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May 7, 2021

CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
ON THE
ENVIRONMENTAL NOTIFICATION FORM

PROJECT NAME	: Whiting Street Reservoir Dam Improvements Project
PROJECT MUNICIPALITY	: Holyoke
PROJECT WATERSHED	: Connecticut River
EEA NUMBER	: 16352
PROJECT PROPONENT	: Holyoke Water Works
DATE NOTICED IN MONITOR	: April 7, 2021

Pursuant to the Massachusetts Environmental Policy Act (MEPA; M.G.L. c. 30, ss. 61-62I) and Section 11.06 of the MEPA regulations (301 CMR 11.00), I hereby determine that this project **does not require** an Environmental Impact Report (EIR).

Project Description

As described in the Environmental Notification Form (ENF), the Proponent, the Holyoke Water Works, proposes to rehabilitate the Whiting Street Reservoir Dam (dam) in the City of Holyoke (City) to address structural deficiencies and to bring the dam into compliance with the Massachusetts Department of Conservation and Recreation's (DCR) Office of Dam Safety (ODS) regulations (302 CMR 10.00). According to the ENF, the dam is considered a Large Dam (Class I) and is classified as a High Hazard Potential dam because failure of the dam may cause loss of life and serious damage to property. The dam was inspected and determined to be in poor condition because of its inability to safely pass the spillway design flood without overtopping; a deteriorated concrete core wall; areas of seepage and leakage along the downstream toe; an inoperable low-level outlet due to corrosion; a partially collapsed portion of the top of the pipe; and overgrown trees and brush on the embankment. The project will enhance the resilience of the dam to minimize the potential for failure under existing and future

conditions and to maintain its impoundment. The Proponent is proposing repairs at the dam to provide a long-term solution to the noted deficiencies.

The current spillway which is approximately 33.5 feet long, will be demolished and replaced with a concrete spillway with a weir length of approximately 120 feet. Two eight-foot-wide by four-foot-high culverts will be installed on the northeast side of the spillway and will outlet to an unnamed perennial stream downstream of the spillway. A portion of the stream will be stabilized with rubble placement. Three existing box culverts that outlet from the current spillway beneath the access road will be replaced with a single three-foot-high by three-foot-wide concrete culvert. A temporary cofferdam will be installed to create an isolated, dry work area. The impoundment will be drawn down four feet from the normal elevation of 385 feet to 381 feet and six feet below the existing spillway crest elevation of 387 feet. The drawdown is proposed to provide a dry work environment for the construction of the new spillway supplemented by a cofferdam to protect against fluctuations in the water level due to storm events.

The project site will be accessed through existing gravel access roads from Easthampton Road (Route 141) and Mountain Park Road. To access work in the downstream unnamed perennial stream, trees will be cleared to allow equipment access. Upon completion of work, disturbed upland areas along the dam will be replanted and restored.

Project Site

The 371.8-acre project site contains the Whiting Street Reservoir Dam which is located off Easthampton Road (Route 141) in the City of Holyoke on the eastern slopes of the Mount Tom Range. The site is bounded by Route 141, Mount Tom, Interstate 91 and the Wyckoff Country Club golf course. The Whiting Street Reservoir, an approximately 479-million-gallon manmade impoundment, was constructed in 1888 and provided drinking water until 1997. It is now used as a backup emergency water supply. The impoundment is fed by several unnamed intermittent streams. A gravel access road extends around the perimeter of the impoundment and connects west to Easthampton Road (Route 141) and east to Mountain Park Road. The access road is also used by the public for hiking, running, and wildlife viewing. The area surrounding the impoundment is predominantly forested with deciduous trees.

The Whiting Street Reservoir Dam is a Large Size, High (Class I) Hazard Potential dam. Whiting Street Reservoir Dam is a stone masonry and earthen embankment dam that is approximately 1,900 feet long, with a maximum height of 19 feet. The alignment of the dam includes a curve approximately 260 feet from the left abutment. The upstream face of the dam is constructed of dry-laid stone masonry. The capstones on the crest are approximately seven feet wide and the remainder of the crest is approximately 10 feet wide with a grass covered surface. The downstream slope is vegetated and varies from 1.25 to 2.5 horizontal units, to one vertical unit (1.25H:1V to 2.5H:1V). The dam includes a five-foot high, three-inch thick sheet piling cutoff wall.

A brick masonry gatehouse is located at the approximate midpoint of the dam, approximately 900 feet east of the spillway. The primary outlet controls are located inside the gatehouse. The windows of the gatehouse are blocked up with brick masonry and the gatehouse door is constructed of a steel plate to keep vandals from entering the structure. A four-foot square sluice gate controls flow into the gatehouse. A 16-inch diameter gate controls a pipeline that was previously connected to the municipal

water system and can be reconnected in the event of an emergency. The 10-inch gate valve controls a pipeline that serves as the low-level outlet. The low-level outlet gate is throttled to maintain the water level in the impoundment below the crest of the spillway. A second outlet is located approximately 110 feet to the left of the spillway. The outlet is a 14-inch diameter cast iron pipe that discharges to the earthen spillway discharge channel. A 33.5-foot wide concrete spillway is located near the right abutment.

