

**REQUEST FOR PROPOSALS**  
**DAM REMOVAL FEASIBILITY AND IMPACT ANALYSIS**  
**Exeter River Great Dam, Exeter River, Exeter, NH**

**Introduction**

The Town of Exeter is exploring the option of dam removal for the Exeter River Great Dam which is located on the Exeter River in Exeter, NH. The dam has known deficiencies, and associated safety and liability issues. The Exeter River Great Dam is owned by the Town of Exeter who has owned this dam since 1981 and purchased it for the purposes of recreation and water supply. The current Exeter River Great Dam was constructed in 1914 according to the NH Department of Environmental Services' (NHDES) Dam Bureau database, however, local historic records indicate there has been a dam at this location since the late 1600s for the purposes of manufacturing. Funds have been secured for this project and the total cost for services will not exceed \$125,000.

**Background**

The Town of Exeter has received a Letter of Deficiency (LOD) from the NHDES Dam Bureau outlining the deficiencies associated with the Exeter River Great Dam. Based on an inspection conducted by personnel from the NHDES Dam Bureau, several deficiencies were identified which include deteriorated concrete, small leaks/seeps through the penstock intake, and the dam's inability to pass the runoff resulting from a 50-year precipitation event. While the dam is not in any immediate danger of failing, it does not meet modern safety requirements and the NHDES has given the Town deadlines to either modify or remove the dam to meet the safety requirements. A series of studies were conducted during 2006 (Wright-Pierce and Woodlot Alternatives); 2007 (Wright-Pierce); 2008 (Wright-Pierce); and in 2010 (Weston and Sampson) that further evaluated the deficiencies and provided alternatives to address them. The option of dam removal was not explored in great detail and thus the consequences of this alternative were not evaluated under these studies. The deficiency of most concern is the dam's inability to pass the 50-year precipitation event. In order to meet the safety standards the Town will need to greatly modify the existing dam. This does not include other potential costs for improving water quality in the impoundment. In addition, the modification of the dam does not solve all upstream flooding issues and water quality or fish passage difficulties, and downstream impacts to the Squamscott River and/or Great Bay due to dam removal have not been identified or assessed.

Prior to making a decision as to whether to modify or remove the dam, the Town would like to examine the option of dam removal in detail. The Town has recommended that an impact analysis/feasibility study be completed and used as a tool in the decision making process. Issues that will be explored include, but are not limited to: natural resources, water quality, hydraulics, infrastructure, economics, historic resources, endangered species, recreation, flooding, etc. This study will supplement the previous and on-going studies and is not meant to be the sole piece of information on which to base a final decision. At this point in the review process, neither dam modification nor dam removal has been identified as the preferred alternative. The Town will vote on a preferred alternative at a future date.

NH Fish and Game has been actively working on restoring both river herring and American shad in the Exeter River since the late 1970's with the goal of establishing self-sustaining populations. The methods include stocking gravid river herring and shad adults above barriers into prime spawning and rearing habitat and providing fish passage at the first two dams from the head-of-tide during spring months only. Fish ladders at Pickpocket Dam in Brentwood and Great Dam in Exeter allow for upstream passage of diadromous fish (saltwater fish that enter freshwater to spawn and then return to the saltwater) to reach spawning and nursery habitat, however, there is not specific passage facilities for American eels from the tidal portion of the river, Squamscott River, to the Exeter River upstream. The fish ladders are not designed to provide downstream passage for emigrating diadromous fish. The Exeter River watershed is home to ten fish species of "special conservation concern" as identified in the New Hampshire's Wildlife Action Plan prepared by the New Hampshire Fish and Game Department. These include both diadromous and freshwater species: American eel, alewife, blueback herring, sea lamprey, American shad, rainbow smelt, bridle shiner, redbfin pickerel, banded sunfish and swamp darter. A designation of "special concern" indicates that the species has the potential to become threatened if no conservation actions are taken. There is an ongoing anadromous fish restoration effort for river herring and shad, and the river serves as a spawning area and juvenile habitat for alewife, blueback herring, sea lamprey, American eel, rainbow smelt and American shad.

The New Hampshire Department of Environmental Services has deemed that the impoundment behind the dam and two river reaches upstream of the impoundment have water quality issues significant enough to require action. The lower Exeter River from the Great Dam upstream to the Pickpocket Dam, approximately eight (8) river miles, has three reaches listed on the state's 303(d) list for various water quality issues.

Under the National Historic Preservation Act Section 106 Regulations, the Town of Exeter will work with the NH Division of Historical Resources (NHDHR), Exeter Heritage Commission, Exeter Historic District Commission, Exeter Historical Society, Consulting Parties, interested citizens, Lead Federal Agency representative, and others as identified throughout the project duration to ensure compliance with these regulations.

### **Deliverable**

The Town of Exeter would like to evaluate the outcomes associated with the dam removal option and determine if the option of dam removal is prudent, feasible, cost effective, and in the best interest of the people of Exeter. In conjunction with the studies that have been developed thus far regarding modification of the dam, this study will complete a review of the alternatives so the Town is well-informed and is able to have the information to vote on a preferred alternative in the future. The Town of Exeter has prepared this Request for Proposal in cooperation with the public, town committees, and project partners to solicit proposals from qualified consultants to provide the deliverables requested in the following scope of services.

