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November 9, 2018

DRAFT RECORD OF DECISION

PROJECT NAME	: Foothills Preserve and West Beaver Dam Brook Restoration Project
PROJECT MUNICIPALITY	: Plymouth
PROJECT WATERSHED	: South Coastal
EEA NUMBER	: 15916
PROJECT PROPONENT	: Town of Plymouth
DATE NOTICED IN MONITOR	: September 26, 2018

Pursuant to the Massachusetts Environmental Policy Act (MEPA; M.G.L.c.30, ss. 61-62I) and Section 11.11 of the MEPA Regulations (301 CMR 11.00), I have reviewed the Expanded Environmental Notification Form (EENF) and hereby **propose to grant a Waiver** from the categorical requirement to prepare an Environmental Impact Report (EIR). In a separate Certificate also issued today, I have set forth the outstanding issues related to the project that can be addressed by permitting agencies.

Project Description

As described in the EENF, the project consists of an environmental restoration project on a former cranberry farm in Plymouth. The project seeks to transform the retired 42-acre cranberry bog into a freshwater wetland system. The primary goal of the project is to create conditions that will allow the restored site to maintain ecological integrity over time without ongoing intervention. The project will accomplish this goal by addressing multiple ecological stressors associated with the former agricultural uses that inhibit natural processes. These stressors include an anthropogenic sand layer that separates the ground surface from the water table, a physically altered and simplified stream system with poor habitat value and water quality, and multiple barriers to natural surface hydrology (including earthen berms and water control structures). By addressing these stressors, the project will restore multiple wetland types, enhance fish and wildlife habitat, restore fish passage from ocean to headwaters, improve water quality, and enhance storage of floodwaters on the site. The Town is developing the project with

the support of numerous state, local, and federal agencies and non-profit organizations. DER selected the project as a "Priority Project" in a competitive review of solicited proposals, based on the breadth of its ecological benefits.

Project elements to restore surface water hydrology and stream conditions include the reconstruction of the main stream channel and tributaries to provide a more natural stream width and depth with natural sinuous stream characteristics and the removal of all interior earthen berms and water control structures. To help elevate the water table, sediment generated by digging new stream channels will be used to fill and/or plug lateral and perimeter irrigation ditches. Wetland restoration work also includes removal of the sand layer in select areas to create open water features of various sizes, roughening of the flat bog surfaces, installation of large wood (logs and tree stumps) across the bog surfaces and within the restored channels to improve habitat features, and re-grading the steep transitions around the bogs and stream channel to facilitate wildlife movement between wetland and upland areas. While some planting of Atlantic White Cedar Trees will occur, the project will rely primarily on passive restoration of wetland plants by activating the native seed bank. The project will also remove two earthen dams (Upper and Lower Dams) which impound the West Beaver Dam Brook to create Upper Pond and Lower Pond. The EENF indicated that these dams are not jurisdictional pursuant to M.G.L. c. 253.

The project also provides for public access on unpaved paths around the perimeter of the site, and will retain three stream crossings for pedestrian use. Specifically, a boardwalk will replace a portion of the earthen berm located between Cells C and D and a footbridge or boardwalk will replace the earthen berm located downstream of Cell F. A small footbridge across West Beaver Dam Brook will replace Lower Dam to connect the parking lot to the restoration area. All crossings will be designed consistent with the Massachusetts River and Stream Crossing Standards.

Project Site

The project site represents a portion of the former commercial cranberry bog farm known as Tidmarsh Farms. Restoration of approximately 250 acres of the former cranberry bog, located on the east side of Beaver Dam Road, was completed in 2016 and is currently owned and managed by Mass Audubon as the Tidmarsh Wildlife Sanctuary. The portion of the former bog located on the west side of Beaver Dam Road is known as the Foothills Preserve and is owned and managed by the Town as public open space. The Natural Resources Conservation Service (NRCS) holds a permanent conservation easement on the Town-owned Foothills Preserve and Mass Audubon holds a conservation easement on the Tidmarsh Wildlife Sanctuary.

