

6.0 Other CEQA/NEPA Considerations

This chapter describes any unavoidable adverse, potentially significant impacts that implementing the proposed Fresno to Bakersfield Section of the high-speed train (HST) project would create. It also describes the relationship between short-term uses of the environment and long-term productivity. This chapter discusses significant irreversible or irretrievable commitments of resources or foreclosures of future options that implementing the proposed HST and heavy maintenance facility (HMF) would create. Finally, this chapter discusses the environmentally superior alternative or environmentally preferable alternative and the least environmentally damaging practicable alternative. This chapter is based on the detailed analysis of environmental resources of concern presented in Chapter 3.0, Affected Environment, Environmental Consequences, and Mitigation Measures.

6.1 Preferred Alternative

Nine HST alignment alternatives with station options and 5 HMF alternatives that meet the purpose and need for the project are evaluated in detail in this Revised Draft EIR/Supplemental Draft EIS. Comments received from the public and agencies on the alternatives presented in this draft document will be considered in the development of the Preferred Alternative. The Preferred Alternative is the staff's recommendation to agency decision-makers of the alternative that best fulfills the purpose and need for the project while balancing impacts on the natural and human environment. The Final EIR/EIS will present the Preferred Alternative and address public and agency comments received on the Draft EIR/EIS circulated in August 2011 and on this Revised Draft EIR/Supplemental Draft EIS.

The selection of a Preferred Alternative will take into account the physical and operational characteristics, and potential environmental consequences associated with the HST alignments and station and HMF alternatives in which relative differences are identified, including:

- Physical and Operational Characteristics
 - Travel time
 - Capital cost
 - Ability to test and certify trains operating at speeds of 220 mph
 - Right-of-way availability and ability to reach agreement with stakeholders to acquire easements or operating rights
 - Construction complexity
 - Impacts on existing railroad facilities and operations
 - Available funding limitations (e.g., American Recovery and Reinvestment Act of 2009 (ARRA) deadlines)
- Potential Environmental Impacts
 - Transportation-related topics (air quality, noise and vibration, and energy).
 - Human environment (land use and community impacts, farmlands and agriculture, aesthetics and visual resources, socioeconomics, utilities and public services, and hazardous materials and waste).
 - Cultural resources (archaeological resources, historic properties) and paleontological resources.
 - Natural environment (geology and seismic hazards, hydrology and water resources, and biological resources and wetlands).
 - Section 4(f) and 6(f) resources (certain types of publicly owned parklands, recreation areas, and historic sites)

The Authority and FRA have not identified relative differences with regard to other HST system criteria. For example, all alternatives are expected to have operational independence, generate equal ridership, equally connect to other modes of transportation, and provide for logical expansion of the HST system.

6.2 Environmentally Superior Alternative

The CEQA guidelines [Section 15126.6(e)(2)] state that if the environmentally superior alternative is the No Project Alternative, then the EIR must also identify an environmentally superior alternative among the other alternatives. For the reasons described in this Revised Draft EIR / Supplemental Draft EIS, the environmentally superior alternative is not the No Project Alternative. The HST alternatives would provide benefits, such as reducing vehicle trips on freeways and reducing regional air pollutants that would not be realized under the No Project Alternative. Therefore, CEQA does not require identification of an environmentally superior alternative. However, based on comments received during the public review process for the Draft EIR/EIS and this Revised Draft EIR / Supplemental Draft EIS, the Authority and FRA intend to identify an environmentally superior alternative in the Final EIR/EIS.

The environmentally preferable alternative is a NEPA term for the alternative that will promote the national environmental policy as expressed in NEPA's Section 101. Ordinarily, this means the alternative that causes the least damage to the biological and physical environment; it also means the alternative that best protects, preserves, and enhances historic, cultural, and natural resources. The FRA will identify the environmentally preferable alternative in its Record of Decision (ROD) on the project.