## Selection Procedure

1. Proposals will be submitted in a two envelope system. Proposals must be submitted in a separate sealed envelope plainly marked, “**Exeter River Great Dam Removal Feasibility and Impact Analysis – Consulting Services**”. Consultants are required to submit eight (8) original hard copies and one (1) electronic copy as a PDF of their “Non-Price Proposal” package. PDFs will be submitted on CD. Double-sided copies are appreciated. The package shall include:
  - a. Technical Proposal, not to exceed thirteen (13) typed, single-spaced pages.
  - b. Statement of Qualifications and directly relevant work experience, not to exceed seven (7) pages. The consultant shall clearly identify a primary contact for their proposal and clearly provide that person’s phone number and email address.
  - c. List of references who may be contacted about the consultant’s qualifications and work experience, not to exceed one (1) page.
  - d. Curriculum vitae or resumes for project team members, not to exceed two (2) pages per team member; and not to exceed a total page limit of fifteen (15) pages for the entire project team.
  - e. Timeline to complete individual tasks outlined in the RFP. The timeline will be in GANTT format.

In a separate sealed envelope, only one (1) cost proposal shall be submitted. This envelope shall be clearly marked “**Exeter River Great Dam Removal Feasibility and Impact Analysis – Cost Proposal**”.

2. The selection team will evaluate the proposals based on the following criteria:
  - a. experience performing dam removal feasibility and impact studies,
  - b. experience with dam removals,
  - c. experience with bridge design and scour analysis,
  - d. knowledge of riverine and geomorphic processes,
  - e. environmental engineering and design experience,
  - f. knowledge of riverine ecological systems,
  - g. clarity and presentation of proposal,
  - h. knowledge of the local, state and federal permits and authorizations required for projects in New Hampshire, including the National Historic Preservation Act Section 106 consultation process,
  - i. demonstration of successful cooperation with local, state and federal agencies, project stakeholders, the public, and
  - j. demonstration of implementing creative solutions to complex river issues.
3. The proposals will be opened at the Town of Exeter Board of Selectman meeting at 7:00 pm on Monday November 22, 2010 at the Exeter Town Office Building in the Nowak Room located at 10 Front Street. Only the consulting services envelopes will be opened and the cost proposal envelopes will remain sealed.

4. The selection team will review all proposals and rank them according to the criteria outlined in section 2 above. The selection team will determine the top finalists based upon a review and ranking process. These firms will be asked to interview with the selection team. Those firms invited to interview will ensure that the anticipated project managers, individual responsible for public presentations, and sub-consultants (if applicable) for this project be present during the interview.
5. Following the interviews, the Town of Exeter Board of Selectmen will open and evaluate the cost proposals and forward them to the selection team for all of the remaining finalists interviewed. The selection team will rank the interviewed consultants according to preference for hiring to conduct the project. After the ranking is complete, the first ranked consultant will be recommended to the Town of Exeter Town Manager and Board of Selectmen, and the Town of Exeter will proceed with contract negotiations with that firm. If negotiations are unsuccessful, Town of Exeter will contact the second ranked consultant and proceed with contract negotiations with that firm, and so on.

### **Pre-Proposal Site Visit**

A pre-proposal brief presentation on the project will occur at the Exeter Town Hall on Thursday October 28, 2010 at 10:00 a.m. and will be immediately followed by a visit to the dam site. The Exeter Town Hall is located on 7 Front Street in Exeter, NH. The dam is located in the center of town in Exeter, NH. The dam site is just downstream from the Great Bridge. Parking is available at the Town parking lot behind the Town Office Building off Main Street. See attached location map. This pre-proposal meeting and site visit is not mandatory.

### **Questions and Due Date:**

Town of Exeter staff will not respond to telephone questions about the RFP. Questions concerning this RFP must be received at the pre-proposal meeting or in writing to Town of Exeter (see mailing address below) by 4:00 p.m. on Thursday, November 4, 2010. Questions may also be submitted via e-mail to Phyllis Duffy at [pduffy@town.exeter.nh.us](mailto:pduffy@town.exeter.nh.us) (Subject Line: Exeter River Great Dam Feasibility and Impact Analysis RFP Question) or by facsimile machine to (603) 772-1355 (Attn: Phyllis Duffy). Town of Exeter will post responses to all submitted questions at <http://town.exeter.nh.us/exeterriver.cfm>.

All proposals must be titled "Exeter River Great Dam Feasibility and Impact Analysis RFP" and received by 4:00 p.m. on Monday November 22, 2010 at:

Exeter Town Office  
Office of Town Manager  
10 Front Street  
Exeter, NH 03833

Any proposals received after this specified time will not be considered.

**General:**

Each proposer must submit a two-part proposal, consisting of a “Non-Price Proposal” and a “Price Proposal” as outlined in the Selection Procedure section. The Price Proposal shall be submitted in a separate sealed envelope labeled as “**Exeter River Great Dam Feasibility and Impact Analysis – Cost Proposal**”.

**Time Line:**

October 14, 2010	Request for Proposals (RFP) release
October 28, 2010	Pre-proposal site visit
November 4, 2010	Due date for questions about RFP
November 12, 2010	Answers to submitted questions posted to web site
November 22, 2010	Due date for proposals

\*Consulting Services proposals will be opened at the Town of Exeter Board of Selectman meeting on November 22, 2010.

Final selection is anticipated January 2011.

