Targeted Supplemental Environmental Assessment
For The Lower Shannock Falls Dam Removal Project

Introduction

This document is a targeted supplemental environmental assessment (TSEA) for the National Oceanic and Atmospheric Administration's (NOAA) Community-based Restoration Program (CRP), administered within NOAA's National Marine Fisheries Service under the authority of the Fish and Wildlife Coordination Act, 16 U.S.C. 661, as amended by the Reorganization Plan No. 4 of 1970 and the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006. The CRP is proposing to provide financial assistance to a restoration activity entitled "Lower Shannock Falls Dam Removal Project," through the American Recovery and Reinvestment Act (ARRA). Other financial assistance for the project is being provided by the Natural Resources Conservation Service (NRCS), United States Fish and Wildlife Service (USFWS) and Rhode Island Coastal Habitat Trust Fund. The NRCS is the lead Federal agency implementing the project.

Purpose and Need for the Action

After reviewing the proposed project, CRP staff determined that the proposed action is in keeping with the purpose and need analyzed in the February 6, 2002 Programmatic Environmental Assessment (PEA) for the Community-based Restoration Program Implementation Plan and the June 23, 2006 Supplement (SPEA). Those programmatic documents analyze the impacts to the human environment generally resulting from the award of community-based grant funds to undertake a variety of coastal and marine habitat restoration activities. As described in the PEA/SPEA, certain site-specific impacts, such as impacts to properties eligible for or listed on the National Register of Historic Places (historic properties) warrant additional analysis via a TSEA to assess the potential for significant impact on the human environment. Specifically the proposed action would remove portions of the Lower Shannock Falls Dam, a contributing element to the National Shannock Village Historic District, an historic property. In addition to consideration under NEPA, the adverse effects related to historic properties are subject to the procedures for identification of historic properties and evaluation and resolution of adverse effects established pursuant to Section 106 of the National Historic Preservation Act (NHPA) as implemented by 36 C.F.R. Part 800.

This TSEA tiers to and incorporates by reference the pre-existing PEA and SPEA in accordance with 50 C.F.R. §1502.20 and NAO 216-6, subsection 5.09a. This TSEA level of review is conducted in accordance with the implementation procedures described in the SPEA and appropriately focuses on consideration of effects to historic properties and means for mitigating those effects through consultation in accordance with Section 106 of the NHPA, as implemented by 36 C.F.R. Part 800. Beyond consideration of site-specific effects to historic properties, our review of the proposed action has not revealed any substantial changes in the proposed action or new potentially significant adverse effects to other elements of the human environment which would require additional review in the TSEA or supplementation of the pre-existing NEPA documents.

Summary of NHPA Compliance

NRCS as the lead Federal agency for implementation of this project has been engaged in consultation with the Rhode Island Historic Preservation and Heritage Commission (RI SHPO) since March 2006, pursuant to 36 C.F.R. part 800. A Memorandum of Agreement (MOA) between the NRCS and the RI SHPO was fully executed on September 1, 2009. NRCS, in consultation with the RI SHPO concluded that the proposed undertaking will have an adverse effect on the Lower Shannock Falls Dam, a contributing element to the Shannock Village Historic District, and the MOA includes mandatory stipulations for resolving those adverse effects. As part of the proposed action, NRCS will implement those stipulations, which, for NEPA purposes, will mitigate the adverse effects to historic properties.

In addition, NRCS invited the Narragansett Indian Tribe (Tribe) to participate in the Section 106 process as a Consulting Party due to the project's location within an area of cultural and religious significance to the Tribe. Although the project site has not been determined to be eligible for the National Historic Register nor is any adverse impact to Tribal ancestral land anticipated, the Tribe has requested that NRCS enter into a separate MOA with the Tribe to formally recognize the Tribe's interest in the project and the restoration of historic fishing grounds.

Preferred Alternative: Description of Proposed Action

The CRP is proposing to fund removal of the Lower Shannock Falls Dam in Richmond, Rhode Island, located on the upper Pawcatuck River. The Wood Pawcatuck Watershed Association is a local advocate for the project and is working with the Town of Richmond (dam owner), NOAA, NRCS, USFWS, and several other project partners to complete the proposed project.

The 33-mile Pawcatuck River forms a natural border between Rhode Island and southeastern Connecticut, traveling through mostly rural land and small towns before it discharges into Little Narragansett Bay in Westerly, Rhode Island. The watershed is well known for its high water quality, important fishery resources, and recreational opportunities. The river also has a long history of industrial use, and many dams were constructed along the mainstem and its tributaries to generate power. These dams, many of which no longer serve their intended purpose, prevent access by diadromous fish to historic upstream spawning and rearing habitat.

