

APPENDIX 3.3-B: FEDERAL GENERAL CONFORMITY DETERMINATION

1 FEDERAL GENERAL CONFORMITY DETERMINATION

Section 176(c)(1) of the Clean Air Act (CAA) prohibits federal agencies from engaging in, supporting, or providing financial assistance for licensing, permitting or approving any activities that do not conform to an approved CAA implementation plan. That approved plan may be a federal, state, or tribal implementation plan. Because the San Jose to Merced Project Section (project) of the California High-Speed Rail (HSR) System likely will require and/or receive one or more federal approvals or future federal construction funding, a General Conformity Determination must be issued, in accordance with the implementing regulations of Section 176 of the CAA.

The Federal Railroad Administration's (FRA) general conformity determination would be related only to those activities included in the federal action pertaining to the HSR project, which is the project's potential approval through a NEPA ROD. The project is described further in Chapters 1 and 2 of the San Jose to Merced Draft Environmental Impact Report (EIR)/Environmental Impact Statement (EIS).

Pursuant to 23 U.S.C. 327 and a Memorandum of Understanding executed by the FRA and the State of California on July 23, 2019, FRA assigned its federal environmental review responsibilities under the National Environmental Policy Act (NEPA) and related statutes to the Authority under a federal program commonly known as NEPA Assignment. Accordingly, the Authority is now the NEPA lead agency. Consistent with 23 U.S.C. 327 and the July 23, 2019 NEPA Assignment Memorandum of Understanding, FRA retains its obligations to make general conformity determinations under the CAA. The Authority and FRA have agreed to collaborate on the development of general conformity determinations. As part of this collaboration, the Authority has developed and provided to FRA a Draft General Conformity Determination and supporting information, as well as the Authority's proposed approach for achieving general conformity. Because the analysis used for the Draft EIR/EIS also generated the information necessary for the Draft General Conformity Determination, specific analysis may be incorporated by reference in the General Conformity Determination. FRA will make the ultimate general conformity determination for this project.

The General Conformity regulations establish certain procedural requirements that must be followed when preparing a General Conformity evaluation. The FRA's Draft General Conformity Determination will address the major applicable procedural issues and specify how these requirements are met for the evaluation of the federal action. The procedures required for the General Conformity evaluation are similar, but not identical, to those for conducting an air quality impact analysis pursuant to NEPA. Pursuant to 40 C.F.R. Section 93.156, it is anticipated FRA will release a draft General Conformity Determination for public and agency review concurrently with the San Jose to Merced Draft EIR/EIS. The Authority intends to publish the FRA's final General Conformity Determination concurrently with the record of decision (ROD) for the federal action, if the Authority decides to move forward with project approval.

1.1 General Conformity Requirements

In November 1993, the U.S. Environmental Protection Agency (USEPA) promulgated two sets of regulations to implement section 176(c) of the CAA. The first were the Transportation Conformity Regulations issued on November 24, 1993 and then the General Conformity Regulations issued on November 30, 1993. Though the Transportation Conformity regulations do not apply to the project, many of the transportation planning documents developed under those regulations are helpful in understanding the regional air quality and planning status of the resource study area (RSA), described above. In general terms, unless a project is exempt or presumed to conform under the General Conformity Regulations, a General Conformity Determination is required where a federal action in a nonattainment or maintenance area causes an increase in the total of direct and indirect emissions of the relevant criteria pollutants and precursor pollutants that are equal to or exceed certain *de minimis* thresholds.

The General Conformity Rule is codified in Title 40 Code of Federal Regulations (C.F.R.) Part 93, Subpart B, “Determining Conformity of General Federal Actions to State or Federal Implementation Plans.” Conformity is defined as “upholding an implementation plan’s purpose of eliminating or reducing the severity and number of violations of the NAAQS and achieving expeditious attainment of such standards.” 40 C.F.R. Part 93 also establishes the process by which federal agencies determine conformance of proposed projects that are federally funded or require federal approval. This determination must demonstrate that the federal action would not cause or contribute to new violations of air quality standards, exacerbate existing violations, or interfere with timely attainment or required interim emissions reductions towards attainment.