**Disclaimer:**

This RFP does not commit the Town of Exeter to award a contract or to pay any costs incurred during the preparation of the proposal or during the interview process. The Town of Exeter reserves the right to reject any or all of the proposals for completing this work. The Town of Exeter also reserves the right to eliminate the need for the selected consultant to complete one or more tasks, pending the outcome of preceding related tasks or issues, and/or the availability of project partners to complete that task.

**Federal Compliance:**

Funding for the project detailed in this solicitation is provided in part with Federal EPA Section 319 grant funds obtained through an agreement with the State of New Hampshire Department of Environmental Services. Recipients of these grants and their subcontractors are required to meet certain contract requirements including the federal requirements detailed in Title 40 of the Code of Federal Regulations (CFR) parts 7, 12, 31, 33, 34, 36, and additional regulations referenced therein. It is highly recommended that the applicant review the relevant CFR sections available on the US Government Printing Office’s webpage: [http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?sid=98dba274891fffb61aa3f390c42f4924&c=ecfr&tpl=/ecfrbrowse/Title40/40cfrv1\\_02.tpl](http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?sid=98dba274891fffb61aa3f390c42f4924&c=ecfr&tpl=/ecfrbrowse/Title40/40cfrv1_02.tpl).

## Scope of Services

The consultant shall provide detail on their approach and deliverables for the following tasks and subtasks:

### **Task 1. Existing Data Collection and Review**

- 1.1 Collect and review available data and resource information on file with the Town of Exeter, New Hampshire Department of Environmental Services (NHDES), New Hampshire Fish & Game Department (NHF&G), other state agencies, National Oceanic Atmospheric Administration (NOAA) US Army Corps of Engineers (ACOE), US Fish and Wildlife Service (USFWS), other federal agencies and other applicable sources. Existing studies can be found at: <http://town.exeter.nh.us/exeterriver.cfm> unless otherwise noted. Existing information to include but not be limited to the following existing data:
  - 1.1.1 Exeter River Study – Phase 1 Final Report for the Town of Exeter (March 2007 Wright-Pierce)
  - 1.1.2 Exeter River Study-2008 Activities-Riverbank Scour Analysis and Discharge Gate Design Impacts to Water Quality for the Town of Exeter, NH (April 2008 Wright-Pierce)
  - 1.1.3 Town of Exeter, New Hampshire – Water Supply Alternatives Study – Final Report (January 2010 Weston & Sampson)  
[www.town.exeter.nh.us/river%20study/RIVER%20STUDY%202010.PDF](http://www.town.exeter.nh.us/river%20study/RIVER%20STUDY%202010.PDF)
  - 1.1.4 Town of Exeter file correspondence including meeting minutes on this project.
  - 1.1.5 Exeter River Geomorphic Assessment and Watershed-based Plan (March 2009 Bear Creek Environmental and Fitzgerald Environmental)  
[http://des.nh.gov/organization/divisions/water/wmb/was/watershed\\_based\\_plans.htm](http://des.nh.gov/organization/divisions/water/wmb/was/watershed_based_plans.htm)
  - 1.1.6 NH Department of Environmental Services Dam Bureau files
  - 1.1.7 NH Division of Historical Resources Request for Project Review for the Exeter River Great Dam
  - 1.1.8 Squamscott River Sediment Analysis
  - 1.1.9 Squamscott River Sediment/Coal Tar Analysis
  - 1.1.10 Assessment of Potential Nonpoint Sources of Pollution from the Great Brook Watershed to the Exeter River: A Policy Implementation Audit. UNH Masters of Science Thesis: May 1996 Sarah Radusci available at the UNH library in Durham, NH.
  - 1.1.11 New Hampshire Department of Environmental Services Volunteer River Assessment Program data  
<http://des.nh.gov/organization/divisions/water/wmb/vrap/exeter/index.htm>
  - 1.1.12 Exeter River Study Interim Report for the Town of Exeter, NH (Wright-Pierce and Woodlot Alternatives – February 2006)
  - 1.1.13 State of the Estuaries Report 2009  
[http://www.prep.unh.edu/resources/soe\\_report.htm](http://www.prep.unh.edu/resources/soe_report.htm)
  - 1.1.14 Piscataqua Region Estuaries Partnership (PREP) 2010 Comprehensive Conservation and Management Plan  
[http://www.prep.unh.edu/resources/pdf/piscataqua\\_region\\_2010-prep-10.pdf](http://www.prep.unh.edu/resources/pdf/piscataqua_region_2010-prep-10.pdf)

1.1.15 Great Bay Estuary Restoration Compendium

[http://www.prep.unh.edu/resources/pdf/great\\_bay\\_restoration-tnc-06.pdf](http://www.prep.unh.edu/resources/pdf/great_bay_restoration-tnc-06.pdf)

1.1.16 Exeter Hydropower and DHC Study July 1981

1.1.17 The Federal Energy Regulatory Commission-Application for License for a Minor Hydroelectric Power Project-PickpocketDam/Exeter River Dam 1 Dam Hydro-Electric Project-Department of Civil Engineering UNH

- 1.2 Dam inspection – Add Alternative<sup>1</sup>. Should the consultant determine that a dam inspection is necessary at this site to support the feasibility analyses described here, the consultant shall, in their technical proposal, provide justification for such investigations, a detailed description of the proposed work. If deemed necessary, the inspection must be conducted by a Professional Engineer registered in the State of New Hampshire.
- 1.3 Review and document the available existing data and resource information regarding the dam and dam site such as aerial photographs, dam inspection reports, past studies, watershed history, potential contamination information, information regarding abutting property owners, information on historical diadromous fish runs and/or fisheries, and information on cultural resources. Prepare a technical summary memorandum discussing these issues, as well as any additional critical issues discovered, of the dam, river and bridge based on the information collected above, and likely impacts of dam removal.

