

Commonwealth of Massachusetts
Executive Office of Energy and Environmental Affairs
Massachusetts Environmental Policy Act (MEPA) Office

Environmental Notification Form

For Office Use Only

EEA#: 16209

MEPA Analyst: Eva Murray

The information requested on this form must be completed in order to submit a document electronically for review under the Massachusetts Environmental Policy Act, 301 CMR 11.00.

Project Name: Bowen's Pond Dam Removal and Osgood Brook Restoration		
Street Address: 269 Wendell Depot Road		
Municipality: Wendell	Watershed: Millers	
Universal Transverse Mercator Coordinates: 18N 714606E, 4717210N	Latitude: 42.57747 N Longitude: -72.38499 W	
Estimated commencement date: TBD	Estimated completion date: TBD	
Project Type: Dam Removal / Stream Restoration	Status of project design: 40 %complete	
Proponent: Bowens Pond LLC, c/o Elizabeth Dougal, Attorney at Law		
Street Address: 666 Bliss Road, Suite 1		
Municipality: Longmeadow	State: MA	Zip Code: 01106
Name of Contact Person: Nick Wildman		
Firm/Agency: MA DER	Street Address: 251 Causeway St., Suite 400	
Municipality: Boston	State: MA	Zip Code: 02114
Phone: 617-626-1527	Fax:	E-mail: nick.wildman@mass.gov

Does this project meet or exceed a mandatory EIR threshold (see 301 CMR 11.03)?
 Yes No

If this is an Expanded Environmental Notification Form (ENF) (see 301 CMR 11.05(7)) or a Notice of Project Change (NPC), are you requesting:

a Single EIR? (see 301 CMR 11.06(8))	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
a Special Review Procedure? (see 301CMR 11.09)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
a Waiver of mandatory EIR? (see 301 CMR 11.11)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
a Phase I Waiver? (see 301 CMR 11.11)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

(Note: Greenhouse Gas Emissions analysis must be included in the Expanded ENF.)

Which MEPA review threshold(s) does the project meet or exceed (see 301 CMR 11.03)?

EIR thresholds:

- 11.03(3)(a)1.b. – alteration of ten or more acres of any other wetland
- 11.03(3)(a)4. – structural alteration of an existing dam that causes an expansion of 20% or any decrease in impoundment capacity

The proponent is respectfully requesting a waiver of an Environmental Impact Report (EIR). Given the significant engineering and scientific analyses completed to date, including preparation of an in-depth Preliminary Design Report, it is our belief that preparation of an EIR would “not serve to avoid or minimize damage to the environment” as described in 301 CMR 11.11(1) and would “result in an undue hardship for the Proponent”, in this case, a private family landowner.

Furthermore, it is our belief that preparation of an EIR would not provide increased benefit to the project and the environment, as described under 301 CMR 11.11(2). The analysis completed to date and provided in the attached Preliminary Design Report demonstrates that the Project meets the EIR waiver thresholds provided in 301 CMR 11.11(3). Specifically, the Project does not cause damage to the environment, but rather serves to benefit and restore the aquatic environment, removing a manmade impediment to a natural system. The environmental impacts of the dam removal would be offset by significant benefits to the environment by restoring this segment of the stream channel to a free-flowing state and improving the condition of the downstream coldwater fishery. Also, the Project does not require additional infrastructure and services beyond the limited construction access needed via a public road; therefore, “ample and unconstrained infrastructure and services” exist to support the Project.

The information contained in this Expanded Environmental Notification Form (EENF) is intended to provide sufficient information to allow the Secretary to grant the requested EIR waiver. In the event that the Secretary finds that an EIR is required for the Project, we request approval for a Single EIR. The justification for these requests is summarized in greater detail in this filing.

Which State Agency Permits will the project require?

*Section 401 Water Quality Certification-MassDEP
MA DCR Office of Dam Safety Chapter 253 Permit*

Identify any financial assistance or land transfer from an Agency of the Commonwealth, including the Agency name and the amount of funding or land area in acres:

In support of its mission to restore and protect rivers, wetlands, and watersheds in Massachusetts for the benefit of people and the environment, MA DER provided funding to assist the Proponent with the preparation of the Preliminary Design Report and the preparation of this EENF, for a total of \$66,888. No further state funding is pending at this time.

