Submission F001 (Michael Jewell, United States Army Corps of Engineers, October 12, 2011)

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO
CORPS OF ENGINEERS
1325 J STREET
SACRAMENTO CA 95814-2922

REPLY TO ATTENTION OF

October 12, 2011

Regulatory Division (SPK-2009-01482)

Mr. Dan Leavitt
California High Speed Rail Authority
925 L Street
Sacramento, California 95814

Dear Mr. Leavitt:

This letter is in response to the August 2011, *Fresno to Bakersfield Section Draft EIR/EIS* (DEIR/S) for the proposed Fresno to Bakersfield section of the California High-Speed Train (HST) Project. As a cooperating agency for preparation of the Environmental Impact Statement and in accordance with our *National Environmental Policy Act/Clean Water Act Section 404/Rivers and Harbors Act Section 14 Integration Process for the California High-Speed Train Program Memorandum of Understanding* dated November 2010 (NEPA/404/408 MOU), this letter is the U.S. Army Corps of Engineers' (Corps) formal response and contains comments that must be addressed prior to issuing the Final EIS. We also request a formal letter response to all comments contained herein.

After reviewing the August 2011 DEIR/S, we are concerned the document may not be sufficient in meeting the Corps' needs under the National Environmental Policy Act (NEPA) and the 404(b)(1) Guidelines, in particular with regard to alternatives and compensatory mitigation for impacts to waters of the United States. The following comments address specific areas where additional information is required and/or corrections should to be made to meet our needs. The comments also include a review of the document for completeness with the 404(b)(1) guidelines.

NEPA/404/408 MOU

F001-1 1. In accordance with the NEPA/404/408 MOU, the California High-Speed Rail Authority (Authority) and the Federal Rail Administration (FRA) submitted the final Checkpoint B package on April 21, 2011 with the reasonable range of alternatives proposed to be carried forward in the DEIR/S. The Corps responded on July 5, 2011, agreeing with the range of alternatives as proposed, with the exception of the elimination of the Hanford West Bypass Alternative. This alternative was not adequately evaluated and should not have been eliminated from the range of alternatives in the DEIR/S and 404(b)(1) analysis. We have previously requested a formal response letter identifying the status of this alternative. To date, we have not received a response and Checkpoint B is not considered closed.

F001-2 2. Without closure on Checkpoint B, we will not be able to complete Checkpoint C. Aside from resolution on alternatives, we are troubled with what appears to be only limited progress

F001-2 towards constructing a draft compensatory mitigation plan that would adequately offset anticipated impacts to waters of the U.S. As you know, we have attended meetings over the past year in which we provided information about our compensatory mitigation regulations and mitigation proposal guidelines, as well as suggestions on potential mitigation proposals and sites. A draft mitigation plan submitted with the Checkpoint C package must contain a proposal with specific details about the elements of the permittee-responsible mitigation project(s). We note that there are no Corps-approved mitigation banks or in lieu fee programs in the area of the proposed HST Fresno to Bakersfield section. We cannot make a preliminary determination on the least environmentally damaging practicable alternative without evaluating a draft mitigation plan.

DEIR/S Comments

F001-3 1. Address Substrate conditions for aquatic features *(40 CFR 230.11(a) and 230.20)*

F001-4 2. Address Impacts to substrate and the restoration of temporary fill outlined in 3.7.5(c), pg 3.7-56 *(40 CFR 230.20)*

3.

F001-5 4. Address potential contaminants in the fill material *(230.11(d))* and a general evaluation of fill material *(40 CFR 230.60, 230.61)*

F001-6 5. The identification of turbidity and suspended particulates is only briefly mentioned as a potential contaminant. How the project would add to the turbidity and suspended particulates of all effected waters should be included *(40 CFR 230.21)*

F001-7 6. Impacts to non special-status species need to addressed *(fish, crustaceans, mollusks, and other organisms in the food web 40 CFR 230.31) (other wildlife 40 CFR 230.32)*

F001-8 7. You need to clarify the cost or funding for station parking lots *(Sec 2.5.3, pg 2-8)*. Who is expected to pay for the parking lots and how much would the Authority or the City be responsible for.

F001-9 8. The document should specifically reference the screening criteria used in the elimination of alternatives.

F001-10 9. What happened to the proposed trench within Fresno as proposed in the 4/21/11 checkpoint B letter *(Attachment G, pg G-1)*? Checkpoint B said that there would be a trench/at-grade/elevated combination, the EIS does not mention this alternative.

F001-11 10. The reference to "other parties" on the top of pg 2-27 needs to be clarified or removed

F001-12 11. For HMFs and Stations there is no text describing permanent impacts to wildlife or habitats of concern. For HMFs only, there is no text describing permanent impacts to wildlife corridor.

Submission F001 (Michael Jewell, United States Army Corps of Engineers, October 12, 2011) - Continued

F001-13 12. Separate seasonal wetlands/vernal pools into two separate categories in tables 3.7-7 *(pg 3.7-37)* and 3.7-9 *(pg 3.7-48)*

F001-14 13. Include the following statement about mitigation ratios in Bio-MM #61 (pg3.7-138), "The following ratios are proposed as a minimum for compensation for permanent impacts, final ratios will be determined in consultation with appropriate agencies." This statement should be at the beginning of the ratio discussion, not as a bullet below the proposed ratios.

F001-15 14. For Table S-2 *(pgs S-23, 24)* clarify that the term "jurisdictional waters" includes waters of the US and waters of the state

F001-16 15. The project termini in section 2.3.2 *(pgs 2-17, 18)* has two sets of project review termini. Clinton Ave in Fresno to Oswell St in Bakersfield is a larger review area identified for the subsections and in the first paragraph on page 2-18 as the termini for the alternatives analysis report. The smaller review area from Clinton Ave in Fresno to Oswell St in Bakersfield is identified in the last paragraph on page 2-17 as the review area for the EIS. Why was the review area for the EIS shortened by approximately 5.5 miles from the review area for the alternatives analysis? Based on the statement in the first paragraph on page 2-18, the longer review area starts and stops at logical termini. The shortening of the review area within Bakersfield removes approximately 2.5 miles of each alternative from Baker St to the point where they come together at Oswell Street, thus removing those impacts from the alternatives analysis. The LEDPA determination and analysis under NEPA is incomplete without inclusion of these additional impacts since the determination of an alternative would determine which path is taken through the additional 2.5 miles to Oswell Street with these additional impacts never being analyzed or publically reviewed.

F001-17 16. The elimination of the West Hanford alternative *(pg 2-25)* was not agreed to by the Corps and requires greater analysis. Data provided by the Authority shows that this alternative would result in fewer impacts to riverine habitat, riparian habitat, and residential and commercial parcels, but more impacts to seasonal wetlands, threatened and endangered species, and indirect impacts to residential communities. This alternative meets the project purpose and need and requires greater analysis within the EIS in order to be eliminated. Very little information was included about this alternative and why it was eliminated. This alternative must be included in greater detail. Multiple comments have been received for the Kings County portion of this project and the full review of an additional alternative within this area is warranted.

F001-18 17. Temporary impacts – *(pg 3.7-56, Bio-MM#20, pg 3.7-126, Bio-MM#45, pg 3.7-132).* Due to the scope and duration of the project, we do not agree that all construction impacts can be adequately restored to pre-project conditions in every location/situation. We are unable to concur that these impacts would be temporary and recommend that temporary impacts be reevaluated and considered permanent in locations where waters would be filled during the construction period. The placement of geotextile fabric and gravel or the stockpiling of topsoil have been successfully used in previous projects where the impact would only last a few months. Our understanding is that the construction period would last several years and the landscape would be degraded through compaction and other land uses depending on the specific location. We suggest that waters be avoided by placing fencing around the features or by implementing

F001-18 other avoidance measures in order to leave the substrate in a pre-project condition. Although the feature would still be temporarily impacts, this would allow for successful restoration of temporary impacts upon completion of construction activities.

F001-19 18. The duration of the construction period is not identified. Section 2.8 defines the construction plan and multiple parts thereof, but fails to identify a timeline for completing the work. The estimated duration of the construction period should be clearly stated.

F001-20 19. Indirect impacts to waters of the U.S. need to be addressed and to the degree possible quanitified. Include acreages of features that would be indirectly impacted. The study area for indirect impacts has been identified as 250 feet on either side of the 100-foot project footprint *(pg 3.7-7)*. Please provide acreages of features within this study area that would be indirectly impacted

F001-21 20. The "Seasonal Wetlands and Vernal Pools" category in the Aquatic Communities impact tables *(Table 3.7-7, -9, -11)* should be separated into two categories of wetland type.

F001-22 21. Impacts to waters o the U.S. resulting from crossings needs to be clarified by crossing type. The current analysis relies on the number of water bodies being crossed. Although potential crossing types are identified *(pg 3.8-41, -42)*, a commitment should be made to which types of crossing would be installed at each type of waterway/track elevation. This would allow for an accurate analysis of the project impacts and increase the amount of avoidance. Once the crossing type is identified, you can also identify measures to reduce the impacts resulting from that crossing type. This would also allow reviewers to provide specific feedback on the type of crossing proposed.

F001-23 22. Stormwater Pollution Prevention Plan best management practices *(pg 3.8-58, -59)*. The list of BMPs should be those actually proposed for the project rather than a list of "typical BMPs". The inclusion of BMPs in the EIS that may not be part of the final project would alter the impact analysis. Since the SWPPP has not been prepared at this time, a statement can be included that, "BMPs will include, but are not limited to, the following".

F001-24 23. Agricultural Impacts Tables *(Table 3.14-5, -6, pgs 3.14-32)*. Format these tables as delta tables similar to the biological and aquatic resource impact tables so that the impacts from each alternative bypass can be directly compared to the opposing section of the BNSF alignment. In order to make the tables easier to read and consistent with other tables, replace the "0" with a "-" when the cell is not applicable (i.e. the bypass is not in that county).

F001-25 24. What is the actual acreage required for the HMF site? Pages 2-14 and 2-79 state that the HMF requires approximately 150 acres while page 3.1-4 says up to 154 acres. This is not consistent with the DEIR/S for the Merced to Fresno section which states that the HMF requires either 154 acres *(pg 2-15)*, between 231 and 401 acres depending on the site *(Table 2-13, pg 2-82)*, or up to 300 acres *(pg 3.1-4)*. Verify the acreage required for the HMF and if this is dependent on the actual site selected.

F001-26 25. There is some confusion about the amount of aquatic resources that would be impacted in the Corcoran area as indicated in Table 3.7-9 *(pg 3.7-48)*. The Corcoran Bypass, Corcoran

Submission F001 (Michael Jewell, United States Army Corps of Engineers, October 12, 2011) - Continued

F001-26

Elevated, and corresponding BNSF Alternative all appear to analyze the same segment between Idaho Ave and Ave 136 *(pg 2.61)*. The following inconsistencies appear with the riverine, seasonal wetlands and vernal pools, and lacustrine habitat.

a. The table indicates that the Corcoran Bypass Alternative has 9.12 acres of riverine habitat while we can only count approximately 6.5 acres in the delineation. The table indicates that the 9.12 acres is 8.04 acres less than the BNSF alternative for this section. That would mean that the BNSF alternative has 17.16 acres of riverine impacts within the Corcoran section. We were only able to count approximately 7.5 acres in the delineation. The Corcoran Elevated Alternative has 2.15 acres, which is 1.35 acres less than the BNSF Alternative. This would indicate that the BNSF Alternative only has 3.5 acres. How many acres are actually in the corresponding segment of the BNSF Alternative?

b. The Corcoran Bypass has 1.23 acres of seasonal wetlands and vernal pools which is 0.24 acres less than the BNSF Alternative. The BNSF Alternative should therefore have 1.47 acres. This category is not applicable to the Corcoran Elevated Alternative, as indicated with a "-" within the cell. This would indicate that neither the Corcoran Elevated nor the BNSF Alternative have any seasonal wetland and vernal pool impacts. Are there seasonal wetlands and vernal pools within the BNSF alignment? If so, how many?

c. There is also a discrepancy in the amount of Lacustrine habitat. The Corcoran Bypass Alternative has 0.04 acres of impacts, 0.80 less than the BNSF Alternative. The BNSF Alternative should therefore have an approximate 0.84 acres. The Corcoran Elevated Alternative would have 0 acres which is 0.42 acres less than the BNSF Alternative. The BNSF Alternative should therefore have 0.42 acres. How many acres of lacustrine impacts does the BNSF Alternative have?

F001-27

26. Verify that the list potential cumulative effects in tables 3.19-1 through 3.19-7 are consistent and accurate for all projects. Applications have been submitted for a Department of the Army for multiple projects listed. These projects have impacts to wetlands and other aquatic resources as well as threatened and endangered species that are not listed here. There are also inconsistencies with similar projects that have different effects listed.

F001-28

27. Chapter 3.19 does not analyze the cumulative impacts by alternative. The cumulative impacts must be shown separated by alternative in order to better inform the selection of a preferred alternative and the LEDPA. Based on the location of the alternatives and the resources or receptors being affected, the cumulative effects would differ.

F001-29

28. How do you know that permanent losses that may occur to unknown cultural resources would result in moderate cumulative impacts? Without knowing what the resources may be, there is no way of knowing what level of impacts would occur.

We appreciate the opportunity to provide comments on the DEIR/S. We continue to be committed to working collaboratively with you to resolve issues, avoiding the need for

supplemental documentation and delays in making a timely permit decision. If you have any questions, please contact Zachary Simmons in our California South Regulatory Branch, 1325 J Street, Room 1480, Sacramento, California 95814-2922, email *Zachary.M.Simmons@usace.army.mil*, or telephone 916-557-6746.

Sincerely,

Michael S. Jewell
Chief, Regulatory Division

Copy Furnished

Mr. David Valenstein, Federal Railroad Adminstration, 1200 New Jersey Avenue SE- Mail Stop 20, Washington, D.C. 20590-0001
Ms. Connell Dunning, U.S. Environmental Protection Agency, Region IX, 75 Hawthorne Street, San Francisco, California 94105
Mr. Jason Brush, U.S. Environmental Protection Agency, Region IX, 75 Hawthorne Street, San Francisco, California 94105
Mr. Bryan Porter, Parsons Brinckerhoff, 925 L Street, Suite 1425, Sacramento, California 95814-3704

Response to Submission F001 (Michael Jewell, United States Army Corps of Engineers, October 12, 2011)

F001-1

Based on substantive comments received during the public and agency review of the Draft EIR/EIS, the Authority decided to reintroduce alignment alternatives west of Hanford. In response to concerns raised by stakeholders in metropolitan Bakersfield, the Authority and FRA also decided to evaluate another alternative in Bakersfield (Bakersfield Hybrid Alternative) that would minimize impacts on residential and community facilities. The Authority and FRA determined that the introduction of these new alternatives and refinements being considered for existing Fresno to Bakersfield route alternatives required publication of a Revised DEIR/Supplemental DEIS in compliance with CEQA and NEPA. That document was released for public and agency review in July 2012.

F001-2

A Revised DEIR/Supplemental DEIS was circulated for public review that included an analysis of alternatives west of Hanford. The inclusion of this analysis brought closure to the Checkpoint B process (Authority and FRA 2011d). The Authority has been developing a compensatory mitigation plan for the project in coordination with the U.S. Army Corps of Engineers.

F001-3

Thank you for your comment. The text of the Revised DEIR/Supplemental DEIS has been
revised in response to your comment in Section 3.7.4.5, Habitats of Concern (under Affected Environment), Biological Resources and Wetlands, and is included as part of the discussion of impacts on jurisdictional waters (Impact Bio #3 and Impact Bio #6).

F001-4

Thank you for your comment. The text of the Revised DEIR/Supplemental DEIS in Section 3.7, Biological Resources and Wetlands, has been revised in response to your comment. The revised text includes the source of the fill and provides for temporary fill free from toxic pollutants in toxic amounts in accordance with Section 307 of the Clean Water Act (Section 3.7.5 Impact Bio #3). Section 3.7.7, Mitigation Measure Bio-48, provides for restoration of waters of the U.S. subject to temporary fill.

F001-5

The origin of fill materials to be used for the project has yet to be determined; however, the temporary fill would be supplied by local sources and from existing permitted quarries, to the extent practicable. Fill material would be suitable for construction purposes and free from toxic pollutants in toxic amounts in accordance with Section 307 of the Clean Water Act.

In the Revised DEIR/Supplemental DEIS, fill materials are addressed in Section 2.8.1, General Approach, and in Section 3.7 under Impact Bio #3 – Construction Effects on Habitats of Concern, and Impact Bio #7 – Project Effects on Habitats of Concern.

F001-6

Refer to Standard Response FB-Response-HWR-05.

Operation of the HST should not contribute to turbidity and suspended particles. During construction there could be the construction of bridge abutments or installation of piers in the larger rivers. However, mitigation measures described in Section 3.7, Biological Resources, restrict construction in stream and rivers during the winter season.

F001-7

Impacts on non-special-status species are addressed in the Revised DEIR/Supplemental DEIS under Impact Bio #2 – Construction Effects on Special-Status Wildlife Species, Native Fauna, and Impact Bio #6 – Project Effects on Special-Status Wildlife Species, Native Fauna.

F001-8

As indicated in Section 3.2 of the EIR/EIS, the Authority will coordinate its plans for parking facilities with the local communities where stations will be located. Chapter 2 of the EIR/EIS provides the Authority's estimate of maximum parking required for each station assuming that there is no existing public parking available for the HST patrons. It is not the intent of the Authority to construct all of this parking when each station opens. Instead, parking demand will be met through a combination of new parking structures near the station paid for by the Authority and reliance on existing public spaces as determined appropriate in consultation with the local community. Additional parking

Response to Submission F001 (Michael Jewell, United States Army Corps of Engineers, October 12, 2011) - Continued

F001-8

would be provided by the Authority as demand requires over time.

F001-9

The text of the Revised DEIR/Supplemental DEIS has been revised in Chapter 2, Alternatives, Section 2.3, in response to your comment.

F001-10

The text of Chapter 2, Alternatives, of the Revised DEIR/Supplemental DEIS was revised in response to your comment. Because the majority of the proposed trench referenced in the April 21, 2011, Checkpoint B letter (Ahority 2011j) occurs north of Amador Street in Fresno, the majority of the trench falls within the project limits of the Merced to Fresno Section. In the Fresno to Bakersfield Revised DEIR/Supplemental DEIS, the description of the BNSF Alternative through Fresno has been revised in Section 2.4.2, BNSF Alternative, to include the approximately 140 yards of below-grade track that would cross the Fresno Bee railroad spur.

The Merced to Fresno Final EIR/EIS (Authority and FRA 2012b) can be found on the Authority's website.

F001-11

The text of the Revised DEIR/Supplemental DEIS in Chapter 2, Alternatives, has been revised in response to your comment. The reference to "other parties" in Section 2.3 has been removed.

F001-12

Thank you for your comment. The text of the Revised DEIR/Supplemental DEIS has been revised in response to your comment in Section 3.7, Biological Resources and Wetlands.

Please refer to the subsections for Heavy Maintenance Facility Alternatives and“Station Alternatives and corresponding Tables 3.7-11, 3.7-12, 3.7-14, 3.7-15, and 3.7-16, in Section 3.7.5.3, High-Speed Train Alternatives.

F001-13

The categories of aquatic communities in Tables 3.7-7, 3.7-9, and 3.7-10, in Section 3.7, Biological Resources and Wetlands, have been revised in response to your comment.

F001-14

Because of the addition of mitigation measures in the Draft EIR/EIS, Section 3.7, Biological Resources and Wetlands, Mitigation Measure Bio-61 (page 3.7-138) was renumbered to be Mitigation Measure Bio-63 in the Revised DEIR/Supplemental DEIS. Mitigation Measure Bio-63 in the Revised DEIR/Supplemental DEIS was also updated to incorporate the U.S. Army Corps of Engineers' recommended language. The text now states “The following ratios are proposed as a minimum for compensation for permanent impacts; final ratios will be determined in consultation with the appropriate agencies….” This statement is found at the beginning of the mitigation ratios and not at the bottom, as originally presented in the Draft EIR/EIS.

F001-15

The text of the Revised DEIR/Supplemental DEIS also did not clarify that the term "jurisdictional waters" includes waters of the U.S. and waters of the state. The Final EIR/EIS has been revised in response to this comment, and a footnote to Table S-2 has been added that defines and clarifies the fact that jurisdictional waters include waters of the U.S. and waters of the state.

F001-16

The logical termini for the Fresno to Bakersfield project for purposes of environmental review are the stations in Fresno and Bakersfield. Alternative alignments identified for the HST north of Fresno merged at Clinton Avenue, and alternative alignments identified south of Bakersfield merged at Oswell Street. Therefore, identification of possible alternatives in the Fresno to Bakersfield Section could be developed between Clinton Avenue and Oswell Street without affecting decisions on alternative alignments north and south of those points. The EIR/EIS for the Merced to Fresno Section of the HST provides a complete evaluation of project impacts between Clinton Avenue and the Fresno HST Station. The Revised DEIR/Supplemental DEIS for the Fresno to Bakersfield Section provides a complete evaluation of project impacts from the alternative Bakersfield HST Station sites to Oswell Street.

Response to Submission F001 (Michael Jewell, United States Army Corps of Engineers, October 12, 2011) - Continued

F001-16

The environmental analysis of the Fresno to Bakersfield Section was extended to Oswell Street even though it is outside the termini for this section. This was done to provide the public and decision makers with a complete understanding of the impacts associated with the section of an alternative alignment that is to service a station in Bakersfield.

F001-17

Two alternatives west of Hanford were evaluated in the Revised DEIR/Supplemental DEIS for the Fresno to Bakersfield Section. These alternatives are described in Section 2.4.3 of the Revised DEIR/Supplemental DEIS and evaluated in Chapter 3 of the document.

F001-18

Temporary impacts have been revised based on an evaluation of construction impacts on jurisdictional water features. The revisions were made in coordination with the U.S. Army Corps of Engineers and were incorporated into the Revised DEIR/Supplemental DEIS. Most jurisdictional waters can be restored to the predisturbance condition. However, vernal pools and swales are sensitive to disturbance, and it is unlikely that these features could be restored to pre-project conditions. Therefore, all impacts on vernal pools are considered permanent, are discussed under project impacts, and will be mitigated using offsite compensatory mitigation.

Additionally, the commenter's suggestions to avoid impacts on aquatic resources, where possible, through the installation of exclusion fencing or the placement of geotextile fabric and gravel to protect the soil and feature contours, have been incorporated into Mitigation Measure BIO-20: Vernal Pool Protection (which applies to special-status wildlife and jurisdictional waters) in the Revised DEIR/Supplemental DEIS. These suggested mitigation measures have been added to Mitigation Measure BIO-20 because they are a feasible and effective means of reducing impacts on vernal pool.

For temporary impacts on other jurisdictional water features, stockpiled and segregated soils will be replaced following construction to restore the original topography of the features (Mitigation Measure BIO-48).

F001-19

The approximate schedule for construction of the Fresno to Bakersfield Section of the HST System is provided in Chapter 2, Alternatives, Section 2.8 of the Revised DEIR/Supplemental DEIS. Estimated beginning and end dates of construction activities are provided in Table 2-17.

F001-20

Indirect impacts on jurisdictional waters are described qualitatively and presented quantitatively in Tables 3.7-7 and 3.7-13, as well as in Appendix 3.7-B, Attachment 4. The impact acreage presented for indirect impacts was determined by calculating the area of jurisdictional water features that fall within 250 feet of the construction footprint. For vernal pools and swales, an additional category “indirect bisected” is presented under indirect impacts to quantify impacts on features that are bisected by the boundary of the project footprint (i.e., where a vernal pool or swale straddles the project footprint boundary). This category presents the acreage for the portion of these features that lies outside the project footprint but within 250 feet.

F001-21

Thank you for your comment. The categories of aquatic communities in Tables 3.7-7, 3.7-8, 3.7-9, and 3.7-10 have been revised in response to your comment in Section 3.7, Biological Resources and Wetlands.

F001-22

Project impacts associated with crossing types (e.g., bridge, culverts) are evaluated in Chapter 3.8, Hydrology and Water Resources, of the Revised DEIR/Supplemental DEIS. The crossing type at specific locations are identified in Appendix 3.8-A of the Revised DEIR/Supplemental DEIS, in the Hydrology and Water Resource Technical Report, and in the Fresno to Bakersfield Section Hydrology, Hydraulics, and Drainage Report.

F001-23

The text in Chapter 3.8.6, Project Design Features, of the Revised DEIR/Supplemental DEIS has been revised to incorporate your suggested change to identify the minimum storm water best management practices that will be required in the Stormwater Pollution

Response to Submission F001 (Michael Jewell, United States Army Corps of Engineers, October 12, 2011) - Continued

F001-23

Prevention Plan.

F001-24

Your suggestion about the delta tables has been taken into consideration.

F001-25

The text of the Revised DEIR/Supplemental DEIS has been revised in Chapter 2, Alternatives, in response to your comment. The heavy maintenance facility (HMF) would require appoximately 154 acres, as described in Section 2.2.8, Maintenance Facilities, and Section 2.4.6, Proposed Heavy Maintenance Facilities Locations. As described in Section 2.4.6, the five HMF sites under consideration for the Fresno to Bakersfield Section vary in size, physical factors, and accessibility. The HMF site descriptions identify available acreages, ranging from 420 to 590 acres depending on the site, while the facility itself would require fewer acres, at approximately 154.

F001-26

The Draft EIR/EIS did not analyze impacts on the three Corcoran alternatives from the same start and end points, which resulted in inherent discrepancies between the three alternatives (BNSF Alternative, Corcoran Elevated, and Corcoran Bypass). These discrepancies were present in reporting for wetlands and other waters of the U.S.

As part of the Revised DEIR/Supplemental DEIS, these discrepancies were removed and the Corcoran alternatives were analyzed from the same start and end points. This allows for a direct comparison among all three alternatives. As such, the impact numbers presented in the Revised DEIR/Supplemental DEIS, Section 3.7, Biological Resources and Wetlands, have been revised in response to your comment. Specifically, Table 3.7-7 and Appendix 3.7-B, Attachment 4, provide accurate comparisons of impacts on wetlands and other waters, by alternative.

F001-27

The text of the Revised DEIR/Supplemental DEIS has been revised as a result of comments received on the Draft EIR/EIS and additional consultation with public

F001-27

agencies.

The list of reasonably foreseeable development projects, plans, and transportation projects considered in the cumulative condition are provided in Appendix 3.19-A and Appendix 3.19-B. The listed potential significant impacts after mitigation are based on information from previously prepared project-specific or program EIRs documenting resources with significant impacts after mitigation. If an EIR for a project or plan determined that there would be less-than-significant impacts after mitigation for a particular resource, that resource was not listed in the table.

