UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

October 26, 2007

Mark Yachmetz
Associate Administrator of Railroad Development
Federal Railroad Administration
1120 Vermont Avenue, NW, MS 20
Washington, D.C. 20590

Subject: Bay Area to Central Valley California High Speed Train System Draft Programmatic Environmental Impact Report/Environmental Impact Statement (CEQ# 20070303)

Dear Mr. Yachmetz:

The Environmental Protection Agency (EPA) has reviewed the Draft Programmatic Environmental Impact Report/Environmental Impact Statement (Draft PEIS) for the Bay Area to Central Valley California High Speed Train System. Our review is pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and Section 309 of the Clean Air Act. Our detailed comments on the entire Draft PEIS are enclosed. F007-1

EPA requested to be a cooperating agency in this "Tier 1", or programmatic environmental review NEPA process and has been working with Federal Railroad Administration (FRA) and California High Speed Rail Authority (CHSRA) to address the potential environmental impacts of the project as outlined in a June 12, 2006 Interagency Memorandum of Understanding (MOU). The Tier 1 process is expected to eliminate broad corridor alternatives from further consideration. Future "Tier 2", or project-level analyses, will address site-specific environmental impacts of the high speed train system. The MOU outlines a process for integrating the requirements of NEPA and Clean Water Act (CWA) Section 404 in Tier 1 to streamline the environmental review and permitting process in Tier 2. A federal permit from the Army Corps of Engineers under CWA Section 404 will be required for this project at Tier 2 due to anticipated fill of waters of the United States. The MOU seeks to ensure that the alignments advanced to Tier 2 are most likely to contain the "least environmentally damaging practicable alternative," a determination that is required for a CWA Section 404 permit.

EPA commends FRA and CHSRA's commitment to analyze a full range of alternatives connecting the Bay Area to the Central Valley in this separate PEIS, which includes Altamont Pass alternatives, and excludes alternatives that bysect Henry Coe State Park, as recommended by our agency and multiple additional stakeholders. While we are supportive of a high speed train system for California, and connecting Bay Area to the Central Valley, we have rated this project as Environmental Concerns – Insufficient Information (EC-2) based on impacts to F007-2

Printed on Recycled Paper

aquatic resources and the indirect and cumulative impacts analyses. A "*Summary of Rating Definitions*" for further details on EPA's rating system is enclosed. F007-2 Cont.

EPA's comments focus on issues we would like addressed before a Tier 1 Record of Decision is signed. We seek to alert FRA to the potential consequences of these decisions on future Tier 2 analyses. We have three major areas of concern for this Tier 1 project: 1) selection of the alternative corridors most likely to contain the LEDPA, 2) growth-related impacts, and 3) cumulative impacts to resources of concern. F007-3

As a cooperating agency, we look forward to meeting with you to discuss how this information can be addressed in the Final Tier 1 PEIS. This will help to ensure that the alignment moved forward for future Tier 2 project-level study is most likely to contain the least environmentally damaging practicable alternative, the only alternative that can be permitted under CWA Section 404, connecting the Bay Area to the Central Valley. We look forward to working with FRA and CHSRA to identify ways to address these issues and the other concerns identified in the enclosed detailed comments. F007-4

The enclosure further describes the above-listed comments and the additional environmental concerns that EPA identified following our review of the Draft PEIS. We appreciate the opportunity to review the Draft PEIS and believe that a well-planned high speed train system can offer great economic and environmental benefits for California's future. We look forward to continuing our coordination with FRA and CHSRA and are available to discuss the issues addressed in this letter during upcoming interagency meetings. If you have any questions, please feel free to contact Connell Dunning (415-947-4161) or Erin Foresman (916-557-5253), the lead reviewers for this project. F007-5

Sincerely,

Connell Dunning

For Nova Blazej, Manager
Environmental Review Office

Enclosures: EPA's Detailed Comments
Summary of Rating Definitions

cc: Mehdi Morshed, California High Speed Rail Authority
Jane Hicks, Army Corps of Engineers
Mark Littlefield, U.S. Fish and Wildlife Service

Integration of Clean Water Act and National Environmental Policy Act Requirements F007-6

The Federal Railroad Administration (FRA) and California High Speed Rail Authority (CHSRA) are using a tiered process for the National Environmental Policy Act (NEPA) analysis of the proposed project. The goal for this Tier 1 (programmatic) Environmental Impact Statement (EIS) is to identify a corridor for future Bay Area to Central Valley rail. The Tier 2 (project-level) EIS will analyze specific alignment options for the rail within the corridor(s) identified in Tier 1. After Tier 2 project approval, but before project construction, the project proponent will need to obtain a Clean Water Act (CWA) Section 404 individual permit from the U.S. Army Corps of Engineers (Corps).

