Commonwealth of Massachusetts

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

Environmental Notification Form

For Office Use Only

EEA#: _____

MEPA Analyst: _____

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: **Becker Pond Dam Removal**		
Street Address: **East Street**		
Municipality: **Mt. Washington**	Watershed: **Housatonic River**	
Universal Transverse Mercator Coordinates:	Latitude: **42° 33' 30.05"** Longitude: **73° 27' 33.29"**	
Estimated commencement date: **July 2021**	Estimated completion date: **September 2021**	
Project Type: **Dam Removal/River Restoration**	Status of project design: **75**% complete	
Proponent: **The Nature Conservancy**		
Street Address: **136 West St., Suite 202**		
Municipality: **Northampton**	State: **MA**	Zip Code: **01060**
Name of Contact Person: **Candice Constantine**		
Firm/Agency: **Inter-Fluve, Inc.**	Street Address: **63 Spring Street, 2nd Floor, Suite J**	
Municipality: **Williamstown**	State: **MA**	Zip Code: **01267**
Phone: **617.909.7569**	Fax: **608.441.0218**	E-mail: **cconstantine@interfluve.com**

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))	☐Yes ☒No
a Special Review Procedure? (see 301CMR 11.09)	☐Yes ☒No
a Waiver of mandatory EIR? (see 301 CMR 11.11)	☒Yes ☐No
a Phase I Waiver? (see 301 CMR 11.11)	☐Yes ☒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)?
Wetlands, Waterways, and Tidelands (301 CMR 11.03(3))
State-Listed Rare Species (301 CMR 11.03(2))
Which State Agency Permits will the project require?
MA Wetlands Protection Act Notice of Intent
WW26 combined Ch91 dredge permit/401 Water Quality Certification

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:
MA Division of Ecological Restoration: ~$58,000

Summary of Project Size & Environmental Impacts	Existing	Change	Total
LAND			
Total site acreage	0.98 ac		
New acres of land altered		0.98	
Acres of impervious area	N/A	N/A	N/A
Square feet of new bordering vegetated wetlands alteration		N/A	
Square feet of new other wetland alteration		-34,600 (Land Underwater)	
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

Has this project been filed with MEPA before?
☐ Yes (EEA #_____) ☒No

Has any project on this site been filed with MEPA before?
☐ Yes (EEA #_____) ☒No

GENERAL PROJECT INFORMATION – all proponents must fill out this section

PROJECT DESCRIPTION:

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

The project area consists of Becker Pond Dam and the area immediately upstream of the dam. Becker Pond Dam is located on an unnamed brook in a relatively remote area near the Mt. Washington State Forest. The dam and the surrounding property are part of the 800-acre Mt. Plantain Preserve, owned by The Nature Conservancy (TNC). The TNC property is used by the public for hunting, fishing, and other recreation. Downstream of the dam, the unnamed brook joins Schenob Brook downstream of Sages Ravine. The next bridge over the brook is approximately two miles downstream from the dam.

Becker Pond Dam is a run-of-the-river dam currently in poor condition with several critical safety and structural issues. Becker Pond covers an area of approximately 0.65 acres and is not under jurisdiction of the MA Office of Dam Safety. Becker Pond Dam is composed of a 95-foot long earthen embankment and concrete core wall. The dam outlet consists of a rectangular weir spillway with concrete apron and concrete training walls. The structural height of the dam is 14.3 ft. The crest of the concrete spillway is set approximately 2.3 feet below the top of the concrete core wall and has a weir length of 23.2 feet. The concrete training walls retain the earthen embankments adjacent to the spillway section and direct flow over the concrete apron. The concrete apron extends approximately 16.8 feet downstream of the base of the spillway. A low-level outlet is present and believed by project partners to be inoperable.

A visual inspection carried out in 2016 by Fuss & O'Neill found the dam to be in poor condition with several critical issues, notably on the left training wall which is cracking and failing and has slipped off the foundation. The inspection also found significant erosion of the earthen embankment adjacent to the wall and cracked and spalling concrete. The wooden bridge crossing the dam is partially collapsed and has been cordoned off by TNC with warning signs posted.

Downstream of Becker Pond Dam, the brook flows over steep terrain within a narrow hemlock and birch dominated forested valley. The channel is approximately 12 to 15 feet wide with a 1 to 1.5 foot bankfull depth. Frequent, but irregularly spaced, constrictions created by bedrock narrow the channel to approximately 8 feet in some locations. Exposed bedrock, fallen logs, and boulders create steps with 1 to 3 feet of vertical drop with plunge pools located downstream. Investigations found that substrate material is primarily sand and gravel, with 2 to 3-inch particles frequently mobilized.

The upstream limit of the impoundment is approximately 50 feet downstream of a wooden footbridge that crosses the stream. Upstream of this bridge the channel is steep with boulders and cobbles. Further upstream, the channel is a low gradient wetland channel with an extensive deciduous wooded swamp influenced by beaver activity.

Describe the proposed project and its programmatic and physical elements:

The primary goals of the proposed project are to 1) eliminate the safety hazard posed by the dam; and 2) restore aquatic and hydrologic connectivity through the site. TNC is seeking a simple, low-impact solution that will restore habitat for wild brook trout and other native aquatic species.

The design of the dam removal includes removing the full vertical and lateral extents of the

concrete associated with the dam, and re-grading the surrounding embankments to balance the impact to surrounding areas. This minimal effort approach is consistent with the project goals.

The proposed embankment re-grading reflects an intent to tie into the contours of the existing valley slopes and stream channel upstream and downstream of the dam. It is likely that the embankment is constructed of unconsolidated fill placed on boulders and bedrock. If stable consolidated material is not encountered, materials will be excavated to achieve approximately 2:1 slopes.

All excavated slopes that result in bare soil are to receive a slope treatment of native slope/upland seed mix with biodegradable surface fabric on top, staked in place to retain soil on the slope until the vegetation has been established. In addition, native shrub and tree plantings are shown within the limits of fill operations.

Investigations of the watershed and impoundment were carried out to understand the changes that will occur to the area following dam removal. The Becker Pond Dam watershed remains undeveloped, consistent with the conditions that existed when the dam was built. Depth of refusal surveys of the impoundment found that the substrate underlying the impounded sediment is primarily cobbles, boulder, and bedrock consistent with bed and bank materials visible upstream and downstream of the impoundment.

Sediment management following dam removal includes passive downstream release. The relatively small amount of sediment impounded by the dam constitutes approximately 70% of the estimated annual suspended sediment load of the brook and 5% of the estimated suspended sediment load of Schenob Brook. Due to the coarse substrate underlying the fine-grained impounded sediment, headcutting is not expected to be a major risk to channel and adjacent hillslope stability. A due diligence review found no potential sources of contamination within the watershed.

It is expected that a portion of the impounded sediment will be evacuated over time as the channel undergoes natural evolution processes following dam removal. Channel stabilization measures will not be necessary to protect against extraordinary erosion or to protect infrastructure (there is none). Impoundment sediment will be dispersed by the brook downstream of the dam because flow competence and transport capacity are generally high relative to the size and volume of the impounded sediment. Given the sandy nature of the material and the characteristics of the channel and valley, the material will likely be transmitted intermittently, with temporary storage in pools, upstream of log jams, on bars, and other low velocity areas. Thus, the primary impacts of sediment release are likely to include temporary burial of habitat features and/or organisms that cannot quickly mobilize and adapt to changing conditions. Most deposition is likely to be temporary; however, permanent deposition of mobilized sediment may occur in secondary channels and low-lying floodplain areas where the valley widens locally. As seen on similar Massachusetts dam removal projects, these effects will decrease with time and with distance downstream as the inputs of sediment are attenuated through erosion and deposition.

As shown in the design drawings, the proposed access to the dam will be a combination of a new access road and an existing dirt road. The new access road will come off of East Street and will be created in an eastward direction, staying entirely within TNC property until it meets the existing dirt road. The existing dirt road continues in a southerly direction to the dam. Existing cleared areas adjacent to the dam will provide staging space for construction vehicles. Another option for access that is being investigated by TNC is to use the entirety of the existing dirt road that extends from East Street to the dam. This option would eliminate the need to remove vegetation and re-grade a new access road connecting East

Street to the existing dirt road. However, approximately 600 feet of this existing road starting from East Street is on private property. TNC is actively looking into options to be able to use this existing access route.

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.

Describe the on-site project alternatives (and alternative off-site locations, if applicable), considered by the proponent, including at least one feasible alternative that is allowed under current zoning, and the reasons(s) that they were not selected as the preferred alternative:

The proposed project design shown in the plan set is the best option to meet the project goals of public safety and restored aquatic connectivity. The benefits and drawbacks of no action, passive sediment release, and active sediment management/channel stabilization are discussed below.

1. **No Action**

No action at Becker Pond will maintain the existing condition of the dam and impoundment, as well as the river upstream and downstream of the dam. The dam will continue to pose a public safety risk and liability, and hydrologic and aquatic habitat continuity will continue to be impacted. Structural repairs would be recommended if a no action alternative is pursued.

2. **Dam Removal and Passive Sediment Release (preferred alternative)**

The dam removal and passive sediment release alternative is described in detail in other sections. Dam removal will result in the removal of a hydrologic barrier and reduce an existing public safety risk. Passive sediment release is a low-impact option which allows channel evolution processes to occur without major channel stabilization effort. Because impounded sediment volume is small, minor deposition in downstream areas is expected. Additionally, risk of headcut development or excessive erosion within the impounded area is expected to be low.

3. **Dam Removal and Active Sediment Management**

Dam removal and active sediment management within the impoundment is not a preferred alternative due to a lack of demonstrated need of this more intensive level of construction. Under this alternative, dam removal would be a carried out as described above. Active removal of sediment would include dewatering the impoundment and bypassing the active flows of stream while the impounded sediment was removed by excavator. The sediment would be trucked to an approved off-site facility. Active removal and disposal of impounded sediments was found to not be necessary due to the small volume of sediment and the lack of contamination within the sediment. State funding and staff resources are limited for restoration projects within the Commonwealth and the additional resources necessary to proceed with active sediment removal on this site could be better used initiating new restoration projects that would improve stream and wetland ecosystems elsewhere in the Commonwealth.