The project site contains several wetland resource areas regulated under the Massachusetts Wetlands Protection Act (WPA). Wetland resource areas within the vicinity of the project include: Land Under Water (LUW), Riverfront, Bank, Bordering Land Subject to Flooding and Bordering Vegetated Wetlands (BVW). The site contains a perennial stream that flows east from the Whiting Street Reservoir Dam spillway. As shown on the Federal Emergency Management Agency's (FEMA) National Flood Insurance Rate Map (FIRM) effective July 16, 2013), the dam and impoundment are generally located within the 100-year floodplain (Zone AE) with no defined Base Flood Elevation (BFE).

The project site is located within Estimated Habitats of Rare Wildlife and Priority Habitats of Rare Species as mapped by the Division of Fisheries and Wildlife's (DFW) Natural Heritage and Endangered Species Program (NHESP). The site is not located in an Area of Critical Environmental Concern (ACEC).

Environmental Impacts and Mitigation

Potential environmental impacts of the project include temporary alteration of approximately 360 linear feet (lf)) of Bank, 9.4 acres (409,000 sf) of Land Under Water (LUW), 140 sf of Bordering Land Subject to Flooding (BLSF) and 0.25 acres (11,000 sf) of Riverfront Area. These impacts are largely due to the drawdown of the impoundment and are anticipated to be temporary. Potential permanent impacts to wetland resource areas are associated with reconstruction of the spillway and removal of vegetation include impacts to 5,000 sf of LUW and 4,000 sf of Riverfront Area. The project will also alter 13.4 acres of new land and dredge 154 cubic yards of material.

The project will increase the resiliency of the dam by repairing and reinforcing structural deficiencies and replacing components critical to its operation. Measures to avoid, minimize, and mitigate Damage to the Environment include a gradual drawdown of no more than two feet per day to minimize wetland impacts, restoration of any temporarily disturbed areas to pre-construction conditions, loaming and seeding of disturbed areas, use of a gravel stabilized construction entrance, and installation of erosion and sedimentation controls during construction.

Jurisdiction and Permitting

This project is subject to MEPA review and preparation of an ENF pursuant to 301 CMR 11.03(3)(b)(1)(c) and to 301 CMR 11.03(3)(b)(1)(f) of the MEPA regulations because it requires an Agency Action and will result in the alteration of 500 or more lf of bank along a fish run or inland bank and the alteration of one-half or more acres of wetlands. The project will require a 401 Water Quality Certification (WQC) from the Massachusetts Department of Environmental Protection (MassDEP) and a Chapter 253 Dam Safety Permit from the DCR ODS.

Although not indicated in the ENF, the project will require review through a direct filing with the NHESP[1] for compliance with the Massachusetts Endangered Species Act (MESA) because the project will result in impacts to state-listed plants and species and their habitats.

The project requires an Order of Conditions (OOC) from the Holyoke Conservation Commission (or in the case of an appeal, a Superseding Order of Conditions from MassDEP); a submittal of a Pre-Construction Notification to the U.S. Army Corps of Engineers (ACOE) seeking authorization under the General Permits for Massachusetts in accordance with Section 404 of the federal Clean Water Act; and a National Pollutant Discharge Elimination System Construction General Permit (NPDES CGP) from the U.S. Environmental Protection Agency (EPA).

The Proponent is not seeking Financial Assistance for the proposed project. Therefore, MEPA jurisdiction is limited to those aspects of the project within the subject matter of any required or potentially required State Permits that have the potential to cause Damage to the Environment, as defined in the MEPA regulations.

Review of the ENF

The ENF provides a description of existing and proposed conditions, preliminary project plans, and a wetland delineation report. It identifies project elements and describes alternatives that were considered by the Proponent. It identifies existing environmental conditions including a hydrologic and hydraulic analysis, assesses potential environmental impacts, and identifies measures to avoid, minimize and mitigate impacts. Comments from MassDEP, NHESP, DCR and BUAR do not request additional analysis in the form of an EIR but identify additional information that should be provided during the permitting process. This information is detailed below.

Alternatives Analysis

As described in the ENF, alternatives were evaluated based on their ability to meet the project purpose while minimizing environmental impacts. The ENF evaluated the following alternatives: No-Build Alternative; Removal of the Dam Alternative; and Dam Repair and Rehabilitation Alternative (the Preferred Alternative).

The No-Build Alternative would not result in any environmental impacts; however, it was not considered to be a viable alternative, as the dam would continue to deteriorate. Scour and channelization of the spillway downstream of the dam would continue to worsen and potentially impact wetlands and waterbodies. In addition, the dam would continue to present a hazard to the public from its potential for overtopping and failure. The risk of failure would likely increase over time as the dam became subject to continued structural deterioration. The Removal of the Dam Alternative would include removal of the existing dam structure in order to permanently address ongoing issues with scour and channelization. Removal of the dam would render it incapable of impounding water. According to the ENF, this alternative was dismissed as it would result in much greater impacts to LUW of 120 acres versus 9.4 acres with the Preferred Alternative due to the removal of the dam, as well as degradation of recreational opportunities and use as an emergency water supply.

