Appendix 22E

General Conformity Determination

Appendix 22E
General Conformity Determination

22E.1 Introduction

This appendix provides the general conformity determination for the applicant-preferred alternative (APA) of the Bay Delta Conservation Plan (BDCP, or project). A general conformity determination is required by Section 176 of the Clean Air Act (CAA). The CAA requires states to submit a state implementation plan (SIP) for areas in nonattainment for federal standards. Section 176(c)(1) of the 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 SIP.

The U.S. Environmental Protection Agency (EPA) enacted the federal general conformity regulation in 1993 (40 Code of Federal Regulations [CFR] Parts 5, 51, and 93). The purpose of the general conformity rule is to ensure that federal actions do not generate emissions that interfere with state and local agencies' SIPs and emission-reduction strategies to ensure attainment of the national ambient air quality standards (NAAQS). Specifically, projects that receive federal funding or require federal approval must demonstrate that they 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 toward attainment. Because the project is receiving federal funds and approvals from the U.S. Department of the Interior Bureau of Reclamation (Reclamation) (Reclamation), U.S. Fish and Wildlife Service (USFWS), and National Marine Fisheries Service (NMFS) (Federal lead agencies), all direct and indirect emissions generated by the project are subject to the general conformity rule.

22E.1.1 Regulatory Status of the Plan Area

The Plan Area is subject to air quality regulations developed and implemented at the federal, state, and local levels. At the federal level, the EPA is responsible for implementation of the CAA. Some portions of the CAA (e.g., certain mobile-source and other requirements) are implemented directly by EPA. Other portions of the CAA (e.g., stationary-source requirements) are implemented by state and local agencies.

Responsibility for attaining and maintaining air quality in California is divided between the California Air Resources Board (ARB) and regional air quality districts. The Yolo-Solano Air Quality Management District (YSAQMD), Sacramento Metropolitan Air Quality Management District (SMAQMD), Bay Area Air Quality Management District (BAAQMD), and San Joaquin Valley Air Pollution Control District (SJVAPCD) have jurisdiction over local air quality within the Plan area.

Under the CAA, YSAQMD, SMAQMD, BAAQMD, and SJVAPCD are required to develop air quality plans for nonattainment criteria pollutants in their respective air districts. The *1994 Sacramento Area Regional Ozone Attainment Plan* was prepared to address ozone precursors within the Sacramento Federal Nonattainment Area (SFNA) following the region's serious nonattainment designation for the 1-hour ozone NAAQS in November 1991. The *Sacramento Regional 8-Hour Attainment and Reasonable Further Progress Plan* has also been adopted to address the region's

nonattainment status for the 8-hour ozone NAAQS. Counties in the SFNA (Sacramento, Yolo, Placer, El Dorado, Solano, Sutter, and Butte) have also adopted the *Northern Sacramento Valley Planning Area 2012 Triennial Air Quality Attainment Plan* (2012 Plan).

BAAQMD and SJVAPCD have also adopted air quality plans to improve air quality, protect public health, and protect the climate The *Bay Area 2001 Ozone Attainment Plan* was adopted to reduce ozone and achieve the NAAQS ozone standard in the San Francisco Bay Area Air Basin (SFBAAB). BAAQMD also adopted a resignation plan for carbon monoxide (CO) in 1994. SJVAPCD's *2007 Ozone Plan* contains a comprehensive list of regulatory and incentive-based measures to reduce ozone precursors within the San Joaquin Valley Air Basin (SJVAB). SJVAPCD's *2007 PM10 Maintenance Plan*, *2008 PM2.5 Plan*, and *2012 PM2.5 Plan* likewise include strategies to reduce particulate matter (PM) emissions throughout the air basin.

22E.1.2 General Conformity Requirements

The general conformity rule applies to all federal actions located in nonattainment and maintenance areas that are not exempt from general conformity (are either covered by Transportation Conformity or listed in the rule), are not covered by a presumed-to-conform approved list[1], or do not have clearly *de minimis* emissions. In addition, the general conformity rule applies only to direct and indirect emissions associated with the portions of any federal action that are subject to New Source Review for which a Federal permitting agency has directly caused or initiated, has continued program responsibility for, or can practically control (i.e., stationary industrial sources requiring air quality permits from local air pollution control agencies are not subject to general conformity).

Federal projects must undertake an evaluation to determine whether all project emission sources are subject to the general conformity rule. The analysis includes a stepwise process in which the Federal agency determines the following.

1. **Is the emission source located in a Federal attainment area?** If yes, the emission source is not subject to general conformity and no additional analysis is required. If no, document whether the emission source is located in a nonattainment or maintenance area and proceed to step 2.
2. **Does one or more of the specific exemptions apply to the project?** If yes, the project is exempt from general conformity and no further analysis is required. If no, proceed to step 3.
3. **Has the Federal agency included the action on its list of presumed-to-conform actions?** If yes, the project is presumed to conform to the applicable SIP and the requirements of general conformity are satisfied. If no, proceed to step 4.
4. **Are the total direct and indirect emissions below the *de minimis* thresholds?** If yes, the project would not cause or contribute to new violations of air quality standards; the requirements of general conformity are satisfied. If no, the applicant must perform a conformity determination.

A general conformity determination is made by satisfying any of the following requirements.

- Showing that the emission increases caused by the Federal action are included in the SIP.

[1] Category of activities designated by a Federal agency as having emissions below *de minimis* levels or otherwise do not interfere with the applicable SIP or the attainment and maintenance of the NAAQS.

- Demonstrating that the state agrees to include the emission increases in the SIP.
- Offsetting the action's emissions in the same or nearby area.
- Mitigating to reduce the emission increase.
- Utilizing a combination of the above strategies.

The general conformity rule states that the applicability analysis can be (but is not required to be) completed concurrently with any analysis required under the National Environmental Policy Act (NEPA). The applicability analysis for the proposed project is described in Section E.1.8, *Applicability Analysis*.

22E.2 Description of the Federal Action

The federal agency is only required to conduct a general conformity evaluation for the specific Federal action associated with the selected alternative for a project or program (U.S. Environmental Project Agency 1994). The positive conformity determination must be submitted before the federal action is approved. Each federal agency is responsible for determining conformity of those proposed actions over which it has jurisdiction. Alternative 4A has been selected as the applicant-preferred alternative (APA). Construction and operation of the project under Alternative 4A would be identical to Alternative 4. Accordingly, emissions generated by Alternative 4A would be representative of emissions generated under Alternative 4. The general conformity determination presented in this appendix therefore relates to those activities pertaining to Alternatives 4 and 4A (henceforth referred to as Alternative 4/4A).

If the APA is modified such that it would generate a higher amount of emissions, the general conformity determination would be revised to reflect the changes before the finalization of the EIR/EIS. The project is described further in Section 22E.1.3 below.

22E.2.1 BDCP Alternative 4/4A

The BDCP is a comprehensive conservation strategy for the Sacramento–San Joaquin Delta (Delta) to advance the planning goal of restoring ecological functions of the Delta and improving water supply reliability in the state of California. The conservation strategy is designed to restore and protect ecosystem health, water supply, and water quality within a stable regulatory framework. The BDCP reflects the outcome of a multiyear collaboration between Department of Water Resources (DWR), Reclamation, state and federal fish and wildlife agencies, state and federal water contractors, nongovernmental organizations, agricultural interests, and the general public. The BDCP sets out a comprehensive conservation strategy for the Delta designed to restore and protect ecosystem health, water supply, and water quality within a stable regulatory framework.

The BDCP includes up to 21 conservation measures (CM) that will be taken to meet biological the goals and objectives. This general conformity determination covers direct and indirect emissions associated with construction and operation of CM1—Water Facilities and Operation. CM1 provides for the construction and operation of a new north Delta water conveyance facility to bring water from the Sacramento River in the north Delta to the existing water export pumping plants in the south Delta, as well as for the operation of existing south Delta export facilities.

Under Alternatives 4 and 4A, water would primarily be conveyed from the north Delta to the south Delta through pipelines/ tunnels. Water would be diverted from the Sacramento River through three fish-screened intakes on the east bank of the Sacramento River between Clarksburg and Courtland. Water would travel from the intakes to a sedimentation basin before reaching the tunnels. From the intakes water would flow into an initial single-bore tunnel, which would lead to an intermediate forebay on Glannvale Tract. From the southern end of this forebay, water would pass through an outlet structure into a dual-bore tunnel where it would flow by gravity to the south Delta. Water would then reach pumping plants to the northeast of the Clifton Court Forebay, where water would be pumped into the north cell of the expanded Clifton Court Forebay. The forebay would be dredged and redesigned to provide an area isolating water flowing from the new north Delta facilities. The expanded Clifton Court Forebay would be designed to provide water to Jones Pumping Plant 24 hours per day. A complete description of Alternative 4 is provided in Chapter 3, *Description of Alternatives,* Sections 3.4, 3.5.9, and 3.6.1. A complete description of Alternative 4A is provided in Appendix A, *Revisions to the Draft EIR/EIS*, Section 4.

22E.3 Air Quality Conditions in the Plan Area

The Plan Area encompasses the following three air basins: Sacramento Valley Air Basin (SVAB), SJVAB, and the SFBAAB.

22E.3.1 Climate and Meteorology

The SVAB has a Mediterranean climate characterized by hot, dry summers and cool, rainy winters. In general, the prevailing winds are moderate in strength and vary from moist clean breezes from the south to dry land flows from the north. The mountains surrounding the SVAB create a barrier to airflow that can trap air pollutants under certain meteorological conditions. The ozone season (May through October) in the Sacramento Valley is characterized by stagnant morning air or light winds with the Delta sea breeze arriving in the afternoon out of the southwest. Usually the evening breeze transports the airborne pollutants to the north out of the Sacramento Valley (Yolo-Solano Air Quality Management District 2007).

The SJVAB has an inland Mediterranean climate that is characterized by warm, dry summers and cool winters. Although marine air generally flows into the basin from the Delta, the surrounding mountain ranges restrict air movement through and out of the valley. The vertical dispersion of air pollutants in the SJVAB is limited by the presence of persistent temperature inversion. Air pollutants tend to collect under an inversion, leading to higher concentrations of emitted pollutants. Conversely, precipitation and fog tend to reduce pollutant concentrations. Precipitation in the SJVAB decreases from north to south, with approximately 20 inches in the north, 10 inches in the middle, and less than 6 inches in the south (San Joaquin Valley Air Pollution Control District 2002).

The SFBAAB has a coast climate that is influenced by marine air flow and the basin's proximity to the San Francisco Bay. Bay breezes push air onshore during the daytime and draw air offshore at night. During the summer months, the bay helps to cool the warm onshore flows, while it warms the air during the winter months. This mediating effect keeps temperatures relatively consistent throughout the year. In the westernmost portion of the SFBAAB, which encompasses the study area, the bay wind patterns can concentrate and carry air pollutants from other cities to the region,

adding to the mix of pollutants that are emitted locally (Bay Area Air Quality Management District 2011).

22E.3.2 Ambient Air Quality

The existing air quality conditions in the Plan Area can be characterized by monitoring data collected in the region. Air quality concentrations typically are expressed in terms of parts per million (ppm) or micrograms per cubic meter ($\mu g/m^3$). Table 22E-1 summarizes air quality monitoring data from monitoring stations in the SVAB, SJVAB, and SFBAAB for the last 3 years for which complete data are available. As shown in Table 22E-1, the monitoring stations have experienced occasional violations of the NAAQS and California Ambient Air Quality Standards (CAAQS) for all pollutants except CO and nitrogen dioxide (NO_2). However, in general, air quality is improving in the region, as indicated by the declining number of measured violations.

Table 22E-1. Ambient Air Quality Monitoring Data for the SVAB, SJVAB, SFBAAB (2011–2013)

	SVAB (T Street & El Camino)			SJVAB (Stockton)			SFBAAB (Bethel Island & Concord)		
Pollutant Standards	2011	2012	2013	2011	2012	2013	2011	2012	2013
Ozone (O_3)									
Maximum 1-hour concentration (ppm)	0.100	0.104	0.091	0.089	0.097	0.080	0.091	0.098	0.082
Maximum 8-hour concentration (ppm)	0.087	0.092	0.068	0.068	0.083	0.067	0.078	0.087	0.075
Number of days standard exceeded[a]									
CAAQS 1-hour (>0.09 ppm)	1	1	0	0	1	0	0	1	0
CAAQS 8-hour (>0.070 ppm)	5	9	0	0	2	0	4	4	1
NAAQS 8-hour (>0.075 ppm)	1	4	0	0	6	0	2	2	0
Carbon Monoxide (CO)									
Maximum 8-hour concentration (ppm)	2.83	2.14	-	2.13	1.78	-	0.95	0.89	-
Maximum 1-hour concentration (ppm)	3.0	2.7	3.0	3.2	3.0	2.7	1.4	1.5	1.0
Number of days standard exceeded[a]									
NAAQS 8-hour (≥9 ppm)	0	0	0	0	0	0	0	0	0
CAAQS 8-hour (≥9.0 ppm)	0	0	0	0	0	0	0	0	0
NAAQS 1-hour (≥35 ppm)	0	0	0	0	0	0	0	0	0
CAAQS 1-hour (≥20 ppm)	0	0	0	0	0	0	0	0	0
Nitrogen Dioxide (NO_2)									
State maximum 1-hour concentration (ppm)	57	62	59	62	78	62	35	32	33
State second-highest 1-hour concentration (ppm)	53	56	56	59	58	61	34	30	32
Annual average concentration (ppm)	13	12	12	16	14	15	6	6	-
Number of days standard exceeded									
CAAQS 1-hour (0.18 ppm)	0	0	0	0	0	0	0	0	0
Particulate Matter (PM10)[b]									
National[c] maximum 24-hour concentration (μg/m³)	38.8	36.2	53.1	66.1	69.4	90.1	46.8	51.4	47.4
National[c] second-highest 24-hour concentration (μg/m³)	38.1	33.6	45.4	53.0	58.2	69.4	44.3	29.5	45.5
State[d] maximum 24-hour concentration (μg/m³)	42.2	36.7	92.3	70.1	70.0	95.5	49.5	52.3	50.7
State[d] second-highest 24-hour concentration (μg/m³)	39.3	35.6	66.8	57.8	61.7	74.0	45.8	31.4	48.5
National annual average concentration (μg/m³)	18.4	17.2	14.4	23.3	22.4	31.3	17.3	13.8	8.5
State annual average concentration (μg/m³)[e]	19.2	17.8	-	24.1	22.8	32.0	17.9	14.1	-
Number of days standard exceeded[a]									
NAAQS 24-hour (>150 μg/m³)[f]	0	0	-	0	0	0	0	0	0
CAAQS 24-hour (>50 μg/m³)[f]	0	0	21	24	18	58	0	6	1

