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August 16, 2023

CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
ON THE
SINGLE ENVIRONMENTAL IMPACT REPORT

PROJECT NAME	: Lowes Pond Dam Rehabilitation
PROJECT MUNICIPALITY	: Oxford
PROJECT WATERSHED	: French Watershed
EEA NUMBER	: 16571
PROJECT PROPONENT	: Massachusetts Department of Conservation and Recreation
DATE NOTICED IN MONITOR	: July 10, 2023

Pursuant to the Massachusetts Environmental Policy Act (MEPA; M.G.L. c. 30, ss. 61-62L) and Section 11.08 of the MEPA regulations (301 CMR 11.00), I have reviewed the Single Environmental Impact Report (Single EIR) and hereby determine that it **adequately and properly complies** with MEPA and its implementing regulations.

Project Description

As described in the Single EIR, the project involves the rehabilitation of Lowes Pond Dam in the Town of Oxford (Town). The Massachusetts Department of Conservation and Recreation (DCR) is proposing the project as part of a pilot program to determine the most appropriate approach to assessing safety and implementing required remedial measures at abandoned DCR-jurisdictional dams in Massachusetts. Such dams (including Lowes Pond Dam) have no identifiable owner willing to evaluate and repair the infrastructure in compliance with dam safety regulations. Lowes Pond Dam currently exhibits multiple structural deficiencies and cannot safely pass the Spillway Design Flood (SDF), which is based on the 100-year storm. The proposed project involves restoring the dam to a condition that meets the design parameters of the Dam Safety Regulations (302 CMR 10.00) and will remove a safety hazard for the residents of Oxford.

In order to complete the proposed rehabilitation of Lowes Pond Dam, the construction area will be dewatered through the use of cofferdams. The existing 42-foot-wide spillway will be reconstructed and widened another 28 feet for a total spillway length of 70 feet; a new reinforced concrete training wall will be constructed adjacent and to the right of the new section of spillway. The existing section of concrete and stone masonry training wall along the left side of the existing spillway will be replaced and a new embankment will be built to the left of the spillway; areas within 20 feet of the training walls will be cleared to avoid adverse impacts to the embankment from roots and re-seeded with native herbaceous seed mix. A 24-inch diameter low-level outlet pipe with a gate valve will be installed on the western side of the spillway. This low-level outlet will allow the water elevation in the pond to be lowered in the event that repair or maintenance to the upstream spillway face is needed in the future. An aluminum walkway/platform is included above the spillway, extending from the western bank, to facilitate access to the low-level outlet. As described in the Single EIR, the design also incorporates stop logs, which could facilitate potentially lowering of the pond in the future for aquatic vegetation management.

A concrete stilling basin, consisting of a 20-foot-long flat concrete slab, will be constructed at the toe of the spillway for energy dissipation and erosion control. Approximately 865 cubic yards (cy) of accumulated sediment upstream of the dam will be dredged to below the elevation of the new low-level outlet. As described in the Single EIR, sediment has accumulated in the pond to within one foot of the existing spillway crest. A retaining wall will be constructed extending into the pond upstream of the low-level intake in order to minimize future sediment accumulation in the vicinity of the new low-level intake. Vegetation clearing is proposed along the western bank for staging and access for the construction of the new embankment section, and for use a park following project construction. For added public safety, the design provides aluminum guardrails along the training walls on both sides of the dam that would tie into the existing guardrails along Huguenot Road.

Two new parking lots will be constructed on either side of the dam, containing a combined total of five parking spaces. A new pedestrian bridge and connecting walkways will be constructed to connect the two sides of the waterway to provide a safe way for visitors to travel around the site. The parking areas and walkways will be Americans with Disabilities Act (ADA) compliant to encourage public access. A bio-infiltration rain garden adjacent to the east and west parking lots will be constructed to treat runoff from the parking areas. As noted above, the dam is currently abandoned and is located on private property. While DCR is proposing the project, it will not be the owner and/or operator of the site following project completion. The Town is currently moving forward with a Land Court Tax Lien Foreclosure process in the courts, which is anticipated to be completed by the end of 2023 and will result in the Town taking ownership of the dam. As stated in the Single EIR, once the Town completes these legal proceedings, DCR will advertise the project for construction.

