Turtle Protection Plan

MassCentral Rail Trail – Wayside Section

NHESP File No. 15-34327

March 12, 2025

Project Overview/Background

The Massachusetts Department of Conservation and Recreation ("DCR") and NSTAR Electric Company d/b/a Eversource Energy ("Eversource") will be constructing a portion of the Massachusetts Central Rail Trail ("MCRT") and installing an underground electric transmission line within an inactive Massachusetts Bay Transportation Authority ("MBTA") railroad right-of-way ("ROW") within the limits of the towns of Sudbury, Marlborough, Stow, and Hudson, Massachusetts. As proposed, the MCRT and the underground electric transmission line, referred to as "the Sudbury-Hudson Transmission Reliability Project" is a joint project (the "Project") to be constructed in a two-phased approach.

Phase 1 of the Project will be under the control and responsibility of Eversource and will include vegetation removal, all major earthwork, bridge reconstruction, installing the underground electric transmission line, upgrading the existing Sudbury substation, installing stormwater management features, creating a 14-foot-wide gravel access road, and revegetate disturbed areas. The 14-foot-wide gravel access road will be created by Eversource as the base for the MCRT Rail Trail to be constructed in Phase 2 by DCR. Phase 2 of the Project will be under the control of DCR and will include grading of the 14-foot-wide gravel access road, as needed, paving a 10-foot-wide bike path surface within the gravel access road, placing loam and seeding the 2-foot shoulders on either side of the trail, installing benches and bike racks, crossing facilities at road crossings, planting shrubs, installing bike railings adding pavement markings and signage and final restoration.

Both phases of this Project are associated with NHESP File No. 15-34327, however, each phase of the Project was issued a separate No Take Determination letter from the Natural Heritage & Endangered Species Program ("NHESP") of the Massachusetts Division of Fisheries & Wildlife (the "Division"). Eversource received a No Take Determination letter for the Sudbury-Hudson Transmission Reliability Project on October 19, 2018. DCR received a No Take Determination letter for the MCRT on May 17, 2019.

Condition 1 of the No Take Determination letter for the Sudbury-Hudson Transmission Reliability Project identified that the Eastern Box Turtle Protection Plan ("TPP"), dated 5/31/2018 must be implemented as proposed. The 2018 TPP was developed to protect both Eastern Box Turtle (EBT: *Terrapene Carolina*) and Wood Turtle (WT: *Glyptemys insculpta*) and was based upon field data collected through 2018. This updated Plan addresses Condition 3 of the No Take Determination Letter requiring submission of a final version of the Eastern Box Turtle Protection Plan for review and approval.

Since the approval of the 2018 TPP, Eversource has continued to collect field data related to the presence and movement of EBT and WT. Eversource and DCR have developed specific contractor training and

responsibilities throughout the permitting of the Project. DCR is submitting this updated TPP to NHESP for their review and approval for the Phase 2 portion of the Project. This updated TPP contains all the same elements approved in the 2018 TPP, as well as the elements approved in DCR's 2021 TPP, but is updated based on the most current field data and expectations for Contractor Training and environmental monitor oversight during the construction of Phase 2 of the Project. Paving and fence installation activities for Phase 2 of the Project are anticipated to occur between March and June 2025. Installation of ancillary facilities such as benches may continue beyond this timeframe but will result in minimal vehicular traffic or ground disturbance.

EBT and WT are listed and protected by the NHESP as "Species of Special Concern". Both EBT and WT are known to occur in Priority Habitat 1040 / Estimated Habitat 1440 (PH 1040 / EH 1440) in Hudson, Marlborough, and Sudbury generally located between Dutton Road in Sudbury and White Pond Road in Hudson. Since 2017 and up to the present, an ongoing field survey by Eversource for EBT and WT has been completed on the MBTA corridor in Sudbury, Marlborough and Hudson and lands adjacent to it within the mapped Priority Habitat. As part of this survey, a number of EBT and one WT have been captured and fitted with radio transmitters by Eversource. Using radio telemetry techniques, the movements of these animals have been closely followed during their active periods. Based on the observations made during this survey, it is now known that there are turtle movements beyond the mapped Priority Habitat. ***Based on survey efforts, the TPP applies to areas along and within the construction corridor between Dutton Road in Sudbury, west to Parmenter Road in Hudson.***

The TPP consists of rigorous measures that will be taken to protect turtles from unintentional injury or death during the construction of DCR's portion of the Project (Phase 2). The TPP also describes measures that are intended to protect their nests and overwintering locations.

