

STATE OF CONNECTICUT
DEPARTMENT OF ENERGY AND ENVIRONMENTAL ASSESSMENT

ENVIRONMENTAL ASSESSMENT SUMMARY

Date: February 8, 2016

Municipality: Enfield

Staff Contact: Jennifer Perry

Project Name: Springborn Dam Removal and Restoration

This assessment is being conducted in conformance with the generic Environmental Classification Document for Connecticut State Agencies to determine Connecticut Environmental Policy Act (CEPA) obligations.

Project Description: The Springborn Dam, owned by the Connecticut Department of Energy and Environmental Protection (DEEP), is located on the Scantic River in Enfield, CT, adjacent to 504 Hazard Avenue. It is a run of the river dam built in 1890 to provide power for an adjacent mill. The dam has deteriorated over time and is considered to be in very poor condition. The dam currently consists of the failed remains of timber crib over stone masonry. It is the goal of the DEEP to remove the dam in order to eliminate a public safety risk and reconnect habitat by restoring a stretch of free-flowing river.

Project objectives:

- Eliminate a public safety risk
- Increase community resiliency in the face of future storms
- Eliminate a migratory barrier to various fish species and reconnect 2.6 miles of upstream fish habitat
- Promote restoration of runs of diadromous fish species and eastern brook trout
- Remove contaminated sediment from the river, eliminating exposure hazard to recreationalists, downstream residents (in the event of dam failure), and wildlife
- Strengthen the long-term resiliency of the aquatic organisms
- Restore natural riverine functions (e.g. sediment transport, floodplain development and function, maintenance of normal thermal regimes, re-establishment of natural riverine vegetative communities)

Regulations of Connecticut State Agencies (RCSA) Section 22a-1a-3 Determination of Environmental Significance (Direct/Indirect):

1. Impact on air and water quality or on ambient noise levels

- a. Air Quality* – The entire State of Connecticut, including the project area, is currently in non-attainment for 8-hour ozone. The project area, along with the rest of the State of Connecticut is in attainment for all other criteria air pollutants: particulate matter (<10 micrometers in diameter-PM₁₀ or < 2.5 micrometers in diameter-PM_{2.5}); sulfur dioxide (SO₂); ozone (O₃); nitrogen dioxide (NO₂); carbon monoxide (CO); and lead (Pb). The project does not include new construction or conversion of land use facilitating the

development of public, commercial, or industrial facilities. No new sources of stationary source air pollutant emissions will occur as a result of the project. Traffic will not increase as a result of the project, and therefore, there will be no increase in mobile source emissions of air pollutants.

Removal of the impounded sediments and dam will involve temporary emissions from construction equipment. Potential construction air quality impacts can occur due to the use of diesel-powered construction vehicles. Diesel air emissions include carbon monoxide, hydrocarbons, nitrogen oxides, and particulate matter. Emissions from construction equipment are anticipated to be significantly less than the total emissions from other industrial and transportation sources in the region, and therefore, are expected to be insignificant with respect to compliance with the National Ambient Air Quality Standards. Potential localized air quality impacts would be avoided or limited by proper operation and maintenance of construction equipment and adherence to State regulations limiting idling of engines.

Because the project does not include construction or conversion of land use facilitating development of public, commercial, or industrial facilities, any project-related emissions will not interfere with the air quality goals for the State Implementation Plan. No negative impacts are anticipated.

- b. *Water Quality* – The project will take place within the Scantic River. Contaminated sediment will be removed from the impoundment prior to dam removal. Best Management Practices and *The Connecticut Guidelines for Soil Erosion and Sediment Control* will be followed in order to minimize potential construction-period impacts; any construction-related water quality impacts will be temporary. Sediment and dam removal will result in improved habitat quality within the river. No negative impacts are anticipated, and a long-term benefit to water quality is anticipated from removal of contaminated sediment.
 - c. *Ambient Noise Levels* – Use of heavy construction equipment during construction activities are a potential source of short-term noise impacts. Construction activity will occur during daytime hours and any adverse noise impacts due to construction activities will be temporary. In addition, construction noise is exempt from the state noise standards found at RCSA 22a-69-1 through 22a-69-7.4. No negative impacts are anticipated.
2. *Impact on a public water supply system or serious effects on groundwater, flooding, erosion, or sedimentation*
- a. *Water Supply* – The project is not within a public water supply source area, therefore, no negative impacts are anticipated (see letter from Connecticut Department of Public Health stating no comment, attached).
 - b. *Groundwater* – No significant negative impacts are anticipated. This project is not anticipated to affect sustainability of groundwater supply to public groundwater wells in the project area. In addition, there will be decreased flooding of the upstream area during high flow events, which will reduce potential negative effects that storm events

have on upstream wellfields.