Summary of Project Size & Environmental Impacts	Existing	Change	Total
LAND			
Total site acreage	29		
New acres of land altered		6.4	
Acres of impervious area	0.02	0	0.02
Square feet of new bordering vegetated wetlands alteration		+356,000 SF	
Square feet of new other wetland alteration		-1,070LF Bank -634,300 SF LUWW +710,400 SF Riverfront Area +616,400 SF BLSF	
Acres of new non-water dependent use of tidelands or waterways		N/A	
STRUCTURES			
Gross square footage	N/A	N/A	N/A
Number of housing units	N/A	N/A	N/A
Maximum height (feet)	N/A	N/A	N/A
TRANSPORTATION			
Vehicle trips per day	N/A	N/A	N/A
Parking spaces	N/A	N/A	N/A
WASTEWATER			
Water Use (Gallons per day)	N/A	N/A	N/A
Water withdrawal (GPD)	N/A	N/A	N/A
Wastewater generation/treatment (GPD)	N/A	N/A	N/A
Length of water mains (miles)	N/A	N/A	N/A
Length of sewer mains (miles)	N/A	N/A	N/A
<p>Has this project been filed with MEPA before? <input type="checkbox"/> Yes (EEA # _____) <input checked="" type="checkbox"/> No</p>			
<p>Has any project on this site been filed with MEPA before? <input type="checkbox"/> Yes (EEA # _____) <input checked="" type="checkbox"/> No</p>			

GENERAL PROJECT INFORMATION – all proponents must fill out this section

PROJECT DESCRIPTION:

Describe the existing conditions and land uses on the project site:

Existing Conditions and Land Uses

Bowen's Pond Dam (NID# MA00516) is an earthen and masonry structure located adjacent to Wendell Depot Road in the Town of Wendell, Massachusetts. The dam is located at Latitude 42.57747° N, Longitude -72.38499° W, near the easterly end of Bowen's Pond. Bowen's Pond Dam is located along Osgood Brook, which is in the drainage basin for the Millers River. For the purposes of Project review under MEPA, the Project site is considered to be 29± acres in extent out of the overall 212-acre parcel, which includes the pond and the land 100 feet beyond the edge of water, excepting the Wendell Depot Road right-of-way. Refer to Attachment 3 for the following figures: Figure 1 for the Locus Map and Figure 2 for an Aerial Overview Map of the Site. The dam is accessible via foot from the northwesterly side of Wendell Depot Road. Bowen's Pond Dam was reportedly once used as part of a nearby mill which was located downstream of Wendell Depot Road. Currently, the impoundment provides recreational and aesthetic benefits.

Bowen's Pond Dam consists of earthen embankment sections and a stone masonry spillway section, with concrete block wall segments along its upstream face and concrete sections along the spillway to provide for stoplog use. The dam is listed as an Intermediate-sized, Low (Class III) hazard potential dam by the Massachusetts Department of Conservation and Recreation (DCR) - Office of Dam Safety (ODS). According to the 2009 Phase I Inspection/Evaluation Report prepared by Lenard Engineering, Inc., the dam is approximately 83 feet in length, with a structural height of approximately 8 feet with "weirboards" in place and 6 feet without the boards in place. The embankment portion of the crest is approximately 4 feet wide and is grass covered. The upstream face of the embankment consists of a vertical concrete face, with earth fill behind it, while the downstream embankment is part of the roadway embankment for Wendell Depot Road. The spillway is a broad-crested weir approximately 31 feet - 9 inches in length, constructed of stone masonry with a concrete cap. The spillway crest is divided into four distinct sections by three concrete piers which are used to support the weirboards, according to the Phase I report. The piers are spaced at 7 feet apart, creating a total weir length of about 28 feet. Downstream training walls direct flows toward the culvert under Wendell Depot Road. The dam also includes a low-level outlet (which is currently non-functional), within a concrete structure at the right¹ end of the spillway. The Town of Wendell maintains a dry hydrant adjacent to the dam which reportedly enables the local fire department to draft water from the pond to assist with fire-fighting activities.

Modeling indicates that the existing dam spillway cannot pass the runoff generated from the 100-year flood without overtopping the dam. The existing embankment associated with the dam is overtopped by approximately 0.9 feet during the 100-year flood. Model results indicate that the downstream roadway embankment (Wendell Depot Road) is not overtopped in either the 100-year or 500-year flood under either existing or proposed conditions.

