

## **Eastern Box Turtle Protection Plan - Eversource Sudbury to Hudson Transmission Reliability Project and DCR Massachusetts Central Rail Trail**

**NHESP File No. 15-34327**

The following is an Eastern Box Turtle Protection Plan (EBTPP) devised to protect eastern box turtle (*Terrapene carolina*) (EBT) during and after the construction of The Sudbury-Hudson Transmission Reliability and Mass Central Rail Trail Project. EBT is listed and protected by the Massachusetts Natural Heritage and Endangered Species Program (NHESP) as a Species of Special Concern. EBT are known to occur in Priority Habitat 1040 / Estimated Habitat 1440 (PH 1040 / EH 1440) in Hudson, Marlborough, and Sudbury between White Pond Road in Hudson and Dutton Road in Sudbury. The EBTPP consists of rigorous measures that will be taken to protect turtles and / or their nests from unintentional injury or death during construction. The EBTPP also addresses protective measures that will be implemented following construction as part of Eversource's yearly Operation and Maintenance Plan (OMP) for maintenance and operational work on electric transmission line rights-of-way (ROW) and DCR's Trail Guidelines and Best Management Practices Manual. DCR and Eversource have developed a Corridor Management Plan (CMP) specifically for those portions of the existing MBTA ROW where DCR's proposed MCRT will be collocated with Eversource's proposed underground transmission line in the towns of Sudbury, Marlborough, Stow, and Hudson. This CMP is provided as an attachment to this EBTPP and will be shared with DCR and Eversource staff engaged in management activities and outlines specific requirements related to the protection of EBT during operation of the transmission line and the MCRT.

The EBTPP consists of several important components that will work effectively to protect EBT and other turtle species that may be encountered during construction both within Priority Habitat and elsewhere on the project corridor. The Eversource and DCR components of the EBTPP are as follows:

### **Eversource**

#### **Pre-Construction**

##### **Contractor Education and Awareness Program**

Prior to construction, Project construction plans will be developed clearly identifying the locations of sensitive rare turtle habitats. These plans will clearly and concisely identify rare turtle work restrictions and requirements that will be implemented while working within rare turtle habitat.

Prior to construction, all workers who will be working on the Project will be required to attend a rare turtle training session. The session will be conducted by a VHB qualified biologist knowledgeable with EBT biology and behavior. The session will include discussion on rare turtle identification, biology, habitat preferences, natural history, and mandatory work requirements and practices within designated rare turtle habitats. The session will make use of a PowerPoint presentation and handout materials that workers can refer to while working on the Project Site. All attendees of the training session will be required to sign an attendance sheet. Following completion on the training session, all workers in attendance will be provided a hard hat sticker. While working on the Project Site, workers will be required to display this sticker on their hard hats to clearly identify trained workers while on site. Workers not trained or trained workers not displaying a sticker on their hard hats will not be allowed on the

Project ROW. Additional training sessions will be given as new workers are added to the workforce. Refresher training sessions will be given on as need basis should non-compliance activities occur on the Project site.

## **During Construction**

### **Construction Monitoring and Treatment of Animals**

Prior to construction, VHB will prepare a rare turtle capture and handling protocol for approval by NHESP and obtain a scientific collector permit to handle rare turtles that may be found in or near the work areas. Prior to daily work activities within rare turtle habitat between April 1 and November 1, a VHB qualified environmental monitor(s) will visibly search (sweep) access roads, work areas, and areas adjacent to these areas for rare turtles. Additionally, turtles previously fitted with radio transmitters as part of earlier rare turtle survey efforts will be located using radio telemetry tracking methods. Environmental monitors will coordinate with the contractor to be available to complete the sweeps. Turtles that are encountered (if any) will be fitted with radio transmitters (to make it easier to relocate them during subsequent work excursions into the area) and will be relocated greater than 500 horizontal feet from their capture points. In some circumstances it may be necessary to temporarily detain captured turtles and relocate them at the end of the work day. While work is occurring, the area surrounding the work area will also be monitored periodically to ensure that any turtle(s) that may wander into the area will be located and properly moved from harm. If a contractor employee locates a rare turtle in the absence of an environmental monitor, he or she will be required to notify the environmental monitor as soon as possible for directions on how to proceed.

Rare turtle sweeps and construction oversight will not be required during the dormant season, between October 31 and March 31, when turtles are presumed to be hibernating in locations away from the work area. Therefore, time of year work restrictions will be prioritized to the greatest extents practicable.

### **Protection of Turtle Hibernaculum**

Based on the current GPS data for known hibernacula, there are no hibernating turtles within 100 feet of the Project Site. If, based on ongoing studies, a hibernaculum is identified within 100 feet of the Project Site, a no work zone will be identified and will be shown on the Project plans. No work will be allowed within these no work zones between October 31 and March 31.

### **Protection of Turtle Nests**

EBTs nest within well-drained, open areas during evening hours between May 25 and July 5. Turtle nests incubate through the summer and hatchlings typically emerge and migrate away from the nest by early October. Based on rare turtle survey efforts completed to date, there are no active turtle nesting areas within the limits of work. If, based on ongoing surveys, work is proposed within potential nesting habitat in June through early July, the following protection measures will be implemented.

