# Commonwealth of Massachusetts

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

## **Environmental Notification Form**

For Office Use Only		
EEA#:		
MEPA Analyst:		

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

Dunicat Name Crambaum, Daint France,	Ctowara Drain at				
Project Name: Cranberry Point Energy Street Address: 31R Main Street	Storage Project				
	Wetershad: Dumanda Day				
Municipality: Carver Universal Transverse Mercator Coordinate	Watershed: Buzzards Bay				
351810.44, 4639683.09 (Zone 19T)	Latitude: 41.695197 Longitude: -70.786388				
Estimated commencement date: 2/1/2023	Estimated completion date: 3/1/2024				
	Status of project design: 75 %complete				
Project Type: Energy Proponent: Cranberry Point Energy Sto	Otatus of project design. 10				
Street Address: 1237 9th Avenue	nage, LLO				
	State: CA Zip Code: 94112				
Municipality: San Francisco					
Name of Contact Person: Thomas Keough	Chroat Address 250 Apollo Drive				
Firm/Agency: AECOM  Municipality: Chelmsford	Street Address: 250 Apollo Drive State: MA Zip Code: 01824				
1 1111111111111111111111111111111111111					
Does this project meet or exceed a mandatory EIR threshold (see 301 CMR 11.03)? ⊠Yes □No					
If this is an Expanded Environmental Notification Form (ENF) (see 301 CMR 11.05(7)) or a					
Notice of Project Change (NPC), are you requesting:					
0: 1 5:00 (					
a Single EIR? (see 301 CMR 11.06(8))  She sid Positive Procedure 2 ( see 201 CMR 11.06(8))					
a Special Review Procedure? (see 301CMR 11.09) ☐ Yes ☐ No a Waiver of mandatory EIR? (see 301 CMR 11.11) ☐ Yes ☐ No					
a Phase I Waiver? (see 301 CMR 11.11) Yes No					
(Note: Greenhouse Gas Emissions analysis must be included in the Expanded ENF.)					
Which MEPA review threshold(s) does the project meet or exceed (see 301 CMR 11.03)?					
309 CMR 11.03(7)(1) Construction of a New electric generating facility with a Capacity of 100 or more MW.					
Which State Agency Permits will the project require?					
Which State Agency Permits will the project require?  Department of Public Utilities/Energy Facilities Siting Board: Approval under MGL c. 164 Sections					
69J and 72	11				
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: The Project does not require financial assistance or land transfer from an Agency of the Commonwealth					

Effective January 2011

Summary of Project Size	Existing	Change	Total
& Environmental Impacts			
LAND			
Total site acreage	5.85 acres		
New acres of land altered		4.80 acres	
Acres of impervious area	0	0.911 acre	0.1 acre
Square feet of new bordering vegetated wetlands alteration		0	
Square feet of new other wetland alteration		0	
Acres of new non-water dependent use of tidelands or waterways		0	
STRUCTURES			
Gross square footage	0	.39,683	.39,6831
Number of housing units	NA	NA	NA
Maximum height (feet)	NA	9 Ft +/-	9 ft/ +/-²
TF	RANSPORTATIO	N	
Vehicle trips per day	0	<1	<13
Parking spaces	0	<1	<14
	WASTEWATER	₹	
Water Use (Gallons per day)	NA	NA	NA
Water withdrawal (GPD)	NA	NA	NA
Wastewater generation/treatment (GPD)	NA	NA	NA
Length of water mains (miles)	NA	NA	NA
Length of sewer mains (miles)	NA	NA	NA
Has this project been filed with MEPA  ☐ Yes (EEA #)		9?	

Battery enclosure slab foundations & estimated impervious coverage in substation area
 Height of the proposed Tesla Megapack Units/Enclosures
 Project requires no on-site employees. Vehicle trips per day excludes construction traffic.
 No designated parking on site, but vehicles will occasionally park within gravel areas inside of the perimeter fence.

