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October 5, 2018

CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS  
ON THE  
NOTICE OF PROJECT CHANGE

PROJECT NAME : Paradise Pond Sediment Management Protocol  
PROJECT MUNICIPALITY : Northampton  
PROJECT WATERSHED : Mill River  
EOEA NUMBER : 15282  
PROJECT PROPONENT : Smith College Facilities Management  
DATE NOTICED IN MONITOR : September 5, 2018

Pursuant to the Massachusetts Environmental Policy Act (MEPA; M.G.L. c. 30, ss. 61-62I) and Section 11.10 of the MEPA regulations (301 CMR 11.00), I have reviewed the Notice of Project Change (NPC), and hereby determine that this project **does not require** the preparation of an Environmental Impact Report (EIR).

Project Change

The NPC indicates that changes to the 2014 Sediment Management Protocol (SMP) at Smith College that will result in a larger project area and revised sediment redistribution methodology. The 2014 SMP included an adaptive approach for sediment removal and long-term maintenance of Paradise Pond based on an initial three-year period (Experimental Phase) which studied the effectiveness and impacts of this protocol. Initial removal of sediments and subsequent annual removal of newly accumulated sediments to maintain a minimum depth of three feet of water in the pond was determined to be ineffective.

The Implementation Phase presented in the NPC is based on the findings of the Experimental Phase. The NPC describes refinements to project goals including: maintaining two feet of year-round water depth throughout the entire pond to support recreational uses (reduction from three feet of target water depth); balancing annual sediment input and release; restoring historic sediment budget

downstream to improve ecological conditions; and minimizing frequency of drawdowns for sediment management purposes. The prior proposal of mechanical mobilization of 10,000 cubic yards (cy) per event is no longer proposed. The Proponent proposes to commence activities associated with the revised SMP and conduct a drawdown in fall and winter of 2019.

### Original Project

As described in the Environmental Notification Form (ENF), the Original Project included a SMP to guide the release of sediment from Paradise Pond in Northampton. Accumulated sediments were sluiced downstream under high flow conditions (initially greater than 200 cubic feet per second (cfs)) to mimic natural processes. The SMP outlined activities undertaken during a three-year experimental period within which the efficacy and effects of the concept were assessed. The protocol was based on an adaptive management framework that supported data collection, evaluation and changes to the protocol as warranted. It included monitoring, analysis and annual reporting of findings.

The Proponent's goal was to maintain a minimum three feet of water depth in the pond below dam crest elevation while enhancing the downstream aquatic habitat, and to achieve a sustainable balance where the amount of sediment discharged from the pond on an annual basis was equivalent to the amount of sediment entering the pond from the upstream watershed. The Proponent coordinated closely with the Massachusetts Division of Fisheries and Wildlife (DFW), including both the Natural Heritage and Endangered Species Program (NHESP) and the Division of Fisheries, the City of Northampton, the Massachusetts Department of Environmental Protection (MassDEP), and the U.S. Army Corps of Engineers (ACOE) to develop a protocol to preserve and maintain Paradise Pond and its recreational uses and avoid downstream impacts.

The SMP was implemented in two phases: the Experimental Phase (Years 1 through 3) and the Implementation Phase. The project included the following activities:

- Year 1: Collect baseline physical and biological data, and undertake studies to determine sediment mobilization and deposition characteristics over a variety of flow conditions; opening the low level outlet (LLO) gate in the dam during high flow (greater than 200 cfs) conditions;
- Year 2: Based on the outcome of Year 1 studies, redistribute a limited amount of accumulated sediment into the expected flow path through the pond, operate the LLO in the dam during high flow conditions, and monitor sediment mobilization and downstream effects; and
- Year 3: Based on the results of Year 2 activities, redistribute a larger amount of sediment and operate the LLO in the dam to sluice that material through the pond and to the downstream areas while monitoring the effects within the pond and in downstream areas.

The Proponent provided an annual report on these activities. The December 5, 2014 Certificate on the ENF determined that the potential impacts associated with the Original Project (Experimental Phase) did not warrant the preparation of an EIR. The review of the ENF did not include activities associated with the Implementation Phase. The SMP outlined only the Experimental Phase activities because the Implementation Phase would be based on the results of the Experimental Phase. The Implementation Phase and associated impacts would be described in a subsequent NPC.

### Environmental Impacts and Mitigation

Potential environmental impacts associated with the Experimental Phase included alteration of approximately 290,000 square feet (sf) (6.6 acres) of Land Under Water (LUW). The ENF described the potential for up to 10,000 cy of material to be sluiced and/or mechanically relocated in the pond over the course of the three-year experimental period.