6.3 Least Environmentally Damaging Practicable Alternative

Pursuant to the federal Clean Water Act (CWA), the Environmental Protection Agency (EPA), in conjunction with the U.S. Army Corps of Engineers (USACE), regulates the discharge of dredged or fill material into waters of the United States. Under Section 404(b)(1) of the CWA, discharge is generally not allowed if there is a practicable alternative that would have less adverse impact on aquatic ecosystems (so long as it does not have other significant adverse environmental consequences). This alternative is commonly known as the "least environmentally damaging practicable alternative," or LEDPA.

Prior LEDPA determinations apply to the Fresno to Bakersfield Section of the California HST Project. The FRA consulted with the EPA and USACE on the Statewide Program EIR/EIS. In 2005, the EPA and USACE concurred that the preferred network alternative that followed the BNSF Railway corridor from Fresno to Bakersfield was most likely to contain the LEDPA.

During the preparation of this project-level EIR/EIS, the Authority and FRA have continued to consult with the EPA and USACE regarding the project's environmental impacts and refinement of the LEDPA determination from the Statewide Program EIR/EIS. The USACE is a NEPA cooperating agency on all nine sections of the HST system. Moreover, the FRA and EPA executed a memorandum of understanding (MOU) outlining roles and responsibilities for integration of Section 404 of the CWA, Section 408 of the Rivers and Harbors Act, and NEPA, which includes milestones for agreement/concurrence such as purpose and need, the range of alternatives, and the LEDPA determination. The selection of the LEDPA will consider the USACE's permit program (33 CFR Part 320-331) and the EPA's Section 404(b)(1) Guidelines (40 CFR 230-233). The preferred alternative is expected to reflect the selected LEDPA.

6.4 Unavoidable Adverse Potentially Significant Impacts

Chapter 3.0, Affected Environment, Environmental Consequences, and Mitigation Measures, describes the potential environmental consequences of developing the Fresno to Bakersfield Section of the HST project. Mitigation is prescribed for significant adverse impacts, but in some cases the mitigation would not reduce the impact's severity to a less-than-significant level. The impacts that cannot be mitigated to a less-than-significant level are the following:

- Air quality. All HST alternatives would have significant and unavoidable impacts on air quality during the construction period. This impact would take place in the East Kern Air Pollution Control District and it would be caused by NO_x emissions from vehicles hauling ballast from Southern California quarries to the HST alignment. Operation of the HMF may cause the total PM₁₀ and PM_{2.5} ambient concentrations to exceed California Ambient Air Quality Standards.
- Noise effects. The HST alternatives would have significant and unavoidable impacts on sensitive receptors after mitigation in some locations as decided in coordination with local communities.
- Biological Resources. Various segments of the HST alternatives would have significant and unavoidable impacts on wildlife movement corridors.
- Socioeconomics, Communities, and Environmental Justice. The BNSF Alternative and Bakersfield South Alternative would divide communities in northeast and northwest Bakersfield. The BNSF Alternative would divide rural communities in Kings County.
- Station Planning, Land Use, and Development. The BNSF, Hanford West Bypass 1 and 2, Corcoran Bypass, Allensworth Bypass, and Wasco-Shafter Bypass alignment alternatives, the Kings/Tulare Regional Station alternatives, and the HMF alternatives would cause a substantial change in intensity of land use incompatible with adjacent land uses.
- Agricultural Lands. All HST alternatives would convert agricultural land to nonagricultural use and remove lands from Williamson Act and Farmland Security Zone (FSZ) contracts.
- Parks, Recreation, and Open Space. Construction of the BNSF Alternative would create noise impacts at Bakersfield High School. Operation of the BNSF Alternative would introduce a modern feature that is not consistent with the historic atmosphere of Colonel Allensworth State Historic Park.
- Aesthetics and Visual Quality. All HST alternatives would have significant and unavoidable impacts on visual quality in the following areas:
 - The BNSF Alternative would lower visual quality in Corcoran, Wasco, Shafter, Bakersfield, Colonel Allensworth State Historic Park, Rosedale, Kern River, and Bakersfield landscape units.
 - The Bakersfield South Alternative and Bakersfield Hybrid alternatives would lower visual quality in the Rosedale, Kern River, and Bakersfield landscape units.
 - The Corcoran Elevated and Corcoran Bypass alternatives would lower visual quality in the Corcoran landscape unit.
- Cultural resources: All HST alternatives would have significant and unavoidable impacts on historically significant built environment resources, including resources listed on or eligible for listing on the NRHP.