## Introduction

Cranberry Point Energy Storage. LLC ("Cranberry Point" or the "Company") proposes to construct a 150-MW energy storage system, with ancillary structures (*i.e.*, transformers, control enclosures, and utility electrical substation equipment including switchgear, high voltage transformer, circuit breakers and other miscellaneous electrical equipment to allow for connection to the Eversource electrical system) in Carver, Massachusetts, using lithium-ion batteries (the "Project"). The Project will be constructed on an approximately 6-acre parcel of undeveloped land (Project Site) that is being developed by Cranberry Point. The Project Site will also include a substation that will be built and owned by Eversource to support integration into their electric system. All of this equipment would be supported on standalone concrete pads. The existing gravel access driveway from Main Street in Carver, Massachusetts, which is approximately 530 feet in length, will be upgraded to be approximately 20 feet in width.

## **Existing Conditions**

The Project Site is located on two undeveloped properties (Map 61, Lots 7 and 10) at 31R Main Street in Carver, Massachusetts. The approximate 6-acre area of the Project Site that will be leased from the current landowner is part of two larger parcels, one at 21.5 acres and the other at 12.5 acres. The Project Site is currently undeveloped and located primarily in a wooded portion of the properties. Additionally, the Project Site includes existing unimproved roads to access a cell tower and cranberry bogs to the south. That road will be utilized to access the Project. Residential properties are not located within 400 feet of the proposed Project Site's fenced area

An Eversource Substation (Station No. 726) and electrical transmission/distribution lines within a right-of-way (ROW) are located just north of the property. Electrical transmission and distribution lines are also located to the west within an additional ROW. Wetlands and commercial cranberry bogs are located to the south and east. This project will not impact this existing Eversource facility to the North.

The Project Site is currently wooded and dominated by softwoods (Pines) and mixed hardwoods (maples and oaks). Understory species consist of a mix of saplings, shrubs, and herbaceous species. Topography slopes gently in a southerly direction towards the wetland and cranberry bogs.

A large Palustrine Forested (PFO) wetland was delineated south of the Project Site. A Palustrine Emergent (PEM)/Scrub-Shrub (PSS) wetland is located within the electrical transmission line ROW to the west of the site. All these areas of PFO and PEM/PSS wetland are all contiguous and considered one large wetland area.

Vegetation within the Bordering Vegetated Wetland (BVW) include an overstory of trees consisting of red maple (*Acer rubrum*) and yellow birch (*Betula alleghaniensis*), a shrub understory dominated by pepperbush (*Clethra alnifolia*), spicebush (*Lindera benzoin*) and highbush blueberry (*Vaccinium corymbosum*) with an herbaceous understory of cinnamon fern (*Osmundastrum cinnemomea*), skunk cabbage (*Symplocarpus foetidus*), Massachusetts fern (*Parathelypteris simulate*) and sphagnum moss.

Hydric soil containing both shallow and deep organic soil and hydrologic indicators including soil saturation at the surface and a water table less than 12 inches below the surface were encountered.

WPA regulations (310 CMR 10.02(2)(b) establish a 100-foot buffer zone that extends from BVW. The buffer zone itself is not a jurisdictional resource area under the WPA; however, it is a resource area under the Carver Wetlands Protection Bylaw (Chapter 9). In addition, the Town of Carver Wetlands Protection Bylaw provides a 65-foot setback that restricts the construction of any structure or impervious surface within 65 feet of a wetland. The Project will not result in any direct wetland impacts, and no Project elements are proposed to be located within the 65-foot setback.

Based on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) panel No. 25023C0343J (July 17, 2012), the Project site is located outside of the flood hazard areas subject to the 100-year

flood/inundation by the 1% annual chance flood. Therefore, the Site does not contain any areas of Bordering Land Subject to Flooding (BLSF).

According to Massachusetts Natural Heritage and Endangered Species Program (NHESP) Atlas (August 1, 2017, 14th Edition), the site is not located within an area of Estimated Habitats of Rare Wildlife or an area of Priority Habitats of Rare Species. There are no certified vernal pools located on or near the site.