F001-28

Section 3.19, Cumulative Impacts, has been revised to include a greater comparison of the contribution to cumulative impacts specific to the HST alternatives. Differences in the cumulative impacts are identified for HST alternatives, where they exist. However, as described in Section 3.19, Cumulative Impacts, of the Revised DEIR/Supplemental DEIS, the differences in the cumulative impacts between the HST alternatives are generally minor, with no apparent discriminators among the alternatives, except in some cases where noted in the revised text.

F001-29

Refer to Standard Response FB-Response-CUL-01.

Built Environment survey for the FB Section has been completed, therefore all architectural historic properties (NHPA) and historical resources (CEQA) within the APE are known. As stated in Chapter 3.17.4, and as per NEPA, a statement regarding the intensity of impact is required, and, as such, a moderate impact is still considered an adverse effect for the purposes of cultural resources. In the case of unknown resources, this potential impact was considered an adverse effect or significant impact that can be mitigated to less than significant through implementing accidental discovery procedures.

Submission F002 (D.H. Sulouff, United States Department of Homeland Security, United States Coast Guard, September 26, 2011)

U.S. Department of Homeland Security
United States Coast Guard

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16951
California High Speed Rail
Merced to Fresno Section
Fresno to Bakerfield Section
18 Aug 2011

MEMORANDUM

From: D.H. SULOUFF
Chief, Bridge Section

To: U.S. Army Corps of Engineers, Sacramento District
Attn: Zachary Simmons, Project Manager

Subj: CALIFORNIA HIGH SPEED RAIL PROJECT, MERCED TO BAKERFIELD

F002-1

1. We have completed our review of the USACE Public Notices (PN) SPK-2009-01482 and SPK-2009-01483, dated 15 August 2011, for the Merced-Fresno and Fresno –Bakersfield sections of the California High Speed Rail Project (CAHSR). The proposed waterway crossings, along the alignments outlined in the PN, are upstream of our limit of jurisdiction for bridge permitting purposes.

2. Under the provisions of the Coast Guard Authorization Act of 1982, the Coast Guard has determined these sections of the CAHSR do not require Coast Guard involvement for bridge permit purposes.

3. Please keep us informed on the further development of other segments of the proposed rail line.

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Response to Submission F002 (D.H. Sulouff, United States Department of Homeland Security, United States Coast Guard, September 26, 2011)

F002-1

Thank you for your comments. Comments noted.

Submission F003 (Timothy Smith, United States Department of the Interior, Bureau of Land Management, September 28, 2011)

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
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1795(P)
CA-160

September 28, 2011

To: California High-Speed Rail Authority,
Fresno to Bakersfield Draft EIS Comments

From: Field Manager,
BLM, Bakersfield Field Office

Subject: Bureau of Land Management (BLM) comments on the Federal Railroad Administration (FRA) Draft EIS, California High-Speed Train (HST): Fresno to Bakersfield Section High-Speed Train (ER11-0714)

The Bureau of Land Management's (BLM) Bakersfield Field Office has reviewed the California High Speed Train Project Fresno to Bakersfield Section Draft EIR/EIS and offers the following comments.

The BLM's Atwell Island Project is located approximately four (4) miles west of the current BNSF alignment and approximately two (2) miles west of the Allensworth Bypass Alternative. Over the past 10 years, the Atwell Island Project has purchased 8,000 acres of marginal farm land and is in the process of restoring this land to native Alkali Sink, Valley Grassland, and Wetland habitats. One of the functions of the project lands is to provide wildlife linkage habitat between Sand Ridge and Kern National Wildlife Refuge to the west and Allensworth State Historic Park, Allensworth Ecological Reserve, and Pixley National Wildlife Refuge to the east. We believe that the BNSF alignment would have much smaller adverse impact on biological resources than the Allensworth Bypass alternative.

F003-1

The Allensworth Bypass alternative would have environmental impacts that are not addressed or have been underestimated in the Draft EIR/EIS. First, although this route segment is proposed to be constructed entirely at grade level, it would traverse the Alpaugh Irrigation District ponds (just north of Ave. 56 and just west of Hwy 43). It would also pass through the Ton Tache lake bed for approximately seven (7) miles – a shallow lake that was historically fed by Poso Creek, White River, and Deer Creek, today, during wet winters (such as 2010/2011) water can be up to four feet deep in this basin potentially flooding the proposed route. The alignment would also cross several Natural Resource Conservation Service Floodplain Easements south of Ave. 56, in the Ton Tache lakebed, which is not mentioned in the Draft EIR/EIS.

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F003-1

Second, the Allensworth Bypass route would bisect the chain of wetlands from Pixley National Wildlife Refuge (NWR) to Kern NWR that are part of the larger, landscape scale conservation strategy. The Alpaugh Irrigation District ponds have breeding colonies of several colonial water bird species: White-faced Ibis (up to 500 pairs), Black-crowned Night Herons (50 to 100 pairs), and Snowy Egrets (up to 50 pairs). The Draft EIS/EIR, however, does not discuss the potential effects to wetland bird species, including migratory and breeding birds and special-status species. Additionally, there is no mention of the impacts on wildlife (specifically avian species) from the power lines and towers associated with the High-Speed Train in the vicinity of these wetland areas.

The alignment would cross the historic Ton Tache lake shore in two locations and the vicinity of the southernmost crossing has potential for a population of the State and Federal Endangered Blunt-nosed Leopard Lizards (BNLL). It is hard to tell the exact location of this alignment from the Draft EIR/EIS maps, but it passes within one mile, and maybe less depending on the location of the tracks, of an existing, high density population of BNLLs. Dispersers from this population have been found up to two miles away to the northwest on the Atwell Island Project and a similar dispersal is possible to the east. Much of the area that is described in the Draft EIR/EIS to be "farmland" has not been farmed in many years and has potential for populations of several State and Federal Threatened and Endangered species and State Species of Special Concern, including, but not limited to: American badger, San Joaquin kit fox, San Joaquin coachwhip, golden eagle, Tipton kangaroo rat, Western spadefoot toad, and coast horned lizard. This area has documented populations of burrowing owl, a BLM sensitive species and California Species of Special Concern.

F003-2

Finally, the Allensworth Bypass would have the effect of further fragmenting an already highly fragmented landscape and would pass through a relatively undisturbed area. The Bypass would also bisect the existing wildlife movement corridor between Kern National Wildlife Refuge, Sand Ridge, and Atwell Island to the west and Pixley National Wildlife Refuge to the east. The suggested option in the Draft EIR/EIS to move the BNSF tracks west to parallel the Allensworth Bypass would only compound the wildlife movement issues because Highway 43 would continue to be a barrier to wildlife movement and therefore there would be two barriers to wildlife movement instead of the one that currently exists. A better solution would be to use the BNSF alignment for the HST and to provide adequate wildlife movement underpasses under both the existing Highway 43, BNSF tracks, and the new HST tracks. This would preserve habitat connectivity of the Deer Creek-Sand Ridge linkage in the Atwell Island area and concentrate the impacts in an area that is already highly disturbed, thus fulfilling the project's objective of minimizing impacts to wildlife corridors.

Submission F003 (Timothy Smith, United States Department of the Interior, Bureau of Land Management, September 28, 2011) - Continued

If you have any questions, please contact Steve Laymon, Atwell Island Manager at the above address or by phone at 559-949-8486.

Sincerely,

/s/ *Timothy Z. Smith*
Timothy Z. Smith
Bakersfield Field Manager
Bureau of Land Management

cc: Regional Environmental Officer, OAK

"Visit us on the Internet at http://www.ca.blm.gov/bakersfield"

Response to Submission F003 (Timothy Smith, United States Department of the Interior, Bureau of Land Management, September 28, 2011)

F003-1

Thank you for your comment and support of the BNSF Alternative in the Allensworth Area. However, while some impacts may be reduced through the selection of the BNSF Alternative (Through Allensworth), other biological resource impacts would increase. For example, the BNSF Alternative would result in impacts on both Allensworth State Historical Park and Allensworth Ecological Reserve. Both of these natural areas contain extensive habitat for special-status species (including federal- and state-listed plants and animals), as well as special aquatic resources (vernal pools). When these resources are compared, the Allensworth Bypass has fewer impacts on these resources, as discussed in the Revised DEIR/Supplemental DEIS. Please see the delta tables provided in Appendix 3.7-B for comparisons of the construction and project impacts on biological resources. The Authority and FRA have fully addressed and accurately presented impacts associated with the Allensworth Bypass Alternative.

The Revised DEIR/Supplemental DEIS, Section 3.7, Biological Resources, was revised to include reference to aquatic resource impacts on Alpaugh Irrigation District ponds. Furthermore, FRA and Authority reviewed existing information to identify and discuss Ton Tache Lake. However, Ton Tache Lake is a water body that is also considered part of the historic Tulare Lake. Depending on the mapping and extent of the historic lake uses, the historic lakes are either west of, or within a small portion of, the Allensworth Bypass Alternative. Because these lakes are historic and all aquatic resources within the study area have been mapped, impacts on these features have been fully and accurately described. Neither CEQA or NEPA require consideration of historic lakes as part of the impact analysis. Impacts associated with floodplains and flooding are described in detail in Section 3.8, Hydrology and Water Quality, of the Revised DEIR/Supplemental DEIS.

The project would affect wetlands located between Pixley National Wildlife Refuge and Kern National Wildlife Refuge; however, the Allensworth Bypass has been designed to avoid, to the maximum extent practicable, impacts on aquatic resources in the area. This area is not part of an adopted Habitat Conservation Plan or designated critical habitat. Impacts on recovery plans for the select special-status species are described in the Section 3.7 of the Revised DEIR/Supplemental DEIS. No other conservation plans or strategies have been identified or are required for analysis under NEPA or CEQA.

F003-1

Despite attempts to identify Natural Resources Conservation Service floodplain easements, none have been identified in the project study area. Easements associated with the Atwell Island Land Retirement Demonstration Project are located 2 miles west of the project study area.

Section 3.7.5.3 of the Revised DEIR/Supplemental DEIS describes the potential impacts of the project on wetland bird species, including migratory birds protected under the Migratory Bird Treaty Act and breeding birds, and potential impacts on native fauna. Potential impacts on birds due to interactions with electrical systems are described in Section 3.7.5.3. However, power line infrastructure is not required by the Fresno to Bakersfield Section of the HST project. Because the Fresno to Bakersfield electrical infrastructure (e.g., overhead contact system and traction power substations) is different in design, height, and purpose from transmission line infrastructure (e.g., guidelines, towers, masts, lines), the impacts cannot be directly compared and may not be as severe. To address the risk of birds colliding with the overhead contact system and masts, (as described in Section 3.7.7.2, Construction Period Mitigation Measures, of the Final EIR/EIS), Mitigation Measure BIO-31: Bird Protection, has been revised to also include Mitigating Bird Collision with Power Lines (ACLIP 2012). While both guidelines referenced in the measure are specific to power lines, which are not a part of this project, these guidelines will be adopted and applied to this project's electrical infrastructure.

As stated in the Revised DEIR/Supplemental DEIS, the blunt-nosed leopard lizard is a California Fully Protected Species; therefore, measures must be taken to completely avoid (not just minimize) take of this species. The potential for blunt-nosed leopard lizards to occur in the study area from known source populations is discussed in detail in the *Fresno to Bakersfield Section: Biological Resources and Wetlands Technical Report* (Authority and FRA 2012f). The mitigation measures presented in Section 3.7.7 of the Revised DEIR/Supplemental DEIS (Mitigation Measure BIO-26: Conduct Protocol-Level Surveys for Blunt-Nosed Leopard Lizard; Mitigation Measure BIO-27: Conduct Preconstruction Surveys for Blunt-Nosed Leopard Lizard; Mitigation Measure BIO-28: Blunt-Nosed Leopard Lizard Avoidance; and Mitigation Measure BIO-57: Compensate for Impacts on Blunt-Nosed Leopard Lizard, Tipton Kangaroo Rat, and Nelson's Antelope Squirrel), are designed to completely avoid take of the species with

Response to Submission F003 (Timothy Smith, United States Department of the Interior, Bureau of Land Management, September 28, 2011) - Continued

F003-1

consideration of their potential to occur.

Areas that have previously been farmed were generally categorized as either annual grasslands—if the signs of disturbance appeared to have occurred in the past (are not recent)—or as cropland, if there was clear evidence of recent disturbance due to agricultural uses. In both cases, these areas are considered as potential habitat for special-status wildlife species (including species such as American badger, San Joaquin kit fox, San Joaquin whipsnake, Western burrowing owl, golden eagle, Tipton kangaroo rat, Western spadefoot toad, and coast horned lizard), when appropriate, as listed in Attachment 2 of Appendix 3.7-B of the Revised DEIR/Supplemental DEIS. For cropland, only species that are known to occur in agricultural areas or moderately disturbed areas were considered to have potential to occur in cropland.

F003-2

Refer to Standard Response FB-Response-BIO-01.

The Authority and FRA have removed the option to relocate the BNSF tracks to be parallel with the Allensworth Bypass Alternative from consideration in the Revised DEIR/Supplemental DEIS as a result of continuing project design, comments received on the Draft EIR/EIS, and additional consultation with public agencies. The Allensworth Bypass Alternative is described in Chapter 2, Alternatives.

The suggested option to install wildlife-crossing structures under the BNSF railroad and State Route 43, as well as under the HST, would require significant modification to existing facilities. These facilities are owned by the BNSF and Caltrans and are not within the Authority's jurisdiction. Furthermore, given the required length of the structure (under HST, BNSF, and SR 43), maintaining the appropriate openness factor would be infeasible and cost-prohibitive. Without fencing, grade separation, or construction of barriers that would funnel wildlife into dedicated crossing structures, wildlife would likely not use dedicated crossing structures. Wildlife would be subject to the same existing hazards, the wildlife structures may be less effective (given the increased length) and would not be any more effective in reducing wildlife-crossing impacts when compared with the existing project design.

Submission F004 (Patricia Sanderson Port, United States Department of the Interior, Office of Environmental Policy and Compliance, September 28, 2011)

United States Department of the Interior
OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
Pacific Southwest Region
333 Bush Street, Suite 515
San Francisco, CA 94104

IN REPLY REFER TO:
ER# (ex. ER11-714)

Electronically Filed

28 September 2011

Honorable Dan Leavitt, Deputy Director for Environmental Review and Planning
California High-Speed Rail Authority
770 L Street, Suite 800
Sacramento, CA 95814
(916) 324-1541

Subject: Federal Railroad Administration (FRA) Draft EIS, California High-Speed Train (HST): Fresno to Bakersfield Section High-Speed Train, Proposes to Construct, Operate, and Maintain an Electric –Powered High Speed Train (HST), Fresno, Kings, Tulare and Kern Counties, CA

Dear Mr. Leavitt,

The Department of the Interior has received and reviewed the subject document and has the following comments to offer.

The Department of the Interior's Bureau of Land Management's Atwell Island Project is located approximately four (4) miles west of the current BNSF alignment and approximately two (2) miles west of the Allensworth Bypass Alternative. Over the past 10 years, the Atwell Island Project has purchased 8,000 acres of marginal farm land and is in the process of restoring this land to native Alkali Sink, Valley Grassland, and Wetland habitats.

One of the functions of the project lands is to provide wildlife linkage habitat between Sand Ridge and Kern National Wildlife Refuge to the west and Allensworth State Historic Park, Allensworth Ecological Reserve, and Pixley National Wildlife Refuge to the east.

F004-1

We believe that the BNSF alignment would have much smaller adverse impact on biological resources than the Allensworth Bypass alternative.

The Allensworth Bypass alternative would have environmental impacts that are not addressed or have been underestimated in the Draft EIR/EIS. First, although this route segment is proposed to be constructed entirely at grade level, it would traverse the Alpaugh Irrigation District ponds (just north of Ave. 56 and just west of Hwy 43).

It would also pass through the Ton Tache lake bed for approximately seven (7) miles – a shallow lake that was historically fed by Poso Creek, White River, and Deer Creek, today, during wet winters (such as 2010/2011) water can be up to four feet deep in this basin, potentially flooding the proposed route. The alignment would also cross several Natural Resource Conservation Service Floodplain Easements south of Ave. 56, in the Ton Tache lakebed, which is not mentioned in the Draft EIR/EIS.

The Allensworth Bypass route would bisect the chain of wetlands from Pixley National Wildlife Refuge (NWR) to Kern NWR that are part of the larger, landscape scale conservation strategy. The Alpaugh Irrigation District ponds have breeding colonies of several colonial water bird species: White-faced Ibis (up to 500 pairs), Black-crowned Night Herons (50 to 100 pairs), and Snowy Egrets (up to 50 pairs).

The Draft EIS/EIR, however, does not discuss potential effects to wetland bird species, including migratory and breeding birds and special-status species. Additionally, there is no mention of impacts on wildlife (specifically avian species) from power lines and towers associated with the High-Speed Train in the vicinity of these wetland areas.

The alignment would cross the historic Ton Tache lake shore in two locations, and the vicinity of the southernmost crossing has potential for a population of the State and Federal Endangered Blunt-nosed Leopard Lizards (BNLL). It is hard to tell the exact location of this alignment from the Draft EIR/EIS maps, but it passes within one mile, and maybe less depending on the location of the tracks, of an existing, high density population of BNLLs.

Dispersers from this population have been found up to two miles away to the northwest on the Atwell Island Project and a similar dispersal is possible to the east. Much of the area that is described in the Draft EIR/EIS to be "farmland" has not been farmed in many years and has potential for populations of several State and Federal Threatened and Endangered species and State Species of Special Concern, including, but not limited to: American badger, San Joaquin kit fox, San Joaquin coachwhip, golden eagle, Tipton kangaroo rat, Western spadefoot toad, and coast horned lizard.

This area has documented populations of burrowing owl, a BLM sensitive species and California Species of Special Concern.

Finally, the Allensworth Bypass would have the effect of further fragmenting an already highly fragmented landscape and would pass through a relatively undisturbed area. The Bypass would bisect existing wildlife movement corridor between Kern National Wildlife Refuge, Sand Ridge, and Atwell Island to the west and Pixley National Wildlife Refuge to the east.

F004-2

The suggested option in the Draft EIR/EIS to move the BNSF tracks west to parallel Allensworth Bypass would only compound the wildlife movement issues because Highway 43 would continue to be a barrier to wildlife movement and therefore there would be two barriers to wildlife movement instead of the one that currently exists.

Submission F004 (Patricia Sanderson Port, United States Department of the Interior, Office of Environmental Policy and Compliance, September 28, 2011) - Continued

F004-3 A better solution would be to use BNSF alignment for the HST and to provide adequate wildlife movement underpasses under both the existing Highway 43, BNSF tracks, and the new HST tracks. This would preserve habitat connectivity of the Deer Creek-Sand Ridge linkage in the Atwell Island area and concentrate impacts in an area that is already highly disturbed, thus fulfilling the project's objective of minimizing impacts to wildlife corridors.

Thank you for the opportunity to review this project.

Sincerely,

Patricia Sanderson Port
Regional Environmental Officer

cc:
Director, OEPC
BLM, Bakersfield Manager
FWS, Region VIII

- 3 -

Response to Submission F004 (Patricia Sanderson Port, United States Department of the Interior, Office of Environmental Policy and Compliance, September 28, 2011)

F004-1

Thank you for your comment and support of the BNSF Alternative in the Allensworth Area. However, while some impacts may be reduced through the selection of the BNSF Alternative (Through Allensworth), other biological resource impacts would increase. For example, the BNSF Alternative would result in impacts on both Allensworth State Historical Park and Allensworth Ecological Reserve. Both of these natural areas contain extensive habitat for special-status species (including federal and state-listed plants and animals), as well as special aquatic resources (vernal pools). When these resources are compared, the Allensworth Bypass has fewer impacts on these resources, as was discussed in the Revised DEIR/Supplemental EIS. Please see the delta tables provided in Appendix 3.7-B for comparisons of the construction and project impacts on biological resources. The Authority and FRA have fully addressed and accurately presented impacts associated with Allensworth Bypass.

F004-2

The Authority and FRA have removed the option to relocate the BNSF tracks to be parallel with the Allensworth Bypass Alternative from consideration in the Revised Draft EIR/Supplemental Draft EIS, as a result of continuing project design, comments received on the Draft EIR/EIS, and additional consultation with public agencies. The Allensworth Bypass Alternative is described in Chapter 2, Alternatives.

F004-3

Refer to Standard Response FB-Response-BIO-01.

The suggested option to install wildlife-crossing structures under the BNSF railroad and State Route 43, as well as under the HST, would require significant modification to existing facilities. These facilities are owned by the BNSF and Caltrans and are not within the Authority's jurisdiction. Furthermore, given the length of the structure that would be required (to pass under HST, BNSF, and SR 43, maintaining the appropriate openness factor would be infeasible and cost-prohibitive. Without fencing, grade-separation, or construction of barriers that would funnel wildlife into dedicated crossing structures, wildlife would likely not use the dedicated crossing structures. Wildlife would be subject to same existing hazards. The wildlife structures may not be used by wildlife, or may be less effective (given the increased length) and not be any more effective in

F004-3

reducing wildlife crossing impacts when compared with the existing project design.

Submission F005 (Enrique Manzanilla, United States Environmental Protection Agency, Region IX, October 13, 2011)

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

OCT 13 2011

David Valenstein
Federal Railroad Administration
Office of Passenger and Freight Programs
1200 New Jersey Avenue, SE
Mail Stop 20, W38-219
Washington, DC 20590

Subject: Draft Environmental Impact Statements (DEISs) for the California High-Speed Rail System - Merced to Fresno Section (CEQ #20110257) and Fresno to Bakersfield Section (CEQ#20110256)

Dear Mr. Valenstein:

The U.S. Environmental Protection Agency (EPA) has reviewed the above-referenced documents pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), Section 309 of the Clean Air Act, and Section 404 of the Clean Water Act. EPA previously provided feedback on the statewide high-speed rail project through coordination with Federal Railroad Administration (FRA) and California High-Speed Rail Authority (CHSRA) and formal comment letters on the Tier 1 Programmatic Environmental Impact Statements. EPA recognizes the potential benefits, including reduced vehicle emissions, an alternative transportation choice like high-speed rail can provide if planned well. Through this letter, we identify our agency's concerns regarding potential environmental impacts that may result from implementation of the project without adoption of additional design, construction, and operation commitments in the Final Environmental Impact Statement (FEIS). Based on these concerns, we have rated the project as *Environmental Concerns – Insufficient Information (EC-2)*. Please see the enclosed Summary of EPA Rating Definitions. The scope and extent of our detailed comments (enclosed) on the two DEISs are commensurate with a project of this magnitude and complexity.

Aquatic and Biological Resource Impacts
EPA coordinated with FRA and CHSRA during the development of the DEISs and followed a process that is intended to integrate NEPA and Clean Water Act (CWA) Sections 404 and 408 requirements. The process is outlined in an agreement document entitled *National Environmental Policy Act/Clean Water Act Section 404/408 Integration Process for the California High-Speed Train Program Memorandum of Understanding* (NEPA/404 MOU). Our letter identifies concerns with aquatic resource impacts and additional steps and data needs required to integrate these regulatory requirements. Because only the least environmentally damaging practicable alternative (LEDPA) can be permitted pursuant to the Clean Water Act, we recommend FRA and CHSRA continue efforts to 1) protect water quality and sensitive species; 2) ensure high value resources are not significantly degraded; and 3) avoid, minimize, and mitigate unavoidable impacts to aquatic resources, and other environmental resources. We look forward to continuing coordination and providing feedback on the alternative that is most likely to be considered the LEDPA. In addition, because the high-speed train system will include a completely grade-separated corridor, we encourage FRA and CHSRA to continue to refine measures to maintain wildlife connectivity and movement throughout the length of the project.

Community, Agriculture, and Health Impacts
Reducing the project's impacts to communities and farms and protecting the health of people living and working next to proposed corridors are critical to the success of the high-speed train system between Merced and Bakersfield. EPA is concerned with potential air quality impacts resulting from nearly 10 years of construction activities, including emissions that may exceed National Ambient Air Quality Standards and affect public health near construction sites and the proposed heavy maintenance facility. While the project may ultimately reduce the number of vehicles on Central Valley roadways, thereby improving air quality, it will result in localized farming and community impacts that require mitigation commitments to maintain functioning agricultural programs and quality of life along the project footprint. As a recipient of federal funding, reducing impacts to communities is critical. We recommend that the FEISs be improved to include commitments for 1) additional mitigation measures to reduce localized impacts, and 2) specific timing, locations, and responsible parties for mitigation implementation. Committing to measures to reduce diesel emissions at the heavy maintenance facility, such as adoption of a more efficient switcher locomotive, is critical to reducing emissions at the source.

Creating a Sustainable Train System
We note that in September 2011 FRA and CHSRA signed the *Memorandum of Understanding for Achieving an Environmentally Sustainable High-Speed Train System in California* with EPA and other federal and state partners, committing to collaboratively promote environmental sustainability of the high-speed rail system (enclosed). EPA commends FRA and CHSRA for recognizing, through the MOU, the need to "plan, site, design, construct, operate, and maintain a HST System in California using environmentally preferable practices in order to protect the health of California's residents, preserve California's natural resources, and minimize air and water pollution, energy usage, and other environmental impacts." Now that this commitment has been formalized, we recommend including it in the FEIS.

We appreciate the opportunity to review these two DEISs and continue to be available to discuss measures available to design a sustainable high-speed train system for California. When the FEISs are released for public review, please send four hard copies and two electronic copies (on CD) of each to the address above (mail code: CED-2). If you have any questions, please contact me at 415-972-3843 or Connell Dunning, the lead reviewer for this project at 415-947-4161 or dunning.connell@epa.gov.

