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April 14, 2017

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

PROJECT NAME : Town of Eastham Water System
PROJECT MUNICIPALITY : Eastham
PROJECT WATERSHED : Cape Cod
EEA NUMBER : 15273
PROJECT PROPONENT : Town of Eastham
DATE NOTICED IN MONITOR : March 8, 2017

Pursuant to the Massachusetts Environmental Policy Act (MEPA; M.G.L. c. 30, ss. 61-62I) and Section 11.10 of the MEPA regulations (301 CMR 11.00), I have reviewed the Second (2nd) Notice of Project Change (NPC) and hereby determine this project change requires the preparation of a Supplemental Environmental Impact Report (EIR).

Second Notice of Project Change Description

The 2nd NPC proposes the expansion of the recently constructed municipal water system to provide water service to all remaining parcels not served under Phase 1. Phase 2 includes the following components:

- Development of a third well field (District H);
- Construction of a second pump station building with well pump controls and water conditioning chemicals (District H);
- Construction of a second water storage tank (135-foot high) with a capacity of 750,000 gallons (District H);

- 82 miles of distribution system piping; and
- Fire hydrants associated with the distribution system that will provide fire protection to the remainder of the Town.

The District H well field previously received New Source Approval from the Massachusetts Department of Environmental Protection (MassDEP) that will allow for a withdrawal rate up to 1,310,000 gpd. The storage tank will be located in the north-central area of District H on Town-owned property near the existing water supply and groundwater monitoring wells.

Phase 2 will be constructed in a continuous effort between 2017 and 2022 and will be subdivided into five sub-phases (Phases 2A through 2E) for contracting purposes.

Original Project Description and Procedural History

The original project (Phase 1) consists of the construction of a municipal water system in the Town of Eastham. Construction of the Phase 1 system is substantially complete and the water system is now in operation.

The project was proposed to provide water service to approximately one-third of the properties in Eastham (2,021 properties) in the vicinity of the former town landfill. The groundwater in this area has been impacted by leachate from the landfill and nutrients from septic systems. The water system will replace the private drinking water wells that currently serve these properties. The project has been designed to meet an average water demand of 415,000 gallons per day (gpd) and will include sufficient capacity in the distribution system to support future expansion to the remainder of the Town.

Phase 1 includes the following components:

- Two wells (comprised of well fields) with a combined capacity of 1,878,000 gpd;
- Two pump station buildings, one for each well, with well pump controls and water conditioning chemicals;
- A 130-foot high water storage tank with a capacity of 750,000 gallons;
- 45 miles of distribution system piping; and
- Fire hydrants associated with the distribution system to add fire protection for 80 percent of Eastham.

Two test wells were converted into production wells by equipping them with submersible pumps. The District G well and the Nauset Regional High School (NRHS) well are located on Town-owned land in the northern part of Eastham. A third well site, the District H well field, was identified as a potential source to expand the water system to the remainder of the Town.

The storage tank is located on Town-owned land in the vicinity of the District G well. The distribution system includes 12-inch diameter mains located primarily within the paved shoulders of Route 6 and the Town's other main roadways. The pipes have been constructed as looped transmission mains that will serve both as the backbone for an expanded town-wide system and service connections for abutting properties. Eight-inch lateral pipes were installed in secondary and subdivision roadways and in the landfill area to provide service connections to the municipal water system.

A Certificate on the Single EIR was issued on January 30, 2015, which indicated that no additional review was required for Phase 1 and that the project could proceed to permitting. The Certificate also noted that the expansion of the water system would require additional MEPA review.

An NPC (1st NPC) was filed in 2015 to disclose an additional State Agency Action for Phase 1 and to provide an opportunity for State Agency and public comment on this Action. Phase 1 will require permanent subsurface easements on two sections of the Department of Conservation and Recreation's (DCR) Cape Cod Rail Trail (CCRT) right-of-way (ROW) that will convert land held for natural resources purposes in accordance with Article 97 of the Amendments to the Constitution of the Commonwealth to a purpose not in accordance with Article 97. The 1st NPC identified the need for Article 97 legislation and a Construction and Access Permit from DCR. A Certificate on the 1st NPC was issued on June 19, 2015, which indicated that no additional review was required for Phase 1 and that the project could proceed to permitting.

Project Site

Eastham is bordered to the east by Cape Cod Bay, to the west by the National Park Service's Cape Cod National Seashore (CCNS), to the south by the town of Orleans, and to the north by the town of Wellfleet. A portion of the Inner Cape Cod Bay Area of Critical Environmental Concern (ACEC) extends into the southern part of Eastham.

The District G site is located on Town-owned land about one-half mile south of the Eastham-Wellfleet municipal boundary, east of DCR's CCRT and north of Oakleaf Road. The 400-foot diameter Zone I wellhead protection area around the District G well is also located on Town-owned property. The land use within the Zone II wellhead protection area is predominately residential and forested with no potential sources of contamination.

The NRHS well is located in the northeast corner of property owned by the NRHS. It is located 3,000 feet north of the intersection of Cable Road and Nauset Road. The high school is currently served by a well at this site that will be discontinued once the municipal system becomes operational. The Zone I is located on land owned by the NRHS District and the CCNS. Land uses within the Zone II area are predominately forested and residential, with a small proportion of commercial and recreational uses. No potential sources of contamination have been identified within the Zone II.

The District H site is located in the east-central area of the Town and consists of a series of properties that comprise the Water Resource Protection District H zoning district. The district consists of parcels owned by the Town, CCNS, and some private owners. The well field is located approximately 900 feet east of the intersection of Nauset Road and Schoolhouse Road. The Zone I is located on land owned by the Town and CCNS. The Town has zoning that protects the District H well field that prohibits any activities that would result in contamination of the groundwater and surface water resources at District H.

Portions of the project will be located in or adjacent to historic districts or properties listed in the State and National Register of Historic Places, including the CCNS, the Old Towne Center Historic District, and several cemeteries. In addition, portions of the project site are located within areas mapped

as *Priority Habitat* for state-listed rare species by the Natural Heritage and Endangered Species Program (NHESP) in the Massachusetts Natural Heritage Atlas (13th Edition).

Environmental Impacts

Phase 1 will withdraw an average of 415,000 gpd of water from two wells initially and ultimately, from all three wells. Phase 2 will withdraw an average of 748,000 gpd of water from three wells. However, there will be little to no increase in pumping from the aquifer because it already supplies water for the Town's residents through private drinking wells. Phase 1 will temporarily alter 21.8 acres of land and Phase 2 will temporarily alter 42.1 acres of land associated with water main installations, primarily within existing roadway areas. In Phase 2, the storage tank and well field at District H will be constructed in a 0.46-acre undisturbed area. Portions of the project are located within the CCNS, the Inner Cape Cod Bay ACEC, and within the buffer zone of wetlands resource areas. Phase 1 will require the installation of water main under two sections of DCR parkland, totaling 12,700 square feet (sf). Phase 2 will likely result in a "take" of a state-listed rare species.

Jurisdiction and Permitting

Phase 1 was subject to MEPA review and required the preparation of a mandatory EIR pursuant to 301 CMR 11.03(4)(a)(3) because it requires State Agency Actions and will construct new water mains ten or more miles in length. It also exceeds the ENF threshold pursuant to 301 CMR 11.03(11)(b) because it is located in an ACEC. Phase 1 will require a State Highway Access Permit from the Massachusetts Department of Transportation (MassDOT), a permanent easement and a Construction and Access Permit from DCR, and several permits from MassDEP, including a Water Withdrawal Permit (BRP WM 03), Approval to Construct Water Supply Source greater than 70 gallons per minute (BRP WS 20), and an approval for Drinking Water Systems that serve more than 3,300 people (BRP WS 32). Phase 1 may require a Conservation and Management Permit (CMP) from the NHESP. The project is subject to the MEPA Greenhouse Gas (GHG) Emissions Policy and Protocol.