The approximately 65-acre project site is comprised of portions of the Foothills Preserve and Tidmarsh Wildlife Sanctuary. The Foothills Preserve includes 42 acres of former commercial cranberry bogs which ceased production in 2016. The former cranberry farm is comprised of six contiguous bog cells (Cells A-F) containing a central drainage ditch, perimeter drainage ditches, and cross ditches. The bog cells are separated by earthen berms with flow control structures. The site also contains two small irrigation ponds, a sand borrow pit from which sand was excavated for placement on the bog surface during cranberry farming activities, and two small buildings. The headwaters of West Beaver Dam Brook originate in Cell C and flow through Cells D, E, and F, a small irrigation pond, and into a 500-ft section of red maple

forest before flowing through a culvert under Beaver Dam Road. No work will occur on the section of West Beaver Dam Brook located between the irrigation pond and the downstream road crossing.

The portion of West Beaver Dam Brook that will be restored is located approximately 500 feet (ft) east of Beaver Dam Road on the Tidmarsh Wildlife Sanctuary. At this location, the brook flows to the northeast in a straightened channel through two impoundments (Upper Pond and Lower Pond) created by two earthen dams (Upper Dam and Lower Dam) to provide a source of water for former agricultural activities. The Upper Dam is breached on the northwest end and a small channel conveys water from Upper Pond over Upper Dam and into the Lower Pond. At the outlet of Lower Pond, flow is conveyed through Lower Dam via a culvert. The downstream end of the culvert is perched which prohibits the majority of fish passage. From the culvert, West Beaver Dam Brook flows northeast through a straightened and enlarged channel to its confluence with the main stem of Beaver Dam Brook. Unpaved former farm roads are located along the stream and are used as part of a recreational trail network.

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

Environmental Impacts and Mitigation

The project involves the direct alteration of Bank (7,730 linear feet (lf)), Land Under Water (LUW) (4.95 acres), Bordering Vegetated Wetlands (BVW) (56.17 acres), Riverfront Area (26.76 acres), and Bordering Land Subject to Flooding (BLSF) (4.17 acres) to restore the former cranberry bogs and West Beaver Dam Brook to a natural wetland and riverine system. The restoration of natural conditions will permanently convert some wetland resource areas as described below. Potential environmental impacts associated with the project include: creation of 5,470 lf of Bank, elimination of 0.92 acres of LUW, creation of 0.95 acres of BVW, creation of 17.26 acres of Riverfront Area, and elimination of 4.17 acres of BLSF. It will remove approximately 10,000 cubic yards (cy) of material from the former bogs and stream for on-site reuse.

The project itself is an ecological restoration project designed to improve wetlands, fish and wildlife habitat, water quality, and restore former cranberry bogs and West Beaver Dam Brook to a natural, fully-functioning wetland system. Measures to minimize construction period impacts include: staging and maintenance of construction vehicles and equipment in a designated area outside of wetland resource areas to prevent leakage of fuel or other fluids, use of sedimentation and erosion control Best Management Practices (BMPs), use of low ground pressure equipment, and compliance with Time-of-Year (TOY) restrictions. A comprehensive pre- and post-restoration monitoring plan will build on the data collected on similar wetland systems as part of the Tidmarsh Farms and Beaver Dam Brook Restoration Project. The monitoring plan will assess baseline conditions and document changes in plant communities, site hydrology, and soil moisture.

Permitting and Jurisdiction

The project site is subject to MEPA review and preparation of a mandatory EIR pursuant to 301 CMR 11.03(1)(a)(1), 301 CMR 11.03(3)(a)(1)(a), and 301 CMR 11.03(3)(a)(1)(b) because it requires State Agency Actions and involves the direct alteration of 50 or more acres of land (64.9 total acres), alteration of one or more acre of BVW (56.17 total acres), and alteration of ten or more acres of any other wetlands (Riverfront Area, BLSF, and LUW; 35.88 total acres). The project requires a combined 401 Water Quality Certification (WQC) and Chapter 91 (c.91) License/Permit (BRP WW 26) from the Massachusetts Department of Environmental Protection (MassDEP). It may require Federal Consistency Review from the Office of Coastal Zone Management (CZM).