NOTE*: The purpose of the alternatives analysis is to consider what effect changing the parameters and/or siting of a project, or components thereof, will have on the environment, keeping in mind that the objective of the MEPA review process is to avoid or minimize damage to the environment to the greatest extent feasible. Examples of alternative projects include alternative site locations, alternative site uses, and alternative site configurations.*

Summarize the mitigation measures proposed to offset the impacts of the preferred alternative:

The project is a proactive aquatic habitat restoration project with long-term benefits to public safety. No mitigation is proposed.

If the project is proposed to be constructed in phases, please describe each phase:

N/A

AREAS OF CRITICAL ENVIRONMENTAL CONCERN:

Is the project within or adjacent to an Area of Critical Environmental Concern?

☒Yes (Specify__**Schenob Brook Drainage Basin**)

☐No

if yes, does the ACEC have an approved Resource Management Plan? ___ Yes **X** No;
If yes, describe how the project complies with this plan.

_____

Will there be stormwater runoff or discharge to the designated ACEC? __Yes _**X**__ No;
If yes, describe and assess the potential impacts of such stormwater runoff/discharge to the designated ACEC.

The project lies within the Schenob Brook Drainage Basin ACEC. Sediment and erosion control best management practices will be in place during construction to minimize the discharge of sediment from the staging and access areas.

RARE SPECIES:

Does the project site include Estimated and/or Priority Habitat of State-Listed Rare Species? (see http://www.mass.gov/dfwele/dfw/nhesp/regulatory_review/priority_habitat/priority_habitat_home.htm)

☒Yes (Specify_**The project is located within PH 1017**_____) ☐No

HISTORICAL /ARCHAEOLOGICAL RESOURCES:

Does the project site include any structure, site or district listed in the State Register of Historic Place or the inventory of Historic and Archaeological Assets of the Commonwealth?

☐Yes (Specify_____) ☒No

If yes, does the project involve any demolition or destruction of any listed or inventoried historic or archaeological resources? ☐Yes (Specify_____) ☐No

WATER RESOURCES:

Is there an Outstanding Resource Water (ORW) on or within a half-mile radius of the project site? ___Yes **X** No;
if yes, identify the ORW and its location. _____

(NOTE: Outstanding Resource Waters include Class A public water supplies, their tributaries, and bordering wetlands; active and inactive reservoirs approved by MassDEP; certain waters within Areas of Critical Environmental Concern, and certified vernal pools. Outstanding resource waters are listed in the Surface Water Quality Standards, 314 CMR 4.00.)

Are there any impaired water bodies on or within a half-mile radius of the project site? ___Yes _**X**_No; if yes, identify the water body and pollutant(s) causing the impairment:_____.

Is the project within a medium or high stress basin, as established by the Massachusetts Water Resources Commission? ___Yes **X** No

STORMWATER MANAGEMENT:

Generally, describe the project's stormwater impacts and measures that the project will take to comply with the standards found in MassDEP's Stormwater Management Regulations:

Stormwater will not be directly impacted by the project since impervious areas will not be constructed. Construction will adhere to Massachusetts Stormwater Policy Standard #8 for reducing erosion, sedimentation, and other pollutant impacts.

MASSACHUSETTS CONTINGENCY PLAN:

Has the project site been, or is it currently being, regulated under M.G.L.c.21E or the Massachusetts Contingency Plan? Yes ___ No **X** ; if yes, please describe the current status of the site (including Release Tracking Number (RTN), cleanup phase, and Response Action Outcome classification):_____

Is there an Activity and Use Limitation (AUL) on any portion of the project site? Yes ___ No **X**; if yes, describe which portion of the site and how the project will be consistent with the AUL: _____

Are you aware of any Reportable Conditions at the property that have not yet been assigned an RTN? Yes ___ No **X** ; if yes, please describe:_____

SOLID AND HAZARDOUS WASTE:

If the project will generate solid waste during demolition or construction, describe alternatives considered for re-use, recycling, and disposal of, e.g., asphalt, brick, concrete, gypsum, metal, wood:_____

Concrete from the dam will be removed and delivered to an appropriate rubble crushing operation nearby that will recycle the concrete.

(NOTE: Asphalt pavement, brick, concrete and metal are banned from disposal at Massachusetts landfills and waste combustion facilities and wood is banned from disposal at Massachusetts landfills. See 310 CMR 19.017 for the complete list of banned materials.)

Will your project disturb asbestos containing materials? Yes ___ No **X**; if yes, please consult state asbestos requirements at http://mass.gov/MassDEP/air/asbhom01.htm

Describe anti-idling and other measures to limit emissions from construction equipment:

All construction equipment will be turned off when not being used during work hours and will be turned off at the end of each work day.

DESIGNATED WILD AND SCENIC RIVER:

Is this project site located wholly or partially within a defined river corridor of a federally designated Wild and Scenic River or a state designated Scenic River? Yes ___ No **X** ; if yes, specify name of river and designation:

If yes, does the project have the potential to impact any of the "outstandingly remarkable" resources of a federally Wild and Scenic River or the stated purpose of a state designated Scenic River? Yes ___ No ___ ; if yes, specify name of river and designation: _____; if yes, will the project will result in any impacts to any of the designated "outstandingly remarkable" resources of the Wild and Scenic River or the stated purposes of a Scenic River. Yes ___ No ___ ; if yes,describe the potential impacts to one or more of the "outstandingly remarkable" resources or stated purposes and mitigation measures proposed.

ATTACHMENTS:

1. List of all attachments to this document.
2. U.S.G.S. map.
3. Photos of the project site
4. Basis of design memo, including hydrology and hydraulics analysis, climate change impacts discussion, and sediment management plan
5. Rationale for sediment management approach by MA DER
6. Communication with NHESP regarding rare species
7. Map showing proximity of project to resource areas
8. Design drawings for the removal of Becker Pond Dam
9. List of all agencies and persons to whom the proponent circulated the EENF, in accordance with 301 CMR 11.16(2).
10. List of municipal and federal permits and reviews required by the project, as applicable.

LAND SECTION – all proponents must fill out this section

I. Thresholds / Permits

A. Does the project meet or exceed any review thresholds related to **land** (see 301 CMR 11.03(1)
___ Yes **X** No; if yes, specify each threshold:

II. Impacts and Permits

A. Describe, in acres, the current and proposed character of the project site, as follows:

	Existing	Change	Total
Footprint of buildings	__N/A___	__N/A___	__N/A__
Internal roadways	___N/A__	__N/A___	__N/A__
Parking and other paved areas	___N/A__	__N/A___	__N/A__
Other altered areas	___N/A__	__N/A___	___N/A_
Undeveloped areas	__0.98__	____0___	__0.98_
Total: Project Site Acreage	__0.98__	____0___	__0.98_

B. Has any part of the project site been in active agricultural use in the last five years?
___ Yes **X** No; if yes, how many acres of land in agricultural use (with prime state or locally important agricultural soils) will be converted to nonagricultural use?

C. Is any part of the project site currently or proposed to be in active forestry use?
___ Yes **X** No; if yes, please describe current and proposed forestry activities and indicate whether any part of the site is the subject of a forest management plan approved by the Department of Conservation and Recreation:

D. Does any part of the project involve conversion of land held for natural resources purposes in accordance with Article 97 of the Amendments to the Constitution of the Commonwealth to any purpose not in accordance with Article 97? ___ Yes **X** No; if yes, describe:

E. Is any part of the project site currently subject to a conservation restriction, preservation restriction, agricultural preservation restriction or watershed preservation restriction?
Yes **X** No; if yes, does the project involve the release or modification of such restriction?
___ Yes No; if yes, describe:

F. Does the project require approval of a new urban redevelopment project or a fundamental change in an existing urban redevelopment project under M.G.L.c.121A? ___ Yes **X** No; if yes, describe:

G. Does the project require approval of a new urban renewal plan or a major modification of an existing urban renewal plan under M.G.L.c.121B? Yes ___ No **X** ; if yes, describe:

III. Consistency

A. Identify the current municipal comprehensive land use plan
Title:_Mt. Washington Comprehensive Plan___ Date__April 2007_____

B. Describe the project's consistency with that plan with regard to:
1) economic development _**NA**_____
2) adequacy of infrastructure _**Removing a structure that is falling apart**_
3) open space impacts _**improving natural resources**_____
4) compatibility with adjacent land uses_**No change**____

C. Identify the current Regional Policy Plan of the applicable Regional Planning Agency (RPA)
RPA: Berkshire Regional Planning Commission

Title:__The Regional Plan for the Berkshires___ Date__May 2000____

D. Describe the project's consistency with that plan with regard to:
1) economic development __**NA**_____
2) adequacy of infrastructure __ **Removing a structure that is falling apart** _____
3) open space impacts __ **improving natural resources** _____

RARE SPECIES SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **rare species or habitat** (see 301 CMR 11.03(2))? **X** Yes No; if yes, specify, in quantitative terms:

(NOTE: If you are uncertain, it is recommended that you consult with the Natural Heritage and Endangered Species Program (NHESP) prior to submitting the ENF.)

B. Does the project require any state permits related to **rare species or habitat**? ___ Yes **X** No

C. Does the project site fall within mapped rare species habitat (Priority or Estimated Habitat?) in the current Massachusetts Natural Heritage Atlas (attach relevant page)? **X** Yes ___ No.

D. If you answered "No" to all questions A, B and C, proceed to the **Wetlands, Waterways, and Tidelands Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Rare Species section below.

II. Impacts and Permits

A. Does the project site fall within Priority or Estimated Habitat in the current Massachusetts Natural Heritage Atlas (attach relevant page)? **X** Yes ___ No. If yes,

1. Have you consulted with the Division of Fisheries and Wildlife Natural Heritage and Endangered Species Program (NHESP)? **X** Yes ___No; if yes, have you received a determination as to whether the project will result in the "take" of a rare species? ___ Yes **X** No; if yes, attach the letter of determination to this submission.