Project Site

The 0.91-acre project site includes Lowes Pond Dam and the area immediately surrounding it, extending into the pond to the limit of proposed dredging. Lowes Pond Dam

(MA00669), located between I-395 and Huguenot Road, impounds Lowes Pond, which discharges to Lowe's Brook, a tributary of the French River. The dam is a combined earthen embankment, stone masonry, and concrete structure. There is a culvert immediately downstream of the dam that supports Huguenot Road. While there are no known design or construction drawings, the Lowes Pond Dam is thought to have been constructed around 1900 and is located on the site of a former mill structure that was demolished in the 1970s, although remnants of the former mill remain. The dam is classified as a Significant Hazard Potential dam in accordance with Massachusetts Dam Safety Regulations. Lowes Pond Dam has a maximum structural height of 15.6 feet and a maximum storage capacity of 188 acre-feet, as such it is categorized as an Intermediate sized structure. A visual, structural, and geotechnical condition assessment on May 20, 2019 found that, consistent with previous inspections, the condition of the dam was Unsafe. As defined by the Dam Safety Regulations, an Unsafe Condition Dam is a dam whose condition is such that a high risk of failure exists and the dam condition presents a high risk to public safety located downstream from the dam (301 CMR 10.03(2)). As noted above, the dam currently does not have adequate spillway capacity and cannot safely pass the SDF.

The principal spillway has a crest length of 40 feet and consists of a 6-foot-wide broad crested weir with a surveyed crest elevation (el.) of 474.8 feet (ft) NAVD88. The channel elevation at the toe of the spillway is at approximately el. 461.9 ft NAVD88, resulting in an estimated spillway height of 12.9 feet. Concrete and stone masonry training walls contain the flow within the spillway channel. A 6-foot-wide sluiceway inlet is located approximately 20 feet to the right of the principal spillway with an invert elevation of 472.8 ft NAVD88. The covered concrete and stone masonry sluiceway channel is approximately 70 feet in length and passes through the right embankment, which is approximately 90 feet in length traveling westward from the principal spillway. The minimum surveyed crest elevation along the right embankment is 477.8 ft NAVD88. The left embankment is approximately 40 feet in length traveling eastward from the principal spillway, with a minimum surveyed crest elevation of 477.5 ft NAVD88. Both embankments are covered with trees and dense vegetation; concrete and stone masonry walls line the upstream slopes.

Wetland resources on site are associated with the dam and impoundment and include Bank, Land Under Water (LUW), Riverfront Area, and Bordering Land Subject to Flooding (BLSF). The EENF states Lowes Pond is classified as an impaired water body with the stressor identified as noxious aquatic plants. Portions of the project site are mapped as a Regulatory Floodway and as Flood Zone AE (an area inundated during a 100-year storm), with a Base Flood Elevation (BFE) of elevation (el.) 469 ft NAVD88, extending up to 478.1 ft NAVD88 just north of the project site, as delineated on Federal Emergency Management Agency (FEMA) map 25027C0976E (effective date July 4, 2011). The project site does not contain *Estimated and Priority Habitat of Rare Species* as delineated by the Natural Heritage and Endangered Species Program (NHESP) in the 15th Edition of the Massachusetts Natural Heritage Atlas or an Area of Critical Environmental Concern (ACEC). The site does not contain any structures listed in the State Register of Historic Places or the Massachusetts Historical Commission's (MHC) Inventory of Historic and Archaeological Assets of the Commonwealth.

The project site is located within one Environmental Justice (EJ) population characterized by Income criteria and within one mile of an additional EJ population characterized by Minority

criteria. The site is located within five miles of seven additional EJ populations characterized by Income criteria (4) and Minority and Income criteria (3). The Single EIR indicates that the Designated Geographic Area (DGA) for the project is one mile.

Environmental Impacts and Mitigation

Potential environmental impacts associated with the project include the alteration of 0.92 acres of land, the creation of 0.06 acres of impervious surface (for a total of 0.14 acres on site), the construction of one new parking space (for a total of five on site), and the generation of two New average daily trips (adt), for a total of four adt from the project site. The project will alter 693,396 square feet (sf) (approximately 15.92 acres) of LUW; 325 linear feet (lf) of Bank; 19,330 sf of Riverfront Area (approximately 0.44 acres); and 1,950 sf of BLSF; as a result, the project is expected to result in a net loss of 250 sf of LUW and 25 lf of Bank, and a net gain of 850 sf of BLSF. The project will also dredge approximately 865 cy of sediment.

