

Submission 956 (Maria Rea, National Marine Fisheries Service, September 30, 2011)



File

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Region
650 Capitol Mall, Suite 5-100
Sacramento, CA 95814-4700

SEP 30 2011

Doc# SA 00525

Mr. Lupe Jiménez
California High Speed Rail Authority
Senior Environmental Planner
770 L Street, Suite 800
Sacramento, California 95814

Dear Mr. Jiménez:

This letter is in response to the August 30, 2011, submittal of the Merced to Fresno Biological Resources and Technical Report for the Draft EIR/EIS of the California High Speed Train Project to NOAA's National Marine Fisheries Service (NMFS) for review. These comments are provided as technical assistance and not intended to take the place of formal consultation as required under the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

The purpose of the ESA is to provide a means whereby the ecosystems upon which endangered and threatened species depend may be conserved, and to take steps that may be appropriate to achieve this purpose of recovery of listed species. Under section 7(a)(1) of the ESA, all Federal agencies are directed to use their authorities by carrying out programs to further the purpose of the ESA, which is to recover threatened and endangered species and the ecosystems on which they depend. Under section 7(a)(2) of the Endangered Species Act (ESA), each Federal agency must insure that their actions are not likely to directly or indirectly appreciably reduce the likelihood of both the survival and recovery of any threatened or endangered species in the wild. It is important to point out that the jeopardy standard includes consideration of both survival and recovery.

This letter also provides technical assistance under the authority of and in accordance with the provisions of the Fish and Wildlife Coordination Act of 1934 (FWCA), as amended. The purpose of the FWCA is to ensure that wildlife conservation receives equal consideration [16 U.S.C. 661]. The FWCA establishes a consultation requirement for Federal departments and agencies that undertake any action that proposes to modify any stream or other body of water for any purpose, including navigation and drainage [16 U.S.C. 662(a)]. The FWCA allows the opportunity to offer recommendations for the conservation of species and habitats beyond those currently managed under the ESA and Magnuson-Stevens Fishery Conservation and Management Act.

We offer the following specific comments and suggestions for the Merced to Fresno Section:



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• **Section 1.0, Introduction, pg. 1-3**

Commitments for surveys, analysis and mitigation made in the programmatic EIR/EIS documents from 2005 and 2008 are stated. One specific commitment is; "Consultation with USFWS, as needed, for potential impacts on federally listed plant and wildlife species, including the preparation of a Biological Assessment (BA) and Biological Opinion (BO). NMFS is also part of that commitment in regards to the preparation of a BA and BO and should be listed here as well.

• **Section 5.0, UPRR/SR 99 Alternative, Fish, pg. 5-63 & 5-101**

It is stated that; "The USRR/SR 99 Alternative contains aquatic habitats (primarily along the San Joaquin River) known to support Kern brook lamprey, Central Valley spring-run Chinook salmon, hardhead, and San Joaquin Roach." California Central Valley steelhead also needs to be included in this list.

• **Section 5.0, BNSF Alternative, Fish, pg. 5-64 & 5-103**

It is stated that; "The BNSF Alternative contains aquatic habitats (primarily along the San Joaquin River) known to support Kern brook lamprey, Central Valley spring-run Chinook salmon, hardhead, and San Joaquin Roach." California Central Valley steelhead also needs to be included in this list.

• **Section 5.0, Hybrid Alternative, Fish, pg. 5-66 & 5-104**

It is stated that; "The Hybrid Alternative contains aquatic habitats (primarily along the San Joaquin River) known to support Kern brook lamprey, Central Valley spring-run Chinook salmon, hardhead, and San Joaquin Roach." California Central Valley steelhead also needs to be included in this list.

• **Section 5.0, Direct Impacts During the Project Period, Fish, pg. 5-99**

It is stated that; "Direct impacts during operation would be similar to those described for invertebrates and amphibians." Under invertebrates it states "Direct impacts would include mortality from incidental trampling or crushing caused by increased human activity, and exposure to accidental spills including contaminants/pollutants. Direct impacts would also include the permanent conversion of occupied habitat." We believe there should be more clarity in the direct impacts during the project period to fish. If the same conditions are true for fish as stated for invertebrates and amphibians, then it should be directly stated as such in the fish section.

• **Section 5.0, Indirect Impacts During the Project Period, Fish, pg. 5-100**

Again, as recommended above, please state the expected indirect impacts that will occur specifically to fish.

• **Section 5.4, Mitigation Measures, pg. 5-119**

This specific section states; "Coordinate with federal, state, and local agencies to refine mitigation measures presented here. Representative agencies involved in early

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coordination include USFWS, USACE, EPA, CDFG, and RWQCB." NMFS has also been involved in early coordination and this should be added here.

- **Section 5.4.1, Bio-MM #2: Regulatory agency Access, pg. 5-121**
This specific section states; "If requested, before, during, or upon completion of ground-disturbing activities, allow access by USFWS, USACE, RWQCB, and CDFG staff to the construction site." We believe NMFS should also be included in this list.
- **Section 5.4.1, Bio-MM #5: Prepare and Implement a Biological Resources Management Plan, pg. 5-121**
The last sentence in paragraph one states; "Form the parameters for the BRMP with the mitigation measures from the project-level EIR/EIS, including terms and conditions as applicable from the USFWS, USACE, RWQCB, and CDFG permits. NMFS should also be included in this list.
- **Section 5.4.1, Bio-MM #12: Work Stoppage, pg. 5-122**
NMFS also needs to be included in this measure. If a listed species under NMFS jurisdiction (Central Valley spring-run Chinook salmon, California Central Valley steelhead), were to enter the construction footprint, work that could have immediate effects on the species must halt, and our agency must be notified, unless indicated otherwise under an approved NMFS consultation.
- **Section 5.4.1, Bio-MM #13: 'Take' Notification and Reporting, pg. 5-123**
NMFS must also be notified immediately in the case of an accidental death or injury to a federal or state listed species during project-related activities, not just USFWS and/or CDFG.
- **Bio-MM#4: Prepare and Implement a Weed Control Plan**
The Weed Control Plan needs to be implemented for construction-period mitigation measures as well as project mitigation measures concerning fish. With a long construction window, it is necessary to prepare and implement a weed control plan for both the construction window and the project as a whole.
- **Habitats of Concern, Essential Fish Habitat, pg. 5-143**
What exactly are the construction-period mitigation measures? It is not stated how this is clearly defined. It also states that "There will be no impacts related to project-period impacts." Earlier in the document it says that there are concerns with fluid leakage. Indirect effects should also be addressed here. There is also the chance that piles may need to be driven in the San Joaquin River near Camp Pashayan. This would cause project-period impacts, and permanent changes to the essential fish habitat. We would recommend you consider buying conservation bank credits at a 3:1 ratio and describe in more detail other proper mitigation measures.
- **5.5 NEPA Impacts Summary**
Habitats of concern are listed as (i.e. jurisdictional waters and wetlands, critical habitat). Essential fish habitat should also be listed here.

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- **6.2 Federal Fisheries and Essential Fish Habitat Consultation Summary**
This section states that "The Authority initiated informal consultation with NMFS on September 23, 2009, to discuss potential effects from the Merced to Fresno HST..." This is incorrect. The Authority and NMFS have been engaged in technical assistance, but consultation by the Authority and NMFS has not been initiated. This language needs to be changed to reflect that.

NMFS appreciates the opportunity to provide input on the draft EIS/EIR for the California High Speed Train Project. We look forward to working with the High Speed Rail Authority to ensure that the EIR/EIS adequately addresses and analyzes potential project related impacts to salmonids.

If you have any questions regarding this correspondence, please contact Ms. Sierra Franks in our Sacramento Area Office, by telephone at (916) 930-3720 or email at Sierra.Franks@noaa.gov.

Sincerely,


Maria Rea
Sacramento Area Office Supervisor

cc: Copy to file: ARN 151422SWR2011SA00502
NOAA Fisheries-PRD, Long Beach, CA

Response to Submission 956 (Maria Rea, National Marine Fisheries Service, September 30, 2011)

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NMFS provided a comment letter in response to the August 30, 2011 submittal of the Merced to Fresno Biological Resources and Technical Report for the Draft EIR/EIS of the California High Speed Train Project. As stated in the comment letter, the comments were provided as technical assistance and not intended to take place of formal consultation as required under the federal ESA. All of the comments provided by NMFS have been addressed in Section 3.7, Biological Resources and Wetlands, of the Final EIR/EIS.

The California High Speed Train Authority is currently engaged in formal consultation with NMFS as required under ESA. Potential affects to Essential Fish Habitat and special-status fish species have been detailed within the Merced to Fresno Biological Assessment (BA). The BA incorporates a series of checkpoints to minimize potential affects to Essential Fish Habitat and listed fish species that refer to fish mitigation measures (EIR 3.7-114). The Authority and FRA will coordinate with NMFS, USFWS, CDFG, CVFPB and USACE to provide cross-sectional and profile data of the proposed SJR crossing as further refinement of the planning and design process continues. The checkpoints will include specific product deliverables and data that could then be used to conduct hydraulic modeling to demonstrate how bridge design might influence in-river processes such as scour. These analyses will address velocity, turbidity, fluvial processes including sediment scour and deposition. These checkpoints will be developed in concert with the resource agencies to obligate the design build contractor and processes to work with NMFS systematically in the design of the crossing. The anticipated design build phases are itemized below. The first four action items are a part of the preliminary design process, and then final design completion following NMFS concurrence.