#### Agricultural Land

Two cranberry bogs are located to the south of the Project Site, within the remaining southern portion of the eastern parcel (parcel 61/7) and within an off-site parcel (parcel 61/8) to the south (see Figures 1.1-17 and 1.1-19 in Attachment A).

Based on review of United States Geological Survey (USGS) historical topographical maps from 1893 to the present and historic aerial photographs from 1960 to the present, it appears the northern portion of the bog located within the southern extent of the remaining portion of the Project area parcel (parcel 61/7) is an "upland bog" since there has historically been an upland area (upland lobe) that is surrounded by wetland to the south, east and west. The upland bog area is depicted on Figure 1.1-17 in Attachment A. The far southern bog (the southernmost bog) located off-site on parcel 61/8 appears to have potentially been former wetland; however, the far northernmost portion of bog (the "upland bog" area) located on the site of the Project area appears to have been mostly upland. The proposed Project Site is not located within a current or former bog.

#### Purpose and Need

The Project is necessary to meet the capacity needs of ISO-NE's Southeast New England ("SENE") region, which is comprised of Northeastern Massachusetts, Greater Boston, Southeastern Massachusetts, and Rhode Island. On February 8, 2021, ISO-NE selected Cranberry Point in part to ensure there are adequate power system resources available to provide New England with sufficient capacity to meet peak demand need in 2024-2025. Pertinent to this matter, Cranberry Point bid into ISO-NE's most recent Forward Capacity Market Auction ("FCA 15") to serve the SENE region.

The projects selected by ISO-NE align with power system transmission constraints and signal areas of the system with a potential shortfall. The clearing prices in FCA 15 reveal the different values across the region based on the individual capacity needs for each zone.

The Project will benefit the reliability and efficiency of the electric grid by storing electricity generated during off-peak periods when there is a surplus of low-cost energy available and dispatching the electricity into the grid during peak periods, thereby providing an emissions-free source of electricity at times when that electricity will have the greatest value to the regional electric system.

The Project will: (1) benefit the ISO-NE system during peak load times; (2) facilitate the storage of electricity, including from expanding sources of intermittent solar and wind generation; and (3) potentially defer future generation and transmission additions in the region. These three features can be achieved in accordance with the state's energy goals, without creating emissions of pollutants, and in an environmentally-benign manner.

#### **Project Description**

The Project involves the construction of a 150 megawatt (MW) lithium-ion battery storage facility that will contain approximately 128 standalone enclosures of batteries used for the storage of energy These enclosures, along with the additional supporting electrical equipment, will be supported by concrete slab and pier foundations that are surrounded by crushed stone.

The proposed Project has two separate areas of development within the leased area, including an east and west battery storage area. The eastern storage area is the larger of the two areas and is connected to the western side via a proposed vehicle access path at the northern edge of the Project Site.

The Project will consist of approximately 217,800 square feet (5 acres), of which approximately 4,217 square feet includes impervious surfaces such as concrete slabs and drilled piers. The remaining 213,583 square feet within the

proposed fenced-in area will be surfaced with an approximate 12-inch-thick layer of crushed stone and approximately 13,051 square feet of crushed stone within the driveways.

Each of the battery enclosures will be grouped and installed onto a single poured concrete pad in multiples of 4x units, following the manufacturer's guidelines. These pads will be approximately 65-feet long, by 12-feet wide. These dimensions include open space on each pad for the installation of additional battery units to support augmentation of the site at specific intervals over its 20-year projected life. The developer proposes to utilize Tesla Megapack units for the battery enclosures.

In addition to the 128 battery enclosures, there will be a total of 56 outdoor step-up transformers that are 4-feet by 5-feet and approximately 4-feet high, which will also be installed on concrete pads adjacent to the battery enclosures.