- c. *Flooding* – The project is within the 100-year flood zone (FEMA Flood Insurance Rate Map 09003C0232F). Currently during high flow events, water enters the adjacent mill buildings and flood waters rise a considerable distance upstream, which affects bridges and other properties. Following dam removal, water surface elevations upstream of the current Springborn Dam will be lowered under normal and flood conditions. This is a dam removal project, and will comply with requirements of the DEEP Dam Construction Permit. No negative impacts are anticipated.
 - d. *Erosion or Sedimentation* – In order to protect the Scantic River during construction, erosion control measures will be installed. These measures may include, but are not limited to silt fencing and stone check dams, which will comply with *The Connecticut Guidelines for Soil Erosion and Sediment Control*. Disturbed areas will be seeded with appropriate seed mixes following construction. No erosion control measures above surface water elevation will be removed before vegetation has been established. No negative impacts are anticipated.
3. *Effect on natural land resources and formations, including coastal and inland wetlands, and the maintenance of in-stream flows* – The project includes dam removal in order to return the Scantic River to its natural, free-flowing state. As a result of the removal of the dam, it is anticipated that there will be some loss of wetlands in the vicinity of the project due to a change in surface water level. The overall project will have a positive effect on natural resources by restoring river ecology, improving the potential for migratory fish passage, and removing contaminated sediments. A Category 2 General Permit Application under Section 404 of the Clean Water Act for activities in waters of the United States will be submitted to the United States Army Corps of Engineers.
4. *Disruption or alteration of an historic, archeological, cultural, or recreational building, object, district, site, or its surroundings* – A project notification form was submitted to the Connecticut State Historic Preservation Office (SHPO). Following its review, SHPO indicated no objection to the project, but expressed regret at the loss of the historical dam which they believe is eligible for the National Register of Historic Places. A Memorandum of Agreement (MOA) pursuant to the National Historic Preservation Act was requested. A draft MOA between the United States Fish and Wildlife Service (USFWS), DEEP, and SHPO was drafted and submitted to the SHPO for review. The MOA will be finalized before any construction activities take place. Consistent with Section 106 of the National Historic Preservation Act (NHPA), the USFWS has initiated consultation with relevant Tribal Historic Preservation Officers (THPOs). Since the Proposed Action will not involve significant disturbance in the floodplain, it is anticipated that no negative impact to archaeological resources will occur as a result of the project.
5. *Effect on natural communities and upon critical species of animal or plant and their habitats; interference with the movement of any resident or migratory fish or wildlife species* – Removal of the dam will reconnect 2.6 miles of upstream fish habitat, which has been inaccessible for over 100 years. This will strengthen the natural ecosystem by providing additional habitat and increasing effective breeding populations. Dam removal will also allow connection of a small population of eastern brook trout downstream of the dam to a much larger population upstream of the dam. In addition the migration of fish species, freshwater mussels and a variety

of predators are also anticipated to return to the area. Removal of the dam will eliminate a 52-acre impoundment, allowing for re-establishment of natural riverine vegetative communities. In addition, sediment transport, floodplain development and function, and cooler water temperatures will be restored.

A response from the DEEP Natural Diversity Database (NDDDB) request indicates populations of wood turtle and bridle shiner, both listed as State Species of Special Concern, in the vicinity of the project area. The response letter from DEEP provided the following guidelines to be used during the project:

- Siltation and Erosion Control Measures:
 - Where possible, avoid installing sediment and erosion control materials from late August through September and from March through Mid-May.
 - If silt fencing must be installed during these periods, the DEEP recommends staggered silt fencing to allow amphibian and reptile movement.
 - Avoid the use of erosion control products with netting embedded in the product. This includes products with bio-degradable and degradable netting.
 - Siltation and erosion control measures should be removed as soon as soils are stable
- Rip-rap: Consider covering with local stream bank material
- Soil Stockpiles: Fence stockpiles to keep turtles from attempting to nest in them

A Request for Determination of Need for Fishway for Dam Safety Permit was submitted to DEEP Fisheries. No other fish protection measures are necessary beyond what is required by the project permits. No long-term negative impact to natural communities or critical species is anticipated.

