



Commonwealth of Massachusetts

Division of Fisheries & Wildlife

MassWildlife

Wayne F. MacCallum, *Director*

October 25, 2013

Richard K. Sullivan, Jr., Secretary
Executive Office of Energy and Environmental Affairs
Attention: MEPA Office
Purvi Patel, EEA No.14346
100 Cambridge St., Suite 900
Boston, Massachusetts 02114

Alan Anacheka-Nasemann
U.S. Army Corps of Engineers, N.E. District, Regulatory
696 Virginia Road
Concord, MA 01742

<i>Project Name:</i>	<i>South Coast Rail Project</i>
<i>Document Reviewed:</i>	<i>Final Environmental Impact Statement / Final Environmental Impact Report</i>
<i>Proponent:</i>	<i>Massachusetts Department of Transportation (MassDOT)</i>
<i>EEA No.:</i>	<i>14346</i>
<i>NHESP Tracking No.:</i>	<i>98-3735</i>
<i>US ACOE No.:</i>	<i>NAE-2007-00698</i>

Dear Secretary Sullivan and Mr. Anacheka-Nasemann:

The Massachusetts Division of Fisheries & Wildlife (the "Division") has reviewed the South Coast Rail Project *Final Environmental Impact Statement / Final Environmental Impact Report* ("FEIS/FEIR") and would like to offer the following comments.

The FEIS/FEIR presents a description of the purpose and need for the project and considers several alternatives which differ in their ability to achieve the stated project goals, cost, and constructability. The project alternatives also vary in extent of impacts to state-listed species, wildlife habitat, wetlands, open space, and other environmental resources.

State-listed Species

The Natural Heritage & Endangered Species Program ("NHESP") of the Division is responsible for implementation of the Massachusetts Endangered Species Act (M.G.L. c. 131A) and its implementing regulations (321 CMR 10.00) (MESA). As discussed in Section 4.15 of the FEIS/FEIR, all of the project alternatives involve some level of work in Priority Habitat of Rare Species and *Estimated Habitat of Rare Wetland Wildlife*. Consequently, MassDOT will be required to file with the NHESP for review of the work under MESA and the rare wildlife provisions of the Wetlands Protection Act.

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Division of Fisheries and Wildlife

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An Agency of the Department of Fish and Game

The Executive Summary, Section 4.15, and Section 3.3.3.2 of the FEIS/FEIR present various qualitative and quantitative measures of the adverse impacts of the various alternatives to state-listed species. The Stoughton Alternative (the "Preferred Alternative") would use an inactive railroad right-of-way that bisects the Hockomock Swamp Area of Critical Environmental Concern ("ACEC"). At ±16,950 acres, this ACEC encompasses the largest freshwater wetland system in Massachusetts. The Hockomock Swamp provides habitat for numerous state-listed species and a great diversity of native plants and animals. The Stoughton Alternative would also bisect the ±5,000 acre Hockomock Swamp Wildlife Management Area ("WMA") managed by the Division for the protection of wildlife and their habitats as well as for the public's enjoyment and use. The Whittenton Alternative (a variant of the Stoughton Alternative) impacts one additional area of *Priority Habitat* for the Eastern Box Turtle, but avoids the ecologically significant Pine Swamp and the Atlantic White Cedar wetland that supports a state-listed butterfly. However, because the differences in overall state-listed species impacts between the two Stoughton alternatives are small, it is the Division's opinion that they should not play a determinative role in evaluation of the relative impacts and merits of these two alternatives.

As outlined in Section 4.15, the Stoughton and Whittenton Alternatives would both result in the direct loss of state-listed species habitat, the fragmentation of large, otherwise unfragmented areas of habitat and open space, and partially interrupt migratory corridors used by state-listed species - including, in particular, the Blue-spotted Salamander (*Ambystoma laterale*), state-listed as "Special Concern", Blanding's Turtle (*Emydoidea blandingii*), state-listed as "Threatened", and Eastern Box Turtle (*Terrapene carolina*), state-listed as "Special Concern" - as well as a variety of other wildlife species.