In addition to the batteries and transformers, the Project will include a small internal substation, which will allow for the battery system to electrically interconnect to the Eversource transmission system at the 115kV transmission line to the West of the project area. This substation will include medium voltage switchgear in an electrical enclosure, a 115kV/35kV Power Transformer, and associated transmission structures to allow for the appropriate and safe electrical connection to the Eversource equipment. All of the equipment within this facility will be supported by concrete pads. This substation equipment will be secured by the installation of a chain link fence and will be monitored by security cameras. Within the fenced-in area, the area in between the concrete pads will be covered with gravel.

The Cranberry Point Energy Storage Project will interconnect to Eversource's existing Line #127 via a new 115- kV three-breaker ring-bus which will be designed and installed by Eversource's and located on the western portion of the Project Site ("Substation"). It is anticipated this interconnection will be effectuated via an approximately 100-foot, aboveground 115-kV bus structure directly from the Cranberry Point Project substation to the Eversource ring-bus. The interconnecting line will not cross any public ways and will be entirely located on the Project's properties.

Two access gates—points of ingress/egress—are proposed as part of this Project, with one additionally proposed emergency entrance within Eversource's existing transmission ROW to the north of the Project Site. A new approximate 16- to 20-foot-wide gravel access driveway that is approximately 530 feet in length is proposed to extend off an existing unimproved drive-way from Main Street that is currently used to access the cranberry bogs located to the south of the Project area. A second new 20-foot wide gravel access driveway that is approximately 25 feet in length is proposed to extend from the existing access road directly to the east storage area. A third new 20-foot wide gravel access driveway that is approximately 90 feet in length is proposed to extend from the Substation to the northern portion of the site to provide ingress/egress to the west storage area from the electrical substation. This driveway is proposed solely for emergency access purposes.

Permanent structural stormwater management control devices are proposed including two infiltration basins. These stormwater management control devices will collect and treat stormwater before discharge to the surrounding wetlands.

## Alternatives Analysis

Cranberry Point conducted a comprehensive analysis to determine a suitable Massachusetts location for its 150-MW Battery Energy Storage System ("BESS").

The locations evaluated met specific requirements for a project of the size and scope under consideration. For example, the BESS had to be located (1) adjacent to infrastructure with available transmission capacity, (2) on a parcel of land greater than 1 acre and available for lease or sale, (3) in an area where construction and operation of the project would have minimal environmental impact or would not closely abut residences, (4) in ISO-NE's "SENE" region, and (5) near interconnection ties to offshore wind projects under development and other market initiatives that will enhance the BESS' economic viability.

As such, Cranberry Point evaluated several alternative sites as well as a 'no-build' alternative.

#### No Build Alternative

Under the No-Build alternative, the Project would not be constructed. Failure to develop the Project would be inconsistent with ISO-NE's capacity requirements in the SENE region. Moreover, because the Project is likely to defer and/or alleviate the need for additional electric transmission infrastructure in the area, the environmental benefits from the Project would not be realized. Therefore, the No-Build alternative was not considered further.

## <u>Alternative 1 – Carver (Preferred Alternative)</u>

The proposed Carver BESS site is an approximately 6-acre site (250,000+ square foot) area located adjacent to and just south of the existing Eversource Carver Substation off Main Street in Carver, Massachusetts. This location was identified as the optimal solution for multiple reasons. First, the size of the lot, at approximately 6-acres, meets the requisite land area needed for a project of the size proposed. Second, as the lot is more than 400 feet from the nearest residence, there is minimal, if any, economic or environmental impact on the surrounding community. Third, the lot of land is readily available for lease. Fourth, the parcel is adjacent to infrastructure with available transmission capacity. Fifth, the location of the Project is in an area where the Company could readily obtain a Site Plan & Special Permit and Site Control, with minimal impact on the environment. Sixth, the location is in close proximity to potential offshore wind interconnection points onshore which, combined with significant market advantages including but not limited to, energy price volatility, compensation mechanisms available for providing ancillary services, proximity to potential offshore wind interconnection points, etc., enhance the viability of a project of this size and scope.

