

California High-Speed Rail Authority

Fresno to Bakersfield *Section*

Draft Supplemental Environmental Impact Report/Environmental Impact Statement

Appendix 3.12-C Effects on Children's Health and Safety

November 2017



This page intentionally left blank

TABLE OF CONTENTS

APPENDIX 3.12-C: EFFECTS ON CHILDREN’S HEALTH AND SAFETY	3.12-C-1
3.12-C.1 INTRODUCTION	3.12-C-1
3.12-C.2 EXISTING CONDITIONS.....	3.12-C-1
3.12-C.3 ENVIRONMENTAL CONSEQUENCES	3.12-C-5
3.12-C.4 REFERENCES	3.12-C-7

Tables

table 3.12-C-1 Child Population In The Vicinity Of The F-B Lga	3.12-C-2
Table 3.12-C-2 Schools In The Study Area For The F-B Lga.....	3.12-C-3
Table 3.12-C-3 Parks, Recreation, And Open-Space Resources In The Study Area For The F-B Lga	3.12-C-4
Table 3.12-C-4 Construction Impacts On Children’s Health And Safety Specific To The F- B Lga.....	3.12-C-6

This page intentionally left blank

ACRONYMS AND ABBREVIATIONS

EIR	environmental impact report
EIS	environmental impact statement
Fresno to Bakersfield Section Final EIR/EIS	Final Fresno to Bakersfield Section Environmental Impact Report/Environmental Impact Statement
F-B LGA	Fresno to Bakersfield Locally Generated Alternative
HSR	high-speed rail
May 2014 Project	Comparable portion of the Fresno to Bakersfield Section Final EIR/EIS Preferred Alternative

This page intentionally left blank

APPENDIX 3.12-C: EFFECTS ON CHILDREN'S HEALTH AND SAFETY

3.12-C.1 Introduction

This appendix describes potential children's environmental health and safety risks associated with the high-speed rail (HSR) project. The analysis considers the proposed Fresno to Bakersfield Locally Generated Alternative (F-B LGA) and the comparable portion of the Preferred Alternative identified in the Fresno to Bakersfield Section Final Environmental Impact Report/Environmental Impact Statement (Fresno to Bakersfield Section Final Environmental Impact Report/Environmental Impact Statement [EIR/EIS]) (Authority and FRA 2014), herein referred to as the May 2014 Project.

The regulatory setting that relates to potential health and safety risks to children, and the methods and thresholds used to evaluate these potential project-related effects are the same as those discussed in the Fresno to Bakersfield Section Final EIR/EIS (Authority and FRA 2014). For a description of applicable regulations that apply to this analysis, please see Section 1.1, Regulatory Setting of Appendix 3.12-C of the Fresno to Bakersfield Section Final EIR/EIS (Authority and FRA 2014: 3.12-C-1-1). These sections also provide an explanation of the study area used for this analysis, which encompasses a 0.5-mile buffer from the HSR project centerline.

Regulatory Setting

Executive Order 13045 (EO 13045), Protection of Children from Environmental Health and Safety Risks, was issued in 1997 to minimize environmental health and safety risks to children, and to prioritize the identification and assessment of environmental health and safety risks that may have a disproportionate impact on children. EO 13045 also ensures that federal agencies, in their policies, programs, activities, and standards, address environmental and safety risks to children. Environmental health risks and safety risks include risks to health or to safety that are attributable to products or substances that children are likely to come into contact with or ingest, such as air, food, drinking water, recreational waters, soil, or products they might use or be exposed to. In proportion to their size, children breathe more air, drink more water, and eat more food than adults. This puts them at greater risk of exposure to pollutants. Children's bodies are also less able to metabolize, detoxify, and expunge these pollutants.