Measures to avoid, minimize, and mitigate project impacts include the partial removal of existing impervious surface on site, the restoration of temporarily altered wetland resource areas, construction of a bio-infiltration rain garden, use of erosion and sedimentation controls, use of best management practices (BMPs) during construction to minimize noise and dust impacts, and the creation of 850 sf of LUW, 125 lf of Bank, and 850 sf of BLSF through the removal of existing infrastructure within these resource areas.

Jurisdiction and Permitting

The project is undergoing MEPA review and is subject to a mandatory EIR pursuant to 301 CMR 11.03(3)(a)(1)(b) of the MEPA regulations because it requires an Agency Action and will involve the alteration of 10 or more acres of wetlands through the temporary dewatering of the pond. The project additionally exceeds the ENF threshold at 301 CMR 11.03(3)(b)(1)(f) because it will result in the alteration of one half or more acres of any other wetlands (LUW, Riverfront Area, and BLSF). The project requires the preparation of an EIR under 301 CMR 11.06(7)(b) of the MEPA regulations because it is located within one mile of one or more EJ populations. The project requires a Chapter 253 Dam Safety Permit from DCR and a 401 Water Quality Certification (WQC) and Chapter 91 (c.91) License and Permit from the Massachusetts Department of Environmental Protection (MassDEP).

The project requires an Order of Conditions from the Oxford Conservation Commission (or in the case of an appeal of either, a Superseding Order of Conditions from MassDEP). The project requires authorization from the U.S. Army Corps of Engineers (USACE) under the General Permits for Massachusetts in accordance with Section 404 of the Federal Clean Water Act. The project will also require consultation with the US Fish and Wildlife Service (USFWS).

The project was reviewed by MHC acting as the State Historic Preservation Officer (SHPO) pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended (36 CFR 800).

Because the project will be undertaken by an Agency (DCR), MEPA jurisdiction is broad in scope and extends to all aspects of the project that may cause Damage to the Environment, as defined in the MEPA regulations.

Review of the Single EIR

The Single EIR included an updated project description, existing and proposed conditions plans, estimates of project-related impacts, an update on permitting, a description of public outreach conducted since the filing of the EENF, an update on coordination with Agencies since the filing of the EENF, and response to comments on the EENF. The Single EIR states that no changes to the project design have been made since the filing of the EENF. However, the impacts to wetland resource area as presented in the EENF were estimates; these impacts have since been refined resulting in slight adjustments to wetland impact estimates as presented in the Single EIR and identified above.

The Proponent provided additional information to the MEPA Office on August 9, 2023 regarding EJ populations within one mile of the project site, the potential for climate change to impact the project, and invasive species management. For purposes of clarity, all supplemental materials provided by the Proponent are included in references to the "Single EIR," unless otherwise indicated.

Environmental Justice / Public Health

As noted above, the project site is located within one EJ population characterized by Income criteria and within one mile of an additional EJ population characterized by Minority criteria. The Single EIR notes that the project will eliminate an existing public safety hazard to downstream EJ communities, and create a publicly accessible recreational resource. As described in the Single EIR, the nearest downstream environmental justice population is a Minority and low-income population in 2010 census tract 7542, block group 3, located approximately 3 miles to the south of the project in the Town of Webster. Since the filing of the EENF, the Town has provided updates via live cable television and public meetings to the community. A list of community-based organizations (CBOs) and tribes/indigenous organizations (the "EJ Reference List") provided by the MEPA Office was used to notify the listed entities of the filing of the Single EIR.

As noted in the EENF, the DPH EJ Tool did not indicate that any census tract or municipality in which the identified EJ populations are located as exhibiting "vulnerable health EJ criteria"; this term is defined in the DPH EJ Tool to include any one of four environmentally related health indicators that are measured to be 110% above statewide rates based on a five-year rolling average. The EENF also surveyed environmental indicators tracked through the U.S. EPA's "EJ Screen" for census tract 7532, block group 3 (the EJ population in which the project site is partially located), which indicated that the EJ census block does not exhibit any environmental indicators at or above the 80th percentile of the statewide average. The Scope on the EENF directed the Proponent to provide data from the EPA's EJ Screen for census tract 7531, block group 5, the second EJ population present within one mile of the project at the time the EENF was filed. The Single EIR states that based on the revised mapping published by EEA on November 12, 2022, this census block is no longer designated as an EJ population.

