UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
5 POST OFFICE SQUARE, SUITE 100
BOSTON, MA 02109-3912

January 8, 2014

OFFICE OF THE
REGIONAL ADMINISTRATOR

Colonel Charles Samaris
Commander, New England District
U.S. Army Corps of Engineers
696 Virginia Road
Concord, MA 01742-2751

Re: EPA Comments on the South Coast Rail Project Final Environmental Impact Statement/Final Environmental Impact Report (CEQ file number 20130294)

Dear Colonel Samaris:

In accordance with our responsibilities under the National Environmental Policy Act (NEPA), Section 404 of the Clean Water Act, and Section 309 of the Clean Air Act, we have reviewed the U.S. Army Corps of Engineers' (Corps) Final Environmental Impact Statement (FEIS)/Final Environmental Impact Report (FEIR) for the South Coast Rail Project in southeastern Massachusetts. EPA served as a cooperating agency to the Corps of Engineers during development of the DEIS and FEIS providing advice under NEPA with respect to alternatives to be considered and issues related to the assessment of environmental impacts and mitigation. This comment letter identifies outstanding issues to be addressed prior to the issuance of a Record of Decision (ROD) for the project.

The FEIS details MassDOT's project purpose to improve public transportation opportunities between the cities of New Bedford and Fall River and Boston. The FEIS also highlights the Commonwealth's desire to support opportunities for transit oriented development and overall stimulation of economic development in the region. The FEIS evaluates the ability of the No-Build and two rail service alignment alternatives (the Stoughton and Whittenton routes, both with diesel and electric options) to achieve the project purpose. The two rail alternatives considered in the FEIS result in improvements to air quality due primarily to a reduction in vehicle miles traveled in the region. The Corp's FEIS identifies the Stoughton Electric alternative as the applicant's preferred alternative and also as the least environmentally damaging practicable alternative (LEDPA) under Section 404 of the Clean Water Act.

EPA continues to support expanded opportunities for mass transit to serve the South Coast region. Cleaner air and the potential for transit oriented development are two of the meaningful benefits of an expanded Massachusetts Bay Transportation Authority (MBTA) network. In order for any improvements to the transit network to become a reality, the project must successfully navigate through local, state and federal environmental review and permitting. Our review revealed outstanding issues that we

identified previously during the environmental review process or that have arisen in the FEIS that should be addressed before the Corps finalizes a ROD for the project. These include our concerns about the Corps' newly announced LEDPA determination; the assessment of direct and secondary impacts; and project mitigation.

EPA will remain actively engaged through the completion of the NEPA and Section 404 processes to help the Corps address these issues. Attached are detailed comments articulating our concerns. We intend to follow up with your staff to set up a meeting to discuss our comments. Please feel free to contact William Walsh-Rogalski of EPA's Office of Environmental Review at 617-918-1035 or Jackie LeClair of EPA's Office of Ecosystem Protection at 617-918-1549 if you wish to discuss this letter.

Sincerely,

H. Curtis Spalding
Regional Administrator

Enclosure

U.S. Army Corps of Engineers New England District
Alan Anacheka-Nasemann, Senior Project Manager
Regulatory Division, Permits and Enforcement Branch
696 Virginia Road
Concord, MA 01742-2751

EPA's Detailed Comments on the South Coast Rail FEIS
CEQ # 20130294

Clean Water Act Section 404 Issues

Proposed projects seeking to obtain a Clean Water Act (CWA) Section 404 permit to authorize discharges to waters of the United States must meet the regulatory guidelines found at 40 C.F.R. Part 230 ("the Guidelines"). EPA provided comments on both the DEIS and multiple technical reports (Wetland Impacts, Biodiversity, and Mitigation Reports) and requested that the FEIS address areas still lacking enough detail to judge compliance with the Guidelines. Based on our review of the FEIS, EPA believes that the Corps' decision under § 230.10(a) as to which alternative is the least environmentally damaging practicable alternative (LEDPA) is not supported by the record, and finds that there is insufficient information to ensure compliance with the other requirements of the Guidelines. The FEIS underestimates direct impacts to vernal pools, does not fully address or quantify secondary impacts, and does not provide sufficient information on proposed mitigation. In order for a proposed project to satisfy the Guidelines, the full extent of project impacts to waters of the United States, and an evaluation of proposed mitigation to offset those impacts, is required. Therefore, these outstanding issues should be addressed before the Corps finalizes a ROD for the project.