Pollutant Standards	SVAB (T Street & El Camino)			SJVAB (Stockton)			SFBAAB (Bethel Island & Concord)		
	2011	2012	2013	2011	2012	2013	2011	2012	2013
Particulate Matter (PM2.5)									
National[c] maximum 24-hour concentration (μg/m³)	50.5	27.1	39.2	60.0	60.4	65.5	47.5	32.2	36.2
National[c] second-highest 24-hour concentration (μg/m³)	47.8	26.7	35.9	53.1	45.0	64.4	39.7	30.0	29.5
State[d] maximum 24-hour concentration (μg/m³)	50.5	40.8	40.2	65.5	60.4	66.5	47.5	32.2	36.2
State[d] second-highest 24-hour concentration (μg/m³)	47.8	31.1	39.4	59.5	45.0	64.4	39.7	30.0	29.5
National annual average concentration (μg/m³)	10.1	8.3	10.0	11.3	12.3	17.6	7.8	6.6	7.6
State annual average concentration (μg/m³)[e]	10.1	-	10.1	14.0	12.4	-	7.9	6.6	7.6
Number of days standard exceeded[a]									
NAAQS 24-hour (>35 μg/m³)	18	0	6	11	6	28	2	0	1
Sulfur Dioxide (SO_2)									
No data available									

Source: California Air Resources Board 2014a; United States Environmental Protection Agency 2014a.

ppm = parts per million.
NAAQS = National Ambient Air Quality Standards.
CAAQS = California Ambient Air Quality Standards.
μg/m³ = micrograms per cubic meter.
mg/m³ = milligrams per cubic meter.
> = greater than.
NA = not applicable.

[a] An exceedance is not necessarily a violation.
[b] National statistics are based on standard conditions data. In addition, national statistics are based on samplers using federal reference or equivalent methods.
[c] State statistics are based on local conditions data, except in the South Coast Air Basin, for which statistics are based on standard conditions data. In addition, State statistics are based on California approved samplers.
[d] Measurements usually are collected every 6 days.
[e] State criteria for ensuring that data are sufficiently complete for calculating valid annual averages are more stringent than the national criteria.
[f] Mathematical estimate of how many days concentrations would have been measured as higher than the level of the standard had each day been monitored. Values have been rounded.

22E.3.3 Mass Emissions

The ARB compiles an emissions inventory for all sources of emissions within the study area. This inventory is used by the YSAQMD, SMAQMD, BAAQMD, SJVAPCD, and ARB for regional air quality planning purposes and is the basis for the region's air quality plans, and includes such sources as stationary (e.g., landfills, electric utilities, mineral processes); area-wide (e.g., farming operations, construction/demolition activities, residential fuel combustion); and mobile sources (e.g., automobiles, aircraft, off-road equipment). The latest criteria pollutant emissions summary (2012) for counties in which the water conveyance facility would be located (Yolo, Sacramento, San Joaquin, Contra Costa) is summarized in Tables 22E-2 through 22E-5.

Table 22E-2. Yolo County Air Quality Emissions—2012

	Annual emissions (tons per day)					
Source Type	ROG	CO	NO_X	SO_X	PM10	PM2.5
Stationary sources						
Total fuel combustion	0.14	1.81	2.93	0.26	0.46	0.46
Total waste disposal	0.07	0.00	0.00	0.01	0.00	0.00
Total cleaning and surface coatings	1.02	0.00	0.00	0.00	0.01	0.01
Total petroleum production and marketing	1.17	0.04	0.00	0.00	0.00	0.00
Total industrial processes	0.41	0.39	0.17	0.08	1.74	0.64
Total stationary sources	2.81	2.24	3.10	0.35	2.21	1.11
Area-wide sources						
Total solvent evaporation	2.30	0.00	0.00	0.00	0.00	0.00
Total miscellaneous processes	1.29	6.77	0.53	0.04	21.30	3.49
Total area-wide sources	3.59	6.77	0.53	0.04	21.30	3.49
Mobile sources						
Total on road mobile sources	2.50	23.64	7.13	0.02	0.49	0.27
Total off road mobile sources	1.99	11.71	5.72	0.01	0.30	0.27
Total mobile sources	4.49	35.35	12.85	0.03	0.79	0.54
Yolo County total	10.89	44.36	16.48	0.42	24.30	5.14

Source: California Air Resources Board 2013

Table 22E-3. Sacramento County Air Quality Emissions—2012

	Annual emissions (tons per day)					
Source Type	ROG	CO	NO_X	SO_X	PM10	PM2.5
Stationary sources						
Total fuel combustion	0.39	3.34	2.62	0.08	0.35	0.34
Total waste disposal	1.16	0.05	0.05	0.01	0.00	0.00
Total cleaning and surface coatings	4.43	0.00	0.00	0.00	0.00	0.00
Total petroleum production and marketing	2.47	0.01	0.01	0.00	0.00	0.00
Total industrial processes	1.06	0.54	0.24	0.28	1.27	0.48
Total stationary sources	9.51	3.94	2.92	0.37	1.62	0.82
Area-wide sources						
Total solvent evaporation	13.14	0.00	0.00	0.00	0.01	0.01
Total miscellaneous processes	8.19	37.20	2.98	0.13	21.78	7.84
Total area-wide sources	21.33	37.20	2.98	0.13	21.79	7.85
Mobile sources						
Total on road mobile sources	15.11	148.81	31.70	0.19	2.62	1.33
Total off road mobile sources	9.30	61.30	11.89	0.18	0.76	0.68
Total mobile sources	24.41	210.11	43.59	0.37	3.38	2.01
Sacramento County total	55.25	251.25	49.49	0.87	26.79	10.68

Source: California Air Resources Board 2013

Table 22E-4. San Joaquin County Air Quality Emissions—2012

	Annual emissions (tons per day)					
Source Type	ROG	CO	NO_X	SO_X	PM10	PM2.5
Stationary sources						
Total fuel combustion	0.34	2.97	5.04	1.33	0.22	0.21
Total waste disposal	1.59	0.10	0.07	0.03	0.04	0.03
Total cleaning and surface coatings	2.69	0.00	0.00	0.00	0.08	0.07
Total petroleum production and marketing	1.34	0.02	0.02	0.00	0.00	0.00
Total industrial processes	2.48	0.25	2.85	1.60	1.55	0.66
Total stationary sources	8.44	3.34	7.98	2.96	1.89	0.97
Area-wide sources						
Total solvent evaporation	6.73	0.00	0.00	0.00	0.00	0.00
Total miscellaneous processes	9.22	9.57	1.54	0.07	26.82	5.23
Total area-wide sources	15.95	9.57	1.54	0.07	26.82	5.23
Mobile sources						
Total on road mobile sources	7.82	69.94	23.17	0.09	1.52	0.91
Total off road mobile sources	4.38	19.77	5.04	0.08	0.40	0.33
Total mobile sources	12.20	89.71	28.21	0.17	1.92	1.24
San Joaquin County total	36.59	102.62	37.73	3.20	30.63	7.44

Source: California Air Resources Board 2013

Table 22E-5. Contra Costa County Air Quality Emissions—2012

	Annual emissions (tons per day)					
Source Type	ROG	CO	NO_X	SO_X	PM10	PM2.5
Stationary sources						
Total fuel combustion	2.56	11.20	13.44	5.98	0.58	0.58
Total waste disposal	0.42	0.16	0.28	0.03	0.00	0.00
Total cleaning and surface coatings	2.48	0.00	0.01	0.00	0.00	0.00
Total petroleum production and marketing	7.45	0.72	0.57	2.00	0.00	0.00
Total industrial processes	3.33	1.16	2.25	7.02	0.64	0.16
Total stationary sources	16.24	13.24	16.55	15.03	1.22	0.74
Area-wide sources						
Total solvent evaporation	8.48	0.00	0.00	0.00	0.00	0.00
Total miscellaneous processes	2.00	23.68	2.46	0.07	11.08	4.55
Total area-wide sources	10.48	23.68	2.46	0.07	11.08	4.55
Mobile sources						
Total on road mobile sources	11.24	111.62	23.88	0.15	1.96	1.01
Total off road mobile sources	2.81	9.83	5.50	0.44	0.31	0.27
Total mobile sources	14.05	121.45	29.38	0.59	2.27	1.28
Contra Costa County total	40.77	158.37	48.39	15.69	14.57	6.57

Source: California Air Resources Board 2013

22E.3.4 Federal Nonattainment Status and Conformity Applicably

Local monitoring data (Table 22E-1) are used to designate areas as nonattainment, maintenance, attainment, or unclassified for the NAAQS. Table 22E-6 summarizes the attainment status of the Plan Area within SVAB, SJVAB, and SFBAAB with regard to the NAAQS.

Table 22E-6. Federal Attainment Status of the Plan Area within SVAB, SJVAB, and SFBAAB

Pollutant	SVAB	SJVAB	SFBAAB
Ozone	Severe Nonattainment	Extreme Nonattainment	Marginal Nonattainment
Carbon Monoxide	Moderate Maintenance[a]	Moderate Maintenance[a]	Moderate Maintenance[a]
Coarse Particulate Matter (PM10)	Moderate Maintenance[a]	Serious Maintenance	Attainment
Fine Particulate Matter (PM2.5)	Nonattainment[a]	Nonattainment	Nonattainment

Sources: U.S. Environmental Protection Agency 2014b; California Air Resources Board 2014b.
[a] Applies only to a portion of the air basin that the Plan Area crosses (see Figures 22E-1 through 22E-4).

EPA's General Conformity Rule (40 CFR Parts 51 and 93) only applies to Federal actions that are taken in EPA-designated "nonattainment" or "maintenance" areas. Accordingly, as outlined in Section III.A of the General Conformity Rule, "only actions which cause emissions in designated nonattainment and maintenance areas are subject to the regulations". The general conformity

evaluation is made by comparing all emission sources (e.g., haul trucks, off-road equipment) located in nonattainment or maintenance areas to the applicable general conformity *de minimis* thresholds shown in Table 22E-7.

Table 22E-7. Federal General Conformity *de Minimis* Thresholds

	Annual Air Pollutant Emissions in Tons per Year					
Air Basin	ROG[a]	NO_X[a]	CO	PM10	PM2.5	SO_2[b]
Sacramento Valley Air Basin	25	25	100	100	100	100
San Joaquin Valley Air Basin	10	10	100	100	100	100
San Francisco Bay Area Air Basin	100	100	100	None	100	100

Source: 40 CFR 93.153
CO = carbon monoxide.
NO_X = oxides of nitrogen.
PM2.5 = particulate matter 2.5 microns in diameter or less.
PM10 = particulate matter 10 microns in diameter or less.
ROG = reactive organic gases.
SO_2 = sulfur dioxide
[a] ROG and NO_X are precursors to ozone and NO_X is a precursor to PM NO_X emissions in excess of 100 tons per year within federally-designated PM10 or PM2.5 nonattainment or maintenance areas trigger a secondary PM threshold.
[b] SO_2 is a precursor to PM2.5.

The majority of construction emissions would occur at construction sites along the water conveyance alignment. Emissions would also be generated along haul routes used to transport equipment and materials to construction sites. Figures 22E-1 through 22E-4 identify the federally-designated nonattainment and maintenance areas for ozone (ROG and NO_X), CO, PM10, and PM2.5 in the Plan Area relative to the project alignment and haul routes. Table 22E-8 summaries project construction activities that would occur within the federally-designated nonattainment and maintenance areas.

Table 22E-8. Construction Activities Located Within Federally-Designated Nonattainment or Maintenance Areas

	Sacramento Valley Air Basin		
Pollutant	Federal Designation (see Table 22E-6)	General Designation Boundaries (see Figures 22E-1 through 22E-4)	Project Sites Within Boundary (see Figures 22E-1 through 22E-4)
Ozone	Severe Nonattainment	Sacramento and Yolo counties, non-Lake Tahoe Air Basin areas of El Dorado and Placer counties, and eastern Solano and southern Sutter counties	Water conveyance alignment and material and equipment haul roads
CO	Moderate Maintenance	Urbanized areas of Sacramento, Placer, and Yolo counties	Material and equipment haul roads
PM10	Moderate Maintenance	Sacramento County	Water conveyance alignment and material and equipment haul roads within Sacramento County
PM2.5	Nonattainment	Sacramento County, western El Dorado and Placer counties, and eastern Yolo and Solano counties	Water conveyance alignment and material and equipment haul roads
Pollutant	San Joaquin Valley Air Basin		
	Federal Designation (see Table 22E-6)	General Designation Boundaries (see Figures 22E-1 through 22E-4)	Project Sites Within Boundary (see Figures 22E-1 through 22E-4)
Ozone (8 hr)	Extreme Nonattainment	All counties in SJVAPCD-portion of the SJVAB	Water conveyance alignment and material and equipment haul roads
CO	Moderate Maintenance	Stockton urbanized area	Material and equipment haul roads
PM10	Serious Maintenance	All counties in SJVAPCD-portion of the SJVAB	Water conveyance alignment and material and equipment haul roads
PM2.5	Nonattainment	All counties in SJVAPCD-portion of the SJVAB	Water conveyance alignment and material and equipment haul roads
Pollutant	San Francisco Bay Area Air Basin		
	Federal Designation (see Table 22E-6)	General Designation Boundaries (see Figures 22E-1 through 22E-4)	Project Sites Within Boundary (see Figures 22E-1 through 22E-4)
Ozone (8 hr)	Marginal Nonattainment	All areas in the SFBAAB except northern Sonoma County	Water conveyance alignment and material and equipment haul roads
CO	Moderate Maintenance	Urbanized areas of Alameda, Contra Costa, Marin, San Mateo, Santa Clara, Solano, and Sonoma counties	Material and equipment haul roads
PM10	Attainment	-	-
PM2.5	Nonattainment	All areas in the SFBAAB except northern Sonoma County	Water conveyance alignment and material and equipment haul roads

The general conformity analysis considers all direct and indirect construction emissions associated with the project activities outlined in Table 22E-8. The analysis also evaluates emissions from long-term operations and maintenance (O&M) activities that would begin once construction is complete. Two timeframes are evaluated in the O&M analysis to capture anticipated changes in vehicle technologies and emission factors—2030 (early long-term, or ELT) and 2060 (late long-term, or LLT).