The CWA Section 404(b)(1) Guidelines (Guidelines) are binding, substantive regulations that restrict CWA Section 404 permits to the "least environmentally damaging practicable alternative (LEDPA)." The Corps cannot grant a CWA Section 404 permit to a preferred project-level alternative that is not the LEDPA; therefore, it is critical that the LEDPA is not prematurely eliminated during the Tier 1 NEPA review.

FRA, CHSRA, Corps, and U.S. EPA Region IX agreed to follow a NEPA/CWA Section 404 Integration Process Memorandum of Understanding (NEPA/404 MOU) for Tier 1 decision making as the framework to guide the environmental review of the programmatic, Tier 1 project. The goal of the modified NEPA/404 MOU process is to ensure that Tier 1 decisions reflect careful consideration of the Guidelines. The Guidelines should be addressed as early as possible in the Tier 1 NEPA evaluation to eliminate the need to revisit decisions at the Tier 2 project-level that might otherwise conflict with CWA 404 permit requirements.

EPA has agreed with the first three checkpoints in the NEPA/404 MOU process – the purpose and need, criteria for selecting the range of alternatives, and the range of alternatives. The next steps in the process are: 1) to select the corridor(s) most likely to contain the LEDPA and 2) to determine the mitigation framework for the project.

Corridor(s) most likely to contain the LEDPA

Multiple Mountain Crossings F007-7

On January 22, 2007, EPA concurred with the range of alternatives to be analyzed in the Programmatic Draft EIS. EPA concurred on multiple alternatives to be analyzed, including Altamont Pass options and Pacheco Pass options, with potential bridge crossings. EPA did not, however, concur with the potential scenario of a high speed train system with *both* an Altamont Pass and a Pacheco Pass alignment. In follow up discussion with CHSRA and FRA, we have voiced a concern regarding potential doubling of impacts that would result from crossing at both the Altamont Pass and Pacheco Pass.

Recommendations:

In order to be consistent with the Guidelines, EPA recommends eliminating from further consideration a high speed rail alternative connecting Bay Area to Central Valley that includes both an Altamont Pass alignment and a Pacheco Pass alignment, termed

"*Pacheco Pass with Local Service*" in the Draft PEIS. This scenario would effectively result in twice the habitat fragmentation, noise, and indirect impacts to aquatic resources. This alternative would likely result in CWA Section 404 permitting challenges because it is difficult to demonstrate that mountain crossings at both Pacheco and Altamont Passes represent the LEDPA given the increased indirect and direct impacts to aquatic resources and habitat fragmentation associated with this alternative. F007-7 Cont.

Indirect Impacts

The Guidelines call for an analysis that compares the total impact – direct and secondary (indirect) – for each alternative. However, the Draft PEIS only includes direct impacts in the comparison of alternatives in some comparison matrices (e.g., Table S.5-1). It is important to include indirect, including growth-inducing impacts, in the alternatives analysis comparison, because an alternative with greater direct impacts, but fewer indirect impacts (including growth-related impacts) may be identified as the LEDPA if another alternative with greater indirect impacts is also being analyzed.[1] F007-8

Recommendation:
In order to be consistent with the Guidelines and determine which corridor is most likely to contain the LEDPA, the alternatives analysis should compare and present the alternatives using both direct and indirect impacts to environmental resources of concern.

Pacheco Pass and Altamont Alignments

As disclosed in the Draft PEIS, and as identified in the previously completed statewide High Speed Rail Programmatic DEIS, the Pacheco Pass alignments may result in substantial impacts to wetlands and other waters and may result in substantial impacts to jurisdictional waters. The Altamont Pass alignments also result in a large number of impacts to aquatic resources. The significant loss of aquatic resources associated with Pacheco Pass and Altamont alignments, as well as the impacts to wildlife corridors and habitat fragmentation, are not consistent with the substantive binding requirements of CWA Section 404(b)(1) Guidelines to avoid and minimize impacts to the maximum extent practicable (40 CFR 230.10 (a) and (d)). Specifically, the magnitude of impacts to bay waters and special aquatic sites may cause or contribute to significant degradation of waters of the United States (40 CFR 230.10(c)) and design modifications and commitments are needed to reduce impacts to resources. F007-9

Recommendations:
If the FRA and CHSRA choose to advance the Pacheco Pass alignments or Altamont Pass alignments for high speed rail to Tier 2 (or request the agencies concur that either alignment is the alternative most likely to contain the LEDPA), substantial alignment and design modifications would be important to reduce impacts consistent with the Guidelines.