The project change is proposed improve environmental conditions within Paradise Pond and, potentially, downstream within the Mill River. The project change (Implementation Phase) will increase impacts to LUW by 119,000 sf (total of 409,000 sf (9.4 acres)) and increase the area of the project site by 3.14 acres (total of 9.8 acres), including the area of the downstream plunge pool. Measures to avoid, minimize and mitigate environmental impacts associated with the project change include construction-period best management practices (BMPs), decreasing the total volume of redistributed sediment per event from 10,000 cy to between 1,500 and 3,000 cy, and potentially improving riverine habitat below the Smith College Dam through sediment transport.

### Jurisdiction and Permitting

The Original Project underwent MEPA review and required an ENF pursuant to 301 CMR 11.03(3)(b)(1)(f) and 301 CMR 11.03(3)(b)(3) because it required State Agency Actions, and included alteration of one-half acre or more of wetlands (LUW) and dredging of 10,000 cy of material. The Original Project required a Chapter 91 (c. 91) Permit and Section 401 Water Quality Certification (WQC) from MassDEP and a Dam Safety Permit from the Massachusetts Department of Conservation and Recreation (DCR) Office of Dam Safety. It received an Order of Conditions from the Northampton Conservation Commission on November 20, 2014. It also required a Category 2 General Permit from ACOE.

The project change will continue to exceed the ENF review thresholds pursuant to 301 CMR 11.03(3)(b)(1)(f) and 301 CMR 11.03(3)(b)(3)<sup>1</sup> and it may potentially exceed the ENF review threshold pursuant to 301 CMR 11.03(2)(b)(2) for disturbance of greater than two acres of designated priority habitat that results in a take of a rare species. It will require a c. 91 Dredge Permit and a 401 WQC for dredge (in the pond) and fill (replenishing the sediments downstream) from MassDEP. It also requires an Order of Conditions from the Northampton Conservation Commission (and, on appeal only, a Superseding Order of Conditions from MassDEP).

Because the Proponent is not seeking State Financial Assistance, MEPA jurisdiction extends to those aspects of the project that are within the subject matter of required or potentially required State Agency Actions and that may cause Damage to the Environment, as defined in the MEPA regulations. In this case, MEPA jurisdiction extends to wetlands, waterways, and rare species.

### Review of NPC

The NPC provides a description of the project change, associated impacts, and project plans. It identifies measures to avoid, minimize and mitigate environmental impacts. Comments from State

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<sup>1</sup> The NPC indicates that the dredging threshold of 10,000 cy will not be exceeded at any one event; however, multiple events of redistributing approximately 3,000 cy will likely exceed the threshold over the period of several years.

Agencies do not request additional MEPA review.

### *Wetlands, Waterways, and Tidelands*

The Northampton Conservation Commission will review the Implementation Phase to determine its consistency with the Wetlands Protection Act (WPA), the Wetlands Regulations (310 CMR 10.00), and associated performance standards, including the Stormwater Management Standards (SMS). MassDEP will also review the project to determine its consistency with the c. 91 regulations (310 CMR 9.00), 401 WQC (314 CMR 9.00) and associated performance standards.

The goal of the SMP was to determine if releasing impounded sediments through the LLO during higher flow events (greater than 200 cfs) would maintain sufficient depth for recreation and education purposes (three foot depth) and improve downstream habitat. Results indicate that the LLO does not mobilize sufficient sediment from the pond to be self-sustaining to achieve the target depth. The Proponent proposes to modify the SMP to use a conventional annual drawdown to allow for mechanical redistribution of sediments into the active channel of the impoundment. It is expected that the sediments moved into the active channel will be mobilized out of the LLO during natural high-flow events.

The ultimate goal of the changes will be to achieve a minimum pond depth of two feet at normal pool depth (elevation 136) throughout Paradise Pond (compared to the previously identified target water depth of three feet). The Proponent proposes to retain elements of the 2014 SMP that are deemed effective including monitoring, adaptive management, and reporting. The NPC describes the refinements to the SMP associated with sediment redistribution between October and May of any year; water level restoration; high-flow sluicing; and frequency. The sediment redistribution will consist of drawing down the pond to one-half normal pool depth to allow mechanical redistribution of accumulated sediment throughout the pond bottom (approximately 1,500 to 3,000 cy); redistributing sediment above elevation 134 to deeper areas of pond (northern and northwestern areas); and facilitating the sluicing of sediments downstream under high flows.

