, contain diverse subsistence-related activities, and occupy a variety of habitats.

Sites dating to the Early (3000 - 1600 B.P.), Middle (1600 - 1000 B.P.), and Late (1000 - 450 B.P.) Woodland periods in the region are predominantly found on floodplain locations of the river drainages. Several of the sites located along the Deerfield River in Deerfield, Conway, and Shelburne contained Early to Late Woodland Period components. Early Woodland occupations are represented by diagnostic Vinette I (exterior/interior cord-marked) pottery and Middle to Late Woodland deposits are identified by the presence of thin-walled, grit-tempered pottery. These pottery assemblages were found in association with quartz, quartzite, and chert chipping debris; calcined bone; and fire-cracked rocks. These Deerfield River Valley sites are situated on well-drained alluvial flood plains or intact terrace/bluff landforms within 330 ft of the river.

3.1.2 *Historic Context*

3.1.2.1 *Contact and Plantation Periods (1500 - 1675)*

The lower Deerfield River Valley in Massachusetts was occupied by a Native American group known as the Pocumtucks during the Contact Period. Dutch and English traders had contact with this group prior to 1636. Early historic accounts describe the Pocumtucks as living in sedentary agricultural villages, presided over by a principal sachem. Clans or families appear to have controlled separate tracts

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of land, which they sold to newly arrived colonists. In 1663 the Pocumtucks were massacred at their fort near Deerfield by a group of invading Mohawks. Following this battle, the colonial government granted the Mohawks 8,000 acres of Pocumtuck land. By the end of the Plantation Period (ca. 1675), the surviving Pocumtucks had become integrated into colonial society as laborers, and Native American settlement shifted from dispersed hamlets to the colonial villages. Shelburne Falls was a major fishing site for Native American and English settlers during these periods.

3.1.2.2 *Colonial Period (1675 - 1775)*

The earliest English settlement in the area now encompassed by the town of Buckland occurred during this period. Captain Nahum Wood reportedly established his residence in the southwest portion of the town in 1769. The area of present-day Buckland Center was the site of early settlement that followed Wood's arrival. Later eighteenth-century settlement was focused around the confluence of the Deerfield River and Clesson Brook. The portion of eastern Buckland closest to the project was first settled by Joshua Johnson in 1773. Economic activities of the early settlers were focused on agriculture, hunting, and fishing along with some small-scale mill activity along Clesson Brook.

In 1712 the area of Shelburne was granted as pasture to the town of Deerfield. In 1743 a statute was passed preserving 20 acres around the falls for public fishing. The first English settlement in the area is attributed to Jonathan Catlin and James Ryder, who reportedly built structures near the falls between 1752 and 1756. The houses were abandoned because of Indian raids in the area during the French and Indian Wars, and their occupants retreated to Deerfield. Settlement increased by late 1700s and included features of a growing village which centered around Charlemont Road. This transportation route served as the social and economic focus for the residents of surrounding dispersed farmsteads. Village structures included a meetinghouse, two taverns, and a town cemetery.

3.1.2.3 *Federal Period (1775 - 1830)*

This period witnessed increased village settlement and industrial development in both Buckland and Shelburne Falls. In Buckland, a number of wood and gristmills were constructed along the Deerfield River and its tributaries. Increased settlement necessitated the construction of footbridges across the river in 1780, linking Buckland to Shelburne Falls. Additional industrial and trade development included fulling mills, lumber mills, forges, cooperages, box makers, and clock makers.

In 1775 the districts of Shelburne were granted township status under colonial legislation; this provided political autonomy to the town's residents. Early nineteenth-century industrial developments in the town were limited to two tanneries which manufactured boots. The economic focus of the town remained agricultural throughout this period. The population increased substantially during this period, beginning with 575 residents listed in 1776. In general, crops were cultivated along the Deerfield River floodplain, while the uplands were used primarily for livestock grazing, with the exception of the central and north central uplands of Shelburne where high quality cropland occurred.

3.1.2.4 *Early (1830 - 1870) and Late (1870 - 1915) Industrial Periods*

The coming of the railroads to western Massachusetts in 1867 (the Troy and Greenfield Railroad) ushered in a new age of industrialization and commercialism. However, participation in the industrial revolution for the Lower Deerfield towns, like Buckland and Shelburne, was primarily in a consumption and not a production role. There were exceptions, however, and the village of Shelburne Falls developed its own manufacturing specialty that continued into the twentieth century. More limited industrial development occurred in the Buckland township during the nineteenth century. The 1873 Beers atlas map of the town depicts an unnamed complex of multiple structures located on the Buckland

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side of the Deerfield River north of the project. This cluster of buildings could represent a mill or group of residences. Residential housing increased considerably during the late 1800s with the construction of numerous Victorian mi II houses on both sides of the river.

The arrival of the railroad appears to have led to a unique construction type along the Deerfield River Valley in the Buckland and Shelburne Falls area. It has been hypothesized that a number of stone foundations discovered in proximity to the Boston and Maine Railroad bed are the remains of temporary structures built to house workers when the railroad was being built. A depot was also erected at Shelburne Falls at this same time.

In Shelburne one of the most viable economic pursuits to arrive in the 1870s was the cutlery industry. By 1880 the town's leading employer was J. W. Gardner, the English former cutlery superintendent at Lamson & Goodnow in Buckland. He retired in 1876 to form a pocket cutlery firm on the Shelburne side of the river. The prosperity of Lamson & Goodnow is attributed with establishing the village of Shelburne Falls on the Buckland and Shelburne sides of the river. A patent on the crooked scythe scathe was reportedly secured by Silas Lamson circa 1800. Around 1833 Lamson erected a scathe shop on the Shelburne side of the falls. By 1845 he employed 75 individuals producing scathes valued at \$60,000. The manufacture of cutlery had been added to the company's production line around 1842. In 1851 the cutlery was moved to a new site on the Buckland side of the river, where it dominated the town's industrial sector for the next fifty years. For example, in 1875, the value of Lamson & Goodnow products was \$400,000, representing 94 percent of the total value of manufactured goods in the town.

3.1.2.5 Modern Period (1915 - present)

The cutlery industry along with other manufacturing interests (e.g., edge tools) in the area were given an enormous boost in production by the introduction of large-scale hydroelectric power in 1904 at Gardner Falls and circa 1911-1912 by the New England Power Company. The village of Shelburne Falls quickly became the hub of local industrial activity with the establishment of the New England Power Company's "great hydro-electric power center" along the Deerfield River. The early-twentieth-century prosperity of the village was also due to the establishment of the Mayhew Steel Products Company. By 1930 this industry employed nearly 200 persons in the manufacturing of a variety of forged tools.

The economic focus of this portion of the Deerfield River Valley continues to be centered in the village of Shelburne Falls. The village is accessed via railroad and Route 2 and has become the center of local commercial and municipal activity. The present-day nature of settlement in the two towns and around the project consists of scattered residences and undeveloped woodland.

3.2 Hydroelectric Power on the Deerfield River

The rapid adoption of electricity for industrial and domestic uses during the 1880s created a demand for hydroelectric power plants in communities throughout the nation. Before 1895, hydroelectric power was considered applicable only in small local markets close to the power plant. The Niagara Falls power project, which entered service in 1895, brought attention to the potential of hydroelectric power and sparked an era of large-scale hydroelectric power plant construction throughout the nation.

The earliest hydroelectric projects in New England were developed in Massachusetts in the 1860s by the Holyoke Water Power Company and the Turner Falls Company, both of which generated power along their own canals on the Connecticut River and sold it to local mills and factories. The Holyoke Power Company opened the first viable hydroelectric plant in the region in 1885, although power from that plant was not widely distributed until 1903.

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The hydroelectric power potential of the lower Deerfield River was first realized in 1897, when the Shelburne Falls Electric Light and Power Company (SFELPCO) constructed a waterwheel-driven generator that provided the first electricity to the town of Shelburne. In the first three decades of the twentieth century, the Deerfield River was developed intensively as a source for hydroelectric power. The Gardner Falls Project was the first major hydroelectric power plant constructed on the Deerfield River. It was constructed in 1904 about one mile south of Shelburne Falls by the Greenfield Electric Light and Power Company (GELPCO) to produce electricity for the city of Greenfield, located some 15 miles to the east. SFELPCO's system changed over to a steam-powered generator in 1908. In 1911, GELPCO acquired SFELPCO, closed the steam plant, and began providing electricity to Shelburne Falls from the Gardner Falls Project.

Soon after the completion of the Gardner Falls Project, Malcomb Chace and Henry Harriman formed the New England Power Company (NEP) with the intention of creating an integrated hydroelectric power generating and transmission system that would meet the growing demand for electricity in central New England. The first plant constructed by NEP was built along the Connecticut River at Vernon, Vermont in 1910. That project included the region's first long-distance high-tension line, which extended from Vernon to Worcester, Massachusetts.

The Deerfield River was to play an integral role in NEP's plans. Surveys to determine areas with potential for hydroelectric development were undertaken by NEP between 1908 and 1911. The earliest scenario considered was for the development of three hydroelectric plants. By 1911-1912, the plans had expanded and called for a system of two large storage reservoirs and eight dam and powerhouse developments. The initial phase of the Deerfield River Project system started with construction of the Somerset storage reservoir. Completed in 1912, its purpose was to provide predictable flow to downstream generating stations. Deerfield Nos. 2, 3, and 4 were first three powerhouses. They are located in and near Shelburne Falls, and were designed as standardized units with only minor variations. Deerfield No. 2 was completed in 1912 and began generating in 1913. It was followed by Deerfield Nos. 3 and 4, which were completed between 1912 and 1913. In 1915, Deerfield No. 5, located at Hoosac, Massachusetts, was converted from its original operating function as a frequency changing station to a full generating plant.

After World War I, the regional demand for electricity increased sharply. NEP attempted to keep up with the market by adding several new plants to its system. Between 1921 and 1927, a transmission tie to New York was completed and three new hydroelectric developments were put into operation. The Searsburg Development, which was constructed in 1922, was the first addition to the NEP system on the Deerfield River during this second phase of construction. The Harriman Development, the largest in NEP's Deerfield River Project system, was completed in 1924 at Davis Bridge, Vermont. At the time, the Harriman dam was one of the largest earthen dams in the world. The Sherman Development, a fully automated hydroelectric facility completed in 1927 near Rowe, Massachusetts, was the last facility constructed as part of NEP's original Deerfield River system.

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3.3 Summary of Recorded Archaeological Resources

In February 1990, an archaeological reconnaissance survey was conducted for the Gardner Falls Hydroelectric Project in Buckland and Shelburne, Massachusetts (McBride 1990). The purpose of this survey was to provide information on the archaeological sensitivity of the Gardner Falls Plan and determine whether current conditions within the impoundment area were having an adverse impact or had the potential to impact archaeological resources.

Two primary tasks, background research to review data on known archaeological resources and a walkover survey to identify resources within the project, were completed. Prior to this survey, there were no archaeological resources recorded within the Gardner Falls Project. The archaeological survey stratified the Project's APE into zones of expected low and high archaeological sensitivity. Potential prehistoric and historic site areas were identified and are included in the high sensitivity zones for these types of resources.

Since no below ground testing was conducted, the identification of archaeological resources was limited to a visual above ground inspection. This resulted in the location of one possible prehistoric rockshelter site and one historic stone foundation within the Project's APE. These sites are discussed below; however, more detail can be found in the archaeological reconnaissance survey report (McBride 1990).

The potential prehistoric rockshelter site was represented by a series of glacially deposited boulders which formed an overhanging shelter. It was situated on the east side of the river at the lower end of the impoundment. On August 28, 2011, a historic flood caused by ten inches of rain from Tropical Storm Irene devastated the area near the Gardner Falls Project. On February 10, 2012, an employee of EP Energy (former owner of the project) conducted the annual visual site inspection for the archaeological site and no sign of the rockshelter was found. On June 4, 2012, EP Energy notified FERC of the change and requested that the original Cultural Resources Management Plan be updated to reflect this change. On January 7, 2013, FERC approved (with concurrence from the Massachusetts Historical Commission) removing the requirements to monitor and report on the potential prehistoric rock shelter from the CRMP for the Gardner Falls Project. Chapter 3 and 5 of the CRMP were updated in March 2020 to reflect this change.

The historic stone foundation is located on the west side of the river at the upper end of the impoundment. It may represent the remains of a temporary structure built to house workers during construction of the Boston and Maine Railroad. No subsurface testing has been conducted to confirm this use of the foundation nor its temporal affiliation. No further archaeological intensive level survey work was recommended, however, because the current mode of project operation was not determined to have any impact on this historic resource.

Further archaeological investigations would be needed to assess the potential National Register eligibility of the identified archaeological site areas; however, no such investigations are recommended at this time (see Chapter 5-Action Plan). An evaluation of the potential significance of these sites cannot be made with the limited information collected to date. This evaluation would consist of archaeological intensive level survey work that includes background research and subsurface testing. Since no assessment can yet be made as to the significance of these archaeological sites at the Gardner Falls Project, they are to be treated as historic properties eligible to the National Register until further archaeological investigations are completed.