Alternatives

LEDPA Determination

In its analysis of rail alternatives (chapter 3 of the FEIS), the Corps concluded that both the Stoughton and Whittenton Alternatives are practicable, and that the Stoughton Alternative would have greater adverse effects on the aquatic environment. We agree with these conclusions. However, as presented, the analysis does not support the Corps' conclusion that the Stoughton Alternative is the LEDPA. The Corps' determination is based on an incorrect interpretation and application of the section of the Guidelines that allows a practicable alternative that would have less adverse impact on the aquatic ecosystem (in this case, the Whittenton Alternative) to be rejected as the LEDPA if it would have "other significant adverse environmental consequences." 40 C.F.R. § 230.10(a). The Corps improperly treated that provision as a "balancing" test, and in its "balancing" mischaracterized some impacts, considered others that were not pertinent, and did not identify any impacts to be significant.

The FEIS states that "The [LEDPA] determination … rests on a comparison of the overall environmental impacts of the Stoughton and Whittenton Routes…," and, more specifically, on whether the impacts to other environmental resources of the Whittenton

Alternative outweigh the aquatic resource impacts of the Stoughton Alternative. FEIS 3-141. However, § 230.10(a) does not establish a balancing test. Rather, in order for the alternative that is least damaging to the aquatic environment to be rejected, it must be shown that it would cause other *significant adverse environmental consequences*. The preamble to the Guidelines refers to such consequences as "damage to other ecosystems…."[1] EPA/Corps guidance refers to these consequences as "substantial impacts to other natural environmental values." [2] In conducting its evaluation, the Corps considered certain non-aquatic impacts from the Whittenton Alternative that do not fall within the scope of the natural environment or ecosystems, and it did not provide the necessary demonstration that the adverse non-aquatic impacts from the Whittenton Alternative would be "significant," either individually or cumulatively.

Both the Stoughton and Whittenton Alternatives would cause similar non-aquatic environmental impacts, with Whittenton expected to cause slightly or somewhat greater impacts on some resources. The alternatives evaluation should have considered whether the impacts from the Whittenton Alternative to the non-aquatic natural environment were so substantial as to render them "significant." Instead, rather than finding any significant adverse environmental consequences, the Corps "weighed" the impacts and concluded that "overall there is no less damaging practicable alternative than the Stoughton Alternatives," and therefore that "there is no practicable alternative to the Stoughton Electric Alternative which would have less adverse impact on the aquatic ecosystem, and also does not have other significant adverse environmental consequences." FEIS 3-143. We disagree with the Corps' analysis under § 230.10(a) and believe that the FEIS does not clearly demonstrate that the Whittenton Alternative should be rejected as the LEDPA because it has "other significant adverse environmental consequences."[3] We look forward to discussing our concerns with the Corps to ensure that the LEDPA determination is fully supported and documented prior to the issuance of a ROD.

.

Direct and Secondary Impacts

Impacts to Vernal Pools

EPA believes that the impacts to vernal pools are substantially understated in the FEIS, which minimizes the loss of these high-value aquatic resources. At 4.14-77, the FEIS states that "Overall, impacts to vernal pools along the South Coast Rail project corridor are small and are not likely to compromise the functions of pools or communities of pools along the route." EPA disagrees with this statement. The direct placement of fill in any vernal pools does not constitute a small impact, and the preferred alternative would

---

[1] 45 Fed. Reg. 85336, 85340 (December 24, 1980).

[2] Memorandum: Appropriate Level of Analysis Required for Evaluating Compliance with the Section 404(b)(1) Guidelines Alternatives Requirements, at Section 3.a.iv. http://water.epa.gov/lawsregs/guidance/wetlands/flexible.cfm.

[3] In fact, even if the Corp's balancing approach were correct, the FEIS fails to demonstrate that the Stoughton Alternative is the LEDPA. In weighing the impacts, the Corps simply recites a variety of non-aquatic impacts from the Whittenton alternative and then concludes, with no analysis or explanation, that they outweigh the aquatic impacts that the Stoughton Alternative would cause. We also note, as discussed below, that the impacts to aquatic resources are not yet fully characterized.

place fill directly in 19 vernal pools. Additionally, the difference in impacts to vernal pools by the two rail alternatives, while downplayed in the FEIS, is noteworthy. The Whittenton Alternative would place fill directly in 10 vernal pools, whereas the Stoughton Alternative would place fill directly in 19 pools (the same 10 as Whittenton plus an additional 9 pools) including 100% filling of two of those nine additional pools. This leads EPA to conclude that the Stoughton Alternative would have a much greater impact on aquatic resources as compared to the Whittenton Alternative.