Phase 1 also requires an Order of Conditions (OOC) from the Eastham Conservation Commission (and, on appeal only, a Superseding Order of Conditions (SOC) from MassDEP) and a National Pollutant Discharge Elimination System Construction General Permit (NPDES CGP) from the U.S. Environmental Protection Agency (EPA).

Phase 2 is also subject to MEPA review and requires the preparation of a mandatory EIR pursuant to 301 CMR 11.03(4)(a)(3) because it requires State Agency Actions and will construct new water mains ten or more miles in length. It also exceeds the ENF threshold pursuant to 301 CMR 11.03(11)(b) because it is located in an ACEC. Phase 2 will require a modification to its Water Withdrawal Permit (BRP WM 03), Approval to Construct Water Supply Source greater than 70 gallons per minute (BRP WS 20), and an approval for Drinking Water Systems that serve more than 3,300 people (BRP WS 32) from MassDEP. Phase 2 will likely require a CMP from NHESP. Phase 2 will also require an OOC from the Eastham Conservation Commission (and, on appeal only, a SOC from MassDEP) and a NPDES CGP from EPA.

Because the Town is seeking Financial Assistance from the Commonwealth for all phases of the project, MEPA jurisdiction is broad and extends to all aspects of the project that are likely, directly or

indirectly, to cause Damage to the Environment, as defined in the MEPA regulations. The project change does not alter jurisdiction of the project.

Waiver Request

The project change, as described in the 2nd NPC, exceeds a Mandatory EIR threshold at 301 CMR 11.03(4)(a)(3): construction of one or more new water mains ten or more miles in length. In accordance with Section 11.05(7) of the MEPA regulations, the Town submitted an NPC with a request that I waive the requirement for a mandatory EIR. The 2nd NPC does not address the project's consistency with the criteria for a Waiver; the Town asserts that the format and content of the 2nd NPC provides the same level of detail as presented in the Single EIR for Phase 1 of the project. The 2nd NPC was subject to an extended public comment period pursuant to Section 11.06(1) of the MEPA regulations.

Review of the 2nd NPC

The 2nd NPC identifies the need for the project, describes existing conditions in the project area, provides a detailed description and plans of the project, analyzes alternatives, describes project-related impacts, and proposes mitigation measures associated with Phase 2. The 2nd NPC includes an analysis of existing and future water demand, a summary of Pumping Test Reports prepared as part of the application to MassDEP for a New Water Supply Source for District H, a feasibility study, and an Archeological Sensitivity Assessment.

Prior to construction of Phase 1, most properties in Eastham relied on private drinking water wells that are commonly found in close proximity to on-site septic systems. Since the 1960's, the community has considered building a public water system to address water quality concerns and the limited ability of the Town's Fire Department to provide fire protection due to the lack of fire hydrants. Planning studies and water quality sampling conducted in the 2000's confirmed elevated nitrate levels in private drinking wells throughout the Town due to on-site septic systems. In addition, groundwater contamination associated with leachate from the municipal landfill in the central part of the Town affected some private wells since the late 1990's. Groundwater sampling conducted since the landfill was closed 1997 has detected vinyl chloride, a Volatile Organic Compound (VOC). More recently, the Town has detected 1,4-dioxane, a likely carcinogen, in monitoring wells and drinking water wells. Forty-three wells have exceeded water quality standards for 1,4-dioxane and were provided with the use of bottled water to replace well water prior to being served by the Phase 1 water system. The discovery of 1,4-dioxane in areas of the Town where the groundwater is not influenced by the landfill suggests a more regional problem. The construction of a municipal water supply system serving one-third of the Town was approved by the residents of Eastham at the Annual Town Meeting in May 2014. At the Town's May 2015 Annual Town Meeting, the Town voted to expand the Phase 1 water system into a Town-wide water system and connect the remaining two-thirds of the Town's properties to the system. MassDEP's comments indicate that it supports the project as a means of ensuring a safe and reliable water supply for the Town.

Alternatives Analysis

As noted in the Certificate on the Single EIR, NHESP indicated that the work area at the District H location is within Priority Habitat of numerous state-listed species, including rare reptile, amphibian, plant, and insect species. NHESP requested that the Town consider alternative locations and design alternatives if it proceeded with Phase 2. The 2nd NPC does not specifically address these concerns from NHESP; however, the Town has consulted with NHESP during the review period of this NPC.

The 2nd NPC reiterated the results described in the Expanded Environmental Notification Form (EENF) and Single EIR and presented in the feasibility study conducted in 2005, in which the Town evaluated nine potential water supply sites within the Town and one potential interconnection with Orleans according to the following screening criteria: ownership, potential yield, water quality, ability to accommodate a 400-foot Zone 1 radius around the well head, impact on environmental receptors, and proximity to the service area of the water system. The District G, District H, and NRHS sites met these criteria and were evaluated further as part of the MassDEP New Source investigation. District H was designated as highly favorable, although the study report identified concerns with site access and environmental issues. The study indicated that any new source of groundwater would require a thorough environmental impact evaluation to confirm that water withdrawal will not impact natural resources such as wetlands, vernal pools, surface water bodies, wildlife, endangered species and critical habitat areas.

Phase 2 requires construction of a second storage tank. The Town considered several locations for siting the second storage tank. Each parcel considered is Town-owned and has good proximity to the water supplies. District H was selected as the preferred location because it also had a larger setback from residential properties than the Candlewood Area and Town Hall sites.

Water Supply and Groundwater

Phase 2 will continue the project's overall objective of providing a safe and reliable water supply to the residents of Eastham by supplying water withdrawn from a part of the aquifer that is not impacted by septic systems or landfill leachate. The project is not expected to have a significant effect on the aquifer because it will replace the use of the private wells, resulting in little, if any, net increase in water withdrawal. MassDEP comments indicate strong support for the project.

The Town's current water demand cannot be measured because it is supplied by unmetered private wells. The same methodology used for developing water demand estimates for Phase 1 properties was used for Phase 2. The 2nd NPC developed estimates of the water system demand based on an analysis of the current land uses of the properties to be provided with water service in Phase 2. Land uses are predominately residential (96.6 percent). Tax-exempt properties (government, religious, or charity-owned), commercial uses, industrial, recreational, and multiple-use properties make up the remaining land uses. A small number of parcels (349 parcels out of the total of 4,617 properties) are currently undeveloped, of which 210 parcels represent the potential increase in demand. The 2nd NPC considered per capita water usage rates, Title 5 wastewater flow criteria, or data from other community systems to estimate the water demand associated with the land uses in the Town. A contingency factor of 5 percent is included in the overall estimate of the water system demands to reflect the uncertainty associated with the unmetered water usage. The annual average day current demand for Phase 2 is

estimated at 705,000 gpd, which could rise to 748,000 gpd in the future with the development of the remaining undeveloped parcels. The seasonal peak in water use during the summer months is estimated at 1,368,000 gpd, which could increase to 1,451,000 gpd under future conditions. The peak day usage is estimated at 1,992,000 gpd, which could increase to 2,113,000 gpd in the future. The overall future water system demand (Phase 1 and Phase 2) is estimated at 1,163,000 gpd for the annual average day demand; 2,257,000 gpd for the seasonal peak in water use during the summer months; and 3,285,000 gpd for the peak day usage.

The Town conducted hydrological testing and groundwater modeling to determine the effect of the District H water withdrawals on the aquifer. Based on pumping tests that examine the effect of water withdrawals on groundwater levels, MassDEP approved a withdrawal of 1,310,000 gpd from the District H well field. According to the 2nd NPC, the future water demand is estimated at 1,163,000 gpd, or 36 percent of the combined permitted withdrawal rate for the three well fields serving the system of 3,188,000 gpd. It is anticipated that the system demands will be met by using District G, NRHS, and District H well fields on a 25-50-25 basis, respectively.