6. *Use of pesticides, toxic or hazardous materials or any other substance in such quantities as to create extensive detrimental environmental impact* – Contaminated sediment has been identified within the impoundment. This material will be removed, dewatered, and disposed at an appropriate off-site location. Removal of these sediments will eliminate exposure hazard to recreationalists and downstream residents (in the event of dam failure) and strengthen the long-term resiliency of the aquatic organisms. In addition, measures will be taken during the construction process to avoid spills of fuel or other potentially hazardous materials during equipment operation. No negative impact is anticipated.
7. *Substantial aesthetic or visual effects* – No negative impact will occur as the existing, deteriorated dam is not in an accessible area for public view and the removal will restore the site to a free-flowing river
8. *Consistency with the written and/or mapped policies of the Statewide Plan of Conservation and Development and such other plans and policies developed or coordinated by the Office of Policy and Management or other agency* – Based on areas identified on the Interactive Location Guide Map for the 2013-2018 State Conservation and Development Policies Plan, the project is located within a Priority Conservation Area. These areas are identified based on environmental and/or natural resource values. The project is located within the 100-year flood zone and will restore

natural riverine functions (e.g. sediment transport, floodplain development and function, maintenance of normal thermal regimes, re-establishment of natural riverine vegetative communities) and habitat for populations of State-listed species of special concern. The project is consistent with the policies of the 2013-2018 State Conservation and Development Policies Plan. No negative impact will occur.

9. *Disruption or division of an established community or inconsistency with adopted municipal and regional plans* – The 2011 Plan of Conservation & Development for the Town of Enfield places emphasis on the protection of the community’s natural and open space resources, especially rivers and wetlands. In addition, the 2014-2024 Capitol Region Plan of Conservation and Development promotes active natural resource stewardship. The project will restore the Scantic River to its natural, free-flowing condition and improve potential for migratory fish passage. In addition, contaminated sediments will be removed from behind the dam, which will eliminate the potential for release of contaminated sediment to downstream areas. The project is therefore consistent with the 2011 Enfield Plan of Conservation & Development and the 2014-2024 Capitol Region Plan of Conservation and Development; no negative impact will occur.
10. *Displacement or addition of substantial numbers of people* – This project does not involve the displacement of people or result in a population increase in the project area; no negative impact will occur.
11. *Substantial increase in the congestion (traffic, recreational, other)* – This project does not affect traffic; no negative impact will occur.
12. *A substantial increase in the type or rate of energy use as a direct or indirect result of this action* – The project will not result in new direct or indirect increases in energy use. No negative impact will occur.
13. *The creation of a hazard to human health or safety* – Removal of contaminated sediment will eliminate exposure hazard to recreationalists and downstream residents (in the event of sediment release due to dam failure). Removal of Springborn Dam will eliminate public safety risk. No negative impact will occur.
14. *Any other substantial impact on natural, cultural, recreational or scenic resources* – No negative impact is anticipated.

The Following Comments Were Received During the Scoping Process:

1. *SHPO Comments* – SHPO understands that the project objective is to restore a free-flowing river habitat, which will enable fish passage and eliminate public safety risk. Staff from SHPO conducted an on-site inspection of the project area, and do not oppose the project. SHPO indicated that the project will involve the loss of a significant historic feature (the dam), and made recommendations that a Memorandum of Agreement pursuant to the National Historic Preservation Act be drafted for the dam removal and that it include state-level documentation of Springborn Dam, publication of the documentation in a scholarly journal, and archeological monitoring during the dam removal.

2. *DPH Comment (no comment)*

Conclusion:

After examining any potential cultural or environmental impacts and reviewing the comments received from SHPO, DEEP has concluded that preparation of an Environmental Impact Evaluation (EIE) will not be required for the removal of Springborn Dam and associated dredging of impounded sediments.

Recommendations:

1. *Recommendations received from the State Historic Preservation Office (SHPO) as a result of the Scoping Process* – SHPO recommended a Memorandum of Agreement (MOA) pursuant to the National Historic Preservation Act be drafted between the project proponents (DEEP and USFWS) and the SHPO. The MOA will include state-level documentation of the Springborn Dam, publication of the results in a scholarly journal, and archeological monitoring of the dam removal process.
2. *Recommendations received from the DEEP Wildlife Division as a result of an NDDB Request* - The NDDB has records of extant populations of two species listed by the State as species of special concern within the project area. These are the wood turtle (*Glyptemys insculpta*) and the bridle shiner (*Notropis bifrenatus*).

Wood turtles require riparian habitats bordered by floodplain, forests or meadows. They hibernate in the banks of rivers in submerged tree roots. Their summer habitat included pastures, old fields, woodlands, powerline cutes, and railroad beds bordering or adjacent to streams and rivers. The NDDB provided the following recommendations to protect the wood turtle and other similar species during this project:

- Install sediment and erosion control measures
- Install silt fence in a staggered layout to allow wildlife to travel between wetland and upland habitats
- Do not use erosion control materials that use embedded netting. This includes bio-degradable and degradable netting, since these can be fatal to wildlife
- If rip-rap is used, consider covering with local stream bank material
- Soil stockpiles should be fenced off to discourage wood turtles from nesting in them.

No specific construction-period recommendations have been made for the bridle shiner.