3.4 Summary of Expected Archaeological Resources

The 1990 reconnaissance survey identified several areas of high prehistoric archaeological sensitivity within the Gardner Falls Project. These areas are located on the small flood plains and terraces situated along both the east and west sides of the northern end of the Project impoundment (about 2,099 feet along the east side and 2,247 feet along the west side). The remainder of the river and impoundment shoreline

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have low archaeological potential due to steep slopes and or disturbance. High archaeological potential has also been assigned to a higher-level terrace located east of the river and north of the powerhouse.

The reconnaissance survey reported that a wide range of prehistoric site types could be present in these sensitive areas of the Project. These sites would reflect both long-term seasonal use as well as more specialized temporary and tasks-specific habitations. The results of the reconnaissance survey strongly suggest that further intensive level archaeological survey, consisting of subsurface testing in the sensitive areas, could identify additional prehistoric resources ranging from the Archaic through Woodland periods. Historic site potential is limited to the reported stone foundation and a mortared stone block trestle associated with the nineteenth-century Boston and Maine Railroad. The latter historic feature is situated outside of the Project's APE, although it is considered to represent a potentially significant historic engineering resource. No other areas of historic archaeological sensitivity were identified during the reconnaissance survey. This is due to a lack of documented settlements or structures and visible remains.

3.5 Summary of Existing Real Property

Standing buildings and structures at the Gardner Falls Project consist of a concrete gravity dam, power canal, and powerhouse with an associated storage shed and tailrace. The dam is 337 feet long by 30 feet high and has an ogee type spillway. The dam was constructed with gravel fill and poured concrete walls. A row of 2-feet-high flashboards runs along the crest. Masonry abutments are located at either end. In 1908 an additional course of concrete was added to increase the height of the dam. The headgates were enlarged and motorized in 1915. In 1945, a concrete blanket was added to the downstream face of the ogee spillway.

The power canal measures 1300 feet long, 31 feet wide, and 15 feet deep. It is fed from a canal intake structure at the southwest corner of the dam. The only significant alteration to the canal was done in 1925, when the downstream end was widened to accommodate new generating units in the powerhouse. The powerhouse is an excellent example of Renaissance Revival-style architecture as it was applied to industrial and public works buildings during the late nineteenth and early twentieth centuries. It is a brick and concrete structure equipped with four active turbines with a rated capacity 00.58 MW. The powerhouse is constructed on a granite ledge, in a steep hillside on the south bank of the Deerfield River. The building has a two-tiered flat roof with an encircling parapet. A simple corbeled brick cornice runs around the base of the parapet. The exterior walls are brick on a raised rubble stone foundation. Doors and windows are set in round arch openings with three-course header brick and masonry keystone surrounds. The window and door bays are slightly recessed and are topped by a receding, stepped brick cap, and flanked by rectangular brick pilasters. A rectangular wood frame shed with a gable roof and wood clapboard siding is located to the northwest of powerhouse.

Originally a three-bay stone and brick building, the brick wall structure of the building was modified, and the size of the building doubled in 1913. The building was expanded to its present dimensions by a second addition in 1924. The interior of the building retains its historic spaces and most of the equipment dates from the period between 1904 and 1925.

The standing building and structures within the Gardner Falls Project have been determined eligible for inclusion in the National Register of Historic Places by the MASHPO (April 1990).

CHAPTER 4 LAND AND BUILDING USE GUIDE

This section of the CRMP describes land use practices and historic buildings and structures uses at the Gardner Falls Project. The land and building use guide provides information relating to the types of activities and processes which may affect these properties as a result of routine operations and maintenance as well as other undertakings such as existing and proposed public enhancements. The recognition of these potential impacts will allow the Project Owner to make informed decisions and consult with the MASHPO as necessary to ensure the consideration of actions affecting historic properties under their jurisdiction.

The following documents were used to assist in the original preparation of this section of the CRMP:

- Draft Recreation Plan (October 22, 1997);
- Draft Recreational Use Erosion and Sediment Control Plan (October 22, 1997);
- Draft Soil Erosion and Sediment Control Plan (February 10, 1993);
- Master Plan from the Application for New License filed December 23, 1991.

4.1 Management Responsibilities

The historic buildings and structures of the Gardner Falls Project are the dam, power canal, and powerhouse and its associated outbuildings and machinery. Located within an attractive natural setting on the scenic Deerfield River, these resources possess historical significance through their architectural and engineering design, integrity of function, and importance to the early development of hydroelectric power on the Deerfield River in the early twentieth century. The generally good condition of the resources is attributable to the value of the project in meeting local hydroelectric power needs and its continuous utilization and maintenance since it was first placed online in 1904.

All historic buildings and structures located at the Gardner Falls Project are currently owned, operated, and maintained by the Project Owner, Central Rivers Power, and the Project Operator, Ware River Power. The Project Owner and Operator also own and maintain all lands enclosed by the project boundary as delineated in the application for new license filed December 23, 1991. The Project Operator is responsible for carrying out routine operations and maintenance. The Project Owners are involved with securing environmental permitting for proposed activities within project lands. No maintenance or repair work that is likely to alter, in any substantial way, the character or integrity of a historic structure nor any proposed activity that is likely to alter archaeological sites and sensitive lands should be undertaken without first consulting the Project Operator and Project Owner.

4.2 Review of Routine Project Operations

Flows to the Gardner Falls Project are regulated by releases from the Deerfield No.3 Development of Great River Hydro, LLC's Deerfield River Project (FERC Project No. 2323), located about one mile upstream. Central Rivers Power utilizes the flows in a pond-and-release mode, fluctuating the reservoir up to 1.8 feet on a daily basis to match, insofar as possible, the inflows from upstream to the hydraulic capacity of the project turbines, which is 1,420 cfs.

The project is typically operated from a remote location but can be operated manually from the site. There are five generating units and one water-driven exciter which pre-date 1926. One generating unit and the exciter were retired in place. The four operating units are controlled by float sensors that activate the units depending on water levels at the power canal intake on the impoundment. As flows vary at the project, the number of turbines operating, and the duration of operation change, increasing or decreasing the amount of

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annual generation produced. When necessary, during extreme high water periods and-or floods, the powerhouse may be manned 24 hours per day.

4.3 Review of Existing and Proposed Public Enhancements

WMECO's public enhancement program at the Gardner Falls Project began in 1962 when the first recreational plan for the facility was developed as part of the original licensing of the project. The facilities outlined in the original plan were constructed in 1966 and 1967 and have been continuously maintained and improved by WMECO and subsequent owners to the present. The initial facilities were developed to provide convenient access to the Deerfield River, primarily for fishing and picnicking. Since that time, the area has become popular for a number of other recreational activities, including walking, jogging, hiking, canoeing, and kayaking. In response, WMECO developed several other areas within the project boundaries for recreational use and plans for further public enhancements have been made. In addition, WMECO was responsible for addressing the impacts of its operation on the Deerfield River concerning issues such as water quality, sediment and erosion control, and fish and wildlife, as they affect the public's usage of the river. Areas that WMECO developed for public enhancement within the Gardner Falls Project include Wilcox Hollow, the impoundment, the power canal, and powerhouse areas.

4.3.1 Existing Recreational Facilities

Existing recreational facilities at Gardner Falls are accessed via an access road off Massachusetts Route 2 on the Shelburne side of the river, and by the access road to the powerhouse on the Buckland side. The area developed for recreational activities on the Shelburne side is known locally as Wilcox Hollow. The access road consists of a dirt and gravel lane that winds down the side of a steep hill to a small, graded parking area and continues to a canoe launching and fishing area. Recreation facilities on the Buckland side of the river include a picnic area located on the bluff above the Gardner Falls impoundment. Recreational facilities there include gravel parking areas and picnic tables. The access road to the powerhouse and a nature trail along the canal are popular among residents for walking and jogging.

4.3.2 Proposed Recreational Facilities

During its relicensing effort, WMECO proposed a variety of recreational enhancements designed to promote public use of the facilities grounds. They included the following:

4.3.2.1 *Impoundment Area*

- Provide a launch and landing area for hand-carried boats, canoes and kayaks;
- Improvements to parking area; and
- Signage to identify recreational facilities and provide general information.

4.3.2.2 *Picnic Area*

- Install signage to identify recreational facilities and provide general information; and
- Add handrail to existing stairs from picnic area to the impoundment.

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4.3.2.3 *Nature Trail Along Canal*

- Develop a self-guided nature trail using existing footpath along the canal and powerhouse access road;
- Install additional signage to mark the trail and identify recreational facilities and provide general information;
- Improve or replace existing footbridges over streams and brooks as required; and
- Construct new footbridges where necessary.

4.3.2.4 *Powerhouse Area*

- Install additional signage to identify recreational facilities and provide general information; and
- Improve existing trail between the powerhouse access road and nature trail along the canal.

4.3.2.5 *Wilcox Hollow Area*

- Improve safety of access road by asphalt paving a short portion at the road's junction with Route 2
- Install new sign at the entrance denoting Wilcox Hollow;
- Remove a small amount of scrub brush at entrance to enhance visibility of the access road;
- Erect a 150 Foot-Long timber guard rail at the entrance to prevent vehicles from entering the adjacent brook;
- Establish a parking area for 25-30 cars along access road on land owned by the Commonwealth of Massachusetts;
- Install additional signage to identify recreational facilities and provide general information;
- Install restroom facilities;
- Erect a formal launch and takeout area for hand-carried boats, canoes, and kayaks in place of existing gravel ramp; and
- Enlarge existing turn-around at the end of the access road to provide a formal loading and unloading area.

4.3.3 *Downstream Fish Passage Facility*

WMECO proposed and built a downstream fish passage facility for out-migrating Atlantic salmon smolts and to provide minimum flows to the bypassed reach of the riverbed. This project necessitated the construction of a guidance structure, in the form of a boom or louver panel, which is installed upstream of the dam. This structure was anchored to the dam and to the existing concrete and granite jetty adjacent to the canal headgate structure. The installation of a steel gate at the dam required an approximately six-foot wide cut at its crest, adjacent to the west abutment. In 2016, the then current licensee, Essential Power Massachusetts, requested permission from FERC to discontinue operation of the downstream fish passage facilities (Article 403) and suspend monitoring of the facilities (Article 404) since the Massachusetts DFW had determined that it was no longer necessary for hydroelectric project owners on the Deerfield River to operate downstream fish passage facilities. FERC approved the request to discontinue operating and monitoring the facility on May 16, 2016. Please note that the

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fish passage structure was destroyed by a significant ice jam during the winter of 2018 and has not been replaced.

4.4 Historic Buildings and Structures

Continued operation of the Gardner Falls Project depends on a consistent regimen of maintenance, repair, and necessary updating of equipment to keep the plant operating efficiently by today's standards. In general, such activities do not have negative impacts on the overall historic character of the complex. Activities, such as masonry repair, painting, and the replacement in-kind of equipment, are necessary to maintain the historic integrity of the plant and help the Project Owners accomplish the mission of providing economical hydroelectric power. Exceptions occur when physical characteristics that contribute to the historic character of the resource are removed or altered in a fashion that destroys its historic value. Examples of changes that would have an impact on the historic integrity of the facility are the removal of existing historic period machinery, use of incompatible materials in repair or replacement of existing architectural features, or razing a historic building or structure.

4.4.1 Types of Activities That Do Not Impact Historic Buildings and Structures

The following is a list of routine operations and maintenance activities that may be required to maintain the present capabilities of the Gardner Falls Project, as well as public enhancement activities proposed by WMECO within the ten-year time frame following the development of the original plan. WMECO concluded that the following activities would have no significant impact on the historic or architectural integrity of the resources, and therefore, if these maintenance activities were necessary to complete, they would not require consultation with the MASHPO.

4.4.1.1 *Reservoir Operation*

- The fluctuation of 1.8 feet in water level associated with the routine operation of the Gardner Falls Project

4.4.1.2 *Dam and Spillway*

- Concrete repair and restoration of face abutments
- Flashboard repair and/or in-kind replacement

4.4.1.3 *Canal*

- Dredging
- Embankment clearing and repair
- Concrete and masonry repair and restoration

4.4.1.4 *Intakes, Headworks, Gates, Hoists, Cranes, Trash Rakes*

- Concrete and masonry repair and restoration of intake and headwork structures
- Repair of existing gates and gate seals
- Repair of trash rakes
- Repair of mechanical equipment

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4.4.1.5 Roads and Bridges

- Painting of bridge steel
- Repair and/or replacement of wooden bridge deck
- Road paving and repairs

4.4.1.6 Powerhouse and Miscellaneous Structures

- Concrete and masonry repair and restoration
- Repointing of brickwork using appropriate repointing materials
- Window frames and lights repair
- Wood trim and siding painting
- Roof repair and/or in-kind replacement

4.4.1.7 Electrical, Control, and Supervisory Equipment

- Switchgear, breakers, capacitors, transformers, exciters control panels, relays, ammeters, volt meters repair and/or in-kind replacement

4.4.1.8 Generating Equipment

- Repair of turbines, generators, governors, wicket gates
- Periodic rewinding of generators
- Shaft alignment

4.4.1.9 Recreational Improvements

- The emplacement of hiking, nature, or interpretive trails and signage
- Repair or replacement of existing footbridges
- Improvements in areas that do not contain historic buildings and/or structures

4.4.2 Types of Activities That Could Potentially Impact Historic Buildings and Structures

Routine operations and maintenance activities and public enhancement activities that have the potential to impact historic resources are subject to review by the MASHPO in compliance with Section 106 of the National Historic Preservation Act, as amended, following the procedures presented in Chapter 5. In general, activities requiring replacement other than in-kind replacement, new construction, and/or total or partial demolition of structural elements are considered to have a potential adverse effect on historic properties. The following examples provided do not constitute an exhaustive list of activities that would require mitigation but are provided to alert the Project Operator and Project Owner to the types of activities that would be subject to Section 106 review.