Following construction, rare turtle protective measures will be implemented by Eversource as part of their yearly Operation and Maintenance Plan (OMP) for maintenance and operational work on electric transmission line rights-of-way (ROW). Similarly, DCR will follow their trail Guidelines and Best Management Practices Manual.

The TPP consists of several important components that will work effectively to protect EBT, WT, and other turtle species that may be encountered during construction both within Priority Habitat and elsewhere on the project corridor.

It is the intent that this TPP not be a static document. As construction and on-going turtle survey efforts proceed beyond the construction corridor, changes may be made to the TPP. These changes will be made should new information regarding turtle movements and / or behavior indicate necessary changes to protect turtles during construction activities.

Protective measures that DCR will follow during construction are as follows:

Pre-Construction

Contractor Education and Awareness Program

Prior to construction, Project construction plans have been 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 qualified biologist knowledgeable with EBT and WT biology and behavior. The session will include discussions 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. ***Workers not trained will not be allowed on the Project ROW in areas identified as turtle habitat in this TPP (i.e., from Dutton Road to Parmenter Road).*** Additional training sessions will be given as new contractors or crews are added to the workforce. Refresher training sessions will be given on as need basis should non-compliance activities occur on the Project site.

Environmental Inspectors

Qualified Environmental Inspectors (EI) will be assigned to the section of the construction corridor where the TPP applies, should be familiar with the biology and behavior of rare turtles and the measures that are necessary to protect them during construction. The EI(s) shall also be required to either obtain a Scientific Collection or be listed as a sub-permittees on such a permit obtained for the Project by a qualified individual.

During Construction

Construction Inspections and Treatment of Animals

Prior to daily work activities within rare turtle habitat between April 1 and October 31, a qualified EI or trained staff will visibly search (sweep) access roads, work areas in the construction corridor and occasionally in areas adjacent to the construction corridor on the MBTA corridor for rare turtles. Additionally, from April 1 through completion of paving activities, radio telemetry scans will be made from the construction corridor to locate turtles previously fitted with radio transmitters near work areas. Pinpoint locations of turtles fitted with radio transmitters outside of the MBTA corridor is not needed, but daily telemetry will be used to determine if their general locations are near or within the construction corridor. Once paving activities are complete, radio transmitters will be removed and visual searches will continue for any remaining activities that may take place through October 31.

Turtles observed within Limits of Work will be photographed, and the location, direction of travel and any designating numbers or notches on the carapace will be recorded. The individual will then be relocated greater than 500 horizontal feet from their capture points. Attempts will be made to relocate turtles in their perceived direction of travel, avoiding areas of private/no-access properties. In some circumstances it may be necessary to temporarily detain captured turtles and relocate them at the end of the workday. ***Should any rare turtle be located within the construction corridor or the MBTA ROW, proper handling, care, and relocation must follow the "Rare Turtle Capture and Handling Protocol" provided in Attachment A.***

While work is occurring, the area surrounding the work area will also be inspected 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 EI, he or she will be required to notify the EI as soon as possible for directions on how to proceed.

Rare turtle sweeps and construction oversight for rare turtles will not be required during the dormant season, between November 1 and March 31, when turtles are presumed to be hibernating in locations away from the work area (see circumstances described below in "Protection of Turtle Hibernacula" for exceptions to this). However, other wildlife time of year restrictions may apply.

Protection of Turtle Hibernacula

Based on the current data for known hibernacula conducted by Eversource, since 2017 no tracked rare turtle has hibernated within 100 feet of the Project Site.

Protection of Turtle Nests

Rare turtles typically nest within well-drained, open areas during evening hours typically 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 Eversource's rare turtle survey efforts completed to date, there have been no turtle nesting areas identified within the project construction corridor.