The Town has adopted zoning to protect the MassDEP-approved Zone 1 areas around each well. Each well field will also be monitored with a system that will provide real time information on the status of its operations and security of the pump station. The mitigation requirements for the additional water withdrawals from District H will be determined as part of the MassDEP Water Management Act (WMA) permitting process.

The Town will continue its program of water conservation measures as part of the water system operations, and as part of requirements of its MassDEP Water Withdrawal permit. These measures include a Drought Management Plan. The water conservation measures will include public education, including a program to encourage water-efficient plumbing fixtures; regular leak detection surveys; maintenance and repair of water meters; programs for calibrating meters and sealing them; and a water pricing structure that includes the full cost of system operations, maintenance, and protection. The goal of the water conservation program will be to achieve a 65 residential gallon per capita per day (rgpcd) use standard consistent with MassDEP's Sustainable Water Management Initiative (SWMI).

Rare Species

Portions of the project site are located within the mapped *Priority Habitat* of one or more of the following state-listed species: Coastal Heathland Cutworm (Special Concern Butterfly/Moth); Eastern Whip-poor-will (Special Concern Bird); Gerhard's Underwing (Special Concern Butterfly/Moth); Melsheimer's Sack Bearer (Threatened Butterfly/Moth); Pink Sallow Moth (Special Concern Butterfly/Moth); Eastern Spadefoot (Threatened Amphibian); and Eastern Box Turtle (Special Concern Reptile). These 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). District H is also located in the vicinity of at least twelve certified vernal pools. The Town is actively consulting with NHESP regarding Phase 2. A MESA filing was submitted in February 2017.

NHESP comments indicate that it is likely that the Town can address concerns regarding state-listed moths and the Eastern Box Turtle.

Comment from NHESP express significant concerns regarding impacts to the Eastern Spadefoot and maintain that the information provided in the 2nd NPC does not adequately assess potential impacts to this species associated with construction or long-term operation of the District H well field and storage tank. It anticipates that the activities at District H may result in a “take” of Eastern Spadefoot. Furthermore, it is unclear if and how the project will be able to meet the performance standards of a Conservation and Management Permit (CMP) pursuant to 321 CMR 10.23.

NHESP indicates that the studies conducted during hydrogeologic assessments of District H as part of the pumping test do not sufficiently determine potential impacts to Eastern Spadefoot. NHESP's comments on the Single EIR requested that the Town evaluate alternative locations and design alternatives that avoided and minimized impacts to state-listed species and their habitats as part of any future proposal to expand the water system at District H. It also recommended initiating consultations during the conceptual design phase and prior to submission of a formal filing to proactively address state-listed species concerns. However, the Town did not consult with NHESP prior to designing and completing the studies. In a letter dated March 10, 2017, NHESP required that the Town provide: a detailed habitat assessment for Eastern Spadefoot and an assessment of potential, alternative locations for the proposed well field and water storage tank that would avoid and minimize impacts to state-listed species. The Town has engaged a qualified biologist and intends to conduct an Eastern Spadefoot habitat assessment (with a particular focus on potential breeding habitats) during spring of 2017.

The 2nd NPC includes the results of hydrogeologic investigations that evaluated potential impacts of groundwater withdrawals to surface waters, wetlands and certified vernal pools. Three vernal pools located within 1,000 feet of the test production wells were monitored in consultation with MassDEP, CCNS, and the Cape Cod Commission (CCC). NHESP comments note that more ephemeral wetlands were not included in the analysis. Modeling of impacts indicated that two of the three pools reflected minimal or no surface water elevation change under proposed water withdrawals. However, vernal pool #11 exhibited an average drop of approximately 2.5 inches at an average pumping rate of 0.5 million gallons per day (mgd). NHESP comments note the detrimental impacts to Eastern Spadefoot from surface water elevation drops of this magnitude or less.

Cultural Resources

According to the 2nd NPC, the Town completed consultation with the Massachusetts Historical Commission (MHC) regarding historic sites and structures and archeological sites within the Town as part of Phase 1. The Town includes the following historic districts: Old Town Center (25 properties), Eastham Center (59 properties), Collins Cottages (13 properties), and Fort Hill (33 properties). In addition, there are several sites and structures within the Town that are listed in the National Register of Historic Places, including some that are within the boundaries of CCNS. The District H storage tank and well field are not located within or adjacent to any historic districts or structures. According to the 2nd NPC, Phase 2 will not impact any historic districts because the distribution system passing through these areas will be installed within existing roadways.

The Public Archaeology Laboratory, Inc. (PAL) evaluated the cultural resources of Eastham and areas within the federally-owned land of the CCNS as part of Phase 1. PAL completed an archaeological reconnaissance survey and archaeological sensitivity assessment of the Phase 1 project elements in 2015, and identified areas as moderately or highly archaeological sensitive, which were the subject of

intensive (locational) survey testing and archaeological monitoring during construction. The 2nd NPC includes a preliminary archaeological sensitivity assessment of Phase 2 project elements prepared by PAL (February 2017) to collect updated information, document previous disturbance and existing conditions in each Phase 2 area, rank each Phase 2 area, and develop conclusions and recommendations for additional investigations based on the location of proposed construction activities and existing utilities to recorded archaeological sites.

PAL concluded that District H has moderate to high archaeological sensitivity and recommends that additional intensive (locational) hand-testing be completed in the areas where construction is proposed. Locational surveys and monitoring will be conducted under a State Archaeologist's permit issued by MHC. Locational investigations within District H and within the CCNS will require scoping, permitting, and approval by the National Park Service.

The Town has requested that the CCNS review the project area, specifically the Nauset Archaeological District, which is located within the boundaries of the CCNS. The Town will continue its coordination with MHC as part of the Phase 2 design and continue to operate under the Post-Review Discoveries Plan prepared by PAL for Phase 1, and update it as appropriate.

The 2nd NPC provides photo renderings depicting views of the water tower at District H from various vantage points throughout the Town.

Greenhouse Gas Emissions

The 2nd NPC includes a baseline analysis of GHG emissions based on the estimated electrical demands and associated GHG emissions of the existing well pumps used at each of the private wells serving the 4,617 properties that will be served by Phase 2. This baseline was compared to the expected use of electricity and GHG emissions associated with the pumps at the three municipal water supply wells. The analysis used an emissions factor of 719 pounds (lbs) of carbon dioxide (CO₂) per Megawatt-hour of electricity per year (719 lbs/MWh/year).

The baseline energy use was calculated assuming that existing private residential wells use 900 watt pumps for 1.43 hours per day or 500 hours per year. Community well systems were assumed to use a three-horsepower (hp) pump for the same run time as the residential wells. This results in baseline emissions of 740 tons per year (tpy) of CO₂ for Phase 2. GHG emissions associated with the Preferred Alternative were derived from the energy use needed to replace the existing Phase 2 individual wells using the three wellfields equipped with 75-hp pump motors. Water withdrawals will be split between the three wellfields to meet the demand and are anticipated to be distributed at a ratio of 25:50:25 between District G, NRHS, and District H, respectively. GHG emissions associated with the Preferred Alternative were calculated as 138 tpy of CO₂, for a reduction in emissions of CO₂ by 602 tpy.

The 2nd NPC provides a sensitivity analysis to estimate reductions in GHG emissions if not all existing private and community wells were discontinued. If only 50 percent of the existing well pumps were decommissioned, the reduction in CO₂ emissions from the project would be 300 tpy; a 60 percent reduction in existing well use would result in a reduction of 361 tpy of CO₂; a 70 percent reduction in existing well use would result in a reduction of 421 tpy of CO₂; an 80 percent reduction in existing well

use would result in a reduction of 481 tpy of CO₂; and a 90 percent reduction in existing well use would result in a reduction of 481 tpy of CO₂.