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4.4.2.1 Dam and Spillway

- Removal of mechanical equipment in place for more than fifty years, including sluice gates or lifting mechanisms
- Altering the height of the dam through the addition or removal of concrete

4.4.2.2 Canal

- Altering the existing dimensions of the canal through widening or narrowing
- Changes in the height or width of the canal walls

4.4.2.3 Intakes, Headworks, Gates, Hoists, Cranes, Trash Rakes

- Removal of equipment in place for more than fifty years

4.4.2.4 Roads and Bridges

- Removal or widening of the bridge traversing the canal on the powerhouse access road

4.4.2.5 Powerhouse and Miscellaneous Structures

- Removal of original architectural details such as woodwork or ornamental features
- Application of synthetic or other non-compatible materials, such as stucco or paint, to exterior brick walls
- Enlargement, reduction, or elimination through filling of window and door openings
- Addition of new window and door openings
- New construction additions to the existing buildings
- Permanent partitioning of interior spaces

4.4.2.6 Electrical, Control, and Supervisory Equipment

- Removal of equipment, including transformers, exciters, or slate control panels, that has been in place for at least fifty years

4.4.2.7 Generating Equipment

- Removal of equipment, including turbines, generators, governors, and wicket gates, that has been in place for at least fifty years

4.4.2.8 Fish Passage Facility

The installation of a fish passage facility will affect the dam. Several changes have been made to the dam since it was constructed in 1904. In 1908, an additional course of concrete was added to increase the height of the dam. The headgates were enlarged and motorized in 1915. In 1945, a concrete blanket was added to the downstream side of the dam. The proposed insertion of a gate to provide minimum flows and a fish passage, however, would constitute the first major alteration to the dam since its period of significance (1904-1948). Consultation procedures are outlined in Chapter 5.

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4.5 Archaeological Resources and Land Use Patterns

The Project's APE includes (a) lands enclosed by the project boundary as delineated in the application for new license filed December 23, 1991, and (b) lands or properties outside the project boundary where project operation or project-related recreational development or use may cause changes in the character or use of Historic Properties, if any exist. These lands were the subject of an archaeological reconnaissance survey (McBride 1990) and it was determined that the current mode of operation is not expected to impact any known or potential archaeological resources within or outside of the project boundary. The MASHPO concurred with this determination (MASHPO letter to NUSCO, January 13, 1990).

4.5.1 Types of Activities That Do Not Impact Archaeological Resources

The following is a list of routine operations and maintenance activities and existing and proposed public enhancement activities that occur or may occur at the Gardner Falls Project. The following activities should produce no significant adverse impacts to known and expected archaeological resources, and therefore do not require consultation with the MASHPO.

4.5.1.1 Reservoir Operation

The archaeological reconnaissance survey determined that areas of high archaeological potential, situated at extreme elevations in the eastern and southwestern portions of the Project's APE, will not be impacted by the fluctuation of 1.8 feet in water level associated with the routine operation of the Gardner Falls Project (McBride 1990:29). The MASHPO concurred with the finding of no effect on archaeological resources (MHC letter to NUSCO, July 13, 1990).

The 1990 survey also found no active erosion along the reservoir shoreline, which is characterized by heavy vegetation and steep bouldery and cobbly banks that are not susceptible to erosion and are unlikely to conceal archaeological resources. The steep, bouldery riverbank continues downstream of the dam, through the bypassed reach, and below the powerhouse, and includes some outcroppings of hard metamorphic bedrock. It was concluded that minimum flows would have a negligible impact on the bypassed reach when compared to the effect of storm- and snowmelt-related high flows that periodically pass through the reach.

4.5.1.2 Maintenance of Infrastructure

Maintenance of the infrastructure is described in the historic buildings section above. None of these activities will affect any archaeological resources, including canal dredging.

4.5.1.3 Recreational Facilities

Central Rivers Power continues to provide routine maintenance of the existing and new recreational facilities constructed by WMECO within the project boundary and the Wilcox Hollow parcel. The routine types of activities were determined to be unlikely to disturb archaeological resources as long as they are limited to previously disturbed areas. WMECO noted in the original plan that the construction of new recreational facilities in undisturbed areas could impact archaeological resources, and therefore, require consultation with the MASHPO prior to construction (see section below). Central Rivers Power has no proposed recreational facilities in undisturbed areas.

The emplacement of hiking, nature, or interpretive trails and signage intended for pedestrian use was determined not to affect archaeological resources as long as the following guidelines are followed:

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- a) the construction of the trail involves the mowing of existing vegetation with or without the overlay of mulch or other organic materials;
- b) the construction of the trail does not involve extensive grading, excavating, leveling of contours, etc.;
- c) the trail is maintained in such a way as to prevent erosion;
- d) no stairs, footbridges, overlook stations, rest stations, or other structures which would involve substantial ground disturbance are emplaced along the trail. This includes improvements to existing structures unless these improvements are contained within previously disturbed areas.
- e) Trail construction which does not meet the above criteria should be considered an undertaking and the potential effects to archaeological resources should be assessed in consultation with the MASHPO (see section below for recreational enhancement).

4.5.1.4 Fish Passage Facility

The fish passage facility was constructed by WMECO in previously disturbed areas that have been assigned a low archaeological sensitivity. The fish passage structure was destroyed by a significant ice jam during 2018 and was not replaced.

4.5.1.5 Activities in Areas Designated Low Archaeological Sensitivity

Earthmoving and/or construction activities in areas at the Gardner Falls Project that have been defined as having low archaeological sensitivity should not affect archaeological resources. These areas include borrow pits, former ponds, or other areas that have been previously excavated or dredged. The reconnaissance survey identified areas of low and high archaeological sensitivity based on environmental locational attributes, identified sites, and degree of previous disturbance. Low sensitivity areas are severely disturbed or possess unfavorable environmental characteristics such as steep slope. These areas are not considered likely to contain potentially important prehistoric or historic archaeological resources. Activities in low sensitivity areas could proceed after review by the Project Owner. This includes proposed recreation enhancements that are included in the draft Recreation Plan dated October 22, 1997.

4.5.2 Types or Activities That Could Potentially Impact Archaeological Resources

Routine operations and maintenance activities and public enhancement activities that have the potential to impact archaeological resources are subject to review by the MASHPO in compliance with Section 106 of the National Historic Preservation Act, as amended, following the procedures presented in Chapter 5. In general, activities proposed in areas of high archaeological sensitivity are considered to have a potential adverse effect on historic properties. The following activities have the potential to impact archaeological resources contained within the Project's APE. The examples provided are not meant to be an exhaustive list of activities subject to Section 106 review but are based on the Master Planning documents compiled to date for the Project.

4.5.3 Recreational Improvements

WMECO originally proposed three recreational improvement projects that are located within or in proximity to areas identified as containing archaeological sites and having a high archaeological sensitivity. These consist of 1) a new canoe launch on the impoundment at Wilcox Hollow, including

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access for the disabled; 2) a self-guiding nature trail with signs along the power canal; and 3) an improved canoe access to the impoundment near the project. The Project Owner and MASHPO should consult regarding each of these projects' potential to impact archaeological resources using the cultural resources base map (sheets 1-5) prepared as part of the archaeological reconnaissance survey.

These recreational projects were completed by WMECO and are maintained by the current licensee, Central Rivers Power. Central Rivers Power is not planning any new recreational projects.

4.5.4 Roads and Parking Area Construction

The construction and expansion of roads and parking areas involves grading, leveling, and excavation that could damage the upper cultural strata, or the entirety, of archaeological sites. Furthermore, the emplacement of pavement renders any existing, intact cultural remains beneath it inaccessible to future archaeological investigations. This includes roads and parking areas constructed and expanded as part of the proposed recreational enhancements as described above.

4.5.4.1 *Shoreline Modification*

While no archaeological resources have been identified along the Project's reservoir and river shorelines, there remains a possibility that any archaeological sites which might exist in these areas could be adversely affected by shoreline modifications. The use of erosion control and bank stabilization techniques along the impoundment and river shoreline would involve prior ground slope preparation that could alter the original ground surface. These measures include the erection of silt fences and re-vegetation of land clearances and ground disturbances related to the above-described recreational enhancement projects.

The following activities were not proposed per se in the original Project's ten-year plan; however, they are activities that would require review by the MASHPO. They have been included in the CRMP to provide a comprehensive reference list for the Project Owner, in the event that proposed activities are amended to include any of the following:

4.5.4.2 *New Construction*

This class of impacts includes the construction or enlargement of large-scale projects such as new structures and support buildings to the existing powerhouse complex. They involve substantial excavations, grading, and landscape alterations for building foundations, parking areas, and other site improvements including landscaping. These types of activities are very destructive to archaeological sites and sensitive areas. None of these types of projects were originally identified by WMECO in the 1998 CRMP or planned by the current Project Owners.

4.5.4.3 *Other Earthmoving Activities*

The excavation of soil for fill dirt (borrow pits), construction of ponds, leveling of contours, dredging, etc. is destructive to archaeological sites since these activities remove soil horizons that could contain cultural deposits. Dredging along the reservoir and river shorelines could affect archaeological sites that are inundated but may retain intact deposits. In addition, the emplacement of large amounts of fill or soil for the construction of levees, dikes, etc. can also adversely impact archaeological sites in that the weight of the soil can cause compression related damage to cultural strata.

CHAPTER 5 ACTION PLAN

5.1 Overview of the Action Plan

The original Action Plan outlines procedures for complying with the stipulations included in the Gardner Falls Project Programmatic Agreement, including Section 106 of the National Historic Preservation Act. With the exception of the section entitled “Archaeological Site Monitoring”, the original technical content of this chapter was not changed as part of the April 2020 update.

Specifically, the original Action Plan addressed the following:

- Protection of historic properties and mitigation of unavoidable adverse effects
- Completion of identification of historic properties within the Project's APE consisting of intensive
- archaeological survey and evaluation for proposed actions
- Monitoring of archaeological sites and sensitive areas
- The unanticipated discovery of previously unidentified properties and human remains
- Public interpretation of historic and archaeological values of the project

Specific procedures for WMECO to accomplish these stipulations are outlined below.

5.2 CRMP Integration into Master Planning Process for FERC Relicensing

The integration of the CRMP into the Project's Master Planning process for FERC relicensing is imperative to historic properties being considered in all project activities. WMECO prepared a draft Recreation Plan (October 22, 1997), draft Soil Erosion and Sediment Control Plan (February 10, 1993), and draft Recreational Use Erosion and Sediment Control Plan (October 22, 1997). Monitoring of soil erosion within the Project boundaries continues and significant shoreline erosion will be reported to FERC. In addition, Central Rivers Power continues to perform annual monitoring of the known archaeological resources (stone foundation). At this time, Central Rivers Power does not anticipate any further changes to the Project that would necessitate an archaeological or historic survey/evaluation. It is the intent of Central Rivers Power to ensure that historic properties are not inadvertently destroyed as a result of Project operations and maintenance activities.

The Project Owner and any other staff involved in overseeing activities that may affect historic properties within the Gardner Falls Project APE should be adequately trained in compliance requirements and the use of the CRMP. Attendance at an ACHP Section 106 training course is recommended. The CRMP is updated as needed to remain current with changes to the cultural resources inventory and National Register status of historic properties contained within the Gardner Falls Project. The plan should be reviewed and updated by the Licensee in consultation with the MASHPO, FERC, and ACHP as needed.

5.3 Protection of Historic Properties and Mitigation of Unavoidable Adverse Effects

Section 106 of the National Historic Preservation Act, as amended, and its implementing regulations (36 CFR 800) directs Federal agencies to identify National Register listed or eligible resources and assess the effects of the agencies' actions on them. If an undertaking may result in adverse effects to historic properties, the Federal agency consults with the SHPO to identify measures by which such adverse effects may be avoided, minimized, or mitigated. In some instances, the Federal agency may require the recipient of funds or license to carry out measures to assist the agency to comply with Section 106. For the Gardner Falls Project, the PA notes that FERC will ensure that, upon a license issuing for this Project, the Licensee will implement the stipulations of the agreement.

