

REQUEST FOR PROPOSALS

DAM REMOVAL AND RIVER RESTORATION FEASIBILITY STUDY

McLane and Goldman Dams, Souhegan River, Milford, NH

Introduction

The Town of Milford is seriously exploring the option of dam removal for both the McLane and Goldman Dams which are located on the Souhegan River in Milford, NH. The dams have known structural deficiencies, associated safety and liability issues, and are not currently utilized for any defined purpose nor will they be for the foreseeable future. The McLane Dam is owned by the Town of Milford and the Goldman Dam is owned by the Estate of Helen Goodwin. The Town has received a letter from the Estate of Helen Goodwin indicating its support for the Town to enter into a dam removal feasibility study for the Goldman Dam as well.

The McLane Dam was originally constructed in 1846, and the Goldman Dam in 1810. Prior to the introduction of electric motors the McLane Dam was utilized in the manufacture of furniture at the McLane Mill and the Goldman Dam played a key role with the Milford Cotton and Woolen Mill. The site where the McLane Mill once stood now has elderly housing situated on it and Goldman Mill has since been converted into affordable senior citizen/disabled housing.

In recent years Milford has experienced multiple floods of historic measure in the area of these dams and it is the hope that with this project that the Town of Milford will be better able to ensure the uninterrupted access to needed areas/services for some of the more vulnerable segments of its population. Both the Souhegan Valley Boys and Girls Club and several buildings of workforce housing were heavily damaged in the 2007 flooding with additional concerns for the elderly housing that now occupies the space where the mills once operated.

The State Department of Environmental Services (DES) has deemed that the areas impounded behind these dams have water quality issues significant enough to require action. The Souhegan River has two impounded reaches within the Town of Milford that are on the 2008 303(d) list that are directly linked to the McLane and Goldman Dams respectively. The downstream reach is identified as the Souhegan River-McLane Dam, with an Assessment Unit ID (AUID) of NHIMP7000060906-08. This 3 acre impoundment is impaired for failure to support aquatic life (3-PNS/Dissolved Oxygen) and failure to support primary contact recreation or swimming (5-P/Escherichia coli bacteria). Immediately upstream of this impoundment, the 8 acre, Souhegan River – Goldman Dam impoundment (NHIMP7000060906-07) is on the 303(d) list for failure to support aquatic life (5-M/Dissolved Oxygen). In order to determine the feasibility of removal of both of these dams and remediate these areas, a study must be conducted to ensure that removal of these dams will not adversely impact adjacent areas and the river itself.

Additionally, the dams are preventing the movement of migratory and resident fish by acting as barriers. The NH Fish and Game (NHF&G) and US Fish and Wildlife Service (USFWS) are currently working on revisions to the Anadromous Fish Restoration Program for the Merrimack River (1997) which will identify the management plans for several diadromous fish species for the Souhegan River. It is likely that the Souhegan River will be identified as one of the highest priority rivers for diadromous fish restoration in the Merrimack River watershed. The removal of both dams would not only remove barriers to fish movements but would also restore free-

flowing riverine conditions which are essential to good habitat, nutrient and sediment transport, and improvement to the overall ecology of the river system.

The removal of these two dams would open up an additional 6 miles of the Souhegan River to a free-flowing state. In 2008, the Merrimack Village Dam was removed which was located approximately 14 miles downstream of the McLane Dam. Currently, the McLane Dam is the first barrier to fish passage on the Souhegan River.

The Town of Milford and the Helen Goodwin Trust would like to determine if the option to remove both dams is prudent, feasible and cost effective. Undertaking this feasibility study will allow the owners and the public to make a well-informed decision as many issues will be addressed and evaluated. These issues include, but are not limited to: natural resources, water quality, hydraulics, infrastructure, economics, archeological and historic resources, endangered species, flooding, etc. The feasibility study is considered the first phase of a three phase approach. The information gathered in this feasibility study is key in order for the owners and public to make an informed decision on whether to move forward with dam removal.

The Town of Milford has prepared this Request for Proposals (RFP) in cooperation with the Project Partners to solicit proposals from qualified contractors to provide the deliverables requested in the following scope of services. The services may include final engineering plans and permitting documents if removal is deemed feasible.