The checkpoints are presented below:

- Establish Design Hydrology (peak design flow rate):
 - o Collect, review and summarize available hydrology
 - o Consult with CVFPB and USACE
 - o Develop original hydrology, if required
- Obtain Existing Conditions Field Data (can start concurrent with Task 1):
 - o Aerial and field reconnaissance – field plans
 - o Channel cross-section survey and processing
 - o Geotechnical sampling, testing and data report
- Establish Existing Conditions Hydraulics (HEC-RAS model)

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- o Develop HEC-RAS model for each crossing
- o Calibrate or validate the model
- o Establish design water surface elevation and freeboard
- o Consult with CVFPB and USACE
 - Demonstrate Minimal Hydraulic Impacts from Design
- o Incremental flood rise
- o Freeboard
- o Setbacks and levee clearance
- o Environmental Questionnaire
- o Scour and channel Stability; considerations for changes in geomorphology
 - Final Design incorporating design modifications consistent with findings during the preliminary design process.

The Authority will closely coordinate with the Design Build Team, NMFS, USFWS and other appropriate agencies to design and place the required bridge support pier(s) within the San Joaquin River corridor. A requirement of the design and placement will include compatibility with the intent of the San Joaquin River Restoration Program and the habitat needs of Central Valley steelhead and Central Valley spring-run Chinook salmon. The HST crossing shall be designed with the planned increase in river flows and to maintain or effectively minimize any appreciable changes in scour, sediment transport and deposition, or changes in geomorphic processes that could alter habitat conditions in a manner that would impede the reestablishment of these species. The Authority, in partnership with the Design Build Team, will design and conduct a hydraulics/hydrology analysis with appropriate modeling tools and incorporate site-specific data, including the needed geotechnical investigations to ensure the design, sizing, location, and construction techniques are compatible with habitat conditions that support salmonoid utilization of the San Joaquin River within the area impacted by the proposed HST crossing.

The Authority will coordinate with NMFS, the Bureau of Reclamation, and the U.S. Army Corps of Engineers on the study design methods, hydraulic and geomorphology criteria, and follow-up post construction monitoring to ensure crossing location biological integrity is maintained for habitat primary constituent elements and the compatibility with the goals of the San Joaquin River Restoration Program for the reintroduction of spring-run Chinook salmon and Central Valley steelhead.

Depending on the results of the hydraulic and hydrology analyses, the Authority and the

Response to Submission 956 (Maria Rea, National Marine Fisheries Service, September 30, 2011) - Continued

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Design Build Team may be required to implement design changes to avoid and minimize adverse affects to aquatic habitat, where appropriate. Any design changes would be evaluated and considered in consultation with NMFS, CDFG, the Bureau of Reclamation, and the U.S. Army Corps of Engineers. Possible design changes that could be evaluated and considered include:

- Minor reconfiguration of piers and pier foundations to minimize hydraulic forces and associated potential for scour;
- Providing additional armoring along the bed and banks to minimize scour; and/or
- Major reconfiguration of bridge span arrangement and support pier design to minimize pier placement in the wetted portion of the San Joaquin River channel.

The timeline for invasive weed management within the Action Area will be in both the construction and project period in accordance with guidelines specified within Bio MM#4 Prepare and Implement a Weed Control Plan (EIR 3.7-107). To minimize the creation of open, disturbed soils that the majority of invasive, non-native weeds prefer, disturbance zones will be revegetated after the cessation of ground disturbing activities with site appropriate native species in accordance to with BIO MM#6 Prepare and Implement a Restoration and Revegetation Plan (EIR Page 3.7-107).

Submission 227 (Kevin McCarthy, U.S. House of Representatives, September 15, 2011)

KEVIN MCCARTHY
22ND DISTRICT, CALIFORNIA
MAJORITY WHIP
COMMITTEE ON
FINANCIAL SERVICES

09-15-11P02:58 RCVD



Congress of the United States
House of Representatives
Washington, DC 20515-0522

September 15, 2011

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

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

Dear Mr. Umberg,

227-1

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,

PRINTED ON RECYCLED PAPER

Response to Submission 227 (Kevin McCarthy, U.S. House of Representatives, September 15, 2011)

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See MF-Response-GENERAL-7.

Submission 940 (Michael S. Jewell, United States Army Corps of Engineers, October 13, 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-2009-01483)

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, *Merced to Fresno Section Draft EIR/EIS* (DEIR/S) for the proposed Merced to Fresno 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 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

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 22, 2011 with the reasonable range of alternatives proposed to be carried forward in the DEIR/S. The Corps responded on June 14, 2011, agreeing with the range of alternatives as proposed, with the exception of the elimination of the Western Madera (A3) and SR 152 WYE Connection alternatives. These alternatives were 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 these alternatives. To date, we have not received a response and Checkpoint B is not considered closed.

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

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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 Merced to Fresno section. We cannot make a preliminary determination on the least environmentally damaging practicable alternative (LEDPA) without evaluating a draft mitigation plan.

DEIR/S Comments

940-3

1. Address Substrate conditions for aquatic features (*40 CFR 230.11(a) and 230.20*)
2. Address Impacts to substrate and the restoration of temporary fill in Bio-MM #43, pg 3.7-141 (*40 CFR 230.20*)
3. Address potential contaminants in the fill material (*230.11(d)*) and a general evaluation of fill material (*40 CFR 230.60, 230.61*)
4. 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*)
5. 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)*)

940-4

6. 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.

940-5

7. The document should specifically reference the screening criteria used in the elimination of alternatives.

940-6

8. The environmental consequences in Section 3.7.5 (*pg 3.7-34*) talks about impacts resulting from the current development trends. Are these trends expected to stop or be mitigated through the implementation of the project or is this part of the cumulative impact?

940-7

9. Table 2-13 (*pg 2-83*) states that the Kojima HMF site would include a self-contained community allowing for a work/live environment. This development is never addressed elsewhere in the DEIR/S. This must be addressed as an impact unique to this alternative which would have additional direct and indirect impacts, including cumulative impacts. The residential development it is not part of the purpose and need of the project, how it relates to the rest of the project must be addressed.

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Submission 940 (Michael S. Jewell, United States Army Corps of Engineers, October 13, 2011) - Continued

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940-8

10. Page 2-20 states that the Western Madera (A3) and the UPRR/BNSF Hybrid (A4) alternatives were eliminated because they depart from existing transportation corridors. This is inconsistent with the remaining alternatives since the Hybrid and BNSF alternatives, as well as the West Chowchilla design option, all depart from transportation corridors. Approximately 9.8 miles of the West Chowchilla design option is outside of a transportation corridor. All portions of the Wye's and the trunk line of the Hybrid alternative between SR 99 and the BNSF line are outside of transportation corridors. The Avenue 21 Wye would result in approximately 8.6 miles of track while the Avenue 24 Wye would result in approximately 12.4 miles of track outside of transportation corridors. When combined, the Hybrid Alternative with the West Chowchilla design option would result in approximately 18.9 miles of track outside of transportation corridors.

940-9

11. Table S-4 states that construction-period impacts to agricultural lands are not significantly different between alternatives. Although total acres appear to be similar, the ranges within the important farmland type are significantly different between alternatives. Impacts to prime farmland range from 23.51 to 62.96 acres and unique farmland ranges from 60.36 acres to 115.73 acres.

940-10

12. Separate vernal pools and other seasonal wetlands into two separate categories in tables 3.7-6, -8, -10, -12, -18, -20, -22, -24 (pgs 3.7-47 through 3.7-3.7-82)

13. Inundated non-wetland waters should be included as a water of the United States in Table S-4

940-11

14. Table S-4 should have a row for temporary impacts to Waters of the US

15. The elimination of the Western Madera (A3) and SR 152 WYE Connection alternatives (pg 2-20) was not agreed to by the Corps and requires greater analysis. Data provided by the Authority shows that the Western Madera alternative impacts 52% (73 acres) more prime farmland, but impacts 52% (111 acres) less unique farmland. The agricultural impacts appear to be similar to other alternatives while resulting in fewer community impacts and impacts to the aquatic ecosystem and vernal pool critical habitat. The SR 152 WYE Connection alternative should also be carried forward because a cost comparison has not been provided to substantiate the assertion that it could cost twice as much as any other alternative. This alternative would avoid aquatic and biological resources resulting in impacts to 85% (2.2 acres) less lakes/ponds/streams, 85% (2.3 acres) percent less swamps/marshes, 62% (8 acres) less vernal pool complexes, 46% (11 acres) less wetland habitat, and 24% (73 acres) less San Joaquin kit fox range. These alternatives meet the project purpose and need and require greater analysis within the EIS in order to be eliminated. Very little information was included about these alternatives and why they were eliminated. These alternatives must be included in greater detail.

940-12

16. Temporary impacts – (Bio-MM#6 and Bio-MM#43, pg 3.7-141). 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 has been successfully used

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940-12

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

940-13

17. 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.

940-14

18. Indirect impacts to waters of the U.S. need to be addressed and to the degree possible quantified. 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. It is unclear from page 3.7-46 if the aquatic features within the 250-foot buffer are included in the impact acreages in Tables 3.7-6, -8, -10 and -12.

19. Impacts to waters of 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 3.8-31, -32), 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.

940-15

20. Stormwater Pollution Prevention Plan best management practices (pg 3.8-38). 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".