Bowen's Pond has approximately 16 acres of open water with maximum water depths on the order of eight to ten feet along the northerly side of the pond, with shallower depths on the order of three to six feet along the southerly side of the pond, nearer to the inlets. Downstream

¹ In this document, diectional terms "right" and "left" indicate direction when facing downstream.

of the dam and Wendell Depot Road, Osgood Brook curves northeasterly and follows a relatively low sinuosity, steep path through forested areas along Wendell Depot Road. The brook flows through three culverts downstream of the dam:

1. A box culvert under Wendell Depot Road, immediately downstream of the dam,
2. A culvert under New Salem Road, about 2,000 feet downstream of the dam, and
3. A bridge culvert under Wendell Depot Road, about 9,400 feet downstream of the dam, where the brook turns north and then ultimately discharges to the Millers River approximately 10,000 feet downstream of the dam.

The watershed that contributes runoff to the pond is primarily forested, with wetland areas and limited low-density residential development. Surficial geology within the Osgood Brook watershed is characterized by large areas of glacial till or bedrock, with some areas of sand and gravel and small areas of floodplain alluvium. According to United States Geological Survey (USGS) Surficial Geology data, the depth of soil above bedrock is typically shallow in the area.

Existing Fisheries and Wildlife Habitat Conditions

Osgood Brook is identified as a Coldwater Fishery Resource, and MassWildlife has documented Eastern brook trout, sea lamprey, and American eel as having been observed in the brook. Brown trout have also been found in the brook. All inlet streams to Bowen's Pond are unnamed. The primary inlet stream enters the pond from the south, and reportedly includes a beaver dam and large wetland system at its headwaters. Secondary inlet streams enter the pond on the northerly and westerly sides of the pond.

The dam at Bowen's Pond prohibits access for fish progress upstream. There are no other impoundments or current dams along Osgood Brook downstream of Bowen's Pond Dam. In their current conditions, the pond and those portions of the inlet streams and impoundments upstream of Bowen's Pond are supporting temperatures above known temperature thresholds for trout, based on data collected by MA DER using temperature data loggers deployed in 2019. Water temperatures in Bowen's Pond and the shallow impounded area upstream of Bowen's Pond are generally expected to be higher than those in the free-flowing downstream reaches of Osgood Brook.

Fish community sampling completed by the MA Division of Fisheries and Wildlife in 2019 found exclusively warm-water tolerant species in Bowen's Pond. Fish community sampling upstream and at two locations downstream of Bowen's Pond showed an increasing proportion of trout (a coldwater-dependent species) as one moved further downstream of the dam along Osgood Brook. This correlates with higher water temperatures recorded by DER loggers upstream of Bowen's Pond, and in the reaches immediately downstream.

Existing Wetland Resources in the Project Area

Wetland resources in the immediate vicinity of the proposed work area at the dam include a narrow margin of a shrub-dominated fringe wetland adjacent to the segment of the pond near the dam. Four separate wetland areas were identified within and adjacent to Bowen's Pond and Osgood Brook within the studied Project area approximately 100 feet upstream and downstream of the dam, including: 1) a Bordering Vegetated Wetland, (BVW) located near the southeasterly corner of Bowen's Pond and extending approximately 10-15 feet into the adjacent forested upland; 2) Bank resource, located along the upstream side of the dam and between the dam and Wendell Depot Road; 3) the downstream wetland with Bank resource as well as Riverfront Area associated with Osgood Brook, and 4) the Land Under Water Bodies and Water Ways (LUWW), which is the area below the Ordinary Low Water line (e.g. Bank, per

310 CMR 10.54). Wetland resources are identified on the drawings included in Attachment 4 of this EENF and described in this section and the Preliminary Design Report.

Based upon observations of vegetation, soil characteristics, and evidence of a high-water line, wetland resources associated with Bowen's Pond and Osgood Brook include BVW, Bank, and Land Under Water Bodies and Waterways per the definition at 310 CMR 10.56(2). In addition, the assessment area also contains Riverfront Area that begins at the Bank/MAHWL flagging and extends landward for 200 feet. The Bank and BVW resources also have a regulated 100-foot Buffer Zone that is under the Town of Wendell Conservation Commission's jurisdiction.

In accordance with the eight interests of the Wetlands Protection Act regulations, the delineated wetland resources appear to support several interests: Protection of Wildlife Habitat, Protection of Fisheries, Storm Damage Prevention, Control, Storm Damage Prevention, and Groundwater Protection.