Based on a review of the information that was submitted and the information that is contained in our database, the Division anticipates that the proposed project will result in a "take" of the Blue-spotted Salamander, Blanding's Turtle, and Eastern Box Turtle. Projects resulting in the "take" of state-listed species may only be permitted if they meet the performance standards for a Conservation & Management Permit (321 CMR 10.23) (CMP). The Director must first determine 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.

The FEIS/FEIR contains a comprehensive description of how MassDOT proposes to meet the MESA regulatory requirements for these alternatives, including the standards for authorizing a "take" of a state-listed species through a Conservation & Management Permit and how it would meet the long term "net-benefit" standard through a conservation and management plan for the state-listed species to be impacted by the proposed project.

The proponent has consulted with the NHESP to clarify methods for quantifying impacts to rare species and their habitats and to prepare an appropriate conservation and management plan to meet the long term "net-benefit" standard of a CMP. In addition to modifying project plans to avoid and minimize impacts, potential mitigation options referenced in the FEIS/FEIR include, but may not be limited to, the following: a) installation or enhancement of existing wildlife crossings, including an elevated trestle system through portions of the Hockomock Swamp; b) acquiring land that serves as habitat for state-listed species or providing funding for such land acquisition, as appropriate, to meet the "net-benefit" standards for each species for which a "take" will occur; and c) providing funding for studies of the Blanding's Turtle and Hessel's Hairstreak in order to assist in the development of long-term conservation measures. The NHESP believes that a suitable long-term "net-benefit" can be achieved for the proposed Stoughton alternatives, and would like to highlight several outstanding details that will require additional consultation and clarification during the MESA permitting process:

1. The NHESP generally agrees with the methods used in the FEIS/FEIR to quantify impacts to state-listed species and develop appropriate “net-benefit” mitigation plans. However, the NHESP is concerned that the Blue-spotted Salamander analysis underestimates indirect impacts to this species associated with habitat fragmentation. In response to our concern, the project proponent has agreed to increase the proposed mitigation for this species consistent with its ongoing consultative discussions with the NHESP.
2. The FEIS/FEIR indicates that the proponent intends to fund a study of the Blanding’s Turtle within the Hockomock Swamp in order to determine the size and status of the resident population(s), identify important habitats, etc. The NHESP believes that such a study could provide useful information and analysis that will support the ongoing conservation of this species in the Hockomock Swamp and looks forward to working with the proponent to clarify the scope and details of such a study.
3. The FEIS/FEIR indicates that the proponent intends to fund a study of the Hessel’s Hairstreak within the Hockomock, Pine, Assonet, and Acushnet Cedar Swamps to determine the distribution and abundance of this species. The NHESP believes that such a study could also provide a “net-benefit” for this species and looks forward to working with the proponent to clarify the scope and details of such a study, including potentially broadening the number of cedar swamps to be sampled in southeastern Massachusetts.
4. The FEIS/FEIR outlines proposed locations and potential designs for culvert reconstruction and/or the installation of additional wildlife crossings – including an elevated trestle system through portions of the Hockomock Swamp – to minimize the effects of habitat fragmentation on both state-listed species and other resident wildlife. The NHESP believes that these efforts will be critical to maintaining the dispersal and migration potential of both state-listed species and wildlife species more generally. However, the NHESP notes that the location, number, and design parameters of proposed crossing structures will require additional review and refinement in order to maximize their potential utility.

For example, the NHESP believes that additional crossing structures should be considered in several regions of mapped *Priority Habitat*, and in particular, within Hockomock and Pine Swamps. Because engineering, safety, and operational concerns may limit opportunities to upgrade existing culverts to meet the general/minimum “Massachusetts River and Stream Crossing Standards” (the “Standards”), the NHESP would, at a minimum, encourage the expanded use of between tie-crossings to enable movement and migration of amphibians, reptiles, and other small wildlife species. Additionally, the NHESP would encourage the proponent to make every effort to meet the optimum Standards. General stream crossing standards are designed to enable fish passage, river/stream continuity, and *some* wildlife passage; however, many larger wildlife species may not be able to utilize minimally sized structures. Wildlife passage structures (between tie-crossings and tunnel crossings) should more broadly seek to incorporate many of these same design parameters, including open tops and natural substrates. The NHESP looks forward to working with MassDOT to carefully and strategically assess the location and design parameters of proposed crossings and culvert upgrades / replacements during the MESA project review process.

