

GREENVILLE DAM PROJECT

LIHI APPLICATION

ATTACHMENT F

CULTURAL RESOURCE PROTECTION

**ENVIRONMENTAL INSPECTION REPORT
(ELECTRONICALLY SUBMITTED)
FEDERAL ENERGY REGULATORY COMMISSION**

New York Region

Date of Inspection - May 11, 2005

Name Greenville **Project No.** 2441-CT

Licensee City of Norwich **License Type** Major

License Issued March 31, 1993 **License Expires** January 1, 2044

Location Shetucket River None
(Waterway) (Reservation)
New London Connecticut
(County) (State)

Inspector Joseph Enrico

Licensee Representatives Messrs. Roy Borque, Maintenance Engineer &
Christopher La Rose, Operations Integrity Manager.

Other Participants None

Summary of Findings

The project was found in good condition with all safety and environmental requirements being met. A sign in compliance with Part 8.2(a) of the regulations was not posted at the Greenville recreation area. A follow up letter was sent to request a schedule for sign installation.

Submitted July 29, 2005

Joseph G. Enrico
Environmental Protection Specialist

A. INSPECTION FINDINGS

Requirements*	Date of Requirement	Follow-up Needed	Photo Nos.
CULTURAL RESOURCES			
Article 412 requires the licensee to implement a Memorandum of Agreement with the State executed on February 11, 1993. The CMP was filed on 3-31-95 and 7-28-97. C-184	O: 3-31-93 Ap: 8-21-97	N	
Article 413 requires the Licensee to consult with the SHPO and conduct a cultural resource survey prior to any ground disturbance at the project other than authorized in the license. C-184	O: 3-31-93	N	
FISH AND WILDLIFE RESOURCES			
Article 401 requires the licensee to file a Soil Erosion Control Plan prior to the installation of fish passage facilities. Filed 7-20-94. C-120	O: 3-31-93 Ap:10-19-94	N	
Article 402 requires the licensee to operate the project in a run of river mode. C-204	O: 3-31-93	N	
Article 403 requires the licensee to release a minimum flow of 250cfs from the Greenville dam, or inflow. C-089	O: 3-31-93	N	3
Article 404 requires the licensee to install stream flow gages to monitor compliance with the ROR operation and minimum flow release. Plan filed on 4-3-95 and 6-5-95. C-017	O: 3-31-93 Ap:9-19-95	N	1,2
Article 405 requires the licensee to file design drawings and begin construction and complete the installation of an upstream Denil fish ladder by 4-1-96. Filed 7-20-94. Amendment filed 3-14-94 to install lift instead of ladder. Filed revised drawing for V-trap gate design on 12-2-94. C-071	O: 3-31-93 Ap:4-12-94 Ap:10-19-94 Ap:3-20-95	N	4-6
Article 406 requires the licensee to file design drawings and begin construction and complete the installation of downstream fish passage facilities by 4-1-96. Filed 7-20-94. C-018	O: 3-31-93 Ap:10-19-94	N	7,8
Article 407 requires the licensee to file a plan to assess upstream fish passage. The plan is to include post construction evaluation of the facilities as well as attraction flow needed for the fishway. Filed 4-3-95. C-027	O: 3-31-93 Ap:5-7-96	N	
Article 408 requires the licensee to file a plan for post construction evaluation plan to assess the efficiency of the downstream fish passage facilities. Filed 4-3-95. C-027	O: 3-31-93 Ap:5-7-96	N	
Article 409 requires the licensee to file a fishway maintenance plan for operation of the fish passage facilities. Filed 4-3-95 & 6-5-95. C-026	O: 3-31-93 Ap:10-17-95	N	