2. Will the project "take" an endangered, threatened, and/or species of special concern in accordance with M.G.L. c.131A (see also 321 CMR 10.04)? ___ Yes **X** No; if yes, provide a summary of proposed measures to minimize and mitigate rare species impacts

3. Which rare species are known to occur within the Priority or Estimated Habitat? **This information can be provided to MEPA reviewers but will not be made public.**

4. Has the site been surveyed for rare species in accordance with the Massachusetts Endangered Species Act? ___ Yes **X** No

4. If your project is within Estimated Habitat, have you filed a Notice of Intent or received an Order of Conditions for this project? ___ Yes **X** No; if yes, did you send a copy of the Notice of Intent to the Natural Heritage and Endangered Species Program, in accordance with the Wetlands Protection Act regulations? ___ Yes ___ No

B. Will the project "take" an endangered, threatened, and/or species of special concern in accordance with M.G.L. c.131A (see also 321 CMR 10.04)? ___ Yes **X** No; if yes, provide a summary of proposed measures to minimize and mitigate impacts to significant habitat:

WETLANDS, WATERWAYS, AND TIDELANDS SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **wetlands, waterways, and tidelands** (see 301 CMR 11.03(3))? **X** Yes ___ No; if yes, specify, in quantitative terms:

The removal of Becker Pond Dam will lower water elevations within the former impoundment. The impoundment is in the form of a linear stream and this stream alignment will not be altered, there will be little change in resource areas. The area of Land Under Water to be converted to Bordering Vegetated Wetland is approximately 34,600 square feet.

B. Does the project require any state permits (or a local Order of Conditions) related to **wetlands, waterways, or tidelands**? **X** Yes ___ No; if yes, specify which permit:
Order of Conditions and 401 Water Quality Certification

C. If you answered "No" to both questions A and B, proceed to the **Water Supply Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Wetlands, Waterways, and Tidelands Section below.

II. Wetlands Impacts and Permits

A. Does the project require a new or amended Order of Conditions under the Wetlands Protection Act (M.G.L. c.131A)? **X** Yes ___ No; if yes, has a Notice of Intent been filed? ___ Yes **X** No; if yes, list the date and MassDEP file number: _____; if yes, has a local Order of Conditions been issued? ___ Yes ___ No; Was the Order of Conditions appealed? ___ Yes ___ No. Will the project require a Variance from the Wetlands regulations? ___ Yes ___ No.

B. Describe any proposed permanent or temporary impacts to wetland resource areas located on the project site:

Temporary and permanent impacts will be made to River Bank, Bordering Vegetated Wetlands, Land Under Waterbodies, Bordering Land Subject to Flooding, and Riverfront Area. The design drawings show the location of these resource areas.

C. Estimate the extent and type of impact that the project will have on wetland resources, and indicate whether the impacts are temporary or permanent:

Coastal Wetlands	Area (square feet) or Length (linear feet)	Temporary or Permanent Impact?
Land Under the Ocean	N/A	_____
Designated Port Areas	N/A	_____
Coastal Beaches	N/A	_____
Coastal Dunes	N/A	_____
Barrier Beaches	N/A	_____
Coastal Banks	N/A	_____
Rocky Intertidal Shores	N/A	_____
Salt Marshes	N/A	_____
Land Under Salt Ponds	N/A	_____
Land Containing Shellfish	N/A	_____
Fish Runs	N/A	_____
Land Subject to Coastal Storm Flowage	N/A	_____
Inland Wetlands		
Bank (lf)	+50 LF	Permanent
Bordering Vegetated Wetlands	N/A	
Isolated Vegetated Wetlands	N/A	

Land under Water	-34,600 SF	Permanent
Isolated Land Subject to Flooding	N/A	
Bordering Land Subject to Flooding	-20,100 SF	Permanent
Riverfront Area	+251,600 FF	Permanent

D. Is any part of the project:

1. proposed as a **limited project**? X Yes ___ No; if yes, what is the area (in sf)? 54,500_
2. the construction or alteration of a **dam**? **X** Yes ___ No; if yes, describe:

The Becker Pond Dam will be removed and a natural river corridor will be restored through the former impoundment. The dam is currently in poor condition with critical issues to the left training wall and foundation. There is no active regulation of water at the dam, which acts as a run of river dam. The concrete core and earthen embankment will be removed.

3. fill or structure in a **velocity zone** or **regulatory floodway**? __Yes X No
4. dredging or disposal of dredged material? **X** Yes ___ No; if yes, describe the volume of dredged material and the proposed disposal site:

Approximately 1,500 CY of sediment will be passively released downstream. No sediment is planned for active removal and disposal.

5. a discharge to an **Outstanding Resource Water (ORW)** or an **Area of Critical Environmental Concern (ACEC)**? **X** Yes ___ No
6. subject to a wetlands restriction order? ___ Yes _X_ No; if yes, identify the area (in sf):
7. located in buffer zones? X_Yes ___No; if yes, how much (in sf) 8,150SF_

E. Will the project:

1. be subject to a local wetlands ordinance or bylaw? _X_ Yes ___ No
2. alter any federally-protected wetlands not regulated under state law? ___ Yes _X_ No; if yes, what is the area (sf)?

III. Waterways and Tidelands Impacts and Permits

A. Does the project site contain waterways or tidelands (including filled former tidelands) that are subject to the Waterways Act, M.G.L.c.91? **X** Yes ___ No; if yes, is there a current Chapter 91 License or Permit affecting the project site? ___ Yes **X** No; if yes, list the date and license or permit number and provide a copy of the historic map used to determine extent of filled tidelands:

B. Does the project require a new or modified license or permit under M.G.L.c.91? X Yes ___ No; if yes, how many acres of the project site subject to M.G.L.c.91 will be for non-water-dependent use? Current _0__ Change __0_ Total _0__
If yes, how many square feet of solid fill or pile-supported structures (in sf)?

C. For non-water-dependent use projects, indicate the following:
Area of filled tidelands on the site:___**N/A**_____
Area of filled tidelands covered by buildings:___**N/A**_____
For portions of site on filled tidelands, list ground floor uses and area of each use:
____**N/A**_____
Does the project include new non-water-dependent uses located over flowed tidelands?
Yes ___ No _**X**_
Height of building on filled tidelands_____

Also show the following on a site plan: Mean High Water, Mean Low Water, Water-dependent Use Zone, location of uses within buildings on tidelands, and interior and

exterior areas and facilities dedicated for public use, and historic high and historic low water marks.

D. Is the project located on landlocked tidelands? ___ Yes _**X**__ No; if yes, describe the project's impact on the public's right to access, use and enjoy jurisdictional tidelands and describe measures the project will implement to avoid, minimize or mitigate any adverse impact:

E. Is the project located in an area where low groundwater levels have been identified by a municipality or by a state or federal agency as a threat to building foundations? ___Yes **X** No; if yes, describe the project's impact on groundwater levels and describe measures the project will implement to avoid, minimize or mitigate any adverse impact:

F. Is the project non-water-dependent **and** located on landlocked tidelands **or** waterways or tidelands subject to the Waterways Act **and** subject to a mandatory EIR? ___ Yes **X** No;
(NOTE: If yes, then the project will be subject to Public Benefit Review and Determination.)

G. Does the project include dredging? **X** Yes **__** No; if yes, answer the following questions:
What type of dredging? Improvement **X** Maintenance ___ Both ____
What is the proposed dredge volume, in cubic yards (cys) 550 (passive release)__
What is the proposed dredge footprint _400 length (ft) _25 width (ft)_1.5_depth (ft);
Will dredging impact the following resource areas?
Intertidal Yes__ No X if yes, ___ sq ft
Outstanding Resource Waters Yes__ No X if yes, ___ sq ft
Other resource area (i.e. shellfish beds, eel grass beds) Yes X No _; if yes __ sq ft **The area of Land Under Waterways within the existing impoundment that we anticipate the natural mobilization of sediment following dam removal is: 10,000 SF**
If yes to any of the above, have you evaluated appropriate and practicable steps to: 1) avoidance; 2) if avoidance is not possible, minimization; 3) if either avoidance or minimize is not possible, mitigation? **Yes, please see discussion of alternatives. The preferred alternative of natural mobilization of impounded sediment following dam removal includes the least amount of dredging within the impoundment. This alternative includes the anticipated natural downstream movement of approximately 550 CY of impounded sediment. This avoids the disturbance of impounded sediment outside the area of anticipated future channel alignment. This volume is the minimum volume of dredge (passive downstream release) required to achieve the dam removal project. If the impounded sediment were to be mechanically removed by heavy machinery, additional dredging and resource area impact would be necessary to gain access to the area of dredging.**
If no to any of the above, what information or documentation was used to support this determination?
Provide a comprehensive analysis of practicable alternatives for improvement dredging in accordance with 314 CMR 9.07(1)(b). Physical and chemical data of the sediment shall be included in the comprehensive analysis.
Sediment Characterization
Existing gradation analysis results? X Yes ___No: if yes, provide results.
Existing chemical results for parameters listed in 314 CMR 9.07(2)(b)6? X Yes ____No; if yes, provide results.
Do you have sufficient information to evaluate feasibility of the following management options for dredged sediment? If yes, check the appropriate option.

Beach Nourishment ___
Unconfined Ocean Disposal ___
Confined Disposal:
Confined Aquatic Disposal (CAD) ___

Confined Disposal Facility (CDF) ___
Landfill Reuse in accordance with COMM-97-001 ___
Shoreline Placement ___
Upland Material Reuse X
In-State landfill disposal X
Out-of-state landfill disposal ____
(NOTE: This information is required for a 401 Water Quality Certification.)

IV. Consistency:

A. Does the project have effects on the coastal resources or uses, and/or is the project located within the Coastal Zone? ___ Yes **X** No; if yes, describe these effects and the projects consistency with the policies of the Office of Coastal Zone Management:

B. Is the project located within an area subject to a Municipal Harbor Plan? ___ Yes **X** No; if yes, identify the Municipal Harbor Plan and describe the project's consistency with that plan:

WATER SUPPLY SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **water supply** (see 301 CMR 11.03(4))? ___ Yes **X** No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **water supply**? ___ Yes **X** No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Wastewater Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Water Supply Section below.