The CAA defines nonattainment areas as geographic regions that have been designated as not meeting one or more of the national ambient air quality standards (NAAQS). The CAA requires that each state prepare a State Implementation Plan (SIP) for each nonattainment area. A maintenance plan must be prepared for each former nonattainment area that subsequently demonstrated compliance with the standards. The SIP is a state’s plan for how it will meet the NAAQS by the CAA deadlines established by the CAA.

General Conformity requirements only apply to federal actions proposed in nonattainment areas (i.e., areas where one or more NAAQS are not being achieved at the time of the proposed action and requiring SIP provisions to demonstrate how attainment will be achieved) and in maintenance areas (i.e., areas recently reclassified from nonattainment to attainment and requiring SIP provisions to demonstrate how attainment will be maintained).

The General Conformity regulations incorporate a stepwise process, beginning with an applicability analysis. According to the USEPA’s *General Conformity Guidance: Questions and Answers* (USEPA Guidance) (USEPA 1994), before any approval is given for a federal action to go forward, the first step in a General Conformity evaluation is an analysis of whether the requirements apply to a proposed federal action in a nonattainment or a maintenance area. The federal agency must apply the applicability requirements found at 40 C.F.R. Section 93.153 to the federal action or determine on a pollutant-by-pollutant basis whether a determination of General Conformity is required. During the applicability analysis, the federal agency determines the following:

- Whether the action will occur in a nonattainment or maintenance area
- Whether one or more of the specific exemptions apply to the action
- Whether the federal agency has included the action on its list of presumed-to-conform actions
- Whether the total direct and indirect emissions are below or above the *de minimis* levels
- Where a facility has an emissions budget approved by the state or tribe as part of the SIP or Tribal Implementation Plan, the federal agency determines whether the emissions from the proposed action are within the budget.

The USEPA Guidance states that the applicability analysis can be, but is not required to be, completed concurrently with any analysis required under NEPA. As noted above, FRA’s Draft General Conformity Determination may incorporate by reference specific analysis from the San Jose to Merced Draft EIR/EIS. The applicability analysis for this project will be described in FRA’s Draft General Conformity Determination.

If, through the applicability analysis process, the responsible federal agency determines that the General Conformity regulations do not apply to the federal action, no further analysis or documentation is required. If, however, the General Conformity regulations apply to the federal action, the responsible federal agency must conduct a conformity evaluation in accordance with the criteria and procedures in the implementing regulations, publish a draft General Conformity Determination for public review, and publish the final General Conformity Determination.

To make a conformity determination, the federal agency must demonstrate conformity by one or more of several prescribed methods. These methods include:

- Demonstrating that the direct and indirect emissions are specifically identified in the relevant implementation plan
- Obtaining a written statement from the entity responsible for the implementation plan that the total indirect and direct emissions from the action, along with other emissions in the area, will not exceed the total implementation plan emission budget
- Fully offsetting the total direct and indirect emissions by reducing emissions of the same pollutant in the same nonattainment or maintenance area

1.2 Resource Study Area and Its Air Quality Conditions

The resource study area (RSA) for the project is within the boundaries of the San Francisco Bay Area Air Basin (SFBAAB), North Central Coast Air Basin (NCCAB), and San Joaquin Valley Air Basin (SJVAB). Figure 1 shows the project footprint as it is situated in the three air basins. Planning documents for pollutants for which the RSA is classified as federal nonattainment or maintenance are developed by the Bay Area Air Quality Management District (BAAQMD), Monterey Bay Air Resources District (MBARD), San Joaquin Valley Air Pollution Control District (SJVAPCD), and California Air Resources Board (CARB) and approved by the USEPA.