22E.4 Relationship to Other Environmental Analyses

A partially recirculated Draft EIS/EIR will be published for public review and comment in May 2015 providing an analysis of the APA (Alternative 4/4A), with publication of the Final EIS/EIR anticipated in December 2015. The partially recirculated Draft EIS/EIR presents the general conformity determination process and general findings in the general conformity determination for public and agency review, while the final general conformity determination will be published concurrent with the Record of Decision (ROD) for the Federal action.

The EIS/EIR was prepared consistent with NEPA and California Environmental Quality Act (CEQA) requirements. CEQA and NEPA requires an evaluation of air quality impacts associated with construction and operation of the proposed project. The analysis of impacts under NEPA and CEQA was evaluated using the local thresholds of significance established by the YSAQMD, SMAQMD, BAAQMD, and SJVAPCD.

22E.5 Emission Reduction Measures

22E.5.1 Onsite Environmental Commitments

Environmental commitments to reduce onsite construction emissions are identified in Appendix 3B, *Environmental Commitments*, of the partially recirculated Draft EIS/EIR. These commitments have been incorporated into the project design and are considered a condition of project approval. The environmental commitments represent all feasible actions to reduce onsite construction emissions. The environmental commitments outlined in the partially recirculated Draft EIS/EIR are described below. The BDCP proponents—Department of Water Resources (DWR) and six State Water Project (SWP) and Central Valley Project (CVP) water contractors—have primary implementation responsibility for the environmental commitments.

Construction Equipment Exhaust Reduction Plan

Prior to construction, BDCP proponents will develop a construction equipment exhaust reduction plan to reduce criteria air pollutants from construction equipment. The reduction plan will be provided to the appropriate Plan Area air districts for approval prior to construction. Control technology that achieves equivalent or greater reductions than those identified below may be specified as new emissions reduction technologies become available and cost-effective.

22E.5.1.1.1 Off-Road Heavy-Duty Engines

The reduction plan will require that equipment used to construct BDCP facilities achieve fleet-wide average criteria pollutant emissions rates for equipment greater than 50 horsepower that are equivalent to the use of a model year 2013 fleet. Prior to construction start for each major project feature BDCP proponents will ensure model year 2013 emissions rates are achieved by developing a-specific construction equipment exhaust reduction plan. Contractors may utilize a combination of newer engines, aftermarket controls, and retrofits to achieve the fleet-wide average performance standard. Potential strategies may include the following:

- Electrification of equipment
- Use of diesel particulate filters on non-electrified equipment.
- Use of compressed natural gas (CNG).
- Use of advanced engines (e.g.., Tier 3 or Tier 4 certified engines).

The BDCP proponents will quantitatively demonstrate, through equipment-specific modeling, that fleet-wide average achieve criteria pollutant emissions rates for equipment greater than 50 horsepower that are equivalent to the use of a model year 2013 fleet have been achieved by the selected equipment and aftermarket controls. As noted in Appendix 22A, *Air Quality Analysis Methodology*, the Air Quality analysis and Health Risk Assessment have been performed based on model year 2013 emission factors obtained from the SMAQMD Construction Mitigation Calculator. The 2013 model year emission factors for each equipment piece are built from the zero-hour emissions rates, annual deterioration rates, and assumptions about engine operating hours.

In addition to the model year 2013 performance standard, the following best management practices will be incorporated into the reduction plan.

- Minimize idling time either by shutting equipment off when not in use or limiting the time of idling to 3 minutes (5 minutes required by 13 CCR 2449[d][3], 2485). Provide clear signage that posts this requirement for workers at the entrances to the site.
- Maintain all construction equipment in proper working condition according to manufacturer's specifications. The equipment must be checked by an ASE- certified mechanic and determined to be running in proper condition before it is operated.
- Ensure that emissions from all off-road diesel-powered equipment used on the project site do not exceed 40% opacity for more than 3 minutes in any 1 hour. Any equipment found to exceed 40% opacity (or Ringelmann 2.0[2]) will be repaired immediately. Non-compliant equipment will be documented and a summary provided annually to the lead agency and air district. A visual inspection of all in-operation equipment will be made at least weekly by the contractor and witnessed monthly or more frequently by the proponent agency(ies), and a periodic summary of the visual survey results will be submitted by the contractor throughout the duration of the proposed project, except that the summary will not be required for any 30-day period in which no construction activity occurs. The summary will include the quantity and type of vehicles inspected, as well as the dates of each survey. The air districts or other officials may conduct periodic site inspections to determine compliance. Nothing in this measure will supersede other air district or state rules or regulations.

[2] Based on the Ringelmann scale, which measures the density of smoke in the air.

22E.5.1.1.2 Marine Vessels

Prior to construction start for each major project feature BDCP proponents will ensure that all marine vessels used to construct BDCP facilities utilize EPA certified Tier 3 or newer engines. As noted in Appendix 22A, *Air Quality Analysis Methodology*, the air quality analysis and HRA have been performed based on model year 2010 emission factors (Tier 3 compliance for new engines) obtained from the ARB.

22E.5.1.1.3 Heavy Duty Haul Trucks

Prior to construction start for each major project feature BDCP proponents will ensure that all on-road heavy-duty diesel trucks with a gross vehicle weight rating of 19,500 pounds or greater used to construct BDCP facilities comply with EPA 2007 on-road emission standards for particulate matter less than 10 microns in diameter (PM10) and nitrogen oxides (NO_X) (0.01 g/bhp-hr and 0.20 g/bhp-hr, respectively). These PM10 and NO_X standards were phased in through the 2007 and 2010 model years on a percent of sales basis (50% of sales in 2007 to 2009 and 100% of sales in 2010). As noted in Appendix 22A, *Air Quality Analysis Methodology*, the Air Quality analysis and Health Risk Assessment have been performed based on model year 2010 emission factors obtained from the ARB's EMFAC2014 model.

22E.5.1.1.4 Locomotives

Prior to construction start for each major project feature BDCP proponents will ensure that all diesel tunneling locomotives used to construct BDCP facilities utilize EPA certified Tier 4 or newer engines.

Fugitive Dust Control

BDCP proponents will implement basic and enhanced control measures at all construction and staging areas to reduce construction-related fugitive dust. This commitment is related to AMM35, Fugitive Dust Control, described in BDCP Appendix 3.C. The following measures are based on the SMAQMD's CEQA guidelines, and are in conformance with the BAAQMD, SJVAPCD, and YSAQMD fugitive dust control requirements.

22E.5.1.1.5 Basic Fugitive Dust Control Measures

BDCP proponents will ensure that the following measures will be implemented to control dust during construction activities.

- Water will be applied to all exposed surfaces as reasonably necessary to prevent visible dust from leaving work areas. Frequency of watering will be increased during especially dry or windy periods or in areas with high construction activity. Exposed surfaces include (but are not limited to) soil piles, graded areas, unpaved parking areas, staging areas, and access roads. If water or other dust control measures cannot be implemented to unpaved access roads, vehicle speeds will be limited to 15 miles per hour on such road segments.
- Cover or maintain at least 2 feet of freeboard space on haul trucks transporting soil, sand, or other loose material on the site. Haul trucks transporting soil, sand, or other loose material that will be traveling along freeways or major roadways shall be covered.
- Use wet power vacuum street sweepers to remove any visible trackout mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited.

- Disturbed areas should be promptly finished and/or protected and maintained in a manner to control fugitive dust. Mulch, dust palative, soil binders, or other reasonable mitigation measures will be used in inactive areas.

22E.5.1.1.6 Enhanced Fugitive Dust Control Measures for Land Disturbance

BDCP proponents will ensure that the following measures will be implemented to control dust during soil disturbance activities.

- Water exposed soil with adequate frequency for continued moist soil. However, do not overwater to the extent that sediment flows off the site.
- Suspend excavation, grading, and/or offending demolition activity during high wind conditions, should the high winds cause fugitive dust to leave the construction site.
- Where appropriate, install wind breaks (e.g., plant trees, solid fencing) on windward side(s) of construction areas.
- Plant vegetative ground cover (native grass/plant seed) in disturbed areas as soon as reasonable after construction is completed. Water appropriately until vegetation is established.

22E.5.1.1.7 Measures for Entrained Road Dust

BDCP proponents will ensure that the following measures will be implemented to control track out.

- Install rattle plates, stabilized construction entrances/exits, wheel washers, or wash off all trucks, vehicles, and equipment leaving the site.
- Treat site accesses to a distance of 100 feet from the paved road with a 6 to 12-inch layer of wood chips, mulch, or gravel to reduce generation of road dust and track out onto public roads.
- Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person will respond and take corrective action within 48 hours. The phone number of the District will also be visible to ensure compliance.

22E.5.1.1.8 Measures for New Concrete Batching Plants

BDCP proponents will ensure that the following measures will be implemented to the extent feasible to control dust during concrete batching activities.

- Apply water and/or chemical suppressants to reduce fugitive dust emissions from active storage piles and during aggregate and sand delivery, storage, and transfer.
- Use a hood system vented to a fabric filter/baghouse to reduce fugitive dust emissions during cement delivery and hopper and central mix loading.

22E.5.2 Offsite Mitigation

Mitigation measures to avoid construction emissions in excess of air district and federal *de minimis* thresholds are outlined in Chapter 22, *Air Quality and Greenhouse Gases*, of the partially recirculated Draft EIS/EIR. These measures are consistent with NEPA and CEQA mitigation and minimization measures and will be required elements of the project, as they will be included in the project's Mitigation Monitoring and Reporting Program, as required under CEQA. The mitigation measures

required in the partially recirculated Draft EIS/EIR are described below. The BDCP proponents have primary implementation responsibility for the mitigation measures.

Mitigation Measure AQ-1a: Mitigate and Offset Construction-Generated Criteria Pollutant Emissions within the SFNA to Net Zero (0) for Emissions in Excess of General Conformity *De Minimis* Thresholds (Where Applicable) and to Quantities below Applicable CEQA Thresholds for Other Pollutants[3]

DWR will reduce criteria pollutant emissions generated by the construction of the water conveyance facilities associated with BDCP within the SFNA through the creation of offsetting reductions of emissions. The preferred means of undertaking such offsite mitigation shall be through a partnership with the SMAQMD involving the payment of offsite mitigation fees. Criteria pollutants in excess of the federal *de minimis* thresholds shall be reduced to net zero (0) (see Table 22-9). Criteria pollutants not in excess of the *de minimis* thresholds, but above any applicable air pollution control or air quality management district CEQA thresholds[4] shall be reduced to quantities below the numeric thresholds (see Table 22-8).[5]

DWR will undertake in good faith an effort to enter into a development mitigation contract with SMAQMD in order to reduce criteria pollutant emissions generated by the construction of the water conveyance facilities associated with BDCP. The preferred source of emissions reductions for NO_X, PM, and ROG shall be through contributions to SMAQMD's HDLEVIP. The HDLEVIP is designed to reduce NO_X, PM, and ROG from on- and offroad sources. The program is managed and implemented by SMAQMD on behalf of all air districts within the SFNA, including the YSAQMD.

SMAQMD's incentive programs are a means of funding projects and programs capable of achieving emissions reductions. The payment fee is based on the average cost to achieve one ton per day (tpd) of reductions based on the average cost for reductions over the previous year. Onroad reductions averaged (nominally) $44 million ($NO_X$ only) and off-road reductions averaged $36 million ($NO_X$ only) over the previous year, thus working out to approximately $40 million per one tpd of reductions. This rate roughly correlates to the average cost effectiveness of the Carl Moyer Incentive Program.

If DWR is successful in reaching what it regards as a satisfactory agreement with SMAQMD, DWR will enter into mitigation contracts with SMAQMD to reduce NO_X, PM, or ROG (as appropriate) emissions to the required levels. Such reductions may occur within the SMAQMD and/or within another air district within the SFNA. The required levels are:

- For emissions in excess of the federal *de minimis* threshold: **net zero (0)** (see Table 22-9).
- For emissions not in excess of *de minimis* thresholds but above the appropriate SMAQMD standards: **below the appropriate CEQA threshold levels** (see Table 22-8.)

[3] In the title of this mitigation measure, the phrase "for other pollutants" is intended to apply to other alternatives, where associated impacts to other pollutants may exceed thresholds other than NO_X.

[4] For example, NOx emissions in a certain year may exceed BAAQMD's 54 pound per day CEQA threshold, but not the 100 ton annual *de minimis* threshold. According to Appendix G of the State CEQA Guidelines, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make determinations regarding the significance of an impact.

[5] For example, emissions of NO_X generated by Alternative 1A both exceed the federal *de minimis* threshold for the SVAB and the SMAQMD's CEQA threshold. NO_X emissions must therefore be reduced to net zero (0).