The project requires an Order of Conditions from the Plymouth Conservation Commission (or in the case of an appeal, a Superseding Order of Conditions from MassDEP). It requires submittal of a Pre-Construction Notification to the U.S. Army Corps of Engineers (ACOE) seeking authorization under the General Permits for Massachusetts. It also requires compliance with the National Environmental Policy Act (NEPA) and is subject to review by the Massachusetts Historical Commission (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). The project also requires a National Pollutant Discharge Elimination System Construction General Permit (NPDES CGP) from the United States Environmental Protection Agency (EPA).

Funding and technical assistance will be provided from DER. Therefore, 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.

Waiver Request

In accordance with Section 11.05(7) of the MEPA regulations, the Town submitted an EENF with a request that I waive the requirement for a mandatory EIR. The EENF identified the project's consistency with the criteria for a Waiver and was subject to an extended comment period pursuant to Section 11.06(1) of the MEPA regulations. I have determined that the EENF demonstrates that the project meets the Waiver criteria at 301 CMR 11.11. All comment letters support the project and waiver request and do not identify additional alternatives or mitigation measures that warrant additional analysis through an EIR.

Standards for All Waivers

The MEPA regulations at 301 CMR 11.11(1) state that I may waive any provision or requirement in 301 CMR 11.00 not specifically required by MEPA and may impose appropriate and relevant conditions or restrictions, provided that I find that strict compliance with the provision or requirement would:

(a) Result in an undue hardship for the Proponent, unless based on delay in compliance by the Proponent; and,

(b) Not serve to avoid or minimize Damage to the Environment.

Determinations for an EIR Waiver

The MEPA regulations at 301 CMR 11.11(3) state that, in the case of a Waiver of a mandatory EIR review threshold, I shall at a minimum base the finding required in accordance with 301 CMR 11.11(1)(b) stated above on a determination that:

(a) The project is likely to cause no Damage to the Environment; and,

(b) Ample and unconstrained infrastructure facilities and services exist to support those aspects of the project within subject matter jurisdiction.

Findings

Based on the EENF and consultation with State Agencies, I find that the Waiver request has merit and that the Town has demonstrated that the project meets the standards for all waivers at 301 CMR 11.11(1). I find that strict compliance with the requirement to prepare a Mandatory EIR for the project would result in undue hardship by delaying completion of an environmental restoration project and would not avoid Damage to the Environment, as the Proponent has adequately analyzed project alternatives, and the project and proposed design are supported by State Agencies. The Town has been studying and monitoring the former cranberry farm for the past four years. Additionally, the recent successful completion of the Tidmarsh Farms and Beaver Dam Brook Restoration Project has demonstrated the town's ability to execute complex restoration projects at former cranberry bogs. The results from the previous project also demonstrate the habitat improvements within the stream and surrounding wetlands. The Town of Plymouth, Division of Ecological Restoration (DER), U.S. Fish and Wildlife Services (FWS), Natural Resources Conservation Service (NRCS), MassAudubon, Ducks Unlimited, Living Observatory, and other stakeholders have provided funding and technical support throughout the planning and design stages of the project. More than $600,000 of funding has been secured to complete the restoration work. Furthermore, the restoration project will improve wetland hydrology which will increase soil moisture, elevate the groundwater table, and hold water on site to encourage self-sustaining wetland conditions. This will provide immediate improvements to the form and function of the wetlands while also repairing longer-term ecological processes that will naturally build and maintain habitat.

