

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 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 HMF would create. Finally, this chapter discusses the environmentally superior or environmental 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, Affected Environment, Environmental Consequences, and Mitigation Measures.

6.1 Preferred Alternative

This Draft EIR/EIS presents the effects of the No Project Alternative compared to the proposed action, or, the HST alternatives. Five HST alternatives including station and HMF options that meet the purpose and need for the project are evaluated in detail. 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 to the natural and human environment. The Final EIR/EIS will present the Preferred Alternative and address public and agency comments.

The selection of a Preferred Alternative will take into account the physical and operational characteristics, and potential environmental consequences associated with the HST alignments, 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, wildlife refuges, 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 and Environmentally Preferable 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 Draft EIR/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 this Draft EIR/EIS and comments received during the public review process, the Authority intends 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 which 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), EPA, in conjunction with the 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 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 EPA and USACE on the Statewide Program EIR/EIS. In 2005, 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 EPA and USACE regarding the project's environmental impacts and refinement of the LEDPA determination from the Statewide Program EIR/EIS. USACE is a NEPA cooperating agency on all nine sections of the HST System. Moreover, FRA and EPA executed an 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 USACE's permit program (33 CFR Part 320-331) and EPA's Section 404(b)(1) Guidelines (40 CFR 230-233).

6.4 Unavoidable Adverse Potentially Significant Impacts

Chapter 3, describes the potential environmental consequences of developing the Fresno to Bakersfield 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:

- **Transportation.** Traffic associated with the Fresno station would have a significant impact on operations at two intersections.
- **Air quality.** All HST alternatives would have significant and unavoidable impacts on air quality during the construction period. Construction of the HST alternatives would exceed the San Joaquin Valley Air Pollution Control District CEQA significance thresholds for VOC, NO_x, and PM₁₀. Therefore, the project could violate an air quality standard or contribute substantially to an existing or projected air quality violation for VOC, NO_x, and PM₁₀.
- **Noise effects.** The HST alternatives would have significant and unavoidable impacts on sensitive receptors after mitigation.
- **Biological Resources.** Various segments of the HST alternatives would have significant and unavoidable impacts on special-status species, habitat of concern, and wildlife movement corridors, as follows:
 - All alternatives would permanently convert habitat that has the potential for special-status plant species to occur.
 - The BNSF Alternative, Corcoran Bypass Alternative, Allensworth Bypass Alternative, and Bakersfield South Alternative would cause the loss of special-status vernal pool branchiopods and their habitat.
 - All alternatives would permanently convert habitat that has the potential for special-status reptiles and amphibians, special-status birds, raptors, and special-status mammals to occur.
 - All of the alternatives except for the Wasco-Shafter Bypass Alternative would permanently convert special-status plant communities such as iodine bush scrub, alkali goldenbush scrub, bush seepweed scrub, saltgrass flats, Fremont cottonwood forest, black willow thickets, red willow thickets and other natural lands such as riparian forest.
 - The BNSF Alternative would permanently convert critical habitat for vernal pool tadpole shrimp.
 - The BNSF Alternative would permanently convert land within the Allensworth Ecological Reserve.
 - All alternatives would permanently convert jurisdictional waters.
 - The BNSF Alternative, Corcoran Bypass Alternative, and Allensworth Bypass Alternative would interfere with wildlife movement.
 - Location of the HMF at the Fresno Works, Hanford, and Shafter East sites would convert habitat that has the potential for special-status plant species to occur.
- **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.
- **Agricultural Lands.** All HST alternatives would convert agricultural land to nonagricultural use.
- **Parks, Recreation, and Open Space.** The BNSF Alternative would convert land from the Colonel Allensworth State Historic Park.
- **Aesthetics and Visual Quality.** The project 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, and the Colonel Allensworth State Historic Park landscape units.

- The Corcoran Elevated Alternative 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.
- 4(f)/6(f) Properties. All alternatives would use the following historic properties protected under Section 4(f): Washington Colony Canal, North Branch of Oleander Canal, Peoples Ditch, and Friant-Kern Canal. The BNSF Alternative would have a direct use of the Colonel Allensworth State Historic Park which is a 4(f) and 6(f) property, and the Allensworth Ecological Reserve which is a 4(f) property.

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. Fossil fuels would be consumed for project construction. 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.

As indicated in Chapter 1, 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 would require consumption of fossil fuels (e.g., automotive trips and commercial air travel), and because the HST System would be powered by electricity, 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 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. Overall, it is expected that residents and businesses within 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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