While the Rhode Island Department of Environmental Management (RIDEM) operates fishways in the lower Pawcatuck River, the majority of the watershed is not accessible to migratory fish species. The Lower Shannock Falls Dam is the first in a series of dams within the upper Pawcatuck River that prevents diadromous fish access to significant habitat in the upper Pawcatuck, Beaver and Usquepaug Rivers, and Worden's Pond. The Pawcatuck River Watershed is the state's only watershed identified by the RIDEM 2002 Strategic Plan for the Restoration of Anadromous Fishes to Rhode Island Coastal Streams with significant habitat suitable for Atlantic salmon.

Removal of the Lower Shannock Falls Dam will allow river herring, American shad, Atlantic salmon, American eel, and brook trout access to approximately 4 acres of

spawning and nursery habitat in the upper Pawcatuck River. Future fish passage projects are planned in the upper Pawcatuck River watershed, including the installation of a structural fishway at the Upper Shannock Falls (Horseshoe Falls) Dam in Shannock Village and a potential dam removal at the Kenyon Dam in the village of Kenyon (Richmond, RI). Once completed, approximately 10 stream miles and 1,300 acres of high quality spawning and nursery habitat will be available to migratory fish in the upper watershed, including the state's largest freshwater body, Worden's Pond.

The proposed 4 acre restoration action addressed in this TSEA has independent utility from the additional acres proposed for restoration associated with future projects and can function independently to achieve restoration goals that support the purpose of NOAA's CRP. Other benefits expected to result from the proposed project include improvements to water quality in a formerly impounded river segment, and an increase in natural transport of sediment and nutrients typical of free-flowing rivers.

Cartographic and archival resources indicate that a dam was probably first erected at this location by John T. Knowles in the 1830s or 1840s when he purchased a mill property at the Lower Falls with an existing gristmill. In 1834 he built a cotton and woolen mill on the east (Town of Richmond) side of the river but by 1875 the mill property had been purchased by the Carmichael Manufacturing Company. A massive fire destroyed the mill in 1884, and a new mill building was constructed immediately south of the original mill site in 1885. This building was used for various industries until the 1960's and later for storage. In 2006 the very deteriorated building was removed by the Town of Richmond, and a public park is planned at the site of the former mill. Today only the dam and a few associated structures remain, including masonry ruins of the 1834 mill, as well as a headrace and small powerhouse on the west (Town of Charlestown) side of the river dating from the 1920's when the mill was modernized to include hydroelectric generating equipment. The dam is severely deteriorated and has become an economic and safety liability for the Town of Richmond, who together with the WPWA and other project partners, is seeking to remove the dam.

In addition to its role in the 19th century industrial development of Shannock Village, the Lower Shannock Falls Dam is located within an area of cultural and religious significance to the Narragansett Indian Tribe (Tribe). The Tribe has identified the greater southern New England coast as sensitive to containing natural and cultural resources with significance to their heritage and within the vicinity of the Lower Shannock Falls Dam, a battle was fought between the Narragansett Indian Tribe and Pequots over fishing rights to the Shannock Falls during the seventeenth century.

The project involves the removal of an existing timber-crib spillway and channel modifications to allow the target species to efficiently pass the dam site under a range of flow conditions. Channel bottom material (bedrock, cobbles/rocks and sediment) will be removed from two locations immediately downstream of the dam to provide appropriate elevations and three grade control structures (rock weirs) will be constructed near the bottom of the falls to provide hydraulic controls for fish passage. The river-right raceway (east) channel bypassing the spillway will remain in place but will be closed at its upstream end using fill material. The raceway and powerhouse on the west side of the river will also remain but this raceway will also be closed using fill material.

In order to minimize impacts to historic resources, a portion of the spillway may remain in place if it is determined to be structurally competent following channel work. If the portions remaining are unstable or otherwise present a public safety hazard (e.g., embedded iron pins), those sections will be removed in their entirety down to the pre dam channel bed (exposed bedrock) to prevent any hazards to future recreational users in the river.

No adverse impacts to areas with cultural significance to the Tribe are anticipated in association with the described construction activities. However, the Tribe has asked for the opportunity to retain stone from the riverbed during its excavation and is working with NRCS to formalize this request.

No Action Alternative
Under the no action alternative, the CRP would not fund the proposal to remove the Lower Shannock Falls Dam and the dam would continue to prevent diadromous fish passage to upstream foraging and spawning habitat. The Town of Richmond would be responsible for upkeep and repair of the dam which serves no useful purpose.

