

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

Environmental Notification Form

For Office Use Only

EEA#: _____

MEPA Analyst: _____

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

Project Name: Collins Pond Dam Improvements

Street Address: Harold Parker Road

Municipality: Andover	Watershed: Ipswich
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Universal Transverse Mercator Coordinates: X: 327145 Y: 327145	Latitude: 42 36' 39.7" Longitude: -71 6' 26.7"
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Estimated commencement date: Fall 2021	Estimated completion date: Summer 2022
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Project Type: Dam Improvements	Status of project design: 40 %complete
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Proponent: MADCR c/o Dan Mortell	
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Street Address: 180 Beaman Street	
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Municipality: West Boylston	State: MA	Zip Code: 01583
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Name of Contact Person: Allen R. Orsi, P.E.	
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Firm/Agency: Pare Corporation	Street Address: 10 Lincoln Road, Suite 210
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Municipality: Foxboro	State: MA	Zip Code: 02035
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Phone: (508) 543-1755	Fax: (508) 543-1881	E-mail: AOrsi@parecorp.com
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Does this project meet or exceed a mandatory EIR threshold (see 301 CMR 11.03)?

Yes No

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

a Single EIR? (see 301 CMR 11.06(8))

Yes No

a Special Review Procedure? (see 301CMR 11.09)

Yes No

a Waiver of mandatory EIR? (see 301 CMR 11.11)

Yes No

a Phase I Waiver? (see 301 CMR 11.11)

Yes No

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

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

11.03(3)(b)(1)b: Alteration of 500 or more linear feet of bank along a fish run or inland bank

11.03(3)(b)(1)f: Alteration of half or more acre of any other wetlands (LUW, Riverfront Area)

Which State Agency Permits will the project require? **Water Quality Certification, MADCR Ch. 253 Permit**

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

Summary of Project Size & Environmental Impacts	Existing	Change	Total
LAND			
Total site acreage	1.97± acres*		
New acres of land altered		1.15± acres**	
Acres of impervious area	0***	0***	
Square feet of new bordering vegetated wetlands alteration		203 permanent; 530 temporary	
Square feet of new other wetland alteration		3,600 S.F. permanent impact to LUW 4.71 ac. LUW for drawdown 526 L.F. BANK (326 permanent, 200 temp)	
Acres of new non-water dependent use of tidelands or waterways		0	
STRUCTURES			
Gross square footage	0	0	0
Number of housing units	0	0	0
Maximum height (feet)	0	0	0
TRANSPORTATION			
Vehicle trips per day	0	0	0
Parking spaces	9	+15	24
WASTEWATER			
Water Use (Gallons per day)	0	0	0
Water withdrawal (GPD)	0	0	0
Wastewater generation/treatment (GPD)	0	0	0
Length of water mains (miles)	0	0	0
Length of sewer mains (miles)	0	0	0
Has this project been filed with MEPA before? <input type="checkbox"/> Yes (EEA # _____) <input checked="" type="checkbox"/> No			
Has any project on this site been filed with MEPA before? <input type="checkbox"/> Yes (EEA # _____) <input checked="" type="checkbox"/> No (none known)			

*Includes entire area within LOD, including temporary access and staging.

**Existing undeveloped areas in the LOD including existing wooded and otherwise unaltered areas. The change in this area reflects areas to be cleared or otherwise modified for dam safety and public use improvements.

***Existing parking area at dam consists of unpaved dense grade surface. Proposed parking, access drive and crest access path will consist of dense grade surfaces with no impervious area proposed.

GENERAL PROJECT INFORMATION – all proponents must fill out this section

Describe the existing conditions and land uses on the project site: Collins Pond Dam (the Dam) is located within the Harold Parker State Forest in the Town of Andover, Massachusetts. The Dam impounds water along an unnamed tributary to the Skug River on the north side of Harold Parker Road. The dam is currently owned by the Massachusetts Department of Conservation and Recreation (DCR). The Harold Parker State Forest is responsible for operation and maintenance of the dam. The dam was reportedly constructed by the Civilian Conservation Corps (CCC) in the 1930's to create public infrastructure and support fish hatcheries. The dam no longer supports a fish hatchery, and now supports recreational uses. The structures and impoundment are shown on the Reading, Massachusetts USGS quadrangle map with the dam near coordinates 42.611013°N / 71.107410°W.

The Dam, currently considered to be in an Unsafe condition based on findings of recent inspections, is a Small sized Significant hazard structure that consists of an approximately 13' high, 280' long earthen embankment dam with an upstream concrete core wall/parapet wall and a downstream stone masonry wall. The top of the embankment has a width of varying between approximately 8 and 20 feet, and the downstream slope varies from about 2H:1V to about 3H:1V. The concrete core wall runs along the upstream side of the dam and extends approximately 3 feet above the surface of the embankment to form a parapet wall.