## **Task 2. Field Survey and Base Mapping**

- 2.1 Dam Structures Topography Survey - The consultant shall complete a field survey of the dam structure, Great Bridge, String Bridge, and any impacted utilities and/or structures identified in Task 1. This should include property lines, wetland boundaries, floodplain boundaries, and existing easements. Available information is located in the Exeter River Study Interim Report for the Town of Exeter, NH (Wright-Pierce and Woodlot Alternatives – February 2006) located on the Town of Exeter website at: <http://town.exeter.nh.us/exeteriver.cfm>.
- 2.2 River/Impoundment Survey - The consultant shall complete a river/impoundment survey of the project area of sufficient detail to conduct the hydrologic analyses outlined below in Task 4 using currently available data and additional data as necessary to address pertinent tasks. Describe the rationale for the extent of survey and methods outlined, and equipment availability to your respective contracting firm.
- 2.3 Existing Conditions Plan - Depict the structures, topography and impoundment bathymetry in plan view and cross section.

<sup>1</sup> Add Alternative is an optional item either due to the discretion of the consultant, due to the regulatory process, or based on subsequent information gathered.

- 2.4 Deed and Title Search on the dam site and impoundment-abutting properties. As part of the Existing Conditions Plan preparation, the consultant shall complete a deed and title search using existing documents available from the Town of Exeter and Rockingham Registry of Deeds. Property ownership, Plot and Lot Numbers, and property boundary information shall be used in preparing an Existing Conditions Plan for the dam site and will provide specific property information.

### **Task 3. Sediment Evaluation**

- 3.1 Develop a Quality Assurance Project Plan (QAPP) following EPA guidelines and facilitate QAPP review process with NHDES and EPA; address all NHDES and EPA comments and provide final approved QAPP to NHDES.
- 3.2 The consultant shall prepare a sediment sampling plan to assess sediment quantity and quality, and physical parameters in the Exeter River Great Dam impoundment according to the NHDES Sediment Quality Guidance document <http://des.nh.gov/organization/commissioner/pip/publications/wd/documents/wd-04-9.pdf>. Work will be limited to sediment chemical analysis and physical parameters. Additional work may be deemed necessary in order to evaluate the ecological and/or human risk. If this additional work is necessary, the following work will be completed:
  - 3.2.1 Add Alternative<sup>1</sup> - Sediment Toxicity Bioassay
  - 3.2.2 Add Alternative<sup>1</sup> - Community Assessment
- 3.3 Analyze sediment transport capabilities and mobility in conjunction with Task 4.
- 3.4 Assess sediment impacts upstream and downstream relative to sediment analysis results, mobility, and deposition; and recommend appropriate sediment management options.

### **Task 4. Hydrology and Hydraulics Analysis**

- 4.1 Conduct a hydrologic study on the Exeter River including the dam, Great Bridge, String Bridge, extent of impoundment and surrounding areas. Incorporate generated data into the dam removal analysis.
- 4.2 Conduct a hydraulic analysis to predict water surface and velocity profiles for both existing and post-removal conditions of the Exeter River Great Dam. Evaluate post removal conditions and review available data of historical, recent, and potential storm events and tidal storm surges. Incorporate generated data into dam removal and storm events analysis.
- 4.3 Perform a scour analysis on the Great Bridge, String Bridge, foundations, water withdrawals, and any other impacted infrastructure, and impacted utilities identified in Task 1 to evaluate the potential impact of dam removal upstream and downstream.
- 4.4 Coordinate with the Army Corps Cold Regions Research and Engineering Laboratory to determine the impacts of ice and ice jams associated with dam removal and the need for further surveys. Prepare summary of findings.



4.4.1 Add Alternative<sup>1</sup> - Conduct a riverine ice survey upstream and downstream of the dam in order to collect ice data pre-dam removal. This data will assist the Army Corps Cold Regions Research and Engineering Laboratory in the determination of potential ice jam development in the event of dam removal. Prepare summary of findings.

4.5 Assess the impact of dam removal on the FEMA designated floodway.

4.6 Evaluate and summarize findings on the impact of dam removal on private wells and incorporate data on municipal wells.

### **Task 5. Cultural Resources**

5.1 Historic Resource Assessment – The Request for Project Review (RPR) will be prepared by the Town of Exeter. The NHDHR generalized guidelines on conducting historic resource reviews for dam removal projects is attached to this RFP. The level of information required is currently limited to the following sections: Archaeological Resources: Phase IA (Reconnaissance-level) and Historic/Architectural/Engineering Resources: Phase I. Additional surveys may be required as a result of the outcome and recommendation of these surveys, and through coordination with the NHDHR, Lead Federal Agency representative(s), local cultural resource commissions/committees as commensurate with the National Historical Preservation Act Section 106 regulations. Coordinate with the NHDHR on behalf of the project partners and Lead Federal Agency. A qualified historian shall conduct this work and be a person with a bachelor's or a graduate degree in history or closely related field with at least five (5) years full-time experience in research, writing, teaching, interpretation or other demonstrable professional activity with an academic institution, historical organization or agency, museum or other professional institution concerning historic resources in New Hampshire. Additional potential surveys are noted below as optional until deemed required through consultation:

5.1.1 Add Alternative<sup>1</sup> - Archaeological Resources: Phase IB (Reconnaissance-level)

5.1.2 Add Alternative<sup>1</sup> - Historic/Architectural/Engineering Resources: Phase II

### **Task 6. Wildlife**

6.1 Assess impact of current dam and dam removal on rare species, species of concern, threatened and endangered species, general wildlife, and habitat located both upstream and downstream of the project area.