Implementation of this mitigation would require DWR to adopt the following specific responsibilities.

- Consult with the SMAQMD in good faith with the intention of entering into a mitigation contract with SMAQMD for the HDLEVIP. For SIP purposes, the necessary reductions must be achieved (contracted and delivered) by the applicable year in question (i.e., emissions generated in year 2016 would need to be reduced offsite in 2016). Funding would need to be received prior to contracting with participants and should allow sufficient time to receive and process applications to ensure offsite reduction projects are funded and implemented prior to commencement of BDCP activities being reduced. This would roughly equate to the equivalent of two years prior to the required mitigation; additional lead time may be necessary depending on the level of offsite emission reductions required for a specific year. In negotiating the terms of the mitigation contract, DWR and SMAQMD should seek clarification and agreement on SMAQMD responsibilities, including the following.
    - Identification of appropriate offsite mitigation fees required for BDCP.
    - Timing required for obtaining necessary offsite emission credits.
    - Processing of mitigation fees paid by DWR.
    - Verification of emissions inventories submitted by DWR.
    - Verification that offsite fees are applied to appropriate mitigation programs within the SFNA.
- Quantify mitigation fees required to satisfy the appropriate reductions. As noted above, the payment fees may vary by year and are sensitive to the number of projects requiring reductions within the SFNA. The schedule in which payments are provided to SMAQMD also influences overall cost. For example, a higher rate on a per-tonnage basis will be required for project elements that need accelerated equipment turn-over to achieve near-term reductions, whereas project elements that are established to contract to achieve far-term reductions will likely pay a lower rate on a per-tonnage basis.
- Develop a compliance program to calculate emissions and collect fees from the construction contractors for payment to SMAQMD. The program will require, as a standard or specification of their construction contracts with DWR, that construction contractors identify construction emissions and their share of required offsite fees, if applicable. Based on the emissions estimates, DWR will collect fees from the individual construction contractors (as applicable) for payment to SMAQMD. Construction contractors will have the discretion to reduce their construction emissions to the lowest possible level through additional onsite mitigation, as the greater the emissions reductions that can be achieved by onsite mitigation, the lower the required offsite fee. Acceptable options for reducing emissions may include use of late-model engines, low-emission diesel products, additional electrification or alternative fuels, engine-retrofit technology, and/or after-treatment products. All control strategies must be verified by SMAQMD.
- Conduct daily and annual emissions monitoring to ensure onsite emissions reductions are achieved and no additional mitigation payments are required. Excess offsite funds can be carried from previous to subsequent years in the event that additional reductions are achieved by onsite mitigation. At the end of the project, if it is determined that excess offset funds remain (outstanding contracts and administration over the final years of the contracts

will be taken into consideration), SMAQMD and DWR shall determine the disposition of final funds (e.g., additional emission reduction projects to offset underperforming contracts, return of funds to DWR, etc.).

If a sufficient number of emissions reduction projects are not identified to meet the required performance standard, DWR will coordinate with SMAQMD to ensure the performance standards of achieving net zero (0) for emissions in excess of General Conformity *de minimis* thresholds (where applicable) and of achieving quantities below applicable CEQA thresholds for other pollutants not in excess of the *de minimis* thresholds but above CEQA thresholds are met.

Mitigation Measure AQ-1b: Develop an Alternative or Complementary Offsite Mitigation Program to Mitigate and Offset Construction-Generated Criteria Pollutant Emissions within the SFNA to Net Zero (0) for Emissions in Excess of General Conformity *De Minimis* Thresholds (Where Applicable) and to Quantities below Applicable CEQA Thresholds for Other Pollutants

Should DWR be unable to enter into what they regard as a satisfactory agreement with SMAQMD as contemplated by Mitigation Measure AQ-1a, or should DWR enter into an agreement with SMAQMD but find themselves unable to meet the performance standards set forth in Mitigation Measure AQ-1a, DWR will develop an alternative or complementary offsite mitigation program to reduce criteria pollutant emissions generated by the construction of the water conveyance facilities associated with BDCP. The offsite mitigation program will offset criteria pollutant emissions to the required levels identified in Mitigation Measure AQ-1a. Accordingly, the program will ensure that the project does not contribute to or worsen existing air quality violations. Whether this program will address emissions beyond NO_X, PM, or ROG, will turn on whether DWR has achieved sufficient reductions of those pollutants pursuant to Mitigation Measure AQ-1a.

The offsite mitigation program will establish a program to fund emission reduction projects through grants and similar mechanisms. All projects must provide contemporaneous (occur in the same calendar year as the emission increases) and localized (i.e., within the SFNA) emissions benefit to the area of effect. DWR may identify emissions reduction projects through consultation with SMAQMD, other air districts within the SFNA, and ARB, as needed. Potential projects could include, but are not limited to the following.

- Alternative fuel, low-emission school buses, transit buses, and other vehicles.
- Diesel engine retrofits and repowers.
- Locomotive retrofits and repowers.
- Electric vehicle or lawn equipment rebates.
- Electric vehicle charging stations and plug-ins.
- Video-teleconferencing systems for local businesses.
- Telecommuting start-up costs for local businesses.

As part of its alternative or complementary offsite mitigation program, DWR will develop pollutant-specific formulas to monetize, calculate, and achieve emissions reductions in a cost-effective manner. Construction contractors, as a standard specification of their construction contracts with DWR, will identify construction emissions and their share of required offset fees.

DWR will verify the emissions estimates submitted by the construction contractors and calculate the required fees. Construction contractors (as applicable) will be required to surrender required fees to DWR prior to the start of construction. Construction contractors will have the discretion to reduce their construction emissions to the lowest possible level through additional onsite mitigation, as the greater the emissions reductions that can be achieved by onsite mitigation, the lower the required offset fee. Acceptable options for reducing emissions may include, but are not limited to, the use of late-model engines, low-emission diesel products, additional electrification or alternative fuels, engine-retrofit technology, and/or after-treatment products. All control strategies must be verified by SMAQMD, the ARB, any relevant air pollution control or air quality management district within the SFNA, or by a qualified air quality expert employed by or retained by DWR.

The offsite fee, grant, or other mechanism will be calculated or formulated based on the actual cost of pollutant reductions. No collected offset fees will be used to cover administrative costs; offset fees or other payments are strictly limited to procurement of offsite emission reductions. Fees or other payments collected by DWR will be allocated to emissions reductions projects in a grant-like manner. DWR shall document the fee schedule basis, such as consistency with the ARB's Carl Moyer Program cost-effectiveness limits and capital recovery factors.

DWR will conduct annual reporting to verify and document that emissions reductions projects achieve a 1:1 reduction with construction emissions to ensure claimed offsets meet the required performance standard. All offsite reductions must be quantifiable, verifiable, enforceable, and satisfy the basic criterion of additionality (i.e., the reductions would not happen without the financial support of purchased offset credits). Annual reports will include, at a minimum the following components.

- Total amount of offset fees received.
- Total fees distributed to offsite projects.
- Total fees remaining.
- Projects funded and associated pollutant reductions realized.
- Total emission reductions realized.
- Total emissions reductions remaining to satisfy the requirements of Mitigation Measure AQ-1b.
- Overall cost-effectiveness of the projects funded.

If a sufficient number of emissions reduction projects are not identified to meet the required performance standard, DWR will consult with SMAQMD, the ARB, any relevant air pollution control or air quality management district within the SFNA, or a qualified air quality expert employed by or retained by DWR to ensure conformity is met through some other means of achieving the performance standards of achieving net zero (0) for emissions in excess of General Conformity *de minimis* thresholds (where applicable) and of achieving quantities below applicable CEQA thresholds for other pollutants.

Mitigation Measure AQ-3a: Mitigate and Offset Construction-Generated Criteria Pollutant Emissions within BAAQMD/SFBAAB to Net Zero (0) for Emissions in Excess of General Conformity *De Minimis* Thresholds (Where Applicable) and to Quantities below Applicable BAAQMD CEQA Thresholds for Other Pollutants[6]

DWR will reduce criteria pollutant emissions generated by the construction of the water conveyance facilities associated with BDCP within the BAAQMD through the creation of offsetting reductions of emissions occurring within the SFBAAB. The preferred means of undertaking such offsite mitigation shall be through a partnership with the BAAQMD involving the payment of offsite mitigation fees. Criteria pollutants in excess of the federal *de minimis* thresholds shall be reduced to net zero (0) (see Table 22-9). Criteria pollutants not in excess of the *de minimis* thresholds, but above any applicable air pollution control or air quality management district CEQA thresholds[7] shall be reduced to quantities below the numeric thresholds (see Table 22-8).

DWR will undertake in good faith an effort to enter into a development mitigation contract with BAAQMD in order to reduce criteria pollutant emissions generated by the construction of the water conveyance facilities associated with BDCP within the BAAQMD. The preferred source of emissions reductions for NO_X, ROG, and PM shall be through contributions to BAAQMD's Carl Moyer Program and/or other BAAQMD incentive programs (e.g., TFCA).

If DWR is successful in reaching what it regards as a satisfactory agreement with BAAQMD, DWR will enter into mitigation contracts with BAAQMD to reduce NO_X, PM, or ROG (as appropriate) emissions to the required levels. Such reductions may occur within the SFBAAB. The required levels are:

- For emissions in excess of the federal *de minimis* threshold: **net zero (0)** (see Table 22-9).
- For emissions not in excess of *de minimis* thresholds but above the appropriate BAAQMD standards: **below the appropriate CEQA threshold levels** (see Table 22-8).

Implementation of this mitigation would require DWR adopt the following specific responsibilities.

- Consult with the BAAQMD in good faith with the intention of entering into a mitigation contract with BAAQMD for the Carl Moyer Program and/or other BAAQMD emission reduction incentive program. For SIP purposes, the necessary reductions must be achieved (contracted and delivered) by the applicable year in question (i.e., emissions generated in year 2016 would need to be reduced offsite in 2016). Funding would need to be received prior to contracting with participants and should allow sufficient time to receive and process applications to ensure offsite reduction projects are funded and implemented prior to commencement of BDCP activities being reduced. In negotiating the terms of the mitigation contract, DWR and BAAQMD should seek clarification and agreement on BAAQMD responsibilities, including the following.

[6] In the title of this mitigation measure, the phrase "for other pollutants" is intended to apply to other alternatives, where associated impacts to other pollutants may exceed thresholds other than NO_X.

[7] For example, NO_X emissions in a certain year may exceed BAAQMD's 54 pound per day CEQA threshold, but not the 100 ton annual *de minimis* threshold. According to Appendix G of the State CEQA Guidelines, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make determinations regarding the significance of an impact.

- Identification of appropriate offsite mitigation fees required for BDCP.
- Timing required for obtaining necessary offsite emission credits.
- Processing of mitigation fees paid by DWR.
- Verification of emissions inventories submitted by DWR.
- Verification that offsite fees are applied to appropriate mitigation programs within the SFBAAB.

- Quantify mitigation fees required to satisfy the appropriate reductions. Funding for the emission reduction projects will be provided in an amount up to the emission reduction project cost-effectiveness limit set by for the Carl Moyer Program during the year that the emissions from construction are emitted. (The current emissions limit is $17,720 / weighted ton of criteria pollutants [NO_X + ROG + (20*PM)]). An administrative fee of 5% would be paid by DWR to the BAAQMD to implement the program. The funding would be used to fund projects eligible for funding under the Carl Moyer Program guidelines or other BAAQMD emission reduction incentive program meeting the same cost-effectiveness threshold that are real, surplus, quantifiable, and enforceable.
- Develop a compliance program to calculate emissions and collect fees from the construction contractors for payment to BAAQMD. The program will require, as a standard or specification of their construction contracts with DWR, that construction contractors identify construction emissions and their share of required offsite fees, if applicable. Based on the emissions estimates, DWR will collect fees from the individual construction contractors (as applicable) for payment to BAAQMD. Construction contractors will have the discretion to reduce their construction emissions to the lowest possible level through additional onsite mitigation, as the greater the emissions reductions that can be achieved by onsite mitigation, the lower the required offsite fee. Acceptable options for reducing emissions may include use of late-model engines, low-emission diesel products, additional electrification or alternative fuels, engine-retrofit technology, and/or after-treatment products. All control strategies must be verified by BAAQMD.
- Conduct daily and annual emissions monitoring to ensure onsite emissions reductions are achieved and no additional mitigation payments are required. Excess offsite funds can be carried from previous to subsequent years in the event that additional reductions are achieved by onsite mitigation. At the end of the project, if it is determined that excess offset funds remain (outstanding contracts and administration over the final years of the contracts will be taken into consideration), BAAQMD and DWR shall determine the disposition of final funds (e.g., additional emission reduction projects to offset underperforming contracts, return of funds to DWR, etc.).

If a sufficient number of emissions reduction projects are not identified to meet the required performance standard, the DWR will coordinate with BAAQMD to ensure the performance standards of achieving net zero (0) for emissions in excess of General Conformity *de minimis* thresholds (where applicable) and of achieving quantities below applicable BAAQMD CEQA thresholds for other pollutants not in excess of the *de minimis* thresholds but above BAAQMD CEQA thresholds are met.

Mitigation Measure AQ-3b: Develop an Alternative or Complementary Offsite Mitigation Program to Mitigate and Offset Construction-Generated Criteria Pollutant Emissions within the BAAQMD/SFBAAB to Net Zero (0) for Emissions in Excess of General Conformity *De Minimis* Thresholds (Where Applicable) and to Quantities below Applicable BAAQMD CEQA Thresholds for Other Pollutants

Should DWR be unable to enter into what they regard as a satisfactory agreement with BAAQMD as contemplated by Mitigation Measure AQ-3a, or should DWR enter into an agreement with BAAQMD but find themselves unable to meet the performance standards set forth in Mitigation Measure AQ-3a, DWR will develop an alternative or complementary offsite mitigation program to reduce criteria pollutant emissions generated by the construction of the water conveyance facilities associated with BDCP. The offsite mitigation program will offset criteria pollutant emissions to the required levels identified in Mitigation Measure AQ-3a. Accordingly, the program will ensure that the project does not contribute to or worsen existing air quality violations. Whether this program will address emissions beyond NO_X, PM, or ROG, will turn on whether DWR has achieved sufficient reductions of those pollutants pursuant to Mitigation Measure AQ-3a.