940-16

21. What is the actual acreage required for the HMF site? Page 2-15 states that the HMF requires approximately 154 acres, Table 2-13 on pages 2-82 and 2-83 ranges between 231 and 401 acres depending on the alternative, while page 3.1-4 says up to 300 acres. This is not consistent with the DEIR/S for the Fresno to Bakersfield section which states that the HMF requires either 150 acres (pgs 2-14 and 2-79) or up to 154 acres (pg 3.1-4). Verify the acreage required for the HMF and if this is dependent on the actual site selected.

940-17

22. The maps of the alignments on page 2-40 show that the UPRR/SR 99 West Chowchilla with Ave 24 and the UPRR/SR 99 East Chowchilla with Ave 24 alternatives are identical with the exception that the East Chowchilla alternative includes an additional 11 miles of track along SR 99 (Figure 2-27a and 2-27b). Table 3.7-18 (pg 3.7-75) shows that despite the identical alignment and the additional track, the East Chowchilla alternative has less impacts to aquatic communities than the West Chowchilla alternative. Please explain how the East Chowchilla

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940-17

alternative can impact 8 acres less of aquatic communities despite having approximately 11 miles more track.

940-18

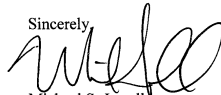
23. Verify that the list potential cumulative effects in tables 3.19-1 through 3.19-7 are consistent and accurate for all projects. Applications have been submitted for a Department of the Army for multiple projects listed. These projects have impacts to wetlands and other aquatic resources as well as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

24. 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.

25. 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 Administration, 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 940 (Michael S. Jewell, United States Army Corps of Engineers, October 13, 2011)

940-1

The FRA and Authority has coordinated with EPA and USACE to finalize "Checkpoint B together with Checkpoint C." The EPA and USACE requested additional detail on the effects of A3 – Western Madera to reflect impacts on the Waters of the US in accordance with the 404 process guidelines. The Authority provided a response to the USACE and EPA in January 2012, resulting in the agencies agreeing with the dismissal of the A3 - Western Madera Alternative in the EIR/EIS evaluation (February, 2012), concluding the Checkpoint B process for Merced to Fresno. The SR 152 Wye connection alignment will be analyzed in the San Jose to Merced Project Draft EIR/EIS and it will be included in the Checkpoint B analysis for that section.

940-2

See MF-Response-BIO-3.

In November 2011, as part of its Checkpoint C submittal to the USACE and EPA, the Authority submitted an initial version of the Draft Compensatory Mitigation Plan.

USACE/EPA both concurred (on 3/26 and 3/23 respectively) with Checkpoint C which included a Compensatory Mitigation Plan and partial draft of the MSIP. The Draft MSIP was submitted to USFWS for review on 3/12.

940-3

1-4) Specific substrate conditions within the aquatic ecosystem and those associated with the riparian communities, waters of the United States and wetlands will be assessed in more detail during the preparation and development of site specific HMMPs and during the design/build process. It is acknowledged that the discharge can include a change to complex physical, chemical and biological characteristics. The DEIR/DEIS discusses both direct and indirect effects to the aquatic system and acknowledges potential indirect, permanent effects to vernal pools. Specific details on the restoration of temporary fill will be addressed in more detail in site specific HMMPs and landscape plans during the design-build process.

On page 3.7-51 the DEIR/DEIS addresses indirect effects to aquatic resources:

Plant Communities and land cover types that are assumed to be impacted indirectly during construction activities are vernal pools, other seasonal wetlands, Great Valley

940-3

mixed riparian forest, and other riparian communities and land cover types. The following discussion of indirect impacts during construction is focused on native plant communities that occur within the construction footprint:

- **Vernal Pools and Other Seasonal Wetlands:** Vernal pools and other seasonal wetlands that lie completely or partially within the 250-foot-radius buffer around project elements are expected to be indirectly and permanently impacted by construction activities. The vernal pools and other seasonal wetlands within the 250-foot-radius buffer may be potentially, indirectly impacted within the construction and project period by hydrological changes within the watershed. Indirect permanent impacts can be anticipated for the pools receiving flow from the location of the construction footprint. Drilling, excavating or other activities that occur within the construction footprint would potentially alter surface and subsurface water flow within the watershed (hardpans, volume, flow direction, etc.) and increase sedimentation/pollution from the construction footprint.
- **Great Valley Mixed Riparian Forest and other riparian communities and land cover types:** Indirect impacts on Great Valley mixed riparian forest and other riparian communities would include: erosion, siltation, and drainage runoff; soil and water contamination from construction equipment leaks; construction-related dust that affects plants by reducing their photosynthetic capability (especially during flowering periods); invasion by exotic species; and an increased risk of fire (e.g., construction equipment use and smoking by construction workers) in adjacent open spaces.

On page 3.7-65 the DEIR/DEIS addresses indirect effects to aquatic resources:

Construction-related indirect impacts on habitats of concern would include: erosion, siltation, and runoff into natural and constructed watercourses; soil and water contamination from construction equipment leaks; construction-related dust reducing photosynthetic capability (especially during flowering periods); and an increased risk of fire (e.g., construction equipment use and smoking by construction workers) in adjacent open spaces. Wildlife use of adjacent habitats would also be subjected to noise, dust, and motion and startle disturbances.

Vernal pools that lie completely within the wetland study area, and those that lie partially within the wetland study area and partially within the habitat study area, are considered

Response to Submission 940 (Michael S. Jewell, United States Army Corps of Engineers, October 13, 2011) - Continued

940-3

to be indirectly and permanently impacted.

5) As stated on page 3.7-66 of the DEIR/EIS, Essential Fish Habitat and the associated special-status fish are being restored within the San Joaquin River from the Friant Dam to the Merced River confluence. Potential project impacts (i.e., indirect from runoff/water-quality related) could hinder re-establishment of special-status fish along the San Joaquin River; as such, essential fish habitat is regulated by NMFS, CDFG, and USFWS. Although the potential impacts are being considered during the project design, impacts to essential fish habitat during construction are considered moderate under NEPA and significant under CEQA.

940-4

See MF-Response-GENERAL-6.

940-5

MF-Response-GENERAL-2.

940-6

Development trends refer to other past, present, and foreseeable future land use actions that, coupled with the Project, could result in cumulative effects. Page 3.7-34 of the DEIR/EIS shows Figure 3.7-7 Threatened and Endangered Species Observed and Reported. The Authority is not required to mitigate effects that are not the result of the Project.

940-7

MF-Response-GENERAL-15. The Authority has no active plan for development of a community near this site. Such a project would be proposed by others, such as the property owner, and would undergo separate environmental review.

940-8

MF-Response-GENERAL-2.

940-9

As the commenter states, the distribution of each category of Important Farmland is different across all alternatives and design options. Farmland impacts, however, are based on the summary of impacts to all four categories - Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance. Another impact measurement is the Land Evaluation and Site Assessment calculation by the Natural Resources Conservation Service, which takes soil type into account in its scoring. See MF-Response-AGRICULTURE-8 and MF-Response-GENERAL-4 for additional information.

940-10

12-14) The FEIR/EIS contains updated data regarding aquatic resources, vernal pools and seasonal wetlands have been separated into two separate groups. In addition, the "inundated non-wetlands" have been classed as open water features. The Draft EIR/EIS combined these two wetland classes in order to summarize and streamline the data.

The requested data was provided in the November 2011 Checkpoint C Information Packet. Specifically, the information is provided in the following tables of the Checkpoint C Information Packet: Tables 6-1 Direct Impacts (All Alternatives), Table 6-2 Direct Impacts (UPRR/SR-99), Table 6-3 Direct Impacts (BNSF), Table 6-4 Direct Impacts (Hybrid), and Table 6-5 Extent of Vernal pool Habitat (All Alternatives).

In the Preliminary Jurisdictional Determination letter from the Corps (dated November 3, 2011), the USACE stated "*We concur with the amount and location of wetlands and other water bodies within the review area as depicted on the October 2011, Appendix C- Wetlands and Waters Study Area Map prepared by CH2MHill.*" In this map, the vernal pools and seasonal wetlands are presented as two different polygon types.

See MF-Response-BIO-1.

940-11

The FRA and Authority has coordinated with EPA and USACE to finalize "Checkpoint B together with Checkpoint C." The EPA and USACE requested additional detail on the effects of A3 – Western Madera to reflect impacts on the Waters of the US in accordance with the 404 process guidelines. The Authority provided a response to the

Response to Submission 940 (Michael S. Jewell, United States Army Corps of Engineers, October 13, 2011) - Continued

940-11

USACE and EPA in January 2012, resulting in concurrence with Checkpoint B and the agencies agreeing with the dismissal of the A3 - Western Madera Alternative in the EIR/EIS evaluation (February, 2012). That concluded the Checkpoint B process for Merced to Fresno. The SR 152 Wye connection alignment will be analyzed in the San Jose to Merced Project Draft EIR/EIS and it will be included in the Checkpoint B analysis for that section.

940-12

The areas where Waters of the United States, wetlands or other riparian resources are shown to be temporarily impacted are those areas that are not required for the permanent project, but rather for construction-related activities. Resource areas will be avoided to the maximum extent possible. These temporary impact areas are required for construction purposes such as the mobilization, storage and movement/work areas of construction equipment, storage of equipment, temporary access roads, spoil placement, staging areas, etc.