### **Task 7. Other Issues of Importance**

7.1 Fish passage. Assess whether the site - if the dam is removed - would be passable by the fisheries of interest: American shad, river herring, Atlantic salmon, American eel, sea lamprey, and resident species.

7.2 Structural bridge and infrastructure impacts. Assess impact of dam removal on Great Bridge and String Bridge, pier and foundation stability, and other infrastructure. Discuss

appropriate project design options with bridge stability and other infrastructure as a stated goal.

- 7.3 Recreational Usage. Assess the impact of dam removal on boating, angling, swimming and other recreational uses of the river and impoundment.
- 7.4 Other socio-economic and political issues may arise during the consultant's research and investigation on the Exeter River Great Dam. The consultant shall describe how such issues would be addressed and reported.
- 7.5 Assess the potential for invasive species to populate exposed lands in the impoundment area post-dam removal, and recommend methods of mitigating this occurrence, if appropriate.
- 7.6 Water withdrawals – Evaluate the current usage of, and potential impact of dam removal on, the fire department, mill facilities, Phillips Exeter Academy, and other surface water withdrawal facilities that utilize the Exeter River. Consider previous impact studies and identify potential impacts for dam removal.

#### **Task 8. Water Quality**

The impoundment just upstream of the dam (Assessment Unit NHIMP600030805-4) is impaired for Category 5-P (Dissolved Oxygen and Saturation) for not supporting Aquatic Life Use. The impoundment is also impaired for Category 5-M (chlorophyll-a) and Category 5-P (e. coli) for not supporting Primary Contact Recreation. The two river reaches upstream of the impoundment to the Pickpocket Dam (Assessment Units NHRIV600030805-9 and NHRIV600030805-2) are both listed as impaired for Category 5-P (Dissolved Oxygen and Saturation) for not supporting Aquatic Life Use. Additionally, Assessment Unit NHRIV600030805-2 is impaired for Category 5-P (e. coli) for Primary Contact Recreation. More information about these impairments is located here: <http://www2.des.nh.gov/SWQA/>.

- 8.1 Evaluate current water quality data and potential water quality with the dam removal option as it relates to fish and other biota.
- 8.2 Evaluate current water quality data and potential water quality data with the dam removal option as it relates to drinking water supply.
- 8.3 Evaluate current and potential water quality with respect to recreational use.

#### **Task 9. Dam Deconstruction Alternatives and Impact Analysis**

- 9.1 Identify and evaluate alternatives for deconstruction and removal of the dam structure, including scenarios that include partial removal. Identify and evaluate upstream and downstream areas affected and potential areas requiring reclamation.
- 9.2 Identify and evaluate the possible need for structural stabilization of Great Bridge, String Bridge and/or other infrastructure in deconstruction scenarios.

- 9.3 Provide an estimate of how dam removal would affect the acreage, type, and function of wetlands within the influence of the project area.
- 9.4 Develop cost estimates for scenarios deemed feasible, including permitting, engineering, design, and construction/deconstruction efforts.
- 9.5 Develop a timeline in GANTT format for execution of scenarios deemed feasible. Include prerequisite requirements where applicable – such as the implementation of alternative water supplies and other potential constraints.