Within the confines of the proposed work area, adjacent to the dam, small groupings of glossy buckthorn (*Frangula alnus*) were noted along the concrete wall at the dam as were a few individual stems of purple loosestrife (*Lythrum salicaria*) along the left side of the dam. Buckthorn has also been identified along the western edge of the pond and extensively throughout the general area by others.

Existing Sediment/Sediment Quality

As discussed in the Preliminary Design Report, bathymetric data and sediment quality samples were obtained as part of that study to characterize the quantity and disposition of sediments in the pond, as well as to review sediment quality.

Sediment samples were taken from within Bowen's Pond Dam, from within Osgood Brook immediately downstream of New Salem Road, and from the primary input stream, upstream of Bowen's Pond (see Preliminary Design Report). At each location, cores were collected through the entire sediment thickness. Cores were examined for visual and olfactory indications of contamination, and none were observed.

Results of all analytical tests show that all samples are below the levels established under the Massachusetts Department of Environmental Protection (MassDEP) Method 1, S-1/GW-1 Standards or Massachusetts Contingency Plan (MCP) Reportable Concentrations for RCS 1 soils (MCP values used for cases where Method 1 levels have not been established). No PCBs were detected in the samples, nor were pesticides. Low levels of PAHs were detected in the brook samples taken near roadways, likely related to roadway runoff. Metals were detected in low levels in all samples, at levels typically consistent with "natural soil" background levels identified in MassDEP guidance. Grain size was analyzed for all five sediment samples. The samples generally consisted of silty sand with the upstream-most pond sample being described as a poorly-graded sand. The complete results of the sediment analyses conducted in support of the Project design are included in Attachment 5.

As part of the Preliminary Design Report (Attachment 5), sediment analysis utilized a weight of evidence approach as a guide for assessing potential sediment-related risks to ecology, human health and safety, and infrastructure and flooding.

To assess potential ecological risk, mean pollutant concentrations for the collected sediment samples were compared to the freshwater probable effect concentrations (PECs). Mean pollutant concentrations of all detected pollutants were less than the freshwater PECs, suggesting a low risk level for the release of sediment. Sediment chemistry is similar upstream, within the pond, and downstream. This information suggests a low risk level for the

release of sediments from Bowen's Pond, with no apparent limitations on sediment management options. This will be further confirmed prior to MA DEP permitting.

For the assessment of human health and safety risks, the potential for contact with sediment was reviewed. The downstream areas are sparsely populated and likely to have low frequency and intensity of human uses that would promote contact with mobilized sediment. Additionally, all sediment test results were below MCP S-1 concentrations, suggesting that downstream sediment release would have low risks for human health and safety.

Infrastructure and flooding risks were also reviewed as part of the assessment. Assessment indicated that the existing downstream infrastructure is unlikely to be impacted by downstream release of sediment. The downstream reaches of Osgood Brook appear to be sediment starved, and the brook channel is steep in nature, likely to move sediment along without significant accumulations.

Describe the proposed project and its programmatic and physical elements:

NOTE: The project description should summarize both the project's direct and indirect impacts (including construction period impacts) in terms of their magnitude, geographic extent, duration and frequency, and reversibility, as applicable. It should also discuss the infrastructure requirements of the project and the capacity of the municipal and/or regional infrastructure to sustain these requirements into the future.

In 2018, Bowens Pond LLC applied successfully to MA DER for Priority Project status to remove Bowen's Pond Dam and restore riverine ecological functions along Osgood Brook, a coldwater fishery. The dam results in heat effects to the downstream coldwater fishery, due to the shallow impoundment, and does not include a fish passage structure, which prevents most species from moving upstream.

The purpose and goals of the proposed dam removal project are the following:

1. Restoration of riverine ecological functions, and
2. Elimination of a potential public safety hazard and reduction of liability and maintenance obligations related to Bowen's Pond Dam.

Proposed Conditions

The Project includes dam removal as described herein and in the attached Preliminary Design Report. The proposed channel condition will be formed by removing concrete and stone portions of the primary spillway and grading back the embankment portions of the dam left and right of the spillway such that the remaining channel has the capacity to pass, at minimum, the 100-year flood. The preliminary design of the dam removal indicates that the water-carrying capacity of the channel will be maintained. Under higher flows, portions of the former pond area will serve as flood storage.