The following mitigation measures will be included in the project but were not included in the GHG analysis: variable frequency drives on the pump motors; motion sensors on lighting and climate controls for the pump station buildings; the use of high R-value insulation in the walls and ceilings of the pump station buildings; the use of LED lighting in the pump station buildings; high efficiency HVAC systems with demand-controlled ventilation; and implementation of a water conservation plan for the Town. According to the 2nd NPC, the project will not incorporate the use of solar photovoltaic (PV) systems or wind energy to offset the energy needs of the water system at this time. However, the Town is committed to the use of renewable energy sources and began operation of a solar farm at the closed landfill in 2014, which will offset 537 tpy of CO₂.

Solid Waste Management and MCP

The Town has monitored groundwater quality since the landfill closed in the late 1990s in connection with MassDEP's landfill closure requirements to determine whether leachate was impacting groundwater quality. Vinyl chloride, a VOC, was discovered in a sample collected from a private drinking well in 2004, initiating response actions by the Town pursuant to the Massachusetts Contingency Plan (MCP; 310 CMR 40.0000)/M.G.L. 21E. Subsequent sampling detected 1,4-dioxane (Release Tracking Number (RTN) 4-0024301), a likely carcinogen, in monitoring wells and drinking water wells in concentrations greater than the MCP Reportable Concentrations in Groundwater (RCGW-1) standard. The affected properties are all now connected to the municipal water system as part of Phase 1.

According to MassDEP, although the capped landfill is an Adequately Regulated Site pursuant to 310 CMR 40.0114 some response actions are being conducted in accordance with the MCP including an Immediate Response Action (IRA) to address the private water supply wells impacted with 1,4-dioxane down gradient of the landfill in Eastham (RTN 4-0024301). Assessments indicate that septic systems in the area are also impacting the private water supply wells. The proposed water system will facilitate a permanent solution to the release of 1,4-dioxane and the impact to private water supply wells from area septic systems.

I refer the Town to the comments from MassDEP regarding notification and compliance with the MCP associated with the project including the appropriate management of soils within and proximate to former railroad beds and encountering releases during the installation of the water main. According to MassDEP, there are 15 listed disposal sites within one-half mile of the proposed water main construction locations, 13 of which are closed under the MCP and require no further response actions. A Licensed Site Professional (LSP) should be retained to determine if notification is required and, if need be, to render appropriate opinions. The Town should contact MassDEP for guidance if questions arise regarding assessment and cleanup. The Town is reminded that any contaminated soil encountered during construction of the project must be handled in accordance with the MCP, and may require Utility Release Abatement Measures (URAMs) and/or Release Abatement Measures (RAMs) conducted under the supervision of a Licensed Site Professional (LSP).

Construction

The Town must comply with MassDEP's Solid Waste and Air Quality Control regulations, pursuant to M.G.L. Chapter 40, Section 54, during construction. All construction activities should be undertaken in compliance with the conditions of all State and local permits. The Town will be required to prepare a SWPPP in accordance with the NPDES Permit.

The project will not directly impact any wetlands resource areas. In several areas, installation of the distribution system in paved areas adjacent to roadways will occur within the 100-foot Buffer Zone of Bordering Vegetated Wetlands (BVW). In these areas, the project will employ sedimentation and erosion controls to prevent impacts to BVW and restore and stabilize the trench upon completion of construction.

Contractors will be required to use Ultra Low Sulfur Diesel Fuel (ULSD) for motorized equipment and comply with anti-idling provisions (310 CMR 7.11).

Conclusion

Based on review of the 2nd NPC, consultation with State Agencies, and a review of comment letters, I am requiring the Town to file a Draft Supplemental EIR (DSEIR). I appreciate the Town's commitment to respond to issues, questions and comments that have arisen during the MEPA review period and acknowledge that the 2nd NPC provides a level of information regarding alternatives and mitigation commitments that is typically provided in an EIR. However, the 2nd NPC did not address the criteria for a Waiver, including demonstration that preparation of an EIR would result in an undue hardship to the Town. In addition, the information provided in the 2nd NPC does not adequately assess alternatives to the District H well field and storage tank or potential impacts to Spadefoot Toad associated with its construction or long-term operation. The Town should prepare a DSEIR consistent with the limited Scope outlined below.

The Town has indicated its interest in proceeding with construction of the Phase 2 distribution system prior to completion of the EIR process for the remainder of Phase 2. The Town may submit a NPC with a request for a Phase 1 Waiver for this element of the project. Such a request must clearly address the criteria for the waiver request and demonstrate how the proposed phase would be consistent with the criteria. As previously mentioned, Phase 2 is subdivided into five sub-phases. Phase 2A includes the construction of water mains in three areas of Town. The Town is prepared to contract for Phase 2 in the imminent future and has received State funding through the MassDEP Drinking Water State Revolving Fund (SRF) program; however, it is likely that it may take several months or longer to assess impacts to Spadefoot Toad and to allow NHESP to determine if the project will be able to meet the performance standards of a CMP. Early construction of Phase 2A will expedite the project's overall objective of providing a safe and reliable water supply to the residents of Eastham from a source that is not impacted by septic systems or landfill leachate.

SCOPE

General

The DSEIR should follow Section 11.07 of the MEPA regulations for outline and content, as modified by this Scope. The DSEIR should clearly demonstrate that the Town has sought to avoid, minimize and mitigate Damage to the Environment to the maximum extent feasible. The project change is proposed to expand water service to the remainder of the Town and the Town has provided significant information regarding the project, environmental impacts, and mitigation during review. I expect that the Town can adequately address the limited Scope contained herein.

Rare Species

Comments from NHESP anticipate that activities at the District H location will require a CMP for Eastern Spadefoot. Projects resulting in a take of state-listed species may only be permitted if they meet the performance standards for a CMP. The DSEIR should describe how the CMP will demonstrate that the project has avoided, minimized and mitigated impacts to state-listed species consistent with the following performance standards: (a) the Proponent has adequately assessed alternatives to both temporary and permanent impacts to state-listed species; (b) an insignificant portion of the local population would be impacted by the project; and (c) the Proponent agrees to carry out a conservation and management plan that provides a long-term Net Benefit to the conservation of the state-listed species impacted.

The DSEIR should include a detailed habitat assessment for Eastern Spadefoot and an assessment of potential, alternative locations for the proposed well field and water storage tank that would avoid and minimize impacts to state-listed species.

The DSEIR should address comments from NHESP regarding its concerns regarding habitat loss resulting from construction of the proposed well field and water storage tank at District H. The DSEIR should assess potential impacts associated with water withdrawal on Eastern Spadefoot, and examine the level of groundwater withdrawal, if any, that can occur without affecting potential breeding habitats in the vicinity of the project site. The DSEIR should respond to NHESP's comments regarding the *limitations* of the hydrogeologic assessment to include a range in potential breeding habitats sufficient to accurately determine potential effects to Eastern Spadefoot.

The Town should continue to consult with NHESP during its assessment of impacts to state-listed species and their habitats, as well as its evaluation of potential avoidance, minimization and mitigation measures. The DSEIR should provide a summary of consultations with NHESP and describe proposed measures to protect state-listed species.

The DSEIR should describe how Phase 2 will address concerns regarding state-listed moths and the Eastern Box Turtle.

Solid Waste Management and MCP

The DSEIR should provide a response to comments from MassDEP regarding compliance with the MCP, in particular, the development of a soil management plan for work areas proximate or within former railroad beds. During and after installation of the water main, work should be conducted consistent with the procedures outlined in MassDEP's Best Management Practices for Controlling Exposure to Soil during the Development of Rail Trails. The DSEIR should describe the applicability of other policies and guidance documents to Phase 2.

Greenhouse Gas Emissions

The DSEIR should address how the Town will consider the expected operating profile of the system and the sizing of the water mains in order to minimize the friction loss load to the pumping system in selecting the optimally efficient pumping system for the project. The DSEIR should identify which specific mitigation measures were incorporated into Phase 1 for the reduction of GHG emissions and electrical demand.