#### **Task 10 Outreach and Coordination Meetings**

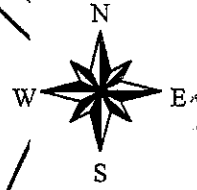
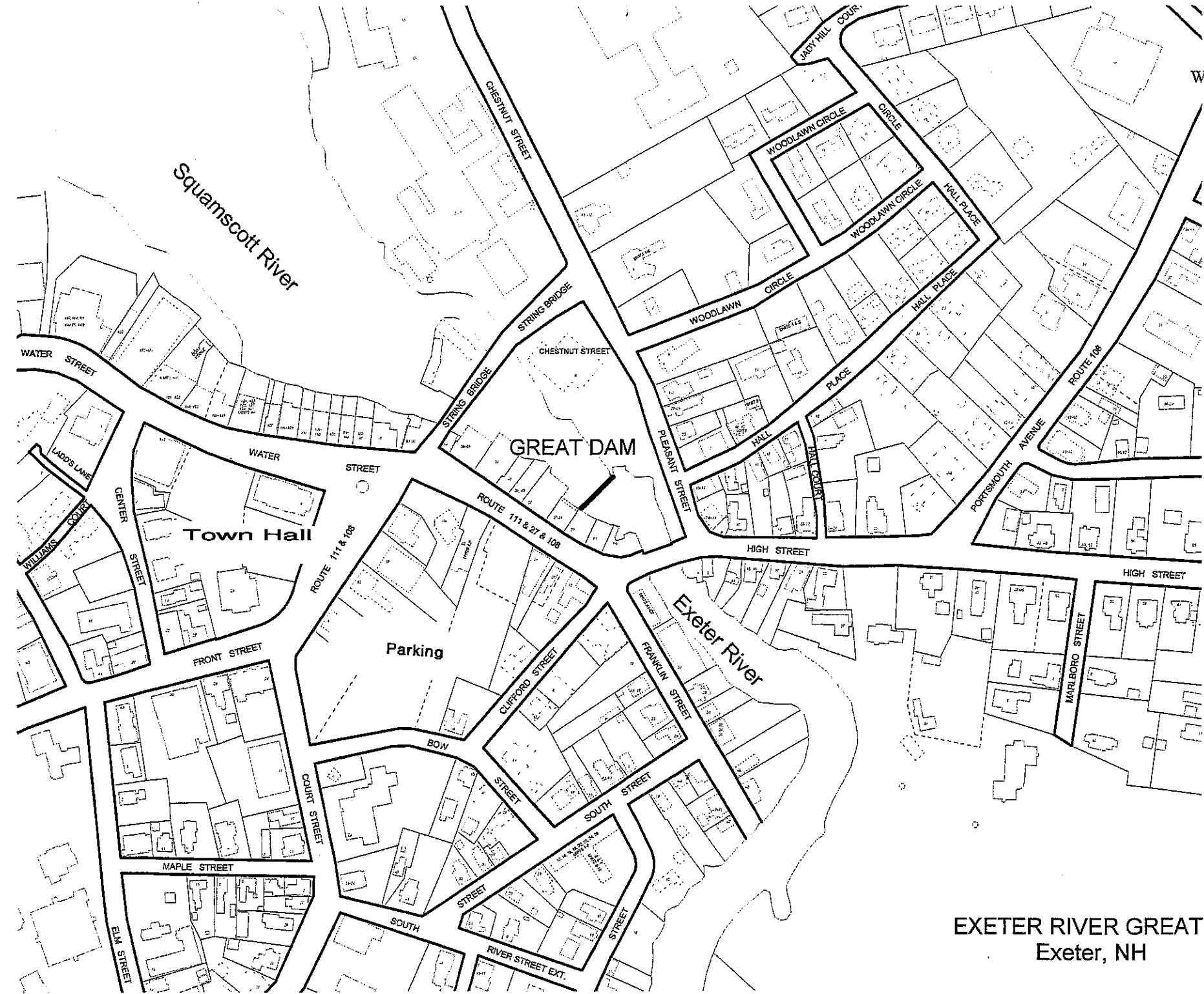
- 10.1 Coordinate with project partners including Town of Exeter, Exeter River Great Dam Working committee, NH Department of Environmental Services (NHDES), NH Fish and Game Department (NHF&G), Environmental Protection Agency (EPA), National Oceanic Atmospheric Administration (NOAA), US Fish and Wildlife Service (USFWS), Piscataqua Region Estuaries Partnership (PREP), Exeter River Local Advisory Committee, Exeter River Study Committee, and others. A minimum of six (6) project progress meetings are expected with project partners. Project partners will be involved at the appropriate stages within the scope of work and as the project progresses.
- 10.2 The role of the consultant is to participate at meetings, provide information, and report on progress. Three (3) public informational meetings are expected: 1.) Initial project overview including timeline, issues to be addressed, and overview of existing data and review. 2.) Approximately mid way through completion, present information collected to date and provide timeline for completion of work and final presentation of draft feasibility study. 3.) Present draft final feasibility study and summary contained therein. Preparation of visual aids for the public. Provide for a qualified historian to attend one public informational meeting to present the findings of Task 5.2.

#### **Task 11. Feasibility and Impact Analysis Report Preparation**

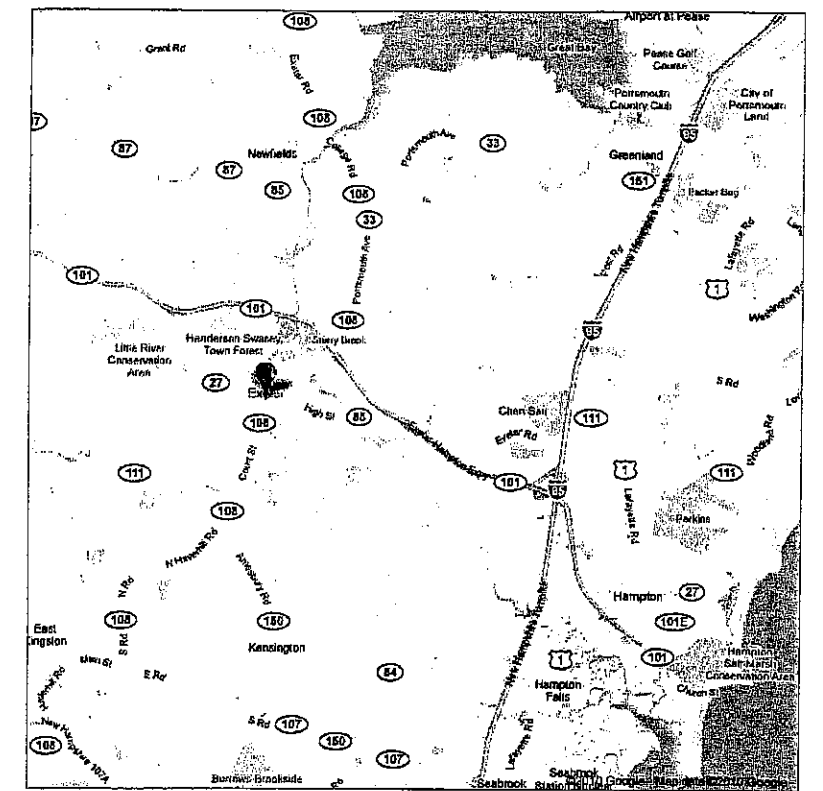
- 11.1 The consultant will incorporate the results of each of the tasks outlined in this proposal into a comprehensive feasibility study report. The consultant is not being asked to provide its recommendation on whether to modify or remove the dam. The consultant will present the information from its study in an objective manner to enable the Town of Exeter to make a well-informed decision. A draft feasibility study will be prepared for review by the Town officials and project partners for review prior to public presentation. A final report will be prepared after the public has had an opportunity to review and provide comment. Report additional information needed and/or recommended outside of the tasks outlined.
- 11.2 Prepare a table that identifies the consequences of dam removal as they relate to each of the tasks. Incorporate this table into the feasibility report.