Methodology and Definitions

The analysis was performed in accordance with EO 13045 and consisted of conducting a demographic analysis and review of the May 2014 Project and F-B LGA to qualitatively assess whether the project would result in children's environmental health and safety risks. The analysis is based on the environmental documentation prepared in support of the Fresno to Bakersfield Section Final EIR/EIS. The following sections were reviewed because these resources would have the greatest potential to affect children's health and safety: Section 3.2, Transportation; Section 3.3, Air Quality and Global Climate Change; Section 3.4, Noise and Vibration; Section 3.5 Electromagnetic Fields and Electromagnetic Interference; Section 3.8, Hydrology and Water Resources; Section 3.10, Hazardous Materials and Wastes; Section 3.11, Safety and Security; Section 3.12, Socioeconomics, Communities, and Environmental Justice; Section 3.15 Parks, Recreation, and Open Space; and Section 3.19, Cumulative Impacts.

The project study area in this analysis is defined as 0.5 mile from the HSR project alignment and station location. This distance is chosen since this is the area where the majority of the project effects occur (i.e., noise impacts only extend about 0.25 mile and local air quality impacts consider sensitive receptors, such as schools, residences, and health care facilities, under 0.25 mile). Some disciplines, such as air quality, analyze a broader area when potential impacts could reach beyond 0.25 mile, but these effects are on a regional level. For the purposes of this analysis, children are defined as the population within the study area under the age of 18.

3.12-C.2 Existing Conditions

This section provides information on demographics, community setting, schools, parks, and other community facilities located in the study areas for the May 2014 Project and F-B LGA.

Demographics

In total, 30.4 percent of the population is under the age of 18 in the four-county region affected by the Fresno to Bakersfield Section of the HSR project (Table 3.12-C-1). Of the jurisdictions that are affected by the F-B LGA in the segment between the northern and southern termini of the F-B LGA, the highest percentage of children under the age of 18 (36.0) occurs in the city of Shafter, and the lowest percentage (28.8) occurs in the community of Oildale. Table 3.12-C-1 provides information on the population under the age of 18 in the study area for the F-B LGA. Section 2.1, Demographics, of Appendix 3.12-C of the Fresno to Bakersfield Section Final EIR/EIS (Authority and FRA 2014) provides this information for the May 2014 Project. For additional information on demographics, refer to Section 3.12, Socioeconomics and Communities, of the Supplemental Environmental Impact Report/ Environmental Impact Statement (Supplemental EIR/EIS).

Table 3.12-C-1 Child Population in the Vicinity of the F-B LGA

Location	Population	Population in the F-B LGA Study Area	Percent of Population under Age 18
Four-county Region	2,365,242	57,106	30.4%
Kern County	839,631	57,106	30.3%
City of Shafter	16,988	11,087	36.0%
Community of Oildale	32,684	5,568	28.8%
City of Bakersfield	347,483	17,824	31.5%

Source: U.S. Census Bureau 2010.

Community Setting

The study areas for the May 2014 Project and F-B LGA run through the cities of Shafter and Bakersfield, and through unincorporated areas of Kern County. The study area for the F-B LGA also traverses the community of Oildale, located in unincorporated Kern County. The majority of residents, businesses, and community resources in the study areas are in the city of Bakersfield, while some are located in the city of Shafter and community of Oildale. The remainder of the study area consists mostly of rural agricultural land with few residences, businesses, services, and community facilities, or other areas where children would congregate. For complete information on the community setting, refer to Section 3.12, Socioeconomics and Communities, of the Supplemental EIR/EIS.

Schools

There are 23 schools, including public and private elementary, middle, and high schools, in the study area for the May 2014 Project, and 28 schools in the study area for the F-B LGA. For both the May 2014 Project and F-B LGA, there are four schools within 0.5 mile of the proposed station location. For a list of the schools in the study area and within 0.5 mile of the proposed HSR station for the May 2014 Project, please see Tables 3.12-C2 and 3.12-C3 in Appendix 3.12-C of the Fresno to Bakersfield Section Final EIR/EIS (Authority and FRA 2014). Schools in the study area and within 0.5 mile of the proposed HSR station for the F-B LGA are listed in Table 3.12-C-2.