Comments from MassDEP indicate that the Proponent should describe cumulative impacts to LUW and BVW in the 401 WQC application. The Proponent should submit a copy of the application for *BRP WW 26 Combined Licenses/Permits for Waterways & Water Quality Certification* to the MassDEP Western Regional and the Boston Offices for review. MassDEP will issue a single permit for the long-term dredge maintenance project (Implementation Phase). As previously advised, the Proponent should be clear that the permit application is for long term maintenance; MassDEP has the regulatory authority to condition the permit for maintenance.

### *Rare Species*

The project site is mapped as *Priority* and *Estimated Habitat*, as indicated in the Massachusetts Natural Heritage Atlas (14<sup>th</sup> Edition) for seven state-listed species: Wood Turtle (*Glyptemys insculpta*, Special Concern), Ocellated Darner (*Boyeria grafiana*, damselfly of Special Concern), Skillet Clubtail (*Gomphus ventricosus*, Threatened dragonfly), Dwarf Wedgemussel (*Alasmidonta heterodon*, Endangered)<sup>2</sup>, Yellow Lampmussel (*Lampsilis cariosa*, Endangered), Eastern Pondmussel (*Ligumia*

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<sup>2</sup> Federally listed pursuant to the Endangered Species Act (50 CFR 17.11) administered by the U.S Fish and Wildlife Service.

*nasuta*, Special Concern), and Creeper (*Strophitus undulates*, mussel of Special Concern).<sup>3</sup> These species and their habitats are regulated pursuant to the implementing regulations of the Massachusetts Endangered Species Act (MESA) (MGL c. 131A) and the rare species provisions of the WPA.

NHESP comments indicate that it expects to issue a conditional no Take determination letter for the Implementation Phase. NHESP will require conditions regarding the timing and frequency of drawdowns, limits to the amount of suspended sediments during high-flow events to avoid smothering downstream mussels, and ongoing monitoring. It indicates that outstanding details can be resolved during the MESA review process to develop conditions that will avoid impacts to state-listed species. The Proponent will continue to consult with NHESP as the project design and approach is refined to avoid and minimize impacts to habitat, and mitigate any potential unavoidable impacts during implementation and management of the project.

### Conclusion

The NPC has sufficiently defined the nature and general elements of the project change for the purposes of MEPA review and demonstrated that the project's environmental impacts will be avoided, minimized and/or mitigated to the extent practicable. Based on the information presented in the NPC and after consultation with State Agencies, I find that no further MEPA review is required at this time. Remaining issues can be addressed through the local, state and federal permitting and review processes.



October 5, 2018

Date

Matthew A. Beaton

### Comments received:

- 09/25/2018 Massachusetts Department of Environmental Protection (MassDEP) – Western Regional Office (WERO)
- 09/27/2018 Massachusetts Natural Heritage and Endangered Species Program (NHESP)

MAB/PPP/ppp

<sup>3</sup> Comments from NHESP do not list the presence of mapped habitat for the Stygian Shadowdragon (*Neurocordulia yamaskanensis*, dragonfly of Special Concern), which was previously noted in the Certificate on the ENF, according to the 13<sup>th</sup> Edition of the Massachusetts Natural Heritage Atlas.



MASSWILDLIFE

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September 26, 2018

Matthew A. Beaton, Secretary  
Executive Office of Energy and Environmental Affairs  
Attention: MEPA Office  
Purvi Patel  
100 Cambridge Street  
Boston, Massachusetts 02114

*Project Name:* Paradise Pond Sediment Management Protocol  
*Proponent:* The Trustees of Smith College  
*Location:* Paradise Pond, an impoundment of the Mill River  
*Document Reviewed:* Notice of Project Change  
*EEA Number:* 15282  
*NHESP Tracking No.:* 10-27790

Dear Secretary Beaton:

The Natural Heritage & Endangered Species Program and Fisheries Program of the Massachusetts Division of Fisheries & Wildlife (the Division) have reviewed the *Notice of Project Change* for the *Paradise Pond Sediment Management Protocol* (the Project) and would like to offer the following comments.