Impacts of the Preferred Alternative:
Removing the Lower Shannock Falls Dam, while providing access to habitat for diadromous fish, will have direct adverse effects on historic resources associated with disturbance of the existing dam. The earliest state records indicate the dam was present in 1884 when it was identified as part of the Carmichael Manufacturing Company mill complex, but cartographic and archival resources indicate a dam was likely erected in the 1830's or 1840's by John T. Knowles with the construction of a stone mill at the site. Industry of some kind has been in almost continual operation at the site since the early 1800's until modern times. At one time the dam provided water power for a textile mill to manufacture cotton and woolen yarns, and later cotton and "mixed goods," manufacture of ground mica, and fabric. In the 1920's hydroelectric equipment was installed in brick powerhouses on the west side of the river and was reportedly accessed by a pedestrian concrete bridge across the river.

The Lower Shannock Falls Dam is a contributing element of the Shannock Village Historic District, and is listed on the National Register of Historic Places. NRCS, acting as lead federal agency on behalf of NOAA and the USFWS, consulted with the RI SHPO, pursuant to 36 C.F.R. Part 800 of the regulations implementing Section 106 of the NHPA, and determined that the project will have an adverse effect on the Lower Shannock Falls Dam and the Shannock Village Historic District.

In addition, the project site is located in an area to which the Tribe attaches traditional cultural and religious importance. NRCS has consulted with the Narragansett Indian Tribe Tribal Historic Preservation Officer (NITHPO), pursuant to 36 C.F.R. Part 800 of the regulations implementing Section 106 of the National Historic Preservation Act and determined that no adverse impacts will result from the project.

Mitigation

The NRCS entered into an MOA with the RISHPO to resolve the potential adverse effects of the proposed project. NRCS and the RISHPO agree that the undertaking would be implemented in accordance with stipulations provided in the MOA, including on site consultation with the RISHPO and other project partners to determine the extent that the dam structure may be preserved, designs showing remnants of the dam to remain following removal and preservation of existing structures on the west side of the river, preparation of archival quality photographic documentation, and interpretive signage to provide an account of the historical development of the river and Lower Shannock Falls Dam. Via the MOA, these appropriate mitigating stipulations have been agreed upon by all parties. These mitigation measures, therefore, are considered part of the proposed action.

In addition, NRCS is working with the Tribe to formally recognize their role in the proposed project and the importance of the historic run to the Tribe. NRCS and the NITHPO agree that the Tribe will participate in an on-site consultation with the RI SHPO and other project partners to determine the extent that the dam structure may be preserved and require notification of soil excavation and rock removal, at which time NRCS will schedule an on-site meeting with NITHPO to discuss the method of rock removal and possession of the materials by the NITHPO.

NOAA has not identified any indirect effects to historic properties or other cultural resources resulting from dam removal activities. While two additional fish passage projects are planned to restore the watershed in the future, NOAA has not identified any synergistic impacts related to those projects and a projection of cumulative impacts, if any, to historic properties or other cultural resources would be speculative at this time. Prior to funding any additional projects that have the potential to affect historic properties within the watershed, NOAA would consider the potential for cumulative impacts to such resources through preparation of additional NEPA analysis if appropriate.

Impacts of the No Action Alternative

Under the no-action alternative, NMFS CRP would not fund the proposed project. Other agencies would still have the option to fund this project. However, the need for coastal habitat restoration is great, and this project responds to those needs and meets important priorities of the CRP, therefore not funding would not contribute to the fulfillment of the CRP purpose and need. There would be no foreseeable direct, indirect or cumulative impacts to the human environment under the no action alternative.

Comparison of Alternatives

Based on the analysis presented here, including the capacity to mitigate the loss to historic resources, the preferred alternative can be conducted in a manner that minimizes the impacts to the historic resource by preserving and interpreting the resource. The No Action alternative does not immediately impact the historic resource, however, significant work is required to stabilize the dam, and the No Action alternative would not assure that historic preservation was conducted prior to damage or loss of the resource. In addition, the preferred alternative meets the purpose of the CRP by restoring important habitat for fish species under NMFS jurisdiction, whereas the purposes of the CRP are not advanced via the No Action alternative. While the preferred alternative better meets

the purpose and need for action, it will have direct adverse impacts to identified historic properties. Those impacts have been mitigated through commitment to mitigation measures developed through consultation under Section 106 of the NHPA. The no action alternative would not result in similar immediate direct impacts although the resource and its integrity could deteriorate over time without implementation of preservation measures such as photographic documentation and interpretation.

References

USDA Natural Resources Conservation Service, 2009. Memorandum of Agreement between the United States Department of Agriculture, Natural Resources Conservation Service and the Rhode Island Historic Preservation and Heritage Commission Historic Preservation Officer Regarding the Restoration of Fish Runs at the Lower Shannock Falls, on the Pawcatuck River, Charlestown and Richmond, Rhode Island.

Public Archaeology Laboratory, 2007. Cultural Resources Assessment Shannock Fish Passage Feasibility Study, Richmond and Charlestown, Rhode Island.