VHB biologists will conduct evening surveys within the identified potential nesting habitat areas between May 25 and July 5 to locate females in search of suitable nest locations. Observed state-listed female turtles will be watched from a distance or tracked using thread to identify nest locations. After females have completed nesting, the nest locations will be flagged for avoidance to prevent destruction of incubating eggs.

Increased human activity near turtle nesting habitat could lead to a potential increase in nest predators. These could include raccoons, skunk, fox, and coyote. To minimize this potential, contractors will be required to implement good housekeeping practices and properly dispose of discarded food, food wrappers, beverage bottles, and all rubbish and debris.

If nest avoidance is not possible during construction, nests may be excavated by the biologist and relocated to a suitable incubation area beyond the limits of work. The biologist will confer with NHESP prior to relocating state-listed turtle nests. All identified state-listed turtle nests will be equipped with predator excluding hardware cloth and treated with cayenne pepper. The nest enclosures will be removed during early September to allow unhindered hatching egress unless directed otherwise by NHESP.

### **Other Protective Measures**

Erosion control barriers containing plastic or wire mesh can ensnare turtles and have been documented as frequently resulting in reptile mortality. Therefore, erosion control and stabilization measures containing mesh (straw wattles, mesh-backed silt fence, and open mesh blankets) will be prohibited within mapped rare turtle habitat. As such, syncopated silt fence will be used within Priority Habitat Areas and erosion controls within mapped rare turtle habitat will be removed as soon as site stabilization has occurred.

VHB's environmental monitors will coordinate with contractors in the field to effectively prevent turtles from falling into newly excavated areas. During the rare turtle active season (April 1 through October 31), protective measures that may be applied daily may include surrounding open trenches with barriers at the end of each day or covering them with iron plates.

### **Post Construction**

Eversource will submit to NHESP an Operations and Maintenance Plan (OMP) to NHESP on an annual basis plan for review and approval under the utility maintenance exemption section of the Massachusetts Endangered Species Act (MESA) implementing regulations (321 CMR 10.14 (11)). Rare turtle protective measures that will be adhered to shall follow those typically included in the Company's annual Operation and Maintenance Plan (OMP). Accordingly, the following is an excerpt from the Company's NHESP approved 2018 OMP listing the applicable rare turtle protective measures that must be adhered to for ROW and utility maintenance activities<sup>1</sup>.

4. A subset of ROW areas proposed for operation and maintenance activities in 2018 are mapped, in part, for the presence of state-listed turtle species. Within these ROW areas, extra care should be taken to avoid direct impacts to turtles by following the recommendations provided in the "Guide\_1" and "Guide\_2" columns of the shapefile table. These recommendations include:

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<sup>1</sup> NHESP conditions issued for the OMP under the utility maintenance exemption are issued every year and are subject to change or modification.

- a. Avoiding such areas between 1 April and 1 November (the Sensitive Dates found in the “Sens\_dates” column of the shapefile table)<sup>2</sup>. In general, operation and maintenance activities associated with OMPs that are conducted between 1 November and 1 April will pose minimal or no risk to state-listed turtles.
- b. *“Guide 1”: Avoid direct harm to turtles:* If operation and maintenance activities are to occur between 1 April and 1 November, extra care should be used when using heavy machinery or traveling in vehicles through areas mapped for state-listed turtles. Any silt fencing used in these areas should be removed as soon as site stabilization has occurred, as such fencing can be a barrier to turtle movements. If excavation is required, excavation should be completed within one day or open trenches should be backfilled daily to prevent turtles from becoming trapped. Additionally, every effort should be made to conduct visual inspections of the work area for turtles by trained personnel prior to the commencement of work. If turtles are encountered, they should be removed from the work zone and reported to the NHESP (see below for details).

Any state-listed turtles that are encountered shall be photographed and reported to the NHESP on Rare Animal Observation Forms (available at [www.mass.gov/nhesp](http://www.mass.gov/nhesp)).

## **DCR**

Pre-construction, during construction, and post construction components of the EBTPP to be developed with input from DCR.

For rare turtle concerns, post construction vegetation treatments should consider the following;

- Avoidance of mowing during turtle nesting season (May 25- July 5)
- If annual mowing of the duct bank and stormwater swales occurs between April 1 and November 1, the mower blades will be set higher than 10 inches above the ground.
- Conduct “turtle sweeps immediately prior to mowing activities.

## **Eversource and DCR**

### **Alteration of Protection Plan Elements**

The EBTPP detailed above is designed to avoid direct mortality to any turtles that are known to use the work area or by chance are found during construction activities. Because work plans may change or weather conditions may necessitate changes in schedules, the avoidance plan offers a certain amount of flexibility to accommodate any such schedule or program change. It is the intention of the avoidance plan to respond to any such change to assure that resident turtles in the planned work area will not be directly harmed by construction equipment or activities. If it is necessary to modify the protective

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<sup>2</sup> NHESP provides GIS shape files to Eversource depicting rare species mapped habitats on their utility corridors. This information is not available to the public and is provided to Eversource under strict confidentiality agreements.

approaches detailed herein, NHESP Staff will be consulted in the development of a modified protective approach.

#### **Data Recording and Reporting**

All rare turtle observations will be reported online using the NHESP VPRS reporting application. An annual summary report to NHESP at the end of each year during construction. The report will include sections on turtle demographics, morphometric data, locational data, movement data and the results of mortality avoidance measures.

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