Table 3.12-C-2 Schools in the Study Area for the F-B LGA

School	Location	Type
Golden Oak Elementary	City of Shafter	Public
Redwood Elementary	City of Shafter	Public
Sequoia Elementary	City of Shafter	Public
Richland Junior High	City of Shafter	Public
Shafter High School	City of Shafter	Public
Central Valley Continuation High School	City of Shafter	Public Continuation
Free Will Christian Academy	City of Shafter	Private
Beardsley Intermediate and Junior High School	Community of Oildale	Public
North Beardsley School	Community of Oildale	Public
Beardsley Elementary School	Community of Oildale	Public
Horace Mann Elementary School	City of Bakersfield	Public
Vista East High School	City of Bakersfield	Public
Mount Vernon Elementary School	City of Bakersfield	Public
Sierra Middle School	City of Bakersfield	Public
Virginia Avenue Elementary School	City of Bakersfield	Public
Bethel Apostolic Academy*	City of Bakersfield	Private
Stella Hills Elementary School*	City of Bakersfield	Public
Pioneer Drive Elementary School	City of Bakersfield	Public
Ramon Garza Elementary School	City of Bakersfield	Public
Downtown Elementary School	City of Bakersfield	Public
Blanton Education Center	City of Bakersfield	Public
Legacy Christian Academy	City of Bakersfield	Private
Owens Intermediate School	City of Bakersfield	Public
International South Sikaran Academy	City of Bakersfield	Private
Bakersfield Adult School*	City of Bakersfield	Public
Valley Oaks Charter School*	City of Bakersfield	Public
Williams Elementary School	City of Bakersfield	Public
San Lauren Elementary School	City of Bakersfield	Public

Source: Fresno to Bakersfield Section Supplemental CIA (Authority and FRA 2017).

* These schools are located within 0.5 mile of the proposed HSR station location.

Outside of the urban areas, the school boundaries are very large and can extend into the transportation corridors. It is likely that many of the students in these areas use transportation provided by the school district, rely on family members, or drive themselves to school. Refer to Appendix 3.12-B, Effects on School District Funding and Transportation Bus Routes, for a map of school district boundaries in the study areas for the May 2014 Project and the F-B LGA.

Parks and Recreation

The study area for the May 2014 Project contains 13 parks, recreation, and open space resources, none of which are within 0.5 mile of the proposed HSR station location. The study area for the F-B LGA contains 12 of these types of resources, 5 of which are within 0.5 mile of the

proposed HSR station location on Truxtun Avenue.¹ For a list of the parks, recreation, and open space resources in the study area for the May 2014 Project, please see Table 3.12-C4 in Appendix 3.12-C of the Fresno to Bakersfield Section Final EIR/EIS (Authority and FRA 2014: 3.12-C-2-9 to 3.12-C-2-10). Parks, recreation, and open space resources in the study area for the F-B LGA, including those resources within 0.5 mile of the proposed HSR station location on F Street, are listed in Table 3.12-C-3.

Table 3.12-C-3 Parks, Recreation, and Open-Space Resources in the Study Area for the F-B LGA

Resource	Location	Distance from Project Centerline	Type
Mannel Park	City of Shafter	1,040 feet	Active
Town Square	City of Shafter	560 feet	Active
Kirchemann Park	City of Shafter	480 feet	Active
Stringham Park	City of Shafter	895 feet	Active
Riverview Park	Community of Oildale	985 feet	Active
Metropolitan Recreation Area*	City of Bakersfield	490 feet	Active
Kern River Parkway*	City of Bakersfield	0 feet	Active
Uplands of the Kern River Parkway Park*	City of Bakersfield	515 feet	Passive
Central Park	City of Bakersfield	920 feet	Active
Weill Park*	City of Bakersfield	0 feet	Active
Joshua Park	City of Bakersfield	625 feet	Active
Stella Hills Elementary School*	City of Bakersfield	1,175 feet	Active

Sources: Fresno to Bakersfield Section Supplemental CIA (Authority and FRA 2017); Fresno to Bakersfield Section Supplemental EIR/EIS Chapter 3, Parks, Recreation, and Open Space (Authority and FRA 2017)

* These parks, recreation, and open-space resources are located within 0.5 mile of the proposed HSR station location.