**EXETER RIVER GREAT DAM  
COST PROPOSAL SCHEDULE**

<b>TASK NO.</b>	<b>ITEM</b>	<b>TOTAL</b>
1	Existing Data Collection and Review	\$
2	Field Survey and Base Mapping	\$
3	Sediment Evaluation	\$
4	Hydrology and Hydraulics Analysis	\$
5	Cultural Resources	\$
6	Wildlife	\$
7	Other Issues of Importance	\$
8	Water Quality	\$
9	Dam Removal Alternatives Analysis	\$
10	Outreach Coordination Meetings	\$
11	Feasibility Report Preparation	\$
12		
13		
<b>TOTAL Tasks</b>		<b>\$</b>
<hr/>		
<b>Add Alternatives</b>		
1.2	Dam Inspection	\$
3.2.1	Sediment Toxicity Bioassay	\$
3.2.2	Community Assessment	\$
4.4.1	Riverine Ice Survey	
5.1.1	Archaeological Resources - Phase IB	\$
5.1.2	Historic/Architectural/Engineering Resources - Phase II	\$
<b>TOTAL Add Alternatives</b>		<b>\$</b>
<hr/>		
<b>TOTAL COST PROPOSAL (Tasks + Add Alternatives):</b>		<b>\$</b>
(use in words)		(use in figures)



EXETER RIVER GREAT DAM  
Exeter, NH



LOCUS MAP

LOCATION MAP



## NEW HAMPSHIRE DIVISION OF HISTORICAL RESOURCES

State of New Hampshire, Department of Cultural Resources  
 19 Pillsbury Street, 2<sup>nd</sup> Floor, Concord NH 03301  
 Voice/ TTY RELAY ACCESS 1-800-735-2964  
<http://www.state.nh.us/nhdhr>

603-271-3483  
 603-271-3558  
 FAX 603-271-3433  
[preservation@nhdhr.state.nh.us](mailto:preservation@nhdhr.state.nh.us)

### **Generalized Guidelines for Research and Reporting:**

#### **Scope of Work for Proposed Dam Removals Pertaining to Historical and Archaeological Resources**

##### **Historic preservation laws and objectives:**

Historic preservation “Review & Compliance” is a consultation process to identify significant historic properties so that any harm to them from government-assisted actions can be avoided or minimized. It is intended to be a conflict-resolution and problem-solving system, which balances the public interest in historic preservation with the public benefit from a variety of governmental initiatives. With respect to the proposed removal of a number of dams along New Hampshire’s waterways, we must first assume that most if not all dams are historic (50 years-age criteria).

Historic properties that are significant in history, architecture, archaeology, engineering, and culture are recognized by both the state and the federal governments as resources to be preserved and interpreted for the benefit of **all** citizens. They are **non-renewable resources** important to our individual and collective identity, and they are worthy of protection, investigation, interpretation, and conservation.

This policy does not mean that all properties of sufficient age to be considered “historic” are significant resources, nor does it mean that all significant historic properties can or should be saved. Rather, it is a directive to prevent the needless destruction of our tangible cultural heritage, so that historical resources can exist in harmony with government-aided social and economic changes.

##### **Purposes and Steps of Process:**

The purpose of the historic preservation review process, as defined under state law RSA 227-C: 9 and Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended (16 U.S.C. 470) and implemented by the Federal Advisory Council on Historic Preservation’s (ACHP) procedures, is to balance the public interest in historic preservation with the public benefit from a variety of governmental initiatives. Steps in this process are:

- Define the area of impact through the project scope. Division of Historical Resources (DHR) should be involved in preliminary discussions.

- Identify consulting parties to the review process; these may include representatives of local governments, property owners, tribal organizations, and others with a demonstrated interest in the project.
- Locate and identify potential historical, architectural, and archaeological resources within the project impact area.
- Evaluate identified resources that might be impacted by the project using National Register of Historic Places (NRHP) criteria for eligibility.
- Assess the probable effects a project would have on historic properties eligible for or listed on the National Register.
- Develop means to resolve adverse effects.

The services of both Architectural Historians and Archaeological Consultants (meeting the minimum federal standards 36CFR 61.5) are required to address preservation concerns and to proceed smoothly through the review process. A scope of work should be submitted to the DHR for review and would include:

### **Identification of Historical Resources**

#### **Archaeological Resources: Phase I (Reconnaissance-level)**

A Phase I Archaeological Reconnaissance-level survey is typically divided into two sub-phases (Phase IA and IB). Phase IA is defined in the following.