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The procedures proscribed in Section 106 are referred to as the "Section 106 process" and are set forth in regulations issued by the ACHP, "Protection of Historic Properties" (36 CFR 800). The regulations emphasize consultation among FERC, MASHPO, WMECO, and other interested parties.

The ACHP's Section 106 regulations are set forth in a process of five basic steps, as follows:

5.4 Identification and Evaluation

This step involves the identification of all historic properties included or eligible for inclusion on the NRHP that are within the Gardner Falls Project APE. These lands were the subject of an archaeological reconnaissance survey (McBride 1990) and it was determined that the current mode of operation is not expected to impact any known or potential archaeological resources within or outside of the Project boundary. The MASHPO concurred with this determination (MASHPO letter to NUSCO, January 13, 1990). The buildings and structures within the Project APE were also surveyed and determined eligible for the National Register eligible by the MASHPO (April 1990). As outlined in Chapter 4, for any ground disturbing activities in areas of high to moderate archaeological sensitivity, additional survey and evaluation must be undertaken. The procedures for additional archaeological investigations are outlined below in "3. Conduct Intensive Archaeological Survey and Evaluation for Proposed Actions".

5.5 Effect Determination

The regulations provide specific criteria for determining whether an alternative or action will have an effect, and the nature of the effect, as follows:

- No Effect: An action will have no effect of any kind, either harmful or beneficial, on the NRHP property.
- No Adverse Effect: An action could have an effect, but the effect will not be harmful to those characteristics that qualify the property for inclusion in the NRHP.
- Adverse Effect: An action is considered to have an adverse effect when the effect on a property may diminish the characteristics which make it eligible for the NRHP, including the integrity of the property's location, design, setting, materials, workmanship, feeling, or association.

Chapter 4 also identifies activities that have the potential to adversely affect historic properties and require consultation with the MASHPO. In general, activities requiring replacement other than in-kind replacement, new construction, total or partial demolition of structural elements, and ground disturbing activities within areas identified as having high archaeological sensitivity are considered to have potential adverse effect on historic properties.

5.6 Consultation

When the need for activities described above and in Chapter 4 is identified, the Project Owner will initiate consultation with MASHPO to consider ways to avoid, minimize or mitigate potential adverse effects. As a documentary basis for this consultation, the Project Owner will prepare an alternatives analysis, in detail commensurate with the nature and scope of the proposed activity, that is consistent with and based upon the internal evaluation which Central Rivers Power normally undertakes for its projects. The alternatives analysis, which will be submitted to the MASHPO and copied to FERC for informational purposes, will include:

- Purpose and need for the project
- Description of the affected historic property, fabric, or feature

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- Description of the proposed activity and its anticipated effect upon the historic property and upon the historic character of the Gardner Falls Project as a whole
- Evaluation of alternatives and identification of mitigation measures as described below.

If the MASHPO does not respond within 30 days, The Project Owner will proceed with the proposed action. The alternatives analysis will consider at least two of the following:

- No action
- Repair of deteriorated or damaged historic fabric or feature
- Replacement of deteriorated or damaged historic fabric or feature with new fabric or feature that duplicates the old in terms of materials, design, size, color, texture, and functional characteristics (in kind replacement).
 - (a) Replacement of deteriorated or damaged historic architectural fabric utilizing materials that match the old in terms of design, color, texture, and other visual qualities.
 - (b) Replacement of deteriorated or damaged operational features with features that are similar to those being replaced in terms of scale and functional characteristics, and that can be installed with minimal or no structural alteration.
- Removal of feature from active service, with appropriate measures to ensure structural/materials stability in situ while maintaining the feature in its essential form as at present.
- New installation or construction that avoids damage to or destruction of historic fabric or features, and/or that is compatible with terms of design, materials, scale, and color with those characteristics of the Gardner Falls Project as a whole.
- New installation or construction with substantial alteration or loss of original feature, accompanied by recordation and salvage and storage for future use.

Each alternative will be evaluated in terms of at least two of the following:

- Safety of plant personnel and/or the public
- Operational requirements
- Historic preservation objectives
- Short and/or long-term cost considerations
- Requirements imposed by public agencies other than FERC

An alternative may be rejected if:

- It fails to meet operational requirements (including Project generation)
- It imposes unacceptable economic constraints
- It would result in, or fail to resolve, severe operational and/or safety problems
- It would result in unresolvable conflict with requirements of other public agencies
- All of the above are applicable to some degree

Measures by which an adverse effect may be mitigated include, but are not limited to:

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5.7 Historic American Buildings Survey/Historic American Engineering Record

The Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER) was established by the National Park Service with the intention of compiling a record of America's historically and architecturally significant buildings, engineering, and industrial resources. HABS/HAER documentation is often selected as an option for mitigating adverse effects of Federal undertakings in compliance with Section 106. Such mitigation entails photographic, cartographic, and written documentation of the property that will be adversely affected by a proposed undertaking. Any proposed undertaking that is determined, in consultation with the MASHPO, to have an unavoidable adverse effect on significant historic architectural or engineering features at the Gardner Falls Project will likely require that HABS/HAER documentation be completed before the undertaking is allowed to proceed. The responsibility for determining the appropriate level of documentation for the affected properties is vested in the Chesapeake/Allegheny System Support Office of the National Park Service.

5.8 Data Recovery

In the event that avoidance or preservation of an archaeological site proves to be unsuitable, then data recovery through excavation accompanied by documentation and archival research is the usual means of acquiring data, and thereby mitigating the loss of the historic property. The data recovery efforts must meet Federal standards as outlined in the *Secretary of the Interior's Standards and Guidelines: Archaeology and Historic Preservation*, Federal Register (NPS 1983).

- Agreement and Council Comment: If agreement is reached among the MASHPO, FERC, and Central Rivers Power, a MOA outlining stipulation to eliminate, minimize, or mitigate the Project's adverse effects is drawn up and signed by the parties. If an agreement is not reached, formal comments of the ACHP are requested. Acceptance of the MOA by the ACHP and implementation of its terms by Central Rivers Power on behalf of FERC satisfies the requirements of Section 106.
- Proceed: Central Rivers Power, in consultation with FERC, either carries out the terms of the MOA or considers the ACHP's formal comments in making its final decisions about whether and how to proceed with the action.

5.9 Conduct Intensive Archaeological Survey and Evaluation for Proposed Action

It is not deemed necessary at this time to complete the identification and evaluation of archaeological sites that may be eligible to the National Register of Historic Places. The 1990 reconnaissance survey resulted in the determination that current Project operations are not impacting known or expected resources. The proposed minimum flow releases through the bypassed reach are also not likely to adversely affect archaeological sites or sensitive areas.

Chapter 4 identified proposed actions which have the potential to adversely impact archaeological resources within the Project's APE. The Licensee should consult with the MASHPO to determine the need for and scope of intensive archaeological survey to determine whether any potentially significant archaeological resources may be impacted by these proposed actions. Should intensive archaeological surveys conducted for proposed actions conclude with recommendations for further study, the Licensee will work in conjunction with the MASHPO to prepare a plan and scope of work for archaeological site examination. These investigations are designed to determine site age, boundaries, internal complexity, and physical integrity needed to evaluate a site's eligibility to the National Register of Historic Places.

If the Licensee, after consultation with the MASHPO, undertakes site examination investigations, and concludes that a site is National Register eligible and is, or will be, adversely affected by the proposed action, the Licensee will prepare and present a plan for mitigation to minimize the adverse effect. If

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avoidance and preservation in place is not possible and archaeological data recovery is required, the Licensee will develop a scope of work for review by the MASHPO and implement a data recovery program.

All archaeological survey, site examination, and data recovery work will be conducted by a qualified archaeologist who meets the requirements set forth in the Secretary of the Interior's *Standards and Guidelines for Archaeology and Historic Preservation* (NPS 1983). Furthermore, all archaeological investigations will be conducted in a manner consistent with the Secretary of the Interior's *Standards and Guidelines for Identification and Archaeological Documentation* (NPS 1983) and *Public Planning and Environmental Review: Archaeology and Historic Preservation* (MHC 1979), and will take into account the National Park Service publication, *The Archaeological Survey: Methods and Uses* and the ACHP's publication, *Treatment of Archaeological Properties* (ACHP 1980).

These archaeological investigations will also include procedures to ensure that Native Americans are consulted regarding access to sacred sites and when future access may be restricted or when adverse effects to the physical integrity of sacred sites may occur. The initial point of contact for Native American consultation in Massachusetts is the Commission on Indian Affairs. Other interested parties include local historical societies and commissions in the towns of Buckland and Shelburne and local residents who may be knowledgeable about the prehistory and history of the area. The above-named organizations should be contacted by the Project Owner at the onset of any archaeological investigations conducted within the Project. This contact should be in the form of written correspondence stating the nature and schedule of the investigation. Follow-up phone conversations may be necessary during the course of the research and field activities. These organizations should be provided with copies of the final CRMP as well as copies of all technical reports prepared for previous and subsequent cultural resources investigations.

5.10 Archaeological Site Monitoring

The Gardner Falls Project archaeological reconnaissance survey identified one potential prehistoric rockshelter site and one historic foundation. In addition, small flood plains and terraces situated along both the east and west sides of the river have a high potential to contain additional prehistoric archaeological resources.

The potential prehistoric rockshelter site was represented by a series of glacially deposited boulders which formed an overhanging shelter and was situated on the east side of the river at the lower end of the impoundment. On August 28, 2011, a historic flood caused by ten inches of rain from Tropical Storm Irene devastated the area near the Gardner Falls Project. On February 10, 2012, an employee of EP Energy (former owner of the Project) conducted the annual visual site inspection for the archaeological site and no sign of the rockshelter was found. On June 4, 2012, EP Energy notified FERC of the change and requested that the CRMP be updated to reflect this change. On January 7, 2013, FERC approved (with concurrence from the Massachusetts Historical Commission) removing the requirements to monitor and report on the potential prehistoric rock shelter from the CRMP for the Gardner Falls Project. Chapter 3 and 5 of the CRMP were updated in March 2020 to reflect this change.

Archaeological sites and sensitive areas are continually subject to natural aging processes related to environmental conditions and can be disturbed by looting and vandalism. Since these sites and sensitive areas are to be treated as historic properties until further intensive survey and evaluations are conducted, the Licensee should implement an archaeological monitoring program to ensure adequate site protection and preservation measures as needed.

The archaeological monitoring should consist of an annual visit to recorded archaeological sites in order to determine the presence, effects, and extent of any existing or ongoing impacts, such as erosional forces, looting, and vandalism. Any significant sites which have been protected by some means or technology

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should also be monitored in order to assess the effectiveness of the protective measures used. In addition, periodic monitoring of the reservoir and river shorelines is recommended to allow for the identification of general or localized changes in erosion patterns which might occur, subsequent site assessment for archaeological resources which might be present, and formulation and implementation of appropriate mitigative measures such as preservation or data recovery.

Examples of preservation measures that could be adopted by the Licensee for archaeological sites and sensitive areas contained within the Gardner Falls Project include:

- Bank stabilization in areas of known archaeological sites and sensitivity;
- Revegetation of areas of heavy public utilization for soil stabilization;
- Site camouflage techniques;
- Non-destructive land use practices;
- Emplacement of signs regarding illegality of site looting and vandalism;
- More effective law enforcement;
- Public education.

Several of these preservation measures are further discussed below in "Public Interpretation of Historic and Archaeological Values of the Project"

5.11 Unanticipated Discoveries Including Previously Unidentified Properties and Human Remains

When an archaeological site is discovered during the implementation of a proposed action or during routine operation and maintenance, the Licensee should:

- Halt all work in the vicinity of the discovered remains. The site/remains should be assumed to be eligible for listing in the National Register of Historic Places and protected until a formal determination of eligibility can be made.
- Notify the MASHPO.
- Take all reasonable steps to ensure that the discovery is protected and undisturbed until it can be assessed by the MASHPO.
- Section 106 procedures must be initiated if the site/remains is determined to be significant. The MASHPO will coordinate this process with the appropriate consulting parties.

If at any time during the course of Project operations or the implementation of a proposed action, human remains are encountered within the Project's APE, the appropriate county medical examiner and law enforcement agencies and the MASHPO must be notified according to the Massachusetts Unmarked Burial Law. The treatment and disposition of any human remains must take into account the consultation process outlined in the state's unmarked burial law and the ACHP's "Policy Statement Regarding Treatment of Human Remains and Grave Goods" (ACHP 1988).

If the remains are determined to be historic or prehistoric (over 50 years old), the MASHPO will initiate the consultation process outlined in the Massachusetts Unmarked Burial Law for archaeological sites. The human remains should not be removed, and care should be taken to protect them in place from any local activity that might result in their vandalism. Appropriate special permits must be acquired in consultation with the MASHPO in order to collect, excavate, or transport human remains.

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5.12 Public Interpretation of Historic and Archaeological Values of the Project

The public interpretation of the historic and archaeological values of this Project are addressed through local nature trails and signage.