- Section 4(f)/6(f) Properties. The BNSF and Hanford West alternatives would have significant and unavoidable impacts on Section 4 (f) properties:
 - The BNSF Alternative would affect the Friant-Kern Canal and the Washington Irrigated Colony Historic Rural Landscape, including two of its contributing properties: the Washington Colony Canal and the North Branch of Oleander Canal, and the People's Ditch.
 - The Hanford West Bypass 1 and 2 alternatives would affect three Section 4(f) resources: the Last Chance Ditch, 13148 Grangeville Boulevard, 9860 Thirteenth Avenue, and 11029 Kent Avenue.

6.5 Relationship between Short-Term Use of the Environment and the Enhancement of Long-Term Productivity

Developing the Fresno to Bakersfield Section of the HST project would require an investment of materials to create new transportation infrastructure. This investment of materials is expected to include natural resources such as rock and aggregate (e.g., for alignment and other facility foundations), steel (e.g., for rail and catenary structures), other building materials, and the various structural components of the HST trains. In addition, the project would require conversion of land to accommodate the new transportation infrastructure. In many cases, the land required is already being put to economic use as productive farmland, urban and rural structures (including homes, businesses, and parks), and local roads and state highways. The consequences of these land conversions are described in Chapter 3.0, Affected Environment, Environmental Consequences, and Mitigation Measures.

As indicated in Chapter 1.0, Project Purpose, Need, and Objectives, the capacity of California's intercity transportation system, including in the San Joaquin Valley, is insufficient to meet existing and future travel demand, and the current and projected future congestion of the system will continue to result in deteriorating air quality, reduced reliability, and increased travel times. The Fresno to Bakersfield Section of the HST project would provide benefits (such as increased safety, reduced pollutant emissions, and reduced greenhouse gases) and accessibility improvements (such as transit linkages to the Bay Area, Sacramento, and Southern California). HST service will provide linkages to a number of bus, light rail, and commuter rail services for intercity travelers to other areas. Because the HST System would provide a new alternative to regional transportation options that consume fossil fuels (e.g., automotive trips and commercial air travel), and because the HST System would be powered by electricity primarily generated by harnessing renewable resources (e.g., solar power, wind power), the Fresno to Bakersfield Section of the HST project would make an important contribution to greenhouse gas reduction efforts. As described in Section 3.18, Regional Growth, the proposed HST System would provide direct and indirect economic benefits, including short- and long-term employment benefits. The HST System would improve accessibility to labor and customer markets and induce regional job growth by providing a more attractive market for commercial and office development in the Fresno and Bakersfield station areas. Regional job growth is expected to be primarily internal to Fresno, Kings, Tulare, and Kern counties (i.e., not by population shifts from the Bay Area and Southern California). Improved accessibility would increase the competitiveness of the San Joaquin Valley, as well as the state's industries and overall economy. The benefits of the HST project are described in more detail in Chapter 1, Project Purpose, Need, and Objectives.

6.6 Significant Irreversible Environmental Changes That Would Result from the Proposed Project If Implemented

The Fresno to Bakersfield Section of the HST Project would require the commitment of material and energy for construction and operation, and the commitment of land for HST facilities. As previously described, the project would require an investment of materials such as rock, aggregate, steel, and other building materials. Fossil fuels would be consumed for project construction. In addition, the project would require the conversion of land, including productive agricultural land, to accommodate the new transportation infrastructure (including stations, ancillary facilities, and potentially an HMF). These environmental changes would be irreversible. The significance of these impacts is evaluated throughout Chapter 3.0. Overall, it is expected that residents and businesses in the region would benefit from the improved quality of the transportation system (e.g., improved accessibility, increased capacity, energy savings), which would outweigh the irreversible commitment of resources.

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