Cultural Resources

The DSEIR should provide an update on the Town's ongoing coordination with MHC, the local historical commission, CCNS, PAL, and CCC with respect to avoiding and mitigating impacts to historic and archaeological resources.

Mitigation / Draft Section 61 Findings

The Single EIR and 1st NPC contained draft Section 61 Findings associated with each separate State Agency Action identified for Phase I. The DSEIR should include an updated and revised chapter that summarizes proposed mitigation measures for Phase 2 and provides individual draft Section 61 Findings for each State Agency that will issue permits for the project. The DSEIR should contain clear commitments to implement mitigation measures, estimate the individual costs of each proposed measure, identify the parties responsible for implementation, and contain a schedule for implementation.

The DSEIR should include a commitment to provide a self-certification to the MEPA Office at the completion of the project to be signed by an appropriate professional (e.g. engineer, architect, transportation planner, general contractor) indicating that all of the GHG mitigation measures, or equivalent measures that are designed to collectively achieve identified reductions in stationary source GHG emission and transportation-related measures, have been incorporated into the project. The Town should refer to the Policy for additional guidance on the GHG analysis. The DSEIR should provide this self-certification to the MEPA Office for the completion of Phase 1.

Responses to Comments/Circulation

The DSEIR should contain a copy of this Certificate and a copy of each comment letter received. In order to ensure that the issues raised by commenters are addressed, the DSEIR should include direct responses to comments to the extent that they are within MEPA jurisdiction. This directive is not

intended, and shall not be construed, to enlarge the scope of the DSEIR beyond what has been expressly identified in this certificate.

The Town should circulate the DSEIR to those parties who commented on the EENF, Single EIR, and 2nd NPC, to any State Agencies from which the Town will seek permits or approvals, and to any additional parties specified in section 11.16 of the MEPA regulations. To save paper and other resources, the Town may circulate copies of the DSEIR to commenters other than State Agencies in a digital format (e.g., CD-ROM, USB drive) or post to an online website. However, the Town should make available a reasonable number of hard copies to accommodate those without convenient access to a computer to be distributed upon request on a first come, first served basis. The Town should send a letter accompanying the digital copy or identifying the web address of the online version of the DSEIR indicating that hard copies are available upon request, noting relevant comment deadlines, and addresses for submission of comments. The DSEIR submitted to the MEPA office should include a digital copy of the complete document. A copy of the DSEIR should be made available for review at the Eastham public library.

April 14, 2017

Date


Matthew A. Beaton

Comments received:

03/13/2017	Massachusetts Division of Marine Fisheries (DMF)
04/07/2017	Massachusetts Department of Environmental Protection (MassDEP)/ Southeast Regional Office (SERO)
04/07/2017	Natural Heritage and Endangered Species Program (NHESP)
04/07/2017	Cape Cod Commission (CCC)

MAB/PPP/ppp

Patel, Purvi (EEA)

From: Strysky, Alexander (EEA)
Sent: Monday, March 13, 2017 9:00 AM
To: Patel, Purvi (EEA); Logan, John (FWE)
Subject: FW: Town of Eastham, Water System Phase 2, NPC EEA#15273

Thanks, John. I'm sending this over to Purvi, who will be the reviewing this NPC.

Alex

Alex Strysky
MEPA Office
100 Cambridge Street, 9th Floor
Boston, MA 02114

ph: (617) 626-1025
fx: (617) 626-1181

-----Original Message-----

From: Logan, John (FWE)
Sent: Monday, March 13, 2017 8:49 AM
To: Strysky, Alexander (EEA)
Cc: Potti, Pooja (FWE); 'mnw@envpartners.com'
Subject: Town of Eastham, Water System Phase 2, NPC EEA#15273

Secretary Matthew A. Beaton
Executive Office of Energy and Environmental Affairs (EEA)
Attn: MEPA Office
Alexander Strysky, EEA No. 15273
100 Cambridge Street, Suite 900
Boston, MA 02114

Dear Secretary Beaton:

The Division of Marine Fisheries (MarineFisheries) has reviewed the Notice of Project Change by the Town of Eastham for Phase 2 of the proposed Eastham water system. This component consists of the development of a third well field, construction of a second water storage tank, and installation of approximately 82 miles of distribution system piping in the Town of Eastham. The project was reviewed with respect to potential impacts to marine fisheries resources and habitat.

Based on the information provided, MarineFisheries has no further recommendations for sequencing, timing, or methods that would avoid or minimize impact at this time.

Questions regarding this review may be directed to John Logan in our New Bedford office at 508-990-2860 ext. 141.

Sent on behalf of John Logan

John Logan, Ph.D.
MA Division of Marine Fisheries
1213 Purchase Street
New Bedford, MA 02740
(508) 990-2860 x141
<http://www.mass.gov/eea/agencies/dfg/dmf/>
https://www.researchgate.net/profile/John_Logan



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Southeast Regional Office • 20 Riverside Drive, Lakeville MA 02347 • 508-946-2700

Charles D. Baker
Governor

Karyn E. Polito
Lieutenant Governor

Matthew A. Beaton
Secretary

Martin Suuberg
Commissioner

April 7, 2017

Mathew A. Beaton,
Secretary of Environment and Energy
Executive Office of Environmental Affairs
ATTN: MEPA Office
100 Cambridge Street, Suite 900
Boston, MA 02114

RE: EASTHAM– NPC Review
EOEEA #15273.town of Eastham Water
System at 2500 State Highway

Dear Secretary Beaton,

The Southeast Regional Office of the Department of Environmental Protection (MassDEP) has reviewed the Notice of Project Change (NPC) for the Town of Eastham Water System Project at 2500 State Highway, Massachusetts (EOEEA #15273). The Project Proponent provides the following information for the Project:

The subject of the Notice of Project Change is Phase 2 of the water system, where the water system will become a true town-wide water system by providing water service to all of the remaining parcels not served under Phase 1. Phase 2 consists of the following components:

- Development of a third well field (District H), which has previously received a DEP New Source permit approval;
- Construction of a second water storage tank, also at District H;
- Installation of approximately 82 miles of distribution system piping

The same measures taken in the Phase 1 construction program to mitigate construction impacts (erosion control, protection of cultural resources and rare species) are to be utilized in Phase 2. Coordination with the Historic Commission and the Division of Fish & Wildlife is ongoing, and approvals from these agencies will be received prior to constructing each Project sub-phase.

Which State Agency Permits will the project require?

DEP BRP WMO3 – Water Withdrawal Permit
DEP BRP WS20 – Approval to Construct Water Supply Source > 70 gpm
DEP BRP WS32 – Drinking Water Systems that serve > 3,300 people

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:

DEP State Revolving Fund - \$82.840 Million

Bureau of Water Resources Comments:

Drinking Water Program:

MassDEP's Drinking Water Program (DWP) continues to strongly support the Town of Eastham as it builds its municipal drinking water system. All parties associated with the Project, including town officials, consultants, contractors, and operators, have professionally and rapidly brought the first phases of the system to successful implementation. Residents of Eastham are now receiving water regulated and monitored under the requirements of the Safe Drinking Water Act. In addition to the permits listed in the NPC, the consultant will also apply for a BRP WS23 permit to construct the treatment facility for the District H Well. This permit will run concurrently with the BRP WS20, similar to Phase 1 permitting.

Construction Stormwater Permit

The Project construction activities may disturb one or more acres of land and therefore, may require a NPDES Stormwater Permit for Construction Activities. The Proponent can access information regarding the NPDES Stormwater requirements and an application for the Construction General Permit at the EPA website: <http://cfpub.epa.gov/npdes/stormwater/cgp.cfm>

Bureau of Air and Waste Comments:

Air Quality

Construction and operation activities shall not cause or contribute to a condition of air pollution due to dust, odor or noise. To determine the appropriate requirements please refer to:

310 CMR 7.09 Dust, Odor, Construction, and Demolition

310 CMR 7.10 Noise

Massachusetts Idling Regulation

MassDEP acknowledges the Proponent's statement in the NPC that its project contractors will be prohibited from excessive idling of their construction engines in compliance with the Massachusetts Idling Regulation (310 CMR 7.11). Typical methods of reducing idling include driver training, periodic inspections by site supervisors, and posting signage.