The Mill River and Diversion of the River between the Paradise Pond impoundment to the confluence with the Connecticut River is within mapped Priority & Estimated Habitat of the following state-listed species:

<b>Taxonomic Group</b>	<b>Scientific Name</b>	<b>Common Name</b>	<b>State-Status</b>
Invertebrate Animal: Damselfly	<i>Boyeria grafiana</i>	Ocellated Darner	Special Concern
Invertebrate Animal: Dragonfly	<i>Gomphus ventricosus</i>	Skillet Clubtail	Threatened
Invertebrate Animal: Mussel	<i>Alasmidonta heterodon</i>	Dwarf Wedgemussel*	Endangered*
Invertebrate Animal: Mussel	<i>Lampsilis cariosa</i>	Yellow Lampmussel	Endangered
Invertebrate Animal: Mussel	<i>Ligumia nasuta</i>	Eastern Pondmussel	Special Concern
Invertebrate Animal: Mussel	<i>Strophitus undulatus</i>	Creeper	Special Concern
Vertebrate Animal: Turtle	<i>Glyptemys insculpta</i>	Wood Turtle	Special Concern

These species and their habitats are protected pursuant to the implementing regulations of the MESA (321 CMR 10.00) and the rare species provisions of the WPA. Fact sheets for most state-listed species can be found at [www.mass.gov/nhesp](http://www.mass.gov/nhesp). \*The Dwarf Wedgemussel is also listed pursuant to the federal Endangered Species Act (50 CFR 17.11), which is administered by the United States Fish & Wildlife Service (USFWS).

Over the last several years, the Proponents have conducted a series of experimental impoundment releases to develop an adaptive management plan for Paradise Pond. The goal was to determine if using

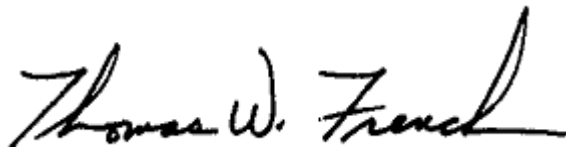
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the low-level outlet to release impounded sediments during higher flow events would both maintain sufficient depth for the College's recreation and education needs (a minimum water depth of 3 feet below the spillway elevation) while not harm (and hopefully improve) downstream habitats. Post management monitoring results found that only using the low-level outlet would not mobilize sufficient sediment from the impoundment to be self-sustaining to meet the recreational goals. The Proponents have therefore modified the adaptive management plan to include the use of a conventional drawdown to allow for mechanical redistribution of sediments into the "active" channel of the impoundment, which is located around the north end of the impoundment. The riverine sediments moved into the "active" channel will then be mobilized out of the low-level outlet during natural high-flow events. The project would conduct a drawdown to facilitate the mechanical re-distribution of the sediment, which may occur annually. The Proponents have also reduced the target water depth to 2 feet from the initial 3 feet. The results of the past studies suggest that a balance in the interests can be found, with some potential benefits to the overall River habitat below the Smith College Dam.

Based on the data collected to date by the Proponents, we anticipate requiring conditions as to the timing and frequency of the drawdown, limits to the amount of suspended sediments during high-flow event to avoid smothering downstream mussels, and ongoing monitoring. We are confident that outstanding details can be resolved during the MESA review process. We will continue to consult with the Proponent during the MESA review process to develop conditions to avoid impacts to state-listed species.

The Division will not render a final decision regarding the MESA until the MEPA review process and its associated public comment period is complete, and until all required application materials have been submitted to the Division. As the MESA review process has not formally initiated, no alteration to the soil, surface, or vegetation associated with the Project shall occur until the Division has made a final decision pursuant to 321 CMR 10.14 and 321 CMR 10.18.

Sincerely,

A handwritten signature in black ink that reads "Thomas W. French". The signature is written in a cursive, flowing style.

Thomas W. French, Ph.D.  
Assistant Director

cc: Briscoe Lang, Pare Corporation  
David Foulis, MA DEP Western Regional Office, Wetlands  
Paul Sneeringer, US Army Corps of Engineers  
Sarah LaValley, Northampton Conservation Commission



## Department of Environmental Protection

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September 25, 2018

Matthew Beaton, Secretary  
Executive Office of Energy & Environmental Affairs  
Massachusetts Environmental Policy Act Office  
Purvi Patel, EEA No. 15282  
100 Cambridge Street, 9<sup>th</sup> Floor  
Boston, MA 02114-2524

Re: Paradise Pond Sediment Management  
Protocol, Notice of Project Change  
Northampton, MA

Dear Secretary Beaton,

The Massachusetts Department of Environmental Protection (MassDEP), Western Regional Office (WERO) appreciates the opportunity to comment on the Notice of Project Change (NPC) submitted for the proposed Paradise Pond Sediment Management Protocol, Northampton, MA (EEA# 15282). The applicable MassDEP regulatory and permitting considerations regarding wetlands, waterways, air pollution, solid waste, and waste site cleanup are discussed.