Sincerely,

Enrique Manzanilla, Director
Communities and Ecosystems Division

Submission F005 (Enrique Manzanilla, United States Environmental Protection Agency, Region IX, October 13, 2011) - Continued

Enclosures: Summary of EPA Rating Definitions
EPA's Detailed Comments
Memorandum of Understanding for Achieving an Environmentally Sustainable High-Speed Train System in California

F005-1

Cc via email:
Roelof Van Ark, CHSRA
Colonel Michael C. Wehr, U.S. Army Corps of Engineers
Colonel Mark Toy, U.S. Army Corps of Engineers
Colonel William J. Leady, U.S. Army Corps of Engineers
Colonel Torrey A. DiCiro, U.S. Army Corps of Engineers
Dave Castanon, U.S. Army Corps of Engineers
Mike Jewell, U.S. Army Corps of Engineers
Jane Hicks, U.S. Army Corps of Engineers
Leslie Rogers, Federal Transit Administration
Ophelia B. Basgal, U.S. Department of Housing and Urban Development
Dan Russell, U.S. Fish and Wildlife Service
Mike Thomas, U.S. Fish and Wildlife Service
Robert Tse, U.S. Department of Agriculture
Michelle Banonis, U.S. Bureau of Reclamation
Ken Alex, Governor's Office of Planning and Research
Heather Fargo, Strategic Growth Council
Matt Rodriguez, California EPA
Kurt Karperos, California Air Resources Board
Seyed Sadredin, San Joaquin Valley Air Pollution Control District
Traci Stevens, Business Transportation and Housing
Garth Fernandez, California Department of Transportation
Diana Dooley, California Health and Human Services
John Laird, California Natural Resources
Julie Vance, California Department of Fish and Game
Brian R. Leahy, California Department of Conservation
Paul Romero, California Department of Water Resources
Bruce Fujimoto, State Water Resources Control Board
Bill Orme, State Water Resources Control Board
Mayor William Spriggs, City of Merced
Mayor Ashley Swearengin, City of Fresno
Mark Scott, City of Fresno
Mayor Dan Chin, City of Hanford
Mayor Harvey Hall, City of Bakersfield

EPA'S DETAILED COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENTS FOR THE CALIFORNIA HIGH-SPEED RAIL SYSTEM - MERCED TO FRESNO AND FRESNO TO BAKERSFIELD SECTIONS OCTOBER 13, 2011

I. CHARACTERIZATION OF SIGNIFICANT IMPACTS

Both the Fresno to Bakersfield Draft Environmental Impact Statement (DEIS) and Merced to Fresno DEIS include a section titled "National Environmental Policy Act (NEPA) Impacts Summary" for each resource area assessed. However, the summary section does not clearly indicate conclusions regarding potential significance. Rather than state whether or not the project would result in significant impacts, the DEISs state whether or not the project would result in "substantial" impacts and it is unclear what significant impacts the project will cause. Introduction of the term "substantial" rather than "significant" is confusing. Further, the DEISs are internally inconsistent in the use of both terms. As an example, in the Cumulative Impacts Section (Section 3.19, Fresno to Bakersfield), the DEIS uses the term "significant" to characterize the high-speed train contribution to cumulative impacts for some resource areas (Station Planning/Land Use; Cultural), and "substantial" for other resource areas (Agriculture;Parks/Open Space).

We appreciate the conversation held between EPA and FRA (October 12, 2011) regarding this issue, and we understand that the intent of using the term "substantial" was to describe thresholds developed to determine significance. However, without clarification, it could be interpreted that each reference of the term "substantial" is synonymous with "significant", as defined by Council on Environmental Quality. We note that an EIS "shall provide full and fair discussion of significant environmental impacts (40 CFR Part 1502.1)" and shall "include a discussion of direct effects and their significance" and "indirect effects and their significance" (40 CFR 1502.16).

Recommendations:

- The Final Environmental Impact Statement (FEIS) should clearly and consistently indicate, in each "NEPA Impacts Summary", whether the anticipated impacts of the proposed project are significant, as defined by Council on Environmental Quality in 40 CFR Part 1508.27.

2. AQUATIC RESOURCES and CLEAN WATER ACT SECTION 404

The proposed high-speed train system will pass through miles of wildlife habitat and natural aquatic ecosystems including riverine, slope and depressional wetlands. These aquatic resources provide a wide range of functions that are critical to the health and stability of the aquatic environment. As described in the DEISs, a substantial cumulative extent of existing waters would be eliminated, reduced and/or degraded by the projects. Wildlife and hydrologic functions of natural riverine and depressional aquatic resources could be significantly degraded or lost by their direct and indirect alteration. Integrating measures that both maintain and improve aquatic resource functions is key to ensuring the long term sustainability of natural resources within this new transportation corridor. Commitments to such measures can be assured through the CWA Section 404 permitting program, which requires impacts to aquatic resources be avoided and minimized to the extent practicable, and unavoidable impacts to be mitigated.

Submission F005 (Enrique Manzanilla, United States Environmental Protection Agency, Region IX, October 13, 2011) - Continued

The high-speed rail (HSR) project is being evaluated under CWA Section 404 through an Interagency Memorandum of Understanding (NEPA/404 MOU) aimed at integrating the requirements of the National Environmental Policy Act (NEPA) and CWA Section 404 into a single review and permitting process. One objective of this integration is for the DEISs to serve as the environmental document for NEPA purposes for both FRA, the lead federal agency, and the U.S. Army Corps of Engineers (Corps), the CWA permitting authority. To accomplish this integration, an EIS must meet the provisions of the CWA 404(b)(1) Guidelines at 40 CFR Part 230 (the Guidelines), thereby allowing the Corps to adopt the NEPA document for their CWA Section 404 permitting decision, rather than having to supplement the analysis with their own NEPA decision document. The information presented in the DEISs is neither detailed nor complete enough to meet the substantive requirements of the Guidelines, and EPA is providing recommendations below to advance the objective of allowing the FEISs to fulfill this purpose.

The purpose of CWA Section 404 is to restore and maintain the chemical, physical, and biological integrity of the nation's waters by prohibiting avoidable discharges of dredged or fill material, or discharges that would result in significant adverse impacts on the aquatic environment. Fundamental to the Guidelines is the principle that dredged or fill material cannot be discharged into the aquatic ecosystem, unless it can be demonstrated that there is no less environmentally damaging practicable alternative that achieves an applicant's project purpose. In addition, no discharge can be permitted if it will cause or contribute to significant degradation of waters of the U.S. (waters). To obtain a permit, applicants must demonstrate compliance with the Guidelines by specifically addressing its four independent requirements:

1. **Alternatives Analysis**: Section 230.10(a) prohibits a discharge if there is a less environmentally damaging practicable alternative. Alternatives are presumed to exist for non-water dependent activities in special aquatic sites such as wetlands.
2. **Protecting Water Quality and Sensitive Species:** Section 230.10(b) prohibits discharges that will result in a violation of water quality standards or toxic effluent standards, jeopardize a threatened or endangered species, or violate requirements imposed to protect a marine sanctuary.
3. **Significant Degradation**: Section 230.10(c) prohibits discharges that will cause or contribute to significant degradation of waters. Significant degradation may include individual or cumulative impacts to human health and welfare; fish and wildlife; ecosystem diversity, productivity and stability; and recreational, aesthetic or economic values.
4. **Mitigation**: Section 230.10(d) prohibits discharges unless all appropriate and practicable steps have been taken to minimize potential adverse impacts of the discharge on the aquatic ecosystem. This is further described in 2008 regulations describing specific expectations for the timing and content of mitigation plans.

To help ensure the FEISs meet permit-level information requirements, as intended under the NEPA/404 MOU, we offer the following recommendations related to meeting aspects of the above substantive regulatory requirements.

F005-2

2.1Alternatives Analysis

Only the Least Environmentally Damaging Practicable Alternative (LEDPA) can be permitted under the Guidelines (40 CFR 230.10(a)). Based on the information currently available, the

F005-2

DEISs do not appear to adequately compare the direct, indirect, and cumulative impacts to jurisdictional waters resulting from an appropriate range of practicable alternatives. "Practicable" is defined by regulation as alternatives that meet the project purpose and are "available and capable of being done in light of costs, logistics and existing technology." The LEDPA is the practicable alternative with the fewest impacts to aquatic resources, so long as it does not have other significant adverse environmental consequences.

Recommendations:

Analyze a range of alternatives appropriate to the Guidelines. While EPA supports the project objective to use existing transportation corridors, to meet this objective, it is critical to demonstrate that less damaging alternatives are not present outside of such corridors. During previous coordination with FRA and CHSRA during a milestone outlined in the NEPA/404 MOU (Checkpoint B - Identification of the range of alternatives to be analyzed in the DEISs), the Corps and EPA identified that the proposed elimination of the Western Madera and West Hanford alignment alternatives was premature. Although EPA does not advocate for these or any particular alternatives as the preferred alignments, sufficient information has not been presented at that time to rule out either alignment as part of a LEDPA determination. The DEISs did not bring these alternatives forward for analysis, and no supplemental information has been presented to EPA in order to revisit the Corps and EPA assessment at Checkpoint B. Should FRA and CHSRA continue to strive for merging the NEPA and CWA Section 404 processes, the next milestone in the NEPA/404 MOU process (Checkpoint C – Identification of the LEDPA) and the FEISs should document that these two alignments are either impracticable (as a matter of costs, logistics and/or technology), or that they would be more environmentally damaging to the aquatic environment than the other alternatives. To do so, both the quantity (acres, linear feet) and quality (functional status) of waters that these alternatives would impact must be compared with the other alternatives. If these alignments are both practicable and less damaging to the aquatic ecosystem, permitting a different alignment would be difficult absent "other significant adverse environmental consequences."

F005-3

Provide an accurate assessment of impacts to aquatic resources. EPA has concerns with uncertainty in the DEISs regarding quantity and quality of the aquatic resource impacts, as well as with the format and consistency with which impact estimates were presented. *Example: Merced to Fresno. To date, EPA has been presented with conflicting estimates of acres impacted. The Corps Public Notice states 32-48 acres of waters would be impacted, including 5-16 acres of wetlands; and the DEIS reports "project period" impacts between 28-52 acres. Each alternative alignment also has a range of impacts to waters (e.g., BNSF: 35-52 acres), which is problematic because a LEDPA determination cannot be made on a range.*

- Refine impact totals to estimate a sum, rather than a range, of acres of impacts. Differentiate these totals by each aquatic resource type, rather than "lumping" impacts (for example, rare vernal pools should not be combined with other, more common "seasonal wetlands"). The tables in the DEISs do not describe the types of aquatic resources impacted by each alternative.

Submission F005 (Enrique Manzanilla, United States Environmental Protection Agency, Region IX, October 13, 2011) - Continued

F005-3

- Once the Corps' preliminary jurisdictional determination has been finalized, include those values in the Checkpoint C packages and the FEISs.
- Ensure that impact numbers are presented consistently within the document (Summary Tables, Technical Appendices) and between supporting documents (US Army Corps of Engineer CWA Section 404 permit application and future Checkpoint C package to determine the LEDPA).
- Include descriptions of the major watercourses that traverse the project area with maps depicting the location of aquatic resources in the study area.
- Analyze the spatial patterns, density and type of waters within the larger landscape as well as in relationship to lands already protected (e.g., the Great Valley Conservation Bank, and Camp Pashayan within the San Joaquin River Ecological Reserve, Tulare Lakebed Mitigation Site, Pixley National Wildlife Refuge, and Allensworth Ecological Reserve). Describe these aquatic resources in context to one another and adjacent land uses (for example, how overall watershed health and ecosystem services are affected by water quality impairments, planned or active rehabilitation efforts, and connectivity to adjacent or nearby preserves or sensitive resource areas).

Quantify indirect impacts. The DEISs do not quantify indirect impacts to aquatic resources, and qualitative data is lacking. An assessment of indirect impacts from the proposed project is critical to determining the LEDPA because the level of environmental damage of a given alternative may depend on indirect impacts if, for example, direct impacts are similar. *Example: While section 3.7.3 of the DEISs states that indirect impacts occur within the 250-foot buffer around project elements, no further mention is made of any methodology for characterizing indirect impacts or calculating quantitative indirect impact totals. Throughout the DEISs there are descriptions of permanent indirect impacts, but there is no corresponding quantified data.*

- Provide updated analyses clearly indicating the estimated acreage of indirect impacts, per each expected discharge activity, to aquatic resources. Include the methodology and assumptions used.

Revise and clarify the assessment of "permanent" and "temporary" impacts. The DEISs state, "impacts associated with construction activities would result in temporary impacts, whereas activities during the project period would result in permanent impacts on biological resources." This assessment is not accurate, as many of the permanent impacts to biological resources and wetlands may also occur during construction. EPA is also concerned the analysis of impacts as presented underestimates the extent of permanent impacts to wetlands, particularly vernal pools. Permanent loss clearly occurs when a wetland is filled, but permanent functional loss (degradation) also occurs when there are indirect (non-fill) impacts to a portion of a wetland, or when drilling and excavation activities alter the hydrology within its surrounding drainage basin. *Example: Vernal pools and other seasonal wetlands that lie completely or partially within the 60-foot wide fill embankment within elevated segments would be directly and permanently impacted by the project. However, pools or portions of pools within the remaining construction footprint (i.e., additional 20 feet) of an elevated segment are incorrectly*

F005-3

considered only temporarily impacted from ground disturbing activities, even though a permanent degradation of functions may occur. (pg. 3.7-46).

- Clearly differentiate permanent and temporary impacts based not only on fill footprint, but on aquatic resource functions. Where construction will result in permanent impacts, including functional degradation, this should be noted and estimates of permanent and temporary impacts should be revised.
- Revise the various tables in Chapter 3.7 that summarize Construction Period and Project Period impacts to aquatic resources to clearly present direct, indirect, temporary and permanent impacts from construction and project operation.

Confirm that impact values presented include all connected actions. In addition to the Heavy Maintenance Facility (HMF), the proposed project alternatives include several other project elements (e.g., maintenance of way facilities, traction stations, switching stations, paralleling stations, access roads and road widening).

- Ensure that impacts from these project features have been included in impact totals and are presented clearly in the FEISs.
- Present aquatic resource impacts anticipated from Merced Station.

Include a functional assessment of aquatic resource impacts. The health of wetlands and riparian habitats can be assessed through standardized tools such as the California Rapid Assessment Method. The DEISs present no assessment information on the condition of wetlands/waters on the project site based on the field application of such tools, as outlined in the NEPA/404 MOU. The FEISs should incorporate functional assessment information into impact characterization, so that current and impacted resource conditions can provide context to acreage numbers.

F005-4

2.2 Water Quality

The proposed projects will result in a variety of unquantified erosion and construction-related impacts to the quality of waters found throughout the study area from what is likely to be a lengthy, multi-phased project build-out. According to the DEISs, several waters within the project study area are listed on the CWA Section 303(d) list as impaired water bodies. The Guidelines prohibit discharges that will result in a violation of water quality standards or toxic effluent standards (40 CFR 230.10(b)). Post-construction green infrastructure and LID (low impact development) techniques, such as bioretention areas, porous pavement, and vegetated swales, can improve water quality, as well as provide a variety of additional benefits, including long-term economic savings and visual enhancement. More information on green infrastructure and LID techniques can be found at: http://cfpub.epa.gov/npdes/home.cfm?program_id=298.

Recommendations:

- Confirm with supporting information in the FEISs that the proposed projects will not further impair 303(d)-listed water bodies and will not increase pollutants from stormwater runoff, nuisance flows and groundwater drawdown. In the FEISs, identify a set of low impact development techniques (LID) for the construction and post-construction stage of the project to retain, infiltrate, and treat stormwater runoff.

Submission F005 (Enrique Manzanilla, United States Environmental Protection Agency, Region IX, October 13, 2011) - Continued

F005-4

EPA understands from discussions with the State Water Board that the Board is considering permitting stormwater discharges from the drainage system serving the HST as a municipal separate storm sewer system (MS4) under the National Pollutant Discharge Elimination System (NPDES) stormwater permit program. The municipal permit would cover discharges from the entire drainage system of the project, including the tracks. The DEISs (section 3.8.2) discuss the regulatory framework for the project, including the applicability of the NPDES stormwater permit program, but do not identify CHSRA as the operator of an MS4 permit. Further, although there are references to the State Water Board's industrial general stormwater permit in the DEISs (e.g., Section 3.8.6), the permit is not mentioned in section 3.8.2 which summarizes the regulatory framework for the project.

Recommendations:

- The FEISs should acknowledge the potential applicability of the MS4 permit program to the CHSRA and the potential mitigation stemming from the requirement of an MS4 permit to reduce pollutants in discharges from the drainage system to the maximum extent practicable.
- Identify and discuss the basic requirements of the State Water Board's industrial general stormwater permit (Water Quality Order No. 97-03-DWQ) in section 3.8.2. Include a discussion of the stormwater pollution prevention plan (SWPPP) and the monitoring requirements.
- Describe the State Water Board's current effort to reissue this general permit. Include a description of the State Water Board's 2011 draft permit and its requirements and potential impacts to the project.

The DEISs (Section 3.8.5) indicate that the impacts of increased stormwater runoff would be minor because the discharges would be directed to either the local stormwater system in urban areas or to the local drainage system via swales in rural areas. There is little information provided to support this conclusion. The DEISs further state that runoff from the HMF would be contained onsite via infiltration, and therefore there would be no impacts to surface water. However, Section 3.8.6 indicates the runoff would be contained onsite, if feasible. Other references in the DEISs provide yet other descriptions of how the runoff would be handled.

Recommendations:

- Include a quantitative assessment of the anticipated impacts and runoff from the various project components (including train tracks) to existing hydrology, downstream waterbodies, and impervious.
- Describe and confirm the availability of adequate space for mitigation via measures such as infiltration (as indicated in Section 3.8.6).
- Clarify and be internally consistent concerning how the runoff from heavy maintenance facilities would be handled. If there would be any discharges, the nature of the potential pollutants should be described along with the risks and impacts to surface water bodies.

The DEISs (section 3.8.5) indicate that the HST does not require large amounts of lubricants or hazardous materials for operation. However, the nature and quantities of these materials are not

F005-4

provided. Further, the runoff from the tracks is assumed to be less than a significant source of pollutants, but no supporting documentation is provided for this assumption.

Recommendations:

- As discussed in the Hazardous Materials Section below, describe the quantity and content of lubricants and hazardous materials that will be used for operation.
- Provide supporting information to justify the conclusion that the runoff from the tracks would be less than a significant source of pollutants. For example, provide runoff monitoring data from existing or similar railroads along with a description on how ongoing maintenance activities will be implemented to avoid runoff of lubricants and hazardous materials.

F005-5

2.3 Significant Degradation

Without clear commitments from FRA and CHSRA to minimize and avoid impacts to aquatic resources, and a clear plan to mitigate impacts that cannot be avoided, the proposed projects could cause and/or contribute to significant degradation of aquatic resources. The Guidelines prohibit permit issuance for discharges causing or contributing to significant degradation (40 CFR 230.10 (c)).

Recommendations:

- Present a reasoned, specific and detailed argument that the project will neither cause nor contribute to significant degradation of waters. Drawing on watershed data, including the projects' potential for both positive and negative impacts on existing water quality and habitat functions, this analysis should be based npon reliable data on (a) the extent of unavoidable direct and indirect fill impacts, (b) the condition of the aquatic resources in their watershed context, and (c) measures to mitigate the project's adverse impacts.

2.4 Mitigation for Impacts to Aquatic Resources

The DEISs provide no details on specific avoidance and minimization strategies, and no overall strategy for compensatory mitigation for unavoidable impacts to waters (Chapter 3.7). Identifying mitigation opportunities in advance of the FEISs, as identified in the NEPA/404 MOU, should be a key priority for FRA and CHSRA, as it will help to avoid potential delays during project permitting. We note that compensatory mitigation is intended only for unavoidable impacts to waters after the LEDPA has been determined (40 CFR 230.10(d)), so EPA does not expect to review and approve a final compensatory mitigation plan prior to having clarity on compliance with the Alternatives portion of the Guidelines. However, it is appropriate for applicants to look for opportunities to compensate for likely unavoidable impacts in a watershed context, and to establish a framework for mitigation planning (e.g., identifying likely partners, and opportunities for watershed improvement and restoration, etc). The mitigation measures presented in the DEISs consist primarily of commitments to implement best management practices and to develop habitat mitigation and monitoring plans.

Checkpoint C, the next milestone in the NEPA/404 MOU, provides an opportunity for EPA agreement on a preliminary LEDPA and draft mitigation plan. EPA anticipates receiving updated estimates for aquatic resource impacts and corresponding practicable avoidance measures

Submission F005 (Enrique Manzanilla, United States Environmental Protection Agency, Region IX, October 13, 2011) - Continued

F005-5

commensurate with these regulatory decision points. Because the release of the FEISs follows Checkpoint C, the FEISs should include a draft mitigation plan that meets all requirements of the Compensatory Mitigation for Losses of Aquatic Resources; Final Rule (40 CFR Part 230, subpart J of the Guidelines).

Recommendations:

- Identify specific avoidance and minimization measures for impacts to waters of the U.S. (e.g. complete spanning of waterways, elevating tracks above sensitive wetland areas, use of bottomless arch culverts, etc.)
- The draft mitigation plan for Checkpoint C should describe the processes that FRA and CHSRA will use, and commitments it will make, to maximize opportunities for successful mitigation including: identifying potential mitigation sites; options available for creation, restoration, enhancement and preservation of waters (e.g., land dedication, acquisition of conservation easements, mitigation banks); opportunities to integrate with existing or planned conservation efforts; potential for improvements to existing infrastructure to enhance aquatic system and wildlife use; and instruments for long-term management of mitigation sites (e.g., established maintenance endowments).
- The Mitigation Rule (Subpart J of the Guidelines at 40 CFR Part 230) includes 12 elements required of final compensatory mitigation plans. Since this will be a permit requirement, we recommend each of these elements be detailed in the FEISs to facilitate 404 permitting.

F005-6

3. SPECIAL STATUS SPECIES AND WILDLIFE MOVEMENT

The DEIS states that all proposed crossings of the San Joaquin River will have potential impacts to essential fish habitat for federally listed Central Valley spring-run Chinook salmon (pg 3.7-36). Subpart D of the CWA Section 404 regulations (40 CFR 230.30) emphasizes the importance of protection of "aquatic habitat which are particularly crucial to the continued survival of some threatened or endangered species including adequate good quality water, spawning and maturation areas…" In addition, no CWA Section 404 permit may be issued if the proposed discharges would jeopardize the continued existence of an endangered species (40 CFR 230.10(b)). EPA is concerned that the DEIS contains little analysis and disclosure of specific likely impacts of river crossings on listed species. For example, it will be important for the project to demonstrate that it will not pose unacceptable risks to listed salmonids.

Recommendations:

- Fully analyze potential impacts of the project on the San Joaquin River, including specific areas affected and permanent vs. temporary impacts.
- Provide information on San Joaquin River crossing design options.
- Continue to coordinate on plans for crossing designs and share information on predicted impacts with the San Joaquin River Restoration Project federal and state leads, U.S. Bureau of Reclamation and Department of Water Resources.
- Ensure implementation of the best available methods for river crossings that maintain and enhance wildlife habitat.

F005-6

The DEISs recognize that wildlife linkages are essential to the health and viability of natural ecosystems, and note that a significant study commissioned by Caltrans and California Department of Fish and Game was conducted to identify essential landscape linkages for wildlife movement and genetic dispersal. The DEISs also provide descriptions of the major wildlife linkage areas that will be impacted by the HST alternatives, including Eastman Lake-Bear Creek, Berenda Slough, Fresno River, Kings River, St. John's River-Cross Creek, SR 43/SR 155, Deer Creek-Sand Ridge, Poso Creek, and Kern River. However, the DEISs do not demonstrate how the HST alternative alignments could adversely affect these corridors or how impacts to these corridors will be addressed.

Recommendations:

- Provide additional qualitative information on any unavoidable impacts to wildlife movement corridors
- Document coordination with Fish and Wildlife Service and California Department of Fish and Game regarding appropriate avoidance, wildlife crossings, and mitigation measures to address these impacts
- Include specific high-speed train design commitments that: 1) remove wildlife movement barriers; 2) enhance use of modeled wildlife corridors; 3) provide crossings with suitable habitat and topography to accommodate multiple species.
- Describe specific project elements that would be constructed to enable wildlife connectivity for Merced to Fresno HSR alternatives, including types of features and approximate locations. This should be integrated into the description of alternatives in Section 2 of the Merced to Fresno DEIS, following the example of the Fresno to Bakersfield DEIS.

F005-7

4. AIR QUALITY

While the high-speed train could potentially have great long term benefits to air quality in California by reducing vehicles miles traveled and reducing the need to expand airports and highways, the project would also result in increased emissions from construction of the system and operation of the HMF and support vehicles. Depending on the energy source for powering the electric train, emissions may also result from the increased electricity demand required for powering the train system. Because the San Joaquin Valley Air Basin has some of the worst 8-hour ozone and PM2.5 problems in the nation, it is important to reduce emissions of ozone precursors and particulate matter from this project to the maximum extent.

4.1 General Conformity

The FEISs should ensure that direct and indirect emissions from both the construction and the operational phases of the project conform to the approved State Implementation Plan and do not cause or contribute to violations of the National Ambient Air Quality Standards (NAAQS). The DEISs note that impacts affecting air quality plan compliance would last the entire construction period of nearly 10 years and would increase nonattainment pollutant emissions, which would conflict with the ultimate goal of the air quality plan to bring the air basin into compliance (Merced to Fresno p. 3.3-42 and Fresno to Bakersfield p. 3.3-41). For Merced to Fresno, with mitigation, the annual construction emissions would "exceed the San Joaquin Valley Air Pollution Control District (SJVAPCD) California Environmental Quality Act (CEQA) thresholds for volatile organic compounds (VOC), nitrous oxides (NOx), and particulate matter less than 2.5

Submission F005 (Enrique Manzanilla, United States Environmental Protection Agency, Region IX, October 13, 2011) - Continued

F005-7

microns (PM2.5) for the entire construction duration and the particulate matter less than 10 microns (PM10) SJVAPCD CEQA threshold for half of the construction duration" (Merced to Fresno p.3.3-42). For the Fresno to Bakersfield section, "with mitigation, the annual construction emissions would exceed the SJVAPCD CEQA thresholds for VOC, NOx, PM10, and PM2.5 for the entire construction duration" (Fresno to Bakerfield p. 3.3-41). Both DEISs conclude that project construction may impede implementation of the 8-hour SJVAPCD 2007 Ozone Plan, the 2004 Extreme Ozone 1-hour Attainment Demonstration Plan3, the 2007 PM10 Maintenance Plan, and 2008 PM2.5 Plan.