Bureau of Waste Site Cleanup

NPC #15273 - Based upon the information provided, the Bureau of Waste Site Cleanup (BWSC) searched its databases for disposal sites and release notifications located within and near the proposed project area. A disposal site is a location where there has been a release to the environment of oil and/or hazardous material that is regulated under M.G. L. c. 21E, and the Massachusetts Contingency Plan [MCP – 310 CMR 40.0000].

There are fifteen listed disposal sites located at or within one-half mile of the proposed project area. Thirteen of the listed disposal sites have been closed under the MCP and require no further response actions.

The two open MCP disposal sites located within one-half mile of the proposed project area are: Neighborhood Service Center (Release Tracking Number (RTN) 4-0000707) located on Route 6 within the southeastern edge of the proposed project area; former Charlie's Place Texaco, 2360 State Highway (Route 6) (RTN 4-0000750) located within the eastern edge of the proposed project area. These disposal sites require continued response actions under the MCP prior to site closure.

Three of the disposal sites listed as closed are associated with the capped Eastham Landfill located on Old Orchard Road. Two of the RTNs (4-0000062 and 4-0024838) are listed as Adequately Regulated and response actions are being conducted under the MassDEP Solid Waste Program. RTN 4-24838 has been closed with a Class A-2 Response Action Outcome on December 6, 2013, indicating that the contamination associated with the release has been demonstrated to be below a level of No Significant Risk. Even though the capped Eastham Landfill is Adequately Regulated under Solid Waste, pursuant to 310 CMR 40.0114 some response actions are being conducted in accordance with the MCP. Response actions to address the private water supply wells impacted with 1,4-dioxane down gradient of the landfill in Eastham are being conducted as an Immediate Response Action (IRA) pursuant to the MCP. BWSC assigned Release Tracking Number 4-0024301 to the 1,4-dioxane release impacting the private water supply wells. As part of the assessment of the 1,4-dioxane release it has been determined that septic systems in the area are also impacting the private water supply wells. The installation of the water system is being proposed, in part, to facilitate a permanent solution to the release of 1,4-dioxane and the impact to private water supply wells from area septic systems.

There are no other listed disposal sites located at or within one-half mile of the proposed project location that might impact the project. The MCP compliance status of these and other BWSC disposal sites may be viewed using the BWSC Waste Sites/Reportable Release Lookup at: <http://public.dep.state.ma.us/SearchableSites2/Search.aspx>

Soils need to be managed appropriately, since the easement area (the proposed change) is a former a railroad bed. The potential exists for PAHs and/or metals (lead and arsenic) to be present in soils located at and in close proximity to the tracks. These contaminants were likely deposited by emissions from train engine exhaust, and the routine application of pesticides, respectively, and are therefore excluded from the definition of "release" under M.G.L. c. 21E, sec. 2, so long as the impacted soil is left in place. A soil management plan should be developed prior to the installation of the water main that describes how any soil that has to be removed will be properly characterized and disposed of based upon the concentration of contaminants in the soil. The easement area is a bike path along a rail trail. Therefore, during and after installation of the water main, the work should be conducted following procedures outlined in the document entitled "Best Management Practices for Controlling Exposure to Soil during the Development of Rail Trails," which may be found via MassDEP's website <http://www.mass.gov/eea/docs/dcr/projects/mcrt/railtrail.pdf> Other policies and guidance documents may be applicable as well, and can also be found on the MassDEP website <http://www.mass.gov/eea/agencies/massdep/cleanup/regulations>

Other releases may be encountered during the installation of the water main, and Utility Related Abatement Measures (URAMs) and/or Release Abatement Measures (RAMs) may be required if contaminants other than the PAHs and/or metals (lead and arsenic) discussed above are discovered. The requirements for conducting URAMs and RAMs can be found at 310 CMR 40.0460 and 310 CMR 40.0440, respectively. The project proponent is required to notify the Department of any 2-Hour, 72-Hour or 120-day notification condition, as outlined in 310 CMR 40.0300, if encountered. Immediate Response Actions (IRAs) are also required for 2-Hour and 72-Hour reporting conditions.

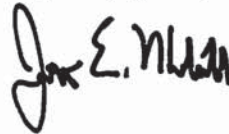
A Licensed Site Professional (LSP) should be retained to determine if notification is required and, if need be, to render appropriate opinions. The LSP may evaluate whether risk reduction measures

are necessary or prudent if contamination is present. The BWSC may be contacted for guidance if questions arise regarding assessment and cleanup.

Proposed s.61 Findings

The "Certificate of the Secretary of Energy and Environmental Affairs on the Notice of Project Change" may indicate that this Project requires further MEPA review and the preparation of an Environmental Impact Report. Pursuant to MEPA Regulations 301 CMR 11.12(5)(d), the Proponent will prepare Proposed Section 61 Findings to be included in the EIR in a separate chapter updating and summarizing proposed mitigation measures. In accordance with 301 CMR 11.07(6)(k), this chapter should also include separate updated draft Section 61 Findings for each State agency that will issue permits for the Project. The draft Section 61 Findings should contain clear commitments to implement mitigation measures, estimate the individual costs of each proposed measure, identify the parties responsible for implementation, and contain a schedule for implementation.

Very truly yours,



Jonathan E. Hobill,
Regional Engineer,
Bureau of Water Resources

JH/GZ

Cc: DEP/SERO

ATTN: Millie Garcia-Serrano, Deputy Regional Director, Acting Regional Director
David Johnston, Deputy Regional Director, BRP
Maria Pinaud, Deputy Regional Director, BWP
Gerard Martin, Acting Deputy Regional Director, BWSC
Jennifer Viveiros, Deputy Regional Director, ADMIN
Rick Rondeau, Chief, Drinking Water
Jim McLaughlin, Drinking Water Program
Kermit Studley, Drinking Water Program
Allen Hemberger, Site Management



DIVISION OF FISHERIES & WILDLIFE

1 Rabbit Hill Road, Westborough, MA 01581

p: (508) 389-6300 | f: (508) 389-7890

MASS.GOV/MASSWILDLIFE

Jack Buckley, Director

April 7, 2017

Matthew A. Beaton, Secretary
Executive Office of Energy and Environmental Affairs
Attention: MEPA Office
Purvi Patel, EEA No. 15273
100 Cambridge St.
Boston, Massachusetts 02114

Project Name: Town of Eastham Water System (Phase 2)
Proponent: Town of Eastham
Location: District H (Well Field and Storage Tank), Various Locations (Distribution Piping), Town of Eastham
Document Reviewed: Notice of Project Change
EEA No.: 15273
NHESP No.: 09-27553

Dear Secretary Beaton:

The Natural Heritage & Endangered Species Program of the Massachusetts Division of Fisheries & Wildlife (the "Division") has reviewed the *Notice of Project Change* ("NPC") for the proposed Town of Eastham Water System (Phase 2) and would like to offer the following comments.

Portions of the project site are within the mapped *Priority Habitat* of one or more of the seven (7) state-listed species shown in the table below, according to the Massachusetts Natural Heritage Atlas (13th Edition). These species and their habitats are protected pursuant to the Massachusetts Endangered Species Act (MGL c.131A) and its implementing regulations (321 CMR 10.00; MESA). Fact Sheets for these species can be found on our website, www.mass.gov/nhesp. The Division notes that District H is also located in the vicinity of at least twelve (12) certified vernal pools.