#### Alternative 2 – Wakefield

The Wakefield BESS site is an approximately 2.24-acre (97,700+ square foot) area located adjacent to and just east of the existing Wakefield Substation off of Old Colony Drive in Wakefield, Massachusetts. The location within the Boston load center made the Wakefield site attractive, however, as compared to the Preferred Alternative, this location was not considered further. First, the site is densely forested and surrounded by Isolated and Bordering Vegetated Wetlands. Second, the site is located within 300 feet of the nearest residence. Third, this site was not known to be located near future offshore wind interconnection points. As such, the economics to develop a project at this location were not viable. Access to the site would have required significant tree clearing and filling an Isolated Wetland in order to construct the roadway. Given the constraints that this site would have on the project's development and economic viability, Wakefield was not considered further.

## Alternative 3 – Falmouth

The proposed Falmouth BESS site is an approximately 2.42-acre (105,600+ square foot) area located adjacent to and northwest of the existing Falmouth Substation off of Stephens Lane in Falmouth, Massachusetts. The Falmouth site is on a lower-voltage network near Cape Cod, which presented deliverability difficulties to the Boston load center when compared to the location and transmission network of the Preferred Site. From an interconnection perspective, a generation tie-line would have been required in order to connect to the nearest point of interconnection. Moreover, the site is located within 200 feet of the nearest residence, as well as within 200 feet of the Oak Grove cemetery. While the site is an active sand and gravel pit, and any tree removal required to construct the BESS project would be minimal, construction would result in impacts to an Isolated Wetland. When Falmouth was under consideration, it was not known to be located in an area where offshore wind projects were thought to tie into the existing onshore electrical grid. Thus, given these issues, the Falmouth site was not considered further.

#### Conclusion

Of all the BESS sites considered, Alternatives 2 and 3 were excluded because of the significant environmental impacts (e.g., close proximity to Isolated Wetlands and residential neighborhoods. Additionally, Alternative 2 would result in significant tree clearing. The Preferred Alternative location was selected because of its proximity to a crucial inter-tie point for the 115-kV transmission systems, has no impact on wetlands, minimal tree-clearing needs, and is greater than 400 feet of the nearest residence. Given the cost, siting constraints, land area requirements, environmental considerations and transmission analysis performed, the Preferred Alternative is ideally-located for a large, grid-improving standalone BESS project in Massachusetts.

## **Mitigation Measures**

### Environmental Justice

The Massachusetts Environmental Policy Act (MEPA) developed interim protocols concerning climate change adaptation and environmental justice (EJ) outreach to address the new public involvement requirements for MEPA projects under Chapter 8 of the Acts of 2021: An Act Creating a Next-Generation Roadmap for Massachusetts Climate Policy (the "Climate Roadmap Act" or "the Act"), as well as the on-going public involvement requirements under the 2017 Executive Office of Energy and Environmental Affairs (EEA) Environmental Justice Policy (the "2017 EJ Policy")

The interim protocols require applicants to identify all EJ Populations within a 1-mile and 5-mile radius of a project and indicate whether the project is "reasonably likely" to negatively affect EJ populations within a 1-mile or 5-mile (if affecting air quality) radius of the project site.

As depicted on Figure 1.1-18 in Attachment A, The Project Site is not located within one mile of an EJ community, with the nearest EJ community being located approximately 1.45 miles to the southeast of the Project Site. The impacts of the proposed Project do not exceed MEPA review thresholds for air emissions found at 301 CMR 11.03(8)(a)-(b). The Cranberry Point Energy Storage Project will not create any air emissions as the proposed Project will store energy, not create energy, therefore will not affect air quality and/is not reasonably likely to negatively affect EJ populations within a 5-mile radius around the Project Site.