[1] Need for filing with NHESP not included in the ENF but was stated in comment letter from NHESP.

The Dam Repair and Rehabilitation Alternative (the Preferred Alternative) in the ENF evaluated a combination of the use of a temporary cofferdam and also temporarily lowering the water level in the impoundment as a means of water control during construction for repairs and rehabilitation. According to the ENF, a combination of the temporary drawdown of the impoundment and a temporary cofferdam was selected as the safest option for dewatering as it eliminates the possibility of an uncontrolled release of water during construction, which may occur if only a cofferdam is utilized and large stormwater flows occur during project construction. The ENF provides a detailed project description, additional analysis of elements of the Preferred Alternative and addresses how it meets the criteria used for evaluation. The design intent for this alternative is to provide safe access and reduce hydrostatic pressures during completion of the dam rehabilitation. In addition, the Preferred Alternative will be maintained as an emergency water supply and continue to provide recreational benefits.

Wetlands

The drawdown of the Whiting Street Reservoir will result in temporary impacts to wetland resource areas. The Holyoke Conservation Commission will review the project to determine its consistency with the limited project provisions of the WPA, the Wetlands Regulations (310 CMR 10.00), and associated performance standards, including stormwater management standards (SMS). MassDEP will review the project to determine its consistency with the 401 WQC regulations (314 CMR 9.00). The ENF includes a wetland delineation report that characterized wetland resource areas within the project area consistent with the Wetlands Regulations.

The ENF describes the proposed impacts to each type of wetland resource area. Removal and replacement of the existing dam spillway will require construction access, dredging, and the placement of fill material within the Whiting Street Reservoir impoundment, or LUW. Excavated sediment along the dam will be reused and replaced within impoundment when the replacement spillway is installed. Work within LUW and inland Bank associated with an unnamed perennial stream is also required to install three culverts downstream of the spillway. To limit erosion and withstand heavy flows, the portion of the unnamed perennial stream located downstream of the two proposed eight-foot-wide by four foot-high culverts will be stabilized using a combination of rubble placement and cross vanes. Activities necessary to replace the spillway, including tree clearing, are also proposed within Riverfront Area. Temporary impacts to wetland resource areas include the temporary drawdown of the reservoir to allow for the safe replacement of the spillway. A temporary coffer dam will also be installed within LUW to create an isolated (i.e., dry) work area.

The project requires a 401 WQC from MassDEP. The ENF indicates that the project qualifies as a Limited Project in accordance with 310 CMR 10.53(3)(i). The ENF includes a sediment characterization study completed by the Proponent, which should be included in the 401 WQC application to MassDEP. The project includes removal of sediments following the installation of the cofferdam to gain access to the sluiceway. Dredged material is anticipated to be disposed of at an approved location off-site to be selected by the contractor. MassDEP's comments indicate that the Proponent will need to manage and dispose dredged materials in accordance with conditions of a 401 as detailed in the *MassDEP Interim Policy COMM 94-007 Sampling, Analysis, Handling & Tracking Requirements for Dredged Sediment Reused or Disposed at Massachusetts Permitted Landfills*. During the remote MEPA site visit held on April 15, 2021, the Proponent discussed how they propose to develop an invasive species management plan for the areas affected by the drawdown.

Dam Safety / Climate Change Adaptation and Resiliency

Governor Baker's Executive Order 569: Establishing an Integrated Climate Change Strategy for the Commonwealth (EO 569; the Order) was issued on September 16, 2016. The Order recognizes the serious threat presented by climate change and directs Executive Branch agencies to develop and implement an integrated strategy that leverages state resources to combat climate change and prepare for its impacts. The Order seeks to ensure that Massachusetts will meet GHG emissions reduction limits established under the Global Warming Solution Act of 2008 (GWSA) and will work to prepare state government and cities and towns for the impacts of climate change. I note that the MEPA statute directs all State Agencies to consider reasonably foreseeable climate change impacts, including additional greenhouse gas emissions, and effects, such as predicted sea level rise, when issuing permits, licenses and other administrative approvals and decisions.

The ENF did not directly examine climate resiliency during the design process but did identify the useful life[2] of the dam and described how the dam would comply with 302 CMR 10.00 Dam Safety Regulations. In accordance with these regulations, the spillway has been designed to pass one-half the Probable Maximum Flood (PMF). The PMF represents the most severe flood that is considered reasonably possible at a site as a result of the most severe combination of critical meteorological and hydrologic conditions possible in the region. For comparison, the ½ PMF event represents greater precipitation and peak discharge rates than those anticipated during 100-year and 500-year events.