The temporary impact areas for aquatic resources will be restored to original grade and contours and revegetated as required in Bio-MM#58 and addressed in the HMMP as described in and required by Bio-MM#58: Prepare and Implement a Habitat Mitigation and Monitoring Plan (HMMP). All aquatic resources within the construction limits that are to be avoided during construction will be fenced as Environmentally Sensitive Areas (ESAs) for the purpose of excluding construction activities and associated impacts. Permitted work would only be allowed outside the fenced ESAs. Work will be monitored to ensure that the ESAs are avoided. Where access is allowed outside the ESAs, impacts will not exceed permitted levels (see Bio-MM#45: Monitor Construction Activities Within Jurisdictional Waters). Where temporary impacts to jurisdictional wetlands cannot be restored, these impacts will be compensated for pursuant to federal permit requirements approved for the project (see Bio-MM#59: Compensate for Permanent Impacts on Jurisdictional Waters).

While the construction period for the entire project is over a period of years, the actual construction time frame at any location will be of limited duration as the construction, will likely be staged during the design/build process. In any event, as recognized above, the HMMP will take into consideration the longevity of the impact, compaction and other

940-12

temporary disturbance factors during the restoration and repair of the affected resource. If the effects to jurisdictional waters that were considered temporarily affected last longer than one season, then the effect will be considered permanent. Effects to vernal pools, seasonal wetlands, and open water are all considered direct permanent impacts because of the difficulty in restoring these features. Therefore, temporary impacts are only considered for natural watercourses, constructed watercourses, constructed basins, and forested wetlands.

940-13

The first paragraph of Section 2.8 Construction Plan in the EIR /EIS states that construction will be completed by December 2019 for the HST track and stations and by December 2021 for the HMF.

940-14

18) See MF-Response-BIO-1 and MF-Response-BIO-3.

The acreages depicted in the tables for the construction period represent the portions of the project that are not subject to the permanent placement of fill that support the cross-section of the facility. In some cases these areas may be restored on a case-by-case basis pending the design/build program. The project period represents the portions of the project that are permanently placed under the fill and the built portion of the project. The indirect effects of the project are discussed for the construction and operations periods in Section 3.7.5.3. The acreages for indirect effects will be considered in the preparation and implementation of the HMMP and are a part of the mitigation program and final mitigation ratio considerations.

19) For crossing types, please refer to EIR/EIS Section 3.8 Hydrology and Water Resources as well as the Technical Report (California High-Speed Authority (Authority) and Federal Railroad Administration (FRA). 2011. *Hydraulics and Floodplain Technical Report* for Merced to Fresno Section High-Speed Train Project EIR/EIS.

940-15

See MF-Response-WATER-5.

Response to Submission 940 (Michael S. Jewell, United States Army Corps of Engineers,
October 13, 2011) - Continued

940-16

The HMF facility requires approximately 154 acres. As noted in Section 2.2.9.2 HST Heavy Maintenance Facility, the property boundaries for each HMF site would be larger than the acreage needed for the actual facility, due to the unique site characteristics and constraints of each location. As a result, all sites are larger than 154 acres, as described in Table 2-13. Section 3.1.3 Approach to the Analysis in the EIR/EIS has been revised to indicate that, depending on the site, the HMF site may be up to 401 acres.

940-17

The UPRR/SR 99 West Chowchilla with Ave 24 includes a connection to both Avenue 24 as well as the connection to the high-speed train segment to the west. With the elimination of the connection to the West Chowchilla connector, even with the addition of the much longer north-south alignment with the UPRR/SR 99 East Chowchilla with Ave 24 design option, there is an overall reduction in the amount of aquatic habitats being affected. The reason for this is that the removal of the west connector also results in the avoidance of Ash Slough and several constructed watercourses which included a longitudinal encroachment. This more than offsets the pick-up of the north-south alignment that crosses more narrow drainages that are part of the eastern design option. In part, this is because the West option intersects wider, more robust resources than does the East option.

940-18

23) The list of potential cumulative effects in Table 3.19-1 through Table 3.19-7 has been revised to reflect current information from previously prepared project EIRs documenting resources with significant impacts after mitigation. If a project EIR determined that a resource would have less than significant impacts after mitigation, that resource was not listed as a potential cumulative impact in Table 3.19-1 through Table 3.19-7.

24) Section 3.19, Cumulative Impacts, has been revised to include impact analysis by resource specific to the different HST alternatives.

25) The conclusion in the Cultural and Paleontological Resources subsection of Section 3.19 was revised to state "There could be a loss of significant cultural artifacts, and due to this likelihood, cumulative impacts could be substantial under NEPA and cumulatively

940-18

considerable under CEQA."

Submission 366 (D.H. Sulouff, United States Coast Guard, August 23, 2011)



Commander
Eleventh District

U.S. Coast Guard Island
Building 50-2
Alameda, CA 94501-5100
Staff Symbol: (dsw)
Phone: (510) 437-3514
Fax: (510) 437-5836

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

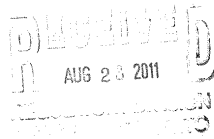
1. We have completed our review of the USACE Public Notices (PN) SPK-2009-01482 and SPK-2009-01483, dated 15 August 2011, for the Merced-Fresno and Fresno -Bakersfield sections of the California High Speed Rail Project (CAHSR). The proposed waterway crossings, along the alignments outlined in the PN,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

366-1

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.

#



Response to Submission 366 (D.H. Sulouff, United States Coast Guard, August 23, 2011)

366-1

Thank you for the information that a bridge permit from the USCG is not needed.

Submission 386 (Patricia Sanderson Port, United States Department of the Interior, September 30, 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 11/715)

Filed Electronically

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 Environmental Impact Statement (DEIS), California High-Speed Train (HST): Merced to Fresno Section High-Speed Train (HST), Proposes to Construct, Operate, and Maintain and Electric-Powered High-Speed Train, Merced, Madera and Fresno Counties, CA

Dear Mr. Leavitt:

386-1

The Department of the Interior has received and reviewed the subject document and has the no comments to offer.

Thank you for the opportunity to review this project.

Sincerely,

Patricia Sanderson Port
Regional Environmental Officer

cc:
Director, OEPC

Response to Submission 386 (Patricia Sanderson Port, United States Department of the Interior, September 30, 2011)

386-1

Thank you for your review of the Draft EIR/EIS.

Submission 774 (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 774 (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

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 Swearingin, City of Fresno
Mark Scott, City of Fresno
Mayor Dan Chin, City of Hanford
Mayor Harvey Hall, City of Bakersfield

774-1

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

1. 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 774 (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.

2.1 Alternatives 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

774-2

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."

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.

774-3

774-2

Submission 774 (Enrique Manzanilla, United States Environmental Protection Agency Region IX, October 13, 2011) - Continued

774-3

- 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*

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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.

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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.

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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

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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.

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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 upon 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

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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.

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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.

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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.

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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

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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 Bakersfield 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

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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 PM2.5. 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.

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- 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.

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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

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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.

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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

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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

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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/Tulare Regional Station to promote policies to help ensure that infrastructure will not be provided to support development in areas beyond current planned growth areas.

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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 to 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.

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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.

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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

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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>

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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.

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- 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."

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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.

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.

774-14

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 brownfield 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.

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- 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.

774-15

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.

774-16

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.

774-16

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.

774-17

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).

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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.

774-18

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.

774-19

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 online at: <http://epa.gov/environmentaljustice/resources/publications/interagency/ej-mou-2011-08.pdf>.

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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).

774-20

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.

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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 Tlanquis 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.

774-22

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.

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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.

774-24

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.

774-25

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

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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 on 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 potentially 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 many additional receptors could be affected and what additional mitigation might be needed.

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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

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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.

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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 promote 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_stationareapanning.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).

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- 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.

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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.

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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>.

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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.

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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.

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- 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.

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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.

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14. ELECTROMAGNETIC FIELDS AND ELECTROMAGNETIC INTERFERENCE

Section 3.5 of both DEISs assesses 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.

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Each resource analysis in Chapter 3 has been updated to include the significance conclusion under NEPA in accordance with CEQ guidance following the description of mitigation measures.

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The Authority has continued to coordinate with the USACE and EPA regarding alternatives, and has received concurrence from the USACE on alternatives to be studied, with the exception of the continued request to include the Western Madera Alternative. In November 2011, the Authority provided more information in a supplemental memo regarding the A3 - Western Madera Alternative to the USACE and EPA, including details on direct and indirect impacts to Waters of the U.S (WOUS) and the functions and services of each impacts WOUS. The alternatives evaluated in this memo included:

- A1 –BNSF (with the Mariposa Way Design Option)
- A1 –BNSF (with the Mission Ave Design Option)
- A2-UPRR/SR 99 (with the East Chowchilla Design Option)
- A2- UPRR/SR 99 (with the West Chowchilla Design Option)
- Hybrid (no design options)
- A3-Western Madera (no frontage road)
- A3-Western Madera (frontage road included)

Following review of the memo, the USACE and EPA concurred with the elimination of the A3-Western Madera alternative from the EIS analysis on February 21, 2012.

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See MF-Response-BIO-2.

The DEIS provided a range for both “permanent” and “temporary” impacts because of the many design options that relate to the three north-south alternatives. The Final EIR/EIS includes an additional impact category, indirect impacts, which are now quantified. In addition, as part of the Checkpoint C submittal, coordination with the USACE and EPA have occurred to review and finalize the methodology used to calculate the GIS acreages for impacts to aquatic resource types. As part of the Checkpoint C submittal, a California Rapid Assessment Method (CRAM) report and a

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Watershed Evaluation Report (WER) have been prepared to provide a more in-depth assessment of the condition of potential aquatic resource impacts. Specifically, the CRAM report and WER includes descriptions of the major watercourses that traverse the project area, analyzes the spatial patterns, density, and types of waters within the larger landscape, and provides a methodology related to the characterization of indirect, direct, permanent, and temporary impacts. It should be noted that 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.