A large volume of construction-related diesel trucks or equipment may be regarded as affecting air quality up to a 5-mile radius, depending on the specific routes of travel for the trucks or equipment. Construction traffic to and from the Project Site is anticipated to be limited to several vehicles per day (material deliveries and staff) and will occur over a period of approximately six to twelve months. As the volume of construction vehicles that will travel public roadways within close proximity to the nearest EJ community are considered to be minimal, the Project will not affect air quality and is not reasonably likely to negatively affect EJ populations within a 5-mile radius around the Project Site.

## **Greenhouse Gas Emissions**

A Greenhouse Gas Emissions analysis is required to accompany the submittal of an Expanded ENF under the *MEPA* Greenhouse Gas Emissions Policy and Protocol (GHG Protocol). Per the GHG Protocol, a project is subject to this Policy if an EIR is required for the Project, and if it falls into one or more of the following three categories:

- 1. Where MEPA has full scope jurisdiction as defined at 301 CMR 11.01(2)(a)(2) or equivalent full scope jurisdiction over the project as defined at 11.01(2)(a)(3)~
- 2. The Project is privately funded, but requires an Air Quality Permit from the Department of Environmental Protection
- The Project is privately funded, but requires a Vehicular Access Permit from the Massachusetts Highway Department

The proposed project does not fall into any of the above stated categories. The BESS will not generate air emissions once construction is complete, as the project will store energy rather than generate energy. Eversource will be responsible for the design of the proposed Substation, and currently the only potential release of *Sulfur Hexafluoride* (SF<sub>6</sub>) from the Project would be from circuit breakers within the Substation. It is anticipated that new equipment installed within the Substation will be specified for an annual emission rate of 0. 1%, which is in compliance with the Massachusetts standard of 1.0% per year (310 C.M.R. 7.72). Accordingly, the Proponent is requesting that MEPA grant a *de minimis* exception to the requirement to analyze and quantify the potential annual GHG emissions from the proposed Project.

#### Noise

Cranberry Point is conducting a study to monitor background noise levels near the BESS. Noise levels will be monitored continuously for a five day period, and upon completion of the study a noise model will be prepared to determine the maximum predicted residential property line sound levels. In the event that predicted noise levels

from the BESS are greater than 10 dBA of the minimum measured background levels at the closest residential property and exceed the MADEP noise regulation limits outlined in 310 CMR 7.10, Cranberry Point will develop noise attenuation measures to bring the site into compliance.

## Thermal Safety

Cranberry Point has designed its Project in strict conformance with the Massachusetts Fire Code and associated National Fire Protection Association ("NFPA") standards to ensure that the Project is constructed and operated in a manner that remains safe to the public, emergency responders and the Company's employees.

There are numerous and redundant safeguards built into the hardware and management systems of lithium-ion battery systems to help mitigate the risk of a thermal event. The Project will adhere to the national standards for stationary battery energy storage installation (i.e., the NFPA 855 code) (the "Code").

Moreover, the design and operation of the Project will comply with international, national and state safety requirements and standards, including but not limited to:

- Battery design requirements, driven by safety standards from organizations such as UL or International Electrotechnical Commission ("IEC")
  - UL 1642 Standard for Lithium Batteries
  - UL 1741 Standard for Inverters, Converters, Controllers and Interconnection System Equipment for Use with Distributed Energy Resources
  - UL 1973 Standard for Batteries for Use in Light Electric Rail (LER) Applications and Stationary Applications
  - UL 9540 Standard for Energy Storage Systems and Equipment Test Method for Evaluating Thermal Runaway Fire Propagation in Battery Energy Storage Systems
  - o IEC 62619 Secondary cells and batteries containing alkaline or other non-acid electrolytes Safety requirements for secondary lithium cells and batteries, for use in industrial application
- Fire codes and NFPA standards, including:
  - o The Massachusetts Comprehensive Fire Safety Code (527 CMR 1.00);
  - o NFPA 1 National Fire Code;
  - NFPA 855 Energy Storage Systems Standard