As with previous dam removal projects in Massachusetts, no significant impacts are anticipated relative to flooding or downstream water level impacts associated with this Project. The Project will restore free-flowing conditions along Osgood Brook along this segment of the stream. Detailed hydrologic and hydraulic analyses were conducted for both the existing and proposed (post-dam removal) conditions and are included in the attached Preliminary Design Report (Attachment 5). The analysis was performed using NOAA Atlas 14 precipitation data, which includes more recent and longer periods of record, accounting for observed trends in precipitation due to climate change. As final design proceeds, forward looking climate change can also be considered. Results show that the proposed breach of the Bowen's Pond Dam will

result in a decrease in the water surface elevation in the area of the breach, as compared to existing conditions when the dam was in place. According to those analyses, there is no change in the water surface elevations downstream of the first Wendell Depot Road culvert under the proposed dam removal conditions. Conditions at the two downstream culverts (New Salem Road and the second Wendell Depot Road culvert) were also reviewed, with no change in water surface elevations or velocities at either of these roadway crossings.

The banks of the restored stream channel in the former pond basin will be allowed to naturally re-form to a dynamically stable configuration. As with natural stream channels, some meandering is expected over time. The banks within the actual breach area will be stabilized using a combination of appropriate best management practices (BMPs) including stone dam remnants in keeping with the structure of the stream channel downstream, and bioengineering practices as appropriate (erosion control blanket, turf reinforcement mat, etc.). At the current dam's footprint, the breach channel is anticipated to be at or near the underlying bedrock surface, so vertical and horizontal stability is not anticipated to be an issue with proper stabilization of the breach section. Embankment areas will be seeded and erosion control blanket installed on slopes. Refer to the Preliminary Design Drawings for more detail.

General parameters of the proposed reconfigured channel include:

- Demolition and removal of the existing primary spillway and majority of the stone masonry section of the dam to create the main channel geometry consisting of an approximately 2-foot-wide bottom by 2-foot deep trapezoidal channel with an invert at the dam of approximately El. 908.3± to contain normal flows and meet criteria for fish migration during low flows. Side channel slopes would be 3H:1V and cut into the existing dam embankment. The channel from the upstream end of the Wendell Depot Road culvert is proposed be graded to provide a channel slope no steeper than 1.5% through the footprint of the existing dam.
- An approximately 6-foot-wide overbank area on the right side of the channel transitioning to a restored bank area sloped at 3H:1V, tying into the existing slope along the existing dam embankment.
- Use of dam masonry remnants (stone rubble), plantings, and related bio-engineered products to stabilize disturbed and sloped areas and promote healthy re-establishment of vegetation; and
- Minimal excavation and channel forming upstream of the former dam to remove small quantities of sediment thinly deposited on the slope upgradient of the masonry portions of the dam. The excavated sediment will be properly reused/disposed of offsite or at an upland location on-site approved by the Owner (to be determined). Naturally-occurring, long-term formation and stabilization of the channel upstream of the former dam is expected. The anticipated long-term channel slope will likely be on the order of 0.5 percent, which is appropriate for this setting.
- The granular materials excavated during creation of the final channel geometry will be used as fill to reestablish finish grades and channel slope, as necessary. Rock and natural stone rubble may be placed through the restored reach at the direction of the engineer. Concrete will be removed from the channel and legally disposed of offsite.

Ultimately, much of the original impoundment area will become a seasonally-saturated or inundated floodplain wetland once construction has been completed. The area will be generally left at current grades, except for the new stream thalweg and banks in the immediate

vicinity of the dam breach section. Any temporary impacts from accessing the work area during the construction period will be restored by loaming and seeding or other appropriate treatment.

Restoring free-flowing conditions along Osgood Brook through the removal of Bowen's Pond Dam will result in unavoidable loss of certain resource areas and/or conversion of certain resources to other resources as necessary to achieve the Project's ecological restoration goals. The open water habitat provided by Bowen's Pond will transition to riparian or riverine functions, as Osgood Brook re-forms within the former impoundment.

A variety of avian life has been observed in and around the impoundment. Some of these species, like mergansers will likely not use the restored stream channel, but other species such as ducks and herons will do so. While there will be changes to the species that use the former impoundment area as it transitions to a more riparian habitat, it is anticipated that, similar to other similar successful dam removal project, these species that seek open water habitats may take advantage of other nearby locations with similar habitat, as there is significant open water and emergent wetland locations within the vicinity of the Project site.