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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. 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.

Due to a net reduction in farmed area within the track right-of-way, groundwater use in the project area is expected to decline. Thus the project would not contribute to a decline in groundwater supply.

Low Impact Development measures applicable to the project are identified in the second paragraph of Section 3.8.6 – Mitigation Measures. Wording has been added to the Final EIR/EIS to specifically state this. LID measures applicable to the project are discussed in considerable detail in Chapter 5 of the Stormwater Management Plan, a companion document to the Draft EIR/EIS. In that document, emphasis is placed upon onsite retention of runoff, where practical, using dispersal or infiltration of project runoff.

Bullet #2. As stated in the Draft EIR/EIS, 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

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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 Merced to Fresno HST Section includes more than 60 miles of track, substantial numbers of 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. Also see MF-Response-WATER-3.

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.

Bullet #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. Stormwater runoff generated at the 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. The text in the Merced to Fresno and the Fresno to Bakersfield EIR/EIS documents will be consistent in stating that the preferred method of HMF stormwater management would be onsite infiltration but that if local soil conditions make this impractical, then a controlled surface discharge could 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 starting on p. 3.10-23 of the Draft EIR/EIS.

Bullet #9. Section 1.1 of the Stormwater Management Plan, a companion document to the 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.

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See MF Response-BIO-3.

A detailed assessment of impacts to aquatic resources was completed as part of the California Rapid Assessment Method (CRAM) report and the Watershed Evaluation Report (WER) and is included in the Checkpoint C February 2012 submittal. The CRAM Report provided the baseline data on wetland condition, since it is necessary to understand the current condition of aquatic resources before completing an impact analysis. The WER proposes implementation of a watershed approach to evaluating potential affects to jurisdictional waters. The WER uses the National Wetlands Inventory (NWI) 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 project level. The National Hydrography Dataset and Holland Central Valley Vernal Pool Complexes data layer 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 located 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 NWI aquatic resources were known within the Regional Area, an impact analysis was performed with respect to the Merced to Fresno Section HST alternative alignments. Data analysis focused the relative contribution of impact that a particular alternative had within the larger Regional Area of the applicable watersheds.

The CRAM and the WER, which are part of the February 2012 Checkpoint C submittal, are submitted with the Compensatory Mitigation Plan (CMP) and a Mitigation Strategy and Implementation Plan (MSIP). The MSIP integrates impacts and a condition assessment, as well as site-specific and watershed analyses, to provide a mitigation plan that are designed to maintain and improve aquatic resource functions. The approach and implementation of mitigation of potential affects to jurisdictional waters can be found in MF-Response-BIO-3. Changes have been made to the EIS/EIR accordingly.

The Draft EIR/EIS provided a range for both "permanent" and "temporary" impacts because of the many design options that relate to the three north-south alternatives. The

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Final EIR/EIS will include an additional impact category, indirect impacts, which are quantified. In consultation with the USACE and EPA, the Authority finalized the methodology used to calculate the GIS acreages for impacts to aquatic resource types and submitted it as part of the February 2012 Checkpoint C package. It also included a CRAM report and a WER that provided a more in-depth assessment of the condition of potential aquatic resource impacts. Specifically, the CRAM report and WER included descriptions of the major watercourses that traverse the project area, analyzed the spatial patterns, density, and types of waters within the larger landscape, and provided a more detailed methodology related to the characterization of indirect, direct, permanent, and temporary 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.

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Potential affects to Essential Fish Habitat and special-status fish species have been detailed within the Merced to Fresno Biological Assessment that will incorporate a series of checkpoints to minimize impacts to Essential Fish Habitat and listed fish species. The Authority and FRA will coordinate with the NMFS, USFWS, CDFG, CVFPB and USACE to provide cross-sectional and profile data of the proposed San Joaquin River crossing as further refinement of the planning and design process continues. The checkpoints will include specific product deliverables and data that could then be used to conduct hydraulic modeling to demonstrate how bridge design might influence in-river processes such as scour. These analyses will address velocity, turbidity, fluvial processes including sediment scour and deposition. These checkpoints will be developed in concert with the resource agencies to obligate the design/build contractor and processes to work with NMFS in the design of the crossing. The anticipated design/build phases are itemized below. The first four action items are a part of the preliminary design process, and then final design completion following NMFS concurrence.

The checkpoints are presented below:

- Establish Design Hydrology (peak design flow rate)
- Obtain Existing Conditions Field Data (can start concurrent with Task 1)

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- Establish Existing Conditions Hydraulics (HEC-RAS model)
- Demonstrate Minimal Hydraulic Impacts from Design
- Final Design incorporating design modifications consistent with findings during the preliminary design process

The Authority will closely coordinate with the Design/Build Team, NMFS, USFWS and other appropriate agencies to design the placement of the required bridge support pier(s) within the San Joaquin River corridor. Piers will be placed to comply with the intent of the San Joaquin River Restoration Program and the habitat needs of Central Valley steelhead and Central Valley spring-run Chinook salmon. The HST crossing shall be designed with the planned increase in river flows and to maintain or effectively minimize any appreciable changes in scour, sediment transport and deposition, or changes in geomorphic processes that could alter habitat conditions in a manner that would impede the reestablishment of these species. The Authority will design and conduct a hydraulics/hydrology analysis with appropriate modeling tools and incorporate site-specific data, including the needed geotechnical investigations to ensure the design, sizing, location, and construction techniques are compatible with habitat conditions that support salmonoid utilization of the San Joaquin River within the area impacted by the proposed HST crossing.

The Authority will coordinate with NMFS, the Bureau of Reclamation, and the USACE on the study design methods, hydraulic and geomorphology criteria, and follow-up post construction monitoring. This will ensure that the biological integrity of the crossing location is maintained and is consistent with the reintroduction of spring-run Chinook salmon and Central Valley steelhead.

Depending on the results of the hydraulic and hydrologic analyses, the Authority may be required to implement changes to the preliminary design to avoid and minimize adverse effects to aquatic habitat, where appropriate. Any design changes would be evaluated and considered in consultation with NMFS, CDFG, the Bureau of Reclamation, and the U.S. Army Corps of Engineers.

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The Authority will present a detailed San Joaquin River Crossing Plan that considers the hydraulic and hydrology analyses to NMFS that addresses the issues presented above prior to any site preparation or mobilization work at the San Joaquin River.

Wildlife exclusion and permeability will be addressed within the MSIP through the strategic utilization of fencing and underpasses appropriate to specific special-status species. Permeability will be situated to connect areas of suitable habit and/or specific landscape features (i.e., vernal pools, washes) as feasible with project requirements. Fencing will be designed to minimize train related mortality for wildlife species, particularly special-status species (e.g. California tiger salamander, San Joaquin kit fox, golden eagle). Fencing will work towards guiding wildlife towards suitable passages. Wildlife movement corridor implementation is discussed within Bio-MM#46-48 (See Final EIR/EIS Section 3.7.6).

774-7

4.1 General Conformity. An Air Quality Conformity Determination, which is required prior to project construction, is currently being prepared to accompany the issuance of the Record of Decision by the FRA. While emissions generated in the area would decrease with the operation of the project (primarily as a result of a mode shift from auto and air travel to the high-speed train), the air quality analysis has identified emission rates from the project for NOx and VOCs during the construction phase that exceed the Conformity de minimis thresholds. As such, a formal general conformity compliance demonstration is required and general conformity requirements will be met through first, efforts to use the cleanest reasonably possible construction equipment fleet (mitigation measure 1), then through a Voluntary Emissions Reduction Agreement (VERA) between the Authority and the San Joaquin Valley Air Pollution Control District (AQ-MM#4). The FRA will prepare and sign the "General Conformity Determination" for the project.

Also see MF-Response-AQ-7 for responses regarding mitigation measures.

4.2 Transportation Conformity. The Merced to Fresno HST Project is not subject to the transportation conformity rule. However, if the project requires future actions that meet the definition of a project element subject to transportation conformity, additional

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determinations and associated analysis will be completed as may be required.

4.3 Air Quality Impacts on Health. Qualitative discussion of health impacts during project alignment construction were provided in Section 3.3.5.3 of the EIR/EIS.

HST would be electrical powered. Therefore, there will not be any direct combustion emissions from HST to cause health concerns such as asthma or other respiratory diseases during operation. Fugitive dust emissions due to HST travel are not expected to be a significant source of pollutants either (See MF-Response-AQ-1 and Appendix 3.3-A of the Final EIR/EIS for details). For localized health impacts of the Heavy Maintenance Facility (HMF), the cancer and non-cancer chronic and acute hazard risk analyses conducted for the DEIS was 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 Final EIR/EIS. A site specific Health Risk Assessment (HRA) for the HMF operation will be conducted once a final HMF site is selected and detailed design information becomes available when the HMF is selected (see MF-Response-GENERAL-15). Quantitative cancer risks and non-cancer hazard indexes due to HMF operation will be evaluated in the final HRA. Mitigation measures, if necessary, would be included to ensure that the health risk significance thresholds are not exceeded at the sensitive land uses.

Mitigation measures recommended in the comments have been added to project design feature and will be implemented during project construction and operation. The number of bus trips has been included in the EIR/EIS as requested. The EIR/EIS 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 concrete batch plant location has been revised based on the comment.

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5.1-Agricultural Land Valuation and Compensation. See MF-Response-AGRICULTURE-3 and MF-Response-GENERAL-4.