REFERENCES CITED

Advisory Council on Historic Preservation

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- 1985 Guidelines for Local Surveys: A Basis for Preservation Planning. *National Register Bulletin* 24. National Park Service, Department of the Interior, Washington, D.C.

Northeast Utilities Company

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Western Massachusetts Electric Company [WMECO]

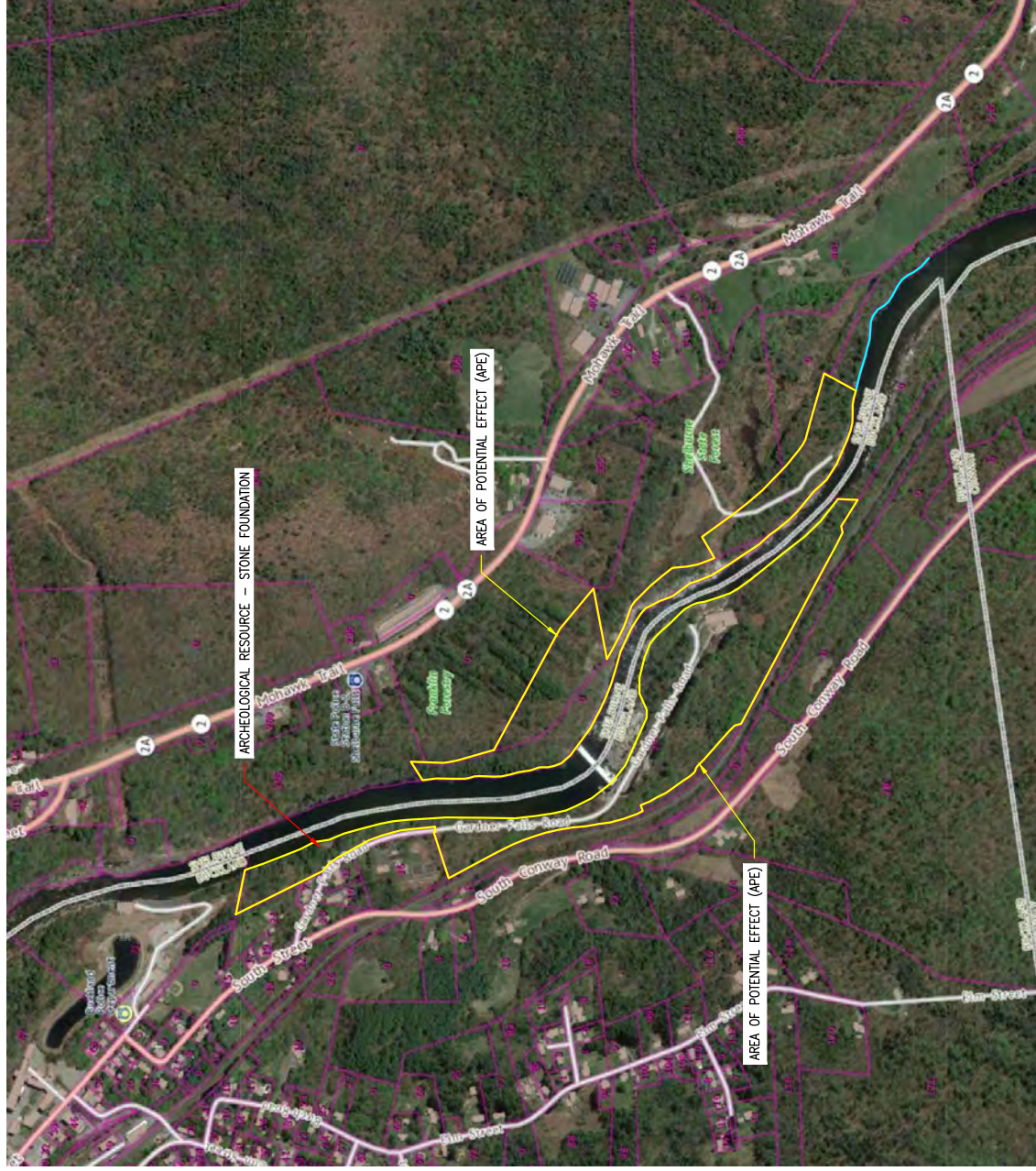
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- 1993 *Draft Soil Erosion and Sediment Control Plan*, dated February 10, 1993. On file, Northeast Utilities Service Company, Berlin, CT.
- 1997 *Draft Recreation Plan. Gardner Falls Hydroelectric Project*, dated October 22, 1997. On file, Northeast Utilities Service Company, Berlin, CT.
- 1997 *Draft Recreational Use Erosion and Sediment Control Plan. Gardner Falls Hydroelectric Project*, dated October 22, 1997. On file, Northeast Utilities Service Company, Berlin, CT.

APPENDIX A

GARDNER FALLS PROJECT MAP



				DWG.
				DATE
				Berkshire Environmental Consultants, Inc. 1450 East Street, Suite 6H, Pittsfield, MA 01201, 413.443.0130, Fax 413.443.1297
				DRAWN RZ
				CHK'D
				APP'D 1
				APP'D 2
				DATE 08/07/18
				SCALE NONE
				DWG.NO. FIGURE 1A
				SHEET 1 OF 1
				NO.
				REVISD BY
				SITE LOCUS CENTRAL RIVERS POWER MA, LLC GARDNER FALLS STATION (MAG 360018) 29 GARDNER FALLS ROAD. BUCKLAND. MA

[illegible]

APPENDIX B

GARDNERS FALLS PROJECT PROGRAMMATIC AGREEMENT

**PROGRAMMATIC AGREEMENT AMONG
THE FEDERAL ENERGY REGULATORY COMMISSION,
THE ADVISORY COUNCIL ON HISTORIC PRESERVATION,
AND THE MASSACHUSETTS STATE HISTORIC PRESERVATION OFFICER,
FOR MANAGING HISTORIC PROPERTIES
THAT MAY BE AFFECTED BY A LICENSE ISSUING TO
THE WESTERN MASSACHUSETTS ELECTRIC COMPANY
FOR THE CONTINUED OPERATION OF THE
GARDNERS FALLS HYDROELECTRIC POWER PROJECT
IN MASSACHUSETTS**

WHEREAS, the Federal Energy Regulatory Commission or its staff, on delegated authority (hereinafter, "Commission"), proposes to issue a new license to the Western Massachusetts Electric Company (hereinafter, "Licensee") to continue operating the Gardners Falls Hydroelectric Project, Project No. 2334 (hereinafter, "Project"), as authorized by Part I of the Federal Power Act, 16 U.S.C. Sections 791(a) through 825(r), as amended; and,

WHEREAS, the Commission has determined that issuing such a license for the Project may affect properties included in or eligible for inclusion in the National Register of Historic Places (hereinafter, "Historic Properties"); and

WHEREAS, Appendix A of this Programmatic Agreement provides a description of the Project, Historic Properties identified as of the date of this Programmatic Agreement, and anticipated effects; and

WHEREAS, the Commission has consulted with the Advisory Council on Historic Preservation (hereinafter, "Advisory Council") and the Massachusetts State Historic Preservation Officer (hereinafter, "SHPO") pursuant to 36 C.F.R. Section 800.13, of the Advisory Council's regulations (36 C.F.R. Part 800) implementing Section 106 of the National Historic Preservation Act (16 U.S.C. 470F; hereinafter, "Section 106");

WHEREAS, the Licensee has participated in the consultation and has been invited to concur in this Programmatic Agreement; and

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WHEREAS, the Commission will require the Licensee to implement the provisions of this Programmatic Agreement as a condition of issuing the new license for the Project; and

NOW THEREFORE, the Commission, the Advisory Council, and the SHPO agree that the Project will be administered in accordance with the following stipulations in order to satisfy the Commission's Section 106 responsibilities during the term of the Project's license.

S t i p u l a t i o n s .

The Commission will ensure that, upon a license issuing for this Project, the Licensee implements the following stipulations. All stipulations that apply to the Licensee will similarly apply to any and all of the Licensee's successors. Compliance with any of the following stipulations does not relieve the Licensee of any other obligations it has under the Federal Power Act, the Commission's regulations, or its license.

I. CULTURAL RESOURCES MANAGEMENT PLAN

- A. Within one year of a license issuing for this Project, the Licensee will file for the Commission's approval a Cultural Resources Management Plan (hereinafter, "CRMP") specifying how Historic Properties will be managed in the Project's area of potential effect (APE)¹, as defined in 36 C.F.R. Section 800.2(c), during the term of the license. During development of the CRMP, the Licensee will consult with the SHPO and interested persons, as defined in 36 C.F.R. Section 800.1(c)(2). The Licensee will seek the SHPO's concurrence in the CRMP.
- B. "Archeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines" (Federal Register, September 29, 1983, Vol. 48, No. 190, Part IV, pp. 44716-44740; hereinafter, "Secretary's

¹ For the purposes of this Programmatic Agreement, the Area of Potential Effect as defined in 36 C.F.R. Part 800, at Section 800.2(c), includes all the following: (a) lands enclosed by the project boundary as delineated in the application for new license filed December 23, 1991, and (b) lands or properties outside the project boundary where project operation or project-related recreational development or use may cause changes in the character or use of Historic Properties, if any Historic Properties exist.

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Standards") will be taken into account in developing the CRMP. The CRMP will be developed by or developed under the direct supervision of a person or persons who meet, at a minimum, the professional qualifications standards for architectural history and archeology in the Secretary's Standards (48 FR 44738-39).

C. The CRMP will, at a minimum, include principles and procedures to address the following:

- 1. completion, if necessary, of identification of Historic Properties within the Project's APE;**
- 2. continued use and maintenance of Historic Properties;**
- 3. protection of Historic Properties threatened by shoreline erosion, recreational developments, other project-related ground-disturbing activities, and vandalism;**
- 4. mitigation of unavoidable adverse effects on Historic Properties;**
- 5. treatment and disposition of any human remains that may be discovered, taking into account any applicable state laws and the Advisory Council's "Policy Statement Regarding Treatment of Human Remains and Grave Goods" (September 27, 1988, Gallup, NM);**
- 6. discovery of previously unidentified properties during project operations;**
- 7. public interpretation of the historic and archeological values of the Project;**
- 8. coordination with the SHPO and interested persons during implementation of the CRMP.**

II. CRMP REVIEW AND IMPLEMENTATION

- A. The Licensee will submit the CRMP, along with documentation of the views of the SHPO and interested persons, to the Commission for review and approval.**
- B. If the SHPO has concurred in the CRMP, and the Commission determines that the CRMP is adequate, the Commission will forward a copy of the CRMP to the**

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Advisory Council, which will have 30 days to review the CRMP.

1. If the Advisory Council does not object to the CRMP, the Commission will proceed to ensure that the Licensee implements the CRMP.
 2. If the Advisory Council objects to the CRMP, the Commission will consult with the Advisory Council in an effort to reach agreement on the CRMP. If agreement cannot be reached, the Commission will request that the Advisory Council comment pursuant to Stipulation IV.B, of this Programmatic Agreement.
- C. If the SHPO has not concurred in the CRMP, or the Commission finds the CRMP inadequate, the Commission will consult with the Licensee and the SHPO to seek agreement on the CRMP. If concurrence is not reached within 30 days, the Commission will request that the Advisory Council enter into consultation to seek agreement on the CRMP.
1. If agreement is reached on the CRMP, the Commission will forward a copy of the revised CRMP to the Advisory Council for review pursuant to Stipulation II.B.
 2. If agreement on the CRMP cannot be reached among the Commission, the SHPO, the Licensee, and the Advisory Council, the Commission or the SHPO will request that the Advisory Council comment pursuant to Stipulation IV.B, of this Programmatic Agreement; or the Advisory Council may terminate consultation and comment sua sponte.
- D. The Licensee will, on every anniversary of the license issuing, file a report with the Commission and the SHPO of activities conducted under the implemented CRMP.

III. INTERIM TREATMENT OF HISTORIC PROPERTIES

- A. Pending review and implementation of the CRMP pursuant to Stipulation II, the Licensee will consult with the SHPO and interested persons regarding the impact of the following:
1. all activities, including recreational developments, that require ground-disturbance;

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2. new construction, demolition, or rehabilitation of project facilities;
 3. active erosion of archeological sites due to project operations.
- B. Consultation will be in accordance with 36 C.F.R. Sections 800.4 and 800.5(a) through (c), with the Licensee acting as the Agency Official. If the Licensee and the SHPO agree that the activity will not adversely effect Historic Properties, the Licensee may proceed in accordance with any agreed-upon treatment measures or conditions.
- C. If either the Licensee or the SHPO determines that the activity will have an adverse effect, and the affected property is a National Historic Landmark, the Licensee will submit the matter to the Commission, which will initiate the process set forth at 36 C.F.R. Section 800.5(e). Otherwise, the Licensee and the SHPO will consult to develop a strategy for avoiding or mitigating such adverse effects. If the Licensee and the SHPO can reach agreement, the Licensee will implement the agreed-upon strategy. If they disagree, the Licensee will submit the matter to the Commission, which will initiate the process set forth at 36 C.F.R. Section 800.5(e).