The stream segment directly affected during dam removal will be restored to pre-construction conditions or better at the conclusion of the Project. Restoration will include the placement of a series of specially-formulated seed mixes containing native wetland and upland species. Two commercially-available seed formulations are appropriate for site restoration efforts to address disturbance from construction, including:

- New England Conservation/Wildlife Mix - for Upland Areas*
- New England Moist Area Conservation Mix - for Banks and Slopes.*

Areas further upstream in the former pond area will be allowed to naturally re-vegetate with the seed stock already present in the sediment.

Flow velocities within the formerly-impounded basin will increase post-dam removal due to the change from a slow-moving impounded condition to a more riverine system. The natural hydraulics of the faster moving stream will provide the scour potential which will tend to move sediments downstream. Transport of fine sediments can be expected during typical annual floods within the channel; however, it is anticipated that the majority of the former pond bottom will be generally stable during flood conditions, especially once vegetation has established. It is also expected that the channel bottom through the reconfigured section will extend into naturally-occurring glacial till material or bedrock/ledge.

Flow velocities are also important for fish passage purposes. Guidance provided in the Federal Interagency Technical Memorandum Fish Passage Guidelines was used to evaluate the efficacy of fish passage through the reconfigured channel during a range of estimate seasonal flows, as summarized in the attached Preliminary Design Report.

Wildlife Habitat and Fisheries Benefits

The Bowen's Pond fishery is dominated by warm water-tolerant species (e.g. bullhead, pickerel, and yellow perch). These species will decline in numbers or be extirpated following dam removal. The proposed Project's benefit is that it is expected to improve imperiled cold-water fisheries in the Project area in a number of ways. After the dam is removed and the stream channel is restored, the impoundment area will change to a riparian habitat. The increased flow velocities are expected to increase the dissolved oxygen content of the water. Average water temperatures will decrease with the decrease in shallow open water areas and diminished residence times. Openness within the formerly impounded area will moderate over time as the vegetation community succeeds, creating additional shading of the brook and

contributing to lower stream temperatures. The increase in dissolved oxygen and the decrease in temperatures will both benefit cold-water fish species downstream.

The Project will also provide the renewed potential for upstream movement of fish species in the brook, and an increase of the range of foraging and breeding habitat available to fish species. It should be mentioned that there is a waterfall along the brook downstream of the dam which may prevent the upstream movement of fish under most flows. However, the reconfigured channel has been designed to provide for water depths and flow velocities under typical and low flow conditions which to facilitate fish access, to the extent that passage is possible with grades further downstream on the brook.

The downstream channel is likely “sediment starved,” and the channel formation in the former impoundment will improve downstream habitat due to a restoration of the sediment transport balance and filling of the interstitial spaces which would prevent flow from going subsurface during dry periods.

Removal of the Bowen’s Pond Dam and restoration of natural conditions to the Osgood Brook channel within the Project area will support climate change resiliency by restoring more natural free-flowing conditions in the brook and improving water temperature and dissolved oxygen levels for trout, eel, sea lamprey, and other fish species.

Project Benefits Summary

This dam removal project is being conducted for stream restoration purposes and reduction in liability and maintenance costs for the dam owner.

Anticipated benefits and impacts from the project are presented below:

<i>Eliminates risk of dam failure and need for maintenance</i>	<i>Removing the dam will eliminate the need for continued maintenance and remove the risk to downstream infrastructure and property from an uncontrolled dam breach occurring in the future.</i>
<i>Restores the natural channel</i>	<i>Rivers in their natural state are dynamic systems where changing flow levels trigger sediment movement, as well as growth and reproduction cycles in native river species creating a healthier and more biodiverse ecosystem.</i>
<i>Restores natural dissolved oxygen levels</i>	<i>The recreation of a natural riffle-pool stream channel will help increase dissolved oxygen levels in the water, which will improve water quality and riverine biodiversity.</i>
<i>Restores natural water temperatures</i>	<i>Water held in shallow impoundments behind dams is often warmer than in free-flowing rivers. Removing the dam will help restore natural flow velocities and temperature regimes and support the success of cold-water fish species.</i>
<i>Restores natural sediment transport pathways</i>	<i>Natural sediment transport—an essential geomorphological function of the brook—will be restored by the dam removal. This will replenish the sediment-starved areas downstream of the dam, and result in a healthier ecosystem.</i>

Infrastructure Requirements

The only infrastructure requirement for the Project is access from Wendell Depot Road for construction vehicles to bring in equipment and materials to stage and conduct the work of the Project. The Project will take place on the Proponent’s private property and within the right-of-way of Wendell Depot Road. The Project will not need any municipal or regional infrastructure