Bay Crossings

The loss of waters associated with all Bay Crossings analyzed are not consistent with the substantive binding requirements of CWA Section 404(b)(1) Guidelines (40 CFR 230.10 (a) and F007-10

[1] Chapter 2.3, Guidance for Preparers of Growth-related, Indirect Impact Analyses. http://www.dot.ca.gov/ser/Growth-related_IndirectImpactAnalysis/gri_guidance.htm#cwadef

(c)). Specifically, the magnitude of impacts to bay waters and special aquatic sites may cause or contribute to significant degradation of waters of the United States (40 CFR 230.10(c)). All opportunities for reducing impacts should be clearly identified in order to determine if a route that includes a Bay Crossing is most likely to to contain the least environmentally damaging practicable alternative. F007-10 Cont.

Recommendations:
In order for an alternative to be considered as the LEDPA, all feasible (in terms of logistics, cost, technology, availability, etc.) design modifications to reduce impacts to waters should be incorporated. If FRA chooses to advance alignment options with Bay Crossing options, all design modifications, and more accurate estimates of potential impacts should be presented in the Final PEIS. This would inform decision-makers about the potential opportunities for reducing impacts to waters from the project.

Growth-related Impacts Analysis

Chapter 5, Economic Growth, provides an estimate of urbanization associated with the high speed train system and notes that specific station sites may lead to greater induced growth /urbanization than other station sites. For example, page 5-30 states the following: F007-11

In Stanislaus County, the Amtrak Briggsmore station could lead to the urbanization of 1,000 more acres in the county than the SP Downtown site, leading to additional indirect impacts; this difference between station sites accounts for about 35% of the difference in urbanized area size between the Altamont and Pacheco Network alternatives noted in Table 5.3-6 for Stanislaus County.

The information regarding potential induced growth impacts due to specific station sites is informative for decision-makers and should be highlighted to better inform ultimate choice of station locations. In addition, because urbanization estimates attributed to some station sites has such a large impact on the projected urbanization values (35% of all impacts in the above scenario), the Final PEIS should present a range of potential impacts, by resource, to each county, identifying low- and high-end estimates of potential urbanization.

Recommendations:

- Include a table of all proposed station sites with estimates of acres of induced growth/urbanization impacts associated with each location.
- Include a map of all proposed station sites showing the estimated area of induced growth/urbanization impacts associated with each location.
- Clearly delineate on the table what station sites would have the least projected acreage of induced urbanization and which station sites would have the greatest projected urbanization.
- Revise all values of impacts in tables in Chapter 5 to provide range of potential acreage/mileage impacts, including an "upper" and "lower" value. For example, for urbanization impacts to Stanislaus County, the acreage of urbanization should clearly reflect that, depending upon the choice of station, the impacts vary by 1,000 acres.

Chapter 5 concludes that Merced and Madera counties are likely to experience the greatest magnitude of secondary impacts. F007-12

Recommendation:

- In Chapter 5, include specific mitigation measures to address and offset high growth-inducing impacts to Merced and Madera counties, and other counties that will be most affected by potential growth-inducement from high speed train.
- Specifically, the Final PEIS should include a Growth Mitigation Plan to create a strategy for addressing, planning for, and mitigating growth-related impacts in counties that will be most affected. The Plan should include:
  - an outlined process for coordination with agencies that have land-use planning authority in the affected counties and location near the high speed train
  - a list of growth limiting and management measures, including changes in the General Plan designations, zoning, conservation easements, purchase of land
  - a suggested timeframe for coordinating with land-use planners, including who will initiate discussions, how the public will be involved, etc.
  - references to the transit-oriented principles that FRA and CHSRA have developed for the high speed train system.

Cumulative Impacts Analysis

F007-13

While NEPA provides for the option of cumulative impacts analyses to be limited through the use of tiering, as stated on page 3.17-2, it is important to note that the scope of this PEIS is not the same as the scope of the analysis for the Bay Area to Central Valley portion of the previously completed statewide high speed rail document. Therefore, tiering from the previously completed document would not have included information related to cumulative impacts resulting from the Altamont Pass project. In addition, EPA provided multiple recommendations to FRA and CHSRA for improving upon the Cumulative Impacts Analysis protocol that was used for the previously completed statewide PEIS, so EPA does not support any tiering from the conclusions provided in that document for this project.

EPA completed a preliminary review of the draft Cumulative Impacts Analysis in March 2007 and provided feedback through a memo from our agency to FRA and CHRSA. While some of our feedback was considered (as indicated below), several points were not incorporated. We provide the following recommendations for updating the cumulative impacts analysis and including it in the Final EIS as a follow up to recommendations already provided: F007-14

- As proposed by EPA through previous interagency correspondence, the following is a suggestion for steps in a cumulative impact assessment with recommendations accompanying specific steps. See the Caltrans Cumulative Impact assessment Guidance, which is applicable to non-highway projects: (http://www.dot.ca.gov/ser/cumulative_guidance/purpose.htm

Steps for Cumulative Impacts Analysis

1) Identify resources to consider in the impact analysis. F007-15

This is included in Section 3.17.4. EPA has no further recommendations regarding this step.