Scientific Name	Common Name	Taxonomic Group	State Status
<i>Abagrotis nefascia</i>	Coastal Heathland Cutworm	Butterfly/Moth	Special Concern
<i>Caprimulgus vociferus</i>	Eastern Whip-poor-will	Bird	Special Concern
<i>Catocala herodias gerhardi</i>	Gerhard's Underwing	Butterfly/Moth	Special Concern
<i>Cicinnus melsheimeri</i>	Melsheimer's Sack Bearer	Butterfly/Moth	Threatened
<i>Psectraglaea carnosa</i>	Pink Sallow Moth	Butterfly/Moth	Special Concern
<i>Scaphiopus holbrookii</i>	Eastern Spadefoot	Amphibian	Threatened
<i>Terrapene carolina</i>	Eastern Box Turtle	Reptile	Special Concern

MASSWILDLIFE

The MESA is administered by the Division, 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).

PHASE 2 – WATER DISTRIBUTION SYSTEM PIPING

The project, as described in the NPC, includes Phase 2 of the Town of Eastham’s water distribution system. Phase 2 involves the installation of approximately 82 miles of distribution system piping, with the majority of associated work to occur within paved and unpaved roadways (Figure 1, NPC). The Division has determined (letter dated March 10, 2017) that this portion of the project would not result in a Take of state-listed rare species (321 CMR 10.18) or would be exempt for MESA review (321 CMR 10.14).

PHASE 2 – DISTRICT H WELL FIELD AND STORAGE TANK

Phase 2 also involves the proposed development of a third well field and a second water storage tank at District H. The Division’s review of the proposed work at District H remains ongoing.

The Proponent conducted a feasibility study in 2005 (NPC, Appendix H). The study evaluated nine (9) potential water supply locations as well as a possible interconnection with the Town of Orleans. Sites were assessed according to several criteria, including but not limited to “Impacts on Environmental Receptors.” The study determined that of these ten potential options, District G, Nauset Regional High School and District H met the designated criteria and were retained for further evaluation. District H was designated a “Highly Favorable” site, although the study report acknowledged that environmental issues were an issue of concern. The study report confirmed that any new water supply site will require a “thorough environmental impact evaluation” to confirm that water withdrawal will not impact natural resources such as surface water bodies, wildlife, endangered species and critical habitat areas. Although the Proponent examined a range of environmental concerns during subsequent hydrogeologic assessments of District H, they failed to conduct studies sufficient to determine potential impacts to Eastern Spadefoot.

In the Division’s previous comments to MEPA (letter dated January 23, 2015) on the *Single Environmental Impact Report*, we noted that the Proponent should evaluate alternative locations and incorporate design alternatives that avoid and minimize impacts to state-listed species and their habitats as part of any future proposal to expand the water system at District H. The Division also recommended initiating consultations during the conceptual design phase and prior to submission of a formal filing to proactively address state-listed species concerns. Nevertheless, consultation with the Division was initiated only upon submission of a formal MESA filing in February 2017, after all studies presented in the NPC had been designed and conducted. In response to that formal filing, the Division required (letter dated March 10, 2017) that the Proponent provide: (a) a detailed habitat assessment for Eastern Spadefoot; and (b) an assessment of potential, alternative locations for the proposed well field and water storage tank that would avoid and minimize impacts to state-listed species.

Although it appears that the Proponent will be able to address concerns related to state-listed moths and the Eastern Box Turtle, the Division has significant concerns about impacts to the Eastern

Spadefoot. Based on plans presented in the NPC, the Division anticipates that the project, as proposed, may result in a Take of Eastern Spadefoot. Further, it is unclear if and how the project will be able to meet the performance standards for issuance of a Conservation and Management Permit (CMP; 321 CMR 10.23). Projects resulting in a Take of state-listed species may only be permitted if they meet the performance standards for a CMP. The CMP must demonstrate that the project has avoided, minimized and mitigated impacts to state-listed species consistent with the following performance standards: (a) the applicant has adequately assessed alternatives to both temporary and permanent impacts to state-listed species; (b) an insignificant portion of the local population would be impacted by the project; and (c) the applicant agrees to carry out a conservation and management plan that provides a long-term Net Benefit to the conservation of the state-listed species impacted.

Eastern Spadefoot is a fossorial toad species that was formerly widespread in Massachusetts. This species breeds in vernal pools and other ephemeral wetlands with even shorter hydroperiods, with mass colonial breeding occurring between April and September. Eggs have a rapid development rate, hatching in five to fifteen days and completing metamorphosis (to a terrestrial individual) in as little as four weeks. Due to habitat loss, road mortality, pesticide sensitivity and other impacts, Eastern Spadefoot has been extirpated from most of its former range. Today, remnant populations in Massachusetts are limited to the Connecticut River Valley and Cape Cod. The outer Cape represents the species' last stronghold, where it is primarily found within the relatively undisturbed habitats of the Cape Cod National Seashore and its surrounds.

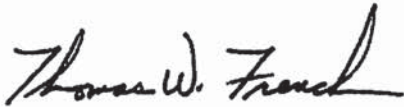
In addition to habitat loss resulting from construction of the proposed well field and water storage tank at District H, the Division is also concerned about the potential effects of water withdrawals on vernal pools and other potential Eastern Spadefoot breeding habitats in the vicinity of the project site. Section 6 of the NPC provides the results of hydrogeologic investigations that sought to assess potential impacts of groundwater withdrawals to surface waters, wetlands and certified vernal pools. Three (3) vernal pools were selected for monitoring in consultation with the Cape Cod National Seashore, though more ephemeral wetlands were not included in the analysis. Modeling of impacts found that two (2) of the three pools reflected minimal or no surface water elevation change under proposed water withdrawals. However, vernal pool #11 (VP-E11, Figure 4, NPC) exhibited a drop of approximately 2.5" (and perhaps as much as 3.6", based on recent consultations with the Proponent) at an average pumping rate of 0.5 MGD. For many vernal pools and potential Eastern Spadefoot breeding habitats, a surface water elevation drop of this magnitude may create breeding sinks, where egg-laying occurs but the reduced hydroperiod of the habitat prevents eggs from completing metamorphosis. Such a drop could even prevent breeding from occurring, and drops of far less can cause significant population impacts. The NPC did not assess potential impacts associated with water withdrawal on Eastern Spadefoot, and so did not examine what level of groundwater withdrawal, if any, could occur without affecting potential breeding habitats in the vicinity of the project site. Additionally, because the hydrogeologic assessment was limited to the selected vernal pools, it failed to include a range in potential breeding habitats sufficient to accurately determine potential effects to Eastern Spadefoot.

Since submitting the MESA filing in February 2017, the Proponent and their representatives have worked cooperatively with the Division. During a consultation meeting between the Proponent and the Division on April 6, 2017, the Proponent confirmed that it has engaged a qualified biologist and intends to conduct an Eastern Spadefoot habitat assessment (with a particular focus on potential breeding habitats) during spring of 2017 as a first step to addressing the Division's concerns.

In summary, the information provided in the NPC does not adequately assess potential impacts to Spadefoot Toad associated with construction or long-term operation of the District-H well field and storage tank. While it appears that the Proponent can address concerns regarding state-listed moths and the Eastern Box Turtle, the Division has significant concerns about impacts to the Eastern Spadefoot Toad. We anticipate that the project, as proposed, may result in a Take of Eastern Spadefoot and it is unclear if and how the project will be able to meet the performance standards of a CMP. The Division recommends that the Proponent continue to consult with the Division during its assessment of impacts to state-listed species and their habitats, as well as its evaluation of potential avoidance, minimization and mitigation measures. We look forward to continued, collaborative permitting discussions with the Proponent as it proceeds through the MESA review process.

The Division will not render a final decision until the MEPA review process and its associated public comment period is complete, and until all required materials have been submitted to the Division. If you have any questions about this letter, please contact Jesse Leddick, Endangered Species Review Biologist, at jesse.leddick@state.ma.us or 508-389-6386. We appreciate the opportunity to comment on this project.