Selection Procedure

1. Consultants are required to submit one (1) original hard copy and one (1) electronic copy as a PDF of their proposal package. PDFs can be submitted on CD with hard copies or emailed to the Town of Milford. 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. (Optional) Curriculum vitae or resumes for project team members, not to exceed two (2) pages per team member.
2. The selection team will evaluate the proposals based on the following criteria:
 - a. experience with dam removals,
 - b. experience with bridge design and scour analysis,
 - c. knowledge of geomorphic processes,
 - d. environmental engineering and design experience,
 - e. clarity and presentation of proposal,
 - f. knowledge of the local, state and federal permits and authorizations required for projects in New Hampshire,
 - g. demonstration of successful cooperation with local, state and federal agencies, project stakeholders, the public,
 - h. demonstration of implementing creative solutions to complex river issues, and
 - i. bid price

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 for this project be present during the interview.

3. Following the interviews, 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 contacted and the Town of Milford will proceed with contract negotiations with that firm. If negotiations are unsuccessful, the Town of Milford will contact the second ranked consultant and proceed with contract negotiations with that firm, and so on.

Pre-Bid Site Visit

A pre-bid, brief presentation on the project will occur at the Milford Town Hall immediately followed by a visit to the dam sites on May 6, 2010 at 9:00 am (the dams are adjacent to the Milford downtown and within easy walking distance). The dams are in Milford, N.H., which is west of Nashua. The dam sites are just downstream from the Colonel Shepard Stone Bridge. Parking is available in the Putnam Street Municipal Parking Lot, behind Town Hall on Putnam Street.

Questions and Due Date:

Town of Milford staff will not respond to telephone questions about the RFP. Questions concerning this RFP must be received in writing to the Town of Milford (see mailing address below) by 4:00 p.m. on Friday, May 12, 2010. Questions may also be submitted via e-mail to Guy Scaife at gscaife@milford.nh.gov (Subject Line: McLane & Goldman Dam RFP Question) or by facsimile machine to (603) 673-2273 (Attn: Guy Scaife). The Town of Milford will post responses to all submitted questions at:

<http://milfordnh.info/milford/RFP/Damremovalquestions.pdf>

All proposals must be received by 4:00 p.m. on May 21, 2010 at:
Milford Town Hall
Town Administrator Guy Scaife
1 Union Square
Milford, NH 03055

Any proposals received after this specified time will be rejected.

Time Line:

April 23, 2010	Request for Proposals (RFP) release
May 6, 2010	Pre-bid site visit
May 11, 2010	Due date for questions about RFP
May 17, 2010	Answers to submitted questions posted to web site
May 21, 2010	Due date for proposals

Disclaimer:

This RFP does not commit the Town of Milford to award a contract or to pay any costs incurred during the preparation of the proposal or during the interview process. The Town of Milford

reserves the right to reject any or all of the proposals for completing this work. The Town of Milford 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.

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 Milford, DES, other state agencies, U.S. Environmental Protection Agency (EPA), U.S. Army Corps of Engineers (ACOE), U.S. Fish and Wildlife Service (USFWS), other federal agencies and other applicable sources. To include but not be limited to the following existing data:
 - 1.1.1 Gomez & Sullivan Preliminary Evaluation Report
 - 1.1.2 Dam Site Plans and other relevant file information
 - 1.1.3 Town of Milford file correspondence including meeting minutes on this project
 - 1.1.4 EPA Waste Site and Cleanup and Reuse in New England – Fletcher’s Paint Works and Storage
- 1.1. Optional - Dam inspection - 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, and a detailed description of the proposed work. If deemed necessary, the inspection should be conducted by a Professional Engineer registered in the State of New Hampshire.
- 1.2. Prepare a technical summary memorandum discussing the environmental, cultural, economic, and structural issues, as well as any additional critical issues discovered, of the dams, river and bridge based on the information collected above.

Task 2. Field Survey and Base Mapping

- 2.1 Dam Structures Topography Survey - The consultant shall complete a field survey of the dam structures, bridges, and any impacted utilities and/or structures identified in Task 1. This should include property lines, wetland boundaries, floodplain boundaries, and existing easements.
- 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. 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.
- 2.4 Deed and Title Search on the dam sites 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 Milford. Property ownership, Plot and Lot Numbers, and property boundary information shall be used in preparing an Existing Conditions Plan for each of the two dam sites and will provide specific property information.

- 2.5 Historic Resource Assessment - The generalized guidelines on conducting historic resource reviews for dam removal projects are attached to this RFP. The Request for Project Review (RPR) will be completed by the Town of Milford. 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 NH Division of Historical Resources (NHDHR), Lead Federal Agency representative, local cultural resource commissions/committees as commensurate with the National Historical Preservation Act Section 106 regulations. Additional potential surveys are noted below as optional until deemed required through consultation:
- 2.5.1 Optional - Archaeological Resources: Phase IB (Reconnaissance-level)
 - 2.5.2 Optional - Historic/Architectural/Engineering Resources: Phase II

Task 3. Sediment Management.