II. Impacts and Permits

A. Describe, in gallons per day (gpd), the volume and source of water use for existing and proposed activities at the project site:

	Existing	Change	Total
Municipal or regional water supply	_____	_____	_____
Withdrawal from groundwater	_____	_____	_____
Withdrawal from surface water	_____	_____	_____
Interbasin transfer	_____	_____	_____

(NOTE: Interbasin Transfer approval will be required if the basin and community where the proposed water supply source is located is different from the basin and community where the wastewater from the source will be discharged.)

B. If the source is a municipal or regional supply, has the municipality or region indicated that there is adequate capacity in the system to accommodate the project? ___ Yes ___ No

C. If the project involves a new or expanded withdrawal from a groundwater or surface water source, has a pumping test been conducted? ___ Yes ___ No; if yes, attach a map of the drilling sites and a summary of the alternatives considered and the results. _____

D. What is the currently permitted withdrawal at the proposed water supply source (in gallons per day)? _____Will the project require an increase in that withdrawal? ___Yes ___No; if yes, then how much of an increase (gpd)? _____

E. Does the project site currently contain a water supply well, a drinking water treatment facility, water main, or other water supply facility, or will the project involve construction of a new facility? ___ Yes ___No. If yes, describe existing and proposed water supply facilities at the project site:

	Permitted Flow	Existing Avg Daily Flow	Project Flow	Total
Capacity of water supply well(s) (gpd)	_____	_____	_____	_____
Capacity of water treatment plant (gpd)	_____	_____	_____	_____

F. If the project involves a new interbasin transfer of water, which basins are involved, what is the direction of the transfer, and is the interbasin transfer existing or proposed?

G. Does the project involve:

1. new water service by the Massachusetts Water Resources Authority or other agency of the Commonwealth to a municipality or water district? ___ Yes ___ No
2. a Watershed Protection Act variance? ___ Yes ___ No; if yes, how many acres of alteration?
3. a non-bridged stream crossing 1,000 or less feet upstream of a public surface drinking

water supply for purpose of forest harvesting activities? ___ Yes ___ No

III. Consistency

Describe the project's consistency with water conservation plans or other plans to enhance water resources, quality, facilities and services:

WASTEWATER SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **wastewater** (see 301 CMR 11.03(5))? ___ Yes **X** No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **wastewater**? ___ Yes **X** No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Transportation -- Traffic Generation Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Wastewater Section below.

II. Impacts and Permits

A. Describe the volume (in gallons per day) and type of disposal of wastewater generation for existing and proposed activities at the project site (calculate according to 310 CMR 15.00 for septic systems or 314 CMR 7.00 for sewer systems):

	Existing	Change	Total
Discharge of sanitary wastewater	_____	_____	_____
Discharge of industrial wastewater	_____	_____	_____
TOTAL	_____	_____	_____

	Existing	Change	Total
Discharge to groundwater	_____	_____	_____
Discharge to outstanding resource water	_____	_____	_____
Discharge to surface water	_____	_____	_____
Discharge to municipal or regional wastewater facility	_____	_____	_____
TOTAL	_____	_____	_____

B. Is the existing collection system at or near its capacity? ___ Yes ___ No; if yes, then describe the measures to be undertaken to accommodate the project's wastewater flows:

C. Is the existing wastewater disposal facility at or near its permitted capacity? ___ Yes___ No; if yes, then describe the measures to be undertaken to accommodate the project's wastewater flows:

D. Does the project site currently contain a wastewater treatment facility, sewer main, or other wastewater disposal facility, or will the project involve construction of a new facility? ___ Yes ___ No; if yes, describe as follows:

	Permitted	Existing Avg Daily Flow	Project Flow	Total
Wastewater treatment plant capacity (in gallons per day)	_____	_____	_____	_____

E. If the project requires an interbasin transfer of wastewater, which basins are involved, what is the direction of the transfer, and is the interbasin transfer existing or new?

(NOTE: Interbasin Transfer approval may be needed if the basin and community where wastewater will be discharged is different from the basin and community where the source of water supply is located.)

F. Does the project involve new sewer service by the Massachusetts Water Resources Authority (MWRA) or other Agency of the Commonwealth to a municipality or sewer district? ___ Yes ___ No

G. Is there an existing facility, or is a new facility proposed at the project site for the storage, treatment, processing, combustion or disposal of sewage sludge, sludge ash, grit, screenings, wastewater reuse (gray water) or other sewage residual materials? ___ Yes ___ No; if yes, what is the capacity (tons per day):

	Existing	Change	Total
Storage	_____	_____	_____
Treatment	_____	_____	_____
Processing	_____	_____	_____
Combustion	_____	_____	_____
Disposal	_____	_____	_____

H. Describe the water conservation measures to be undertaken by the project, and other wastewater mitigation, such as infiltration and inflow removal.

III. Consistency

A. Describe measures that the proponent will take to comply with applicable state, regional, and local plans and policies related to wastewater management:

B. If the project requires a sewer extension permit, is that extension included in a comprehensive wastewater management plan? ___ Yes ___ No; if yes, indicate the EEA number for the plan and whether the project site is within a sewer service area recommended or approved in that plan:

TRANSPORTATION SECTION (TRAFFIC GENERATION)

I. Thresholds / Permit

A. Will the project meet or exceed any review thresholds related to **traffic generation** (see 301 CMR 11.03(6))? ___ Yes **X** No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **state-controlled roadways**? ___ Yes **X** No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Roadways and Other Transportation Facilities Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Traffic Generation Section below.

II. Traffic Impacts and Permits

A. Describe existing and proposed vehicular traffic generated by activities at the project site:

	Existing	Change	Total
Number of parking spaces	_____	_____	_____
Number of vehicle trips per day	_____	_____	_____
ITE Land Use Code(s):	_____	_____	_____

B. What is the estimated average daily traffic on roadways serving the site?

Roadway	Existing	Change	Total
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____

C. If applicable, describe proposed mitigation measures on state-controlled roadways that the project proponent will implement:

D. How will the project implement and/or promote the use of transit, pedestrian and bicycle facilities and services to provide access to and from the project site?

C. Is there a Transportation Management Association (TMA) that provides transportation demand management (TDM) services in the area of the project site? ____ Yes ____ No; if yes, describe if and how will the project will participate in the TMA:

D. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation facilities? ____ Yes ____ No; if yes, generally describe:

E. If the project will penetrate approach airspace of a nearby airport, has the proponent filed a Massachusetts Aeronautics Commission Airspace Review Form (780 CMR 111.7) and a Notice of Proposed Construction or Alteration with the Federal Aviation Administration (FAA) (CFR Title 14 Part 77.13, forms 7460-1 and 7460-2)?

III. Consistency

Describe measures that the proponent will take to comply with municipal, regional, state, and federal plans and policies related to traffic, transit, pedestrian and bicycle transportation facilities and services:

TRANSPORTATION SECTION (ROADWAYS AND OTHER TRANSPORTATION FACILITIES)

I. Thresholds

A. Will the project meet or exceed any review thresholds related to **roadways or other transportation facilities** (see 301 CMR 11.03(6))? ___ Yes **X** No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **roadways or other transportation facilities**? ___ Yes **X** No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Energy Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Roadways Section below.

II. Transportation Facility Impacts

A. Describe existing and proposed transportation facilities in the immediate vicinity of the project site:

B. Will the project involve any

1. Alteration of bank or terrain (in linear feet)? _____
2. Cutting of living public shade trees (number)? _____
3. Elimination of stone wall (in linear feet)? _____

III. Consistency -- Describe the project's consistency with other federal, state, regional, and local plans and policies related to traffic, transit, pedestrian and bicycle transportation facilities and services, including consistency with the applicable regional transportation plan and the Transportation Improvements Plan (TIP), the State Bicycle Plan, and the State Pedestrian Plan:

ENERGY SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **energy** (see 301 CMR 11.03(7))? ___ Yes **X** No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **energy**? ___ Yes **X** No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Air Quality Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Energy Section below.

II. Impacts and Permits

A. Describe existing and proposed energy generation and transmission facilities at the project site:

	Existing	Change	Total
Capacity of electric generating facility (megawatts)	_____	_____	_____
Length of fuel line (in miles)	_____	_____	_____
Length of transmission lines (in miles)	_____	_____	_____
Capacity of transmission lines (in kilovolts)	_____	_____	_____

B. If the project involves construction or expansion of an electric generating facility, what are:

1. the facility's current and proposed fuel source(s)?
2. the facility's current and proposed cooling source(s)?

C. If the project involves construction of an electrical transmission line, will it be located on a new, unused, or abandoned right of way? ___Yes ___No; if yes, please describe:

D. Describe the project's other impacts on energy facilities and services:

III. Consistency

Describe the project's consistency with state, municipal, regional, and federal plans and policies for enhancing energy facilities and services:

AIR QUALITY SECTION

I. Thresholds

A. Will the project meet or exceed any review thresholds related to **air quality** (see 301 CMR 11.03(8))? ___ Yes **X** No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **air quality**? ___ Yes **X** No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Solid and Hazardous Waste Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Air Quality Section below.

II. Impacts and Permits

A. Does the project involve construction or modification of a major stationary source (see 310 CMR 7.00, Appendix A)? ___ Yes ___ No; if yes, describe existing and proposed emissions (in tons per day) of:

	Existing	Change	Total
Particulate matter	_____	_____	_____
Carbon monoxide	_____	_____	_____
Sulfur dioxide	_____	_____	_____
Volatile organic compounds	_____	_____	_____
Oxides of nitrogen	_____	_____	_____
Lead	_____	_____	_____
Any hazardous air pollutant	_____	_____	_____
Carbon dioxide	_____	_____	_____

B. Describe the project's other impacts on air resources and air quality, including noise impacts:

III. Consistency

A. Describe the project's consistency with the State Implementation Plan:

B. Describe measures that the proponent will take to comply with other federal, state, regional, and local plans and policies related to air resources and air quality:

SOLID AND HAZARDOUS WASTE SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **solid or hazardous waste** (see 301 CMR 11.03(9))? ___ Yes **X** No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **solid and hazardous waste**? _ Yes **X** No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Historical and Archaeological Resources Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Solid and Hazardous Waste Section below.