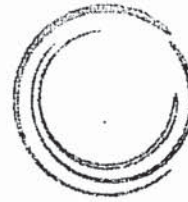
Sincerely,

A handwritten signature in black ink that reads "Thomas W. French". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Thomas W. French, Ph.D.
Assistant Director

cc: Mark White, Environmental Partners Group, Inc.
Cape Cod Commission
Cape Cod National Seashore
MassDEP Southeast Regional Office

3225 MAIN STREET • P.O. BOX 226
BARNSTABLE, MASSACHUSETTS 02630



CAPE COD
COMMISSION

(508) 362-3828 • Fax (508) 362-3136 • www.capecodcommission.org

Via Email

April 7, 2017

Matthew A. Beaton, Secretary
Secretary of Energy and Environmental Affairs
Executive Office of Energy and Environmental Affairs (EEA)
Attn: MEPA Office, Alex Strysky, Project Analyst
100 Cambridge Street, Suite 900
Boston MA 02114

**Re: Notice of Project Change - EEA No. 15273
Eastham Water System
Town of Eastham
(Commission Project No. 15016)**

Dear Secretary Beaton:

Thank you for the opportunity to provide comments on the above-referenced matter, which follow and are arranged by the applicable issue areas from Barnstable County's Regional Policy Plan (RPP). Cape Cod Commission staff supports the Town's request for a waiver from preparation of an EIR for the project.

Cape Cod Commission staff is available to answer any questions about the comments.

Sincerely,

Jonathon Idman
Chief Regulatory Officer

Cc: Project File
Mark White, Environmental Partners Group via email
Eastham Cape Cod Commission Representative via email
Paul Lagg, Eastham Town Planner via email

WATER RESOURCES

The expanded water supply project for Eastham includes the implementation of water withdrawals in the District H area. The District H area has a series of vernal pools which are connected to the water table and capture precipitation. Commission Water Resources staff worked with the National Seashore on a hydrogeological assessment of the area in 1998¹. The Town and its consultants conducted a significant assessment of the hydrologic conditions of the vernal pools and the aquifer including; a pump test, groundwater monitoring, surface water monitoring and the development of a calibrated groundwater flow model. The work indicates that the aquifer is comprised of several zones with the vernal pools being substantially separated from the deeper zones in which the public wells will derive their water. Commission Water Resources staff worked with the Town's consultants on scoping and reporting through the DEP New Source Approval process and Water Management Act permitting.

The New Source Approval pump test of April 2013 contains a description of the monitoring programs which are a condition of the Water Management Act Permit of March 30, 2015. Three monitoring programs are proposed for the District H wellfield:

1. Monitoring to confirm the water quality conditions related to movement of the saltwater transition zone under actual operating conditions of the wellfield. The goal of the water quality monitoring plan is to ensure that behavior of the salt water transition zone is consistent with SEAWAT modeling predictions. This monitoring program includes long term water level monitoring in the Zone B, C and D aquifers and water quality monitoring in the Zone C and Zone D aquifers.
2. Monitoring of water levels in select vernal pools and monitoring wells to confirm the vernal pool modeling predictions under actual operating conditions of the wellfield. This monitoring program includes monitoring of water levels within and beneath in four vernal pools located within 1,000 feet of the District H production wells.
3. Monitoring of water quality in sentinel wells located at the western perimeter of the District H property. Water quality parameters of nitrate, VOCs and 1,4-dioxane will be monitored in the Zone B and Zone C aquifers.

The monitoring programs will begin after the permit is issued and before pumping begins to allow for the comparison of baseline data (i.e., pre-pumping conditions) to wellfield pumping conditions.

The Commission will review the current project as a modification to the Development of Regional Impact decision issued to authorize the first phase of the project. As part of the Commission's review of the project, the Commission will look to the Town and its consultants to update and formalize the Groundwater Monitoring Program similar to the approval of the District G wellfield. The update will formalize the District H Groundwater monitoring program

¹ Physical Hydrology of Selected Vernal Pools and Kettle Hole Ponds in the Cape Cod National Seashore: Groundwater and Surface Water Interactions., April, 2003. Sobzack, J., TC Cambareri and J Portnoy. Cape Cod Commission

described in section 12 of the DEP pump test report with associated maps of locations and reporting frequencies.

NATURAL RESOURCES

The Project Site includes areas in proximity to wetlands and certified vernal pools, and within rare species habitat. Per the NPC, there are 3 vernal pools within 1,000 feet of the two test wells, and the site contains habitat for Eastern box turtle, Eastern spadefoot toad, and species of Lepidoptera. The proposed access road to the wells and the water tank are to be located outside of the 100-foot buffers to wetlands, though within the 350-foot buffers to vernal pools. As part of Commission's review of the project, the applicant shall provide detailed construction plans and other information showing how impacts on the movement of protected species to and from these vernal pools, and how other potential construction and operational impacts to the vernal pools, will be mitigated, minimized or avoided.

The RPP prohibits disturbance which would adversely impact rare species or their habitats. The NPC indicates that the proponent is working with the Natural Heritage and Endangered Species Program (NHESP) to address impacts to rare species; NHESP may require a turtle protection plan to be implemented during construction and a Conservation and Management Plan to protect the spadefoot toad. In addition to those proposed mitigation actions, during review the Commission will look to ensure that clearing, grading, and land disturbance are minimized to the extent feasible within this sensitive habitat area.

Additionally, the RPP does not permit adverse impacts to vernal pools or wetlands because of water withdrawals. These impacts will be monitored as part of the monitoring plans discussed above.

COASTAL RESOURCES

Commission staff notes that some of the distribution system pipes will be installed near eroding coastal banks. Pipes installed in high erosion areas, such as north of Nauset Light, may become exposed or threatened by erosion in the near term; the Town should develop a contingency plan to address potential service and maintenance issues in these and other similar areas of the town served by the system.

HERITAGE PRESERVATION/COMMUNITY CHARACTER

The Town has proposed to continue working with Massachusetts Historical Commission (MHC), Cape Cod National Seashore (CCNS), and the Public Archaeology Laboratory (PAL, as consultants) to address archaeologically sensitive areas. In areas that are deemed archaeologically sensitive, PAL will review detailed construction plans to determine if water pipe installation has the potential to impact undisturbed areas. If study reveals that the route is proposed in undisturbed areas with a strong likelihood of archaeological sensitivity, other feasible routes should be considered. Should there be no other feasible alternative routes then additional archaeological testing should be done pursuant to MHC and National Park Service permits. As part of the Commission's review, the town shall advise the Commission whether PAL recommends any further archeological testing. This, combined with the town's articulated protocol for unexpected discoveries, appears sufficiently protective of potential archaeological resources that may be encountered during project construction.

It does not appear that any above-ground historic resources will be impacted by the construction, though the NPC states that the Eastham Historical Commission, MHC and CCNS will review construction plans for areas near historic resources. Review should include not only the town's Local Historic District, but also areas that have been inventoried but not yet listed on the National Register of Historic Places such as Campground Road, Locust Road and Dyer Prince Road. Commission staff will look closely at potential impacts to these areas as part of the Commission's review. Construction plans submitted to the Commission should be sufficiently detailed to allow for such review.

The Town conducted a balloon test and provided graphics to illustrate the visibility of the proposed 135-foot high water tower. It appears that the tower will be visible in the distance from several key scenic viewsheds (Coast Guard Station and Fort Hill), but that it will not be a dominant feature. From much closer locations, it appears that the tower will be at least partially screened by trees. Commission staff will review construction plans for any other locations where water pipes will cross water or marshes, or will be located above the road surface; plans should be sufficiently detailed to allow for such review. Maps in the submittal showing the proposed water line locations are conflicting, with some showing service extended to the Coast Guard Station and others not. If service is extended to this very visible and scenic location, the installation design should be reviewed by Commission staff early in the design stage. The same is true for the creek crossing on Dyer Prince Road and any other similar locations.