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5.2-Impacts to Dairies. See MF-Response-AGRICULTURE-6.

5.3-Loss of Road Access. See MF-Response-AGRICULTURE-2.

Regarding the suggested mitigation measure of providing remainder parcels to beginning and disadvantaged farmers willing to use small-farm practices to supply the local market, this measure is similar to Ag-MM # 2: Consolidate Non-Economic Remnants which is designed to offer remainder parcels to adjacent property owners through consolidation. This approach is intended to ensure ongoing agricultural use of the remainder properties, but not lead to secondary complexities of having to provide additional, independent access to the remainder parcel.

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6.1-Regional Growth and Development Patterns.

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

Bullet #2: Text has also been added to Section 3.18.5, Environmental Consequences, discussing how commuting to the larger metropolitan areas is not considered a major issue in the HST induced population growth.

Bullet #3: No new analysis was run for HST induced employment and population. Analysis was performed in 2010 using RIMS II and the latest information was entered. Comparing the HST induced numbers from earlier reports illustrates that the new numbers reflect the recession which started in 2008.

Bullet #4: While the Authority has offered planning grants to station communities to help realize the implications

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and benefits of HST through mixed-use and higher-density development in the areas near stations, the Authority does not have the jurisdiction or purview 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 the Appendix 3.13-B, Land Use and Communities, for additional information.

Bullet #5: See response to comment #2670 in section 11 of the EPA letter.

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 MF-Response-GENERAL-4 for discussion of agricultural conservation easements.

Bullet #3: Analysis of agricultural easements surrounding the Kings/Tulare regional station will be included in the Fresno to Bakersfield EIR/EIS.

Bullet #4: See MF-Response-GENERAL-4 for discussion of agricultural conservation easements.

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See MF-Response-LAND USE-3 and MF-Response-LAND USE-4.

Bullet #1: Additional text has been added to Section 3.13.5, Station Planning, Land Use, and Development, 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 and HST Station Area Development: General Principles and Guidelines.

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774-10

Bullet #2: Additional text has been added to Section 3.13.5, Station Planning, Land Use, and Development, to discuss the current planning efforts by the 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 and HST Station Area Development: General Principles and Guidelines.

Bullet #3: Text also includes a reference to Chapter 8, Public and Agency Involvement, for information on meetings that have occurred with the cities.

Bullet #4: Additional text has been added to Section 3.13.5, Station Planning, Land Use, and Development, 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 information from the Urban Design Guidelines and HST Station Area Development: General Principles and Guidelines.

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

Bullet #6: The information provide 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. In addition, see response to comment #2670 in section 11 of the EPA letter that provides information on Sustainability MOA.

774-11

This is a mitigation measure from the 2005 Program EIR/EIS and will be carried out by the Authority cooperatively with the cities of Merced and Fresno as station planning progresses (See Section 3.1.6, Mitigation Strategies and CEQA Significance Conclusions, of the 2005 Program EIR/EIS).

774-12

This is a mitigation measure from the 2005 Program EIR/EIS and will be carried out by the Authority cooperatively with the cities of Merced and Fresno as station planning progresses (See Section 3.1.6, Mitigation Strategies and CEQA Significance Conclusions, of the 2005 Program EIR/EIS).

774-13

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 (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#5 "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 is also recommended in the planning process set out in the HST Urban Design Guidelines.

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

In response to the criteria related to the HMF locations: 1) The topic of impacts to low income/minority communities is addressed in Section 3.12.5, Socioeconomics, Communities, and Environmental Justice. The Castle Commerce Center HMF would result in disproportionately high and adverse impacts because of the guideway impact on

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774-13

a mobile home park. The guideway would also affect a community facility unique to the minority population in the Merced area. 2) No smart growth is being proposed or likely because except for the Castle Commerce Center HMF, 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 probably not feasible since the work force will not be coming from distinct points and is not feasible when the work force is coming from a number of different directions. 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.

774-14

When the project acquires property that has been contaminated, either related to stations or facilities (including the HMF), the Authority will conduct a clean-up of the property in accordance with the applicable regulations, including the Resource Conservation and Recovery Act (RCRA). Redevelopment of these or any other properties surrounding potential stations and the HMF that are not to be acquired for the project, including 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 beyond the scope of this project.

774-15

7.6-Safety in Station Areas. HST Urban Design Guidelines require the use of Crime Prevention Through Urban Design. This information has been added to Section 3.11.6 Safety and Security - Project Design Features as follows: "HST Urban Design Guidelines (Authority 2011) 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

774-15

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 Merced Fresno EIS has incorporated the Authority's Urban Design Guidelines for the California High Speed Train Project which includes screening and landscaping treatments as summarized in VQ-MM#3. Additionally, Section 3.16.6 Mitigation Measures commit 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 VQ-MM#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 the parks and Socioeconomic sections.

774-16

Section 8.1-Analysis of Risks to Children and 8.2-Child Safety During Construction Activities. An analysis of Children's Health and Safety has been completed for the Merced to Fresno 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 associated with non-residential land uses including both the Merced Station and Fresno Station. In the rural areas, the HST alignments are in areas of 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 are anticipated to result in significant impacts on children's health and safety. The complete analysis is located in

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Appendix D, Children's Health and Safety Assessment, in the Community Impact Assessment and in Section 3.12.5, Socioeconomics, Communities, and Environmental Justice.

774-17

The study area for schools is 0.25 miles for the alignments and 0.5 miles for stations, as discussed in Section 3.12.3.1. This area includes additional schools that are not part of the 0.25 impact area identified for hazardous materials. A note has been added to Table 3.12-5 defining the study area.

774-18

The HMF site will not be selected as part of the Board's action on the Merced to Fresno HST section. A decision on the HMF location will be made following certification of the San Jose to Merced Final EIR/EIS. Potential impacts to sensitive receptors 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 receptors. 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 receptors 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-MM#6 requires the implementation of means to reduce emissions from the HMF, including use of non-diesel machinery which would reduce toxic air contaminant (TAC) emissions, or establishment of a buffer area between emitters and sensitive receptors. Implementation of mitigation measure AQ-MM#7 would reduce the impacts of stationary emission sources.

774-19

Bullets #1&2) The text in the EIR/EIS has been updated to include a summary of all

774-19

sections including cumulative impacts and information on noise related to the distances covered by both moderate and severe impacts. Text in the EIR/EIS indicates that almost all of the census blocks and communities of concern, and therefore almost the entire study area is reference community.

Bullet #3) Where needed a reference to Chapter 2 to address information on construction timing has been added to be consistent with other sections of the EIR/EIS.

Bullet #4) Table 3.12.17 in Section 3.12, Socioeconomics, Communities, and Environmental Justice, has been updated to include information on cumulative impacts and whether there are any adverse impacts to communities of concern.

Bullet #5) See MF-Response-NOISE-6. The distances covered by moderate and severe noise impacts for each alternative section are provided in Tables 7-3 through 7-8, 7-10 through 7-15, and 7-17 through 7-22 in the Noise and Vibration Technical Report in Section 7.1, titled Noise Impact Assessment.

774-20

Bullet #1: Text in the EIR/EIS provides information on the common impacts to all alternatives and where there are differences, such as the impacts on the community of Le Grand associated with the BNSF Alternative and the impacts on the community of Fairmead with the UPRR/SR 99 and Hybrid alternatives.

Bullets #2-4: For the localized impacts identified in the comment, text in Table 3.12-7 provides summary information on the road closures and how there is no adverse impact on communities of concern, the Authority will follow noise policy that has been developed for the HST Project, and community impacts were considered in the analysis of the HMF site and information is provided in Section 3.12.

Bullet #5: Text in Section 3.12.3.5 indicates that because the study area is composed primarily of communities of concern the comments heard during the public involvement process reflect their concerns.

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774-21

Bullet #1) Relocation efforts within the same neighborhood for neighborhood serving businesses to minimize impacts to community could be a consideration, but not the focus because there may be situations where no properly zoned relocation sites exist in the neighborhood. As described in Appendix 3.12-A, the businesses will be working with a relocation representative who will work with them to find suitable locations to relocate.

Bullet #2) SO-MM#6, Investigate avoidance of displacements or consider other replacement housing options in Franklin-Beachwood, Le Grand, and Fairmead has been rewritten to be a commitment by the Authority.

Bullet #3) At minimum residents found to be living in motels would qualify for relocation advisory assistance. Other benefits, if any, will be assessed on an individual basis once we're able to interview the tenants. The Authority's right-of-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 on or 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) Text in Section 3.12.5 has been updated to include a reference to the Community Impact Assessment where tables 7-18 through 7-20 have been updated to include information on the residential and business displacements by community.

Bullet #5) Text in Section 3.12.5 has been updated to included a reference to the Community Impact Assessment where additional detail is provided on the residential and business displacements and the socioeconomic impacts by community.

Bullet #6) SO-MM#5 in Section 3.12.7 has been revised to address the commitment that will be made to continue outreach in the communities affected by the HST Project.

774-22

See MF-Response-GENERAL-19.

774-23

Bullets #1-4: See MF-Response-GENERAL-17 and MF-Response-SOCIAL-7

774-24

Bullet #1: See MF-Response-GENERAL-5. In addition, additional text has been added to Section 3.13.4, Socioeconomics, Communities, and Environmental Justice, to provide information on all unincorporated communities within the study area.

Bullet #2: The Merced to Fresno EIR/EIS study area has been revised to 0.5 mile for the areas around the station and the HST alignments.