Recommendations:

- Confirm that direct and indirect emissions from both the construction and the operational phases of the project conform to the approved State Implementation Plan and do not cause or contribute to violations of the National Ambient Air Quality Standards (NAAQS). Include a letter from SJVAPCD supporting that this project will meet conformity requirements.
- Identify additional mitigation measures for project construction by continuing to coordinate with the San Joaquin Valley Air Pollution Control District and California Air Resources Board. These may include:
  - Participate in the Voluntary Emission Reduction Agreement program to establish a suite of mitigation measures to reduce air quality impacts in the vicinity of the project.
  - Work with local government and agricultural community to generate possible opportunities to offset emissions from the project and include a list in the FEIS. Potential opportunities could include renewable energy production from local farming practices and measures to reduce truck traffic through freight improvements.
- While EPA supports the commitment to reduce criteria exhaust emissions from Construction Equipment by requiring use of Tier 4 engines (mitigation measure AQ-MM#4; p.3.3-71 in both DEISs), we are concerned that a lack of Tier 4 engines in the available construction equipment fleet may result in increased emissions.
- Identify additional mitigation measures for operation of the HMF. Partner with San Joaquin Valley Air Pollution Control District (District) to identify applicable technologies, and consider the following:
  - Use electric or hybrid trucks to serve the facility.
  - Commit to adjusting the facility operations and orientation (through staging, operation schedules, ingress/egress routes, etc.) to reduce localized impacts to surrounding sensitive receptors.
  - Identify an alternative orientation of the facility to move emission activities or release points to areas where impacts to surrounding sensitive areas are lessened.
  - Commit to use of a electric or Clean Switcher Locomotive and revise the analysis of potential air impacts to reflect emissions reductions.[1]

[1] The District has funded one such project and the locomotive is currently being built. The modification involves retrofitting a Tier 2 locomotive engine (3005 hp single engine) to result in 91% NOx emissions reductions (compared with a pre-1973 diesel locomotive) making the switcher the cleanest possible . For more information on

F005-7

4.2 Transportation Conformity

The DEISs state that neither project is a "Project of Air Quality Concern", therefore no further analysis of PM10 or PM2.5 impacts is required. However, there is no discussion of interagency consultation. Since the HST project is not yet in the area's Transportation Improvement Plan (TIP), it has not been documented that required consultation has occurred.

Recommendation:

- Confirm the Project of Air Quality Concern determination by documenting that an interagency consultation process has been completed. Caltrans currently leads an interagency consultation process for such determinations in the San Joaquin Valley.

4.3 Air Quality Impacts on Health

Sections 3.3 and 3.19 of the DEISs discuss how project construction and operation will impact local and regional air quality. The project is located in non-attainment areas for ozone and $PM_{2.5}$. Research has shown that these air pollutants may exacerbate asthma conditions. Fresno and Merced Counties, as well as the San Joaquin Valley region in general, have high rates of asthma in adults and children. Childhood asthma prevalence and emergency department visits due to asthma are higher than the statewide average in all six San Joaquin Valley counties where the project would be located. It does not appear that the DEISs considered how local air quality impacts from construction and operation of the project may impact those with asthma or other respiratory diseases.

Recommendations:

- Assess how local air quality impacts during project construction and operation may affect health and exacerbate asthma or other respiratory conditions in children and adults in the FEISs. This discussion should include qualitative as well as quantitative information, and a discussion of mitigation options for those most impacted. Respiratory Hazard Indices should be provided for each alternative.
- Add measures to wash all trucks and equipment before exiting the construction site and measures to suspend dust generating activities when wind speeds exceed 25 mph to Air Quality Mitigation Measure #3, which includes actions to reduce fugitive dust from material hauling.
- Revise Air Quality Mitigation Measure #6 in the Merced to Fresno FEIS (so that it applies to all heavy maintenance facility alternatives, rather than only those specified in the DEIS) by limiting idling and instituting a minimum buffer distance of 1,300 feet away from diesel emission sources. Or, alternatively, commit to preparing a detailed health risk assessment for all heavy maintenance facilities considered.
- Commit to locating concrete batch plants at least 1,000 feet away from other sensitive receptors, including daycare centers, senior care facilities, residences, parks, and other areas where children may congregate. Air Quality Mitigation Measure #8 includes actions to reduce concrete batch plant emission impacts to nearby sensitive

the clean switcher, please contact Kevin McCaffery with the District's Strategies and Incentives department (559) 230-5831.

Submission F005 (Enrique Manzanilla, United States Environmental Protection Agency, Region IX, October 13, 2011) - Continued

F005-7

receptors by locating concrete batch plants at least 1,000 feet away from sensitive receptors, such as school and hospitals.

- Specify other control measures that will be used for the concrete batch plants to minimize pollution from these plants, including dust control measures for operations and trucks.
- Provide an estimate of increased bus traffic and associated air quality impacts near proposed stations to supplement the conclusion that there would not be a significant number of diesel vehicles congregating at a single location near the HSR stations. (page 3.3-67 of the Merced to Fresno DEIS). Include a discussion of coordination efforts with local transit agencies to promote best practices for reducing bus-related emissions impacts.

F005-8

5. AGRICULTURAL IMPACTS

The various alternatives discussed in the DEISs would involve trade-offs between impacts to developed land and communities, agriculture, and other resources. The DEISs address impacts to agriculture, including direct conversion of agricultural land to transportation uses, severance of parcels, and impacts to onsite utilities (irrigation systems, access roads, and power supplies). Multiple impacts to agriculture and EPA's associated recommendations are included below and in subsequent growth, land use, and community impacts sections of this letter.

5.1 Agricultural Land Valuation and Compensation

Impacts that are not documented in the DEISs are potential increases in operational expenses due to smaller field sizes and resulting loss of efficiency in field management operations. In addition, the DEISs don't specify the methodology for calculating "non-economic" parcels or the appraised parcel value, although the DEISs reference relevant factors, including infrastructure access and proximity issues, and include commitments to compensate landowners for infrastructure as well as land.

Recommendations:

- Include a discussion of potential increases in operational expenses due to smaller field sizes and resulting loss of efficiency in field management operations.
- Describe the land valuation methodology used for determining which parcels were determined to be "non-economic". Include assumptions for analysis and source of data used.
- Describe the compensation methodology and how it was developed. Address how the methodology 1) calculates the present value of lost future earnings, and 2) assesses the decreased efficiency of operations on remaining land. Clarify assumptions used regarding land staying in the same cropping system and/or changing to another system more amenable to smaller sites, such as truck farming for local consumption.
- Address whether the proposed mitigation to compensate property owners for parcels needed for the alignment adequately compensates owners for all reasonably foreseeable potential impacts to their financial viability.

5.2 Impacts to Dairies

The Merced to Fresno DEIS states that the proposed project could result in the closure of several dairies, and acquisition of property from several other dairies. The DEIS states that CHSRA

F005-8

would work with each affected dairy to address issues of concerns and attempt to resolve conflicts to preserve operational capacity. Although this is deemed a negligible impact, EPA is concerned that the complexity of siting and permitting dairies could make the closure of dairies a more significant impact.

Recommendation:

- Avoid impacts to dairies as feasible and work with dairy owners to mitigate unavoidable impacts.

5.3 Loss of road access

The DEISs state that over- or undercrossings will be provided every two miles. EPA is concerned about this reduction of transportation access and its impacts on agricultural operations. The DEISs state that the right-of-way acquisition process provides additional opportunities to reduce hardships caused by access severance, and that the CHSRA would work with each affected property owner to address issues of concern, attempt to resolve conflicts, and potentially arrange for additional grade-separated crossings. EPA is supportive of continued efforts to work directly with affected farmers to mitigate impacts to access and agricultural operations.

Recommendations:

- Work with each affected property owner to address issues of concern, attempt to resolve conflicts, and arrange for additional grade-separated crossings following meetings with affected farmers.
- Consider providing remainder parcels on a subsidized basis to beginning and disadvantaged farmers willing to use small-farm practices to supply the local market.

F005-9

6. REGIONAL AND LOCAL INDUCED GROWTH

EPA believes that a HSR system has the potential to encourage transit-oriented development (TOD) that could revitalize urban centers, support economic development, and help preserve agricultural land. Based on historic development trends in California, however, the land use and development impacts of a proposed HSR system on station cities and other communities in the vicinity of the project remain uncertain at this time.

6.1 Regional Growth and Development Patterns

Land use and regional growth discussions in the DEISs do not acknowledge the possibility that the HSR system could significantly induce growth, or the uncertainty surrounding growth estimates. Acknowledging uncertainty and providing a range of likely impacts could help affected communities to better plan for HSR induced regional growth.

In discussing regional growth, both DEISs conclude that the HSR project "would only slightly raise the projected population." EPA understands that transportation improvements, including HSR, can affect the location, pattern, timing, and intensity of development. It is unclear if the project's potential to attract new commuters living near Merced, Fresno, Hanford/Visalia, or Bakersfield and traveling to Los Angeles or San Francisco was fully assessed. EPA recognizes that many commuters living in the San Francisco Bay Area and the Greater Los Angeles Metropolitan Area currently experience commute times in excess of the projected HSR travel

Submission F005 (Enrique Manzanilla, United States Environmental Protection Agency, Region IX, October 13, 2011) - Continued

F005-9

time from Central Valley cities, making it seem that HSR system could potentially induce growth more than "slightly" beyond the "no project" scenario, as the documents state.

In discussing land use, the DEISs state that communities within the region have adequate space within their spheres of influence to allow for development to accommodate additional population growth, and therefore the HSR would not induce unplanned growth. Given historic development patterns in California and the uncertainty of future development, EPA believes that this conclusion is misleading and strong measures are needed to avoid inducing unplanned growth.

While EPA acknowledges FRA and CHSRA's past and current efforts to coordinate with proposed station cities in planning for station areas, we emphasize that future coordination efforts during the design and construction phases will be critical to achieving higher-density, mixed-use development around stations. Coordination will also be necessary to maintain rural character near a Kings/Tulare regional station.

Recommendations:

- Revise the induced growth and land consumption analysis to fully acknowledge historic development trends and include commitments to avoid and minimize impacts.
- Clearly acknowledge uncertainty in future induced growth projections and provide a range of potential impacts, with reference to location, pattern, timing, and intensity of growth.
- Discuss the potential for considerable growth to occur from commuters living in the Central Valley and working in Los Angeles or San Francisco, and include an explanation of the range of potential regional and local growth impacts, with reference to location, pattern, timing, and intensity of growth.
- Coordinate throughout the design and construction phases with non-station communities that may experience development pressure due to access to HSR, and support efforts to develop planning documents, land use regulations, and municipal development policies to inhibit low-density development in these areas. Ensure that information and resources are available for planning in these communities.
- Commit to continuing to work with the HUD/DOT/EPA Partnership for Sustainable Communities and the State of California Strategic Growth Council under the *Memorandum of Understanding for Achieving an Environmentally Sustainable High-Speed Train System in California* (Sustainability MOU) to avoid, minimize and mitigate HSR induced growth impacts.

Fresno to Bakersfield

EPA is particularly concerned about the potential for induced growth in the vicinity of the proposed Kings/Tulare Regional station. The DEIS states that "given the Urban Reserve and agricultural land use designations surrounding the station area, the availability of appropriately designated land on the west side of Hanford that could be developed, and the potential for the CHSRA to purchase conservation easements around the station, and the CHSRA's vision for the Kings/Tulare Regional Station to act as a transit hub, the potential for indirect effects on land use is low." Given historic growth patterns in California, EPA believes that there is potential for

significant growth-related indirect impacts and strong measures will be needed to minimize indirect effects.

The DEIS states that the proposed station area is located adjacent to, but north of, a Blueprint Urban Growth Area. Given that the Kings County Association of Governments has developed a Kings County Blueprint for Urban Growth to emphasize city-centered urban growth and agricultural preservation, the decision to site a station location outside of the planned Urban Growth Area does not appear to be compatible with local goals.

The DEIS also states that it is possible that the CHSRA could seek to locate agricultural easements directly surrounding the Kings/Tulare Regional Station footprint. EPA supports this proposed mitigation to reduce the potential for induced growth, as discussed in the next section.

Recommendations:

- Revise the indirect effects analysis associated with the Kings/Tulare Station to accurately reflect historic trends and potential risks to surrounding lands.
- Commit to specific measures to avoid, minimize, and mitigate impacts to the area surrounding the proposed Kings/Tulare Regional Station.
- Discuss in the FEIS why the proposed station location was not sited in the designated Urban Growth Area.
- Work with Kings County and other local governments with land use authority in the vicinity of the proposed Kings/Tnlare Regional Station to promote policies to help ensure that infrastructure will not be provided to support development in areas beyond current planned growth areas.

F005-9

6.2 Managing Induced Growth in Rural Areas

EPA supports plans for higher-density development around the Merced, Fresno, and Bakersfield stations, and FRA and CHSRA's efforts to support TOD planning in these station areas. We remain concerned, however that development pressures from HSR at urban fringes could induce changes in zoning codes and conversion of agricultural lands and open space to other uses, such as residential or commercial development. Lower-density development near urban fringes could cause additional impacts to agriculture and natural resources, beyond what is described in the DEISs. EPA is particularly concerned with the potential for induced growth near the rural Kings/Tulare Regional Station and sees farmland conservation easements as a valuable mitigation tool.

The DEISs state that FRA and CHSRA will work with the California State Department of Conservation to purchase and establish agricultural conservation easements to mitigate for the loss of agricultural land that will result from miles of tracking throughout farming communities. It is unclear if FRA and CHSRA are also committed to promoting conservation easements as a tool avoid and minimize unplanned induced development. Further, it is unclear if FRA and CHSRA would target conservation efforts on specific parcels based on project-induced development risk, and what criteria would be used to assess this risk.

EPA emphasizes that the success of area station planning efforts will likely be directly related to complementary planning and coordination at the urban fringes and neighboring communities.

Submission F005 (Enrique Manzanilla, United States Environmental Protection Agency, Region IX, October 13, 2011) - Continued

F005-9

We also recognize that strong coordination with counties and other stakeholders will be needed to accomplish these planning efforts and get conservation tools implemented, such as easements.

Recommendations:

- Establish criteria (such as proximity to stations and maintenance facilities) and apply the criteria to identify which agricultural and rural lands are most vulnerable to induced growth impacts from the proposed train system. This "high-impact" land should then be targeted for agricultural land conservation easements.
- Commit to promote and support agricultural land conservation easements for high quality agricultural land most at risk for conversion due to the project as a means to mitigate potential induced growth impacts.
- Include a specific commitment to promote agricultural easements directly surrounding the rural Kings/Tulare Regional Station.
- FRA and CHSRA should work with the California State Department of Conservation and/or local land trusts to facilitate identification of potential conservation areas and support of future easements.

F005-10

7. LAND USE AND PLANNING

7.1 Station Area Planning

The location of the HSR stations and the layout of facilities (transit plazas, parking, etc) will have a significant influence on the success of TOD in these areas. The DEISs reference the *Transit Oriented Development Design Report for Fresno Final Report* (UC Berkeley 2010) and *Transit Oriented Development for High-Speed Rail in the Central Valley, California: Design Concepts for Stockton and Merced* (UC Berkeley 2008). In addition, the DEISs state, "The [CHSRA] is committed…to working cooperatively with local government, transit agencies, public interest groups, and the development community to realize a shared vision for land use and transit development around HSR stations consistent with the [CHSRA]'s Development Policies, to the maximum extent possible" (Merced to Fresno p. 2-95 and Fresno to Bakersfield p. 2-94). Details, however, are not provided regarding coordination efforts to achieve this commitment or what, if anything, communities have committed to implementing.

The DEISs state that FRA and CHSRA are providing funding to assist station cities in undertaking studies, research, and planning for station areas. EPA understands that proposals from station cities for activities to be funded by this program are currently being reviewed by FRA and CHSRA. Adding details about these proposals to FEISs would enable readers to better understand how stations areas could change as a result of the project.

Recommendations:

- Commit to continued coordination with station cities throughout the design and construction phases of the project and support efforts to develop planning documents, land use regulations, and municipal development policies that encourage higher density, mixed-use development around Merced, Fresno, and Bakersfield stations.
- Clarify whether FRA, CHSRA, and cities where stations will be located have committed to the planning and design concepts discussed in the referenced documents, which identify opportunities for downtown revitalization in the station

F005-10

cities through urban design, higher densities, mixed-use development, and multimodal transportation options.

- Include more specific information on how communities are being engaged in station area planning.
- Provide more details about what specific activities will be funded under the station area planning program, what the timeline is for the funded activities, how FRA and CHSRA will work with the communities on these activities, and how the results of the activities will be incorporated into station design.
- Revise maps of station study areas in Section 3.13 of the Merced to Fresno DEIS so that proposed station locations are clearly delineated, following the example of maps in Section 3.13 of the Fresno to Bakersfield DEIS.
- Consider best practices for station area planning provided in Section 2 of the American Public Transportation Association March 2011 Transit Sustainability Guidelines and adopt relevant recommendations. Guidelines are available at http://www.apta.com/resources/hottopics/sustainability/Pages/default.aspx

F005-11

7.2 Multimodal Connectivity

As stated in our scoping comments, a substantial benefit of a proposed HSR corridor connecting Merced to Bakersfield is the opportunity to generate improved local transit services and to reduce vehicle miles traveled (VMT). EPA strongly supports including project elements that will reduce VMT, such as features that promote local transit use, walking and biking.

The DEISs describe FRA and CHSRA's vision for HSR stations to serve as multimodal hubs with strong transit connectivity. EPA recognizes that transit connectivity is vital to achieving the land use patterns discussed in DEISs. Achieving strong connectivity with local transit systems requires early and robust coordination with local transit agencies, which is not described in DEISs.

For example, the Fresno to Bakersfield DEIS states that "[t]he FRA's and [CHSRA]'s goals for Kings/Tulare station include creating a station that serves as a regional transportation hub to provide quick transit connections from the station to the downtown areas of Hanford and Visalia; the CHSRA and FRA have approved $600,000 in planning funds to assist local jurisdictions around the Kings/Tulare station to plan to make these goals a reality." EPA is aware of an Expanded Light Rail Connectivity Plan for the City of Visalia that is being funded through the Department of Housing and Urban Development's Sustainable Communities Regional Planning Grant to the Smart Valley Places Consortium. The DEIS does not provide details on how FRA and CHSRA are engaging the local authorities in Visalia to coordinate with this project.

Recommendations:

- Commit to collaborate with local transit agencies to develop transit connectivity plans for HSR station areas and neighboring communities where high HSR ridership is expected.
- As part of coordination with the City of Visalia and other communities on local transit planning efforts, ensure that transit plans are developed to maximize connectivity with the HSR system.

Submission F005 (Enrique Manzanilla, United States Environmental Protection Agency, Region IX, October 13, 2011) - Continued

F005-12

- As part of transit connectivity plans, commit to working with local agencies to develop features to facilitate easy transfers between local transit and HSR, such as shared ticketing, wayfinding for local transit within HSR stations, and other features.
- Include a summary of coordination with local transit agencies to date and a discussion of how existing and planned transit services would connect with the HSR system.
- Commit in the FEISs to design and construct stations to be pedestrian and bicycle-friendly by incorporating features such as bike lockers, changing rooms, and showers.
- Commit to coordinate with car share organizations and promoting use of shared vehicles at HSR stations to provide an additional alternative to car ownership.

7.3 Parking

EPA acknowledges that the DEISs were developed to capture the footprint of the maximum parking demand to give FRA and CHSRA flexibility in future decision making. EPA also recognizes that decisions made on parking quantity, location, and type (surface, structures, shared) will greatly impact whether station areas are walkable and integrated into surrounding neighborhoods, and will influence surrounding development patterns.

Parking is discussed in several places throughout the DEISs and in guidance documents created by FRA and CHSRA. For example, the Fresno to Bakersfield DEIS lists goals including, "Limit the amount of parking to that which is essential for system viability," and "place parking in structures with retail and other land uses." In addition, CHSRA's Urban Design Guidelines offers information on best practices.

Within the DEISs, however, the FRA and CHSRA's plan for parking appears inconsistent. For example, the Merced to Fresno DEIS displays an image of a potential layout for the Mariposa Street Station in Fresno with surface parking lots surrounding the station. EPA has not seen a clear parking policy, and it is unclear if FRA and CHSRA are coordinating with local jurisdictions for implementing parking policies.

Recommendations:

- Include a clear parking policy in the FEISs, containing a clear commitment to work with local jurisdictions and following the Urban Design Guidelines and best practices.
- Commit to minimize the number of parking spaces to the greatest extent possible at stations in order to facilitate the use of transit, and construct multi-level parking structures as opposed to large expansive parking lots to minimize impacts.
- Revise the FEIS so that stations are not proposed to be surrounded by surface parking lots, such as the Figure 2-42b in the Merced to Fresno DEIS and other similar figures.

Fresno to Bakersfield

The DEIS states that at the Kings/Tulare Regional Station, approximately 19 acres would support 1,600 spaces in a surface parking lot, or a portion of parking would be provided on-site and a portion in shuttle lots located in downtown Hanford, Visalia, or Tulare. EPA encourages the use of parking structures at the station location and parking structures in nearby downtowns, as the DEIS states, to "allow for more open space areas around the station, discourage growth at the station, encourage revitalization of the downtowns and reduced the development footprint of the station."

Recommendation:

- Commit in the FEIS to constructing parking structures rather than surface parking at the Kings/Tulare Regional Station, and using parking structures in the downtown areas of Hanford, Visalia, and Tulare to accommodate a significant percentage of parking demand from the Kings/Tulare Regional Station.

F005-13

7.4 Equitable Development

EPA supports FRA and CHSRA's efforts to promote well-planned, multi-modal, mixed-use station areas. An integral component of station area planning includes plans to avoid the potentially adverse consequences that urban revitalization can have on established communities and low-income residents. Without sufficient planning and outreach, urban revitalization efforts risk "pricing-out" historic residents and harming existing cohesion of established communities. Similarly, the siting of the HMF has the potential to disrupt communities and disproportionately impact low-income and minority populations if not planned well. FRA and CHSRA should identify specific commitments to help ensure that station areas and HMFs are developed in an equitable manner.

Recommendations:

- Commit to working with cities and other stakeholders to help ensure that an appropriate percentage of low-income housing is integrated into station area developments.
- Commit to take proactive and thorough efforts to engage low income and minority community members, community groups, and community development organizations in the station area planning process.
- Commit to augmenting CHSRA's "HSR Station Area Development: General Principles and Guidelines" document and "Urban Design Guidelines" document so that they include equity as a key principle and includes guidelines for promoting equity.
- Commit to the following criteria for selecting a heavy maintenance facility (HMF) location: 1) consideration of impacts to low-income and minority communities; 2) future potential for smart growth development patterns; 3) transit connectivity; 4) transit service and/or ride-sharing to connect HMF sites to population centers, to provide an alternative to single-occupant vehicles for employees' commutes. Identify if auxiliary services, such as restaurants or other retail, are planned to be sited near or within the HMF.

F005-14

7.5 Brownfield Redevelopment

The DEISs state that there are underutilized and vacant properties surrounding potential stations. It is currently unclear if identification, assessment, and reuse of browfield sites will be addressed through the assistance FRA and CHSRA are providing to cities.

Recommendations:

- Include identification and assessment of brownfield sites within .5 mile of the stations as a part of FRA and CHSRA funded station area planning activities.

Submission F005 (Enrique Manzanilla, United States Environmental Protection Agency, Region IX, October 13, 2011) - Continued

F005-14

- Support redevelopment and TOD by funding assessment and clean-up of brownfield sites with the requirement that redevelopment on these sites be consistent with FRA and CHSRA station area planning guidelines.
- Commit to assessment and clean-up of underutilized and vacant properties if any are present around the selected HMF site for worker amenities and/or housing.
- Consider whether station and HMF sites offer the opportunity for beneficial reuse of brownfield sites when selecting preferred location.

F005-15

7.6 Safety in Station Areas

According to the National Crime Prevention Council, *Crime Prevention Through Environmental Design* is based on the principle that the design of buildings and the layout of public spaces can lead to a reduction in feelings of fear and actual occurrences of crime, and an improvement in the quality of life for residents and visitors. The American Public Transportation Administration developed guidance specifically for mass transportation providers, which is available at http://www.aptastandards.com/Portals/0/Security_pdfs/APTA-SS-SIS-RP-007-10_CPTED.pdf.

Recommendation:

- Commit to implementing Crime Prevention Through Environmental Design principles for stations in Section 3.11, Safety and Security, of the FEISs.

7.7 Visual Impacts

Aesthetic and visual impacts are discussed in Section 3.16, and adverse impacts on visual quality are reported for select areas under all alternatives. EPA understands that visual impacts from fences, elevated structures, maintenance facilities, and other system components have the potential to alter the character and cohesion of communities. Through working with local stakeholders, CHSRA has the opportunity identify design elements to best meet local needs. This may include incorporation of landscaping screening, integration of public art, and adding color to enable infrastructure to better blend into backgrounds, among several other options.

Recommendations:

- Add VQ-MM#4b from page 3.6-82 of the Fresno to Bakersfield DEIS, entitled, "Provide Offsite Landscape Screening Where Appropriate," to the list of related mitigation measures on page 3.16-58 of the Merced to Fresno DEIS.
- Commit to conducting outreach once the preferred alignment has been selected to obtain input on the future use of the area beneath the rail guideway and identify design options compatible with community character for all elevated portions of the alignment located near communities, as committed to for the Northeast District of Bakersfield on page 3.12-84 of the Fresno to Bakersfield DEIS.

F005-16

8. CHILDREN'S HEALTH

Executive Order 13045 on Protection of Children from Environmental Health Risks and Safety Risks directs each Federal agency to make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children, and ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health or safety risks.

F005-16

8.1 Analysis of Risks to Children

Because children are more susceptible to environmental exposures than adults, analysis of environmental health impacts on children is critical to understanding project impacts and identifying appropriate mitigation. Chapter 3 of the DEISs identifies sensitive receptors and areas where children may congregate (e.g., schools, parks, daycare centers) within the project area. In addition, the DEISs identify air quality, noise, and community impacts from the project, as well as the use of hazardous materials.

Recommendations:

- Evaluate the potential direct, indirect, and cumulative health impacts of the project alternatives (during construction and operation) on children's health. The analysis should consider the following:
  - Potential respiratory impacts, including asthma, from air pollutant emissions and generation of fugitive dust;
  - Potential noise impacts to health and learning, especially in areas where the project is located near homes, schools, daycare centers, and parks; and
  - Potential impacts from the use of chemicals, such as pesticides, dust suppression methods, and hazardous materials, to children's health.
- Identify mitigation measures to reduce the project's impacts to children's health.
- Clearly identify the project alternatives that have the least impact to children and other sensitive receptors, as well as those alternatives that have the least impact on areas already significantly impacted by existing air pollution, high disease rates, and other indicators of social vulnerability.

8.2 Child Safety During Construction Activities

Construction activities may result in temporary heavy truck traffic as well as altered transportation routes. Safety measures that offer additional protection to children who are walking in areas near construction activities should be included in the Construction Mitigation Plan.

Recommendations:

- Identify and assess the potential safety risks of project construction to children, especially in areas where the project is located near homes, schools, daycare centers, and parks.
- Provide mitigation measures that ensure child safety within and near the project area. For example, crossing guards could be provided in areas where construction activities are located near schools, parks, and daycare centers.
- Establish truck traffic routes away from schools, daycares, and residences, or at a location with the least impact if those areas are unavoidable. Notify nearby residences and schools of construction periods and the expected amount of heavy truck traffic.