IV. DISPUTE RESOLUTION

- A. If at any time during implementation of this Programmatic Agreement and the resulting CRMP, the SHPO, the Licensee, the Advisory Council, or an interested person objects to any action or any failure to act pursuant to this Programmatic Agreement or the CRMP, they may file written objections with the Commission.
1. The Commission will consult with the objecting party, and with other parties or interested persons, as appropriate, to resolve the objection.
 2. The Commission may initiate sua sponte such consultation to remove any of its objections.
- B. If the Commission determines that the objection cannot be resolved, the Commission will forward all documentation relevant to the dispute to the Advisory Council and request that the Advisory Council comment.

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Within 30 days after receiving all pertinent documentation, the Advisory Council will either:

1. provide the Commission with recommendations, which the Commission will take into account in reaching a final decision regarding the dispute; or
 2. notify the Commission that it will comment pursuant to 36 C.F.R. Section 800.6(b) and Section 110(1) of the National Historic Preservation Act, and proceed to comment.
- C. The Commission will take into account any Advisory Council comment, provided in response to such a request, with reference to the subject of the dispute, and will issue a decision on the matter. The Commission's responsibility to carry out all actions under this Programmatic Agreement that are not the subject of dispute will remain unchanged.

V. AMENDMENT AND TERMINATION OF THIS PROGRAMMATIC AGREEMENT

- A. The Commission, the SHPO, the Licensee, or the Advisory Council may request that this Programmatic Agreement be amended, whereupon these parties will consult in accordance with 36 C.F.R. Section 800.13, to consider such amendment.
- B. The Commission, the SHPO, or the Advisory Council may terminate this Programmatic Agreement by providing 30 days written notice to the other parties, provided that the Commission, the SHPO, the Licensee, and the Advisory Council consult during the 30-day notice period in order to seek agreement on amendments or other actions that would avoid termination. In the event of termination, the Commission will comply with 36 C.F.R. Sections 800.4 through 800.6, with regard to individual actions covered by this Programmatic Agreement.

Execution of this Programmatic Agreement by the Director, Office of Hydropower Licensing, pursuant to authority delegated by the Commission; the SHPO; and the Advisory Council; and subsequent implementation of this Programmatic Agreement evidence that the Commission has satisfied its responsibilities pursuant to Section 106 of the National Historic Preservation Act, as amended, for all individual actions carried out under the license. Provided, however, that unless and until the Commission issues a license for the project and this Programmatic Agreement is incorporated by reference therein, this Programmatic Agreement

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has no independent legal effect for any specific license
applicant or project.

FEDERAL ENERGY REGULATORY COMMISSION

By: 
Fred E. Springer, Director
Office of Hydropower Licensing

Date: AUG 09 1996**MASSACHUSETTS HISTORICAL COMMISSION**

By: _____ Date: _____
Judith McDonough, State Historic Preservation Officer

ADVISORY COUNCIL ON HISTORIC PRESERVATION

By: _____ Date: _____
Dr. Robert D. Bush, Executive Director

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CONCUR: WESTERN MASSACHUSETTS ELECTRIC COMPANY

By: 
R. G. Chevalier, Vice President

Date: 8/19/96

Appendix A To

PROGRAMMATIC AGREEMENT AMONG THE FEDERAL ENERGY REGULATORY COMMISSION, THE ADVISORY COUNCIL ON HISTORIC PRESERVATION, AND THE MASSACHUSETTS STATE HISTORIC PRESERVATION OFFICER, FOR MANAGING HISTORIC PROPERTIES THAT MAY BE AFFECTED BY A LICENSE ISSUING TO THE WESTERN MASSACHUSETTS ELECTRIC COMPANY FOR THE CONTINUED OPERATION OF THE GARDNERS FALLS HYDROELECTRIC POWER PROJECT IN MASSACHUSETTS

PROJECT, HISTORIC PROPERTIES, AND ANTICIPATED EFFECTS

The purpose of this appendix is to specify the factual basis of the Programmatic Agreement. Here, relevant facts concerning the Project and modifications to the Project proposed by the Licensee under the Commission's relicensing procedures are reviewed; Historic Properties subject to the Programmatic Agreement's stipulations are, in part, identified; and the anticipated effects of the new license issuing are disclosed.

The Licensee proposes to modify and continue operating and maintaining the 1904-vintage, 3.58-megawatt (MW) Project on the Deerfield River in Franklin County, Massachusetts. No Indian lands are involved. The Commission, the SHPO, and the Council have jointly determined and agree that the Project would affect Historic Properties and that certain aspects of the anticipated effect could be adverse, but that adverse effects can be taken into account through mitigation.

I. THE PROJECT

The Licensee applied to the Commission for its new license on December 23, 1991, proposing to continue operating and maintaining existing facilities according to a modified operating regime, and to improve recreational facilities. The Licensee supplemented the application with filings of additional information on March 16, 1992; December 11, 1992; February 11, 1993; and June 16, 1993.

Since its construction in 1904, the Project has produced electricity for distribution and end-use in the Licensee's service area which is located in the New England Power Pool Sub-Region of the Northeast Power Coordinating Council Region. The energy the project would continue to generate would help meet the need for power.

A. Project Historic Context

1. Hydromechanical Power on the Deerfield River

In 1880, the Deerfield River provided hydromechanical power for 117 mills using a total of 4,352 horsepower, or just over 37 horsepower per mill. Most were located above Readsboro, Vermont. There were only three improved water privileges from

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Readsboro downstream to the Connecticut River; these were located at Readsboro, and in Massachusetts at (the village of) Florida and Shelburne Falls. The lack of hydropower development on the lower Deerfield River at that time was credited to the river's fluctuating, wild, and unrestrained character. Except for the reach from Zoar to just downstream of Shelburne Falls, most of the steep-sided river valley was narrow and too confined to accommodate mills, much less villages. This was compounded by the flows which could vary drastically from 1,300 cubic feet per second (cfs) during a dry season to 28,000 cfs during freshets following heavy rains or during spring snow melt.

At Readsboro, the 160-foot-long log-crib dam provided water to operate hydromechanical grinders for making wood pulp to be used in paper making. In the village of Florida, Massachusetts, the Commonwealth of Massachusetts constructed a 2,000-foot dam during the construction of the Hoosac Tunnel (1855-1876). The dam and associated works produced 500 to 600 horsepower which was used to drive air compressors which delivered compressed air to the construction work in the tunnel. By 1880, after the tunnel was completed, the remaining water privilege at Hoosac Tunnel consisted of the dam, a small sawmill, and a one-third-mile-long power canal which supplied water to waterwheels at the machine shop of the Fitchburg Railroad; only a small portion of the waterwheels' 225-horsepower capacity was used.

The Lamson and Goodnow Manufacturing Company (Lamson & Goodnow) owned the entire water privilege for the dam at Shelburne Falls. Lamson & Goodnow's log dam, located on the granite ledges above the falls, provided water via a short raceway to two 125-horsepower overshot waterwheels and a 100 horsepower turbine in the Lamson & Goodnow mill. Lamson & Goodnow rented waterpower to other firms on the north side of the river. Frost and Bartlett used some of Lamson & Goodnow's waterpower for operating a gristmill and a combination sawmill-planing mill, a small tannery downstream of Frost and Bartlett occasionally used a few horsepower, and H.H. Mayhue used 25 horsepower in the manufacture of bits and gimlets.

**2. Earliest Hydroelectric Power on the Deerfield River
and Construction of the Gardners Falls Project**

The Gardners Falls Project was the first "large" hydroelectric facility constructed on the Deerfield River. Previously, in 1897, a waterwheel-driven generator operated by the Shelburne Falls Electric Light and Power Company (SFELPCO) provided the first electricity to the town of Shelburne. The Greenfield Electric Light and Power Company (GELPCO) constructed the Gardners Falls Hydroelectric Project in 1904 to produce

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electricity for the city of Greenfield. SFELPCO's system changed over to a steam-powered generator in 1908. In 1911, GELPCO acquired SFELPCO, closed the steam plant, and began providing electricity to Shelburne Falls from the Gardners Falls Project.

3. Construction of the Deerfield River Project

Meanwhile, preliminary surveys of the Deerfield River for potential hydroelectric development were made under the auspices of New England Power Company (NEP) between 1908 and 1911. The intention was for the Deerfield River to be an integral part of a proposed new hydroelectric power generating and transmission system for central New England. The earliest scenario considered was for the development of three hydroelectric plants. By 1911-1912, the plans had expanded and called for a system of two large storage reservoirs and eight dam and powerhouse developments.

The initial phase of the Deerfield River Project system (currently licensed as FERC Project No. 2334) started with construction of the Somerset storage reservoir. Completed in 1912, its purpose was to provide a predictable flow to downstream generating stations. Deerfield Nos. 2, 3, and 4 were the first three powerhouses. They are located in and near Shelburne Falls, and were designed as standardized units with only minor variations. Deerfield No. 2 was completed in 1912 and began generating in 1913, Deerfield No. 3 was completed in October 1912, Deerfield No. 4 followed, and by 1915, Deerfield No. 5, located at Hoosac, Massachusetts, was completed and operating. Originally developed as a frequency changing station, it soon converted into a full generating plant. The original dam and powerhouse have since been replaced.

With the construction of the Searsburg development in 1922, NEP initiated the second phase of its Deerfield River hydroelectric development in response to sharply increased regional power needs after World War I. The Harriman development, the largest in NEP's Deerfield River Project system, was completed in 1924 at Davis Bridge, Vermont. At the time, the Harriman dam was one of the largest earthen dams in the world. The Sherman development, a fully automated hydroelectric facility completed in 1927 near Rowe, Massachusetts, was the last facility constructed as part of NEP's original Deerfield River system.

4. Bear Swamp Project and Yankee Atomic Project

The Bear Swamp Project (FERC Project No. 2669) is a 610-MW pumped storage hydroelectric facility owned by NEP. The Bear Swamp Project, which began operation in 1974, uses an impoundment located about 4 miles down the Deerfield River from Deerfield No.

**Appendix A To
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Project No. 2334**

Page 4

5 as its lower reservoir. In its daily peaking operating scenario, the Bear Swamp Project, currently releases 125 cfs from July 1 to August 31 and 75 cfs from September 1 to June 30 from the lower reservoir at Fife Brook dam.

The Yankee Atomic Project is a nuclear power facility owned by Yankee Atomic Electric Company. Currently shut down, the Yankee Atomic Project, became operational in 1961 and used the Sherman development reservoir of the Deerfield River Project as its source of once-through cooling water.

B. Gardners Falls Project Facilities

The existing Project consists of: (1) a 337-foot-long by 30-foot-high concrete gravity dam with an ogee type spillway with 2-foot-high flashboards and masonry abutments; (2) a 3,200-foot-long impoundment with approximately 21 acres of surface area at normal full pond, 190 acre-feet of gross storage, and 37.2 acre-feet of usable storage; (3) a 1300-foot-long power canal 31 feet wide and 15 feet deep; (4) a brick and concrete powerhouse equipped with four active turbines with a rated capacity of 3.58 MW; and (5) appurtenant facilities.

C. Current Project Operation

The Licensee fluctuates the reservoir up to 1.8 feet on a daily basis in response to river inflow and project operation. The bypassed reach is 1,400 feet long and about 100 feet wide. Flows to the project are regulated by releases from the No. 3 Development of NEP's Deerfield River Project (FERC Project No. 2323), located about 1 mile upstream and may vary considerably.

The Deerfield No. 4 development operates in a daily peaking mode. The Deerfield No. 4 powerhouse generates between 7:00 a.m. and 11:00 p.m., Monday through Friday. The No. 4 powerhouse and the downstream projects of No. 3, Gardners Falls, and No. 2 are typically operated on the same demand schedule since there is little impoundment storage at any of these sites.

There are periods when project inflow is reduced or eliminated. Normally, spillage into the bypassed reach occurs when project inflows exceed the plant hydraulic capacity of 1,420 cfs. There is also some leakage from the dam. Spillage usually occurs between 5 and 77 percent of the time.

The Project is semiautomatically operated with manual overrides. The four existing units are controlled by float sensors that activate the units depending on water levels at the power canal intake on the impoundment. Under automatic float

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Page 5

control, the four units sequentially pick up or reduce load as the pond elevation varies according to the following schedule:

<u>Unit No.</u>	<u>Pond Elevation (' = feet above mean sea level)</u>	
	<u>Start Generating</u>	<u>Return to Motor</u>
5	334.0'	333.0'
4	334.2'	333.2'
3	334.4'	333.4'
2	334.6'	333.6'

The maximum hydraulic capacity is 1,420 cfs. Inflows are currently stored until the pond level reaches the first set point, initiating generation of the first unit. Flows greater than the hydraulic capacity are spilled at the dam. Flows released from the powerhouse are discharged directly into the Deerfield No. 2 impoundment.