Parks, recreation, and open space resources support passive and active recreation and use, depending on the facilities provided. Passive resources are identified as open-space areas with trails and/or picnic areas. Active resources are identified as those that require development (such as playgrounds and ball fields). Parks that are considered active are associated with more intensive use by children. Under the May 2014 Project, all 13 of the parks, recreation, and open space resources in the study area are active parks, while under the F-B LGA 11 of the parks in the study area are active parks and 1 is a passive park. Refer to Section 3.15, Parks, Recreation, and Open Space, of the Supplemental EIR/EIS for more information on the parks located in the study area of the May 2014 Project and F-B LGA.

Community Facilities

For this analysis, community facilities include those places where children congregate. These include religious institutions, daycare facilities, museums, libraries, and community centers. In the study areas for the May 2014 Project and F-B LGA, services and facilities include schools (public and private), religious institutions, parks and recreation facilities, government facilities (such as courthouses, city halls, post offices, and libraries), cemeteries, fire halls, police stations, hospitals, transit stations, and social institutions (such as community centers, senior facilities, and social clubs). The majority of these are in the city of Bakersfield, with many located in the downtown area. Religious facilities represent half or more of the study area community facilities in Bakersfield. Complete information on the type and location of the community facilities in each

¹ James Park was excluded from the total for the May 2014 Project since this park is no longer listed as a public park on the City of Shafter’s website (City of Shafter

community is presented in Appendix B, Community Baseline Data, of the *Fresno to Bakersfield Supplemental Community Impact Assessment Technical Report* (Authority and FRA 2017).

3.12-C.3 Environmental Consequences

Construction and operation of the HSR project has the potential to result in adverse effects to children's health and safety. These potential impacts were evaluated in Appendix 3.12-C of the Fresno to Bakersfield Section Final EIR/EIS (Authority and FRA 2014) for all alternative alignments considered in the report, including the May 2014 Project. Potential impacts relating to the F-B LGA would be similar to those that may occur under the other alignments because the F-B LGA would require the same type of construction and operation activities and it would cross through areas with the same types of community facilities where children are likely to congregate. As with the May 2014 Project and other HSR alternatives, the F-B LGA would traverse residential neighborhoods.² Therefore, the analysis included in Appendix 3.12-C of the Fresno to Bakersfield Section Final EIR/EIS also applies to the F-B LGA.

Potential effects to children's health and safety relating to all HSR alternatives are discussed in Section 3.0, Environmental Consequences, in Appendix 3.12-C of the Fresno to Bakersfield Section Final EIR/EIS (Authority and FRA 2014: 3.12-C-3-1 to 3.12-C-3-12). This discussion explains that the analysis in the Fresno to Bakersfield Section Final EIR/EIS demonstrates that under all alternative alignments considered in the report, including the May 2014 Project, the HSR project would not affect products or substances (i.e., water, soil, and food) that a child is likely to ingest, use, be exposed to, or come in contact with. The analysis contained in this Supplemental EIR/EIS confirms these findings for the F-B LGA. For a detailed list of environmental elements with potential impacts during construction or operation of the HSR project, discussions of these impacts, and descriptions of how the impacts relate to children's health and safety, please refer to the following tables in Section 3.0, Environmental Consequences, in Appendix 3.12-C of the Fresno to Bakersfield Section Final EIR/EIS (Authority and FRA: 3.12-C-3-2 to 3.12-C-3-11):

- Table 3.12-C6: Construction Impacts on Children's Health and Safety
- Table 3.12-C7: Project Impacts on Children's Health and Safety
- Table 3.12-C8: Station and HMF Impacts on Children's Health and Safety

Any construction impacts that vary for the F-B LGA or are specific to this alternative have been further described in Table 3.12-C-4, which includes any construction impacts that relate to construction of the HSR project, including the HSR station. It also discusses the significance of these impacts after implementation of mitigation measures. Operation impacts under the F-B LGA are the same as those identified for all HSR alternatives, including the May 2014 Project, in Section 3.0, Environmental Consequences, in Appendix 3.12-C of the Fresno to Bakersfield Section Final EIR/EIS (Authority and FRA 2014: 3.12-C-3-1 to 3.12-C-3-12).