II. Impacts and Permits

A. Is there any current or proposed facility at the project site for the storage, treatment, processing, combustion or disposal of solid waste? ___ Yes ___ No; if yes, what is the volume (in tons per day) of the capacity:

	Existing	Change	Total
Storage	_____	_____	_____
Treatment, processing	_____	_____	_____
Combustion	_____	_____	_____
Disposal	_____	_____	_____

B. Is there any current or proposed facility at the project site for the storage, recycling, treatment or disposal of hazardous waste? ___ Yes ___ No; if yes, what is the volume (in tons or gallons per day) of the capacity:

	Existing	Change	Total
Storage	_____	_____	_____
Recycling	_____	_____	_____
Treatment	_____	_____	_____
Disposal	_____	_____	_____

C. If the project will generate solid waste (for example, during demolition or construction), describe alternatives considered for re-use, recycling, and disposal:

D. If the project involves demolition, do any buildings to be demolished contain asbestos?
___ Yes ___ No

E. Describe the project's other solid and hazardous waste impacts (including indirect impacts):

III. Consistency

Describe measures that the proponent will take to comply with the State Solid Waste Master Plan:

HISTORICAL AND ARCHAEOLOGICAL RESOURCES SECTION

I. Thresholds / Impacts

A. Have you consulted with the Massachusetts Historical Commission? ___ Yes **X** No; if yes, attach correspondence. For project sites involving lands under water, have you consulted with the Massachusetts Board of Underwater Archaeological Resources? ____Yes **X** No; if yes, attach correspondence

254

B. Is any part of the project site a historic structure, or a structure within a historic district, in either case listed in the State Register of Historic Places or the Inventory of Historic and Archaeological Assets of the Commonwealth? ___ Yes **X** No; if yes, does the project involve the demolition of all or any exterior part of such historic structure? ___ Yes ___ No; if yes, please describe:

C. Is any part of the project site an archaeological site listed in the State Register of Historic Places or the Inventory of Historic and Archaeological Assets of the Commonwealth? ___ Yes X No; if yes, does the project involve the destruction of all or any part of such archaeological site? ___ Yes ___ No; if yes, please describe:

D. If you answered "No" to all parts of both questions A, B and C, proceed to the **Attachments and Certifications** Sections. If you answered "Yes" to any part of either question A or question B, fill out the remainder of the Historical and Archaeological Resources Section below.

II. Impacts

Describe and assess the project's impacts, direct and indirect, on listed or inventoried historical and archaeological resources:

III. Consistency

Describe measures that the proponent will take to comply with federal, state, regional, and local plans and policies related to preserving historical and archaeological resources:

CERTIFICATIONS:

1. The Public Notice of Environmental Review has been/will be published in the following newspapers in accordance with 301 CMR 11.15(1):

   (Name)_Berkshire Eagle_____(Date)_____5/29/20_____

2. This form has been circulated to Agencies and Persons in accordance with 301 CMR 11.16(2).

Signatures:

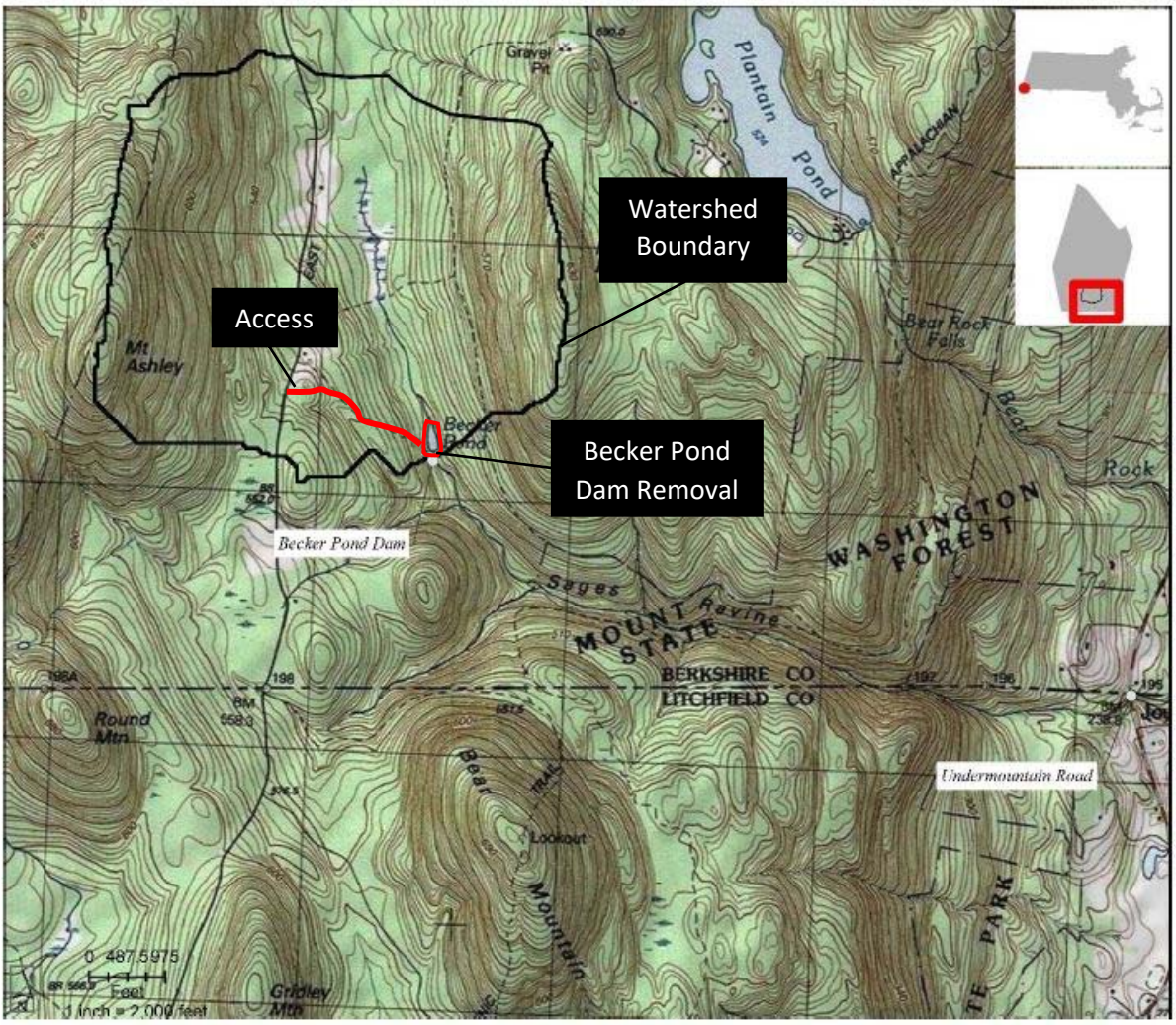
Date	Signature of Responsible Officer or Proponent	Date	Signature of person preparing ENF (if different from above)
5-29-20	Karen Lombard	5/29/20	Candice Constantine

Karen Lombard	Candice Constantine
Name (print or type)	Name (print or type)
The Nature Conservancy	Inter-Fluve, Inc.
Firm/Agency	Firm/Agency
136 West St., Suite 202	63 Spring Street, 2nd Floor, Suite J
Street	Street
Northampton, MA 01060	Williamstown, MA 01267
Municipality/State/Zip	Municipality/State/Zip
413-923-3174	617-909-7569
Phone	Phone

Attachment 1: List of all attachments

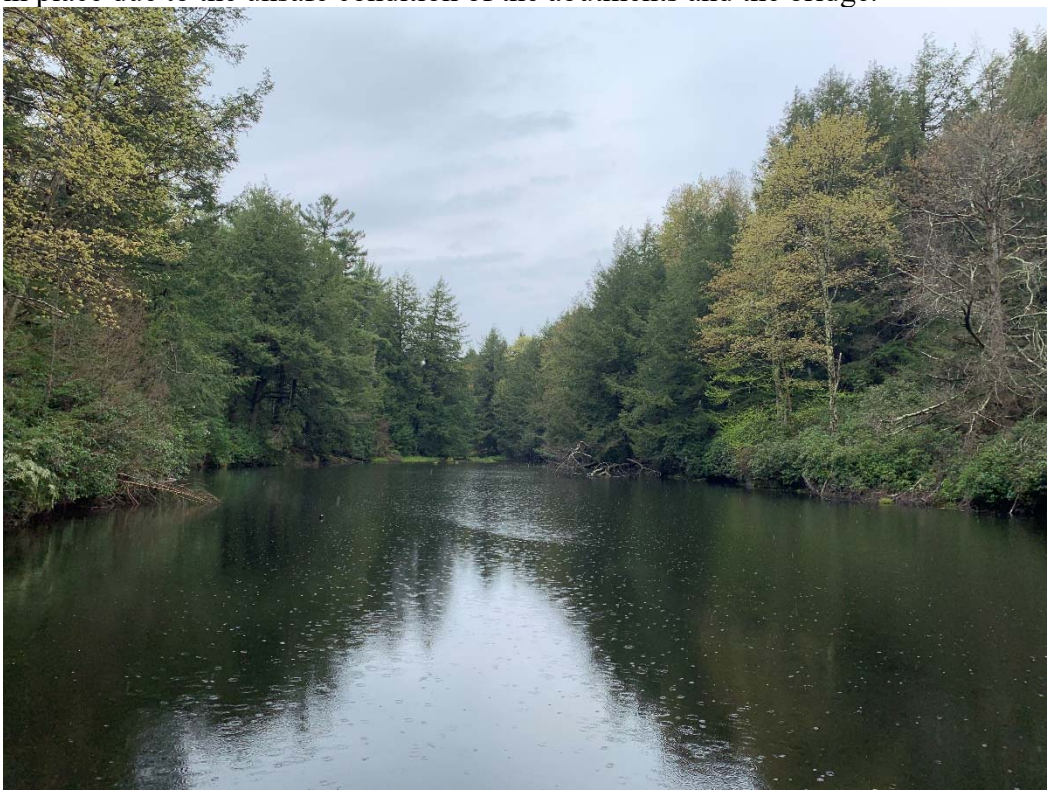
1. List of all attachments to this document.
2. U.S.G.S. map.
3. Photos of the project site
4. Basis of design memo, including hydrology and hydraulics analysis, climate change impacts discussion, and sediment management plan
5. Rationale for sediment management approach by MA DER
6. Communication with NHESP regarding rare species
7. Maps showing proximity of project to resource areas
8. Design drawings for the removal of Becker Pond Dam
9. List of all agencies and persons to whom the proponent circulated the EENF, in accordance with 301 CMR 11.16(2).
10. List of municipal and federal permits and reviews required by the project, as applicable.