Project operation is dependent upon flows that are received from upstream projects owned and operated by NEP. NEP uses their upstream storage capability to capture high spring flows for release throughout the year. The Project utilizes flows that are released from these upstream projects in a pond-and-release mode, utilizing a 1.8-foot drawdown to match, insofar as possible, the inflows from upstream to the hydraulic capacities of the Project turbines.

The Project operating mode doesn't change during dry, mean, or high water years. As flows vary at the project, the number of turbines operating, and the duration of operation change, increasing or decreasing the amount of annual generation produced.

During extreme high water periods and-or floods, the powerhouse is manned 24 hours a day, 7 days a week. Extreme high water is defined in this case to be higher than elevation 337 feet above mean sea level (msl), and normally occurs for two or three weeks during the spring of the year. If the pond level reaches 335.2 feet msl, the headgates are automatically lowered to half-gate position. If the pond level increases to 336.2 feet msl, the headgates are automatically lowered to the fully closed position. This closure procedure is used to prevent overtopping of the power canal embankments. The gates are raised manually when the river flows return to normal.

D. Proposed Modifications to Project Operation

The Licensee proposes to release a continuous minimum flow (when available from inflow) from the project dam of 50 cfs and a

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supplemental flow release of 100 cfs from the powerhouse area during April, May, and June of each year when the powerhouse turbines are not operating and inflow permits. The Section 401 Water Quality Certificate (WQC) would require that a 150-cfs continuous minimum flow be released from the dam (or inflow from NEP's Deerfield No. 2 Development if such inflow is lower than 150 cfs), and that a 150-cfs flow into the bypassed reach be maintained during high flow conditions if operationally possible.

E. Fish Passage Construction and Recreation Improvements

The Licensee proposes to (1) provide downstream fish passage facilities for out-migrating Atlantic salmon smolts; (2) develop a new canoe launch on the impoundment at Wilcox Hollow, including access for the disabled; (3) develop a self-guiding nature trail with signs along the power canal; (4) provide improved canoe access to the impoundment near the project dam; and (5) implement the "Soil Erosion and Sediment Control Plan" during construction of proposed recreational facilities.

II. HISTORIC PROPERTIES IDENTIFIED

The Project's APE effect has been surveyed by archeologists retained for this purpose by the Licensee. The APE includes all the following: (a) lands enclosed by the project boundary as delineated in the application for new license filed December 23, 1991, and (b) lands or properties outside the project boundary where project operation or project-related recreational development or use may cause changes in the character or use of Historic Properties, if any Historic Properties exist. The results of these surveys have been documented in the following report.

- Public Archaeology Survey Team, Inc. (PAST). 1990.
Archaeological reconnaissance survey, Gardner's Falls
Hydroelectric Project (FERC 2334), Buckland and Shelburne,
Massachusetts, prepared for Kleinschmidt Associates.
Storrs, Connecticut. February 1990. 36 numbered pages plus
appendix.

A. Archeological Properties

During the archeological reconnaissance survey, PAST found that the Project area has a potential to contain a variety of prehistoric and historic archeological sites. PAST conducted a walkover inspection of the Project area in 1989 to determine whether any existing prehistoric or historic period sites were being affected by the existing 1.8-foot reservoir water level fluctuation, to identify any currently unknown above-ground

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prehistoric or historic period sites within the project area, and to help assess the project area's prehistoric site potential.

1. Prehistoric Archeological Sites

PAST reports that relatively undisturbed portions of the level floodplain and terrace zones at the project are expected to have moderate to high prehistoric archeological potential.

The project area includes approximately 4,920 linear feet along each side of the river. PAST reports a very high prehistoric archeological potential on the small flood plains and terraces situated along both the east and west sides of the northern end of the Project impoundment (about 2,099 feet along the east side and 2,247 feet along the west side). The remainder of the river and impoundment shoreline have low archeological potential due to steep slopes and/or disturbance. PAST reports high archeological potential on a higher-level terrace located east of the river and north of the powerhouse.

PAST reports that a wide range of prehistoric site types might be encountered, reflecting both long-term seasonal use as well as more specialized temporary and task-specific sites. Disturbed areas such as those associated with an old railroad trestle and the Project powerhouse are not be expected to yield intact prehistoric resources.

During the walkover survey, PAST found no evidence of erosion and no prehistoric features in the areas of high archeological sensitivity immediately adjacent to the impoundment. However, southeast of the Project powerhouse on the eastern side of the Deerfield River, PAST did observe a potential prehistoric rockshelter site represented by a series of glacially-deposited boulders which form an overhanging shelter. Although the significance of this site has not yet been resolved or commented on by the SHPO, pending determination to the contrary, the site should be considered and treated as an Historic Property.

2. Historic Archeological Sites

PAST reports the Project area has a potential for structures and engineering features associated with the 1867 construction of the Boston and Maine Railroad to be located near the old railroad bed. In fact, during the walkover survey, PAST found two such historic period architectural/engineering sites.

One of these, a rounded mortared stone block trestle, located at edge of the Project area southwest of the power canal,

**Appendix A To
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associated with the construction of the Boston and Maine Railroad, is a well-preserved example of nineteenth century railroad engineering and should be considered a significant historic resource. PAST reports that the other site, an historic foundation, located on the west side of the river the upper end of the impoundment, may be the remains of a temporary structure built to home workers during construction of the Boston and Maine Railroad. Although the significance of these sites has not yet been resolved or commented on by the SHPO, pending determination to the contrary, the sites should be considered and treated as Historic Properties.

B. Historic Project Facilities

On April 3, 1990, during the relicensing consultation, the SHPO determined that the Gardners Falls Project dam, power canal, and powerhouse are eligible for inclusion in the National Register. This eligibility is based on:

- ♦ the historic use of the Project as an early twentieth century hydroelectric facility
- ♦ its well-preserved site integrity
- ♦ its architectural features
 - brick construction of the powerhouse
 - associated engineering features -- dam, power canal, and tailrace

III. ANTICIPATED EFFECTS

The proposed issue of a new license to the Licensee for the Project could have effects both beneficial and adverse.

A. Historic Project Facilities

Inasmuch as the Project dam, power canal, and powerhouse are Historic Properties, issuing the Licensee a new license to continue operating and maintaining these facilities under the protection afforded by Section 106, is generally to be considered a beneficial effect. In itself, however, continuing to operate the Historic Project Properties under the protection afforded by Section 106 does not ensure that no adverse effects would ensue. Adverse effects could inadvertently occur during routine daily activities in the absence of an operation and maintenance plan designed to hold intact the Historic Project Properties' historic integrity. Issuing the Licensee a new license to continue

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operating the Project without such a plan, we would have to conclude, would also adversely affect the Historic Project Properties.

B. Archeological Sites

Project operation isn't affecting or threatening any known archeological resources. Most of the reservoir shoreline is characterized by heavy vegetation and steep bouldery and cobbley banks which are not susceptible to erosion and are unlikely to conceal archeological resources. The steep, bouldery riverbank continues downstream of the dam, through the bypassed reach, and below the powerhouse, and includes some outcroppings of hard metamorphic bedrock.

PAST's walkover survey found no erosion which could be threatening any potential prehistoric sites. Neither the Licensee's proposed minimum flow releases nor the WQC's required minimum flow releases through the bypassed reach would have more than a negligible effect on erosion compared to the natural flows which periodically pass through the reach without effect under the Project's current operation.

However, there remain some possibilities for affecting Historic Properties. Previously undiscovered Historic Properties could be affected by recreational development covered by the licensing action. Large portions of the Project area have moderate to high prehistoric archeological and historic site potential, particularly undisturbed portions of the level floodplain and terrace zones. In fact, one possible prehistoric archeological site -- the possible rockshelter site was found during the walkover survey in an undisturbed part of the Project area; and two historic archeological sites -- the historic railroad trestle and building foundation, were also either found or field-verified during the walkover.

In addition, Historic Properties, including the rockshelter site, the railroad trestle site, the historic foundation site, and previously unidentified properties, could also be affected by future ground-disturbing activities not covered by the licensing action.

Lastly, even though the reservoir and river shorelines are not undergoing erosion and do not have moderate to high prehistoric and historic archeological site potential as there is elsewhere in other nearby portions of the Project area, there remains a possibility that if erosion were to occur, archeological sites which might exist along the shorelines could be adversely effected. Periodic monitoring of the project

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Project No. 2334**

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shorelines would allow identification of general or localized changes in erosion patterns which might occur, subsequent site assessment for archeological resources which might be present, and formulation and implementation of appropriate mitigative measures.

APPENDIX C

RELEVANT PROJECT CORRESPONDENCE FROM FERC AND MHC

APR-19-98 THU 13:44 .

P. 02

April 3, 1998



R. A. Reckert
Vice President
Northeast Utilities Service Company
P.O. Box 270
Hartford, CT 06141-0270

Attn: Richard Thomas, NUSCO Generation Facilities Licensing

Re: Gardner Falls, Buckland / Shelburne, MA
FERC No. 2334

Dear Mr. Reckert:

The staff of the Massachusetts Historical Commission has reviewed the materials you submitted regarding the historical and architectural significance of Gardner Falls Hydroelectric Plant. The complex is the first large hydroelectric facility on the Deerfield River.

The staff of the MHC has determined that the complex is eligible for inclusion in the National Register of Historic Places at the local level for its associations with the development of the Deerfield River as a source of water power. Additional information is necessary on the survival of any original machinery, including the turbine to determine if the complex is significant at a state level.

If any work is proposed on the property in conjunction with the Federal Energy Regulatory Commission relicensing process, the MHC requests the opportunity to review proposed plans and specifications in compliance with Section 106 of the National Historic Preservation Act (36 CFR 800).

If you have any questions, please contact Maureen Canavaugh of my staff.

Sincerely,

Berna Sumin DSHPO

Valerie A. Talmage
Executive Director
State Historic Preservation Officer
Massachusetts Historical Commission

VAT/MC/h1

cc: Buckland Historical Commission
Shelburne Falls Historical Commission
Federal Energy Regulatory Commission
Massachusetts Historical Commission, Valerie A. Talmage, Executive Director, State Historic Preservation Officer
80 Boylston Street, Boston, Massachusetts 02116



RECEIVED
JUL 18 1990
F.A.M.

July 13, 1990

R.A. Reckert
Vice-President
Northeast Utilities
P.O. Box 270
Hartford, CT 06141-0270

Attn: Richard Thomas, NUSCO Generation Facilities Licensing

RE: Gardners Falls, Buckland & Shelburne, MA.
FERC No. 2334

Dear Mr. Reckert:

Thank you for your letter of June 19, 1990, regarding the proposed project referenced above. Staff of the Massachusetts Historical Commission have reviewed the information you submitted.

MHC staff have reviewed the draft report entitled "Archaeological Reconnaissance Survey, Gardners Falls Hydroelectric Project (FERC 2334), Buckland and Shelburne, Massachusetts," that was prepared by the Public Archaeological Survey Team, Inc. MHC looks forward to receiving two copies of the final report.

The results of the reconnaissance archaeological survey indicate that most of the project area is considered highly sensitive, since it possesses a high potential to contain significant prehistoric archaeological resources. In addition, the reconnaissance identified an historical period foundation and a railroad tressle that may be significant. The currently proposed project impacts of 1.8 feet fluctuation in water level from the routine operation of the Gardners Falls Hydroelectric Power Plant, however, will have no effect (36 CFR 800.5(b)) on potentially significant cultural resources in the project area.

Your letter also mentioned two proposed modifications to the project: 1) the release of flows into the bypassed portion of the river through the installation of a minimum flow turbine; and, 2) the construction of a fish passage facility. If planning for these facilities proceeds, MHC requests the opportunity to review project plans when they become available to determine



The Commonwealth of Massachusetts

**William Francis Galvin, Secretary of the Commonwealth
Massachusetts Historical Commission**

January 16, 1998

**Ronald G. Chevalier
Northeast Utilities Service Company
PO Box 270
Hartford, CT 06141-0270**

**RE: Gardners Falls Project Cultural Resource Management Plan Outline. FERC #2334-MA.
MHC#RC.3216.**

Dear Mr. Chevalier:

Thank you for submitting a proposed outline for the Cultural Resource Management Plan for the project referenced above. MHC understands that the Public Archaeology Laboratory, Inc. will be preparing the plan for the Western Massachusetts Electric Company.

The proposed outline is acceptable to the MHC, and should lead to the preparation of a useful guidance document to manage the stewardship of the cultural resources in the project area. MHC looks forward to reviewing the draft plan.

These comments are offered to assist in compliance with Section 106 of the National Historic Preservation Act of 1966 as amended and the terms of the Programmatic Agreement for the project.

Sincerely,

A handwritten signature in dark ink, appearing to read "E. Bell", written over a horizontal line.