The offsite mitigation program will establish a program to fund emission reduction projects through grants and similar mechanisms. All projects must provide contemporaneous (occur in the same calendar year as the emission increases) and localized (i.e., within the SFBAAB) emissions benefit to the area of effect. DWR may identify emissions reduction projects through consultation with BAAQMD and ARB, as needed. Potential projects could include, but are not limited to the following.

- Alternative fuel, low-emission school buses, transit buses, and other vehicles.
- Diesel engine retrofits and repowers.
- Locomotive retrofits and repowers.
- Electric vehicle or lawn equipment rebates.
- Electric vehicle charging stations and plug-ins.
- Video-teleconferencing systems for local businesses.
- Telecommuting start-up costs for local businesses.

As part of its alternative or complementary offsite mitigation program, DWR will develop pollutant-specific formulas to monetize, calculate, and achieve emissions reductions in a cost-effective manner. Construction contractors, as a standard specification of their construction contracts with DWR, will identify construction emissions and their share of required offset fees. DWR will verify the emissions estimates submitted by the construction contractors and calculate the required fees. Construction contractors (as applicable) will be required to surrender required fees to DWR prior to the start of construction. Construction contractors will have the discretion to reduce their construction emissions to the lowest possible level through additional onsite mitigation, as the greater the emissions reductions that can be achieved by onsite mitigation, the lower the required offset fee. Acceptable options for reducing emissions may include, but are not limited to, the use of late-model engines, low-emission diesel products, additional electrification or alternative fuels, engine-retrofit technology, and/or after-treatment products. All control strategies must be verified by BAAQMD, the ARB, or by a qualified air quality expert employed by or retained by DWR.

The offsite fee, grant, or other mechanism will be calculated or formulated based on the actual cost of pollutant reductions. No collected offset fees will be used to cover administrative costs; offset fees or other payments are strictly limited to procurement of offsite emission reductions. Fees or other payments collected by DWR will be allocated to emissions reductions projects in a grant-like manner. DWR shall document the fee schedule basis, such as consistency with the ARB's Carl Moyer Program cost-effectiveness limits and capital recovery factors.

DWR will conduct annual reporting to verify and document that emissions reductions projects achieve a 1:1 reduction with construction emissions to ensure claimed offsets meet the required performance standard. All offsite reductions must be quantifiable, verifiable, enforceable, and satisfy the basic criterion of additionality (i.e., the reductions would not happen without the financial support of purchased offset credits). Annual reports will include, at a minimum the following components.

- Total amount of offset fees received.
- Total fees distributed to offsite projects.
- Total fees remaining.
- Projects funded and associated pollutant reductions realized.
- Total emission reductions realized.
- Total emissions reductions remaining to satisfy the requirements of Mitigation Measure AQ-3b.
- Overall cost-effectiveness of the projects funded.

If a sufficient number of emissions reduction projects are not identified to meet the required performance standard, DWR will consult with BAAQMD, the ARB, or a qualified air quality expert employed by or retained by DWR to ensure conformity is met through some other means of achieving the performance standards of achieving net zero (0) for emissions in excess of General Conformity *de minimis* thresholds (where applicable) and of achieving quantities below applicable BAAQMD CEQA thresholds for other pollutants.

Mitigation Measure AQ-4a: Mitigate and Offset Construction-Generated Criteria Pollutant Emissions within SJVAPCD/SJVAB to Net Zero (0) for Emissions in Excess of General Conformity *De Minimis* Thresholds (Where Applicable) and to Quantities below Applicable SJVAPCD CEQA Thresholds for Other Pollutants[8]

DWR will reduce criteria pollutant emissions generated by the construction of the water conveyance facilities associated with BDCP within the SJVAPCD through the creation of offsetting reductions of emissions occurring within the SJVAB. The preferred means of undertaking such offsite mitigation shall be through a partnership with the SJVAPCD involving the payment of offsite mitigation fees. Criteria pollutants in excess of the federal *de minimis* thresholds shall be reduced to net zero (0) (see Table 22-9). Criteria pollutants not in excess of the *de minimis* thresholds, but above any applicable air pollution control or air quality

[8] In the title of this mitigation measure, the phrase "for other pollutants" is intended to apply to other alternatives, where associated impacts to other pollutants may exceed thresholds other than NO_X.

management district CEQA thresholds[9] shall be reduced to quantities below the numeric thresholds (see Table 22-8).[10]

DWR will undertake in good faith an effort to enter into a development mitigation contract with SJVAPCD in order to reduce criteria pollutant emissions generated by the construction of the water conveyance facilities associated with BDCP within the SJVAPCD. The preferred source of emissions reductions for NO_X, PM, and ROG shall be through contributions to SJVAPCD's VERA. The VERA is implemented through the District Incentive Programs and is a measure to reduce project impacts under CEQA. The current VERA payment fee for construction emissions is $9,350 per ton of NO_X and $9,011 per ton of PM10. This is an estimated cost and may change in the future (e.g., future year payment fees for NO_X could be in excess of the current price of $9,350) and are sensitive to the number and type of projects requiring emission reductions within the same air basin (Siong pers. comm. 2012).

If DWR is successful in reaching what it regards as a satisfactory agreement with SJVAPCD, DWR will enter into mitigation contracts with SJVAPCD to reduce NO_X, PM, or ROG (as appropriate) emissions to the required levels. Such reductions must occur within the SJVAB. required levels are:

- For emissions in excess of the federal de minimis threshold: **net zero (0)**.
- For emissions not in excess of *de minimis* thresholds but above the SJVAPCD's standards: **below the appropriate CEQA threshold levels**.

Implementation of this measure would require DWR to adopt the following specific responsibilities.

- Consult with the SJVAPCD in good faith with the intention of entering into a mitigation contract with SJVAPCD for the VERA. For SIP purposes, the necessary reductions must be achieved (contracted and delivered) by the applicable year in question (i.e., emissions generated in year 2016 would need to be reduced offsite in 2016). Funding would need to be received prior to contracting with participants and should allow sufficient time to receive and process applications to ensure offsite reduction projects are funded and implemented prior to commencement of BDCP activities being reduced. This would roughly equate to the equivalent of two months (2) prior to groundbreaking; additional lead time may be necessary depending on the level of offsite emission reductions required for a specific year. In negotiating the terms of the mitigation contract, DWR and SJVAPCD should seek clarification and agreement on SJVAPCD responsibilities, including the following.
    - Identification of appropriate offsite mitigation fees required for BDCP.
    - Processing of mitigation fees paid by DWR.
    - Verification of emissions inventories submitted by DWR

[9] For example, PM10 emissions in a certain year may exceed SJVAPCD's 15 ton annual CEQA threshold, but not the 100 ton annual *de minimis* threshold. According to Appendix G of the State CEQA Guidelines, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make determinations regarding the significance of an impact.

[10] For example, emissions of NO_X generated by Alternative 1A both exceed the federal *de minimis* threshold for the SJVAB and the SJVAPCD's CEQA threshold. NO_X emissions must therefore be reduced to net zero (0).

  - Verification that offsite fees are applied to appropriate mitigation programs within the SJVAB.

- Quantify mitigation fees required to satisfy the appropriate reductions. An administrative fee of 4% would be paid by DWR to the SJVAPCD to implement the program. As noted above, the payment fees may vary by year and are sensitive to the number of projects requiring reductions within the SJVAB.

- Develop a compliance program to calculate emissions and collect fees from the construction contractors for payment to SJVAPCD. The program will require, as a standard or specification of their construction contracts with DWR, that construction contractors identify construction emissions and their share of required offsite fees, if applicable. Based on the emissions estimates, DWR will collect fees from the individual construction contractors (as applicable) for payment to SJVAPCD. Construction contractors will have the discretion to reduce their construction emissions to the lowest possible level through additional onsite mitigation, as the greater the emissions reductions that can be achieved by onsite mitigation, the lower the required offsite fee. Acceptable options for reducing emissions may include use of late-model engines, low-emission diesel products, additional electrification or alternative fuels, engine-retrofit technology, and/or after-treatment products. All control strategies must be verified by SJVAPCD.

- Conduct daily and annual emissions monitoring to ensure onsite emissions reductions are achieved and no additional mitigation payments are required. Excess offsite funds can be carried from previous to subsequent years in the event that additional reductions are achieved by onsite mitigation. At the end of the project, if it is determined that excess offset funds remain (outstanding contracts and administration over the final years of the contracts will be taken into consideration), SJVAPCD and DWR shall determine the disposition of final funds (e.g., additional emission reduction projects to offset underperforming contracts, return of funds to DWR, etc.).

If a sufficient number of emissions reduction projects are not identified to meet the required performance standard, DWR will coordinate with SJVAPCD to ensure the performance standards of achieving net zero (0) for emissions in excess of General Conformity *de minimis* thresholds (where applicable) and of achieving quantities below applicable SJVAPCD CEQA thresholds for other pollutants not in excess of the *de minimis* thresholds but above SJVAPCD CEQA thresholds are met.

Mitigation Measure AQ-4b: Develop an Alternative or Complementary Offsite Mitigation Program to Mitigate and Offset Construction-Generated Criteria Pollutant Emissions within the SJVAPCD/SJVAB to Net Zero (0) for Emissions in Excess of General Conformity *De Minimis* Thresholds (Where Applicable) and to Quantities below Applicable SJVAPCD CEQA Thresholds for Other Pollutants

Should DWR be unable to enter into what they regard as a satisfactory agreement with SJVAPCD as contemplated by Mitigation Measure AQ-4a, or should DWR enter into an agreement with SJVAPCD but find themselves unable to meet the performance standards set forth in Mitigation Measure AQ-4a, DWR will develop an alternative or complementary offsite mitigation program to reduce criteria pollutant emissions generated by the construction of the water conveyance facilities associated with BDCP. The offsite mitigation program will offset criteria pollutant emissions to the required levels identified in Mitigation Measure AQ-4a. Accordingly, the

program will ensure that the project does not contribute to or worsen existing air quality violations. Whether this program will address emissions beyond NO_X, PM, or ROG, will turn on whether DWR has achieved sufficient reductions of those pollutants pursuant to Mitigation Measure AQ-4a.

The offsite mitigation program will establish a program to fund emission reduction projects through grants and similar mechanisms. All projects must provide contemporaneous (occur in the same calendar year as the emission increases) and localized (i.e., within the SJVAB) emissions benefit to the area of effect. DWR may identify emissions reduction projects through consultation with SJVAPCD and ARB, as needed. Potential projects could include, but are not limited to the following.

- Alternative fuel, low-emission school buses, transit buses, and other vehicles.
- Diesel engine retrofits and repowers.
- Locomotive retrofits and repowers.
- Electric vehicle or lawn equipment rebates.
- Electric vehicle charging stations and plug-ins.
- Video-teleconferencing systems for local businesses.
- Telecommuting start-up costs for local businesses.

As part of its alternative or complementary offsite mitigation program, DWR will develop pollutant-specific formulas to monetize, calculate, and achieve emissions reductions in a cost-effective manner. Construction contractors, as a standard specification of their construction contracts with DWR, will identify construction emissions and their share of required offset fees. DWR will verify the emissions estimates submitted by the construction contractors and calculate the required fees. Construction contractors (as applicable) will be required to surrender required fees to DWR prior to the start of construction. Construction contractors will have the discretion to reduce their construction emissions to the lowest possible level through additional onsite mitigation, as the greater the emissions reductions that can be achieved by onsite mitigation, the lower the required offset fee. Acceptable options for reducing emissions may include, but are not limited to, the use of late-model engines, low-emission diesel products, additional electrification or alternative fuels, engine-retrofit technology, and/or after-treatment products. All control strategies must be verified by SJVAPCD, the ARB, or by a qualified air quality expert employed by or retained by DWR.

The offsite fee, grant, or other mechanism will be calculated or formulated based on the actual cost of pollutant reductions. No collected offset fees will be used to cover administrative costs; offset fees or other payments are strictly limited to procurement of offsite emission reductions. Fees or other payments collected by DWR will be allocated to emissions reductions projects in a grant-like manner. DWR shall document the fee schedule basis, such as consistency with the ARB's Carl Moyer Program cost-effectiveness limits and capital recovery factors.

DWR will conduct annual reporting to verify and document that emissions reductions projects achieve a 1:1 reduction with construction emissions to ensure claimed offsets meet the required performance standard. All offsite reductions must be quantifiable, verifiable, enforceable, and satisfy the basic criterion of additionality (i.e., the reductions would not happen without the

financial support of purchased offset credits). Annual reports will include, at a minimum the following components.

- Total amount of offset fees received.
- Total fees distributed to offsite projects.
- Total fees remaining.
- Projects funded and associated pollutant reductions realized.
- Total emission reductions realized.
- Total emissions reductions remaining to satisfy the requirements of Mitigation Measure AQ-4b.
- Overall cost-effectiveness of the projects funded.

If a sufficient number of emissions reduction projects are not identified to meet the required performance standard, DWR will consult with SJVAPCD, the ARB, or a qualified air quality expert employed by or retained by DWR to ensure conformity is met through some other means of achieving the performance standards of achieving net zero (0) for emissions in excess of General Conformity *de minimis* thresholds (where applicable) and of achieving quantities below applicable SJVAPCD CEQA thresholds for other pollutants.