The California Air Resources Board (CARB) maintains ambient air monitoring stations for criteria pollutants throughout California. Three monitoring stations, one in each air basin in the vicinity of the HSR alignment alternatives, were selected for representative ambient monitored data— Jackson Street (SFBAAB), Hollister-Fairview Road (NCCAB), and Merced-S. Coffee Avenue (SJVAB). These stations monitor carbon monoxide (CO), ozone (O₃), nitrogen dioxide (NO₂), and particulate matter (PM) less than or equal to 10 microns in diameter (PM₁₀), and PM less than or equal to 2.5 microns in diameter (PM_{2.5}). Between 2015 and 2017, monitored CO and NO₂ concentrations did not exceed any federal or state standards at any of the three monitoring locations. However, the state and federal standards for O₃ and PM_{2.5} were exceeded, as well as the state PM₁₀ standards. Using violations of the ambient air quality standards as a proxy for air quality, conditions tend to be poorest in the vicinity of the eastern portion of the project in Merced County, with air quality improving westward toward the SFBAAB.

The CARB maintains an annual emission inventory for each county and air basin in the state. The inventories for Santa Clara, San Benito, and Merced Counties consist of data submitted to CARB by the local air districts plus estimates for certain source categories, which are provided by CARB staff.

The most recent published inventory data for Santa Clara, San Benito, and Merced Counties is summarized in Table 3. With the exception of San Benito County, mobile source emissions represent the majority of reactive organic gases (ROG), nitrogen oxide (NO_x), and CO emissions. In San Benito County, area sources represent most ROG emissions, and mobile source emissions represent the majority of NO_x and CO. Area sources represent the majority of PM₁₀ and PM_{2.5} emissions in all three counties.

Under federal designations, the RSA is currently designated as extreme and marginal nonattainment for 8-hour O₃¹ in the SJVAB and SFBAAB, respectively; moderate/serious nonattainment for PM_{2.5} in the SFBAAB and SJVAB; and maintenance for PM₁₀ in the SJVAB. As such, the FRA is required to demonstrate project-level compliance with the General Conformity Rule for NO_x and VOCs (O₃ precursors), PM_{2.5}, PM₁₀, and SO₂ (PM_{2.5} precursor) if project-related

¹ It should be noted that because O₃ is a secondary pollutant (i.e., it is not emitted directly into the atmosphere, but is formed in the atmosphere from the photochemical reactions of VOCs and NO_x in the presence of sunlight), its *de minimis* threshold is based on primary emissions of its precursor pollutants, NO_x and VOCs. If the net emissions of either NO_x or VOCs exceeds the *de minimis* applicability thresholds (USEPA 1994), the federal action is subject to a general conformity evaluation for O₃.

emissions of these pollutants in the SFBAAB or SJVAB would exceed the General Conformity *de minimis* thresholds.

The portion of the RSA in the NCCAB is in attainment for all criteria pollutants. Only actions which cause emissions in designated nonattainment and maintenance areas are subject to the General Conformity regulations. As such, the Authority anticipates that there are no applicable *de minimis* thresholds within the NCCAB and a General Conformity analysis will not be required for the portion of the project within the NCCAB.

The General Conformity requirements would apply to the federal action for each pollutant for which the total of direct and indirect emissions caused by the federal action equal or exceed the *de minimis* emission rates shown in Table 1. These emission rates are expressed in units of tons per year (tpy) and are compared to the total of direct and indirect emissions caused by the project in each air basin for the calendar year. The applicable threshold levels for the pollutants for which General Conformity is required in the RSA are shown in Table 1.

Table 1 De Minimis Rates for Determining Applicability of General Conformity Requirements to Federal Actions

Air Basin	Annual Air Pollutant Emissions in Tons per Year					
	ROG	NO _x	CO	PM ₁₀	PM _{2.5}	SO ₂
San Francisco Bay Area Air Basin ¹	100	100	None	None	100	100
San Joaquin Valley Air Basin ²	10	10	None	100	100	100