Minimally a Phase IA would need to be completed by a qualified archaeologist and submitted to the DHR for review and approval. Information includes:

- General location of project identified on USGS quadrangle map (provided by appropriate agency).
- Methodology statement including purpose of dam project (provided by appropriate agency).
  - Include possible impacts to areas upstream and downstream from dam removal (possible change in hydrology-information provided by appropriate agency).
    - Potential impacts to known sites would include:
      - Erosion to sites from changes in hydrology.
      - Exposure of sites due to lower pond and river levels.
      - Vandalism to exposed sites.
      - Construction impacts resulting from demolition activities.
- Detailed project map with area of impact defined including (provided by appropriate agency):
  - Areas proposed for access, staging, and fill removal/disposal.
- Background Research to include:
  - DHR site file search for known archaeological resources, both Native American and Historical sites.
  - NHDHR Project Area Form and related research as prepared by consulting Architectural Historian. The DHR suggests that consulting archeologists and architectural historians work together to gather and interpret research materials.
- Visual assessment of the proposed project area with regard to archaeological resources.
  - Site description that includes identification of existing archaeological resources.
  - Photo-documentation.

- Detailed map that defines study area including known historic and archaeological resources in close proximity.
  - Cellar holes, retaining walls, etc.
  - Previously identified Native American and Euro American archaeological resources within a 1-mile radius of existing dam.
- NHDHR Archaeological Inventory Forms completed or updated at the Minimum Documentation Level.
- Bibliography of all sources utilized, including informants, DHR's files and the Department of Environmental Services' dam files.

### **Historic/Architectural/Engineering Resources: Phase I**

A Project Area Form must be completed by a qualified architectural historian and submitted to the DHR for review and approval. DHR's general guidance for completing project area forms is available from the office and online at <http://www.nh.gov/nhdhr/formsmanual.html>. In particular, dam project information should include:

- Background Research, including:
  - History and evolution of the dam and study area within the town it is located in, supplemented with historic maps.
  - Information describing comparable resources within the watershed.
- Visual assessment of the proposed project area.
  - Map dam related potential historic resources and sites, with photo key.
  - Photo-documentation.
- Description of the dam and other historical resources present within the study area.
  - Standing structures, sites, or foundations related to dam and/or abutting the impoundment.
  - Bridges, abutments, etc. (within hydrology area of impact-primarily downstream, although upstream should be considered)
  - Mill ponds.
  - Describe possible effects on historic view shed.

An Individual Inventory Form must be completed for the dam and its ancillary components. DHR's general guidance for completing individual inventory forms is available from the office and online at <http://www.nh.gov/nhdhr/formsmanual.html>.

- The date, construction and engineering behind the dam should be clearly described and evaluated.
- The narrative and property map should note and describe all extant and removed dam components – such as retaining walls, gates, sluices, canals and penstocks – with dates of construction (even if estimated).
- The comparable evaluation should examine other dams of the same type and period in New Hampshire and the types, dates and locations of other dams in the watershed or river.

Sanborn maps, corporate records, the industrial schedules from 19<sup>th</sup> century federal census and state-wide dam inventory and records at DES are important research tools for compiling inventory data. The DHR also suggests that consulting archeologists and architectural historians work together to gather and interpret research materials.



- Submit the area and inventory forms to the lead federal agency, the DHR and the Rivers Restoration Program at DES for review and approval. Copies with original, black and white, 35 mm photographs must be submitted to DHR.
- The area form should include recommendations for additional individual and district inventory, as needed.
- If any resources are part of a larger historic district, this evaluation should extend outside of the impact area to define that district.

### **Identification of Historic Resources: Phase IB or II**

- Archaeological Resources (Phase IB Archaeological Reconnaissance-level survey):
  - Level of effort determined through consultation between the archaeological consultant and the DHR, generally includes subsurface testing.
- Historic/Architectural/Engineering Resources (Phase II):
  - Complete additional NHDHR Individual Inventory Forms or District Forms as required.
  - Apply the criteria for evaluation of significance of a resource for possible eligibility for the National Register of Historic Places, if not already listed or nominated.

### **Continuing Consultation under Section 106:**

Continued consultation with the DHR is needed in areas that are determined sensitive to archaeological resources and for historic properties determined eligible for the National Register of Historic Places.

- Determine effect of project on identified historical and archaeological resources.
- If the effects are adverse, the DHR, the lead federal agency, DES and any identified consulting parties consult to resolve these adverse effects.
- Alternatives or modifications to the project that avoid, minimize or mitigate the project's adverse effects are developed and evaluated.
- Conclude consultation with a Memorandum of Agreement (MOA), if needed.
- Include in MOA a clause for Post Dam Removal Monitoring.
  - If there have been archaeological sites identified within the area of impact, the DHR recommends that a qualified archaeologist visually assess the sensitive areas associated with the dam for a year following removal (twice a year), depending on the change in hydrology. This will include potential effects to associated bridges.
- Complete stipulations within time frames outlined in the agreement, mitigating the loss of any historic and archaeological resources.

*This document serves as general guidance on the research and reporting required for proposed dam removal projects. Please contact the Rivers Restoration Coordinator at DES for more specific information as to how this guidance applies to specific projects and resources.*