The ENF includes a hydrologic and hydraulic analysis that was completed in January 2018. The hydrologic and hydraulic analysis indicates that the current Whiting Street Reservoir Dam is not capable of passing flows generated from the ½ PMF without overtopping the dam. The Preferred Alternative will increase the hydraulic capacity of the spillway by replacing the existing spillway with a new, larger spillway. This will bring the spillway into compliance with the Dam Safety Dam regulations set forth by 302 CMR 10.14(6)(a) by meeting the spillway capacity requirements for a Large Size, High Hazard Potential dam. Hydrologic and hydraulic analyses indicate the Preferred Alternative will not be overtopped through the 500-year event. Because the ½ PMF event represents a conservative precipitation scenario that exceeds the 500-year event, this analysis appears to show that the dam will be resilient to future climate conditions with attendant increases in the severity and frequency of large storm events. However, given the long useful life of the project and flood protection functions served by the project, I encourage the Proponent to consider the best available climate data applicable during the useful life of the project when finalizing project design. For instance, the rainfall data used to design the spillway capacity may be increased by a factor of safety to reflect future climate conditions during the useful life of the project.

According to the ENF, the useful-life of the embankment dam is expected to be approximately 100-years. Concrete portions of the spillway as well as gatehouse valves and piping that are more susceptible to corrosion and deterioration are projected to need repairs in less than 100 years and/or replacement in accordance with the ODS approved Operations and Maintenance plan for the dam.

[2] For the purpose of this certificate, "useful life" is understood to be the estimated number of years an asset will be in use before needing reinvestment to continue performing its normal function(s). The anticipated useful life assumes regular and adequate maintenance is implemented; this differs from the design life (or service life), which is typically shorter.

Rare Species

Although not indicated in the ENF, the project will require review through a direct filing with the NHESP for compliance with the Massachusetts Endangered Species Act (MESA) because the project will result in impacts to state-listed plants and species and their habitats.

The project is located within mapped habitat of the Eastern Box Turtle *(Terrapene carolina)*, which is state-listed as a species of Special Concern. The project is located within several mapped plant habitat including the Dwarf Bulrush (Lipocarpha micrantha) and the Wapato (Sagittaria cuneata) which are state-listed as species that are Threatened and the Toothcup (Rotala ramosior) which is state-listed as a species that is Endangered. This species and their habitats are protected pursuant to the Massachusetts Endangered Species Act (MESA; MGL c.131A) and its implementing regulations (321 CMR 10.00).

The Proponent should contact NHESP to initiate pre-filing consultations to proactively address these state-listed species concerns associated with the project. Comments from NHESP indicate that based on the materials included in the ENF, the NHESP anticipates that the project will result in impacts to state-listed plants and species and their habitats. If the project cannot be redesigned to avoid these impacts, it is likely that the project will require a MESA Conservation and Management Permit (CMP; 321 CMR 10.23) for state-listed plants in order to proceed.

Comments from NHESP indicate that the Proponent will need to provide additional information to evaluate potential impacts to state-listed species and their habitat. This includes, but may not be limited to, botanical surveys for all three state-listed plants in all suitable habitat within 20 feet of the project site, using NHESP-approved survey protocols, to aid in developing avoidance and minimization measures. Botanical survey will need to occur during the appropriate survey window in the summer. NHESP's comments also state that the Proponent will need to evaluate alternatives to the proposed refill timing of the drawdown to avoid further impacts to state-listed plants. The Proponent should consult with NHESP regarding the measures to meet the performance standards and to avoid, minimize, and mitigate impacts to these species.

Cultural Resources

The Massachusetts Board of Underwater Archaeological Resources (BUAR) has conducted a preliminary review of the project and has found no record of any underwater archaeological resources within the area. However, if underwater archaeological resources or historical resources are encountered during the course of the project, the Proponent should coordinate with the BUAR, the Massachusetts Historical Commission (MHC), the Holyoke Historical Commission, and any affected Tribal Historic Preservation Officers to ensure that no known historical and underwater archaeological resources are impacted by the project.

Construction Period

The ENF states construction is anticipated to commence in the fall of 2021. The contractor will be required to prepare a water control plan submittal for review and approval by DCR ODS prior to commencement of the project. The contractor will also be required to prepare a Stormwater Pollution Prevention Plan (SWPPP) for managing erosion/sediment impacts during construction.

All construction and demolition (C&D) activities should be managed in accordance with applicable MassDEP's regulations regarding Air Pollution Control (310 CMR 7.01, 7.09-7.10), and Solid Waste Facilities (310 CMR 16.00 and 310 CMR 19.00, including the waste ban provision at 310 CMR 19.017). The project should include measures to reduce construction period impacts (e.g., noise, dust, odor, solid waste management) and emissions of air pollutants from equipment, including anti-idling measures in accordance with the Air Quality regulations (310 CMR 7.11). I encourage the Proponent to require that its contractors use construction equipment with engines manufactured to Tier 4 federal emission standards, or select 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. Off-road vehicles are required to use ultra-low sulfur diesel fuel (ULSD). If oil and/or hazardous materials are found during construction, the Town should notify MassDEP in accordance with the Massachusetts Contingency Plan (310 CMR 40.00). All construction activities should be undertaken in compliance with the conditions of all State and local permits. I encourage the Proponent to reuse or recycle C&D debris to the maximum extent.

Conclusion

The ENF has adequately described and analyzed the project and its alternatives, and assessed its potential environmental impacts and mitigation measures. Based on review of the ENF and comments received on it, and in consultation with State Agencies, I have determined that an EIR is not required.