Source: 40 C.F.R. Section 93.153

CO = carbon monoxide

NO_x = oxides of nitrogen

O₃ = ozone

PM_{2.5} = particulate matter 2.5 microns in diameter or less

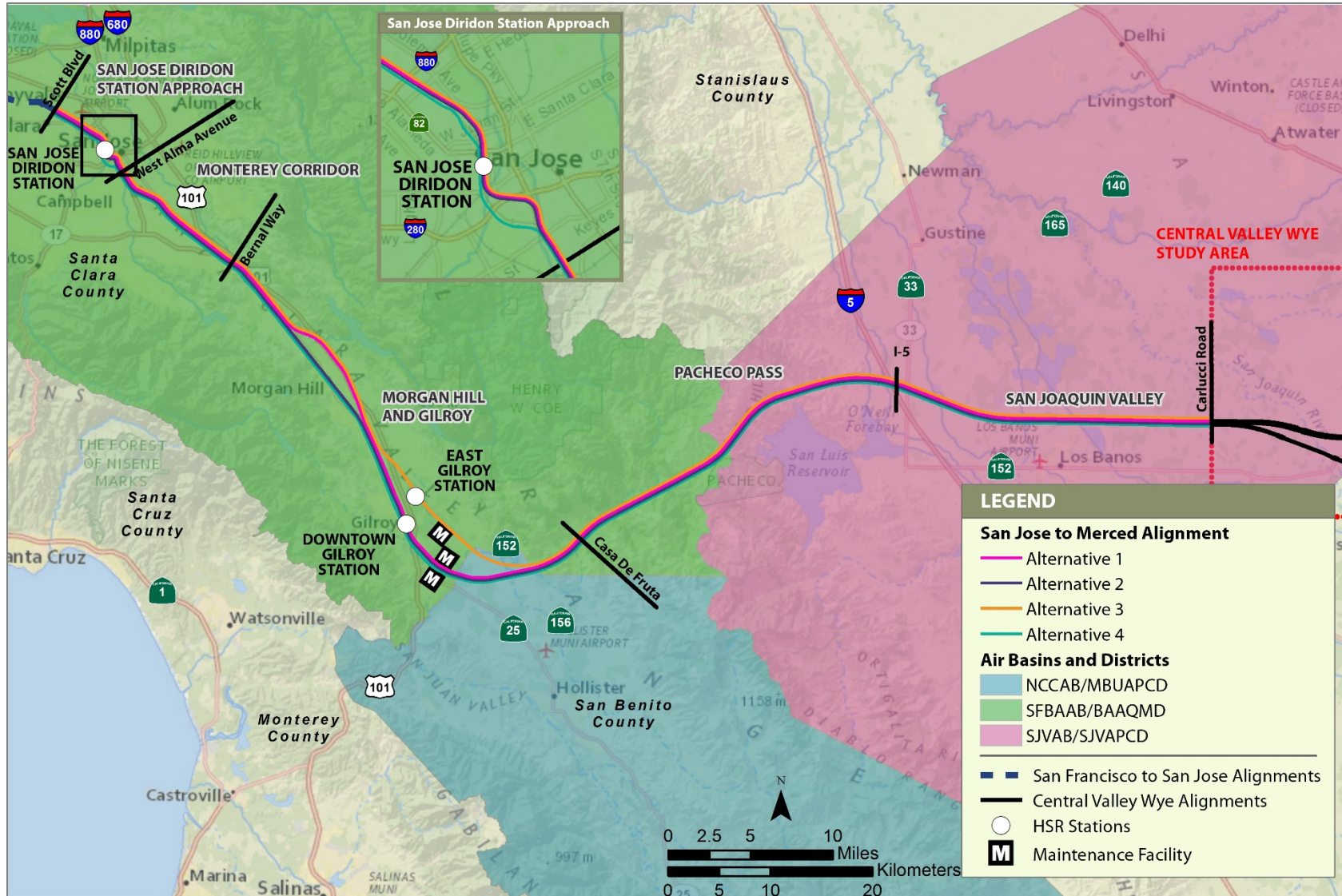
PM₁₀ = particulate matter 10 microns in diameter or less

ROG = reactive organic gases

SO₂ = sulfur dioxide

¹ The General Conformity *de minimis* thresholds for criteria pollutants are based on the federal attainment status of the RSA in the SFBAAB. The RSA is considered a marginal nonattainment area for the O₃ NAAQS and a moderate nonattainment area for the PM_{2.5} NAAQS. Although the RSA is in attainment for SO₂, because SO₂ is a precursor for PM_{2.5}, the PM_{2.5} General Conformity *de minimis* thresholds are used.