Requirements*	Date of Requirement	Follow-up Needed	Photo Nos.
PUBLIC SAFETY			
Facilities and measures to assure public safety (18 CFR, Part 12). Filed 5-8-2000. C-218	O: 3-31-93 Ap:6-14-00	N	3,9-10
RECREATION RESOURCES			
Article 410 requires the licensee to implement the recreation plan filed with the license application on 8-7-92 and 11-4-92. C-113	O: 3-31-93	N	12-14
Article 411 requires the licensee to monitor recreation use to determine if the facilities are adequate, within five years of license issuance and report in conjunction with the Form 80. Report filed 6-16-00. C-112	O: 3-31-93 Ap:6-29-00	N	
Recreation signing and posting (18 CFR, Part 8) C-186	O: 3-31-93	Y	
Standard Article 13 requires the Licensee to allow public free access to project waters and adjacent lands C-110	O: 3-31-93	N	
Submission of the Commission's Form 80 monitoring report. Filed 3-31-03. C-112.	18CFR4-1-03	N	
OTHER ENVIRONMENTAL RESOURCES			
Standard Article 15 requires the Licensee to install fish passage and other wildlife facilities when requested by state and federal resource agencies. C-071	O: 3-31-93	N	
Standard Article 19 requires the Licensee to take reasonable measures to control sedimentation and other pollution at the project. C-120	O: 3-31-93	N	
Article 202 gives the Licensee authority to grant conveyances for non-project use of project lands and waters, for certain types of use without prior Commission approval. C-202	O: 3-31-93	N	

O:=Order C=OEP-IT Code 18CFR=Title 18 Code of Federal Regulations , Ap=Approved

COMMENTS AND FOLLOW-UP ACTION

This project consists of an overflow spillway, gatehouse, power canal and two powerhouses. Upstream and downstream fish passage facilities are also in place and functional. The project's fish lift was in operation and is controlled remotely from the licensee's control center in Norwich (**Photo Nos. 4-6**). The lift began operation in April and lifting is started at 8:30am each day. The licensee's control center, which is manned full time, 24 hours per day and seven days per week, remotely monitors and operates this project as well as the licensee's other project, P-11574, Occum. Equipment at the control center

allows the operator to monitor all project information including generation, flows, headpond and tailwater levels. This information is recorded hourly on manual logs which are available at the licensee's office. Cameras in the control center allow the operator to monitor the fish lift as well as certain areas around the intake canal/headgates. The downstream fish passage facility consists of an angled bar rack with one-inch spacing and discharge chute located in power canal (**Photo Nos. 7 & 8**).

The project provides a fairly good size parking/access area along the left side of the river, downstream of the dam. The powerhouse and intake canal areas are fenced and off limits to the public. The access area is used by hikers, fishermen and canoeists portaging down from upstream areas. The area was in fair condition and is consistently used, according to the licensee. It was noted that there was no sign posted in compliance with Part 8, Section 8.2(a) of the regulations at the recreation area. Signs are posted indicating that the area is open for public use, however. The licensee was advised that the applicable Part 8 information should be included either on the main sign at the entrance or at the kiosk, within the area itself.

B. EXHIBITS AND PHOTOGRAPHS

The following are provided to show the location of the project and to illustrate project features: 14 photographs and photograph location map.

**Cc: FERC-DHCA
FERC-NYRO
Enrico, J./di**

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UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

The City of Norwich, Department)
of Public Utilities)

Project No. 2441-019

ORDER APPROVING CULTURAL RESOURCES MANAGEMENT PLAN
AND HISTORICAL DOCUMENTATION

AUG 21 1997

On April 3, 1995, The City of Norwich, Department of Public Utilities, Connecticut (licensee) filed a Cultural Resources Management Plan (CRMP) for the Greenville Dam Project, FERC No. 2441. 1/ On July 28, 1997, the licensee filed historical documentation consisting of photographs and written narratives on the dam, gatehouse and control gates, canal spillway deck bridge, and the canal. The Greenville Dam Project is located on the Shetucket River in the City of Norwich, New London County, Connecticut. The CRMP and historical documentation are required by article 412 of the project license issued March 31, 1993.