Although the project exceeds the mandatory EIR threshold for alteration of BVW and other wetlands resource areas, as well as the mandatory EIR threshold for land alteration, the project is proposed as an environmental restoration project. The EENF included an alternatives analysis, identified environmental impacts, and committed to measures to minimize and mitigate unavoidable impacts. In addition, the project will restore multiple wetlands types, enhance fish and wildlife habitat, restore fish passage from ocean to headwaters, improve water quality, and enhance storage of floodwaters on the site. Notably, the project will accomplish its goals by addressing multiple ecological stressors associated with the former agricultural use that inhibit natural processes, and therefore establish conditions that will allow the site to recover without ongoing human intervention and maintenance. State Agency comments note that the permitting

process will support resolution of any remaining issues and comments fully support the EIR Waiver request.

I also find that compliance with the requirement to prepare an EIR for the project would not serve to avoid or minimize Damage to the Environment. In accordance with 301 CMR 11.11(3), this finding is based on my determination that:

1. The project is not likely to cause Damage to the Environment. The project will employ the following mitigation measures to ensure the impacts of the project are avoided, minimized and mitigated:
   - Staging and maintenance of construction vehicles and equipment in a designated area outside of wetland resource areas to prevent leakage of fuel or other fluids;
   - Use of low ground pressure equipment on portions of the former bog surface that contain areas of underlying peat;
   - The project will buffer existing wetland resource areas and habitat from the ecological stresses associated with climate change;
   - The project will benefit wetland resource areas by restoring approximately 42 acres of former cranberry farmlands, 5 acres of downstream degraded floodplain, and 1.27 miles of connecting stream channel;
   - The Town will prepare and conform to a SWPPP in accordance with the NPDES CGP to outline BMPs to control erosion and sedimentation during the construction period;
   - The Town will obtain an Order of Conditions from the Plymouth Conservation Commission and a c.91 License/Permit and 401 WQC from MassDEP, and will comply with all conditions of these permits;
   - Work will be conducted in accordance with TOY restrictions identified by DMF to avoid habitat impacts during the spring migratory and fall emigration periods;
   - The public will have an opportunity for ongoing review and comment on the project through public hearings and comment periods associated with the permitting and licensing processes; and
   - The Town, in conjunction with the Living Observatory, will assess baseline conditions at the project site and document changes in plant communities, site hydrology, and soil moisture to gauge the efficacy of restoration efforts.

   MassDEP will review the project to determine its consistency with the 401 WQC regulations (314 CMR 9.00) and Waterways Regulations (310 CMR 9.00). The c.91 authorization from MassDEP will include conditions maintaining appropriate public navigation access. The project requires an Orders of Condition and will undergo review by the Plymouth Conservation Commission. The Plymouth Conservation Commission will review the project for consistency with the Ecological Restoration Project or Ecological Restoration Limited Project provisions of the WPA, Wetlands Regulations (301 CMR 10.00) and associated performance standards. The Town should continue to work collaboratively with State Agencies during the permitting process to further refine project mitigation measures.

2. Ample and unconstrained infrastructure facilities and services exist to support those aspects of the project within subject matter jurisdiction:

   - The project does not require any infrastructure or services to accomplish its overall goal of habitat restoration. Therefore, this criterion has been met.

Conclusion

Based on these findings, I have determined that the Waiver request has merit, and am issuing this DROD, which will be published in the next edition of the *Environmental Monitor* on November 21, 2018 in accordance with 301 CMR 11.15(2), which begins the public comment period. The public comment period will last for 14 days and will end on December 5, 2018. Based on written comments received concerning the DROD, I shall issue a Final Record of Decision (FROD) or a Scope within seven days after the close of the public comment period, in accordance with 301 CMR 11.15(6).

November 9, 2018 _____
Date Matthew A. Beaton

Comments received on EENF:

10/14/2018 Living Observatory, Inc. (Glorianna Davenport, President)
10/26/2/018 Massachusetts Department of Environmental Protection (MassDEP)
11/07/2018 Division of Marine Fisheries (DMF)

MAB/PRC/prc