22E.6 Regulatory Procedures

The general conformity regulations establish certain procedural requirements that must be followed when preparing a general conformity evaluation. The major applicable procedural issues associated with the general conformity demonstration and a description of how these requirements are met are presented in this section. As previously indicated, the partially recirculated Draft EIS/EIR presents the general conformity determination for public and agency review. The final general conformity determination will be published concurrent with the ROD for the Federal action pursuant to 40 CFR §93.156.

22E.6.1 Use of Latest Planning Assumptions

The general conformity regulations require that the analysis use the latest planning assumptions based on data (e.g., population, employment, travel, and congestion) made available by the area's Metropolitan Planning Organizations (MPOs) (40 CFR §93.159[a]).

As the analysis of emissions resulting from construction and O&M activities would not require the use of population, employment, travel, and congestion data, this section is not applicable to the project.

22E.6.2 Use of Latest Emissions Estimation Techniques

The general conformity regulations require the use of the latest and most accurate emission estimation techniques available, unless such techniques are inappropriate (40 CFR §93.159[b]).

Per guidance from the Plan Area air districts, construction and O&M emissions were estimated using the most recent modeling software, including CalEEMod (version 2013.2.2), OFFROAD2007,

EMFAC2014, and the Federal Aviation Administration's (FAA) Emissions and Dispersion Modeling System (EDMS), version 5.1.4. Refer to Appendix 22A, *Air Quality Analysis Methodology*, for detailed information on the emissions estimation techniques.

22E.6.3 Major Construction Phase Activities

Project-specific data, including construction equipment lists and the construction schedule, were used to forecast construction emissions associated with the project using construction activity data provided by DWR. Calculations were performed for each year of construction (2016-2029). O&M calculations were based on detailed equipment and employee forecasts prepared by DWR.

22E.6.4 Emissions Scenarios

The general conformity regulations require that the analysis reflect certain emission scenarios (40 CFR §93.159[d]). Specifically, these scenarios generally include the evaluation of the direct and indirect emissions from a proposed project for the following years.

1. The year mandated in the CAA for attainment and for maintenance areas, the farthest year for which emissions are projected in the approved maintenance plan.
5. The year during which the total of direct and indirect emissions for the Federal action are projected to be the greatest on an annual basis.
6. Any year for which the applicable SIP specifies an emissions budget.

The analysis of construction activities evaluates the construction period of 2016 to 2029, with maximum direct and indirect emissions expected between 2022 and 2026 (see Table 22E-11 below). The O&M analysis considers emissions under two time horizons (ELT and LLT) to capture changes in vehicle technologies and engine emission factors.

22E.7 Applicability Analysis

The general conformity rule applies to all federal actions located in nonattainment and maintenance areas that are not exempt from general conformity (are either covered by Transportation Conformity or listed in the rule), are not covered by a presumed-to-conform approved list[11], or do not have clearly *de minimis* emissions. The first step in a general conformity evaluation is to determine whether the project is located in a Federal nonattainment or a maintenance area.

22E.7.1 Attainment Status of the Plan Area

As indicated in Table 22E-8 and Figures 22E-1 through 22E-4, equipment and material deliveries would be located along haul routes that traverse areas currently designated maintenance for the federal CO standard and PM10 standards. The entire project area, including all haul routes and the water conveyance facility, is designated a nonattainment area for the federal ozone and PM2.5 standards. Consequently, to fulfill general conformity requirements, an analysis must be undertaken

[11] Category of activities designated by a federal agency as having emissions below *de minimis* levels or otherwise do not interfere with the applicable SIP or the attainment and maintenance of the national ambient air quality standard.

to identify whether the proposed project's emissions of ROG and NO_X (ozone/PM precursors), CO, PM10, PM2.5, and SO_2 (PM2.5 precursor) located in nonattainment and maintenance areas are below the appropriate general conformity *de minimis* levels indicated in Table 22E-7.

22E.7.2 Exemptions from General Conformity Requirements

As previously indicated, the general conformity rule applies to all federal actions located in nonattainment and maintenance areas that are not exempt from general conformity (are either covered by Transportation Conformity or listed in the rule), are not covered by a presumed-to-conform approved list, or do not have clearly *de minimis* emissions. In addition, the general conformity rule applies only to direct and indirect emissions associated with the portions of any federal action that are subject to New Source Review for which a federal permitting agency has directly caused or initiated, has continued program responsibility for, or can practically control (i.e., do not include stationary industrial sources requiring air quality permits from local air pollution control agencies). None of these exemptions from general conformity apply to the proposed project.

22E.7.3 Applicability for Federal Action

If it is determined a project is not exempt from general conformity, the applicability of the general conformity requirements to the federal action is evaluated by comparing total direct and indirect emissions for each calendar year of to the appropriate general conformity *de minimis* thresholds indicated in Table 22E-7.

In the event that total direct and indirect emissions of a pollutant attributable to the Federal action are below the *de minimis* thresholds for a pollutant, that pollutant is excluded from general conformity requirements and no further analysis is required, as it is assumed these pollutants would conform to the SIP. Those pollutants that could not be excluded from applicability must undergo a general conformity evaluation.

If the general conformity evaluation indicates that total direct and indirect emissions of a pollutant attributable to the Federal action are in excess of any of the general conformity *de minimis* thresholds, the applicant must perform a conformity determination. A conformity determination is made by satisfying any of the following requirements.

- Showing that the emission increases caused by the Federal action are included in the SIP.
- Demonstrating that the State agrees to include the emission increases in the SIP.
- Offsetting the action's emissions in the same or nearby area.
- Mitigating to reduce the emission increase.
- Utilizing a combination of the above strategies.

22E.7.4 *de minimis* Emissions Rates

General conformity *de minimis* thresholds applicable to the project are summarized in Table 22E-7.

22E.8 Construction Activities Considered

The partially recirculated Draft EIS/EIR estimates construction-related emissions for 16 alternatives currently being considered for the BDCP. However, this conformity determination only includes an analysis of Alternative 4/4A because it has been selected as the APA, as discussed in Section 22E.1.2 above. For additional information on the BDCP Alternatives, please refer to Chapter 3, *Description of Alternatives*, and Chapter 22, *Air Quality and Greenhouse Gases*.

Construction of Alternative 4/4A would generate criteria pollutant emissions that would result in short-term impacts on ambient air quality in the study. Emissions would originate from off-road equipment exhaust, marine vessel exhaust, tunneling locomotive exhaust, employee and haul truck vehicle exhaust, helicopter exhaust, site grading and earth movement, paving, and concrete batching. Construction-related emissions vary substantially depending on the level of activity, length of the construction period, specific construction operations, types of equipment, number of personnel, wind and precipitation conditions, and soil moisture content.

Emissions for major construction activities were calculated based on information provided by DWR and standard and accepted software tools, techniques, and emission factors, as summarized below. A full list of assumptions used to quantify criteria pollutant emissions can be found in Appendices 22A, *Air Quality Analysis Methodology,* and 22B, *Air Quality Assumptions*.

- **Off-Road Equipment**: Emission factors for diesel-powered off-road construction equipment (e.g., loaders, graders, bulldozers) were obtained from the CalEEMod (version 2013.2.2) User's Guide appendix, which provides values per unit of activity (in grams per horsepower-hour) by calendar year (ENVIRON 2013). Default equipment emission factors for gasoline-powered equipment were obtained from the ARB's OFFROAD2011 model. Criteria pollutant and GHG emissions from off-road equipment were estimated by multiplying the CalEEMod and OFFROAD emission factors by the equipment inventory provided by DWR.
- **Marine Vessels**: Criteria pollutant emission factors for marine vessels were quantified using the ARB's (2012) *Emissions Estimation Methodology for Commercial Harbor Craft Operating in California*. Calculated emission factors were multiplied by the marine vessel activity data provided by DWR.
- **Tunneling Locomotives**: Emissions from diesel-powered locomotives were quantified using the ARB's (2010) off-road diesel engine emission standards and a locomotive inventory provided by DWR. All locomotives were assumed to utilize a 150 horsepower engine.
- **Helicopters**: Helicopters would be used during line stringing activities for the 115/230 kV transmission lines. Two light-duty helicopters were assumed to operate four hours a day to install new poles and lines. Helicopter emissions were estimated using emission factors from FAA's EDMS, version 5.1.4.
- **Onroad Vehicles**: Onroad vehicles (e.g., pick-up trucks, flatbed trucks) would be required for material and equipment hauling, tunnel segment hauling, onsite crew and material movement, employee commuting, and as-needed supply and equipment pick-up. Exhaust emissions from onroad vehicles were estimated using the EMFAC2014 emissions model and activity data provided by DWR. Fugitive re-entrained road dust emissions associated with the vehicle trips were estimated using EPA's (2006a; 2011) *Compilation of Air Pollutant Emission Factors* (AP-42), Sections 13.2.1 and 13.2.2.

- **Site Disturbance and Paving**: Fugitive emissions from earth movement (i.e., site grading, bulldozing, and truck loading) and paving were quantified using emission factors from CalEEMod and EPA's (1998) AP-42, Section 11.9. Data on the total graded and paved acreage and quantity of borrow, excavated, and dredged material for each construction phase, as well as the estimated maximum acreage and material that would be disturbed and paved in any one day, were provided by DWR.
- **Concrete Batching**: Fugitive dust emissions from concrete batching were estimated using concrete data from DWR and emission factors from EPA's AP-42 (2006b) Section 11.12, and SMAQMD's (2011) Concrete Batching Operations Policy Manual.

Table 22E-9 summarizes the emission sources or project features that would occur in each air basin. Several features cross multiple air districts or air basins. The proportion of activity within each air district and basin was based on the number of miles or acres constructed within each air district and basin. Please refer to Appendix 22B, *Air Quality Assumptions,* for additional information.

Table 22E-9. Project Features Located in the YSAQMD, SMAQMD, BAAQMD, and SJVAPCD (Alternative 4/4A)

Project Feature	YSAQMD	SMAQMD	BAAQMD	SJVAPCD
Geotechnical Investigations		X	X	X
Temporary Utilities		X		X
Equipment and Material Delivery	X	X	X	X
Tunnel Reach 7/Combined Pumping Plant			X	
Tunnel Reaches 1, 2, 3		X		
Tunnel Reach 4		X		
Tunnel Reach 6				X
Tunnel Reach 5				X
Intakes		X		
Clifton Court Forebay			X	
Intermediate Forebay		X		
Permeant Utilities			X	X

SMAQMD = Sacramento Metropolitan Air Quality Management District.
YSAQMD = Yolo-Solano Air Quality Management District.
BAAQMD = Bay Area Air Quality Management District.

Construction would occur in multiple phases (e.g., mobilization, land clearing). A detailed construction schedule for Alternative 4/4A was provided by DWR. Geotechnical work would begin in 2016, following by temporary utilities in 2017. Construction of the physical water conveyance facility would begin in 2018. Table 22E-10 outlines the expected construction schedule for each major feature. Refer to Table 22B-1 in Appendix B, *Air Quality Assumptions,* for a detailed schedule by construction phase.

Table 22E-10. General Construction Schedule (Alternative 4/4A)

Project Feature	Construction Time Frame	
	Start	Days
Geotechnical Investigations	1/1/2016	823
Temporary Utilities	8/1/2017	-[a]
Equipment and Material Delivery	8/1/2017	4,362
Tunnel Reach 7/Combined Pumping Plant	1/2/2018	2,878
Tunnel Reaches 1, 2, 3	7/3/2018	2,164
Tunnel Reach 4	11/6/2018	2,462
Tunnel Reach 6	3/5/2019	2,141
Tunnel Reach 5	3/3/2020	1,503
Intakes	11/1/2020	2,285
Clifton Court Forebay	12/29/2023	1,561
Intermediate Forebay	7/1/2024	1,300
Permeant Utilities	1/1/2027	128

[a] Number of days varies between 325 to 520, depending on the location of the temporary line.

22E.9 O&M Activities Considered

Operations and maintenance include both routine activities and yearly maintenance. Routine activities would occur on a daily basis throughout the year, whereas yearly maintenance would occur annually or every five years. Emissions associated with vehicle traffic and maintenance equipment were estimated using the EMFAC2014 and CalEEMod models, respectively. Employee and equipment data were provided by DWR. Emissions were quantified for both ELT and LLT. Detailed assumptions used in the emissions modeling are provided in Appendix 22A, *Air Quality Analysis Methodology*.

22E.10 Estimated Emissions Rates and Comparison to *de Minimis* Thresholds

Annual criteria pollutant emissions resulting from construction and O&M (ELT and LTT time periods) of Alternative 4/4A in nonattainment and maintenance areas are presented in Table 22E-11. Emissions estimates include implementation of onsite environmental commitments (see Section 22E.1.5.1). Violations of the federal *de minimis* thresholds are shown in <u>underlined</u> text.