If there appears to be a rare turtle nesting conflict during construction, the EI will be notified. Searches will be completed 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 to identify nest locations. After females have completed nesting, the nest locations will be flagged for avoidance to prevent destruction of incubating eggs. Efforts will be made to pinpoint the precise nest location.

If nest avoidance is not possible during construction, nests may be excavated by the survey biologists 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.

Other Protective Measures

Erosion control barriers and soil erosion blankets containing plastic or wire mesh can ensnare turtles and other animals resulting in mortality. Therefore, erosion control and stabilization measures containing such mesh (straw wattles, mesh-backed silt fence, and open mesh blankets) is prohibited within mapped rare turtle habitat. As such, syncopated erosion control barriers and other erosion control devices that will be used within Priority Habitat areas as shown on Project plans and designed to allow for the passage certain wildlife species across the corridor, will not contain plastic or wire mesh as part of their installation. Any area containing erosion control protective measures or syncopated barriers should be inspected regularly for any turtle that may have entered the construction corridor and detained within it. Any turtle found in any such area should be relocated or handled as prescribed in the "Rare Turtle Capture and Handling Protocol" provided in Attachment A. Materials used for erosion barriers or soil erosion blankets within turtle habitat areas must be approved by the EI. Any such measure that is employed within mapped rare turtle habitat will be removed as soon as site stabilization has occurred.

EIs will coordinate with contractors in the field to effectively prevent turtles from falling into open excavated areas such as post holes or plant holes. The EI will be responsible for approving and inspecting protective measures designed to prevent turtles from falling into open excavations during non-work hours. During the rare turtle active season (April 1 through October 31), excavations will be filled in at the end of each workday. The EI will ensure no excavations are left open at the end of the workday.

Within the area covered by this TPP, signs shall be placed in strategic locations notifying contractors that the area they are entering and/or working in is subject to special requirements designed to protect wildlife. Any such sign shall meet the requirements of the NHESP.

Post Construction

Post-construction maintenance of the MCRT will primarily consist of vegetation removal that interferes with the use of the trail including removal of hazard trees or branches, removal of downed trees or branches, shrub and branch trimming, litter pick up, and periodic mowing grass along the bike path shoulders and yearly mowing of grass over the Eversource duct bank. Within the Priority Habitat 1040 / Estimated Habitat 1440 (PH 1040 / EH 1440) in Hudson, Marlborough, and Sudbury periodic mowing will be conducted in accordance with the Long-Term Pollution Prevention Plan and Operations and Maintenance Plan (LTPPP-OMP) and the DCR Trails Guidelines and Best Practices Manual. During the active turtle season (between April 1 and October 31), the shoulders of the bike path or the Eversource duct bank will be swept by qualified staff to locate any EBT or WT prior to any mowing. In addition, the mower for any areas beyond the 2-foot wide bike path shoulders (Eversource duct bank) will be set at least 10-inches above the ground. A boulder marked by etching with a note and the appropriate mowing height is located at either end of the priority habitat polygon.

Alteration of Turtle Protection Plan Elements

The TPP 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 TPP offers a certain amount of flexibility to accommodate any such schedule or program change. It is the intention of the TPP 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 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's Heritage Hub reporting portal. That report will include a summary of turtle observation made by the EI for completeness of annual rare turtle observations as part of the overall survey.

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Attachment A

Rare Turtle Handling Procedures

Rare turtle Capture and Handling Protocol

Purpose

Eastern Box Turtle (EBT) (*Terrapene carolina*) and the Wood Turtle (WT) (*Glyptemys insculpta*) are state listed in Massachusetts as Species Special Concern. As such, they are protected against direct harm to the individual and protected against destruction or disturbance of their habitats. The purpose of this document is to provide construction personnel with important information that will help reduce the potential for direct harm to individual turtles should they be encountered during construction activities. This document includes information about general habitat use, proper turtle handling procedures, relocation information, contact information of qualified Environmental Inspectors (EI) / Biologists, and representative photographs of both species to assist in proper identification.