K. Theoharides

May 7, 2021
Date

Kathleen A. Theoharides

Comments received:

04/26/2021	Massachusetts Department of Environmental Protection (MassDEP), Western Regional Office (WERO)
04/27/2021	Massachusetts Division of Fisheries & Wildlife's Natural Heritage & Endangered Species Program (NHESP)
04/27/2021	Massachusetts Board of Underwater Archaeological Resources (BUAR)

KAT/ACC/acc

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Charles D. Baker
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Karyn E. Polito
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Kathleen A. Theoharides
Secretary

Martin Suuberg
Commissioner

April 26, 2021

Kathleen A. Theoharides, Secretary
Executive Office of Energy & Environmental Affairs
Massachusetts Environmental Policy Act Office
Anne Canaday, EEA No. 16352
100 Cambridge Street, 9th Floor
Boston, MA 02114-2524

Re: Whiting Street Reservoir
Dam Improvements - Holyoke

Dear Secretary Theoharides,

The Massachusetts Department of Environmental Protection (MassDEP), Western Regional Office (WERO) appreciates the opportunity to comment on the Environmental Notification Form (ENF) submitted for the proposed Whiting Street Reservoir Dam Improvements project in Holyoke, MA (EEA #16352).

The applicable MassDEP regulatory and permitting considerations regarding wetlands, air pollution, solid waste, hazardous waste and waste site cleanup are discussed. MassDEP attended a site visit on April 15, 2021.

I. Project Description

The project proponent, Holyoke Water Works, proposes to improve the dam at Whiting Street Reservoir located at Easthampton Road (Rt 141) in Holyoke. The dam is classified by the Massachusetts Office of Dam Safety as a Large Size (Class I) High Hazard dam which is not capable of passing flows generated from a one-half probable maximum flood event without overtopping the dam. Overtopping the dam could lead to erosion of the embankment slope and potentially cause a dam

failure. The spillway and a portion of the earthen embankment will be demolished and replaced to allow sufficient capacity to pass flows from a one-half probable maximum flood event, improving public safety.

The project site is on the eastern slopes of the Mt. Tom Range, bounded by Route 141, Mt. Tom, Interstate 91 and Wyckoff Country Club. The reservoir was constructed in 1888 and provided drinking water until 1997. It is now used as a backup emergency water supply (PWS 1137000-02S). The current spillway which is approximately 33.5 feet long, will be demolished and replaced with a concrete spillway with a weir length of approximately 120 feet. Two eight-foot-wide by four-foot-high culverts will be installed on the northeast side of the spillway and will outlet to an unnamed perennial stream downstream of the spillway. A portion of the stream will be stabilized with rubble placement and cross-vanes. Three existing box culverts that outlet from the current spillway beneath the access road will be replaced with a single three-foot-high by three-foot-wide concrete culvert. A temporary cofferdam will be installed to create an isolated, dry work area. The impoundment will be drawdown from the normal elevation of 385' to 381'. Construction is anticipated in 2022. Ideally, work would begin mid-April with the target depth being reached in early May allowing demolition and construction to begin, with refilling of the impoundment expected by early October.

Environmental Impacts associated with this project include:

- total site acreage – 371.8 acres
- new acres of land altered – 13.4
- acres of impervious area existing 0.4 no change
- square feet of new other wetland alteration – 9.8
- structures 1, 020 square feet -max height 20 ft existing no change
- inland wetlands – bank – 360 sf permanent
- Land under water – 408,370 sf temporary (drawdown)
- Land under water – 5,000 sf - permanent
- Bordering land subject to flooding – 140 sf temporary (access)
- Riverfront area – 11,000 sf temporary (tree clearing, grading, access)
- Riverfront area – 4,000 sf permanent (spillway and culvert installations, placement of cobbles and boulders

II. Required Mass DEP Permits and/or Applicable Regulations

Wetlands
310.CMR 10.000
Water Quality Certificate
314 CMR 9.00

Air Pollution
310 CMR 7.00
Solid Waste
310 CMR 16.00
Hazardous Waste
310 CMR 30.00
Bureau of Waste Site Cleanup
310 CMR 40.000

III. Permit Discussion

Bureau of Water Resources

Wetlands Protection Act

The project appears to qualify for the statutory exemption afforded by the Massachusetts Wetlands Protection Act related to maintenance, repair and/or replacement of public drinking water infrastructure, provided the permanent footprint of proposed activities can be demonstrated not to expand further into or otherwise alter resource areas.

401 Water Quality Certificate

As proposed, this project will require a Clean Water Act Section 401 Water Quality Certification (WQC) for dredging. The project as proposed includes removal of sediments following the installation of the coffer dam to gain access to sluiceway and other aspects of the work area. The Proponent should submit a copy of the application to both the Western Regional and the Boston Office of MassDEP for review. One certificate will be issued following coordination between regional staff and the Boston office.