2) Define the study area for each resource. F007-16
This is not defined in the Draft PEIS Cumulative Impacts Section.

> **Recommendation:** The Draft PEIS should include a description of the study area examined for each resource.

3) *Describe the current health and historical context for each resource.* F007-17
This is generally described in Section 3.17.4 for each resource area. EPA has no further recommendations regarding this step.

4) *Identify direct and indirect impacts of the proposed project that might contribute to a cumulative impact.* F007-18

> **Recommendation:** Clarify in Section 3.17.4 what potential indirect and direct effects are substantial enough, when considering impacts from other projects, to contribute to significant cumulative impacts.

5) Identify other reasonably foreseeable actions that affect each resource. F007-19
Appendix 3.17.A includes a list of foreseeable projects, however the impacts from those projects to specific resource areas are not included.

> **Recommendation:** Clarify in Section 3.17.4 what potential indirect and direct effects are substantial enough, when considering impacts from other projects, to contribute to significant cumulative impacts.

6) *Assess potential cumulative impacts.*
Cumulative impacts are assessed in Section 3.17.4. EPA has no further recommendations regarding this step. F007-20

7) *Report the results.*
Results are reported in Section 3.17.4. EPA has no further recommendations regarding this step. F007-21

8) *Assess the need for mitigation.*
While multiple mitigation measures are described for the project level, it is unclear what process will be used to ensure that the future project-level environmental documents will incorporate the mitigation measures identified. F007-22

> **Recommendation:**
> - Include in Section 3.17.4 of the Final PEIS and the ROD a listing of all proposed mitigation proposed for project-level, so that all deferred mitigation is identified in one place and is easy to transfer to consultants, project managers, others, etc. who will be contributing to future project-level analyses.
> - Figure 3.17-1 depicting locations and titles for projects considered in the cumulative impact analysis is unreadable. Expand the size of the map or provide the same information in several larger formats.

Design, Mitigation, and Coordination Measures Deferred to Future Project-Level Analyses F007-23

As noted above in our comments on the Cumulative Impacts Section, there are multiple measures that are deferred until future project-level analyses. Each resource-specific section states multiple measures that are deferred until project-level analyses. For example, the Biological Resources Section (page 3.15-65-68) states:

> *"The following mitigation strategies would be applied at the project level for potential impacts on biological resources, when such strategies are appropriate and feasible, as determined by project-level analysis.*
>
> *....Biological resource management plans will contain the following information: ....d) sources of plant materials and methods of propagation.*
>
> *....During project-level review, where the agencies determine that mitigation is required to address site-specific impacts from the HST system, one strategy may be to purchase easements to preserve habitat for sensitive biological species."*

EPA is highly supportive of the multiple measures that CHSRA and FRA have identified as important for future project-level analyses. However, as currently written, mitigation measures are interspersed throughout the document, making it difficult to track commitments, considerations, and guidance for future project level analysis. Because the future success of the high speed train system is based on the ability of the project to be planned, constructed, operated, and maintained in a manner that avoids impacts to environmental resources to highest extent, EPA recommends that this information be compiled into a stand alone separately identified into a document.

Recommendations:
Include in the Final PEIS and the ROD a listing of all identified potential mitigation measures and design guidance, by resource area, for future project-level analyses. Provide this information in a stand-alone format so that it can easily be shared with future consulting teams and staff responsible for site-specific analyses. This will insure that all deferred possible mitigation and design measures are identified in one place and will be easy to transfer to consultants, project managers, others, etc. who will be contributing to future project-level analyses.

SUMMARY OF EPA RATING DEFINITIONS

This rating system was developed as a means to summarize EPA's level of concern with a proposed action. The ratings are a combination of alphabetical categories for evaluation of the environmental impacts of the proposal and numerical categories for evaluation of the adequacy of the EIS.

ENVIRONMENTAL IMPACT OF THE ACTION

"LO" (Lack of Objections)

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

"EC" (Environmental Concerns)

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

"EO" (Environmental Objections)

The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

"EU" (Environmentally Unsatisfactory)

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the CEQ.

ADEQUACY OF THE IMPACT STATEMENT

Category 1" (Adequate)

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

"Category 2" (Insufficient Information)

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analysed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

"Category 3" (Inadequate)

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analysed in the draft EIS, which should be analysed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640, "Policy and Procedures for the Review of Federal Actions Impacting the Environment."