F005-17

8.3 Clarification of Study Area for Merced to Fresno

Depending on the definition of study area, the number of schools impacted by the project varies. For example, the number of schools listed in Table 3.12-5 (Facilities within the Study Area) differs from the number of schools listed in Table 3.10-6 (Summary of Significant Hazardous Materials and Wastes Impacts and Mitigation Measures).

Submission F005 (Enrique Manzanilla, United States Environmental Protection Agency, Region IX, October 13, 2011) - Continued

F005-17

Recommendations:

- Clarify why the number of schools identified in Table 3.12-5 differs from Table 3.10-6.
- Define the study area (or buffer zone) in the notes of Tables 3.12-5 and 3.10-6.

F005-18

8.4 HMF Impacts on Children's Health for Merced to Fresno

Page 3.3-68 indicates that three of the five potential HMF sites would have potentially significant impacts to sensitive receptors for cancer risk and respiratory hazard risk (cancer risk estimates exceed 10 in a million). Likewise, page 3.3-68 implies that three of the HMF sites would have a Respiratory Hazard Index greater than 1.0 but does not explicitly state the Hazard Index for those sites.

Recommendations:

- Consider significant impacts to sensitive receptors in selection of the HMF site.
- Include the estimated cancer risk and the Respiratory Hazard Index if one of the three sites where cancer risk exceed 10 in a million is chosen as the preferred alternative

9. ENVIRONMENTAL JUSTICE AND COMMUNITY IMPACTS

The 1994 Executive Order (EO) 12898 on Environmental Justice addresses disproportionate and adverse impacts of federal actions on minority and low-income populations. In August of this year, several federal agencies, including the U.S. Department of Transportation and EPA, finalized a Memorandum of Understanding (MOU)[2] to advance agency responsibilities under EO 12898. Under the MOU, Federal agencies commit to identifying and addressing the disproportionately high and adverse human health or environmental effects of its programs, policies and activities on minority populations and low-income populations in a number of key areas, including NEPA implementation, implementation of Title VI of the Civil Rights Act, and impacts from climate change. EPA urges FRA, as the lead agency under NEPA, to review and apply the MOU in its FEIS development.

EPA acknowledges the efforts of FRA and CHSRA to analyze impacts to environmental justice communities. Table 3.12-17 in M-F DEIS and Table 3.12-15 in the F-B DEIS present a summary of environmental justice impacts. The analysis indicates that areas along proposed alignments contain higher percentages of environmental justice communities than the region as a whole. The Merced to Fresno DEIS concludes that the majority of impacts (adverse and beneficial) would predominantly be borne by communities of concern in the study area; however, the impacts to communities of concern would not be disproportionately high or adverse. The Fresno to Bakersfield DEIS concludes that there would be some disproportionately high and adverse environmental justice impacts during construction and operation.

F005-19

9.1 Consistency in Methodology and Analysis

For the Merced to Fresno section, the summary of the project's environmental impacts and their relevance to environmental justice, provided in Table 3.12-17 (Impacts Common to All Alternatives on Communities of Concern), indicates that there are no anticipated adverse air

[2] A copy of the Memorandum of Understanding Environmental Justice and Executive Order 12898 is available on-line at: http://epa.gov/environmentaljustice/resources/publications/interagency/ej-mou-2011-08.pdf .

F005-19

quality and noise impacts to communities of concern. The information provided in Table 3.3-32 (Summary of Significant Air Quality and Global Climate Change Impacts and Mitigation Measures), however, indicates that significant impacts on air quality would still exist after mitigation measures are implemented. In addition, Table 3.4-27 (Summary of Significant Noise and Vibration Impacts and Mitigation Measures) states that some neighborhoods would still have significant noise and vibration impacts in areas where sound barriers are not fully effective.

For the Fresno to Bakersfield section, although some environmental impacts to communities of concern were determined not to be disproportionately high, Section 3.12 should reference the air quality and noise impacts to communities living near the proposed alignment that are discussed in other sections of the DEIS. Table 3.12-6 concludes that there are no environmental justice impacts resulting from the project's air quality impacts. If the affected community is composed of a higher minority or low-income population than the reference community, then environmental justice impacts exist.

Recommendations:

- Incorporate the conclusions provided in other sections of the DEISs, such as air and noise impacts, into the EJ analysis and discuss localized impacts to community members who may be unable to relocate.
- Clearly identify the reference community used to complete the environmental justice analysis in the FEISs.
- Clearly identify information on the timing of construction of the project for both sections, with updated information where needed due to scheduling changes.
- Include information on cumulative impacts and their relevance to environmental justice in Table 3.12-17 of the Merced to Fresno FEIS.
- Include the "distance covered" by moderate noise impacts and severe noise impacts to Merced to Fresno Tables 3.4-15 and 3.4-16 (similar to how the distances are included in Table 3.4-14 of the Fresno to Bakersfield DEIS).

F005-20

9.2 Localized Impacts

For both sections, the analysis should better evaluate the localized impacts to minority or low-income communities in the immediate vicinity of the project that could result from construction or operation for each alternative, especially in areas where residents may be unable to relocate.

Recommendations:

- Identify the project alternatives that have the least impact to communities of concern, as well as those alternatives that have the least impact on areas already significantly impacted by existing air pollution, high disease rates, and other indicators of social vulnerability.
- Consider the impact of road closings on environmental justice communities and consider additional over- and undercrossings where significant impacts exist.
- Commit to implementing noise mitigation desired by impacted community members.
- Commit to considering community impacts when selecting a HMF site.
- Review environmental justice concerns raised during the public involvement process to facilitate the identification of highest priority mitigation measures.

Submission F005 (Enrique Manzanilla, United States Environmental Protection Agency, Region IX, October 13, 2011) - Continued

F005-21

9.3 Commercial & Residential Relocation
Both DEISs discuss the disproportionate impacts communities of concern would face as a result of commercial and residential displacement (Merced to Fresno p.3.12-59 & Fresno to Bakersfield p. 3.12-87). EPA believes additional measures are necessary to mitigate impacts.

Recommendations:

- Focus business relocation efforts of neighborhood-serving businesses within their existing neighborhoods to minimize impacts to community cohesion. In particular, due to its role in the community, as discussed in the DEIS, assist the Mercado Latino Tianquis in Bakersfield in relocating to a location where the community it serves can access it.
- Commit to replacement housing options to allow residents to remain in their communities if desired, including rehabilitation of existing housing or construction of new housing in those communities when no replacement housing for displaced residents appears to be available (such as in Fairmead and LeGrand).
- Offer relocation assistance to residents found to be living in motels.
- Revise Table 3.12-46 in the Merced to Fresno FEIS or add an additional table so that residential and business displacements are provided "by community" and then totaled for each alternative, following the example of Table 3.12-9 from the Fresno to Bakersfield DEIS.
- Include a discussion in the Merced to Fresno FEIS of commercial and residential relocations and related socioeconomic impacts by community, following the example of Section 3.12 of the Fresno to Bakersfield DEIS.
- Commit to conducting community workshops in all significantly affected areas to obtain input and identify mitigation measures for residents whose property would not be taken, but whose community would be substantially altered by construction of HSR facilities, including loss of neighbors, following the example of commitments made for the areas northeast of Hanford and Corcoran on page 3.12-83 of the Fresno to Bakersfield DEIS.

F005-22

9.4 Economic Development
Both DEISs state that the project would create jobs, and that these jobs would not benefit local minority and low-income populations more than the general population without the development of specialized programs and training (Merced to Fresno p. 3.12-64 & Fresno to Bakersfield p. 3.12-82). Mitigation measures in both DEISs include recruitment, training, and job set-aside programs to ensure that study area low-income and minority populations benefit from the jobs created by the project. It is unclear, however, if these programs are still under consideration or if FRA and CHSRA have committed to implementation. EPA suggests that such programs and training are a critical component of fairly compensating affected communities of concern.

Recommendation:

- Commit to developing special recruitment, training, and job set-aside programs for environmental justice communities impacted by the project, as discussed in the DEISs.

F005-23

9.5 Meaningful Public Involvement during Relocation and Construction
Chapter 7 of the DEISs discusses public and agency involvement. Although outreach activities, including public meetings, have been used to inform the public of the project and its potential impacts on their communities, it is unclear how public feedback was responded to and taken into consideration during the decision-making process. It is also unclear how public concerns raised during the relocation process and construction period will be addressed.

Recommendations:

- Provide more information in the FEISs on community concerns raised during the public involvement process and how concerns were responded to (i.e., Comment and Response Summary).
- Include a community involvement section in the Construction Mitigation Plan with a phone number for people to call with concerns in English or Spanish.
- Provide more information in the FEISs about the mitigation relocation plan, how the public will be involved, how the plan will be implemented, and who community members can contact for more information in English and Spanish.
- Include specific measures to continue outreach to communities of concern.

F005-24

9.6 Communities Considered in Analysis
Communities in station areas and non-station areas located near the corridor all have the potential to be heavily impacted by the HSR project. It is necessary for FRA and CHSRA to assess impacts to all communities within a reasonable distance from the corridor. In the Merced to Fresno DEIS, it is unclear whether smaller towns along the proposed alignments were left out of the assessment, or if they were fully incorporated into the assessment of larger urban cities. It is also unclear if local policies for smaller incorporated areas are not discussed because they do not exist or because they were overlooked.

Recommendations:

- Revise the Merced to Fresno DEIS so that all communities within the HSR study area are explicitly addressed, including smaller communities such as Athlone, Minturn, Fairmead, Le Grand, and Madera Acres.
- Explain whether the same study area parameters were used in both DEISs to assess community resources and revise analysis if needed. It appears the Merced to Fresno DEIS considers community resources within 0.25 mile from the track, while the study area for Fresno to Bakersfield extends 0.5 mile from the track.

F005-25

10. NOISE & VIBRATION

10.1 Operational Impacts from HMFs
The assessment of noise impacts from HMF operations is not consistent between DEISs (p. 3.4-39 of Merced to Fresno and Fresno to Bakersfield DEISs). The Fresno to Bakersfield DEIS states that sensitive receptors within 900 ft of each proposed HMF site could have severe impacts according to FRA criteria, and sensitive receptors within 900 feet are quantified in Table 3.4-11. The Fresno to Bakersfield DEIS concludes, "Each HMF has residences within the 900-foot contour line and therefore all HMFs have substantial effects under NEPA." The Merced to Fresno DEIS uses a different methodology to assess operational noise from HMFs and concludes

Submission F005 (Enrique Manzanilla, United States Environmental Protection Agency, Region IX, October 13, 2011) - Continued

F005-25

that noise impacts would be "significant" for Castle Commerce Center HMF and no impacts would occur for other HMF alternatives.

Recommendations:

- Revise the DEISs so that analysis, methodology, assumptions, and conclusions are consistently applied throughout the system. For example, revise Merced to Fresno conclusions regarding HMF operational noise impacts following the methodology discussed in Fresno to Bakersfield DEIS p. 3.4-39.
- Identify sensitive receptors within 900 feet of each HMF in the Merced to Fresno section. Use the Fresno to Bakersfield DEIS table 3.4-11 as an example.
- Add measures to mitigate HMF operational noise from the Fresno to Bakersfield DEIS (found on p. 3.4-57 and 3.4-58) to the Merced to Fresno FEIS. All but one of these measures is included in Merced to Fresno Appendix 3.4-A and should also be included in the FEIS document.

10.2 Potential Locations of Noise Barriers

Both Merced to Fresno and Fresno to Bakersfield DEISs provide maps which illustrate potential locations of noise barriers. Details on potential location, height, length, and receptors affected, however, are only provided in the Fresno to Bakersfield DEIS. This level of information is necessary in order for residents to be aware of local impacts and may influence public decisions on whether to become involved in local planning efforts.

Recommendations:

- Include a table in the Merced to Fresno FEIS describing noise barriers with data on potential location, height, length, number of people benefited and number of people adversely affected. Use the Fresno to Bakersfield DEIS Table 3.4-23 as an example.

10.3 Analysis of Traffic Noise

Traffic on streets near HSR stations is expected to increase as a result of the project. This could potentially contribute to increased noise levels near the station and near arterial roadways that feed cars in to the station area. Both DEISs state, "…any changes in traffic near the stations would provide only a minor contribution to the project noise at stations" (Merced to Fresno and Fresno to Bakersfield-F and F-B p. 3.4-15).

Recommendations:

- Reference the specific study that supports FRA and CHSRA's conclusions regarding project impacts on traffic noise levels. In addition, add key summary points from the study to the discussion on traffic noise found on page 3.4-15 of both documents.

10.4 Noise Implications of Track Design

Assumptions for the Merced to Fresno noise analysis are listed ou page 3.4-13 and state, "HSR was assumed to be ballast and tie with continuous welded rail, consistent with the FRA guidance manual (FRA 2005). Ballast and tie track is typically 2 to 4 dB quieter than slab track." It is unclear if slab track may poteutially be used on the HSR project rather than ballast and tie track. In addition, if slab track is used and slab track is louder than ballast and tie track, it is unclear how may additional receptors could be affected and what additional mitigation might be needed.

F005-25

Recommendations:

- Clarify whether slab track, or other material, could potentially be used for the project. If slab track could potentially be used, update the Merced to Fresno noise analysis so that it presents a more conservative estimation of noise impacts. In addition, quantify and discuss locations of receptors that would be affected by noise if slab track is selected. Any increases to mitigation that would be needed relative to the ballast track scenario should also be included.
- Indicate whether the Fresno to Bakersfield DEIS noise analysis assumed ballast and tie or slab track in the noise analysis. If the Fresno to Bakersfield DEIS assumed ballast and tie, the bullet point above would apply to both DEISs.

10.5 Vibration Mitigation Measures

The Merced to Fresno DEIS concludes that vibration impacts from operations are projected to be substantial for one alternative, and mitigation might not be feasible. The Fresno to Bakersfield DEIS concludes that vibration impacts from operations are expected to remain substantial for all alternatives even with mitigation. Both DEISs identify and describe measures to mitigate vibration impacts.

While both DEISs include "special track support systems" as a mitigation measure, neither document refers specifically to use of tire derived aggregate (TDA). TDA can act as an energy absorbing layer below tracks. TDA can be far more cost effective than traditional materials, such as rubber mats, special track fasteners, or floating slab track beds. Use of TDA also creates substantial environmental benefits because California is challenged with managing more than 40 million newly generated reusable and waste tires each year in addition to tires remaining in stockpiles, which can pose health risks if not disposed of properly or reused.

Recommendations:

- Include "Operational Changes" as a measure to mitigate vibration impacts in Table 3.2-26 of the Merced to Fresno DEIS, following the example of Table 3.4-27 in the Fresno to Bakersfield DEIS.
- Update the list of vibration mitigation measures in both documents to include use TDA comprised of recycled tires. Refer to the California Department of Resources Recycling and Recovery website for more information.

10.6 Analysis of Cumulative Noise Impacts

Both DEISs discuss cumulative noise impacts in Section 3.19. Screening distances, however, appear to be inconsistent between the two documents. The Merced to Fresno DEIS states that a screening distance of up to 1,300 feet is used to analyze cumulative noise impacts. The Fresno to Bakersfield DEIS states that a screening area of 7,500 feet on either side of the centerline of the HST alternatives was used, and the area was selected because the HSR could increase noise within that area. EPA is concerned that potential noise impacts were not disclosed and mitigated for in the Merced to Fresno project area.

Recommendations:

- Consider whether the screening area utilized in the Merced to Fresno DEIS should be revised in order to provide a consistent assessment of the HSR noise impacts

Submission F005 (Enrique Manzanilla, United States Environmental Protection Agency, Region IX, October 13, 2011) - Continued

F005-25

throughout the Central Valley. Revise the analysis to capture the full extent of potential cumulative impacts and commit to noise analysis methodology that can be applied to future segments of high-speed rail. If differing screening area distances are used, provide supporting information to justify the different methodology applied.

F005-26

11. SUSTAINABILITY PARTNERSHIP, POLICIES, AND PRACTICES

11.1 Sustainability MOU

In September 2011 FRA and CHSRA signed the *Memorandum of Understanding for Achieving an Environmentally Sustainable High-Speed Train System in California* (Sustainability MOU) with EPA and other federal and state partners, committing to collaboratively promotes environmental sustainability of the HSR project. Focus areas include: (1) Livable, Sustainable Communities, (2) Material Selection, Design and Construction, (3) Renewable Energy and Energy Efficiency, (4) Water Resources Management, (5) Systemwide Sustainability Policy (http://www.cahighspeedrail.ca.gov/sustainabilitypartners.aspx). EPA commends FRA and CHSRA for recognizing, through the MOU, the need to "plan, site, design, construct, operate, and maintain a HST System in California using environmentally preferable practices in order to protect the health of California's residents, preserve California's natural resources, and minimize air and water pollution, energy usage, and other environmental impacts."

Recommendations:

- Include a copy of the Sustainability MOU in the FEIS and reference it throughout the document where applicable.
- Commit to continuing to work with the HUD-DOT-EPA Partnership for Sustainable Communities and the California Strategic Growth Council under the Sustainability MOU throughout the design and construction of the HSR system.
- Include a discussion in the FEISs on the specific steps FRA and CHSRA are taking to incorporate each of the following policies, publications, and programs into development of the HSR project. Include details on outreach to communities and feedback received:
  - FRA publication, *Station Area Planning for High-Speed and Intercity Passenger Rail* (June 2011), as a guide for state transportation departments and local and regional jurisdictions; (http://www.fra.dot.gov/downloads/FRA_Station_Area_Planning_June_2011_c.pdf).
  - Work plans developed as a result of Station Area Planning Funding Program (March 2011); http://www.cahighspeedrail.ca.gov/pr_stationareaplanning.aspx).
  - CHSRA publication, *Urban Design Guidelines* (March 2011), developed to assist cities and communities with station area visioning (http://www.cahighspeedrail.ca.gov/urban_design_guidelines.aspx).
  - CHSRA publication, *Station Area Development Guidelines* (February 2011), developed to establish principles for promoting sustainable development (http://www.cahighspeedrail.ca.gov/highspeedtrain_stationdev_policies.aspx).

F005-26

  - CHSRA Board 100% Renewable Energy goal (September 2008) (http://www.cahighspeedrail.ca.gov/energy_policy_goal.aspx).
- Commit to implementing an Environmental Management System (EMS) to assess and improve environmental performance throughout the life of the project. Guidance on EMS development and implementation is available at http://www.epa.gov/EMS/. EPA also recommends that the FEISs commit to obtaining ISO 14000 certification.
- Commit to incorporating specific language on preferred qualifications and practices in Request for Qualifications and Request for Proposals to help ensure that contractors have the necessary expertise and develop appropriate proposals to design, construct, and operate the HSR system in a sustainable manner, in line with CHSRA's stated goals.
- As discussed in the Energy Section below, describe FRA and CHSRA's partnership with National Renewable Energy Laboratory and EPA to develop a Strategic Energy Plan to reduce energy use and meet energy needs with renewable resources.

11.2 Leadership in Energy and Environmental Design (LEED) for HSR Facilities

FRA and CHSRA have the opportunity to reduce environmental impacts and promote public health by incorporating green building strategies into the HSR system, including trackway, stations, maintenance yards, and other support facilities. Such strategies facilitate long term savings in cost, energy, and water usage, among other large-scale benefits such as improved indoor air quality.

The DEISs state that "HSR project buildings would conform to U.S. Green Building Council Leadership in Energy and Environmental Design (i.e., LEED) rating standards for environmentally sustainable new construction. HSR facilities, including HSR stations and the HMF, would be certified at the *Silver Level*" (Merced to Fresno p. 3.6-45 and Fresno to Bakersfield p. 3.6-64). While EPA commends FRA and CHSRA's commitment to LEED, we believe the HSR project could be improved by achieving a higher standard for green building.

Recommendations:

- Commit to achieving LEED certification at the *Platinum Level* for HSR facilities, including stations and maintenance facilities. At a minimum, EPA strongly encourages FRA and CHSRA to commit to analyzing the strengths and feasibility of obtaining LEED certification at the Platinum Level for HSR facilities, including stations and maintenance facilities. FRA and CHSRA should work with EPA and other partners under the HST Sustainability MOU to fully identify benefits and address potential challenges of obtaining Platinum Level certification.
- Provide specific topic areas to focus green building strategies, such as onsite renewable energy, optimized energy performance, materials reuse, and indoor air quality.

11.3 California Green Building Standards

The California Building Standards Commission (CBSC) administers California's building codes and is responsible for adopting, approving, publishing, and implementing codes and standards.

Submission F005 (Enrique Manzanilla, United States Environmental Protection Agency, Region IX, October 13, 2011) - Continued

F005-26

CBSC oversees the implementation of 2010 California Green Building Standards (CALGreen) Code, effective January 1, 2011, which sets standards for all new structures to minimize the State's overall carbon output. California requires new buildings to minimize water consumption, employ building commissioning to increase building system efficiencies, divert construction waste from landfills, and install low pollutant emitting finish materials.

Recommendations:

- Add to the list of applicable Laws, Regulations, and Orders in Section 3.6, Public Utilities and Energy, so that it includes 2010 California Green Building Standards Code, California Code of Regulations, Title 24, Part 11. The Part 11 mandatory green building standards for nonresidential buildings are adopted by the California Building Standards Commission under the authority of Section 18930.5 of Health and Safety Code, Division 13, Part 2.5, known as the California Building Standards Law. Information is available at http://www.bsc.ca.gov/default.htm.
- Commit to exceeding CALGreen standards in priority areas by meeting "optional" standards, including: pollutant control, indoor air quality, renewable energy, energy and water conservation, low impact development, and designated parking for fuel efficient/electric vehicles.

11.4 Sustainable Design for Unique Rail Infrastructure

LEED for new construction focuses on traditional buildings (commercial, institutional, multifamily, etc.) and is applicable to many of the facilities that will make up the HSR system. The HSR system, however, will also have unique rail infrastructure that falls outside the scope of traditional buildings covered by LEED.

Recommendations:

- Commit to considering best practices listed in the American Public Transportation Association March 2011 Transit Sustainability Guidelines and adopting relevant recommendations. Guidelines address unique opportunities for green building and overall sustainability in the transit industry. Guidelines are available at http://www.apta.com/resources/hottopics/sustainability/Documents/Transit_Sustainability_Guidelines_APTA_Final.pdf. More detailed examples of best practices and case studies are available in the Transit Sustainability Practice Compendium, available at http://www.apta.com/resources/hottopics/sustainability/Documents/Transit-Sustainability-Practice-Compendium.pdf.

11.5 Promoting Green Building in Station Areas

Section 3.13, Station Planning, Land Use, and Development, discusses FRA and CHSRA commitments to work with local governments in station areas to promote TOD near stations. HSR stations are expected to change development patterns and induce new development. New development will have environmental impacts, which can be minimized by incorporating green building practices. In addition, community benefits can be maximized from incorporating natural elements and community oriented components.

F005-26

Recommendations:

- Commit to providing information on green building practices when working with local jurisdictions on station-area development. In addition, encouraging third party certification (such as LEED for Homes and Build it Green) and goals to exceed CALGreen requirements by meeting "optional" standards.
- Commit to provide technical assistance for green building in station areas. Incorporate into FRA and CHSRA's ongoing grant program to support station-area development.
- Encourage and assist local jurisdictions in designing for adaptability and reuse in station areas to increase flexibility to meet future community needs. This is especially critical for any parking features which may become unnecessary after transit connectivity is developed. For guidance, see Public Architecture, Design for Reuse Primer, http://www.publicarchitecture.org/reuse/, and Lifecycle Building Challenge Resources, http://www.lifecyclebuilding.org/resources.php.
- Commit to working with local jurisdictions to obtain LEED ND Certification for station areas. LEED-ND certification provides independent, third-party verification that a building or neighborhood development project is located and designed to meet high levels of environmentally responsible, sustainable development.

11.6 Industrial Materials Management

EPA commends FRA and CHSRA's intent to use recycled materials for project construction (Merced to Fresno and Fresno to Bakersfield p. 2-97). We recognize, however, that the DEISs do not identify specific best practices to be adopted. Tire derived aggregate (TDA) is one of several recycled materials that could be incorporated into the project. As discussed in our comments above in the Noise Section, use of TDA could lower project costs and energy footprint by reducing the need for mined resources, has free draining characteristics that help solve engineering problems, and can mitigate vibration noise. Several other examples of use of recycled materials can also potentially lower project costs and have been used in other major infrastructure projects, such as the new East Span of the San Francisco-Oakland Bay Bridge. Karen Irwin with the EPA Region 9 Waste Division (415-947-4116) is available to further discuss the use of recycled materials as they relate to a high-speed train system.

In addition, the DEISs contain a regional analysis of GHG emissions associated with the construction phase of the HSR project. GHG emissions attributable to materials production (the raw acquisition, refining, processing, and manufacturing of construction materials to be used in building the HSR infrastructure) are not included in the DEIS emissions analysis. As a result, GHG emissions that would result from the project may be underestimated. The magnitude of emissions associated with materials production is exemplified in a University of California Davis study, which evaluated constructing a HSR segment from San Francisco to Anaheim and concluded that materials production would comprise more than 80% of total CO2e from the project.[3]

[3] "Life Cycle Greenhouse Gas Assessment of infrastructure construction for California's high-speed rail system", May 2011, University of California Davis, Institute of Transportation Studies, Brenda Chang and Alissa Kendall http://www.sciencedirect.com/science/article/pii/S1361920911000484.

Submission F005 (Enrique Manzanilla, United States Environmental Protection Agency, Region IX, October 13, 2011) - Continued

F005-26

Recommendations:

- Identify which recycled materials would be used to replace raw materials for particular infrastructure components. Some options include:
  - Use recycled materials to replace carbon-intensive Portland Cement in concrete as "supplementary cementitious material".
  - Use tire-derived aggregate in lightweight embankment fill, retaining wall backfill, and as underlay to rail tracks.
  - Use recycled materials in pavement applications, such as crushed recycled concrete, recycled asphalt pavement, and rubberized asphalt concrete. Also, in some circumstances, on-site asphalt can be re-used (e.g., cold in-place recycling or full depth reclamation).
  - Limit overdesign and use of excess concrete through admixtures and other techniques.
- Include a discussion of the GHG estimates of the materials production process for materials that would be used in the construction of the HSR, including but not limited to, Portland Cement, precast concrete, ready mix concrete, aggregate, rail, reinforcement bars, rail fasteners, rail pads, steel poles, and contact wire. Where feasible, include a quantification of GHG emissions resulting from the production process.