Table 22E-11. Criteria Pollutant Emissions from Construction and O&M of Alternative 4/4A in Nonattainment and Maintenance Areas of the SVAB, SJVAB, and SFBAAB (tons/year)

	Sacramento Valley Air Basin					
Year	ROG	NO_X[a]	CO[b]	PM10[c]	PM2.5	SO_2
2016	<1	3	<1	<1	<1	<1
2017	<1	4	<1	1	1	<1
2018	1	9	1	9	3	<1
2019	5	45	1	21	5	<1
2020	6	64	1	30	5	<1
2021	10	87	3	40	7	<1
2022	11	82	3	40	7	1
2023	10	73	2	38	6	<1
2024	11	83	3	36	7	1
2025	14	106[d]	6	41	8	1
2026	13	90	1	34	6	1
2027	11	79	<1	33	6	<1
2028	3	20	<1	19	3	<1
2029	3	19	<1	13	2	<1
ELT	0.13	0.80	1.65	0.27	0.08	<0.01
LLT	0.11	0.68	1.58	0.26	0.07	<0.01
De Minimis	*25*	*25*	*100*	*100*	*100*	*100*
	San Joaquin Valley Air Basin					
Year	ROG	NO_X[a]	CO[b]	PM10	PM2.5	SO_2
2016	<1	4	0	<1	<1	<1
2017	1	5	0	1	1	<1
2018	3	20	0	9	3	<1
2019	6	42	0	27	5	<1
2020	12	95	4	48	7	2
2021	14	104	7	47	7	3
2022	16	112	13	47	8	6
2023	14	92	13	35	6	6
2024	12	74	13	24	5	6
2025	10	62	8	19	4	4
2026	6	39	0	15	2	<1
2027	4	27	0	14	2	<1
2028	2	10	0	7	1	<1
2029	0	0	0	0	0	0
ELT	0.01	0.08	0.14	0.02	0.01	0.00
LLT	0.01	0.07	0.13	0.02	0.01	0.00
De Minimis	*10*	*10*	*100*	*100*	*100*	*100*
	San Francisco Bay Area Air Basin					
Year	ROG	NO_X[a]	CO[b]	PM10[e]	PM2.5	SO_2
2016	<1	1	<1	-	<1	<1
2017	<1	1	<1	-	<1	<1
2018	3	20	1	-	2	<1
2019	2	19	0	-	2	<1
2020	5	46	17	-	5	7
2021	8	72	31	-	7	12
2022	10	98	49	-	9	19
2023	10	99	49	-	9	19
2024	15	129	49	-	11	20
2025	19	148	32	-	11	13
2026	10	67	2	-	6	1
2027	9	58	2	-	6	1
2028	6	40	1	-	4	1
2029	<1	1	<1	-	1	<1
ELT	0.19	1.15	2.42	-	0.11	0.01
LLT	0.16	0.97	2.33	-	0.10	0.01
De Minimis	*100*	*100*	*100*	-	*100*	*100*

[a] NO_X emissions in excess of 100 tons per year within federally-designated PM10 and PM2.5 nonattainment or maintenance areas trigger a secondary PM10 and PM2.5 precursor threshold. NO_X emissions in excess of this secondary threshold could conflict with the applicable PM10 and PM2.5 SIPs. Accordingly, NO_X offsets pursued for the purposes of general conformity must occur within the federally-designated PM2.5 nonattainment and PM10 maintenance areas, as applicable.

[b] The proposed water conveyance facility is located within a federally designated CO attainment area. Accordingly, CO emissions generated by construction of CM1 are not subject to the General Conformity Rule and are excluded from the emissions summary and general conformity analysis (40 CFR Part 51 and 93, Section III.A). Emissions presented in the table are limited those generated by haul trucks, which would occur in federally designated CO maintenance area.

[c] There are no federally designated PM10 maintenance areas in Yolo County. Accordingly, PM10 emissions generated by construction of CM1 in Yolo County are not subject to the General Conformity Rule and are excluded from the emissions summary and general conformity analysis for the SVAB (40 CFR Part 51 and 93, Section III.A). Emissions presented in the table are limited those generated within Sacramento County.

[d] 96.2 tons would be generated in SMAQMD and 9.7 tons would be generated in YSAQMD.

[e] There are no federally designated PM10 nonattainment or maintenance areas in the SFBAAB. Accordingly, PM10 emissions generated by construction of CM1 are not subject to the General Conformity Rule and are excluded from the emissions summary and general conformity analysis (40 CFR Part 51 and 93, Section III.A).

22E.11 Regional Effects

As shown in Table 22E-11, implementation of Alternative 4/4A would exceed the following federal *de minimis* thresholds.

- SVAB—NO_X: 2019-2027
- SJVAB—NO_X: 2018-2028 and ROG: 2020-2025
- SFBAAB—NO_X: 2024-2025

ROG and NO_X are precursors to ozone, for which the SVAB, SJVAB, and SFBAAB are in nonattainment for the NAAQS. Since project emissions exceed the federal *de minimis* threshold for ROG (SJVAB only) and NO_X, a general conformity determination must be made to demonstrate that total direct and indirect emissions of ROG (SJVAB only) and NO_X would conform to the appropriate SVAB, SJVAB, and SFBAAB SIP for each year of construction in which the *de minimis* thresholds are exceeded.

NO_X is also a precursor to PM and can contribute to PM formation. As discussed above, Sacramento County and the SJVAB are currently designated maintenance for the PM10 NAAQS, whereas the SJVAB, SFBAAB, and portions of the SVAB are designated nonattainment for the PM2.5 NAAQS. NO_X emissions in excess of 100 tons per year in Sacramento County and SJVAB trigger a secondary PM10 precursor threshold, whereas NO_X emissions in excess of 100 tons per year in the SVAB, SJVAB, or SFBAAB trigger a secondary PM2.5 precursor threshold. Since NOx emissions can contribute to PM formation, NO_X emissions in excess of these secondary precursor thresholds could conflict with the applicable PM10 and PM2.5 SIPs.

As shown in Table 22E-11, NO_X emissions generated by construction activities in SVAB would exceed 100 tons in 2025. However, only 96 of these tons would be generated in Sacramento County. Accordingly, the project does not trigger the secondary PM10 precursor threshold in Sacramento County, but would trigger the secondary PM2.5 precursor threshold in 2025. The PM2.5 precursor threshold would also be exceeded in the SFBAAB in 2024 and 2025. The PM10 and PM2.5 precursor

thresholds would be exceeded in the SJVAB in 2021 and 2022. Accordingly, secondary PM2.5 and PM10 (SJVAB only) effects must be considered in the general conformity determination.

No additional analyses are required for the other pollutants during construction or O&M activities as emission would not exceed the federal *de minimis* thresholds.

22E.12 General Conformity Evaluation

As disused in Section 22E.1.1.2, *General Conformity Requirements*, a positive general conformity determination can be made through one of five criteria (project inclusion in the SIP, revision to the SIP, offsets, additional mitigation, and/or a combination of strategies). This section summarizes the findings that were used to make the determination for the BDCP.

22E.12.1 Conformity Requirements for the Applicant-Preferred Alternative

As described in Section 22E.1.2, Alternative 4/4A has been selected as APA. As shown in Table 22E-11, construction-related NO_X emissions generated by Alternative 4/4A in the SVAB and SFBAAB exceed the federal *de minimis* threshold between 2019 and 2027 and 2024 and 2025, respectively. Construction-related ROG and NO_X emissions in the SJVAB would exceed the federal *de minimis* threshold between 2020 and 2025 and 2018 and 2028, respectively. The highest annual NO_X emissions in the SVAB (106 tons) and SFBAAB (148 tons) occur in 2025. The highest annual ROG and NO_X emissions in the SJVAB occur in 2022 and are 16 ton and 112 tons, respectively. Because NO_X emissions exceed the federal *de minimis* threshold in the SVAB and SFBAAB and ROG and NO_X emissions exceed the federal *de minimis* threshold in the SJVAB, a conformity determination is required for construction-related ROG (SJVAB only) and NO_X emissions generated by Alternative 4/4A for all years in excess of the federal *de minimis* thresholds (See Table 22E-11). Since NO_X emissions exceed 100 tons per year in federally-designated PM2.5 nonattainment areas and a PM10 maintenance area (SJVAB), and because NO_X is a precursor to PM, secondary PM2.5 and PM10 (SJVAB only) effects must also be considered in the general conformity determination for those years in which NO_X emission exceed 100 tons.

No additional analyses are required for the other pollutants during construction or O&M activities as emission would not exceed the federal *de minimis* thresholds.

22E.12.2 Compliance with Conformity Requirements

The Federal lead agencies herein demonstrate that construction-related ROG (SJVAB only) and NO_X emissions generated by the APA would not result in a net increase in regional ROG (SJVAB only) or NO_X emissions. This will be achieved by offsetting ROG (SJVAB only) and NO_X emissions generated during all years in excess of the federal *de minimis* thresholds to net zero. Purchasing offsets is consistent with the general conformity rule, which states that a positive conformity determination may be reached if project-related emissions are offset to net zero for all years in which pollutants exceed applicable *de minimis* thresholds (refer to Section 22E.1.1.2).

Within the SVAB, project emissions would not result in a net increase in regional NO_X emissions, as construction-related NO_X would be fully offset to zero through implementation of Mitigation Measures AQ-1a and 1b, which require additional onsite mitigation and/or offsets (see Section

2E.1.5.2). NO_X offsets for 2025 must occur within the federally-designated PM2.5 nonattainment area of the SVAB. The nonattainment boundary for PM2.5 includes all of Sacramento County and portions of Yolo, El Dorado, Solano, and Placer counties. Mitigation Measures AQ-1a and 1b will ensure the requirements of the mitigation and offset program are implemented and conformity requirements for NO_X are met in the SVAB.

Within SJVAB, project emissions would not result in an increase in regional ROG or NO_X emissions, as construction-related ROG and NO_X emissions would be fully offset to zero through implementation of Mitigation Measures AQ-4a and AQ-4b, which require additional onsite mitigation and/or offsets (see Section 2E.1.5.2). NO_X offsets for 2021 and 2022 must occur within the federally-designated PM10 maintenance and PM2.5 nonattainment areas of the SJVAB, which are consistent with the nonattainment boundary for ozone. Mitigation Measures AQ-4a and AQ-4b will ensure the requirements of the mitigation and offset program are implemented and conformity requirements for ROG and NO_X are met in the SJVAB.

Within the SFBAAB, project emissions would not result in a net increase in regional NO_X emissions, as construction-related NO_X would be fully offset to zero through implementation of Mitigation Measures AQ-3a and 3b, which require additional onsite mitigation and/or offsets (see Section 2E.1.5.2). NO_X offsets must occur within the federally-designated PM2.5 nonattainment area of the SFBAAB, which is consistent with the nonattainment boundary for ozone. Mitigation Measures AQ-3a and 3b will ensure the requirements of the mitigation and offset program are implemented and conformity requirements for NO_X are met in the SFBAAB.

The BDCP proponents have undergone extensive coordination with BAAQMD and SJVAPCD to confirm the feasibility of Mitigation Measures 3a, 3b, 4a, and 4b. Based on the performance of current incentive programs and reasonably foreseeable future growth, the Plan Area air districts have confirmed that sufficient emissions reduction credits would be available to offset ROG (SJVAB only) and NO_X emissions generated by Alternative 4/4A for all years in excess of the federal *de minimis* thresholds (see Table 22E-11). SMAQMD has also reviewed the project and issued a letter regarding future coordination that will occur with DWR to implement Mitigation Measure 1a. Please refer to Attachment 22E-1 for copies of the air district coordination letters.

22E.13 Reporting

The Federal lead agencies are issuing this general conformity determination for public and agency review for a 45-day period as required by 40 CFR §§93.155 and 93.156. Emissions from construction and O&M of Alternative 4/4A have been assessed and quantified using standard and accepted tools, techniques, and emission factors. Additional technical details are provided in the partially recirculated Draft EIS/EIR. The air quality analysis, including this draft conformity determination, is based on consultation with YSAQMD, SMAQMD, BAAQMD, and SJAPCD.

22E.13.1 General Conformity Determination

The general conformity determination will be available for a 45-day public review in conjunction with the partially recirculated Draft EIS/EIR. The Federal lead agencies will provide copies of this general conformity determination to the appropriate regional offices of the EPA, ARB, YSAQMD SMAQMD, BAAQMD, SJVAPCD, and other coordinating agencies consistent with general conformity public noticing requirements. The Federal lead agencies will also announce the availability of the

general conformity determination in conjunction with the public noticing of the Final EIS and NEPA Record of Decision. Such notice will be published, at a minimum, in the Federal Register. A copy of this conformity determination will be made available on Reclamation's, USFWS', and NMFS' websites, as well as at local libraries.

22E.13.2 Revaluation and Redetermination of General Conformity

General conformity determinations are valid for a period of 5 years after the date of public notification for the final documentation (40 CFR §93.157(a)). Ongoing federal activities at a given site that show continuous progress after a 5-year period do not require a redetermination so long as the activities are within the scope of the final conformity determination.

22E.14 Findings and Conclusions

Pursuant to 40 CFR Part 93 Subpart B, the Federal lead agencies have conducted a general conformity evaluation as part of the environmental review of the BDCP. The project is subject to the general conformity rule because it is located an area that is designed nonattainment for the 8-hour ozone and PM2.5 standards and a partial maintenance area for the CO and PM10 standards. The Federal agencies conducted the general conformity evaluation in consultation with air districts in the Plan Area (YSAQMD, SMAQMD, BAAQMD, and SJVAPCD). The emissions analyses are based on accepted standards and are in compliance with all applicable regulatory criteria and procedures.

Based on project-specific construction analysis, NO_X emissions generated by the APA in the SVAB and SFBAAB would exceed the federal *de minimis* threshold between 2019 and 2027 and 2024 and 2025, respectively. Construction-related ROG and NO_X emissions in the SJVAB would exceed the federal *de minimis* threshold between 2020 and 2025 and 2018 and 2028, respectively. The Federal agencies concluded that construction emissions would not result in a net increase in regional ROG (SJVAB only) or NO_X emissions, as construction-related ROG (SJVAB only) and NO_X emissions would be fully offset to zero through implementation of Mitigation Measures AQ-1a, AQ-1b, AQ-3a, AQ-3b, AQ-4a, and AQ-4b, which require the payment of offsite mitigation fees. Accordingly, the Federal lead agencies have determined that the APA, as designed, will conform to the approved SIPs, based on the findings below.

- A commitment from the BDCP Proponents that ROG (SJVAB only) and NO_X emissions generated by the APA will be offset consistent with the applicable federal regulations through development of a mitigation contract with Plan Area air districts or through the development of an alternative offsite mitigation program managed by DWR. The following actions will be taken to execute the conformity determination contained herein under an air district sponsored offset program:
    - BDCP Proponents will enter into a contractual agreement with SMAQMD and BAAQMD to mitigate NO_X emissions in excess of the federal *de minimis* threshold to net zero.
    - BDCP Proponents will enter into a contractual agreement with SJVAPCD to mitigate ROG and NO_X emissions in excess of the federal *de minimis* threshold to net zero.
    - BDCP Proponents will surrender moneys to the following air district approved incentive programs to fund grants for projects that achieve the necessary emission reductions.