Based on the results of sediment sampling, the Proponent proposes to dispose of the dredged material in accordance with MassDEP policy, as applicable. The dredged spoils shall be managed and disposed in accordance with conditions of a 401 Water Quality Certificate Permit as detailed in the *MassDEP Interim Policy COMM 94-007 Sampling, Analysis, Handling & Tracking Requirements for Dredged Sediment Reused or Disposed at Massachusetts Permitted Landfills.*

Bureau of Air and Waste

Construction and Demolition Activities
The construction and demolition activity must conform to current Air Pollution Control Regulations. The proponent should implement measures to alleviate dust, noise, and odor nuisance conditions that may occur during the construction and demolition activities. Such measures must comply with the MassDEP's Regulations 310 CMR 7.01, 7.09, and 7.10.

Construction Equipment
As of June 1, 2010, all non-road engines shall be operated using only ultra low sulfur diesel (ULSD) with a sulfur content of no greater than 15 ppm pursuant to 40 CFR 80.510.

Solid Waste
The Proponent shall properly manage and dispose of all solid waste generated by this proposed project pursuant to 310 CMR 16.00 and 310 CMR 19.000, including the regulations at 310 CMR 19.017 (waste ban).

In addition, the Proponent shall manage regulated asbestos and asbestos-containing waste material as special wastes in accordance with 310 CMR 19.061. The Proponent indicates they do not expect to encounter asbestos. MassDEP notes that vintage masonry may include asbestos-containing materials, i.e.: transite pipe, patching cement and caulk. In addition, vintage caulks may also contain PCB.

Hazardous Waste
If any hazardous waste, including waste oil, is generated or discovered at any part of the site, the proponent must ensure that such generation is properly registered with the Department and managed and disposed of in accordance with 310 CMR 30.0000.

Bureau of Waste Site Cleanup

Massachusetts Contingency Plan (MCP)
If soil and/or groundwater contamination is encountered during excavation activities, the proponent should retain a Licensed Site Professional (LSP); the MCP details procedures to follow for the parties conducting work. MassDEP staff are available for guidance.

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 releases.

IV. Other Comments/Guidance

MassDEP staff is available for discussions as the project progresses. If you have any questions regarding this comment letter, please do not hesitate to contact Kathleen Fournier at (413) 755-2267.

Sincerely,

Michael Gorski
Regional Director

cc: MEPA File

The COMMONWEALTH OF MASSACHUSETTS
BOARD OF UNDERWATER ARCHAEOLOGICAL RESOURCES
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April 27, 2021

Kathleen A. Theoharides, Secretary
Executive Office of Energy and Environmental Affairs
Attention: Anne Canaday, MEPA Unit
100 Cambridge Street, Suite 900
Boston, MA 02114

RE: Whiting Street Reservoir Dam Improvements Project (EOEA #16352), Holyoke, MA

Dear Secretary Theoharides,

The staff of the Massachusetts Board of Underwater Archaeological Resources has reviewed the above-referenced proposed project as detailed in the *Environmental Monitor* of April 7, 2021 and offers the following comments.

The Board has conducted a preliminary review of its files and secondary literature sources to identify known and potential underwater archaeological resources within the proposed project area. No record of any underwater archaeological resources was found within the area. Based on the results of this review, the Board expects that this project is unlikely to impact underwater archaeological resources.

However, should heretofore-unknown underwater archaeological resources be encountered during the course of the project, the Board expects that the project's sponsor will take steps to limit adverse effects and notify the Board and the Massachusetts Historical Commission, as well as other appropriate agencies, immediately, in accordance with the Board's *Policy Guidance for the Discovery of Unanticipated Archaeological Resources*.

The Board appreciates the opportunity to provide these comments as part of the MEPA review process. Should you have any questions regarding this letter, please do not hesitate to contact me at the address above or by email at david.s.robinson@mass.gov.

Sincerely,

David S. Robinson
Director

/dsr
Cc: Brona Simon, MHC

dcr
Massachusetts

April 27, 2021

Secretary Kathleen A. Theoharides
Executive Office of Energy and Environmental Affairs
MEPA Office Attn: Anne Canaday
100 Cambridge Street, Suite 900
Boston, Massachusetts 02114

RE: EEA #16352 Whiting Street Reservoir Dam Improvements ENF (Holyoke)

Dear Secretary Theoharides:

The Department of Conservation and Recreation ("DCR" or "the Department") Office of Dam Safety ("ODS") has reviewed the Environmental Notification Form ("ENF") submitted by Tighe & Bond, Inc. on behalf of the City of Holyoke Water Works (the "Proponent") for improvements proposed at Whiting Street Reservoir Dam, Holyoke (the "Project").

With a maximum impoundment capacity exceeding 1,000 acre-feet, Whiting Street Reservoir Dam is classified by ODS as a Large Dam. As Whiting Street Reservoir Dam is located where failure will likely cause loss of life and serious damage to homes, industrial or commercial facilities, important public utilities, highways or railroads, it is classified as a High Hazard Potential Dam. The Massachusetts Dam Safety Regulations, 302 CMR 10.14, require dams to have spillway capacity to pass the flow resulting from Spillway Design Flood ("SDF") unless the applicant demonstrates the design flow can be stored, passed through, or passed over the dam without failure occurring. For existing large, high hazard potential dams such as Whiting Street Reservoir Dam, the design storm for the SDF is the ½ PMF ("Probable Maximum Flood") storm event, unless it is demonstrated through a quantitative and relative impact analysis that selection of an alternate SDF is suitable. Currently, the spillway at Whiting Street Reservoir Dam is unable to convey SDF flows without the dam overtopping, which is a serious deficiency.