F005-27

12. ENERGY

The EISs state that CHSRA would purchase up to 100% renewable energy to power HSR operations (Merced to Fresno p. 3.6-45 & Fresno to Bakersfield p. 3.6-64). It is not clear if CHSRA is assessing options for powering only the trains or also stations and support facilities. EPA strongly supports FRA and CHSRA's dedication to renewable energy, which would eliminate emissions from powering the HSR system with electricity generated from fossil fuels, along with numerous other potential environmental benefits. EPA recognizes that realizing the goal of powering the system with 100% renewable energy will require strategic planning and early coordination. We also support partnering with BNSF and UP and short haul carriers to determine if electrification of the HSR could occur in coordination with electrifying freight movement.

Recommendations:

- Include a description in the FEIS of steps taken to date to meet future renewable energy needs along with plans to reach the goal to power the system with 100% renewable energy. Include discussion of CHSRA's partnership with National Renewable Energy Laboratory to create a strategic energy plan.
- Identify if the goal to power the system with 100% renewable energy includes powering stations and heavy maintenance facilities and/or generating renewable energy on-site.
- Include commitments to promote siting of renewable resources on contaminated and underutilized lands over pristine lands if FRA and CHSRA have a role in influencing where the source of energy for powering the trains will come from. RE-Powering America's Lands Initiative has a mapping tool that allows users to see contaminated lands by location and is available at http://www.epa.gov/renewableenergyland/mapping_tool.htm.

F005-27

- Coordinate with local farming stakeholders to consider linking generation of renewable energy from farming practices with the need to power the project through renewable energy. Include the discussion of this potential source of renewable energy in the FEIS.
- Describe how electrification of a high-speed train system could occur in coordination with efforts to electrify freight movement. Specifically, the FEIS should outline the steps that would need to occur, and barriers that would need to be overcome, in order to construct electrification infrastructure that could meet the needs of freight movement and high speed train operation.

F005-28

13. HAZARDOUS MATERIALS

EPA understands that hazardous materials would be used in the construction, operation, and maintenance of the overall HSR system. The DEISs state that "operation of the HSR would require only minor amounts of hazardous materials" and provide a few examples of hazardous materials (M-F p. 3.10-24 and F-B p. 3.10-27). A quantification and full list of hazardous materials to be used is not provided. Given the expansive size of the entire HSR system and the projected lifetime of operation, small applications of hazardous materials will accumulate over time and could potentially have adverse impacts on human health and the environment.

DEISs explain that a database search was conducted in order to identify sites of potential environmental concern near HSR alignments. Page 3.10-6 of the Merced to Fresno DEIS describes a buffer of 0.5 mile and page 3.10-7 of the Fresno to Bakersfield DEIS describes a buffer of 1 mile from the centerline of the track. It is unclear why buffers vary between documents and if the 0.5 mile buffer is sufficient to protect human health and the environment.

Recommendations:

- Commit to identifying, avoiding and minimizing hazardous materials in the material selection process for construction, operation, and maintenance of the overall system, including stations and all support facilities. While proprietary information may prevent full knowledge of potential threats, high standards for material specifications and direct communication with manufactures can aid in promoting safety for passengers and employees. Examples of chemicals to consider avoiding are included in the State of California Environmental Protection Agency's "Chemicals known to the State to Cause Cancer or Reproductive Toxicity," available at http://www.oehha.org/prop65/prop65_list/files/p65single090211.pdf.
- Commit to systematically evaluate a full hazardous material inventory list on an annual basis and replace hazardous with non-hazardous substances to the extent possible. Examples of preferable products may include non-toxic cleaning solutions and non-petroleum based lubrication for switching equipment. In addition, pesticides can be minimized through the use of integrated pest management, as detailed on EPA's website at www.epa.gov/pesticides.
- Commit to not using extremely hazardous substances within 0.25 mile of a school or other sensitive receptor. (HMW-MM#1.)
- Clarify why buffers used in the database search for sites of potential environmental concern vary between documents. If found to be appropriate, conduct an additional database search to identify all sites that may be affected by the project.

Submission F005 (Enrique Manzanilla, United States Environmental Protection Agency, Region IX, October 13, 2011) - Continued

F005-29

14. ELECTROMAGNETIC FIELDS AND ELECTROMAGNETIC INTERFERENCE

Section 3.5 of both DEISs asses potential impacts from electromagnetic fields and electromagnetic interference. The scope of sensitive receptors analyzed and mitigation measures proposed appear to differ between documents.

Recommendations:

- Add medical laboratories and research/technical parks to the list of facilities close to the HSR that could be affected by exposure to electromagnetic fields and interference on page 3.5-13 of the Merced to Fresno DEIS (following the example of the Fresno to Bakersfield DEIS) or confirm that they are not present. Update the analysis as needed to reflect these additional facilities, or, if these facilities cannot be found within the study area, commit to assessing them should they later be identified.
- Add a Mitigation Measure identified in the Fresno to Bakersfield DEIS to the Merced to Fresno FEIS, "Protect sensitive equipment". If the study area between Merced and Fresno has been fully assessed and no sensitive equipment has been identified, commit to implementing this mitigation measure if any sensitive equipment is later identified.

34

Response to Submission F005 (Enrique Manzanilla, United States Environmental Protection Agency, Region IX, October 13, 2011)

F005-1

Each resource analysis in Chapter 3, Affected Environment, Environmental Consequences, and Mitigation Measures, of the EIR/EIS has been updated to include the significance conclusion under NEPA after the description of mitigation measures in accordance with Council on Environmental Quality (CEQ) guidance.

F005-2

The Authority has continued to coordinate with the U.S. Army Corps of Engineers (USACE) and the U.S. Environmental Protection Agency (EPA) regarding alternatives and has received Checkpoint B concurrence from the USACE and agreement from the USEPA. Checkpoint B identifies the alternatives that are carried forward for analysis in the EIR/EIS, including an alignment alternatives that bypasses Hanford to the west.

The Authority conducted a supplemental alternatives analysis to further evaluate potential alignment alternatives west of Hanford (Authority and FRA 2010a), and on the basis of this analysis, identified two Hanford West Bypass alternatives to carry through the environmental analysis in the Revised DEIR/Supplemental DEIS. Please see Chapter 2, Section 2.4, Alignment, Station, and Heavy Maintenance Facility Alternatives Evaluated in this Project EIR/EIS.

F005-3

Portions of this comment refer specifically to the Merced to Fresno Section Draft EIR/EIS. Responses to these portions of the comment can be found at the California High-Speed Rail Authority's website.

A description of the major watercourses that traverse the project footprint is provided in Section 3.8, Hydrology and Water Resources, of the Revised DEIR/Supplemental DEIS; this document also provides a quantitative and qualitative description of indirect impacts on aquatic resources.

Additional information about the landscape context of impacts and the results of a functional assessment is provided as part of the Checkpoint C (Identification of the Preliminary Least Environmentally Damaging Practicable Alternative [LEDPA]) submittal. Based on coordination with the the U.S. Army Corps of Engineers and Environmental Protection Agency, the Authority has prepared a number of reports in

F005-3

support of Checkpoint C. These reports provide a detailed assessment of conditions present in the watershed and study areas, including an analysis of project impacts based on both quality and associate compensatory mitigation (see the Watershed Evaluation Report in Appendix 3.7-C). The results of the California Rapid Assessment Method (CRAM) analysis, which assigned a numeric score to select aquatic resources in the study area are provided in Appendix A of Appendix 3.7-C.

A summary table of direct and indirect impacts on jurisdictional waters is provided in Appendix 3.7-B, Attachment 4, of the Revised DEIR/Supplemental DEIS.

A comprehensive diagram illustrating the distinction between direct, indirect, and indirect bisected impacts on aquatic resources is included in the Final EIR/EIS (Figure 3.7-2, and Appendix 3.7-B Attachment 4). Additionally, text has been added in the Final EIR/EIS to clarify that "indirect-bisected" impacts on vernal pools will be treated as direct permanent impacts for the purposes of compensatory mitigation.

In the Final EIR/EIS, the Checkpoint C submittal package and the Clean Water Act Section 404 permit application include impact acreage values consistent with the U.S. Army Corps of Engineers, February 5, 2013, preliminary jurisdictional determination or with subsequent submittals.

F005-4

Bullet #1. As stated in the Draft EIR/EIS, the HST tracks would not generate substantial amounts of pollutants. The runoff from new or modified roads, parking lots, or other pollutant generating surfaces be treated, as would runoff from an HMF alternative (whichever site is ultimately selected). The project would not increase the rates of stormwater runoff to surface waters. Also, the project is not anticipated to contribute any pollutants on the 303(d) list in the study area. As a result, the project would not contribute to any further deterioration of water quality in any of the 303(d)-listed water bodies in the project area.

It is anticipated that the project will not require the use of any appreciable amount of groundwater Thus the project would not contribute to a decline in groundwater supply.

Response to Submission F005 (Enrique Manzanilla, United States Environmental Protection Agency, Region IX, October 13, 2011) - Continued

F005-4

Low Impact Development measures applicable to the project are identified in the second paragraph of Section 3.8.6 – Mitigation Measures. LID measures applicable to the project will be provided in documents (e.g., Stormwater Management Plan, Water Quality Report) that will be submitted with the permit applications. The LID and BMPs used in the project emphasize onsite retention of runoff, where practical, using dispersal or infiltration of project runoff.

Bullet #2. The project would be designed and operated to comply with the requirements of the state's general stormwater NPDES permits and conditions of the 401 permit for the project and, as applicable, local MS4 permits at station areas and HMF locations.

Bullet #3. A subsection has been added to Section 3.8.2.C of the Final EIR/EIS discussing the NPDES Industrial General Permit.

Bullet #4. A subsection has been added to Section 3.8.2.C of the Final EIR/EIS discussing the NPDES Industrial General Permit. Mention is made of the update to this permit, currently underway, and the major changes under consideration.

Bullet #5. The Fresno to Bakersfield HST Section includes more than 100 miles of track, several associated road relocations and other project changes that would affect local stormwater runoff. The Draft EIR/EIS discusses the measures that would be taken to assure that local hydrology and water quality would not be negatively impacted by the project. The actual quantification of local stormwater hydrology and specific drainage and stormwater management measures would occur during detailed design..
See also FB-Response-HWR-02: Site-Specific Drainage Impacts

Bullet #6. The siting of specific stormwater facilities will be accomplished during detailed design (see the response immediately above). The project right-of-way is expected to provide the required space for stormwater facilities for the great majority of the project.

Bulet #7. As discussed in the Draft EIR/EIS, wash water and other project process waters would be segregated from any HMF surface runoff, treated separately and recycled or properly disposed of. Stormwater runoff generated at the

F005-4

HMF would be treated using appropriate BMPs. If surface discharge occurred, the treated runoff would be managed/detained in such a manner so as not to increase peak stormwater runoff from the site. As a result no substantial impacts to surface or groundwater would occur.

Bullet #8. The commenter requests project data on quantities of lubricants and other possible hazardous materials used for HSR operation. At this time, this information is not available. General information about hazardous material use (primarily at the HMF sites) is presented Section 3.10 Hazardous Material and Waste in the Draft EIR/EIS.

Bullet #9. Section 1.1 of the Stormwater Management Plan developed for the Merced to Fresno Draft EIR/EIS, identifies a number of electrically-powered rail systems that have been determined to be non-polluting sources of runoff. These include the San Diego Metropolitan Transit System, the Los Angeles Metro System and the Seattle Light Rail system. Stormwater treatment is not required for track runoff from these systems. Berkhardt, Rossi, and Boller (2008) estimated the composition and quantity of substances released by the Swiss Federal Railways (SBB) network to the environment, based on composition and use of consumable materials (i.e. brake pads, lubricants, and herbicides). In the case of SBB, the primary substances released from braking were estimated to be iron, copper, manganese, and chromium; zinc was estimated to be released from galvanized poles. A total of about 2,270 tons per year of metals was estimated. Most of the releases are as particulate matter and only a small amount of metals would be expected to be leached in dissolved phase. The HST would use regenerative braking technology which will reduce brake pad wear and the amount of metal particles deposited within the track right-of-way.

F005-5

The Authority and FRA are committed to avoid, minimize, and mitigate for impacts on aquatic resources. As part of the NEPA/404/408 Integration Memorandum of Understanding (FRA et al. 2010), and as part as of the Final EIR/EIS, the Authority and FRA have identified and described the avoidance and minimization efforts taken to date (including Section 1.7 of the Checkpoint C Summary Report). They have provided a reasoned, specific, detailed argument that the project will neither cause nor contribute to

Response to Submission F005 (Enrique Manzanilla, United States Environmental Protection Agency, Region IX, October 13, 2011) - Continued

F005-5

significant degradation of waters. This argument is based on watershed information provided in the Watershed Evaluation Report (WER) submitted as part of the Checkpoint C package. Information related to the condition of aquatic resources, the watershed profile, and compensatory mitigation have been added throughout Section 3.7 of the Final EIR/EIS.

The Revised DEIR/Supplemental DEIS describes construction (temporary) and project (permanent) direct, indirect-bisect, and indirect impacts through the use of "delta tables" because of the many alternative options that relate to the Fresno to Bakersfield Section north-south alternatives. In consultation with the U.S. Army Corps of Engineers and EPA, the Authority finalized the methodology used to calculate the GIS acreages for impacts on aquatic resource types and submitted it as part of the Checkpoint C package.

The Checkpoint C submittal includes a California Rapid Assessment Method (CRAM) report and a WER that provide an in-depth assessment of the condition of potential aquatic resource impacts. Specifically, the CRAM report and WER included descriptions of the major aquatic resources types that occur in the study area, analyzed the quantity, and described the quality (condition) and types of features within the watershed, and provided a more detailed methodology related to the characterization of direct-permanent, direct-temporary, indirect-bisected, and indirect impacts. Impacts from all project features (e.g., maintenance-of-way facilities, traction stations, switching stations, paralleling stations, access roads, and road widening) are included within these reports.

The CRAM report provided the baseline data on the wetland condition, since it is necessary to understand the current condition of aquatic resources before completing an impact analysis. The WER implements a watershed approach to evaluate project impacts and provides recommendations for compensatory mitigation.

The WER uses the Watershed Level 1 and Level 2 analysis. As part of the Level 1 analysis, National Wetlands Inventory (NWI) was used to identify the approximate locations and type of wetlands (e.g., emergent wetland, forested/shrub wetland, freshwater pond, lake, other wetland, and riverine) at the watershed level. The National Hydrography Dataset and Holland Central Valley Vernal Pool Complexes data layer

F005-5

were also used. To assess and compare the condition of water features in each watershed, the water features were assigned an ecological condition based on land use intensity surrounding the feature. Water features within relatively undisturbed (natural) land were given a condition of "good," features within low-intensity agriculture areas are considered "fair," and those within high-intensity agriculture/developed land are considered "poor." As correlates for good, fair, and poor, land use classes were assigned within each of the land use data sets.

After the type, amount, and relative quality of aquatic resources were identified in the project watersheds, an analysis was performed with respect to similarities and differences among the watershed in the Fresno to Bakersfield Section.

The Level 2 analysis included the results of the detailed condition assessment of select aquatic resources (obtained using CRAM), and extrapolated conditions to all aquatic resources. The extrapolation was based on analysis of adjacent land use and types of aquatic resources. The Level 2 assessment also provided detailed breakdown on the quantity, quality, and net watershed change in condition associated with the Fresno to Bakersfield direct-permanent, direct-temporary, indirect-bisected, and indirect impacts. This analysis included a summary of impacts by alternative alignment and allows for a comparison between alternatives.

The WER also provides high-level discussion of the watershed needs and suggestions for targeting compensatory mitigation that will provide the most benefit to the watershed and assist in making mitigation decisions in the study area.

The CRAM and the WER are submitted along with the Compensatory Mitigation Plan (CMP) as part of the Checkpoint C package. The CMP integrates impacts and a condition assessment, as well as site-specific and watershed analyses, to provide a mitigation plan that is designed to maintain and improve aquatic resource functions within specific watersheds. The WER and Section 1.7 (Technical Changes Since the Public Review of the Revised DEIR/Supplemental DEIS) of the Checkpoint C Summary Report provide specific avoidance and minimization, and the preliminary engineering design associated with specific aquatic resource impacts. The CMP identifies potential mitigation sites and provides options for creation, restoration,

Response to Submission F005 (Enrique Manzanilla, United States Environmental Protection Agency, Region IX, October 13, 2011) - Continued

F005-5

enhancement, and preservation of waters of the U.S. and discusses the 12 elements required as part to the Mitigation Rule (Subpart of the Guidelines at 40 CFR Part 230), to the maximum extent possible. Additional information regarding the approach and implementation of compensatory mitigation for impacts on jurisdictional waters can be found in FB-Response-BIO-42.

F005-6

Refer to Standard Response FB-Response-BIO-01.

Potential effects to Essential Fish Habitat and special-status fish species have been detailed within the Merced to Fresno Section Final EIR/EIS. This document incorporates a series of checkpoints to minimize impacts on Essential Fish Habitat and listed fish species. The Authority and FRA coordinated with the National Marine Fisheries Service (NMFS), U.S. Fish and Wildlife Service, California Department of Fish and Wildlife, Central Valley Flood Protection Board, and U.S. Army Corps of Engineers to provide further refinement of the planning and design process. The design-build phases have commenced based on the findings for the Merced to Fresno Section environmental approvals, including NMFS concurrence.

For complete analysis, please refer to the Merced to Fresno Section Final EIR/EIS and to the biological opinion from the NMFS. Responses to these portions of the comment can be found at the Authority's website.

F005-7

Refer to Standard Response FB-Response-AQ-05, FB-Response-AQ-02.

Qualitative and quantitative discussions of health impacts during project alignment construction were provided in Section 3.3.6.3 of the Revised DEIR/Supplemental DEIS.

The HST would be electrically powered. Therefore, there will not be any direct combustion emissions from the HST during operation to cause health concerns such as asthma or other respiratory diseases. Fugitive dust emissions due to HST travel are not expected to be a significant source of pollutants either (See Appendix 3.3-A of the Final EIR/EIS for details).

F005-7

For localized health impacts of the heavy maintenance facility (HMF), the cancer and non-cancer chronic and acute hazard risk analyses conducted for the Revised DEIR/Supplemental DEIS were for a prototypical facility with conservative estimates of equipment operations and locations, and the locations of nearby sensitive land uses. A decision on the HMF location will be made following certification of the San Jose to Merced Section Final EIR/EIS. A site-specific health risk assessment for the HMF operation will be conducted after a final HMF site is selected and detailed design information becomes available. Quantitative cancer risks and non-cancer hazard indexes due to HMF operation will be evaluated in the final health risk assessment. Mitigation measures, if necessary, would be included to ensure that the health risk significance thresholds are not exceeded at the sensitive land uses.

The mitigation measures recommended in the comments have been added to the project design feature and will be implemented during project construction and operation. The number of bus trips has been included in the Revised DEIR/Supplemental DEIS, as requested. The Revised DEIR/Supplemental DEIS also notes that local buses are expected to be all natural-gas-powered by the time the HST stations are operational. The mitigation measure regarding the concrete batch plant location has been revised based on the comment.

The construction analysis has also been revised to assume that not all Tier 4 equipment will be available.

Furthermore, transportation conformity does not apply since the project is under general conformity, There may be small project elements that would fall under transportation conformity, but these will be handled on a case-by-case basis.

F005-8

Refer to Standard Response FB-Response-AG-02, FB-Response-AG-03, FB-Response-AG-04, FB-Response-SO-01, FB-Response-AG-06.

Also see Volume I, Section 3.14, Impact AG#5 for more information on effects on agricultural land from parcel severance. For information on the property acquisition and

Response to Submission F005 (Enrique Manzanilla, United States Environmental Protection Agency, Region IX, October 13, 2011) - Continued

F005-8

compensation process see Volume II, Technical Appendix 3.12-A. See Volume I, Section 3.12, Impact SO#12 and Impact SO#16 for impacts on agricultural businesses.

F005-9

Refer to Standard Response FB-Response-GENERAL-03.

6.1-Regional Growth and Development Patterns.

Bullet #1: New text has been added to Section 3.18.2, Laws, Regulations, and Orders, to discuss the requirements of Senate Bill (SB) 375 (2008), which will encourage more compact development patterns in the future, and Section 3.18.4, Affected Environment, to summarize the historic trends, including a reference to Section 3.19, Cumulative Impacts, for complete information on the historic trends that have shaped development in the San Joaquin Valley.

Bullet #2: Counties and cities are responsible for land use decision making. The growth induced by the project will be a small portion of the anticipated growth in this region. The growth scenarios are based on the current General Plans adopted by the counties and cities in the region. These are the guides for future growth. As described in Standard Response FB-Response-GENERAL-03, no additional scenarios are necessary.

Bullet #3: Text has been added to Section 3.18.5, Environmental Consequences, to discuss how commuting to the larger metropolitan areas is not considered a major issue for HST-induced population growth. The potential for commuters living in the Central Valley and working in Los Angeles or San Francisco is expected to be quite small. The HST System is not a commuter rail system, and its pricing structure will be established to compete favorably with airline fares for a comparable trip. The pricing structure would discourage its use by commuters.

Bullet #4; Although the Authority has offered planning grants to station communities to help realize the implications
and benefits of the HST System through mixed-use and higher-density development in the areas near stations, the Authority does not have the jurisdiction or authority to mandate land use throughout the corridor; nor does the project result in influencing the need to re-evaluate adjacent land uses for compatibility. Please review Appendix 3.13-

F005-9

A, Land Use Plans, Goals, and Policies, for additional information.

Bullet #5: The Authority is a signatory to the Sustainability MOU referenced in the comment (Authority et al. 2011). As such, the Authority has committed to work on this subject.

6.2-Managing Induced Growth in Rural Areas

Bullet #1: Text has been added to Section 3.13, Station Planning, Land Use, and Development, regarding the
Authority entering into an agreement with the Department of Conservation's California Farmland Conservancy Program.

Bullet #2: See Standard Response FB-Response-GENERAL-04 for discussion of agricultural conservation easements.

Bullet #3:See Standard Response FB-Response-GENERAL-03 for information on the Kings/Tulare Regional Station.

Bullet #4:See Standard Response FB-Response-GENERAL-04 for discussion a of agricultural conservation easements.

F005-10

Bullet #1: Additional text has been added to Section 3.13, Station Planning, Land Use, and Development, of the Final EIR/EIS to discuss coordination between the Authority and the cities of Merced and Fresno related to station area planning. The Authority is working with the cities on station area plans unique for each city, but ultimately each city will adopt its own plan. The plans will incorporate information from the Urban Design Guidelines (Authority 2011i) and HST Station Area Development: General Principles and Guidelines (Authority 2008a).

Bullet #2: Additional text has been added to Section 3.13, Station Planning, Land Use, and Development, of the Final EIR/EIS to discuss the current planning efforts by the

Response to Submission F005 (Enrique Manzanilla, United States Environmental Protection Agency, Region IX, October 13, 2011) - Continued

F005-10

cities as well as the station area planning. The Authority is working with the cities on station area plans unique for each city, but ultimately each city will adopt its own plan. The plans will incorporate information from the Urban Design Guidelines (Authority 2011i) and HST Station Area Development: General Principles and Guidelines (Authority 2008a).

Bullet #3: Text also includes a reference to Chapter 8, Public and Agency Involvement, for information on meetings that have occurred with the cities. The station illustrations in the EIR/EIS are conceptual in nature, as stated in the EIR/EIS. Actual station planning is in its early stages, so little community involvement in such planning has occurred at this time. The Authority's station planning grants require recipient cities to undertake extensive community involvement once planning activities begin. Based on the principles of context sensitive design solutions, as expressed in the Urban Design Guidelines (see Authority 2011i, Chapter VIII, Assuring Good CAHST Project Urban Design Outcomes), this involvement is expected to include community outreach through design charettes/workshops and stakeholder working groups.

Bullet #4: Additional text has been added to Section 3.13, Station Planning, Land Use, and Development, of the Final EIR/EIS to discuss coordination between the Authority and the cities of Merced and Fresno related to station area planning, including the grant programs and timeline development of the plans. The Authority is working with the cities on station area plans unique for each city, but ultimately each city will adopt its own plan. The plans will incorporate principles from the Urban Design Guidelines (Authority 2011i) and HST Station Area Development: General Principles and Guidelines (Authority 2008a).

Bullet #5: The figures in Section 3.13 have been updated to include the proposed station locations.

Bullet #6: The information provided in the two documents referenced above includes much of the same information identified in Section 2 of the American Public Transportation Association March 2011 Transit Sustainability Guidelines (APTA 2011). Additionally, the Authority has signed a Sustainability MOU and considers its partnership with MOU signatories important over the life of the project.

F005-11

Refer to Standard Response FB-Response-GENERAL-03.

F005-12

Local transit feeder service is not in the project's scope, however the HST project will work with the City of Bakersfield, Kern County or any other entity to accommodate an interconnected regional/intercity bus system serving the Bakersfield Station.
The EIR/EIS describes the proposed station setting with respect to non-motorized access in page 3.2-103. The stations would include bicycle racks, pedestrian connections to the existing sidewalks, and bicycle lanes and facilities where they can be accommodated. Outside of the HST station, future bike improvements would have to be developed with or by the agency with jurisdiction, including Caltrans and/or the County on or across Highway 43.
Refer also to Impact S&S #5 – Motor Vehicle, Pedestrian, and Bicycle Accidents Associated with HST Operations.

F005-13

Bullet #1:Low-income housing being incorporated into the station area developments would be developed by others. California Planning Law, under the Housing Element requirements (Government Code Section 65580, et seq.), requires cities to accommodate their fair share of the regional housing need, including projected needs for low-income housing. This will apply to future development in the station areas. Further reinforcing this requirement is SB 375 (2008), which will require that the regional housing needs allocations to each city reinforce the “sustainable communities strategies” (SCS) or “alternate planning strategy” (APS) to be adopted by the Merced Council of Governments and Fresno Council of Governments, the Kings County Association of Governments, and the Kern Council of Governments (expected to be adopted in 2014). The SCS or APS is required to set out means to reduce greenhouse gas emissions within the applicable county. These are expected to encourage more compact, city-centered development patterns.

Bullet #2: Chapter 8, Public and Agency Involvement, provides information on the outreach that has occurred and SO-MM#6 “Continue outreach to disproportionately and negatively affected environmental justice communities of concern” in Section 3.12.7, Socioeconomics, Communities, and Environmental Justice, provides information on the continued outreach that the Authority is committed to during through the project. This outreach is also recommended in the planning process set out in the HST Urban Design

Response to Submission F005 (Enrique Manzanilla, United States Environmental Protection Agency, Region IX, October 13, 2011) - Continued

F005-13

Guidelines (Authority 2011i).

Bullet #3) The commitment to context-sensitive design in the Authority's Urban Design Guidelines (Authority 2011i) addresses the issues of equity, and equity is explicit in the Housing Element requirements under Government Code 65580, et seq.