5. The Hockomock Swamp represents a uniquely valuable resource for these state-listed species. Although providing funds for off-site land acquisition may be considered during the MESA permitting process, the proponent should prioritize and make every effort to permanently protect habitats within or near the Hockomock Swamp in order to maintain and enhance the local populations of these species.

6. As referenced generally within the FEIS/FEIR, measures to protect state-listed species during and after construction *may* also be required under certain circumstances. The nature and scope of such construction management measures will be further refined during the MESA project review process.

Although the NHESP will not render a final decision until after receipt of a MESA filing and/or CMP application, review of public and agency comments, and completion of the MEPA process, it is the NHESP's opinion that the alternatives analysis and rare species mitigation plan presented in the FEIS/FEIR is adequate for this stage of the project review process.

Wetlands, Vernal Pools and Indirect Impacts

We appreciate the proponent's efforts to estimate direct wetland and vernal pool impacts, and to describe a general mitigation framework for each unique wetland type. Our understanding is that wetland estimates are based on wetland delineations performed early on in the project development process and, for vernal pools specifically, on known locations of Certified and Potential Vernal Pools identified through photo-interpretation. The Division strongly recommends that wetland and vernal pool boundaries be re-surveyed as part of the final design phase of the project in order to refine both direct and indirect impact calculations and mitigation requirements. Similarly, we recommend that additional field surveys be conducted during appropriate spring months in order to identify *all* certifiable vernal pools within the proposed work area that may be impacted both by the proposed project, more accurately quantify direct and indirect vernal pool impacts, and develop site-specific mitigation plans. This is particularly important for sections where there is currently no active rail line, including Hockomock and Pine Swamps. Surveys should be conducted by qualified vernal pool biologists pre-approved by the Division. This field assessment will lay the groundwork for performing vernal pool boundary delineations and developing a final vernal pool mitigation plan for both direct and indirect project impacts.

The FEIS/FEIR included more detailed information about how the project proponent proposes to mitigate impacts to both wetlands and vernal pools. The Division generally agrees with the methods used in the FEIS/FEIR to quantify direct wetland and vernal pool impacts and develop appropriate mitigation plans although, as stated above, the final impact assessment should be based on updated information.

Regarding the proposal to re-create vernal pool habitat as a method to mitigate for direct vernal pool impacts, however, the Division believes that this mitigation approach has a record of mixed success and extreme caution would be advised when selecting sites. In some cases, clearing forest to create a pool may do more harm than good, as many vernal pool species depend upon terrestrial habitat during the non-breeding season. Furthermore, a poorly constructed vernal pool with an incorrect hydro-period has the potential to function as a "sink", attracting animals to breed in an unsuitable pool (e.g. the pool dries too early or experiences high rates of green frog predation). Therefore, we recommend that this mitigation technique be used sparingly, if at all, and that the Division be consulted during both the site selection and design phases.

In our opinion, the protection of terrestrial habitat surrounding vernal pools - and in particular, vernal pool clusters - represents an excellent mitigation option with the greatest potential for long-term conservation benefits. These terrestrial habitats enjoy limited and in some cases, no regulatory protection, but are just as critical to the survival of vernal pool breeding amphibians as the breeding pools themselves (and are also very important for other wildlife, such as turtles). Indeed, the Division is concerned that the FEIS/FEIR broadly excludes indirect impacts to these resource areas and their supporting upland habitats, and would strongly encourage the proponent to quantify impacts and develop a more robust mitigation plan to address these effects.