Attachment 2: USGS map indicating project location and boundaries



Attachment 3: Photos of the project site

Looking across Becker Pond Dam at the spillway and the wooden bridge. The orange fencing is in place due to the unsafe condition of the abutments and the bridge.



Looking upstream from the dam at the impoundment.

Stream downstream of Becker Pond Dam

Access road to Becker Pond Dam

Attachment 4: Basis of design report, including hydrology and hydraulics analysis, climate change impacts discussion, and sediment management plan

See separate file

Attachment 5: Communication with NHESP regarding rare species

From:	Karen Lombard
To:	Candice Constantine PhD (cconstantine@interfluve.com)
Subject:	FW: Becker Pond Dam 30% design - Mt. Washington
Date:	Wednesday, August 29, 2018 1:46:54 PM
Attachments:	image001.png Becker Pond Dam Removal 30% Design Memo 061318.pdf IFI_BeckerPond_061318_PLANS.pdf

FYI from Heritage – we know we need to address in final design, once we know whether we are using the road or constructing the new road, but wanted to you have the email.

Karen

From: Marold, Misty-Anne (FWE) <misty-anne.marold@state.ma.us>
Sent: Friday, August 10, 2018 9:24 AM
To: Karen Lombard <klombard@TNC.ORG>
Cc: Buelow, Chris (FWE) <chris.buelow@state.ma.us>; Cheeseman, Melany (FWE) <melany.cheeseman@state.ma.us>; Holt, Emily (FWE) <emily.holt@state.ma.us>
Subject: FW: Becker Pond Dam 30% design - Mt. Washington

Re: NHESP 18-37448, Mount Washington, Becker Pond Dam

Hi Karen,

Thanks for the plans. The work around the dam itself is not problematic from a habitat alteration perspective. I'm a little confused by the plan relative to the access road. On sheet 4 or 7, there is a shaded orange/brown area around the existing access road (which is grey lines). I can't find any description of what that shading represents unless it is the color for "staging" from sheet 2? Will there be any improvements to the access road (e.g., adding gravel, widening, tree limbing, etc.)?

We also discussed that we were hoping the road would not be opened during the active season. Would you anticipate keeping the gate closed expect in winter after the project? Finally, if there is sufficient concrete block/debris, that a pile of it could be created off the trail/road as habitat enhancement. It likely only makes sense if you get larger slabs.

Best, Misty-Anne

Misty-Anne R. Marold
Senior Endangered Species Review Biologist
Natural Heritage & Endangered Species Program
Massachusetts Division of Fisheries & Wildlife
1 Rabbit Hill Road, Westborough, MA 01581
p: (508) 389-6356 | f: (508) 389-7890
mass.gov/masswildlife | facebook.com/masswildlife

From: Holt, Emily (FWE)
Sent: Tuesday, August 07, 2018 3:24 PM

To: Marold, Misty-Anne (FWE)
Subject: FW: Becker Pond Dam 30% design - Mt. Washington

I left the hard copies in your inbox.

From: Karen Lombard [mailto:klombard@TNC.ORG]
Sent: Thursday, July 19, 2018 9:07 AM
To: Holt, Emily (FWE)
Subject: Becker Pond Dam 30% design - Mt. Washington

Hi Emily,

I wanted to submit the 30% design for the Becker Pond dam removal as it was completed in June. Unfortunately I'm having trouble locating the letter with the project number for this project (a preliminary plan was submitted last winter and Misty-Anne Marold wrote the letter). We'll be starting the wetlands etc permitting this fall.

If you could locate the letter, would you mind sending me another copy. I must have misfiled it.

Thank you,
Karen

Karen Lombard
Director of Stewardship & Restoration
klombard@tnc.org
(413) 923-3174 (Office)
(617) 699-2438 (Mobile)

nature.org

The Nature Conservancy
Massachusetts Field Office

136 West St., Suite 5
Northampton, MA 01060

Attachment 6: Rationale for sediment management approach by MA DER

Becker Pond Dam Removal
Mt. Washington, MA
Rationale for Sediment Management Approach
Author: Massachusetts Division of Ecological Restoration

As further described below, the sediment management plan is based on the following factors:

1. The sediment that will be mobilized is identical in its chemical characteristics to the sediment both upstream and downstream of the site.
2. Physical removal of the impounded sediments would require access into and excavation within the impoundment area, causing unnecessary impacts to Resource Areas, and associated Buffer Zone.
3. Ecological and recreational impacts to downstream areas are anticipated to be minimal and short-lived.
4. Implementation of the dam removal outside of the most sensitive time of year for resident fish species will greatly reduce the risk of any short-term negative effects on those species from reintroduction of the natural sediment transport regime.
5. Careful sequencing of the work elements, along with construction oversight by the Engineer-of-Record to ensure the proper implementation of this method to maximize benefits.

It should first be noted that the sediment being discussed is that which currently resides within the impoundment, and is composed of organic and mineral material found naturally below Mean Annual High Water/Ordinary High Water, and already within other reaches of the stream. It is not soil that would potentially erode from adjacent upland areas and be deposited into the former impoundment area and/or stream stream during and/or immediately after construction. Sedimentation from upland areas will be prevented through the use of the structural (e.g. silt fence and erosion control fabric) and nonstructural (e.g. project sequencing and timing) methods shown in the permitting documents.

As stated in the DEP guidance document "Dam Removal and the Wetlands Regulations"[1], dams are capable of trapping up to 95 percent of the sediment that moves down a stream. Accordingly, one of the primary ecological goals of any dam removal is the restoration of the natural sediment transport regime. That is, reestablishment of natural sediment movement is an intentional effect of the project, rather than something to be avoided.

<u>Factor 1- Sediment Characteristics</u>
As described in the Inter-Fluve, Inc. (IFI) sediment management technical memorandum[2], extensive chemical and physical analysis of the impounded sediments as well as those taken from upstream and downstream was conducted per the due diligence study and guidelines from 414 CMR 9.07(2). The results show that the sediment to be mobilized is clean and nearly identical to sediments found elsewhere in the system. While observations of the channel downstream indicate a much lower proportion of sand, sand is present in all reaches of the stream, except for bedrock cascades.

[1] Available at: http://www.mass.gov/dep/water/resources/dmpol.pdf

[2] Inter-Fluve, Inc. (2019). *Becker Pond Dam Removal – Sediment Management Plan*. Cambridge, MA.

Factor 2- Impacts from excavation

Excavation of the sediment to form a channel through the impoundment would require additional short-term impacts from accessing the impoundment with machinery as well as for the water control system. Impacts are associated with the footprint of the machine, stabilization of the access point, and the set-up and demobilization of the water control system. In addition, this action would also increase costs and logistical challenge of the project. Due to the unconsolidated nature of impounded sediments, creating even a "starter channel" typically requires water diversions to allow the machine to work in the relative dry. This often requires installation of temporary cofferdams, pipes, and other barriers, as well as the pumping and treatment of water that accumulates in the work area. All of this additional disturbance can increase the chance for invasive plants to colonize, possibly altering the successional trajectory of the former impoundment area post dam removal.

Factor 3- Anticipated impacts

Anticipated ecological and recreational impacts are minimal and temporary. Some concern raised over so-called "instream management" of impounded sediments at other dam removal sites revolve around the mistaken belief that the released sediment moves downstream in a single slug, similar to what might be expected in a catastrophic dam failure. On the contrary, previous employment of this method in Massachusetts and elsewhere has shown that the material moves gradually over the first year following implementation of dam removal activity[3]. Research on sediment movement following the removal of the Bartlett Rod Shop Dam in Pelham, Massachusetts documented this phenomenon particularly well[4]. Controlled sediment release is also promoted by the fact that dam removal work is usually done during lower flow periods. This, along with a gradual drawdown of the impoundment, can allow for the consolidation, vegetation, and stabilization of a portion of the impounded sediments so that they don't transport.

The step-pool morphology of the brook downstream of Becker Pond is analogous to the reach of Thunder Brook in Cheshire where a dam was removed in 2012. While the Thunder Brook Dam removal did include the mechanical removal of 800 CY of sand and silt, the natural reestablishment of the sediment transport regime did result in the deposition of sand in the pools downstream of the dam. However, due to the channel slope and seasonal high flows in that system, the accumulated sand was resuspended and moved through the system naturally within the first two years. While sediment transport was not monitored at this site, fish[5] and benthic[6] community surveys were completed. Both showed no detrimental effects to either of these components of coldwater communities.

Another important consideration for the Becker Pond Dam removal is the presence of Sages Ravine downstream of the dam. As described in IFI's sediment management technical memorandum, Sages Ravine is a popular swimming, camping and picnicking spot on the brook. It is mainly accessed via the Appalachian Trail since the ravine is particularly challenging to ascend from downstream. The presence of several pools near the intersection of the brook with the Appalachian Trail make this spot a valuable recreational resource. Some past dam removal projects have caused public outcry due to the temporary settlement of sediment in riverine swimming holes or fishing spots.

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[3] Pearson, A. J., N. P. Snyder, and M. J. Collins (2011), Rates and processes of channel response to dam removal with a sand filled impoundment, Water Resour. Res., 47, W08504, doi:10.1029/2010WR009733.

[4] F.J. Magilligan, K.H. Nislow, B.E. Kynard, A.M. Hackman (2016). Immediate changes in stream channel geomorphology, aquatic habitat, and fish assemblages following dam removal in a small upland catchment. Geomorphology, Vol. 252, 158-170.

[5] Electrofishing surveys conducted by Professor Elena Traister of the MA College of Liberal Arts under permit from the MA Division of Fisheries & Wildlife. Unpublished. Email and MS Excel data available form DER upon request.

[6] Watershed Assessment Associates. 2015. Benthic Macroinvertebrate Survey Report. For Ma DER. Available upon request.