As described in the ENF, the Project's purpose is to increase the hydraulic capacity of the dam's spillway to allow the spillway to accommodate the peak flow from the ½ PMF storm event. The scope of work includes the demolition of the dam's existing spillway and outflow conduits; construction of a wider, higher capacity spillway at the same location; installation of new spillway outflow conduits; and site restoration. Work is proposed to be performed while Whiting Street Reservoir is drawn down to elevation 381' (NAVD88) which is four feet below normal pool elevation of 385' and six feet below the existing spillway crest elevation of 387'.

It is anticipated that successful project completion, following Tighe & Bond's design, will result in the dam spillway meeting ODS spillway adequacy requirements in accordance with 302 CMR 10.14(6) and significant improvement to overall dam condition. Additionally, a compliant spillway enhances project resiliency and lessens downstream risk to public safety. ODS acknowledges the applicant's proposal to perform the work while Whiting Street Reservoir water level is drawn down. ODS has discussed with the designer the planned drawdown of four feet from the normal pool elevation during construction. ODS was assured by Tighe & Bond that the four-foot drawdown will provide for manageable water control during construction. It appears that this drawdown extent will sufficiently reduce risk to both downstream public

safety interests and the safety of construction personnel during execution of the work and will provide for improved worksite conditions to facilitate high quality construction.

Rehabilitation of Whiting Street Reservoir Dam will require the submission of a Chapter 253 Dam Safety Permit application to ODS for review. ODS staff will communicate with the proponent's design engineer as part of the permit process to ensure all required documentation is provided. Upon receipt and review of all required technical information demonstrating compliance with ODS regulations, a Chapter 253 Dam Safety Permit will be prepared and issued by ODS.

DCR appreciates the opportunity to comment on this project. Please contact David Ouellette at david.ouellette@mass.gov with any questions or to request additional information or coordination with ODS.

Sincerely,

Jim Montgomery
Commissioner

cc Bill Salomaa, Priscilla Geigis, Patrice Kish, Tom LaRosa

MASSWILDLIFE

DIVISION OF
FISHERIES & WILDLIFE

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April 27, 2021

Kathleen A. Theoharides, Secretary
Executive Office of Energy and Environmental Affairs
Attention: MEPA Office
Anne Canaday, EEA No. 16352
100 Cambridge St.
Boston, Massachusetts 02114

Project Name:	*Whiting Street Reservoir Dam Improvements Project*
Proponent:	*Holyoke*
Location:	*Whiting Street Reservoir, Spillway*
Project Description:	*Remove and replace existing undersized spillway; install two 8x4 foot culverts to an unnamed perennial stream, stabilize unnamed perennial stream; work necessitates a 4-foot drawdown.*
Document Reviewed:	*Environmental Notification Form*
EEA File Number:	*16352*
NHESP Tracking No.:	*19-38933*

Dear Secretary Theoharides:

The Massachusetts Division of Fisheries & Wildlife (MassWildlife) is responsible for the conservation and management of freshwater fish and wildlife resources in the Commonwealth. Conservation and management of freshwater fish are implemented by the Fisheries Program of the MassWildlife. MassWildlife is also responsible for the regulatory protection of imperiled species and their habitats, as codified under the Massachusetts Endangered Species Act (MESA; M.G.L. c.131A), by and through its Natural Heritage & Endangered Species Program (NHESP). The purpose of MESA is to conserve and protect state-listed rare species and their habitats, and provides a framework for review of projects or activities proposed within mapped *Priority Habitat*.

MassWildlife has reviewed the ENVIRONMENTAL NOTIFICATION FORM for the proposed *Whiting Street Reservoir Dam Improvements Project* (the Project) and would like to offer the following comments. These comments seek to ensure that the review is thorough, balanced and fully represents all fish and wildlife resources, particularly state-listed species protected pursuant to MESA, which may be impacted by the Project.

PROPOSED PROJECT

The Whiting Street Reservoir Dam is classified as a Large Size (Class I) High Hazard dam by the Massachusetts Office of Dam Safety (ODS) and has a spillway that is not capable of passing sufficient flows to comply with the requirements of 302 CMR 10.14(6)(a). Under the proposed Project, the existing spillway, a portion of the earthen embankment, and the existing outlet culverts and headwall will be demolished and removed to allow for the construction of the replacement spillway. The replacement concrete spillway will be cast in place with a weir length of 120 feet. The existing concrete box culverts beneath the access road will be replaced with a single three-foot-high by three-foot-wide concrete culvert. Concrete stairs are proposed on either side of the

spillway to provide access for maintenance. Two eight-foot-wide by four-foot-high culverts will be installed on the northeast side of the spillway beneath the gravel access road and will outlet to the unnamed perennial stream located downstream of the spillway. A portion of the unnamed perennial stream located downstream of the two proposed eight-foot-wide by four-foot-high culverts will be stabilized using a combination of rubble placement and cross-vanes. To facilitate the proposed work, a 4-foot drawdown of the Whiting Street Reservoir is proposed to occur from 15 April to early October. The Proponents also propose to install a cofferdam along the face of the dam to facilitate the spillway work. The temporary cofferdam will be removed from the Whiting Street Reservoir upon the completion of in-water work and water levels restored to normal pool elevation. Disturbed Bank of the unnamed perennial stream (flag series 1B and 1C; Plan Referenced?) will be restored with loam and seed and live stacking or tubelings, depending on the time of year.