The primary spillway is located about 25' from the left abutment and consists of a 30' long broad-crested weir with vertical concrete training walls. The primary spillway discharges to an earthen stream channel that connects to Field Pond. The auxiliary spillway is an approximately 50' long broad crested weir at the right abutment. The crest of the auxiliary spillway is a low section of the upstream core wall/parapet wall. The auxiliary spillway discharges to a gravel parking lot and then to Field Pond. The low-level outlet is located near the middle of the dam and consists of a slide gate mounted on the upstream face of the core wall/parapet wall. The low-level outlet conduit is an approximately 27" diameter corrugated metal pipe that passes through the embankment and discharges at a stone masonry headwall at the toe of the downstream slope.

An upper portion of Field Pond, located along the downstream toe of the dam, is divided from the main body of the Field Pond by Harold Parker Road. A 36" diameter culvert passes under the road and hydraulically connects the two sections of Field Pond. An abandoned fish hatchery building is located downstream of the low-level outlet. The hatchery is flooded from apparent Field Pond backwater.

Describe the proposed project and its programmatic and physical elements: MADCR is proposing repairs at Collins Pond Dam to provide a long-term solution to the noted deficiencies. The proposed repair program is summarized below and described in greater detail in the Schematic Design Report (Appendix D). A combination of a 6-foot temporary drawdown to el. 95 and phased cofferdams are proposed to complete the work in dry conditions.

Embankment work: The scope of embankment work includes the following elements:

- i. **Clearing and grubbing:** Clear woody vegetation from the dam and grub remaining stump and root systems. Fill resulting voids with approved material compacted in lifts to subgrade for the specific treatment (i.e. loam and seeds, riprap, etc.).
- ii. **Raise the dam crest:** The peak predicted pool level during the SDF is approximately El. 101.6. To limit the potential overtopping of the dam and provide for adequate freeboard during the SDF, the crest of the dam will be raised to El. 103.0.
- a. **Core wall modifications:** Remove the deteriorated portion of the core wall to sound concrete; install a cast-in-place concrete extension to set the top of the wall at the top of dam El. 103.
- iii. **Downstream slope:** Regrade the downstream slope to more uniform and maintainable slope, 3H:1V. Potentially archaeologically sensitive walls impacted by this work will be rebuilt along new alignments to preserve the character of the walls.
- iv. **Upstream slope protection:** Remove accumulated sediments and debris along the upstream slope and install riprap slope protection. Fishing platforms are proposed on the upstream slope to provide public access within this area.
- v. **Site improvements:** Install a 6-foot wide dense path to provide easier access for dam maintenance as well as public access within the areas. Establish a maintainable surface coverage within the limit of the embankment.

Spillway Improvements: The scope of spillway improvements includes:

- i. **Debris Removal:** Remove all accumulated debris and sediment along the spillway crest and downstream channel.
- ii. **Training Walls Repair:** Removal and demolish deteriorated/failed existing upstream and downstream training walls. Install a new cast in place upstream and downstream training walls.
- iii. **Spillway Modifications:** Based upon visual inspection, the gravity spillway control section generally appears sound and stable; as such, the existing spillway crest and approach will be maintained. However, as noted during site inspection, severe erosion with seepage was noted along the downstream face of the spillway. The proposed repairs will provide a stable downstream channel capable of receiving discharges from the spillway.

Low Level Outlet Improvement: Modifications to restore the low-level outlet to a serviceable condition include the following:

- i. Construct a new control structure immediately upstream of the existing intake. The new control system includes:
 - a. A reinforced concrete riser tower.
 - b. Stoplogs in the upstream face of the riser to allow for adjusting the level below normal pool conditions.
 - c. Slide gate mounted on downstream face of the riser to provide secondary closure, redundant closure to limit potential for unauthorized operation, and secondary closure to equalize hydrostatic pressure on stoplogs to enable removal.
 - d. Security and safety hatches.
- ii. Provide a conduit from new riser to the corewall; the conduit would likely be continuous with the conduit extending further downstream. After installation, fill intake area between existing intake side walls, parapet/corewall, and new riser with concrete.
- iii. Excavate and replace the LLO conduit through the dam section.
- iv. Extend the discharge conduit beyond the limits of embankment work; the outlet extension would include an 18-inch cast iron pipe with reinforced concrete cradle. Alternatives and selected approach are described in the alternatives section below.

Fish Hatchery: The existing fish hatchery is deteriorated with collapsed security measures, missing portion of the roof, and sediment/debris accumulated around the building. As requested by MADCR, the building will be removed.