Wetlands and Waterways

The Single EIR clarified impacts to wetland resource areas and provided additional details regarding the restoration of temporarily impacted wetland resource areas, as required by the Scope. As described in the Single EIR, all existing vegetated wetland areas that are anticipated to be disturbed during construction (4,830 sf of Riverfront, 1,500 sf of 100-Foot Buffer, and 1,100 sf of BLSF) will be revegetated by seeding and planting of native species. Post-construction monitoring to confirm revegetation is anticipated to occur over two years. During this time, the Town will also monitor for invasive species and address as needed in coordination with the Oxford Conservation Commission, via either hand-pulling or herbicide application. The Town has committed to ongoing water quality testing at Lowes Pond following construction.

Site plans included in the Single EIR identified the location of the cofferdams proposed for water control during construction. The Single EIR indicates that the Proponent will use dewatering bags in conjunction with dewatering/bypass pumping equipment to provide both filtration and velocity reduction. Inflow to the pond will be pumped from a location immediately upstream of the cofferdam to by-pass the construction site and discharged back to the stream immediately upstream of the Huguenot Road bridge. I refer the Proponents to comments from MassDEP, which recommend that the Proponent consider additional turbidity control measures as construction period conditions dictate.

Climate Change Adaptation and Resiliency

As noted in the Certificate on the EENF, an H&H analysis was developed to simulate flood events for the 10-, 50-, and the 100-year storm events using National Oceanic and Atmospheric Administration (NOAA) Atlas 14 precipitation data. According to this analysis, the dam would be overtopped by approximately 0.9 feet during the 100-year storm under existing conditions, and would likely be overtopped by the 50-year storm as well. As noted above, the spillway will be widened as part of the project to pass the SDF (which is based on the 100-year storm). Based on the 60-year useful life of the dam and the self-assessed criticality of this asset, the output report from the MA Resilience Design Tool recommends a planning horizon of 2070 and a return period associated with a 50-year (2% chance) storm event when designing the dam to address extreme precipitation. As stated in the Single EIR, the modifications to the proposed spillway were designed based on the present-day 100-year flood using NOAA Atlas 14 precipitation data, which has a 24-hr precipitation depth of 7.94 inches. The 50-year storm in 2070 (as recommended by the MA Resilience Design Tool) corresponds to a 24-hr precipitation depth of 9.5 inches, 1.56 inches above the 100-year design storm that was used.

The Single EIR notes that, as the goal of the project is to bring the dam into compliance with current regulatory requirements, which do not mandate designing for future climate conditions. However, the Single EIR states that the project as proposed would not preclude additional dam rehabilitation to address future conditions. As noted above, the project will address an immediate public safety hazard, and will improve the dam's ability to adequately contain and pass larger storm events as compared to existing conditions. As stated in the Single EIR, the project is not anticipated to result in any change in water level or velocity upstream of

the spillway as a result of the widening of the spillway, and the project will not result in adverse changes to floodwater flow paths and/or velocities that could impact adjacent properties or the function of the floodplain. Given the limited goals of the project, the Single EIR indicates that spillway sizing is adequate to address existing hazards and does not foreclose future opportunities to add resiliency.

Mitigation and Section 61 Findings

The Single EIR provided draft Section 61 Findings for use by Agencies, which are summarized below. The Section 61 Findings should be provided to Agencies to assist in the permitting process and issuance of final Section 61 Findings.

Environmental Justice

- Elimination of the risk of dam failure and associated hazards
- Improvement of community aesthetics, including improvements to recreational access to Lowes Pond
- Implementation of best management practices (BMPs) during construction to mitigate noise and dust impacts

Wetlands and Waterways

- Use of erosion, sediment, and turbidity controls, including filtering discharge water
- Fueling operations will be conducted away from resource areas whenever possible
- Removal of invasive species and invasive species monitoring
- Restoration of temporarily disturbed wetland resource areas
- Post-constructing monitoring for a period of two years and ongoing water quality monitoring

Adaptation and Resiliency

- Renovation of dam with significant hazard potential
- Widening of the dam spillway such that it is able to pass the 100-year storm based on NOAA Atlas 14 precipitation data
- Installation of a hydrodynamic separator and bioretention rain garden that will receive rainwater from the parking areas