### **I. Project Description**

The original project consisted of sediment removal and long term maintenance of Paradise Pond, which is owned and managed by Smith College Trustees and located on the on the Mill River in Northampton. The pond sediments were dredged in 1974, 1982, 1990, 1998 and 2008 utilizing both hydraulic and dry dredge techniques. In 2012, the Proponent proposed to install a bypass pipe to facilitate long term maintenance by diverting the Mill River and dredging the pond. At that time, state agencies suggested sediment sluicing in a controlled, permitted manner during high flow events that naturally result in sediment movement. The Proponent, in consultation with the Massachusetts Fisheries, Natural Heritage and Endangered Species Programs (NHESP), Army Corps of Engineers and MassDEP, received permits and attempted to sluice sediments downstream during conditions of high flow (initially >200 cfs) to replenish the downstream habitat mimicking natural processes.

The Proponent proposed an adaptive management program with an initial 3 year period studying the effectiveness and impacts of this process. The goal to initially remove sediments and then on an annual basis, remove newly accumulated sediments to maintain a minimum depth of 3 feet of water in the pond was determined to be ineffective.



The long term sediment management process was proposed to be adaptive and included a potential to physically redistribute sediment in the pond to encourage natural sluicing during high flow events. It is presently theorized that the depth of the water in the pond should be shallower (2 feet) and will require mechanical relocation of sediments (dredge) to facilitate the sluicing of sediments downstream. The Proponent proposes to commence this revised management plan and conduct a drawdown in Fall and Winter of 2019.

The project requires a 401 Water Quality Certification for dredge (in the pond) and fill, (replenishing the sediments downstream) and a Chapter 91 dredge permit from MassDEP. The project also requires an Order of Conditions from the Northampton Conservation Commission (and a Superseding Order of Conditions (SOC) from MassDEP in the event the local Order is appealed). The work is proposed to result in environmental improvements that bring collateral benefits.

Environmental impacts associated with this project change include:

- 290,000 s.f of Land Under Water and waterways (LUWW) – previously reviewed, and
- 119,000 s.f. on new LUWW impacts (new total - 409,000 s.f. LUWW).

## **II. Required Mass DEP Permits and/or Applicable Regulations**

### Wetlands & Waterways

310 CMR 10.00

310 CMR 9.00

314 CMR 9.00

### Air Pollution

310 CMR 7.00

### Solid Waste

310 CMR 16.00

### Bureau of Waste Site Cleanup

310 CMR 40.000

## **III. Permit Discussion**

### **Bureau of Water Resources**

#### Wetlands & Waterways

This project is subject to the Wetlands Protection Act and the associated regulations. A Notice of Intent was submitted to the Northampton Conservation Commission on September 17, 2018.

The project is a modification to the long term, dredge maintenance for a pond regulated by a dam. MassDEP will not issue any permits until the Secretary has issued a Certificate that the MEPA review process is complete.

The Site appears to contain Bank (Inland), Land Under Water Bodies and Waterways (LUWW), Bordering Vegetated Wetlands and Riverfront Area. Environmental impacts are proposed for LUWW.

#### 401 Water Quality Certification and Chapter 91 Waterways

As proposed, this project will require a 401-water quality certification (WQC). Under these regulations impacts are to be avoided, minimized and mitigated; the proponent is required to

provide sufficient information to adequately describe cumulative impacts to “Waters of the United States within the Commonwealth” (Bordering and Isolated Vegetated Wetlands and LUWW).

It is anticipated that a Chapter 91 Dredge permit will also be required for this work. As of 2016, MassDEP now has a combined permit. The Proponent should submit a copy of the application for *BRP WW 26 Combined Licenses/Permits for Waterways & Water Quality Certification* to both the Western Regional and the Boston Office of MassDEP for review. A single permit for the long term dredge maintenance project will be issued. As previously advised, the Proponent should be clear that the permit application is for long term maintenance; MassDEP has the regulatory authority to condition the permit for on-going maintenance.

### **Bureau of Air and Waste**

#### Air Quality

No new comments however, previous comments remain valid.

#### Construction Period Air Quality Mitigation Measures

No new comments however, previous comments remain valid.

### **Bureau of Waste Site Cleanup**

#### Spills Prevention

A spills contingency plan addressing prevention and management of potential releases of oil and/or hazardous materials from pre- and post-construction activities should be presented to workers at the site and enforced. The plan should include but not be limited to, refueling of machinery, storage of fuels, and potential future on-site activity releases.

## **IV. Other Comments/Guidance**

MassDEP staff are available to provide additional pre-permitting guidance to the Proponent upon request. If you have any questions regarding this comment letter please do not hesitate to contact Catherine Skiba at (413) 755-2119.

Sincerely,

This final document copy is being provided to you electronically by the Department of Environmental Protection. A signed copy of this document is on file at the DEP office listed on the letterhead.

Michael Gorski  
Regional Director

cc: MEPA File