Article 412 requires the licensee to implement the Memorandum of Agreement (MOA), executed on February 11, 1993, 2/ and file a CRMP to avoid and mitigate any adverse impacts to the historical integrity of the project from maintenance and repair work. Article 412 also requires the filing of historical documentation of those project features that will be affected by the construction of a fish passage facility.

CULTURAL RESOURCES MANAGEMENT PLAN

The licensee proposes that any work conducted pursuant to this plan will adhere to the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings. When possible and reasonable, the licensee will make in-kind repairs to the project. When in-kind repairs are made the licensee will not be required to consult with the

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- 1/ The Greenville Dam is a component of the Greenville Industrial District, a property eligible for inclusion in the National Register of Historic Places. The District is located in the immediate vicinity of the project. The District consists of early nineteenth to early twentieth century mill buildings and mill ruins, the Greenville dam, an associated gate structure and canal spillway, and a canal for providing water and power to mills.
 - 2/ Signatories to the MOA are the Federal Energy Regulatory Commission and the State Historic Preservation Officer. The licensee is a concurring party.

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Project No. 2441-019

-2-

SHPO. The licensee will notify the SHPO of all actions which represent a deviation from the above and will result in demolition or alteration of the project's configuration or construction materials. The notification will describe the type and extent of repair and any alternatives to the proposed work. The licensee will consult with the SHPO to determine the most feasible option for the repair in regard to historic preservation and to determine appropriate measures if historic impacts are not avoidable. In a letter dated April 4, 1995, the SHPO concurred with the CRMP saying it is consistent with the spirit and intent of the MOA.

HISTORICAL DOCUMENTATION

The historical documentation was completed by a consultant recommended by the SHPO. Documentation consisted of photographic documentation and a written report regarding the overall complex plus reports on each individual feature. The SHPO identified the features that needed to be documented: the dam, gatehouse and control gates, canal spillway deck bridge, and the canal. The National Park Service (NPS) reviewed the documentation for conformity to specifications and transmitted the documentation to the Historic American Buildings Survey/Historic American Engineering Record Collection of the Library of Congress.

DISCUSSION AND CONCLUSION

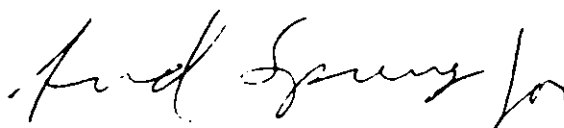
The CRMP is consistent with the requirements of article 412 and the MOA. Upon approval of this order, the licensee should implement the procedures outlined in the CRMP. The historical documentation meets with the approval of the SHPO and the NPS and should also be approved.

The Director orders:

(A) The Cultural Resources Management Plan (CRMP) for the Greenville Dam Project, filed on April 3, 1995, is approved and made part of the license.

(B) The historic documentation filed on July 28, 1997, is approved.

(C) This order constitutes final agency action. Requests for rehearing by the Commission may be filed within 30 days of the date of issuance of this order, pursuant to 18 C.F.R. § 385.713.



Kevin P. Madden
Acting Director
Office of Hydropower Licensing

STATE OF CONNECTICUT

CONNECTICUT HISTORICAL COMMISSION

FILED
OFFICE OF THE SECRETARY

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April 4, 1995

FEDERAL ENERGY
REGULATORY
COMMISSION

Ms. Tina L. Jones
Kleinschmidt Associates
75 Main Street
PO Box 576
Pittsfield, ME 04967

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Subject: Greenville Dam
Norwich, CT
FERC #2441 - 009

Dear Ms. Jones:

The State Historic Preservation Office has reviewed the draft Cultural Resources Management Plan prepared by Kleinschmidt Associates on behalf of the City of Norwich regarding the above-named project. This office believes that the Cultural Resources Management Plan satisfactorily provides a notification and coordination process for ensuring the technical input of our professional staff vis-a-vis both day-to-day and long-term operations of the historic Greenville Dam and its associated hydropower facilities. Further, we believe that the Cultural Resources Management Plan is consistent with the spirit and intent of the Memorandum of Agreement which was ratified by the Advisory Council on Historic Preservation for this project.