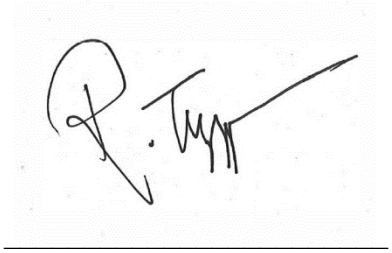
Construction Period

- Use of construction BMPs, including reducing idling times of vehicles, dampening exposed soil areas on dry and/or windy days, and requiring mufflers for construction equipment.
- Limiting construction to daylight hours
- On and off-road idling will be restricted to the maximum extent practicable

- Contractors will be encouraged to use construction equipment with engines manufactured to Tier 4 federal emission standards
- Consideration will be given to selecting project contractors that have installed retrofit emissions control devices or vehicles that use alternative fuels to reduce emissions of volatile organic compounds (VOCs), carbon monoxide (CO) and particulate matter (PM) from diesel-powered equipment to the maximum extent practicable
- Off-road vehicles will be encouraged ~~t~~o use ultra-low sulfur diesel fuel (ULSD)

Conclusion

Based on a review of the Single EIR and consultation with MassDEP, I find that the SEIR adequately and properly complies with MEPA and its implementing regulations. The project may proceed to permitting. Participating Agencies should forward copies of the final Section 61 Findings to the MEPA Office for publication in accordance with 301 CMR 11.12.



August 16, 2023
Date

Rebecca L. Tepper

Comments received:

08/09/2023 Massachusetts Department of Environmental Protection (MassDEP), Central Regional Office (CERO)

RLT/ELV/elv

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Commissioner

August 9, 2023

Secretary Rebecca Tepper
Executive Office of Environmental Affairs
100 Cambridge Street, 9th Floor
Boston, MA 02114

Attention: MEPA Unit – Eva Vaughan

Re: Single Environmental Impact Report (SEIR)
Lowes Pond Dam Rehabilitation
Oxford
EEA #16571

Dear Secretary Tepper,

The Massachusetts Department of Environmental Protection's ("MassDEP") Central Regional Office has reviewed the SEIR for the Lowes Pond Dam Rehabilitation (the "Project") submitted by the Massachusetts Department of Conservation and Recreation Office of Dam Safety (ODS). ODS (the "Proponent") is proposing to rehabilitate the Lowes Pond Dam located north of Huguenot Road and west of Main Street. The Project includes reconstruction and widening of the spillway, reinforcement of the concrete training wall, installation of a 24-inch diameter outlet pipe, removal of sediment, and construction of a pedestrian bridge, parking areas and walkways.

The Project is under MEPA review because it meets or exceeds the following review thresholds:

- 301 CMR 11.03(3)(a)(1)(b) - Alteration of ten or more acres of any other wetlands;
- 301 CMR 11.03(3)(b)(1)(f) - alteration of ½ or more acres of any other wetlands.

The Project requires the following State Agency Permits:

- MassDEP Superseding Order of Conditions (if local Order of Conditions is appealed);
- MassDEP 401 Water Quality Certification;

- Massachusetts Historical Commission Project Notification Form (PNF) and National Historic Preservation Act Section 106 Compliance;
- Chapter 253 Dam Safety Permit;
- MassDEP Chapter 91 License.

MassDEP offers the following comments:

Wetlands

In response to comments made by MassDEP on the Expanded Environmental Notification Form, the SEIR contains information demonstrating that impact values provided for Land Under Waterbodies include the footprint of the proposed training wall along the western limit of the Project. The SEIR includes additional information relating to proposed mitigation plantings, including the location, number, and species to be implemented within restored resource areas and their Buffer Zones. The SEIR includes information which indicates that while the existing Bank which will be impacted by the Project is human-made and affords minimal wildlife habitat value under existing conditions, a wildlife habitat evaluation will be submitted as part of the Notice of Intent filed with the Oxford Conservation Commission and MassDEP. MassDEP is satisfied with these responses.

The SEIR indicates that the proposed cofferdam location will be determined in the field by the contractor and is anticipated to be placed parallel to the Limit of Work as shown on Project plans. The SEIR indicates that the Proponent will use dewatering bags in conjunction with dewatering/bypass pumping equipment to provide both filtration and velocity reduction. MassDEP recommends that the Proponent remain open to the consideration of additional turbidity control measures as construction period conditions dictate.

MassDEP appreciates the opportunity to comment on the Project. If you have any questions regarding these comments, please do not hesitate to contact JoAnne Kasper-Dunne, Central Regional Office MEPA Coordinator, at (508) 767-2716.

Very truly yours,

Mary Jude Pigsley
Regional Director

cc: Commissioner's Office, MassDEP