774-25

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

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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 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

774-25

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 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.

774-26

11.1 Sustainability MOU. At the request of EPA, a copy of the Sustainability MOU will be included in the FEIR/EIS. The Authority considers its partnership with the MOU signatories important over the life of the project. In addition, 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 Policies
 - Federal Railroad Administration Station Area Planning Recommendations
- In addition, the Authority's Urban Design Guidelines 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 to review and download on the Authorities

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website.

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

Currently, RFQs and RFPs contain reference to Authority sustainability policies, procedures and requirements.

Through EPA funding, Authority obtained the assistance of the National Renewable Energy Lab (NREL). NREL has been developing a Strategic Energy Plan for achieving an environmentally sustainable high-speed train system for California. This effort compliments and supports the Memorandum of Understanding (MOU) between the Authority, EPA, DOT, HUD and DOE/NREL which serves as an umbrella agreement covering broad efforts to promote the use of sustainability tools and practices within the HST project. 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 rail system, its stations and operations.

11.2 LEED for HSR Facilities. The Authority is adopting aggressive targets and policies around materials, energy, and water resources used in its facilities, occupant and passenger comfort and health, facilities siting 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 had been met. The Authority is investigating the targets and strategies that would most cost-effectively deliver appropriate high-performance facilities.

High performance facilities should examine the use of resources such as water, energy and materials, incorporation of renewable energy generation into the facility, the health and comfort of the occupant, 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.

774-26

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

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.

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.

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

11.6 Industrial Materials Management. The Authority continues to investigate appropriate recycled materials that meet specified durability and other performance criteria, and would 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 finalized, as well as the whole life-cycle of the project (including maintenance and replacement of components).

There is a margin of error associated with each step of LCA analysis that relate to

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assumptions about energy consumption and emissions data, as well as 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. In addition, 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, that the because of 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 whole life-cycle energy of the materials.

774-27

Bullet #1: The Authority is currently finalizing a Strategic Energy Plan for the entire High-Speed Rail Program; the primary author of this study is the National Renewable Energy Lab. This Strategic Energy Plan establishes, in part, the necessary steps for procuring renewable energy to off-set 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 #2-3: 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.

Bullet #4: There are several ongoing aspects of Agricultural Stakeholder consultation. Renewable energy has not been a topic of those discussions.

Bullet #5: Initial discussion was held with freight rail properties concerning short-haul electrified freight, but those discussions ended inconclusively.

774-28

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.

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 NPL Site List within 1 mile
- Sites on the Federal CERCLIS List within 0.5 mile
- Federal RCRA CORRACTS Facilities within 1 mile
- Federal RCRA non-CORRACTS TSD Facilities within 0.5 mile
- State and tribal leaking storage tank lists within 0.5 mile

The EDR 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

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

774-29

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 Merced to Fresno Section HST project are adjacent, the Authority feels that no impacts are present and no mitigation measures is necessary.

Attachment to Submission 774 (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 774 (Enrique Manzanilla, United States Environmental Protection Agency Region IX, October 13, 2011) - HST Sustainability MOU - Signed.pdf

August 2011

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.

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- 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.

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Attachment to Submission 774 (Enrique Manzanilla, United States Environmental Protection Agency Region IX, October 13, 2011) - HST Sustainability MOU - Signed.pdf - Continued

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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.

3

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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.

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Attachment to Submission 774 (Enrique Manzanilla, United States Environmental Protection
Agency Region IX, October 13, 2011) - HST Sustainability MOU - Signed.pdf - Continued

August 2011

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.

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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: [Signature]
Roelof van Ark, Chief Executive Officer

Date: 9/12/11

U.S. DEPARTMENT OF TRANSPORTATION
Federal Railroad Administration
By: [Signature]
Joseph C. Szabo, Administrator

Date: _____

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
Region 9
By: [Signature]
Ophelia B. Basgal, Regional Administrator

Date: 9/19/11

U.S. DEPARTMENT OF TRANSPORTATION
Federal Transit Administration, Region 9
By: [Signature]
Leslie T. Rogers, Regional Administrator

Date: 9/19/11

U.S. ENVIRONMENTAL PROTECTION AGENCY
Region 9
By: [Signature]
Jared Blumenfeld, Regional Administrator

Date: 9/22/11

Attachment to Submission 774 (Enrique Manzanilla, United States Environmental Protection Agency Region IX, October 13, 2011) - HST Sustainability MOU - Signed.pdf - Continued

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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
Heather Fargo, Executive Policy Officer

Date: 9-14-11

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: Casey Porto
Casey Porto, Senior Vice President for Commercialization and Deployment

Date: 9/8/11

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August 2011

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.

8

Submission 1112 (Jason Brush, United States Environmental Protection Agency, Region IX,
September 28, 2011)



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

SEP 28 2011



Colonel William J. Leady
District Engineer, Sacramento District
U.S. Army Corps of Engineers
650 Capitol Mall, Suite 5-200
Sacramento, California 95814

Subject: Public Notices (PNs) SPK-2009-01482 and SPK-2009-01483 for the proposed California High Speed Train, Fresno to Bakersfield and Merced to Fresno segments, Fresno, Kings, Tulare, Kern, Merced, Madera Counties, California

Dear Colonel Leady:

Thank you for the opportunity to comment on your August 15, 2011 PNs describing alternative train alignments for the first two segments of the proposed California High Speed Train (Merced to Fresno and Fresno to Bakersfield). As you know, our agencies are evaluating this project under a Memorandum of Understanding (MOU) aimed at integrating the requirements of the National Environmental Policy Act (NEPA) and Section 404 of the Clean Water Act (CWA), and our staffs are in frequent contact to move the project forward expeditiously while ensuring compliance with applicable environmental laws. According to the PNs, the 114-mile Fresno to Bakersfield segment will impact up to 61 acres of waters of the United States (waters), and the 65-mile Merced to Fresno segment will impact between 32 and 48 acres of waters.

One objective of the MOU is for the Environmental Impact Statements (EIS) to serve as the environmental document for the Corps' CWA section 404 permitting. Like the subject PNs, the Draft EISs are currently open for public comment, and both our agencies will shortly be providing the CA High Speed Rail Authority (CHSRA) and the lead federal agency, the Federal Railroad Administration (FRA), with detailed feedback on the Draft EISs, including CWA section 404 issues. However, because your PN comment periods close ahead of the EISs, and because EPA has agreed to comment on Corps PNs within the established comment period, this letter provides the Corps with an overview of our primary 404 concerns with the project as presented in the PNs.

As our staffs have discussed with the applicant, the information presented in the Draft EISs and the PNs is neither detailed nor complete enough to meet the substantive requirements of the CWA section 404(b)(1) Guidelines at 40 CFR Part 230 (Guidelines), as intended under the MOU. Of particular concern to EPA with regard to compliance with the Guidelines are:

1112-1

1. **Reliability of Data:** CHSRA has provided conflicting estimates of acres of impacts to aquatic resources, and little to no data on functional impacts. The PNs do not present sufficient impact information to permit EPA to express an opinion on which, if any, of the described alternatives could be the Least Environmentally Damaging Practicable Alternative (LEDPA).

1112-2

2. **Alternatives:** The Corps and EPA agreed (at the MOU's "Checkpoint B") that the West Hanford and Western Madera alignments should be analyzed to ensure all practicable alternatives are considered for 404 decision-making. We are concerned the CHSRA's decision to remove these alternatives from analysis despite our nonconcurrence could compromise the alternatives analysis required for 404 permitting by 40 CFR 230.10(a).

1112-3

3. **Mitigation Planning:** The PNs state CHSRA will mitigate unavoidable impacts to waters through an as-yet undeveloped plan. We share the Corps concern that CHSRA has not yet developed even a conceptual framework on mitigation approach, which is required for 404 permitting (40 CFR 230.10(d) and the "Mitigation Rule" under the Guidelines' Subpart J).

1112-4

Additional restrictions on discharges under 404 include prohibitions against violations of water quality standards or jeopardizing listed species (40 CFR 230.10(b)), and avoiding either causing or contributing to significant degradation (40 CFR 230.10(c)). We believe these standards have also yet to be met under existing information. We continue to work closely with CHSRA to compile information necessary for 404 permitting while working through the NEPA process, but remain concerned that permitting-level information has been difficult to obtain on the project's accelerated time table.

1112-5

In sum, a list of issues remains unresolved at this stage of the regulatory process. What is clear is that as proposed, substantial amounts of wetlands and other waters would be eliminated, reduced and/or degraded by the project, potentially causing or contributing to significant degradation of waters of the U.S. In order to facilitate an affirmative CWA Section 404 permitting decision, the Corps and EPA must have reliable data on (a) the extent of unavoidable impacts, (b) the condition of these resources in their watershed context, and (c) measures to mitigate the project's impacts.

It remains our intention to work closely with your staff to provide detailed and timely guidance to the applicant through the "Checkpoints" in the MOU to ensure adequate information is presented for a permit decision. Again, EPA will be providing specific recommendations by formal letter next month summarizing our review of the Draft EISs, including recommendations to help the applicant integrate CWA Section 404 and NEPA data needs for the final EIS. In the near term, we will also be meeting with your staff and the applicant, focusing on actions the applicant can take in the next few months to clarify impact assessment and mitigation objectives for the upcoming "Checkpoint C."

Thank you for your ongoing partnership in coordinated review of this important project. Please do not hesitate to have your Regulatory Division Chief contact me to discuss any aspect of this matter at (415) 972-3483.