## Tree Removal

In November 2018, Beals and Thomas, Inc., the Project's surveyor, conducted a survey of the Project Site to determine the number of trees greater than 10 inches in caliper. An estimated 426 trees greater than 10 inches will need to be cleared during construction of the Project. Given the remote location of the Project, the lack of residential dwellings, the proximity to the Eversource substation, and the forested area surrounding the Project Site, an off-site tree mitigation plan was proposed to the Town of Carver in 2019. Cranberry Point has agreed to replace 10% of the trees greater than 10 inches in caliper with a combination of 1-1.5-inch diameter maple or oak trees. Cranberry Point proposed to provide monetary compensation to the Town of Carver in an amount equal to the cost for purchasing and planting up to 50 trees at locations of the Town's choosing.

#### **Erosion and Sediment Controls**

An erosion and sedimentation control program will be implemented to minimize potential temporary impacts to BVW and 100-foot Buffer Zone during the construction of the Project. The program incorporates BMPs specified in guidelines developed by the DEP and presented in the Massachusetts Erosion and Sediment Control Guidelines for Urban and Suburban Areas: A Guide for Planners, Designers, and Municipal Officials (1997), River & Stream Crossing Standards (2011), U.S. Army Corps of Engineers (ACOE) document, Stream Crossing Best Management Practices (2015) and U.S. Environmental Protection Agency (EPA) document, Developing Your Stormwater Pollution Prevention Plan: A Guide for Construction Sites (Office of Water Report EPA 833-B-09-002, February 2009).

Proper implementation of the erosion and sedimentation control program will:

- 1. Minimize exposed soil areas through sequencing and temporary stabilization
- 2. Place structures to manage stormwater runoff and erosion.

#### Non-Structural Practices

Non-structural practices to be used during construction include temporary stabilization, pavement sweeping along Main Street (if necessary), and dust control. These practices will be initiated as practicable in appropriate areas at the site.

## **Temporary Stabilization**

Any areas of exposed sediment or stockpiles that will remain inactive for more than 14 days will be covered with a layer of straw mulch or plastic sheeting.

## Structural Practices

Structural erosion and sedimentation controls to be used on the site include erosion control barriers including silt fence, haybales, and/or wattles or a combination of these materials.

## Erosion Control Barriers

Prior to any ground disturbance, an erosion control barrier will be installed at the downgradient limit of work. As construction progresses, additional barriers will be installed around the base of stockpiles and other erosion prone areas.

If sediment has accumulated to a depth which impairs proper functioning of the barrier, it will be removed by hand or by machinery operating upslope of the barriers. This material will be reused at the Site and spread accordingly. Any damaged sections of erosion controls will be repaired or replaced immediately upon discovery

## Infiltration Basin

To accommodate the change in runoff at the site by this Project, two infiltration basins with sediment forebays are proposed at both the eastern and western portions of the Project Site to collect and treat stormwater before discharge to the surrounding wetlands. Each infiltration basin was sized to store the amount of runoff associated with the 10-year, 24-hour storm. The structures were developed in accordance with Volume 2, Chapter 2 of the Massachusetts Stormwater Handbook. Both infiltration basins are proposed just outside of the fence lines to the battery storage areas, but outside of the 65-foot wetland setback area. Please refer to Stormwater Management Report located in Attachment C for further detail.

To protect infiltration basins from failing during a large storm, emergency spillways will be installed. The spillways will be designed to discharge just enough water so that the infiltration basin will not overflow. In addition, riprap will be used to prevent erosion at the weir discharge locations.

In conclusion, the installation of two infiltration basins with sediment forebays are designed to prevent a net increase in runoff from the site for the 10-year, 24-hour storm. The basins have also been designed to withstand larger rainfall events.

If the project is proposed to be constructed in phases, please describe each phase:

The following includes the key design and operation procedures for the Project in the approximate order of their implementation.

- Installation of soil erosion and siltation controls;
- Vegetation clearing and grubbing;
- New access driveway construction;
- Installation of concrete slab and pier foundations;
- Installation of battery storage system components and equipment; and
- Installation of security fencing.