The State Historic Preservation Office anticipates working in partnership with the City of Norwich concerning the professional implementation of the Cultural Resources Management Plan for the Greenville Dam.

For further information please contact Dr. David A. Poirier, Staff Archaeologist.

Sincerely,



Dawn Maddox
Deputy State Historic
Preservation Officer

DAP

9505060343

FERC DOCUMENTED

MAY 24 1995

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59 SOUTH PROSPECT ST. - HARTFORD, CONN. 06106-1407

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into the canal. The Greenville dam was constructed in the early 1880's to replace this dam. The pool behind Greenville dam inundated the remains of the earlier dam.

None of the companies who built the mills operate here anymore. The existing mill buildings currently house various manufacturing firms.

Environmental Impacts and Recommendations: The western end of Greenville dam and a portion of the associated canal spillway would be altered by construction of the proposed fish passage facilities.

The SHPO states that the impacts of the proposed fishway construction on Greenville dam can be mitigated by: (1) recording the affected area of the Greenville dam in accordance with the documentation standards of the HAER; and (2) implementing measures to ensure that other construction activities would not affect the historical integrity of the dam. The SHPO also states that no other alternatives appear feasible to minimize or avoid impacts to the dam (Maddox 1988).

Norwich has agreed to document and protect Greenville dam as recommended by the SHPO. We agree with the recommendations of the SHPO.

We have initiated consultation with the Advisory Council on Historic Preservation on the adverse effect of the project on Greenville dam (Shumway, 1992).

The SHPO's comments, and our concurrence, on the proposed project are based on the premise that the project would require no new construction (except for the earlier discussed environmental measures) and would be operated as described in the application without significant changes. Changes to the project are occasionally found to be necessary after a license has been issued. Under these circumstances, whether or not an application for amendment of license is required, the SHPO's comments and our concurrence would no longer reliably depict the cultural resources impacts that would result from operating the project.

Therefore, we recommend the following measures:

- Before starting any future land-clearing or land-disturbing activities associated with the project, other than activities authorized by the project license, Norwich should consult with the SHPO about the need to conduct a cultural resources survey and to implement avoidance or mitigative measures, and conduct any necessary survey. Norwich should file for Commission approval a report containing the results of any survey work and a cultural resources management

plan for avoiding or mitigating impacts to inventoried cultural resources, along with copies of the SHPO's written comments on the report. The survey and the report should be based on the recommendations of the SHPO and adhere to the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation.

- If Norwich discovers any previously unidentified archeological or historic sites during the course of constructing, developing, or operating project works or other facilities at the project, Norwich should stop all land-clearing or land-disturbing activities in the vicinity of the site, consult with the SHPO, and file for Commission approval a cultural resources management plan to avoid or mitigate impacts to significant resources, together with the written comments of the SHPO on the plan.
- Norwich should not implement any cultural resources management plan or begin any land-clearing, land-disturbing, or spoil-producing activities until informed by the Commission that the requirements discussed above have been fulfilled.

Unavoidable Adverse Impacts: The historical integrity of Greenville dam would be affected.

7. Recreation and other Land and Water uses

Affected Environment: The primary recreational activity along the Shetucket River and diversion canal is fishing with some boating. The existing diversion canal, powerhouses, and project areas are zoned for heavy industry. There is some dispersed fishing in the project area. No recreational facilities are located within or adjacent to project boundaries.

Environmental Impacts and Recommendations: At the Tenth Street powerhouse area, Norwich restricts public access for public safety and security reasons.

At the Greenville development, Norwich proposes to implement a recreation plan. The plan would serve the existing recreational demand and provide for six parking spaces, a trail system to project waters for fisherman, and portage facilities for car-top boaters and canoeists. These recreational facilities would be open during daylight hours between April 1 and November 30. Norwich estimates the construction costs for the recreation improvements would be \$7,500 for the pedestrian access trail to project waters and parking and \$2,500 for the portage facilities.