In December of 2019, DER staff followed the ravine upstream from State Route 41 to the Appalachian Trail to make observations complementary to Inter-Fluve's observations of the brook between the dam and the Trail in May 2019. Morphologically, the reach observed by DER is significantly steeper, than that observed by IFI upstream. However, consistent with IFI's observations upstream, there are several pools that will likely offer temporary storage of sediment moving through the system, particularly where the channel is constrained by large boulders and/or log debris jams. However, given the steep channel and the presence of regular steps that cause turbidity and sediment evacuation, neither observed reach can be considered a true depositional reach[7]. As noted in IFI's sediment management technical memorandum, there will be small areas of permanent deposition, such as secondary channels and low lying areas of the floodplain. However, given the morphology of the system, these areas are limited. Sediment from the Becker Pond Dam removal will move through these reaches as stream hydraulics allow. Sand will accumulate in pools for periods of time, then be flushed out with higher flows in the vast majority of cases.

In the 2016 removal of the Winchell Reservoir Dam on Munn Brook in Granville, MA, approximately 2,200 CY of sediment was allowed to move downstream. This release of sediment caused concern among fishermen and recreators who used the various pools downstream. They observed large quantities of sand and gravel moving through the system, substantially altering the channel they were accustomed to.

Unfortunately, the sediment movement was not monitored. In response to fishermen's concerns, the Massachusetts Division of Fisheries and Wildlife (DFW) conducted a fish community survey of the reaches downstream from the former dam. The unpublished 2018 effort found eastern brook trout (*Salvelinus fontinalis*), slimy sculpin (*Cottus cognatus*), blacknose dace (*Rhinichthys atratulus*), and American eel (*Anguilla rostrata*) near Granville Road with increasing diversity further downstream. This demonstrates that there has been no long-term impairment to the Coldwater Fishery Resource of Munn Brook from the dam removal. This finding is consistent with DFW's perspective on sediment remobilization from other dam removals. DFW biologists typically view any impacts to inland fisheries as short-term and within the level of disturbance those species are evolved to tolerate. Benefits from dam removal are understood to outweigh these temporary impacts. DFW biologists have offered this opinion in regulatory comments and informal project guidance on several occasions.

DFW also collected pebble count data at various locations to describe the evolution of the substrate as has been completed by DER for the Tack Factory Dam Removal in Hanover/Norwell. DER intends to replicate the Munn Brook DFW pebble counts in summer of 2020.

Likely effects from the proposed release of sediment from the Becker Pond Dam removal are anticipated to be less than those from the removal of the Winchell Reservoir Dam mainly due to the steeper channel slope on the Becker Pond brook. According to USGS StreamStats, the mean slope of the contributing watershed to Sages Ravine is 19.2 percent. The mean slope of the contributing watershed to Granville Gorge is only 8.2 percent. This indicates a greater chance for sediment to move through the system downstream of Becker Pond compared to Winchell Reservoir, though some pools will certainly hold more sediment longer than others.

[7] Montana Department of Natural Resources and Conservation (2011). Montana Stream Permitting. Chapter 1. Accessed via the internet at: http://dnrc.mt.gov/licenses-and-permits/stream-permitting-book/

Factor 4- Timing

DER has consulted with Andrew Madden, the Western District Supervisor and Leanda Fontaine, the Western District fisheries biologist for MA DFW about this project. They have informed us that October and November are the typical spawning months for brook trout in this stream. DFW prefers that projects avoid excessive turbidity during this time. In addition, the "rearing window" of June thru September can be important for trout an excess turbidity should also be avoided.

While DFW has been lenient with time-of-Year restrictions on dam removal and river restoration projects in the past, TNC and DER will continue to refine the project schedule with input from DFW during the MEPA and permitting process. Project implementation will be timed to avoid impacts to the existing fish community to the maximum extent practical.

Factor 5- Sequencing and Oversight

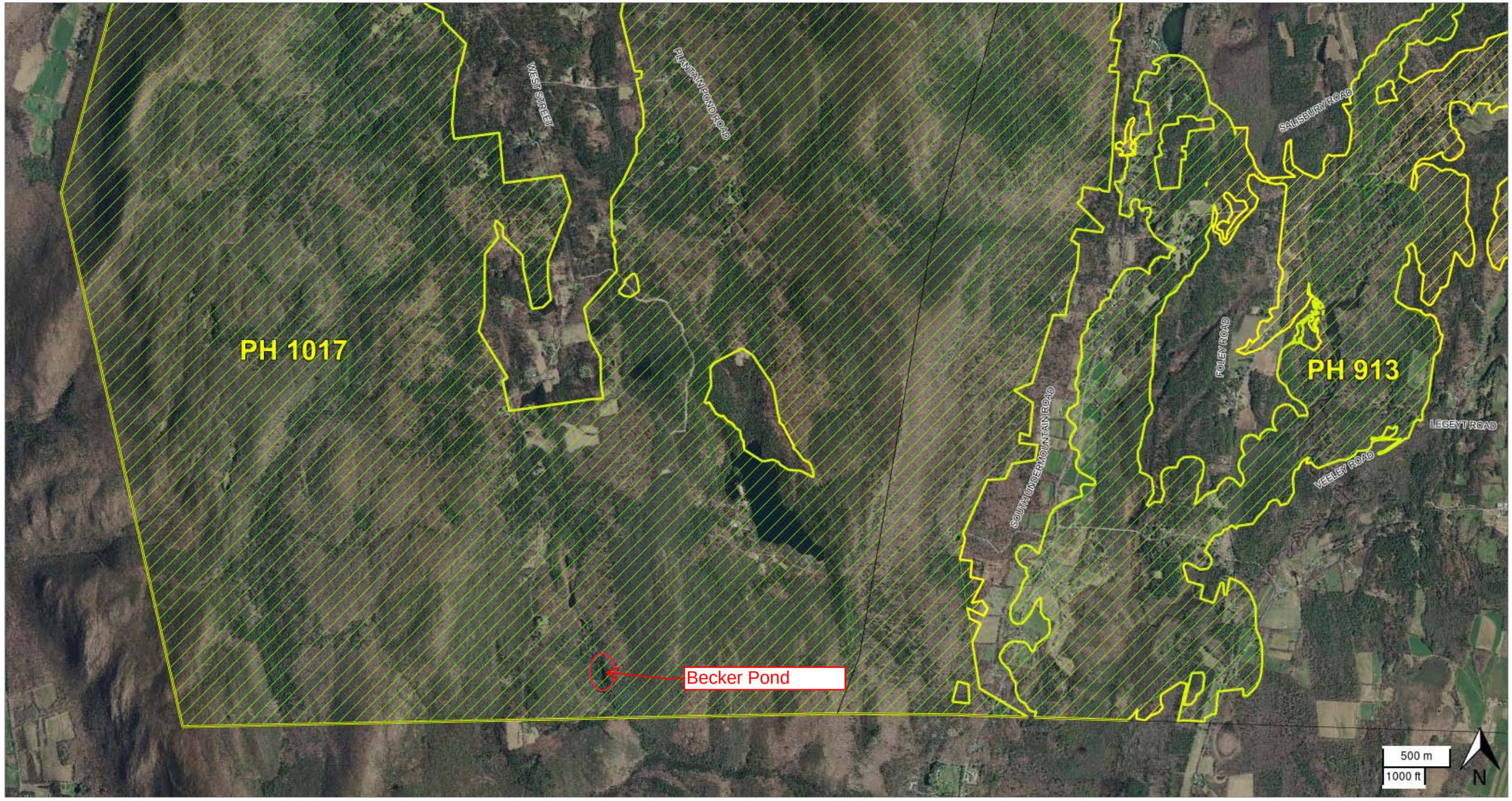
The proposed project has been designed by a multi-disciplinary firm with more Massachusetts barrier removal experience that nearly any other. Input from dam removal experts at DER and TNC, and wildlife biologists from DFW has also guided the project. This level of guidance will also carry through to implementation with regular oversight of the work to ensure adherence to the permits and design plans.

The project contractor will implement best practices to prevent upland soil from eroding into resource areas and will limit disturbance to an appropriate accessway. The contractor will make every effort to initiate an early, slow drawdown of the impoundment in order to stabilize as much sediment in place. During construction, the contractor will mechanically remove sediment opportunistically to ensure consistent, moderate flow of water and sediment. In addition, the contractor and project team will monitor weather forecasts and take precautions against massive sediment movement if at all possible.

As noted above, sediment movement was not monitored at the Winchell Dam site. Sediment monitoring will be a component of the Becker Pond Dam Removal Project, which will help to document the migration of material downstream, and can help inform future dam removal projects. The specifics of this monitoring program will be developed during the remainder of the design and permit process, and informed by regulatory outcomes.