- 3.1 Review of existing information on sediment analysis, including:
- 3.1.1 EPA Waste Site and Cleanup and Reuse in New England – Fletcher’s Paint Works and Storage
 - 3.1.2 NHDES Evaluation of Sediment Quality for Dam Removals guidance document
- 3.2 Collaborate with state and federal agencies to determine what additional sediment sampling and analysis will be required. The consultant shall prepare a sediment sampling plan to assess sediment quantity and quality, and physical parameters in the McLane Dam and Goldman Dam impoundments according to the NHDES Sediment Quality Guidance document. 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 Optional - Sediment Toxicity Bioassay
 - 3.2.2 Optional – Biological Community Assessment
- 3.3 Analyze sediment transport capabilities and mobility in conjunction with Task 4 for the dam removal alternative proposed in Task 6.
- 3.4 Assess sediment analysis results and sediment transport results. Discuss appropriate sediment management options.

Task 4. Hydrology and Hydraulics Analysis

- 4.1 Conduct a hydrologic study on the Souhegan River including the dams, bridge, extent of impoundment and surrounding areas. Incorporate generated data into alternatives analysis.
- 4.2 Conduct a hydraulic analysis to predict water surface and velocity profiles for both existing and post-removal conditions of the McLane and Goldman Dams. Incorporate generated data into alternatives analysis.

- 4.3 Perform a scour analysis on bridges, other infrastructure, and any impacted utilities identified in Task 1 to evaluate the potential impact of dam removal.
- 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. If deemed necessary, conduct a riverine ice survey. Prepare summary of findings and associated impacts.
 - 4.4.1 Optional - 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 removals.
- 4.5 Assess the impact of dam removals on the FEMA designated floodway.

Task 5. Other Issues of Importance

- 5.1 Fish passage. Assess whether the site(s) – if the dams are removed – would be passable by the fisheries of interest: American shad, river herring, Atlantic salmon, American eel, and resident species.
- 5.2 Structural bridge impacts. Assess impact of dam removal on bridge, pier and foundation stability. Discuss appropriate project design options with bridge stability as a stated goal.
- 5.3 Species of concern. Assess impact of dam removal on rare, threatened and endangered species located both up and downstream of the project area.
- 5.4 Recreational Usage. Assess the impact of dam removal on boating, angling, swimming and other recreational uses of the river and impoundment.
- 5.5 Other socio-economic and political issues may arise during the consultant’s research and investigation on the McLane and Goldman Dams. The consultant shall describe how such issues would be addressed and reported.
- 5.6 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.

Task 6. Feasibility Report Preparation

- 6.1 Alternatives analysis for the removal of the dam structures and possible structural stabilization of the bridges and other infrastructure, if necessary.
- 6.2 Alternatives analysis to address other issues described in Task 5, which are not part of Task 6.1.
- 6.3 Preliminary costs for recommended alternatives analyzed in Tasks 6.1 and 6.2. In addition to construction cost estimates, these estimates should include the costs for engineering services and permitting costs to take the project to bid. This estimate should include the

cost to prepare preliminary and final plans and specifications, permit application processing, construction engineering oversight, and meeting attendance and facilitation.

- 6.4 The consultant will incorporate the results of each of the tasks above into a comprehensive feasibility study report. 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.

Task 7 Outreach and Coordination Meetings

- 7.1 Coordinate with project partners including Town of Milford, Souhegan Watershed Association, Souhegan River Local Advisory Committee, NHDES, New Hampshire Fish and Game Department (NHF&G), USFWS, NOAA Restoration Center, American Rivers, Trout Unlimited and others as identified. 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.
- 7.2 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. Coordinate, allow input from, and present findings to the Town of Milford and other interested parties. Preparation of visual aids, including visual renderings, for the public. Provide for a qualified historian to attend one public informational meeting to present the findings of Task 2.5.

Task 8 Final Engineering and Permitting

- 8.1 If the removal of the dams is deemed feasible, and it is acceptable to the dam owners, the consultant may be retained to provide final engineering plans and specifications suitable for bidding purposes and to obtain all necessary permits. The consultant shall describe projected time frames for completing final plans and specifications, and obtaining all necessary approvals.

August 26, 2009

Mr. Guy Scaife
Town Administrator
Town of Milford
One Union Square
Milford, NH 03055

Re: Goldman Dam

Dear Mr. Scaife:

This letter is to advise you that on behalf of the Estate of Helen Goodwin, we are interested in working with the Town of Milford in order to remove the Goldman Dam. We understand that there are issues with the two existing dams located near Milford, and we trust that our cooperation will result in a better community for the citizens of Milford.