² The General Conformity *de minimis* thresholds for criteria pollutants are based on the federal attainment status of the RSA in the SJVAB. The RSA is considered an extreme nonattainment area for the O₃ NAAQS, a serious/moderate nonattainment area for the PM_{2.5} NAAQS, and a serious maintenance area for the PM₁₀ NAAQS. Although the RSA is in attainment for SO₂, because SO₂ is a precursor for PM_{2.5}, the PM_{2.5} General Conformity *de minimis* thresholds are used.



Source: Authority 2017, CARB 2012

MARCH 2019

Figure 1 Resource Study Area Air Basins

1.3 Regional Effects and General Conformity Determination

The Authority identified the appropriate emission estimation techniques and planning assumptions in close consultation with the state entities charged with regulating air pollution in the SFBAAB, NCCAB, and SJVAB. Based on its analysis, the Authority anticipates that annual construction emissions of all project alternatives would exceed the General Conformity *de minimis* threshold in the SJVAB for NO_x for all years of construction between 2022 and 2028. NO_x emissions would also exceed the General Conformity *de minimis* threshold in the SFBAAB in 2024 under Alternatives 1 and 3, and between 2023 and 2025 under Alternatives 2 and 4. All other pollutants would be below applicable *de minimis* thresholds. To appropriately identify and offset, where necessary, the emissions resulting from the project, the Authority expects to enter a memorandum of understanding (MOU) with the BAAQMD, and has a similar arrangement with the SJVAPCD through their offset program, to offset, as necessary, any emissions resulting from the project.

As shown in Section 3.3.6.2 of the Draft EIR/EIS, the total regional emissions for all applicable pollutants are lower during the operations phase of the project than under No Project conditions (and would therefore not exceed the *de minimis* emission thresholds). As such, only emissions generated during the construction phase were compared to the conformity threshold levels to determine conformity compliance. The construction-phase emissions, compared to the General Conformity applicability rates, are as follows:

- Annual estimated NO_x emissions in the SJVAB are greater than the applicability rate of 10 tpy for all years of construction between 2022 and 2028 for all project alternatives with implementation of IAMFs.
- Annual estimated NO_x emissions in the SFBAAB are greater than the applicability rate of 100 tpy in 2024 under Alternatives 1 and 3 and for all years of construction between 2023 and 2025 under Alternatives 2 and 4 with implementation of IAMFs.
- Annual estimated VOC, CO, SO₂, PM₁₀, and PM_{2.5} emissions are less than the applicability rates in the SFBAAB and SJVAB with implementation of IAMFs.

Therefore, the Authority anticipates that a General Conformity Determination will be required for the project for NO_x for the years during construction when the emissions would exceed the *de minimis* thresholds in the SFBAAB and SJVAB and would not meet any of the exceptions cited in 40 C.F.R. Section 93.154(c).

FRA's Draft General Conformity Determination will identify the Authority's commitment to reduce all NO_x emissions through emissions offsets through a MOU with BAAQMD and a project-level Voluntary Emissions Reduction Agreement with SJVAPCD. To reduce impacts on the environment, the construction of the project would include project features to avoid and minimize impacts on air quality. These project features would be included in the Mitigation Monitoring and Enforcement Program, which would be issued concurrently with the ROD and would be enforceable commitments undertaken by the Authority. Construction of the project is anticipated to occur through a design/build contract. The Authority would include all project features in the construction contract, which would create binding and enforcement commitment to implement them. The Authority would be responsible for implementing and overseeing a mitigation monitoring program so the contractor meets all air quality design features.