Fisheries

As outlined in the Division's comments on the DEIS/DEIR, cold water streams are highly susceptible to changes in water quality and/or quantity such as siltation, water level fluctuations, loss of riparian habitat and alterations of the temperature regime. Best management practices for erosion and sedimentation control should be adhered to for all phases of construction to minimize potential impacts to the fisheries resources. To the greatest extent practicable, all in stream work should be conducted during low flow periods throughout the year. Times of year when stream flow is high due to extended rain and/or snow melt events should be avoided.

The Division also noted that culvert replacements should meet the replacement recommendations found in the "Massachusetts River and Stream Crossing Standards: Technical Guidelines, August 6, 2004" to the greatest extent practical, and that new crossing structure should, at a minimum, meet the general standards for new crossings and strive for optimum standards whenever achievable. Acknowledging that engineering, operational, and safety concerns may limit or preclude the upgrading of culverts in many instances, MassDOT should continue efforts to improve existing crossings to the greatest degree practicable.

Hockomock Wildlife Management Area & Other Open Space

In addition to the NHESP's regulatory role, the Division manages Wildlife Management Areas for the benefit of the citizens of the Commonwealth. As discussed above, the Stoughton and Whittenton Alternatives would use an inactive railroad right-of-way that bisects the Hockomock Swamp WMA. As a result, both alternatives have the potential to adversely affect the quality of habitat within the WMA as well as impact public access and use.

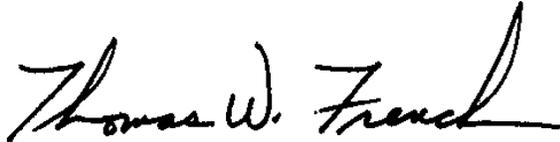
More specifically, the Division notes that the alternatives analysis provided in Section 3 of the FEIS/FEIR may understate the relative adverse impacts to open space and wildlife passage for the Stoughton alternatives. Regarding wildlife passage in particular, the proposed elevated trestle system may facilitate passage across the proposed route for many wildlife species and minimize the effects of the railroad alignment across portions of the Hockomock. However, it is important to note that the final design parameters of the trestle (effective height, openness, etc.) and other wildlife crossing structures will have a large effect on the utility of these measures for many resident wildlife species. For example, larger mammals may experience restricted passage should the minimum height not also incorporate additional, larger passage openings; similarly, usage by smaller wildlife species may depend, in part, on design measures that ensure adequate light penetration and openness. As stated above, the Division looks forward to working with MassDOT to assess the location and design parameters of passage structures to ensure that wildlife crossings maximize the potential benefits to resident wildlife.

Similarly, the FEIS/FEIR acknowledges that public access to the Hockomock Swamp would be lost along the railroad alignment, and that informal recreational usage of the railroad bed would be forced to seek other sites or abandon recreational activities altogether. However, the FEIS/FEIR does not propose to mitigate for the lost access and associated recreational opportunities, from hiking and wildlife viewing to hunting. The Division would suggest that, at a minimum, access mitigation should be provided to offset the loss of public access into the Hockomock Swamp WMA via the railroad alignment. Potential mitigation strategies might include, but may not be limited to, creating parking areas or other access points along existing roads passing through the WMA, improving existing access points (such as the canoe launch on Rt. 106), and/or acquiring key parcels that would enhance public access to the WMA more broadly.

In closing, the Division commends MassDOT for taking a proactive approach to addressing endangered species permitting issues and other environmental impacts to-date. This includes, but is not limited to, a continuing commitment to constructing an elevated trestle through portions of the Hockomock Swamp, should the Stoughton alternatives be constructed. The Division looks forward to continued consultation

with the proponent and inter-agency working group, should this project move forward, as we continue to fulfill our MESA regulatory function. If you have any questions about the MESA section of this letter, please contact Jesse Leddick, Endangered Species Review Biologist, at (508) 389-6386. If you have any questions about the Fisheries section of this letter, please contact Richard Hartley, Fisheries Biologist, at (508) 389-6330. If you have any questions about the section of this letter dealing with the Hockomock Wildlife Management Area, please contact Jason Zimmer, Southeast District Manager, at (508) 759-3406. We appreciate the opportunity to comment on this project.

Sincerely,



Thomas W. French, Ph.D.
Assistant Director

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