Statements made within the FEIS are inconsistent with the current science on vernal pool ecology, particularly assumptions made about the impacts of partially filling vernal pools. While the total quantity of fill placed in vernal pools is a small number when measured in acres, vernal pools by definition are small features with unique habitat value and it is misleading to describe direct impacts to pools simply in terms of acres. The FEIS implies that a vernal pool which is partially filled is only partially impacted (as presented at 4.14-62). This assumption overlooks a unique characteristic of vernal pools, which is that breeding amphibians do not utilize the entire perimeter of the pool uniformly, but rather tend to cluster in certain areas of the pool that have the ideal combination of light, hydrology, attachment points and protection from predation. By describing the loss from direct fill as a percent of the entire area of the pool, the FEIS incorrectly assumes that all pools are completely homogenous features with no spatial variation. We disagree with this approach. Unless it can be demonstrated that the specific fill placement will not impact those areas for which breeding amphibians show preference, we believe it is reasonable to assume that any direct fill to a portion of a vernal pool is likely to result in the loss of that pool as functional breeding habitat.

We also disagree with the approach used to quantify impacts to vernal pools from nearby development. The language in the FEIS downplays the significance of existing development when quantifying impacts from the project to surrounding upland habitat (defined as the area within 750 feet of the vernal pool edge). Best management practices suggest that to avoid meaningful impacts to vernal pools, adjacent development should not cumulatively exceed 25% of the surrounding habitat (defined as 750 feet from the vernal pool edge)[4]. Therefore, a pool that already has had 25% of its surrounding habitat developed is unlikely to absorb impacts from any additional development -- even if the new impact is only to a very small percent of the surrounding habitat. When calculating percent area of impact to the surrounding upland habitat, results should be presented as a cumulative impact with a 25% threshold.

We continue to believe that a more extensive survey of vernal pools is necessary before impacts can be fully characterized and adequate mitigation developed to support a permit decision. While the Secretary's Certificate on the DEIR asked for an assessment of up to 750 feet from the right-of-way (FEIS 4.14-20 and 4.14-29), the FEIS states that it would be impracticable to conduct an assessment of such a large area, especially with many of the vernal pools being on private property. FEIS 4.14-20. The Corps therefore opted to

[4] Calhoun, A. J. K. and M. W. Klemens. 2002. Best development practices: Conserving pool-breeding amphibians in residential and commercial developments in the northeastern United States. MCA Technical Paper No. 5, Metropolitan Conservation Alliance, Wildlife Conservation Society, Bronx, New York.

use "all known certified and potential vernal pools within 750 feet of the right-of-way" in the impact analysis. Id. EPA believes that an on-the-ground survey of all vernal pools within 300 ft of the limit of disturbance including, but not limited to, those pools identified on the Massachusetts Natural Heritage and Endangered Species Program's vernal pool layers is necessary in order to fully understand the impacts of the project on valuable aquatic resources. As noted in our comments on the DEIS, a jurisdictional vernal pool is protected as a wetland under the Clean Water Act *regardless* of its state certification status. This was incorrectly stated in the FEIS, and these vernal pools must be included in a survey.

Secondary Impacts

The FEIS, in its evaluation of secondary impacts to wetlands, continues to state that "these impacts cannot be quantified." FEIS 4.16-111. As previously noted in our comments on the Wetlands Impact Report, we do not agree that such impacts cannot be quantified, and we continue to believe that this determination must be made prior to permitting (40 C.F.R. § 230.11). Furthermore, the FEIS only assesses secondary impacts within100 feet of the ROW. EPA and the Interagency Coordinating Group previously recommended that a distance of 300 feet from the limit of disturbance be used to assess secondary impacts, and we renew that recommendation here.