Sincerely,

Jason Brush
Supervisor
Wetlands Office

Printed on Recycled Paper

Response to Submission 1112 (Jason Brush, United States Environmental Protection Agency, Region IX, September 28, 2011)

1112-1

Comment noted. The Checkpoint C Summary will include refined and consistent estimates of acres of impacts to aquatic resources based on conservative assumptions, including the assumption that all waters of the U.S. within the project footprint will be directly and permanently impacted, and all waters of the U.S. within 250 feet of the footprint will be indirectly and permanently impacted.

Vernal pools and seasonal wetlands are present along portions of all of the HST alternatives. Wetlands and waters of the U.S. were delineated using a combination of field surveys and aerial imagery mapping. Wetland delineation field surveys were conducted on four occasions: in April and May 2010 and in January and February 2011. Field delineations were conducted on parcels of land where access had been granted to the wetland study area. Surveys only included those parcels where suitable habitat was present and where right-of-entry was granted. Potential waters and wetland features that were visible on printed aerial imagery within the wetland resource study area were identified and digitized using GIS technology. More detailed information regarding the mapping of the extent of these features can be found in the Merced to Fresno Section Wetlands Delineation Report (Authority and FRA 2011). Information from the wetland delineation was used to obtain a preliminary jurisdictional delineation from the USACE (obtained on November 3, 2011). Wetland delineations were supplemented with the use of the California Rapid Assessment Method (CRAM) to assess the health of wetlands and riparian habitats. CRAM field work was completed in September 2011. The report will provide a standardized assessment of the ambient status of wetland condition, which will be used to determine appropriate mitigation measures for affected wetlands.

A description of the potential impacts on vernal pools and seasonal wetlands is presented in the EIR/EIS (see Section 3.7.5, Environmental Consequences) and the acreages of impact are categorized for the construction and project periods. Vernal pools and seasonal wetlands are affected by each project alternative, although the BNSF Alternative would directly and indirectly impact the largest acreages and the UPRR/SR 99 Alternative would impact the least. Indirect effects outside the construction footprint could occur through changes in local micro-watersheds, which maintain suitable

1112-1

inundation levels for the lifecycles of vernal pool fauna. In addition to considering permanent, temporary, direct, and indirect impacts, the quality of the habitat is considered for mitigation. Vernal pools along the BNSF corridor provide higher quality habitat than those along the UPRR/SR 99 and Hybrid alternatives because the land uses are rural and subject to less intensive agriculture (e.g., grazing rather than vineyards). The BNSF Alternative would result in the greatest impact on vernal pools compared to the UPRR/SR 99 and Hybrid alternatives because it would affect more acres of higher quality wetlands.

All temporary and permanent impacts on vernal pools require mitigation (see Section 3.7.6 of the EIR/EIS) for both the construction and project periods. The overall mitigation program will be developed in coordination with regulatory agencies and in conjunction with permit approvals required under the federal Clean Water Act, federal and California Endangered Species Acts, California Fish and Game Code, and Porter Cologne Act. A Compensatory Mitigation Plan (CMP) is being prepared (e.g., see standard response Record No. 319) as part of the Section 404 permitting process under the requirements of the USACE, EPA, and USFWS. These compensatory mitigation programs address resources, including special-status species, both plants and wildlife, streambed/riparian communities, other wetlands such as vernal pool/seasonal wetlands, and wildlife movement corridors.

The estimates of affected areas are worst case amounts, based on a 15% design level. The amount of land affected by the project continues to be refined as project design progresses.

1112-2

Supplemental information regarding the Authority's and FRA's decision to eliminate the Western Madera Alternative (A3) from further analysis was submitted to USACE and EPA on January 27, 2012, and is currently under review by these agencies.

1112-3

Mitigation measures have been developed to address environmental impacts/effects on special-status species, plants (e.g., see standard response Record No. 319) and wildlife, streambed/riparian communities, other wetlands such as vernal pool/seasonal wetlands,

Response to Submission 1112 (Jason Brush, United States Environmental Protection Agency, Region IX, September 28, 2011) - Continued

1112-3

and wildlife movement corridors. Mitigation measures are identified for each biological resource category where a significant impact/effect was identified for mitigation purposes. Mitigation measures for both construction and project impacts are described in Section 3.7.6 of the EIR/EIS. These measures include monitoring and reporting roles, avoidance and minimization, and project-specific mitigation measures. Each measure includes, as pertinent, the phase of the project it applies to and the additional permitting requirements that will refine the mitigation action. These permitting activities include the federal and state Endangered Species Acts (Sections 7 and 2081, respectively), federal Clean Water Act (Section 404), Porter Cologne Act (Section 401), and California Fish and Game Code (Section 1600).

Proactive measures to minimize impacts include preconstruction surveys. These surveys are conducted to determine the presence of mobile wildlife and to establish limits for construction activities to protect these species (see, for example, Bio-MM#17 and Bio-MM#29). Mitigation measures described in Section 3.7.7 include actions such as special-status plant salvage and re-establishment, translocation of California tiger salamander, and establishment of buffer areas for nesting species of birds. In addition, there is preconstruction sampling and assessment for vernal pool fauna, which will guide the implementation of performance standards to be consistent with mitigation measures for vernal pool special-status species (e.g., vernal pool branchiopods, western spadefoot toads, and California tiger salamanders).

To further refine the mitigation responsibilities, the Authority will prepare a Mitigation Monitoring and Reporting Program (MMRP), which will provide more guidance on the monitoring and reporting, implementation, verification, and signatory concurrence of the mitigation measures in the EIR/EIS during the design, site preparation, construction, and post-construction activities. In addition to the MMRP, permitting processes now underway will result in more refined mitigation responsibilities for the Authority, the construction management team, the design-build contractor, and the reporting team defined in the EIR/EIS (e.g. Project Biologist, Contractor's Biologist, and Project Biological Monitor).

A CMP is being prepared (e.g., see standard response Record No. 319) as part of the Section 404 permitting process under the requirements of the USACE, EPA, and

1112-3

USFWS, and in accordance with the MOU between the Authority and these agencies. The CMP provides the methods and a foundation for the mitigation options that are available to offset the loss of sensitive natural resources within the Merced to Fresno Section. Compensatory mitigation includes purchase of mitigation bank credits; fee-title acquisition; conservation easements; in-lieu fee payments; and conservation projects to create, restore, or enhance habitats. These compensatory mitigation programs address resources, including special-status species, both plants and wildlife, streambed/riparian communities, other wetlands such as vernal pool/seasonal wetlands, and wildlife movement corridors.

The methods for reducing, avoiding, or compensating for potential impacts discussed in the CMP include a watershed-based approach, site selection criteria, the use of the CRAM to document wetlands, mitigation by resource, long-term management, financing, and monitoring. In addition, the CMP provides an inventory of banks and projects in the area that may provide compensatory mitigation for offsetting effects.

All proposed compensatory mitigation will be prepared under federal agency oversight. Only mitigation projects and programs with USACE and EPA approval will be used to fulfill mitigation requirements. The next step is the preparation of a detailed and specific mitigation proposal, the Mitigation Strategy and Implementation Plan (MSIP). The MSIP will present the mitigation proposal for mitigating impacts on sensitive habitats, plants, and wildlife resulting from construction of the Preferred Alternative, and will provide a proposal detailing the locations where mitigation is proposed to occur and the strategy proposed to implement mitigation to meet the requirements and standards of the various environmental regulatory agencies with jurisdiction over the project. The MSIP will specify the quantity of acres/credits used to offset project effects, by resource, as specified by the mitigation ratios described in the CMP. The MSIP will include all elements necessary to satisfy related federal and state permit requirements for compensatory mitigation. The overall mitigation strategy will consider the structural requirements of the agencies, use of umbrella species to provide mitigation for other species with similar habitat requirements, and the EIR/EIS mitigation commitments.

The MSIP will also use land acquisition strategies that consider watershed-level impacts

Response to Submission 1112 (Jason Brush, United States Environmental Protection Agency, Region IX, September 28, 2011) - Continued

1112-3

when proposing mitigation, giving priority to areas that provide habitat connectivity and those areas with upland and wetland restoration and creation potential. This strategy is designed to meet the requirements and standards of the various environmental regulatory agencies with jurisdiction over the project. The MSIP will specify the quantity of acres/credits used to offset project effects, by resource, as specified by the mitigation ratios described in the CMP. The MSIP will include all elements necessary to satisfy related federal and state permit requirements for compensatory mitigation. The overall mitigation strategy will consider the structural requirements of the agencies, use of umbrella species to provide mitigation for other species with similar habitat requirements, and the EIR/EIS mitigation commitments. The MSIP will also use land acquisition strategies that consider watershed-level impacts when proposing mitigation, giving priority to areas that provide habitat connectivity and those areas with upland and wetland restoration and creation potential.

1112-4

The commenter's concerns are noted. The Authority and FRA continue to work on the Checkpoint C Summary Report and other documents and analyses to meet Clean Water Act Section 404 permit requirements.

1112-5

The comment is noted. The Authority and FRA continue to work on the Watershed Evaluation Report, California Rapid Assessment Method, and the mitigation strategy in close coordination with USACE and EPA to avoid and minimize adverse effects on waters of the U.S. and to ensure that adequate information is available for a permit decision.

Submission 220 (Jim Costa, United States House of Representatives, September 9, 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



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

September 6, 2011

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

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.

220-1

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 220 (Jim Costa, United States House of Representatives, September 9, 2011)

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See MF-Response-GENERAL-7.