MA ENDANGERED SPECIES ACT (MESA)

All projects or activities proposed within *Priority Habitat*, which are not otherwise exempt pursuant to 321 CMR 10.14, require review through a direct filing with the NHESP for compliance with the Massachusetts Endangered Species Act (ref) and its implementing regulations (321 CMR 10.00). The MESA is administered by the MassWildlife, and prohibits the Take of state-listed species. The Take of state-listed species is defined as "in reference to animals…harm…kill…disrupt the nesting, breeding, feeding or migratory activity…and in reference to plants…collect, pick, kill, transplant, cut or process…Disruption of nesting, breeding, feeding, or migratory activity may result from, but is not limited to, the modification, degradation, or destruction of Habitat" of state-listed species (321 CMR 10.02).

Based on the information provided, the proposed Project and associated drawdown is mapped for the following state-listed species:

Scientific name	Common Name	Taxonomic Group	State Status
Lipocarpha micrantha	Dwarf Bulrush	Plant	Threatened
Rotala ramosior	Toothcup	Plant	Endangered
Sagittaria cuneata	Wapato	Plant	Threatened
Terrapene carolina	Eastern Box Turtle	Reptile	Special Concern
*3 Data Sensitive Species**		Reptile	Endangered

The Proponent should contact MassWildlife to initiate pre-filing consultations to proactively address state-listed species concerns associated with the Project. Preliminarily and based on the materials included in the ENF, the MassWildlife anticipates that the Project will result in impacts to state-listed plants and their habitat. If the Project cannot be redesigned to avoid these impacts, it is likely that the Project will require a MESA Conservation and Management Permit (CMP; 321 CMR 10.23) for state-listed plants in order to proceed.

Projects resulting in a Take of state-listed species may only be permitted if they meet the performance standards for a CMP. In order for a project to qualify for a CMP, the Applicant must demonstrate that the project has avoided, minimized and mitigated impacts to state-listed species consistent with the following performance standards: (a) adequately assess alternatives to both temporary and permanent impacts to the state-listed species, (b) demonstrate that an insignificant portion of the local population will be impacted, and (c) develop and agree to carry out a conservation and management plan that provides a long-term net benefit to the conservation of the state-listed species.

Preliminarily, the MassWildlife anticipates that the Proponent will need to provide additional information to evaluate potential impacts to state-listed species and their habitat. This includes, but may not be limited to, botanical surveys for all three state-listed plants in all suitable habitat within 20 feet of the Project site, using MassWildlife-approved survey protocols, to aid in developing avoidance and minimization measures. Botanical survey will need to occur during the appropriate survey window in the summer. The MassWildlife also anticipates the Proponent will need to evaluate alternatives to the proposed refill timing of the drawdown to avoid further impacts to state-listed plants. We anticipate that impacts to state-listed vertebrates can be addressed through implementation of avoidance and minimization measures incorporated into a MassWildlife-approved protection plans.

The MassWildlife will not render a final decision regarding this project until the MEPA review process and its associated public comment period is complete, and until all required application materials have been submitted to the MassWildlife. No work associated with the proposed project shall occur the MESA review and approval process is completed.

Fisheries
During drawdown and refill, protection of up and downstream habitats for native fishes will be critical. Therefore, the drawdown should incorporate the following measures to project native fish and their habitats, unless otherwise allowed in writing by the MassWildlife:

1) Drawdown must proceed slowly meeting the slower (lesser) of:
    a. Limit drawdown to 3" per day, or
    b. Keep outflow during drawdown below a discharge equivalent to 4 cfs per square mile of watershed.
2) Once the target water level is achieved, match outflow to inflow to the greatest extent possible, maintaining a stable water level.
3) Keep outflow during refill above a discharge equivalent to 0.5 cfs per square mile of watershed.

If you have any questions about this letter, please contact Misty-Anne Marold, Senior Endangered Species Review Biologist, at (508) 389-6356. We appreciate the opportunity to comment on this Project.

Sincerely,

Everose Schlüter

Everose Schlüter, Ph.D.
Assistant Director

cc: City of Holyoke Conservation Commission
David Cameron, DEP Western Regional Office, Wetlands and Waterways
David Foulis, DEP Western Regional Office, Wetlands and Waterways
Mark Stinson, DEP Western Regional Office, Wetlands and Waterways
Melissa Coady, Tighe & Bond, Inc.