Bullet #4) In response to the criteria related to the HMF locations: 1) The topic of impacts to low income/minority communities during project construction and operation is addressed in Section 3.12.5, Socioeconomics, Communities, and Environmental Justice. The Wasco HMF alternative would result in disproportionally high and adverse impacts because of its location adjacent to central Wasco and an agricultural workers residential area. 2) No smart growth is being proposed or likely because except for the Wasco HMF alternative all HMF sites are located away from urban centers. 3) Outside of the urban areas there is little transit service in the rural areas of the state. Transit connectivity is not very practical because of the likely lack of ridership versus the operating costs. 4) Transit service is likely infeasible due to the potential for high operating costs associated with the long distances traveled typical of rural areas. 5) No auxiliary services are proposed by the Authority in the area. Refer to Section 3.13.5, Station Planning, Land Use, and Development, where a discussion on the potential for induced growth is discussed. Although induced growth could occur, the HMF sites are all located in close proximity to urban centers and any growth outside of the HMF would require a change in the zoning, which is controlled by the cities and counties.

F005-14

Properties with contamination would be remediated prior to acquisition by the Authority, or responsibility for cleanup would be negotiated during acquisition. Cleanup of any contaminated properties would be conducted in accordance with applicable regulations, including the Resource Conservation and Recovery Act (RCRA). Redevelopment of these or any other properties surrounding potential stations and the heavy maintenance facility that are not to be acquired for the project, including redevelopment for transit-oriented development or worker amenities, is beyond the scope of this project and outside the jurisdiction of the Authority. Further, such future activities are the responsibility of local agencies to undertake under their land use authority and are beyond the scope of this project.

F005-15

7.6-Safety in Station Areas. HST Urban Design Guidelines require the use of crime prevention through environmental design. This information has been added to Section 3.11.6, Project Design Features, as follows: "HST Urban Design Guidelines [Authority 2011i] require implementing the principles of Crime Prevention Through Environmental Design. This is a design method that focuses on reducing opportunities for crime through the design and management of the physical environment. Four basic principles of Crime Prevention Through Environmental Design should be considered during station and site planning: Territoriality (designing physical elements that express ownership of the station or site); Natural Surveillance (arranging physical features to maximize visibility); Improve Sightlines (provide clear views of surrounding areas); and Access Control (physical guidance of people coming to and going from a space)."

7.7-Visual Impacts. The EIR/EIS has incorporated the Authority's Urban Design Guidelines (Authority 2011i), which include screening and landscaping treatments as summarized in Mitigation Measure VQ-3. Also, Section 3.16.7, Mitigation Measures, commits to working with local jurisdictions to develop appropriate visual/aesthetic treatments to reflect the guidelines, reasonable cost, and engineering design parameters consistent with the Urban Design Guidelines. The second bullet under Mitigation Measure VQ-3 explains that the process of addressing aesthetic treatments on elevated guideways will include activities to solicit community input from the affected neighborhoods. The use under the guideways has been articulated in Section 3.15, Parks, Recreation, and Open Space, and Section 3.12, Socioeconomics, Communities, and Environmental Justice, of the Final EIR/EIS.

F005-16

An analysis of Children's Health and Safety has been completed for the Fresno to Bakersfield Section of the HST project. The analysis reviewed demographic data, the community setting, and Sections 3.2, Transportation; 3.3, Air Quality and Green House Gas Emissions; 3.4, Noise and Vibration; 3.5, Electromagnetic Fields and Electromagnetic Interference; 3.8, Hydrology and Water Resources; 3.10, Hazardous Materials and Waste; 3.11, Safety and Security; 3.15, Parks, Recreation, and Open Space; and 3.19, Cumulative Impacts. For the most part, the HST alignments follow existing transportation corridors, and the adjacent uses in the urban areas are

Response to Submission F005 (Enrique Manzanilla, United States Environmental Protection Agency, Region IX, October 13, 2011) - Continued

F005-16

associated with non-residential land uses, including both the Fresno Station and Bakersfield Station. In the rural areas, the HST alignments are in areas with little population, and adjacent land uses are agriculture-related. Because population is low in close proximity to the alignments, the potential for impacts is reduced. The assessment focused on the results of the analysis in the various sections of the EIR/EIS identified, and after mitigation none of the impacts during construction or operation is anticipated to result in significant impacts on children's health and safety. The complete analysis is located in Appendix 3.12-C, entitled Children's Health and Safety Risk Assessment, and in Section 3.12.5, Socioeconomics, Communities, and Environmental Justice.

F005-17

Study areas with respect to schools differed based on the discipline. For example, Section 3.12, Socioeconomics, looks at economic effects on a region wide basis and generally reviews impacts to schools on a district-wide basis. Section 3.10, Hazardous Materials and Waste, assesses schools within 0.25 mile of the project footprint, as schools near the footprint could have the greatest potential for impacts due to their proximity. Assessing schools within 0.25 mile of the project for hazardous materials is consistent with Appendix G of the CEQA guidelines. The difference in the study areas results in a different total number of schools discussed. The study area is implied in the title of Table 3.10-5 ("Educational Facilities within 0.25 mile of the Alternative Construction Footprints") and described along with the number of schools in Table 3.10-6.

All of the potential environmental health and safety to risks to children were analyzed in Appendix 3.12-C, Children's Health and Safety Risk Assessment. The appendix examines whether the project would result in children's environmental health and safety risks. The project study area in the analysis is defined as 0.5 mile from the HST alternatives and from proposed station and HMF locations. This distance is chosen since this includes the area where the majority of the project effects occur (i.e., noise impacts only extend about 0.25 mile and local air quality impacts consider sensitive receptors, such as schools, residences, and health care facilities, under 0.25 mile).

F005-18

The HMF site will not be selected as part of an action undertaken by the Authority's Board of Directors regarding the Fresno to Bakersfield Section of the HST. A decision on the HMF location will be made following certification of the San Jose to Merced Section Final EIR/EIS. Potential impacts on sensitive receivers will be a consideration in the future selection of the HMF site. A key consideration will be the distance from the HMF site to sensitive receivers. Potential effects of the HMF on children's health are discussed in Appendix 3.12-C, Children's Health and Safety Risk Assessment.

As disclosed in Section 2.2.9.2, the future HMF will occupy approximately 154 acres. The property boundaries of each of the alternative HMF sites are larger than the acreage needed for the actual facility, due to the unique site characteristics and constraints of each location. Because the actual site of the HMF within the identified larger parcels has not been determined, an analysis of impacts on sensitive receivers would be premature at this time. Once the HMF site has been selected, a health risk assessment (HRA) would be conducted to address potential health impacts on the surrounding community. Mitigation Measure AQ-6 requires the implementation of means to reduce emissions from the HMF, including use of non-diesel machinery that will reduce toxic air contaminant missions, or establishment of a buffer area between emitters and sensitive receivers. Implementation of Mitigation Measure AQ-7 will reduce the impacts of stationary emission sources.

F005-19

Bullet #1) The text in the Revised DEIR/Supplemental DEIS regarding Environmental Justice has been updated to include a summary of all sections including cumulative impacts and information on noise related to the distances covered by both moderate and severe impacts.

Guidance for parties to be relocated is provided in several documents detailing the relocation assistance programs provided by the Authority. This guidance differs depending on whether the affected party is a farmer, business owner, homeowner, or mobile home owner. As outlined in Chapter 3.12.2, the Uniform Relocation Assistance and Real Property Acquisition Policies Act, as amended (Uniform Relocation Act), ensures that persons displaced as a result of a federal action or by an undertaking

Response to Submission F005 (Enrique Manzanilla, United States Environmental Protection Agency, Region IX, October 13, 2011) - Continued

F005-19

involving federal funds are treated fairly, consistently, and equitably. This helps to ensure persons will not suffer disproportionate injuries as a result of projects designed for the benefit of the public as a whole. Persons who would be displaced would personally work with a Relocation Agent from the Authority. If the HST project would require a considerable number of people to be relocated, the Authority will establish a temporary relocation field office on or near the project. Project relocation offices will be open during convenient hours and evening hours, if necessary. In addition to these services, the Authority is required to coordinate its relocation activities with other agencies causing displacements to ensure that all displaced persons receive fair and consistent relocation benefits.

Bullet #2) The analysis in Chapter 3.12.4 provides a complete description of communities of concern in the project area. As shown in Figures 3.12-4 through 7, the project areas of the alternative alignments, as well as all surrounding areas, have similar distributions of communities of concern. This reference community is not limited to just the project area and therefore takes into consideration the make-up of communities across the region.

Bullet #3) A reference has been added to Chapter 2 to address information on construction timing. In addition the Revised DEIR/Supplemental DEIS has been reviewed for internal consistency regarding this issue and updated as necessary.

Bullet #4) This portion of the comment is not applicable to the Fresno to Bakersfield section of the California High-Speed Train Project. Please refer to the Final Merced to Fresno Section Project EIR/EIS for a response.

Bullet #5) This portion of the comment is not applicable to the Fresno to Bakersfield section of the California High-Speed Train Project. Please refer to the Final Merced to Fresno Section Project EIR/EIS for a response.

F005-20

Bullet #1: See Volume 1, Section 3.12, Impact SO #6 and Impact SO #18, as well as Sections 4.3 and 5.3, and Appendix A in the Community Impact Assessment Technical Report, for information on the Environmental Justice (EJ) analysis and methodology. As can be seen in this baseline analysis, EJ populations are highly concentrated in urban areas within the study region. Potential impacts in all EJ communities of concern are examined for every resource and results can be found in the sections referenced above.

F005-20

Also see FB-Response-GENERAL-05 for potential impacts on urban communities without a HST station, and FB-Response-GENERAL-03 for the benefits and growth implications to urban communities with an HST station.

Bullet#2: See Volume I, Section 3.12, Impact SO #1, which includes road closures as part of the analysis of disruption to community cohesion or division of existing communities during project construction.

Bullet#3: For information on mitigation measures related to noise, see Volume I, Section 3.4.7, and FB-Response-N&V-05.

Bullet#4: The environmental justice impacts of the potential HMF sites were analyzed in Volume I, Section 3.12, Impact SO #18.

Bullet #5: See FB-Response-SO-07 on environmental justice outreach. Also see Volume 1, Section 3.12.3.5 and Section 4.3.2 in the Community Impact Assessment Technical Report, for information on the EJ outreach that was conducted.

F005-21

Bullet #1) Relocation efforts within the same neighborhood for neighborhood-serving businesses to minimize impacts to community would be a consideration; however, there may be situations where no properly zoned relocation sites exist in the neighborhood. As described in Appendix 3.12-A, a relocation representative will be working with the businesses to find suitable locations to relocate.

Bullet#2: See Volume I Chapter 3.12.5 Impact SO #10 for a complete discussion of the residential displacements in each impacted community and the Draft Relocation Impact Report for a relocation plan that includes the potential to provide housing of last resort, including the rehabilitation of existing housing or relocation of the disrupted residential areas to newly constructed housing elsewhere in the vicinity.

Bullet #3) At minimum, residents found to be living in motels in the study area would qualify for relocation advisory assistance. Other benefits, if any, will be assessed on an individual basis once interviews with the tenants have occurred. The Authority's right-of-

Response to Submission F005 (Enrique Manzanilla, United States Environmental Protection Agency, Region IX, October 13, 2011) - Continued

F005-21

way team will likely perform the interviews around the same time as the appraisal inspection. Advisory assistance alone does not include monetary payments. All occupants qualify for advisory assistance even if they don't qualify for monetary benefits/payments. The Authority may establish a temporary Relocation Field Office near the project. If established, project relocation offices will be open during convenient hours and evening hours if necessary. In addition to these services, the Authority is required to adhere to the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (42 U.S.C. sec. 4601, et seq.) (Uniform Act); and Implementing Regulations (49 C.F.R. Part 24) to ensure that all persons displaced receive fair, equitable and consistent relocation benefits. Complete information on relocations for individuals is in Appendix 3.12-A, Relocation Assistance Documents.

Bullet #4) This portion of the comment is not applicable to the Fresno to Bakersfield section of the California High-Speed Train Project.

Bullet #5) This portion of the comment is not applicable to the Fresno to Bakersfield section of the California High-Speed Train Project.

Bullet #6) This portion of the comment is not applicable to the Fresno to Bakersfield section of the California High-Speed Train Project.

F005-22

Refer to Standard Response FB-Response-GENERAL-18.

F005-23

Refer to Standard Response FB-Response-SO-07, FB-Response-GENERAL-07, FB-Response-GENERAL-16.

F005-24

Bullet #1: This comment applies to the Merced to Fresno Section HST project. Please refer to the Final Merced to Fresno Section Project EIR/EIS for a response. The Merced to Fresno Section EIR/EIS study area has been revised consistent with the Fresno to Bakersfield Section EIR/EIS.

F005-24

Bullet #2: This comment applies to the Merced to Fresno Section HST project. The Merced to Fresno Section EIR/EIS study area has been revised to 0.5 mile for the areas around the station and the HST alignments, which is consistent with the Fresno to Bakersfield Section EIR/EIS.

F005-25

10.1-Operational Impacts from HMFs. The noise assessment for the HMF locations used preliminary layouts of the HMF and assumed 24 train movements during the night and none during the day to determine a screening distance of approximately 800 feet. No sensitive receptors were found within that distance for any of the HMF locations for the Merced to Fresno Section. The primary reason for the difference between the Merced to Fresno and Fresno to Bakersfield HMF results is the proposed locations of the HMFs. The HMFs in the Merced to Fresno Section would not be located in areas with sensitive receptors nearby. In addition, a general assessment was also completed for each HMF by modeling the Ldn at the closest receptor and comparing that level to the Ldn from the HST operations to confirm there would be no noise impacts from HMF operations. The EIR/EIS has been revised to explain the process more clearly, and in a way that relates more clearly to the Fresno-Bakersfield EIR/EIS methodology.

10.2-Potential Locations of Noise Barriers. Noise barrier details can be found in Table 8-5 through 8-14 in the Noise and Vibration Technical Report in Section 8.1 titled Operational Noise Mitigation Measures.

10.3-Analysis of Traffic Noise. Potential noise impact has been assessed at sensitive receptors near the proposed stations including noise from the HST and vehicles entering and exiting the park and ride facilities. Because both the Fresno and Merced stations would have a significant number of through trains travelling at speeds up to 220 mph and not stopping at the stations, the dominant noise source at the two stations would be these through trains. Other noise sources, such as cars on local roadways and cars entering and leaving the parking facilities would only make a minor contribution to the project noise, relative to the through trains. The assessment conservatively assumed that the entire capacities of the garage and surface lots entered during the morning and left during the evening. At the receptors closest to the parking facilities, the contribution

Response to Submission F005 (Enrique Manzanilla, United States Environmental Protection Agency, Region IX, October 13, 2011) - Continued

F005-25

of noise from the HSTs would be approximately 60 Ldn for both the Merced and Fresno stations and the contribution of noise from the parking facilities would be approximately 44 Ldn and 36 Ldn for the Merced and Fresno stations, respectively. The total future noise conditions including both HST and parking facility noise sources would be approximately 60 Ldn. With existing levels of approximately 72 Ldn in downtown Merced and 70 Ldn in downtown Fresno, noise impact would not occur at these closest receptors. Since the noise level from the parking facilities is more than 10 dB below the noise level from the HSTs, the contribution of noise from the park and ride facilities would not substantially add to the overall future noise level at the closest receptors to the Merced Station.

10.4-Noise Implications of Track Design. Potential noise and vibration impact has been assessed in the EIR/EIS including ballast and tie track for at-grade portions of the alignment and slab track for aerial structure portions of the alignment, consistent with updated design information.

10.5-Vibration Mitigation Measures. Operational changes are not an accepted mitigation measure for HSR, as the implications of that measure are contradictory to the project (reducing speed) and speed reductions are not considered a permanent mitigation, as is a noise barrier. Tire Derived Aggregate (TDA) is listed as a mitigation measure in Section 8.2 of the Noise and Vibration Technical Report titled Operational Vibration Mitigation Measures. However, it was not included in the EIR/EIS as its use so far has been limited, and the engineering implications of using TDA for 220 mph operations are unclear.

10.6-Analysis of Cumulative Noise Impacts. The FRA guidance manual specifies that within a screening distance of 1,300 feet (for a new project corridor in a quiet suburban/rural environment), noise-sensitive receptors would be close enough to the proposed project that there is the possibility of impact and that beyond this distance there is less possibility of impact. The screening process is only an interim step in the analysis procedure. The screening allows for a high-level look at a corridor, to identify potential locations where noise impacts may occur. This screening distance is based on general assumptions associated with typical projects such as the number of train operations, train speeds, and existing noise conditions. Based on the specific factors of

F005-25

this HSR project, potential impact was assessed for all noise-sensitive receptors within approximately 2,500 feet and potential impact has been identified at distances up to approximately 2,300 feet which is further than the standard screening distance of 1,300 feet. One of the primary reasons that potential noise impact extends further than the typical screening distance is due to low existing noise conditions (i.e. less than 50 dBA Ldn) in some areas. The potential for cumulative noise impacts includes contributions of noise from the proposed HST and from other projects in the study area including the Roeding Regional Park and Fresno Chaffee Zoo Facility Master Plans and The Castle Special Planning Zone project. Based on the cumulative noise exposure from these projects and the proposed HST, there is the potential for noise impact out to 2,500 feet. This distance for potential cumulative noise impact may differ from other project sections (i.e. Fresno to Bakersfield) because there are different projects in each section and different contributions to total noise conditions.

Section 3.4, Noise and Vibration, of the Revised DEIR/Supplemental DEIS is consistent with the Merced to Fresno EIR/EIS (Authority and FRA 2012k) regarding their heavy maintenance facility (HMF) analysis, methodology, assumptions, and conclusions. According to the noise standards listed in the California Noise and Land Use Capability Matrix, it is normally acceptable for industrial land uses to generate noise levels as high as 75 A-weighted decibels (dBA) at 50 feet from the noise source. If a noise level of this magnitude was generated at the selected HMF sites, then for noise levels to be below 50 dBA, a receiver would need to be at least 900 feet from the noise source. Table 3.4-11 in the latest Fresno to Bakersfield EIR/EIS lists the number of sensitive receivers within 900 feet of each proposed HMF site that would have severe impacts according to the FRA impact criteria. Each HMF has residences within the 900-foot contour line, and therefore noise effects from HMF operations at all the alternative HMF sites would have substantial intensity under NEPA, and the impact would be significant under CEQA.

The traffic noise analysis conclusions for all HST stations from Fresno to Bakersfield are discussed under Impact N&V #6 –Traffic Noise, in the Revised DEIR/Supplemental DEIS. A more detailed analysis of the traffic noise for each of the HST stations can be found in the *Fresno to Bakersfield Section: Noise and Vibration Technical Report* (Authority and FRA 2012i). Future traffic conditions with and without the HST project are compared in order to analyze the change in noise levels due to the increase in average

Response to Submission F005 (Enrique Manzanilla, United States Environmental Protection Agency, Region IX, October 13, 2011) - Continued

F005-25

daily traffic (ADT) volumes or changes in the peak hour traffic volumes in all four cities along the HST route. Estimated traffic volumes for the year 2035 were obtained from the project traffic study and are used in this analysis. Where traffic noise is predicted to approach or exceed the criteria presented in Table 3.4-4 in the Revised DEIR/Supplemental DEIS during the noisiest 1-hour period, noise abatement measures must be considered. Caltrans defines "approach" as a peak-noise-hour sound level of 66 dBA equivalent noise level (Leq) in residential areas.

In the Revised DEIR/Supplemental DEIS it was assumed that the HST track will be a combination of ballast and slab track with continuous welded rail, consistent with the assumptions in the FRA *High-Speed Ground Transportation Noise and Vibration Impact Assessment* guidance manual (FRA 2005a). Slab construction will be used for elevated structures exceeding 1,000 feet in length, where operating speeds are planned for 220-miles-per-hour (mph) operations. Slab track would be 3 dB louder than ballast and tie track because of the decreased acoustic absorption compared to that provided by the ballast, and changes to the track stiffness. The Revised DEIR/Supplemental DEIS, Section 3.4.5, Environmental Consequences, summarizes the number of noise impacts with moderate and severe intensity by alternative.

Adding tire-derived aggregate (TDA) as a form of vibration mitigation is a very good environmentally conscious suggestion, which will be forwarded to the FRA as a possible mitigation measure.

The Final EIR/EIS for the Merced to Fresno Section and the Fresno to Bakersfield Section Revised DEIR/Supplemental DEIS are consistent in their analysis of cumulative noise impact methodologies. The FRA *High-Speed Ground Transportation Noise and Vibration Impact Assessment* guidance manual (FRA 2005a) was the primary methodology used for analyzing HST noise for the EIR/EIS. For evaluation of non-HST noise, such as noise from stations, maintenance facilities, and construction, Federal Transit Administration (FTA) methodology in the *Transit Noise and Vibration Impact Assessment* guidance manual was used ([FTA 2006). To analyze the potential noise impacts during operations, the noise impact assessment procedure followed the FRA methodology. The FRA noise impact criteria are based on the potential annoyance of people to the project noise, and are not based on the potential audibility of a noise

F005-25

source. The noise impact criteria are defined such that where no impact is predicted, the project would result in an insignificant increase in the number of people highly annoyed by the new noise. The FRA guidance manual specifies that, within a screening distance of 1,300 feet (for a new project corridor in a quiet suburban/rural environment), noise-sensitive receivers would be close enough to a proposed project that there is the possibility of impact and that beyond this distance there is less possibility of impact. Screening distances are not meant to represent the distances within which the HST would be audible.

The screening process is only an interim step in the analysis procedure. The screening allows for a high-level review of the corridor to identify potential locations where noise impacts may possibly occur (thereby allowing more detailed analysis of those potential locations to determine if impacts actually would occur there) and to identify locations where impacts would not occur. This screening distance is based on the assumptions associated with typical projects, such as the number of train operations, train speeds, and existing noise conditions. Based on the specific factors of the HST project, potential impact was assessed for all noise-sensitive receivers within approximately 2,500 feet, and potential impact has been identified at distances up to approximately 2,300 feet, which is further than the standard screening distance of 1,300 feet. One of the primary reasons that potential noise impact extends further than the typical screening distance is the low (i.e., less than 50-dBA day-night sound level [Ldn]) existing noise in some areas.

F005-26

Refer to Standard Response FB-Response-GENERAL-01.

Section 11.1 Sustainability MOU. At the request of the U.S. Environmental Protection Agency (EPA), a copy of the Sustainability Memorandum of Understanding (MOU) (Authority et al. 2011) will be included in the Final EIR/EIS. The Authority considers its partnership with the MOU signatories important over the life of the project. Also, the Authority has initiated a Station Area Planning Grant Program, in cooperation with its federal partners. In the Station Area Planning Grant application package, the Authority provided the following documents:

• California High-Speed Rail Authority 2011 and 2008 Station Area Development

Response to Submission F005 (Enrique Manzanilla, United States Environmental Protection Agency, Region IX, October 13, 2011) - Continued

F005-26

Policies (Authority 2008a, 2011k)

- Federal Railroad Administration Station Area Planning Recommendations (FRA 2011)

In addition, the Authority's Urban Design Guidelines (Authority 2011i) have been distributed to each of the regional consultant teams for use in potential station area planning activities.

All of the referenced documents are available for review and download on the Authority's website.

An Environmental Management System is being developed for the project, particularly to track implementation of mitigation throughout construction.

Currently, Requests for Qualifications (RFQs) and Requests for Proposals (RFPs) contain reference to Authority sustainability policies, procedures, and requirements.

Through EPA funding, the Authority obtained the assistance of the National Renewable Energy Laboratory (NREL). NREL has been developing a Strategic Energy Plan for achieving an environmentally sustainable high-speed train system for California (NREL 2011). This effort complements and supports the MOU between the Authority, EPA, the U.S. Department of Transportation (USDOT), the U.S. Department of Housing and Urban Development (HUD), and the U.S. Department of Energy (DOE)/NREL. This MOU serves as an umbrella agreement covering broad efforts to promote the use of sustainability tools and practices within the HST Program. The Strategic Energy Plan is intended to define specific steps that will enable the Authority to achieve its sustainability, renewable energy, and energy efficiency goals for the HST rail system, its stations, and its operations.

Section 11.2 LEED for HSR Facilities. The Authority is adopting aggressive targets and policies for the materials, energy, and water resources used in its facilities, occupant and passenger comfort and health, the siting of its facilities, and construction. Demonstrating the achievement of those targets using a third-party assessment scheme, such as the Leadership in Energy and Environmental Design (LEED) system, the Living Buildings Challenge, Green Globes, EnergyStar, or other appropriate assessment and verification scheme would provide assurance that those targets have been met. The Authority is investigating the targets and strategies that would most cost-effectively deliver appropriate high-performance facilities.

F005-26

High-performance facilities should examine the use of resources such as water, energy, and materials; incorporation of renewable energy generation into the facilities; the health and comfort of the occupants; the siting and policies of a facility to maximize connectivity and minimize single-occupant vehicle trips; operations that promote occupant health and minimize energy and water use; and design that minimizes materials used and considers long-term maintenance as well as deconstruction and adaptability.

These considerations need to be weighed alongside durability and functional requirements for the facility.

Section 11.3 CalGreenCode. The 2010 California Green Building Standards has been added to the list of applicable laws, regulations, and orders. The Authority is considering the relevant and appropriate non-mandatory elements of CalGreenCode and what level of compliance they would require designers to meet.

Section 11.4 Sustainable Design for Unique Rail Infrastructure. The Authority is referencing several guidelines and handbooks on sustainable infrastructure—including but not limited to ATPA's Transit Sustainability Guidelines, the Institute for Sustainable Infrastructure, the Zofnass program for sustainable infrastructure, and Civil Engineering Environmental Quality Assessment and Award Scheme (CEEQUAL)—as it develops a policy and goals for sustainable infrastructure.

Section 11.5 Promoting Green Building in Station Areas. Throughout the ongoing Station Area Planning activities, the Authority plans to share with their partners in station area communities high-performance building, eco district, and other sustainability-related information for the building and neighborhood scale.

Section 11.6 Industrial Materials Management. The Authority continues to investigate appropriate recycled materials that meet specified durability and other performance criteria, and will note in specifications and contract documents where contractors should use recycled materials rather than virgin. A life-cycle assessment (LCA) is a systematic, cradle-to-grave process that evaluates the environmental impacts of products, processes, and services. Its quality depends on the life-cycle inventory (LCI) data it uses. (http://www.nrel.gov/lci/assessments.html). Life-cycle inventories continue to evolve. Databases with relevant embodied energy estimates such as BEES, Athena, or that of the Department of Energy (DOE) are constantly being refined. However, a hallmark of all of these data sets is that any relevant information for the project would need to take into account specific circumstances of the project that are still being

Response to Submission F005 (Enrique Manzanilla, United States Environmental Protection Agency, Region IX, October 13, 2011) - Continued

F005-26

finalized as well as the whole life cycle of the project (including maintenance and replacement of components).