Parking Improvements: DCR seeks to improve the functionality and safety of the current parking lots. Modification of the fire access road at the right abutment will provide approximately 12 new parking spaces. To the west of the dam, an existing path parallel to Harold Parker Road will be connected to the existing parking lot and widened, allowing for one-way traffic and 9 parking spaces along one side.

Canoe Launch: Improvements to the existing pond access path leading from the parking lot south of Harold Parker Road to Field Pond will be improved to provide an ADA accessible ramp and dock.

Wetland resource areas present in the vicinity of the dam include the Banks and Land Under Water associated with Collins Pond, Field Pond, and the Dam's outlet channel; an Isolated Wetland downstream of the dam, and several Bordering Vegetated Wetlands (BVW). Due to the location and nature of this dam repair project, impacts to wetland resource areas are unavoidable. Impacts anticipated from the project and described in detail in the "Wetlands, Waterways, and Tidelands" section.

Describe the on-site project alternatives (and alternative off-site locations, if applicable), considered by the proponent, including at least one feasible alternative that is allowed under current zoning, and the reasons(s) that they were not selected as the preferred alternative: During conceptual design, five alternatives were considered to bring the dam into compliance with current dam safety regulations. DCR reviewed the alternatives presented within the conceptual design report; given the recreational opportunity provided by the dam and impoundment, the decommissioning and removal alternatives were determined to not be consistent with the goals of the project. No Action was also identified as not meeting project goals. A hybrid of the repair and rehabilitation was ultimately selected for advancement to design.

1. **Dam Repair:** Complete a repair program at the dam to consist of the following:
 - a. Clearing and grubbing of trees and other unwanted vegetation
 - b. Repairing the low-level outlet system:
 - c. Repairing the spillway:
 - d. Removing and reconstructing deteriorated sections of the parapet/core wall.
 - e. Establishing a maintainable surface coverage
2. **Dam Rehabilitation:** Complete a rehabilitation program at the dam to consist of the following:
 - a. Clearing and grubbing of trees and other unwanted vegetation
 - b. Removing and replacing the low level outlet system:
 - c. Removing and Reconstructing the spillway:
 - d. Addressing potential embankment seepage and stability concerns:
 - i. Removing the above grade portions of the parapet/core wall.
 - ii. Installing a new core wall
 - iii. Reconstructing the earthen embankment upstream and downstream of the core wall.
 - e. Establishing a maintainable surface coverage within the limits of the dam embankment
 - f. Incorporating public safety / recreational use features.
3. **Dam Decommissioning:** Lower the dam crest and spillway so that the structure is no longer considered a jurisdictional structure based upon maximum storage capacity.
 - a. Clearing and grubbing of trees and other unwanted vegetation along the length of the dam.
 - b. Repairing the low level outlet system:
 - c. Lowering the spillway crest 1.9 feet and stabilizing remaining components.
 - d. Lowering the top of dam 4.4 feet to El. 99.6
 - e. Establishing a maintainable surface coverage within the limits of the dam embankment
4. **Dam Removal:** Remove the dam and restore the impoundment to a natural stream channel.
 - a. Clearing and grubbing of all vegetation on the dam embankment within the limits of regrading
 - b. Completing the removal of the dam including:
 - i. the removal of the full extent of the dam in the area of the proposed channel
 - ii. the removal of sediment upstream of the proposed channel including impoundment dredging as required
 - c. Removal of the embankment left and right of the breach to create sloped banks to the river channel. Provide channel protection and loam and seed where appropriate.
 - d. Incorporation of park aesthetics (footbridge, etc.).
5. **No Action:** Perform no corrective action (not recommended as it fails to address the identified dam safety deficiencies).

In addition, alternative design options were evaluated for various elements of the project. Alternatives for the proposed core wall modifications, spillway modifications, and low-level outlet work are described in the Schematic Design Report in Appendix D.

Summarize the mitigation measures proposed to offset the impacts of the preferred alternative: The project will result in approximately 655 square feet of fill within bordering and isolated vegetated wetlands. As such, DCR is proposing compensatory mitigation at a ratio of at least 2:1 (1,310 square feet) to meet the requirements of the various regulatory agencies while resulting in minimal alteration to the surrounding state forest. A Wetland Replication Plan (sheet 7.0) has been designed within the limits of work adjacent to the eastern parking area. Erosion and sedimentation controls are provided at the limits of work to prevent migration of sediment into resource areas. All areas of temporary disturbance within wetlands will be restored to their pre-construction condition and seeded as appropriate.

If the project is proposed to be constructed in phases, please describe each phase: No phasing of the project is required.