Attachment 7: Maps showing proximity of project to resource area boundaries

Becker Pond Priority Habitat



MassDOT Roads Street Names

Major MassDOT Routes
- Interstate Highways
- US Roads
- State

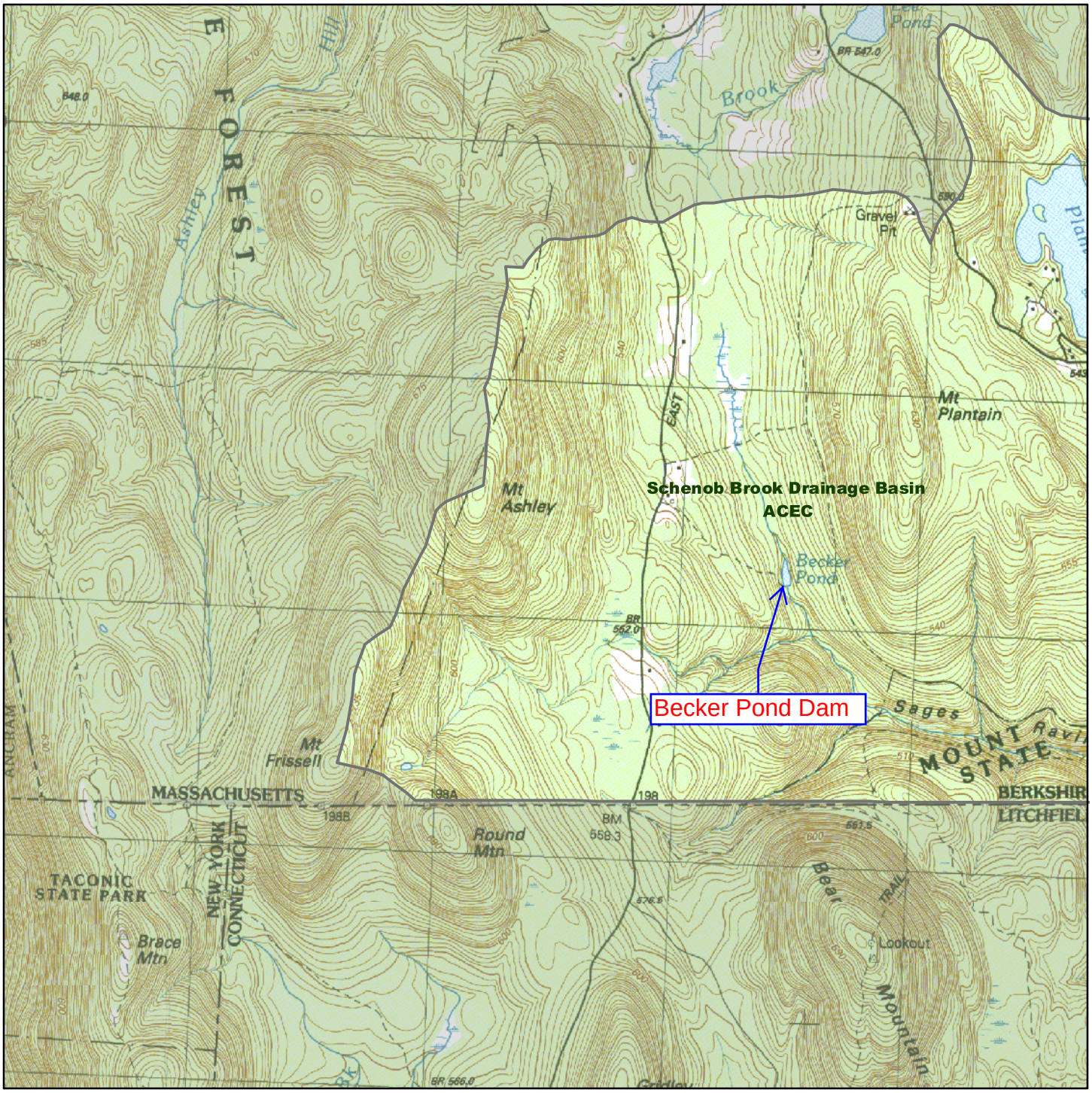
Massachusetts Towns

NHESP Estimated Habitats of Rare Wildlife

NHESP Priority Habitats of Rare Species

2013-2014 Color Orthos (USGS)

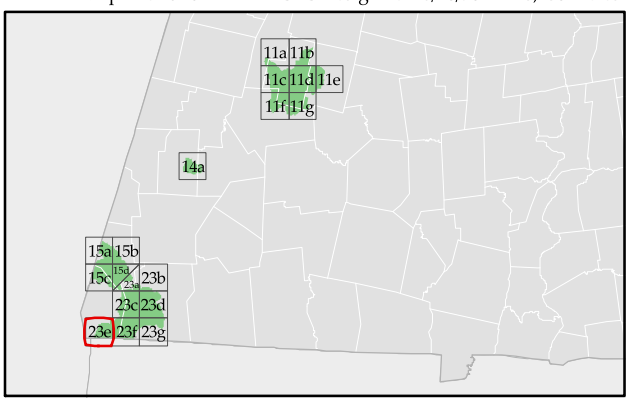
Orthos 2019
2019 Color Orthos (USGS)



Map # **23e**

Schenob Brook Drainage Basin ACEC

Map Tile 5 of 7 ACEC Designated 8/10/90 13,730 Acres



Massachusetts Department of Conservation and Recreation

Areas of Critical Environmental Concern (ACEC) Program

This map is intended to be used with the written boundary description contained in the ACEC designation document. The mapped boundary is not to be used by itself for definitive ACEC boundary delineation or regulatory interpretation. For review of site-specific projects within the ACEC boundary, determinations may need to be made in the field or in consultation with ACEC Program Staff.

For more information:

www.mass.gov/dcr/stewardship/acec

ACEC Boundaries by Type

- Road/Rail based
- River based
- Wetland based
- Floodplain based
- Tide based
- Contour based
- Political boundary
- Property line based
- Other
- Digital update required

Areas not within an ACEC are shaded with a gray mask.

dcr Massachusetts

0.25 miles

N

Attachment 8: Design drawings for the removal of Becker Pond Dam

See separate file

Attachment 9: EENF Distribution List, in accordance with 301CMR 11.16(2)

Agency	Email Address	Address
Department of Environmental Protection, Boston Office	helena.boccadoro@mass.gov	**Commissioner's Office** One Winter Street Boston, MA 02108
Department of Environmental Protection, Appropriate Regional Office and to each program from which a permit will be sought	kathleen.fournier@mass.gov	**DEP/Western Regional Office** Attn: MEPA Coordinator State House West - 4th floor 436 Dwight Street Springfield, MA 01103
	george.zoto@mass.gov jonathan.hobill@mass.gov	**DEP/Southeastern Regional Office** Attn: MEPA Coordinator 20 Riverside Drive Lakeville, MA 02347
	andrea.briggs@mass.gov	**DEP/Central Regional Office** Attn: MEPA Coordinator 8 New Bond Street Worcester, MA 01606
	john.d.viola@mass.gov	**DEP/Northeast Regional Office** Attn: MEPA Coordinator 205B Lowell Street Wilmington, MA 01887
Massachusetts Department of Transportation	lionel.lucien@dot.state.ma.us	**Public/Private Development Unit** 10 Park Plaza, Suite #4150 Boston, MA 02116
Applicable MassDOT District Office	patrick.tierney@dot.state.ma.us	**District #1** Attn: MEPA Coordinator 270 Main Street Lenox, MA 01240
	bao.lang@dot.state.ma.us	**District #2** Attn: MEPA Coordinator 811 North King Street Northampton, MA 01060
	lori.shattuck@dot.state.ma.us	**District #3** Attn: MEPA Coordinator 403 Belmont Street Worcester, MA 01604
	connie.raphael@dot.state.ma.us	**District #4** Attn: MEPA Coordinator 519 Appleton Street Arlington, MA 02476
	barbara.lachance@dot.state.ma.us	**District #5** Attn: MEPA Coordinator 1000 County Street Taunton, MA 02780
	amitai.lipton@dot.state.ma.us	**District #6** Attn: MEPA Coordinator 185 Kneeland Street Boston, MA 02111

Massachusetts Historical Commission	See MHC website.	**The MA Archives Building** 220 Morrissey Boulevard Boston, MA 02125
In each municipality affected by the Project	Coordinate with each municipality.	**City Council or Board of Selectmen** **Planning Board/Department** **Conservation Commission** **Department/Board of Health**
If the project is in a Coastal Zone Community	robert.boeri@mass.gov patrice.bordonaro@mass.gov	**Coastal Zone Management** Attn: Project Review Coordinator 251 Causeway Street, Suite 800 Boston, MA 02114
	DMF.EnvReview-North@mass.gov	**From Hull to New Hampshire Border** DMF – North Shore Attn: Environmental Reviewer 30 Emerson Avenue Gloucester, MA 01930
	DMF.EnvReview-South@mass.gov	**From Cohasset to Rhode Island Border** DMF – South Shore Attn: Environmental Reviewer 836 South Rodney French Blvd New Bedford, MA, 02744
If the project site has been in agricultural use within the last fifteen years	barbara.hopson@mass.gov	**Department of Agricultural Resources** Attn: MEPA Coordinator 138 Memorial Avenue, Suite 42 West Springfield, MA 01089
If the Project site is within or contains designated significant or estimated habitat, or priority sites of endangered or threatened species or species of special concern in accordance with the Massachusetts Endangered Species Act	melany.cheeseman@mass.gov emily.holt@mass.gov	**Natural Heritage and Endangered Species Program** Division of Fisheries & Wildlife 1 Rabbit Hill Road Westborough, MA 01581
If the Project affects DCR roadways, watersheds or other properties	nathaniel.tipton@mass.gov	**DCR** Attn: MEPA Coordinator 251 Causeway St. Suite 600 Boston MA 02114

If the Project implicates public health impacts	DPHToxicology@State.MA.US	**Department of Public Health** Director of Environmental Health 250 Washington Street Boston, MA 02115
If the Project is subject to Greenhouse Gas Emissions Policy or to review by Energy Facilities Siting Board	andrew.greene@mass.gov geneen.bartley@mass.gov	**Energy Facilities Siting Board** Attn: MEPA Coordinator One South Station Boston, MA 02110
	paul.ormond@mass.gov brendan.place@mass.gov	**Department of Energy Resources** Attn: MEPA Coordinator 100 Cambridge Street, 10th floor Boston, MA 02114
If the Project is in a municipality served by the Massachusetts Water Resources Authority (MWRA)	katherine.ronan@mwra.com	**Massachusetts Water Resource Authority** Attn: MEPA Coordinator 100 First Avenue Charlestown Navy Yard Boston, MA 02129
If the Project affects Massachusetts Bay Transportation Authority (MBTA) facilities or properties	MEPAcoordinator@mbta.com	**Massachusetts Bay Transit Authority** Attn: MEPA Coordinator 10 Park Plaza, 6th Fl. Boston, MA 02116-3966

Additional recipients:
Mount Washington Select Board:
jimlovejoy@townofmtwashington.com
gailg@townofmtwashington.com
'briantobin@townofmtwashington.com'
Mount Washington Con Com: bengtgranskog@townofmtwashington.com
Mount Washington Planning Board: billshort@townofmtwashington.com
Mount Washington Board of Health: ellielovejoy@townofmtwashington.com
Massachusetts Historical Commission:
The MA Archives Building
220 Morrissey Boulevard
Boston, MA 02125

Attachment 10: List of permits required by the project

Agency	Permit/License
MassDEP	Wetlands Protection Act Notice of Intent WW26 Combined Ch91 dredge permit/401 Water Quality Certification
Mt. Washington Conservation Commission	Wetlands Protection Act Notice of Intent
Army Corps of Engineers	Section 404 General Permit