A margin of error is associated with each step of LCA analysis that relate to assumptions about energy consumption, emissions data, and system boundaries. This margin of error makes like-to-like comparisons between materials difficult and limits the conclusiveness of comparison as well as the reporting of an absolute embodied energy score. Also, although the potential embodied energy of the various infrastructure components could be considered high, if those materials also have a longer expected lifetime and represent reduced maintenance and service disruption for replacement in terms of life-cycle energy, they would score lower.

The referenced study noted that, using their data, 80% of total carbon dioxide for the project would be associated with materials production. The study also noted that, using conservative ridership estimates and standard electricity emissions data, because of the transfer of riders from cars and airplanes, the off-set emissions would "pay back" the debit of embodied energy in materials within 4 to 5 years. In addition, the study did not consider the whole life-cycle energy of the materials.

F005-27

Bullet #1: The Authority's Strategic Energy Plan for the entire High-Speed Rail Program was primarily authored by the National Renewable Energy Laboratory (NREL 2011). This Strategic Energy Plan establishes, in part, the necessary steps for procuring renewable energy to offset operating energy required for traction power and associated facilities. In addition, the Authority is in the process of refining and clarifying its energy efficiency and renewable energy policy and procedures.

Bullets #2: The Authority's 100% renewable energy goal includes electricity required for traction power. The Authority is currently evaluating whether that goal should be extended to include stations and maintenance facilities.

Bullet #3: The siting of renewable energy facilities would depend upon detailed feasibility studies that will be part of the process of implementing the Strategic Energy Plan. Those sites may include generation facilities on brownfield sites if they are feasible for renewable energy generation. However, the FRA and Authority are not expected to take a direct role in selecting the sites for renewable energy generation facilities.

F005-27

Bullet #4: There are several ongoing aspects of Agricultural Stakeholder consultation. Renewable energy has not been a topic of those discussions. Renewable energy generated from farming practices, to the extent that it is made available off of the farm, is sold to utilities and fed into the grid. Due to economies of scale, the Authority will purchase energy from utilities and does not anticipate entering into contracts with individual farmers. No discussion of this source of energy is included in the EIR/EIS because it is not a part of this project and a discussion of what individual farmers may do in the future with regard to new farming practices that would potentially supply renewable energy would be largely speculative.

Bullet #5: Initial discussion was held with freight rail properties concerning short-haul electrified freight, but those discussions ended inconclusively. The HST project does not include any proposals to electrify freight movement and is not expected to be linked to any future electrification of freight movement. Any decision to electrify the freight rail system is in the realm of the freight operators, not the Authority or FRA. Because this is not part of the HST project, the HST would operate separately from the freight movement system, and since freight operators have not expressed an interest in broad electrification of their system, there is no reason to include the description proposed by the comment. Any such discussion would be wholly speculative.

F005-28

Bullet #1-3: To the extent feasible, the Authority is committed to identifying, avoiding, and minimizing hazardous substances used for construction, operation, and maintenance of the HST System. The suggested commitments regarding evaluating and reducing the use of hazardous materials have been added to Section 3.10, Hazardous Materials and Wastes, as project design features. In addition, as discussed in Section 3.12, Socioeconomics, Communities, and Environmental Justice, the design/build contractor will develop and implement a construction management plan for approval by the Authority, which will address potential impacts from use of extremely hazardous materials on property owners and businesses, including low-income households and minority populations, and the maintenance of access to local businesses, residences, and emergency services.

Response to Submission F005 (Enrique Manzanilla, United States Environmental Protection Agency, Region IX, October 13, 2011) - Continued

F005-28

Bullet #4: Based upon potential areas of impact provided by the project engineers, the Study Area has been designed to encompass locations of rail-related structures (such as stations) and other infrastructure improvements likely necessitated by the project (such as redesign of overpasses). Due to the complex nature of the HST project, the study area is not a uniform corridor. For the hazards and hazardous materials analysis, the Study Area is defined as 150-foot buffer around the construction footprint. This is the area where it is assumed that a site of environmental concern could potentially adversely affect project construction or operation. The Study Area also incorporates the vertical construction profile (potential areas requiring excavation, trenching, or other subsurface work that would require assessment of potential hazardous materials contamination). Assessment of sites of potential environmental concern was guided by ASTM Standard E 1528. This standard suggests identification of the following:

· Sites on the Federal National Priorities List (NPL) Site List within 1 mile.
· Sites on the Federal Comprehensive Environmental Response, Compensation, and Liability Information System
(CERCLIS) List within 0.5 mile.
· Federal Resource Conservation and Recovery Act (RCRA) Corrective Action Sites (CORRACTS) Facilities within 1 mile.
· Federal RCRA non-CORRACTS Treatment, Storage, and Disposal (TSD) Facilities within 0.5 mile.
· State and tribal leaking storage tank lists within 0.5 mile.

The Environmental Data Resources, Inc. searches conducted for this analysis covered more databases than those listed in the E 1528 standard. In the professional opinion of the regional consulting team, the full database search was only necessary within a 0.5-mile buffer of the Study Area, especially due to its rural nature. The smaller Study Area allowed analysts to focus their review, given the length of the Study Area.

Specific queries were conducted of the NPL list and RCRA CORRACTS database to identify any such facilities within 1 mile of the Study Area. This search did not reveal any additional sites of potential concern, and no sites outside of the Study Area were added to the analysis. Since this methodology is supported by the ASTM guidelines and only sites within the Study Area are analyzed in the EIR/EIS, an augmented database query

F005-28

would not contribute to the existing analysis. The project description has been modified to more clearly present this methodology.

F005-29

Bullet #1: In making EMF/EMI measurements along the Merced to Fresno right-of-way hospitals, senior living facilities, medical laboratories or industrial facilities that may contain sensitive equipment were identified. Mercy Hospital, Madera Community Hospital and the Bel Haven Care (Assisted Living Center) were identified as possibly containing equipment that may be potentially sensitive to magnetic fields. Calculated field levels, at these locations are low due to the large distance from the HST right-of-way to potentially sensitive receptors at the Mercy Medical Center, Madera Community Hospital, and Bel Haven Care (Assisted Living Center). Accordingly there will be no EMF effect from the HST on these facilities. No medical labs or industrial facilities that could house potentially sensitive equipment were identified.

Bullet #2: The Authority searched for all possible land uses that may be sensitive to EMI and EMF as
outlined in Section 3.5.3 of the EIR/EIS. This search included driving the entire corridor and inquiring in person. Typically medical businesses have the highest likelihood of containing sensitive equipment. The Authority has adopted the policy to evaluate effects on the built environment for those buildings that were constructed or
under construction at the time of project scoping. The Authority cannot take responsibility for future land use decisions. No sensitive equipment was discovered during the field visits. Additionally, due to the nature of EMI/EMF, business with sensitive equipment would be ill-advised to locate near train tracks and freeways, since traffic on these facilities also emit EMI/EMF disturbances. Since these are the corridors where the Fresno to Bakersfield Section HST project are adjacent, the Authority feels that no impacts are present and no
mitigation measures is necessary.

Attachment to Submission F005 (Enrique Manzanilla, United States Environmental Protection Agency, Region IX, October 13, 2011) - Summary of Rating Definitions - updated Feb 2010.pdf

SUMMARY OF EPA RATING DEFINITIONS*

This rating system was developed as a means to summarize the U.S. Environmental Protection Agency's (EPA) 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 Environmental Impact Statement (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 should 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 Council on Environmental Quality (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 analyzed 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 analyzed in the draft EIS, which should be analyzed 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.

Attachment to Submission F005 (Enrique Manzanilla, United States Environmental Protection Agency, Region IX, October 13, 2011) - HST Sustainability MOU - Signed.pdf

Memorandum of Understanding
for
Achieving an Environmentally Sustainable High-Speed Train System in California

Among
California High-Speed Rail Authority
United States Department of Transportation, Federal Railroad Administration
United States Department of Housing and Urban Development, Region 9
United States Department of Transportation, Federal Transit Administration, Region 9
and
United States Environmental Protection Agency, Region 9

1. PURPOSE AND BACKGROUND

This Memorandum of Understanding for Achieving an Environmentally Sustainable High-Speed Train System for California (MOU) establishes the California High-Speed Train (HST) system as a focus area for the Interagency Partnership for Sustainable Communities (Partnership) and commits the signatory agencies to the sustainability goals described below. The California High-Speed Rail Authority (CHSRA), in cooperation with the Federal Railroad Administration (FRA), is developing the approximately 800-mile HST system serving California's major metropolitan areas (HST System). The Partnership was announced on June 16, 2009 by U.S. Department of Housing and Urban Development (USHUD), U.S. Department of Transportation (USDOT), and U.S. Environmental Protection Agency (USEPA). The Partnership established *Livability Principles* (see attachment) to help improve access to affordable housing, increase transportation options, lower transportation costs, and protect the environment in communities nationwide. The signatory agencies recognize the California HST System as a tremendous opportunity to promote the *Livability Principles* as a means to best serve California's communities.

This MOU serves as an umbrella agreement covering broad efforts to promote sustainability within the California HST System. This MOU establishes a framework under which the signatory agencies can work together to promote the *Livability Principles* and achieve an environmentally sustainable HST System in California. This MOU defines common goals, identifies key areas for collaboration, and defines expectations and terms for signatory agencies.

The signatory agencies recognize that a wide range of expertise and place-based knowledge is needed in order to achieve a truly sustainable HST System. As such, the signatory agencies intend to engage local organizations, appropriate private entities, and other state and federal agencies and encourage them to participate in this collaborative process.

2. SIGNATORY AGENCIES

- CHSRA is the State lead agency under California law (California Public Utilities Code § 185000 *et seq.*) with responsibility for planning, constructing, and operating a high-speed passenger train service and is the lead agency for the California Environmental Quality Act (CEQA). California Public Utilities Code Sections 185034 and 185036 authorize CHSRA to enter this MOU.

- FRA is a modal administration of USDOT and is providing grant funding, planning assistance, and oversight for the development of the HST System through the High-Speed Intercity Passenger Rail Program. FRA is also the lead federal agency for the development of the environmental impact statements required under the National Environmental Policy Act (NEPA) for the nine segments which together comprise the HST System.

- USHUD is participating in the development of the HST System to create strong, sustainable, inclusive communities, and quality affordable homes near proposed HST station locations. USHUD is entering this MOU pursuant to the authority of the Consolidated Appropriations Act, 2010 (Public Law 111-117).

- Federal Transit Administration (FTA) is a modal administration of USDOT and is participating in the development of the HST System to promote and facilitate connectivity to existing and planned local transit systems.

- USEPA is participating in development of the HST System in both regulatory/statutory (e.g., Clean Water Act, NEPA review) and non-regulatory/non-statutory (e.g., technical assistance) roles. This MOU focuses primarily on USEPA's non-regulatory/non-statutory participation through which USEPA seeks to advance the overall sustainability of the HST System and protect human health and the environment. USEPA is entering this MOU pursuant to the authority of Section 102(2)(G) of NEPA, 42 U.S.C. 4332(2)(G), which directs federal agencies to make available to states, counties, municipalities, institutions, and individuals, advice and information useful in restoring, maintaining, and enhancing the quality of the environment.

Nothing in this MOU is intended to amend or supersede the Memorandum of Understanding among FRA, CHSRA, USEPA, and the United States Army Corps of Engineers dated December 21, 2010 regarding integration of Clean Water Act Section 404, Rivers and Harbors Act Section 408, and NEPA.

3. COMMON GOALS

The signatory agencies recognize the need to plan, site, design, construct, operate, and maintain a HST System in California using environmentally preferable practices in order to:

- Protect the health of California's residents and preserve California's natural resources; and
- Minimize air and water pollution, energy usage, and other environmental impacts.

The signatory agencies also recognize the significant and far-reaching benefits of a well-planned HST System in California and share a common vision for a HST System that, when combined with other planning efforts:

- Promotes sustainable housing and development patterns which recognize local goals and interests;
- Integrates station access and amenities into the fabric of surrounding neighborhoods;
- Stimulates multimodal connectivity and thereby increases options for affordable, convenient access to goods, services and employment;
- Reduces per passenger transportation emissions across California, thereby reducing associated environmental and health impacts; and
- Protects ecologically sensitive and agricultural lands.

4. AREAS FOR COLLABORATION

The signatory agencies have identified the following Areas for Collaboration (sections 4.1 to 4.5) to achieve the Common Goals listed above and may, upon mutual agreement, identify additional Areas for Collaboration at any time. If appropriate, specific subject areas may have individual agreement documents among some or all of the signatory agencies. Signatory agencies will evaluate whether the Areas for Collaboration list should be updated on an annual basis.

Attachment to Submission F005 (Enrique Manzanilla, United States Environmental Protection Agency, Region IX, October 13, 2011) - HST Sustainability MOU - Signed.pdf - Continued

4.1 Sustainable, Livable Communities: CHSRA, FRA, USHUD, FTA, and USEPA will engage in an open dialogue to ensure that the HST System, where applicable, is consistent with ongoing efforts to promote sustainable, livable communities under the Partnership. In addition, as time and resources allow FRA and CHSRA will obtain review and comment from USHUD, FTA, and USEPA on station planning documents, parking strategies, and approaches to integrate infrastructure into communities in station and non-station areas, among other related topics. When review and comment is requested, USHUD, FTA, and USEPA will respond in a manner that will not delay the CHSRA's design, environmental review, or construction schedule. CHSRA staff and/or contractors will also partner with local and regional organizations to promote best practices in planning for any potential HST impacts, including induced growth in station-areas and neighboring communities. CHSRA will keep FRA, USHUD, FTA, and USEPA informed of HST-related local and regional planning efforts, and the signatory agencies will partner to identify and potentially allocate technical assistance and resources where they are most needed in a manner consistent with funding requirements.

4.2 Material Selection, Design, and Construction: The signatory agencies recognize the opportunity to promote "green building" by minimizing embodied energy, use of natural resources, waste generation, and pollution through selection of environmentally preferable materials, when available, and the use of best practices for design and construction of HST system infrastructure. CHSRA and USEPA will continue their ongoing collaboration to reduce environmental impacts resulting from manufacturing, transport, and use of building materials. The signatory agencies agree to build on existing efforts and work together to promote best practices in material selection, design, and construction of the HST System and induced development.

4.3 Renewable Energy and Energy Efficiency: The signatory agencies recognize that construction and operation of the HST System will require a large amount of energy, and that ample opportunities exist to promote energy efficiency and renewable energy. CHSRA will continue to partner with USEPA to identify such opportunities through development of a strategic energy plan, which will assist CHSRA in achieving its goal of operating the HST System with 100% renewable energy. In addition, signatory agencies will share information on resources and opportunities to promote energy efficiency and generation and/or use of renewable energy.

4.4 ***Water Resources Management:*** The signatory agencies recognize the potential for a well-planned HST System to improve watershed health across much of the state, particularly when combined with other planning efforts. The signatory agencies agree that, to the extent feasible, water resources management must be well coordinated and considered from a watershed perspective. The signatory agencies will promote best practices for water efficiency and conservation in siting, planning, design, construction, operation, and maintenance of the HST System. In addition, the signatory agencies will promote environmentally-beneficial "green infrastructure" approaches to stormwater management within the HST footprint and through partnering with local organizations in areas that will likely experience induced development as a result of the HST System, as resources allow.

4.5 Systemwide Sustainability Policy: The signatory agencies will collaborate on developing a system-wide, holistic, sustainability policy, which will inform the planning, siting, design, construction, operation, and maintenance of the HST System. The policy may be based on existing research and publications and may be included by reference in future CHSRA environmental documents (Station Area Plans, Contractor Specifications, NEPA Environmental Impact Statements, CEQA Environmental Impact Reports, etc.).

5. EXPECTATIONS

5.1 At the time of the execution of this agreement, the signatory agencies agree to identify staff members and/or contractors who will collaborate through meetings, document review, and other tasks as time and resources allow.

5.2 As time and resources allow, FRA and CHSRA staff members and/or contractors are expected to obtain review and comment from USHUD, FTA, and USEPA on plans and other information relevant to the above Areas for Collaboration and/or other topics relevant to achieving a sustainable HST System in California. When review and comment are requested, USHUD, FTA, and USEPA will respond in a manner that will not delay CHSRA's design, environmental review, or construction schedule.

5.3 FRA, USHUD, FTA, and USEPA staff members are expected to identify agency programs and resources, as well as ongoing Partnership efforts, that may be used to promote sustainability within the California HST System and, where appropriate, work to align efforts.

5.4 Signatory agency staff members and/or contractors are expected to consider their existing external networks (including research organizations, non-profit organizations, and public agencies) and to identify programs or experts that may be able to contribute to the sustainability of the HST System.

6. GENERAL PROVISIONS

6.1 Nothing in this MOU is intended to diminish, modify, or otherwise affect the statutory or regulatory authorities of the signatory agencies.

6.2 Documents, data, maps, and other information provided pursuant to this MOU may be pre-decisional (*e.g.,* intra-agency or inter-agency memoranda or letters, administrative draft documents, etc.), privileged, or prohibited from disclosure pursuant to applicable law. Unless prohibited under Freedom of Information Act or the California Public Records Act (as applicable), any signatory agency receiving such information agrees to treat it as confidential and not to transmit or otherwise divulge this information without prior approval of the agency providing such information.

6.3 A signatory agency's participation in this MOU is not equivalent to serving as a cooperating agency as defined by regulations promulgated by the Council on Environmental Quality, 40 C.F.R. Part 1500, which is a separate process established through a formal written agreement between a cooperating agency and the Federal lead agency.

6.4 As required by the Anti-deficiency Act, 31 U.S.C. Sections 1341 and 1342, all commitments made by Federal agencies in this MOU are subject to the availability of appropriated funds. This MOU is neither a fiscal nor a funds obligation document. Nothing in this MOU, in and of itself, obligates Federal agencies or CHSRA to expend appropriations or to enter into any contract, assistance agreement, interagency agreement, or incur other financial obligations that would be inconsistent with agency budget priorities.

Attachment to Submission F005 (Enrique Manzanilla, United States Environmental Protection Agency, Region IX, October 13, 2011) - HST Sustainability MOU - Signed.pdf - Continued

The non-Federal signatory to this MOU agrees not to submit a claim for compensation for services rendered to any Federal agency in connection with any activities it carries out in furtherance of this MOU, unless separately and specifically authorized by separate agreement(s) such as grant/cooperative agreements. This MOU does not exempt the non-Federal parties from Federal policies governing competition for assistance agreements. Any transaction involving reimbursement or contribution of funds between the parties to this MOU will be handled in accordance with applicable laws, regulations, and procedures under separate written agreements.

The obligations under this MOU of the State of California or its political subdivision are subject to the availability of appropriated funds. No liability shall accrue to the State of California or its political subdivision for failure to perform any obligation under this MOU in the event that funds are not appropriated.

6.5 The execution of this MOU does not represent a legally binding agreement. Rather, it implies that the signatories will strive to reach, to the best of their abilities, the objectives stated in this agreement.

6.6 This MOU does not confer any right or benefit, substantive or procedural, enforceable at law or equity, by a party against the United States, its agencies, its officers, or any person, or against the State of California, its agencies, political subdivisions, its officers or any person.

6.7 Each entity will bear its own expenses in connection with the preparation, negotiation, and execution of this MOU.

7. MODIFICATION AND TERMINATION

7.1 This MOU may be amended at any time by the written agreement of all signatory agencies.

7.2 Any signatory agency may terminate participation in this MOU upon 30 days written notice to all other signatory agencies.

7.3 This MOU will terminate five years after the date of signature by the last signatory agency, unless extended in writing by all signatory agencies.

8. SIGNATORIES

This MOU will become effective on the date of signature by the last signatory agency.

IN WITNESS THEREOF, the parties hereto have executed this Memorandum of Understanding, acting by and through their respective officers.

CALIFORNIA HIGH-SPEED RAIL AUTHORITY
By: _____ Date: 9/12/11
Roelof van Ark, Chief Executive Officer

U.S. DEPARTMENT OF TRANSPORTATION
Federal Railroad Administration
By: _____ Date: _____
Joseph C. Szabo, Administrator

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
Region 9
By: _____ Date: 9/19/11
Ophelia B. Basgal, Regional Administrator

U.S. DEPARTMENT OF TRANSPORTATION
Federal Transit Administration, Region 9
By: _____ Date: 9/19/11
Leslie T. Rogers, Regional Administrator

U.S. ENVIRONMENTAL PROTECTION AGENCY
Region 9
By: _____ Date: 9/22/11
Jared Blumenfeld, Regional Administrator

Attachment to Submission F005 (Enrique Manzanilla, United States Environmental Protection Agency, Region IX, October 13, 2011) - HST Sustainability MOU - Signed.pdf - Continued

9. WITNESSES

The following entities support development of the HST System in a sustainable manner, consistent with the Common Goals stated above in Section 3. The witness entities will contribute to the development of a sustainable HST System when appropriate and when resources allow.

IN WITNESS THEREOF, the party hereto has demonstrated support for the goals established by this Memorandum of Understanding.

CALIFORNIA STRATEGIC GROWTH COUNCIL
By: Heather Fargo Date: 9-14-11
Heather Fargo, Executive Policy Officer

ALLIANCE FOR SUSTAINABLE ENERGY, LLC
In Its Capacity as Managing and Operating Contractor for the
National Renewable Energy Laboratory
Under Department of Energy Contract No. DE-AC36-08GO28308
By: Date: 9/8/11
Casey Porto, Senior Vice President for Commercialization and Deployment

ATTACHMENT: LIVABILITY PRINCIPLES

U.S. Department of Housing and Urban Development (USHUD), U.S. Department of Transportation (USDOT), and U.S. Environmental Protection Agency (USEPA) announced the Interagency Partnership for Sustainable Communities (Partnership) on June 16, 2009. The Partnership represents an unprecedented agreement to coordinate federal housing, transportation and environmental investments, protect public health and the environment, promote equitable development, and help address the challenges of climate change.

The Partnership established the following principles:

- Provide more transportation choices. Develop safe, reliable, and economical transportation choices to decrease household transportation costs, reduce our nation's dependence on foreign oil, improve air quality, reduce greenhouse gas emissions, and promote public health.
- Promote equitable, affordable housing. Expand location- and energy-efficient housing choices for people of all ages, incomes, races, and ethnicities to increase mobility and lower the combined cost of housing and transportation.
- Enhance economic competitiveness. Improve economic competitiveness through reliable and timely access to employment centers, educational opportunities, services and other basic needs by workers, as well as expanded business access to markets.
- Support existing communities. Target federal funding toward existing communities—through strategies like transit oriented, mixed-use development, and land recycling—to increase community revitalization and the efficiency of public works investments and safeguard rural landscapes.
- Coordinate and leverage federal policies and investment. Align federal policies and funding to remove barriers to collaboration, leverage funding, and increase the accountability and effectiveness of all levels of government to plan for future growth, including making smart energy choices such as locally generated renewable energy
- Value communities and neighborhoods. Enhance the unique characteristics of all communities by investing in healthy, safe, and walkable neighborhoods—rural, urban, or suburban.

Submission F006 (Jim Costa, United States House of Representatives, 20th Congressional District, September 6, 2011)

JIM COSTA
20TH DISTRICT, CALIFORNIA
WEB PAGE: www.costa.house.gov

COMMITTEE ON NATURAL RESOURCES
SUBCOMMITTEE ON
ENERGY AND MINERAL RESOURCES
SUBCOMMITTEE ON
WATER AND POWER

COMMITTEE ON AGRICULTURE
SUBCOMMITTEE ON
CONSERVATION, ENERGY AND FORESTRY
SUBCOMMITTEE ON
RURAL DEVELOPMENT, RESEARCH,
BIOTECHNOLOGY AND FOREIGN AGRICULTURE
RANKING MEMBER

CONGRESS OF THE UNITED STATES
HOUSE OF REPRESENTATIVES
WASHINGTON, DC 20515

September 6, 2011

Mr. Thomas Umberg
Chairman
California High-Speed Rail Authority
770 L Street, Suite 800
Sacramento, CA 95814-3359

Dear Chairman Umberg:

Thank you for your diligent efforts and sincere dedication to building the nation's first, true high-speed rail system.

F006-1

As you know, the Authority recently released the Draft Environmental Impact Report/Environmental Impact Statement (Draft EIR/EIS) for the Fresno to Bakersfield and Merced to Fresno segments and extended the initial public comment period to 60 days after hearing from stakeholders in Kings County and across the San Joaquin Valley.

Given the sheer size of these documents and past precedent, I respectfully request that the Authority further extend the public comment period to a full 90 days. Doing so will allow those most affected by the alignments in the Draft EIR/EIS to adequately review the documents and submit their concerns and comments to the Authority. The more California citizens are involved in the construction of this system, the better the outcome will be.

Thank you again for your commitment and dedication to this project.

Sincerely,

JIM COSTA
Member of Congress

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Response to Submission F006 (Jim Costa, United States House of Representatives, 20th Congressional District, September 6, 2011)

F006-1

Refer to Standard Response FB-Response-GENERAL-07.

Submission F007 (Kevin McCarthy, United States House of Representatives, 22nd Congressional District et al, September 20, 2011)

KEVIN McCARTHY
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Congress of the United States
House of Representatives
Washington, DC 20515–0522

September 15, 2011

Thomas J. Umberg, Chairperson
California High-Speed Rail Authority
770 L Street, Suite 800
Sacramento, CA 95814

Dear Mr. Umberg,

F007-1

We write to request a 30-day extension of the time allotted for public comment on the high speed rail route that has been proposed by the California High Speed Rail Authority. As Members of the California Central Valley congressional delegation, we have serious concerns about the proposed route, the current project, and ridership estimates. The official public comment period is currently scheduled to end on October 13, 2011. However, because the draft Environmental Impact Report is over 3,300 pages long, we believe this extension is essential to ensuring our constituents and all Californians have ample time to review, analyze, and develop and submit comments to the Authority for review. Given the size and scope of this project, we believe this is a reasonable request.

Thank you for considering our request, and for your attention to this important matter. If you have any questions please do not hesitate to contact us.

Sincerely,

Members signing this letter: Kevin McCarthy, Jeff Denham, and Devin Nunes

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Response to Submission F007 (Kevin McCarthy, United States House of Representatives, 22nd Congressional District et al, September 20, 2011)

F007-1

Refer to Standard Response FB-Response-GENERAL-07.