EPA previously commented on the applicant's methodology (in comments dated 3/4/2013 on the Wetlands Impact Report), which ranks secondary impacts based upon the extent of the impact relative to the overall size of the wetland (FEIS 4.16-112). We requested a clarification of this methodology since no criteria for categorizing impacts were described. The FEIS still does not contain any such clarification or additional explanation of the methodology. Additionally, EPA is concerned that this ranking system has not evolved since the DEIS to reflect our comments and continues to link the extent of functional impacts to the size of wetland being affected. FEIS 4.16-116. However, wetland size is not the only factor that determines the extent of loss of function. Other factors such as landscape position, proximity and connectivity to other aquatic resources, degree of existing degradation, and anthropogenic inputs should all be considered in determining the extent of secondary impacts as required by the Guidelines.

There are instances where the information presented is confusing or inconsistent across different chapters of the FEIS, which makes it challenging to judge the extent of environmental impacts and make an accurate comparison between alternatives. For example, Tables 4.16-41, 4.16-42, and 3.3-11, which summarize secondary impacts to wetlands, are confusing and misleading. For each function listed, the sum of the various impacts identified is different from the amount listed in each total impact column. Those totals also differ from the narrative descriptions of the Stoughton and Whittenton Alternatives at FEIS 4.16-116, 4.16-117, 3-107 and 3-108. According to both the text and the sum of the numbers in the wildlife habitat rows in the tables, the Stoughton Alternative would cause greater secondary impacts to wildlife habitat than the Whittenton Alternative. However, the tables' total impacts columns show secondary impacts to wildlife habitat to be greater for the Whittenton Alternative. The explanation for these disparities appears to be that the numbers presented in the totals columns include

"wetlands that would receive stormwater discharge that are more than 100 feet from the right-of-way." (See Table 4.16-41) This approach skews the totals with no explanation beyond the footnote, making the tables difficult to use for comparing impacts from the alternatives. [5]

Canopy Clearing

The FEIS discussion of the impacts of canopy clearing along the ROW contains contradictory statements that make it unclear. First the FEIS explains that general research has shown that the impacts from canopy clearing are greater than previously understood and has also shown the relevance of the direction of the canopy opening to the degree of realized impact. (FEIS 4.14-43) In contrast, the FEIS states "... the impacts associated with the clearing are considerably less than would be expected in most clear cut/forest edge conditions and would be more similar to a north-facing exposed cut." FEIS 4.14-43. Since the proposed alternative would require an east or west-facing clearing, the basis for making this claim should be presented. Additionally the FEIS lists several different widths of potential canopy clearing and then states that the width of the canopy clearing will be relatively small with negligible impacts. FEIS 4.14-60. However, without clarification of the width of the canopy gap and references with which to compare the relative impact of that gap width, it is difficult to have confidence in that assertion. At FEIS 4.14-44, the alterations are referred to as being of a "temporary nature" and states that once the gap in the canopy is closed, impacts will no longer be observed. It is our understanding that the canopy clearing will not be temporary, so this is a mischaracterization of impacts. Additional work to better understand canopy clearing impacts will be an important component of the § 404 process to identify the full extent of impacts and to develop a comprehensive mitigation plan.

Mitigation

The FEIS fails to describe the relationship between project impacts, functional loss, and mitigation for replacing specific lost functions. While potential mitigation sites are presented, the site descriptions do not adequately address functional loss specific to this project and the capability of proposed mitigation to replace lost wetland functions (with exception of flood storage). As noted in our comments on the Mitigation Technical Report, a complete mitigation proposal will be needed in order to satisfy the Guidelines and the Corps/EPA Compensatory Mitigation Rule in advance of permitting.

The applicant utilized the Massachusetts Conservation Assessment and Prioritization System (CAPS) analysis for the DEIS in order to provide information for mitigating impacts from the project. The FEIS states that "CAPS is also not an appropriate tool for evaluating the effects of mitigation measures such as wetland creation, wetland restoration, or habitat protection/preservation." Since the issuance of the DEIS, advancements have been made in the use of the CAPS tool to evaluate project impacts and wetland mitigation options. The analysis used in the FEIS appears to have ignored or

[5] This confusion about the totals is exacerbated by the fact that footnote 3, which is included in Table 4.16-41 in the Totals column, is in a different location in Table 3.3-11, and is completely missing in Table 4.16-42.

mischaracterized the evolved ability of CAPS to evaluate mitigation options relative to project impacts. EPA recommends the current capabilities of the CAPS tool be employed to fully evaluate project impacts and mitigation options during the permitting process.

It is customary for EPA to work closely with the Corps on major projects where mitigation is necessary to ensure compliance with the Guidelines. This case is no different and we pledge our active involvement in the Corps' and MassDOT's efforts to develop and evaluate effective mitigation to address project impacts.