Based on this analysis, no significant impacts on children's health and safety are expected from construction or operation of the HSR project under either the May 2014 Project or the F-B LGA. The Fresno to Bakersfield Section Final EIR/EIS (2014) and this Supplemental EIR/EIS include mitigation measures that would minimize or avoid some of the children's health and safety impacts identified in this analysis. These documents also contain a number of measures and best management practices that would be implemented during construction and operation of the HSR project that would further minimize or avoid impacts on children's health and safety.

² Although the F-B LGA would pass through residential neighborhoods, it would result in fewer residential displacements than the May 2014 Project, and would therefore have a reduced effect to residents. Please see Section 5.1.3.1, Residential Displacements, of the *Fresno to Bakersfield Supplemental Community Impact Assessment Technical Report* for a discussion of residential displacements (Authority and FRA 2017).

Table 3.12-C-4 Construction Impacts on Children’s Health and Safety Specific to the F-B LGA

Environmental Element	Impacts Summary	Relevance to Children’s Health and Safety
Air Quality	<p>Station construction would take place over a period of four years, and sensitive receptors at schools, residences, and health care facilities near the station construction areas could potentially be exposed to health impacts from elevated concentrations of criteria pollutants and cancer risks associated with TACs. There are several sensitive receptors located near the Bakersfield F Street station including residences, schools, and parks.</p> <p>Construction of the F-B LGA would result in lower emissions than those estimated for the May 2014 Project as shown in Table 7.10-2 of the Fresno to Bakersfield Supplemental Air Quality and Global Climate Change Technical Report (2017). Therefore, as with the May 2014 Project, station construction under the F-B LGA would also not result in health impacts to nearby sensitive receptors.</p>	<p>Because the air quality impacts at stations would be reduced to a negligible impact under NEPA and less-than-significant impact under CEQA with mitigation, there would be no significant risks to children’s health and safety.</p>
Hazardous Materials and Wastes	<p>Construction activities that have the potential to result in accidental releases of hazardous material and wastes would occur within 0.25 mile of schools, including three schools within 0.25 mile of the proposed HSR station location and associated roadway improvements under the F-B LGA. These are Valley Oaks Charter School, Bakersfield Adult School, and Stella I. Hills Elementary School.</p> <p>Mitigation measures will be implemented to ensure the use of extremely hazardous substances or mixture thereof in a quantity equal to or greater than the state threshold quantity will not occur within 0.25 mile of a school.</p>	<p>Implementation of regulatory requirements would reduce the potential for a severe spill to a negligible intensity and therefore impacts on children’s health and safety would be negligible under NEPA and less-than-significant under CEQA.</p>
Parks, Recreation, and Open Space	<p>Mannel Park, Town Square, Kirschenmann Park, Stringham Park, Riverview Park, Metropolitan Recreation Area, Kern River Parkway, Uplands of the Kern River Parkway Park, Weill Park, Joshua Park, Kern County Museum, and the recreational facilities at Stella Hills Elementary School, Free Will Christian Academy, and Redwood Elementary School / Richland Junior High would experience construction impacts. These impacts would include increased noise caused by the operation of equipment and visual change caused by construction activities, exposed earth, and stockpiled materials.</p>	<p>Temporary construction impacts on parks include noise, visual, and traffic effects. These effects would be primarily an inconvenience or irritation but not a health or safety risk to children. With mitigation, the impacts would be reduced to a negligible (NEPA) and less-than-significant (CEQA) level.</p>

Sources: Sections 3.3, Air Quality and Global Climate Change, 3.10, Hazardous Materials and Wastes, and 3.15, Parks, Recreation, and Open Space of this Supplemental EIR/EIS.

3.12-C.4 References

California High-Speed Rail Authority (Authority) and USDOT Federal Railroad Administration (FRA). 2014. *California High-Speed Train Project Final EIR/EIS: Fresno to Bakersfield Section*. Sacramento, CA and Washington, D.C. April 2014.

_____. 2017. *Draft Fresno to Bakersfield Supplemental Community Impact Assessment Technical Report*. Sacramento, CA and Washington, D.C. March 2017.

U.S. Census Bureau. 2010. *Summary File 1 DP-1: Profile of General Population and Housing Characteristics: 2010*. <http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>. (accessed September 2015)

This page intentionally left blank