**Edward L. Bell
Senior Archaeologist
Massachusetts Historical Commission**

**xc: Peter Leitzke, FERC-Office of Hydropower Licensing, 888 First St. NE, Washington, DC 20426
Deborah C. Cox, PAL, Inc.**



The Commonwealth of Massachusetts

April 1, 1998 William Francis Galvin, Secretary of the Commonwealth
Massachusetts Historical Commission

R.G. Chevalier
Northeast Utilities Service Company
PO Box 270
Hartford, CT 06141-0270

RE: Gardners Falls Project FERC No. 2334-MA. MHC #RC.3216.
Draft Cultural Resource Management Plan.

Dear Mr. Chevalier:

Thank you for submitting the Draft Cultural Resource Management Plan for the project referenced above, received by the Massachusetts Historical Commission on March 2, 1998.

In preparing a final plan, MHC recommends that the plan include a figure using the appropriate section(s) of a USGS base map with the project area boundaries clearly indicated. The area of potential effect (APE) should be delineated on the map. Larger-scale plans should also be included. Appropriate figures from the 1990 report by McBride (referenced on page 37) should also be included.

These maps and plans will assist project planners in evaluating proposed projects.

These comments are offered to assist in compliance with Section 106 of the National Historic Preservation Act of 1966 as amended (36 CFR 800) and the terms of the Programmatic Agreement for the project. Please contact me if you have any questions.

Sincerely,

A handwritten signature in dark ink, appearing to be 'E. Bell'.

Edward L. Bell
Senior Archaeologist
Massachusetts Historical Commission

xc: Deborah C. Cox, Public Archaeology Laboratory, Inc.



ORIGINAL

The Commonwealth of Massachusetts
 William Francis Galvin, Secretary of the Commonwealth
 Massachusetts Historical Commission

P-2334

May 17, 2012

Kimberly D. Bose
 Secretary
 Federal Energy Regulatory Commission
 888 First St NE Room 1A
 Washington DC 20426

FILED
 SECRETARY OF THE
 COMMISSION
 2012 MAY 29 A 9 37
 FEDERAL ENERGY
 REGULATORY COMMISSION

RE: Gardners Falls Hydroelectric Project, Buckland and Shelburne, MA.
 MHC# RC.3216. FERC# 2334.

Dear Secretary Bose:

Staff of the Massachusetts Historical Commission (MHC), office of the State Historic Preservation Officer, have reviewed the information prepared by Kleinschmidt Associates, dated May 1, 2012, on behalf of EP Energy Management LLC, the licensee for the project referenced above.

The MHC concurs with the licensee's request for the Federal Energy Regulatory Commission to eliminate the requirement for the licensee to conduct monitoring and annual reporting of the historic area that no longer exists, and to amend the Cultural Resource Management Plan and/or Programmatic Agreement as needed.

These comments are offered to assist in compliance with the *Programmatic Agreement- Gardners Falls Hydroelectric Power Project*, the *Cultural Resources Management Plan for the Gardners Falls Hydroelectric Project*, and Section 106 of the National Historic Preservation Act of 1966, as amended (36 CFR 800). Please do not hesitate to contact Edward L. Bell of my staff if you have any questions.

Sincerely,

Brona Simon
 State Historic Preservation Officer
 Executive Director
 Massachusetts Historical Commission

xc: Chris Tomichek, Kleinschmidt Associates

142 FERC ¶ 62,004
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Consolidated Edison Energy Massachusetts LLC

Project No. 2334-051

ORDER AMENDING APPROVED CULTURAL RESOURCES
MANAGEMENT PLAN

(Issued January 7, 2013)

1. On June 4, 2012, Consolidated Edison Energy Massachusetts LLC (licensee) filed a request to amend its approved Cultural Resources Management Plan (CRMP) for the Gardners Falls Project.¹ The project is located on the Deerfield River, in Franklin County, Massachusetts.
2. The Gardners Falls Project had a potential prehistoric rock shelter that was located within the project boundary. In August of 2011, tropical storm Irene dropped about 10 inches of rain in the project area causing significant flooding in the Deerfield River. This flooding dramatically changed the banks of the project's impoundment and washed away the rock shelter.
3. The licensee proposes amending its approved CRMP so it does not have to monitor and report on the status of the prehistoric rock shelter, since the site no longer exists. On May 17, 2012, the Massachusetts Historical Commission, Office of the State Historic Preservation Officer, concurred with this recommendation.
4. The licensee's request to amend its CRMP to eliminate monitoring and reporting of an historic site that no longer exists is reasonable and justified and should be approved.

The Director orders:

(A) Consolidated Edison Energy Massachusetts LLC's, proposal to remove the requirements to monitor and report on the potential prehistoric rock shelter from its approved Cultural Resources Management Plan for the Gardners Falls Project, is approved.

¹ 85 FERC ¶ 62,110, Order Approving Cultural Resources Management Plan, issued November 17, 1998.

Project No. 2334-051

- 2 -

(B) This order constitutes final agency action. Any party may file a request for rehearing of this order within 30 days from the date of its issuance, as provided in section 313(a) of the Federal Power Act, 16 U.S.C. § 825*l* (2006), and the Commission's regulations at 18 C.F.R. § 385.713 (2012). The filing of a request for rehearing does not operate as a stay of the effective date of this order, or of any other date specified in this order. The licensee's failure to file a request for rehearing shall constitute acceptance of this order.

Steve Hocking
Chief, Environmental Review Branch
Division of Hydropower Administration
and Compliance

155 FERC ¶ 62,117
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Essential Power Massachusetts, LLC

Project No. 2334-055

ORDER MODIFYING AND SUSPENDING LICENSE ARTICLES 403 AND 404

(Issued May 16, 2016)

1. On March 30, 2016, Essential Power Massachusetts, LLC, licensee for the Gardners Falls Project No. 2334, filed a request to discontinue operation of the downstream fish passage facilities required by Article 403 and 404 of the project license.¹ The project is located on the Deerfield River in Franklin County, Massachusetts. The project does not occupy federal lands.

REQUIREMENTS AND BACKGROUND

2. License Article 403 requires the licensee to file, for Federal Energy Regulatory Commission (Commission) approval, detailed design drawings of the proposed downstream fish passage facilities together with a plan and schedule to construct and install the facilities. The licensee is required to prepare the design drawings and schedule after consultation with the U.S. Fish and Wildlife Service (FWS) and the Massachusetts Division of Fisheries and Wildlife (Massachusetts DFW). In addition, the Article requires that the facilities operate April 1 through June 15 and from September 15 to November 15 each year.

3. License Article 404 requires the licensee to file, for Commission approval, a plan to monitor the effectiveness of the permanent downstream fish passage facilities required by Article 403 and associated operational flows to safely and efficiently pass Atlantic salmon smolts down the Deerfield River past the Gardners Falls Project. The licensee's plan was approved by order dated June 1, 2001² and the as-built drawings under Article 403 were approved by the Commission on November 1, 2002.

¹ Order Issuing New License (79 FERC ¶ 61,007), issued April 4, 1997.

² Order Approving Final Downstream Fish Passage Effectiveness Report and Recommended Modifications (95 FERC ¶ 62,225).

Project No. 2334-055

- 2 -

LICENSEE'S REQUEST

4. In its filing, the licensee requested to discontinue operation of the downstream fish passage facilities approved in Article 403, suspend monitoring of the facilities required in Article 404, and delete Exhibit F drawings F-8 through F-18 from its project license. On May 6, 2016, Commission staff requested that the licensee clarify if downstream facilities would actually physically be removed from the project, necessitating deletion of certain Exhibit F drawings. In response, the licensee stated that facilities would not physically be removed and would therefore rescind its request to delete the aforementioned Exhibits.³

CONSULTATION

5. The licensee's filing indicates that it was notified by the Massachusetts DFW on February 24, 2016, that it was no longer necessary for hydroelectric project owners on the Deerfield River to operate downstream fish passage facilities at their projects for Atlantic salmon smolts beginning in 2016. In its letter, it stated that the Massachusetts Atlantic salmon restoration effort ended in 2013 and that it expected any Atlantic salmon fry to smolt and out-migrate after two years in freshwater (2015). The FWS concurred with the Massachusetts DFW's comments and the licensee's request on March 24, 2016.

CONCLUSION

6. Articles 403 and 404 were intended to support Atlantic salmon restoration efforts in the Deerfield River. The resource agencies agree that the efforts are not likely to provide any measureable benefit without continued stocking efforts and that the two years should have provided sufficient time for any fish stocked in 2013 to smolt and out-migrate. In the event that the Massachusetts DFW reinitiates Atlantic salmon restoration efforts in the future, the Commission reserves the right to reinstate Articles 403 and 404. For these reasons, the licensee's request to discontinue operation of downstream fish passage facilities and suspend the requisite effectiveness monitoring is reasonable and therefore, should be approved.

³ Email communication on May 9, 2016 with the licensee and Joseph Enrico, Commission staff.

Project No. 2334-055

- 3 -

The Director orders:

(A) Essential Power Massachusetts, LLC's (licensee) request, filed with the Federal Energy Regulatory Commission (Commission) on March 30, 2016, to suspend the requirements of Articles 403 and 404 of the license for the Gardner Falls Hydroelectric Project No. 2334, as modified in paragraph B, is approved.

(B) The Commission reserves the right to reinstate Articles 403 and 404 based on fishery management information provided by the licensee, the U.S. Fish and Wildlife Service or the Massachusetts Division of Fisheries and Wildlife.

(C) This order constitutes final agency action. Any party may file a request for rehearing of this order within 30 days from the date of its issuance, as provided in section 313(a) of the Federal Power Act, 16 U.S.C. § 825l (2012), and the Commission's regulations at 18 CFR § 385.713 (2015). The filing of a request for hearing does not operate as a stay of the effective date of this order, or of any other date specified in this order. The licensee's failure to file a request for rehearing shall constitute acceptance of this order.

Thomas J. LoVullo
Chief, Aquatic Resources Branch
Division of Hydropower Administration
and Compliance

FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, D. C. 20426

OFFICE OF ENERGY PROJECTS

Project No. 2334-051 – Massachusetts
Gardner Falls Hydroelectric Project
Nautilus Hydro, LLC

February 27, 2020

VIA FERC Service List

Mr. Randall Osteen
General Counsel
Nautilus Hydro, LLC
c/o Hull Street Energy
4290 Elm Street
Bethesda, MD 20814

Subject: Ten-Year Update to Cultural Resources Management Plan

Dear Mr. Osteen:

On May 23, 2019, you filed a ten-year update to the approved Cultural Resources Management Plan¹ (CRMP) for the Gardner Falls Hydroelectric Project, FERC No. 2334.²

The project's approved CRMP requires you to file with the Commission a ten-year update to the CRMP. In your filing, you say that the only change necessary to the CRMP is removing any requirements related to the Gardner Falls cave, a pre-historic shelter at the project. You had previously requested that removal by letter dated June 4, 2012 saying flooding from Tropical Storm Irene washed away the rock shelter. In a January 7, 2013 Order Amending Approved Cultural Resources Management Plan,³ the

¹ *Consolidated Edison Energy Massachusetts, LLC*, 85 FERC ¶ 62,110 (1998).

² *Essential Power Massachusetts, LLC, Nautilus Hydro, LLC*, 79 FERC ¶ 61,007 (1997). On January 5, 2017, the Commission issued an Order Approving Transfer of License. *Essential Power Massachusetts, LLC, Natilus Hydro, LLC*, 158 FERC ¶ 62,009 (2017).

³ *Consolidated Edison Energy Massachusetts LLC*, 142 FERC ¶ 62,004 (2013).

Project No. 2334-051

-2-

Commission approved your request to amend the CRMP and remove the monitoring requirement.

Since your request to remove the cave was previously approved by Commission staff, it is reasonable to update the CRMP to reflect that change. Therefore, in order to ensure the Commission's record contains the correct CRMP, within 60 days of the date of this letter, please file an updated CRMP with the Commission that removes the cave and any related requirements. In your filing, please reference this letter, and state that you are filing an updated copy of the approved CRMP for the Commission's record.

The Commission strongly encourages electronic filing. Please file your response using the Commission's eFiling system at <http://www.ferc.gov/docs-filing/efiling.asp>. For assistance, please contact FERC Online Support at FERCOnlineSupport@ferc.gov, (866) 208-3676 (toll free), or (202) 502-8659 (TTY). In lieu of electronic filing, please send a paper copy to: Secretary, Federal Energy Regulatory Commission, 888 First Street NE, Washington, DC 20426. The first page of any filing should include docket numbers P-2334-051. You may also register online at: <http://www.ferc.gov/docs-filing/esubscription.asp> to be notified via email of new filings and issuances related to this or other pending projects.

If you have any questions concerning this matter, please contact Jennifer Polardino by telephone at (202) 502-6437 or through email at Jennifer.Polardino@ferc.gov.

Sincerely,

Andrea Claros, Acting Chief
Environmental and Project Review Branch
Division of Hydropower Administration
and Compliance

Document Content(s)

Gardner Falls CRMP Update FERC cover letter 4-24-20.PDF.....1
Gardner Falls Cultural Resources Management Plan update.PDF.....2