General Overview of Eastern Box Turtle Habitat Use

EBTs in the northeast use a variety of habitats over the course of the year based on seasonal availability of food items, life cycle requirements (e.g., nesting and hibernating) and body temperature regulation. A generalized breakdown of this seasonal habitat use is provided below to give contractors an idea of where chance encounters are most likely given the time of year.

- *April through June*. EBTs are typically observed in open fields, early successional scrub-shrub/sapling areas and forest-field edges but may be observed in forested habitats as well. In June, female box turtle may be in open sandy areas with sparse vegetation for nesting.
- *July through September*. EBTs are typically observed in forested uplands and forested wetlands but will sometimes use forest-field edges or dense shrubby areas.
- *October through March*. EBTs use forested habitats almost exclusively but are difficult or impossible to find because they are buried under root/duff layer of the forest floor.

General Overview of Wood Turtle Habitat Use

WT preferred habitat is riparian areas that include slow moving mid-sized streams with sandy bottoms and densely vegetated banks. When not located in riparian habitats they can be found in forests, early successional fields and/or hayfields sometimes great distances from streams.

- *April through June.* WT are found either within slow moving steam or within several hundred meters of them in dense vegetation. They are sometimes found basking in sunlight on stream banks or in areas nearby. In June, female WT may be in open sandy areas with sparse vegetation for nesting.
- *June through early to mid-September*. WT move from riparian habitats into forests, early successional fields and/or hayfields to feed.
- *Mid-September to March*. WT move back into streams or stream banks where they will overwinter.

Methods

Below is a step-by-step process that shall be followed in the event of a rare turtle observation.

1) If an EBT or WT is observed, first determine if the individual is within harm's way. If the individual is observed outside of the exclusion zones (i.e., outside of the work area), then it should not be handled to minimize disturbance and prevent altering their behavior. Report the observation to the EI as soon as possible. If the EI is not immediately available report the observation to a Biologist.

2) When an EBT or WT is determined to be within harm's way, it should be captured and temporarily detained until the designated EI, or Biologist has been notified and can arrive onsite to perform standard data collection and turtle relocation. Contact the EI or as soon as possible. If the EI is not immediately available report the observation to a Biologist.

3) To properly detain a turtle, place the turtle into a plastic tub. Turtles can easily die from overheating. Therefore, this tub **MUST** be placed in a cool shaded area out of direct sunlight, indoors or out. Outdoor shaded areas must be persistent, that is, make sure that the tub is not in an area that will BECOME sunny later in the day. In addition, fresh vegetation (e.g., leaves, tall grass cuttings) and water **SHALL** be placed into the tub for cover and hydration.

4) When handling an EBT or WT grasp it firmly by the sides of the carapace (top shell). These turtles are typically very shy and will usually retract their head and legs into the shell. If the turtle does not retreat into its shell, be cautious of the turtle's head, mouth, and feet. Although these turtles typically do not bite, they are certainly capable of doing so. In addition, they have very sharp claws and powerful legs for digging, which can scratch the skin.

5) As soon as possible an no greater than one (1) hour of either observing or capturing an EBT or WT, contact the EI for direction. If the EI is not present, contact one of the qualified biologists listed below. Turtles shall not be detained for more than four hours at any time.

6) If an injured EBT or WT is seen or captured, contact the EI or a Biologist as soon as possible. If it is possible to detain the injured turtle, detain it as described in item 3 above.

Contact Information for Environmental Inspectors

Name:	TBI	Name:	TBI
Cell No:	TBI	Cell No:	TBI
Email:	TBI	Email:	TBI

Contact Information for Qualified Biologists

Name:	TBI	Name:	TBI
Cell No:	TBI	Cell No:	TBI
Email:	TBI	Email:	TBI

Eastern Box Turtle Photographs

Plastron of female

Plastron of male

Variation in turtle carapace patterns

Turtle under old hay bale

Partially buried turtle in forested area

2-year old juvenile

Wood Turtle Photographs

Wood Turtle Plastron (bottom shell)

Wood Turtle Carapace (top shell)

Wood Turtle Front View (note bright orange limbs)