Indirect Effects and Cumulative Impacts

Similar to our comments on the DEIS, we believe the analysis of indirect (i.e., induced growth) effects in the FEIS/FEIR is excellent, and should serve as a model for other Environmental Impact Statements in New England and beyond. The FEIS/FEIR makes a persuasive case that smart growth development of the South Coast region will be better for the environment than a future in which development continues in its current pattern. As with our comments on the DEIS, our major concern is whether the smart growth future outlined in Scenario 2 will come to pass. If it does not, then the indirect environmental impacts of growth induced by this transportation investment will be larger, and an important opportunity to avoid such impacts would be lost.

To achieve the environmentally preferable future described in Scenario 2, state agencies and local communities will need to take actions and invest resources to support development in the Priority Development Areas and protection in Priority Preservation Areas. We recognize that the Governor signed Executive Order 525 in Fall 2010, directing state agencies to review their policies, actions, and investments to support and implement the recommendations of the Corridor Plan. The Executive Order directed the Executive Office of Administration and Finance to develop a retrospective analysis of all significant investments to ascertain consistency with the Corridor Plan and to establish a system to track investment decisions over time. The Executive Order also directed agencies to target technical assistance programs that are working with South Coast communities to advance goals of the Corridor Plan. Although laudable, these directives fall short of specific strategies and funding commitments. Priorities can change over time, so without firm commitments -- at least from state agencies -- it is not possible to be confident that the environmental benefits of the Corridor Plan will be achieved. We do not believe that MassDOT should limit itself just to measures that it can implement on its own, but instead should reflect commitments from all relevant state agencies. We recommend that such commitments be made by the Commonwealth and reflected in the Corp's Record of Decision.

Modified Rapid Bus

In our capacity as a cooperating agency, we provided comments on the DEIS that offered advice and observations related to the consideration of alternatives, including the rapid bus. The Corps and MassDOT prepared supplemental information to respond to comments on the DEIS and subsequent EPA questions related to what became known as

the modified rapid bus alternative.[6] As noted below, we have several outstanding questions that should be addressed before the ROD is finalized for the project.

The FEIS explains that the Corps eliminated the modified rapid bus alternative from further consideration due to two primary factors: unreasonable costs (ultimately expressed as cost per rider) and logistical issues. In our comments on the DEIS, we questioned the appropriateness of evaluating the cost component of practicability in terms of cost per rider. Assuming, without necessarily agreeing, that this can be an appropriate factor in certain cases, we observe that the FEIS does not explain why the costs were deemed unreasonable.

The FEIS cites logistical issues associated with eventual degradation of the "...already stressed Interstate Highway transportation system" as the other primary factor supporting elimination of the modified rapid bus alternative. The conclusion on the latter point appears to be based on a statement by the Federal Highway Administration (FHWA) in its January 17, 2013 letter that the alternative is "non-viable." Many, if not all, of the concerns cited by FHWA appear focused on alternatives that were already dismissed (rapid bus alternatives 1-4) because they would require design and operational changes to the existing zipper lane near Boston. EPA previously agreed that unacceptable impacts of modified rapid bus alternatives 1-4 renders them impracticable and previously recommended retention of a simplified bus alternative (Alternative 5) which would utilize the existing zipper lane configuration and would therefore avoid the types of impacts that made the other modified rapid bus alternatives impracticable. It is not clear from the analysis how a bus alternative that results in fewer commuters traveling in single occupancy vehicles can be viewed as a stressor to the regional transportation network. Because the FHWA letter does not specifically address this alternative, it is difficult to determine if it was considered. We therefore recommend that the Corps seek clarification from FHWA regarding modified rapid bus Alternative 5.

The Corps cites the logistical infeasibility of the bus alternatives (FEIS page 3-24) associated with impacts during construction. FHWA's letter notes that construction period impacts associated with the modified rapid bus are problematic. If traffic delays associated with upgrading the regional transportation system render this alternative impracticable, a more complete explanation of that conclusion is warranted, in light of delays associated with other typical road and bridge improvement projects.

Finally, we recommend that the Corps address the issues raised in our January 18, 2013 email before a ROD is finalized.

---

[6] One portion of that exchange, the May, 2012 Modified Rapid Bus Technical Memorandum, is presented in FEIS Appendix 3.1-E.)