Please contact me regarding this letter.

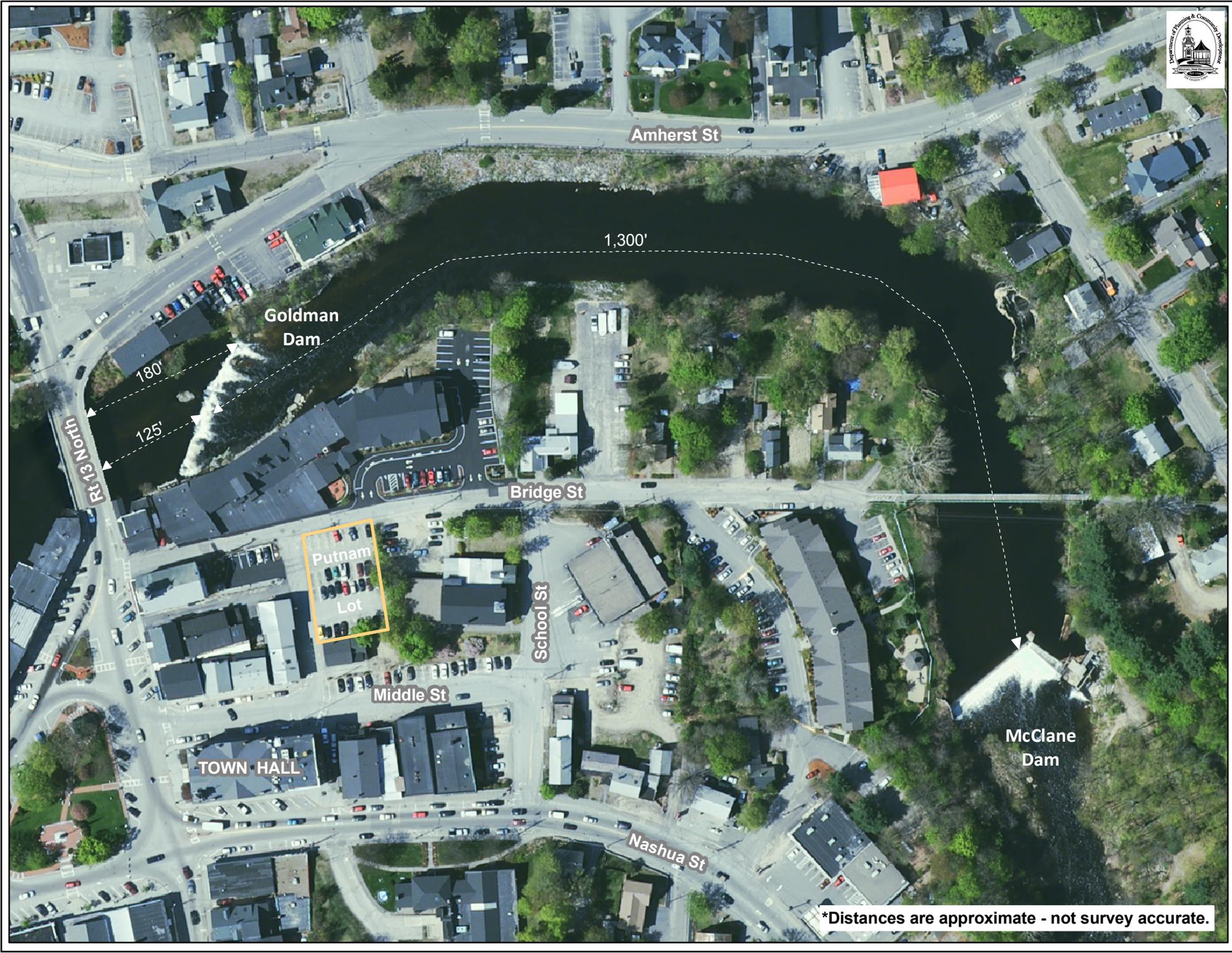
Sincerely,



R. Thomas Dawe

RTD/cjc

cc: Kenyon Schlenker, Personal Representative



Amherst St

1,300'

Goldman Dam

180'

125'

Rt 13 North

Bridge St

Putnam Lot

School St

Middle St

TOWN HALL

Nashua St

McClane Dam

*Distances are approximate - not survey accurate.



NEW HAMPSHIRE DIVISION OF HISTORICAL RESOURCES

State of New Hampshire, Department of Cultural Resources
 19 Pillsbury Street, 2nd 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

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 19th 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.