- SMAQMD's HDLEVIP
- BAAQMD's Carl Moyer Program and TFCA
- SJVAPCD's Incentive Programs

- SMAQMD, BAAQMD, and SJVAPCD will seek and implement the necessary emission reduction measures, using BDCP Proponent funds.
- SMAQMD, BAAQMD, and SJVAPCD will serve in the role of administrator of the emissions reduction projects and verifier of the successful mitigation effort.

The following actions will be taken to execute the conformity determination contained herein under a DWR-sponsored offset program:

- DWR will develop an offsite mitigation program to fund emission reduction projects through grants and similar mechanisms.
- DWR will develop pollutant-specific formulas to monetize, calculate, and achieve emissions reductions in a cost-effective manner.
- DWR will conduct annual reporting to verify and document that emissions reductions projects achieve a 1:1 reduction with construction emissions to ensure claimed offsets meet the required performance standard.
- DWR will serve in the role of administrator of the emissions reduction projects and verifier of the successful mitigation effort.

Therefore, the federal lead agencies herewith conclude that the APA, as designed, conforms to the purpose of the approved SIP and is consistent with all applicable requirements.

22E.15 References

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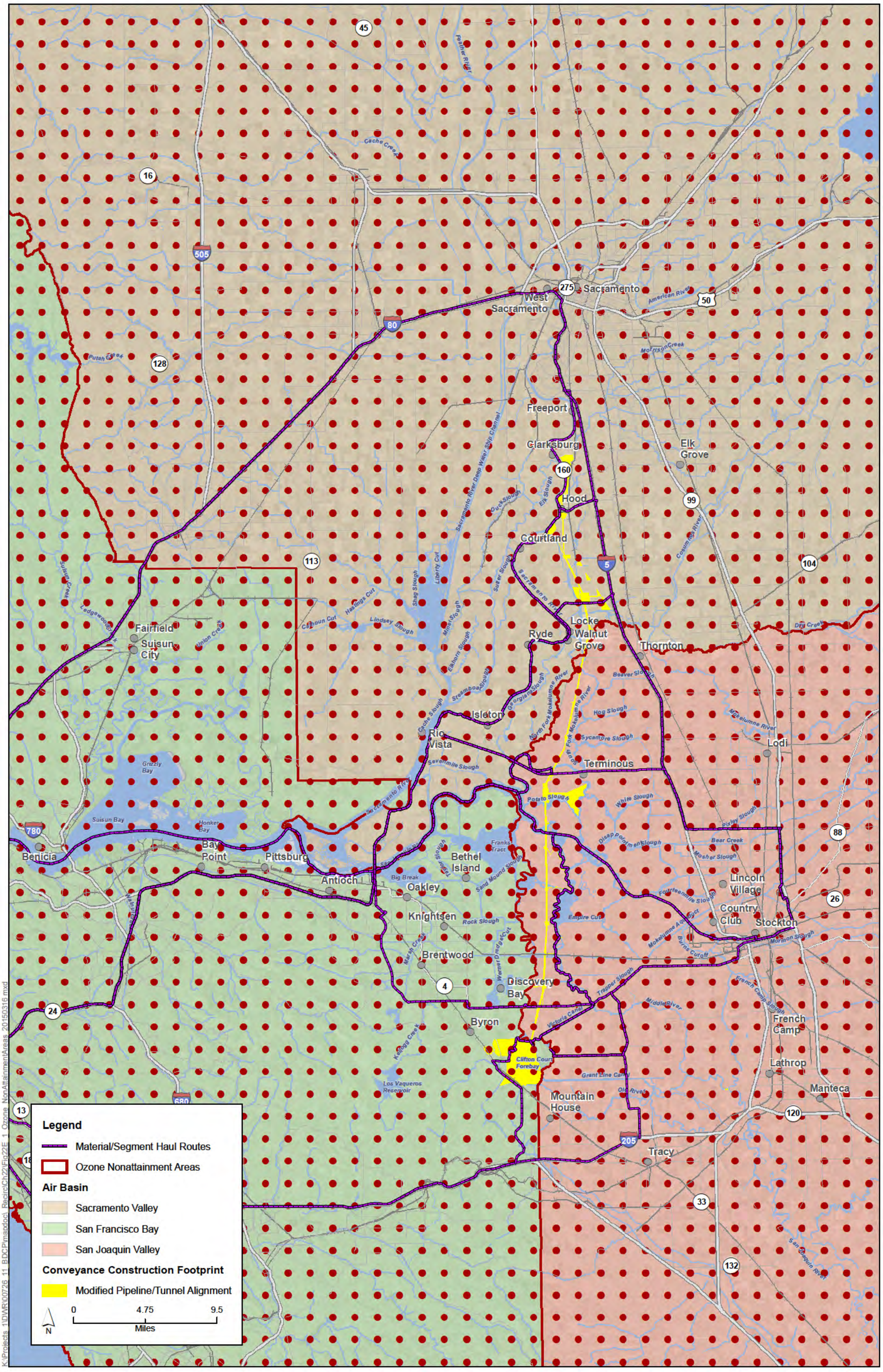

Sources: Plan Area, ICF 2012; Area of Additional Analysis, ICF 2012; ROA, SAIC 2010; Nonattainment/Maintenance Areas, EPA 2013; Air Basins, CARB 2004; Constructability (Rev 10), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 4b), DHCCP DWR 2014

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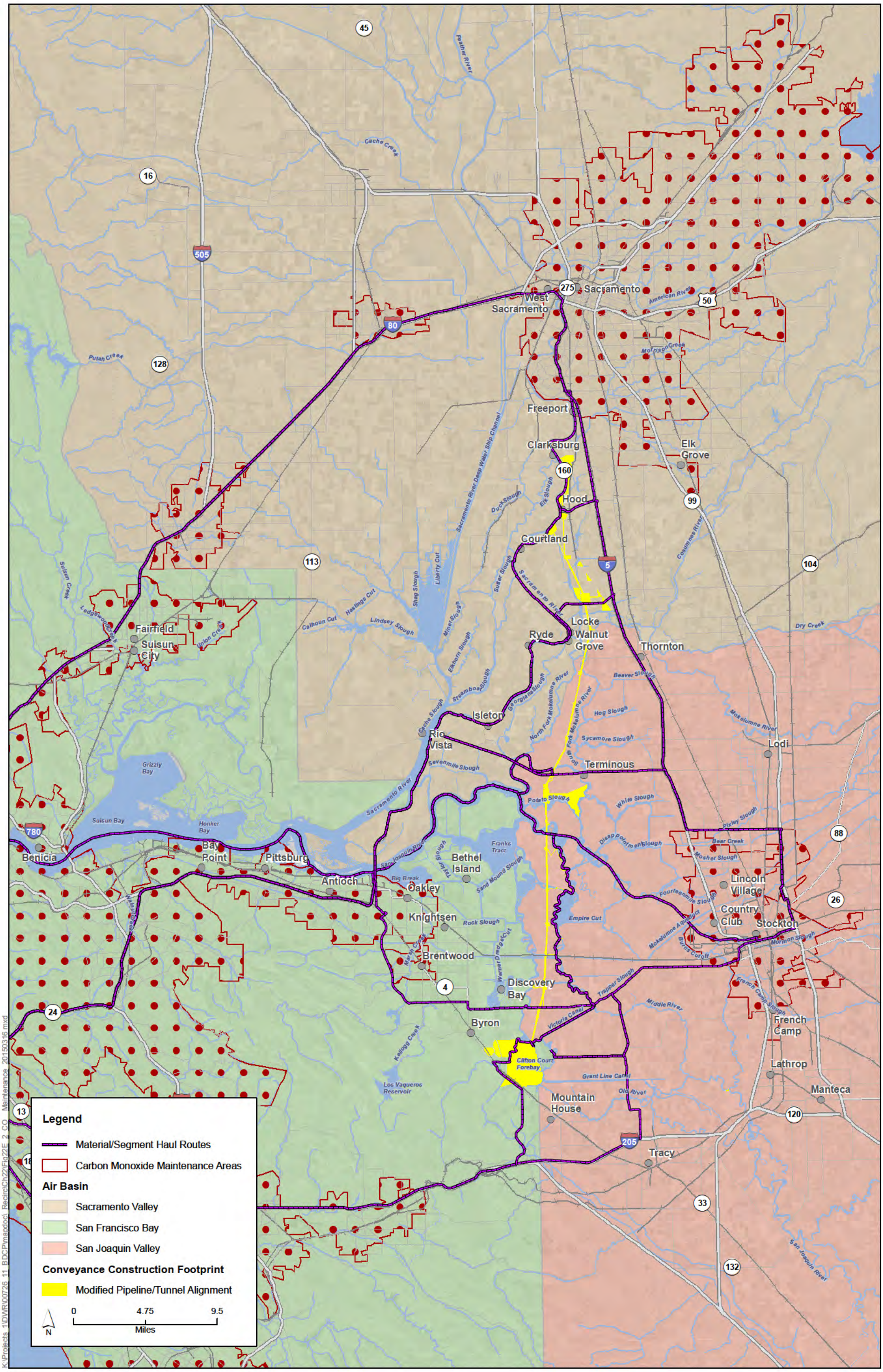
Figure 22E-1
Ozone Nonattainment Areas



Sources: Plan Area, ICF 2012; Area of Additional Analysis, ICF 2012; ROA, SAIC 2010; Nonattainment/Maintenance Areas, EPA 2013; Air Basins, CARB 2004; Constructability (Rev 10), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 4b), DHCCP DWR 2014

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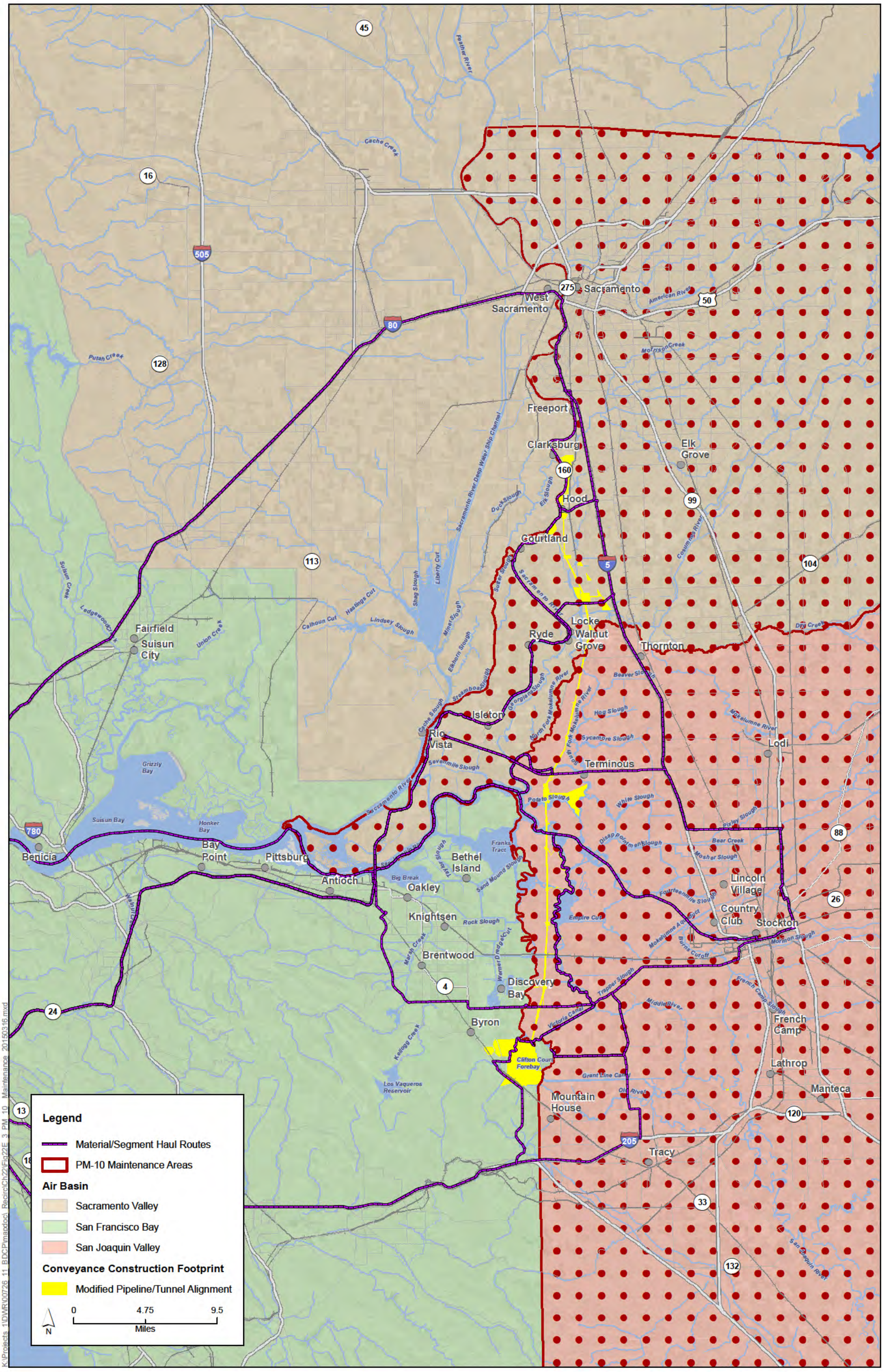
Figure 22E-2
Carbon Monoxide Maintenance Areas



Sources: Plan Area, ICF 2012; Area of Additional Analysis, ICF 2012; ROA, SAIC 2010; Nonattainment/Maintenance Areas, EPA 2013; Air Basins, CARB 2004; Constructability (Rev 10), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 4b), DHCCP DWR 2014

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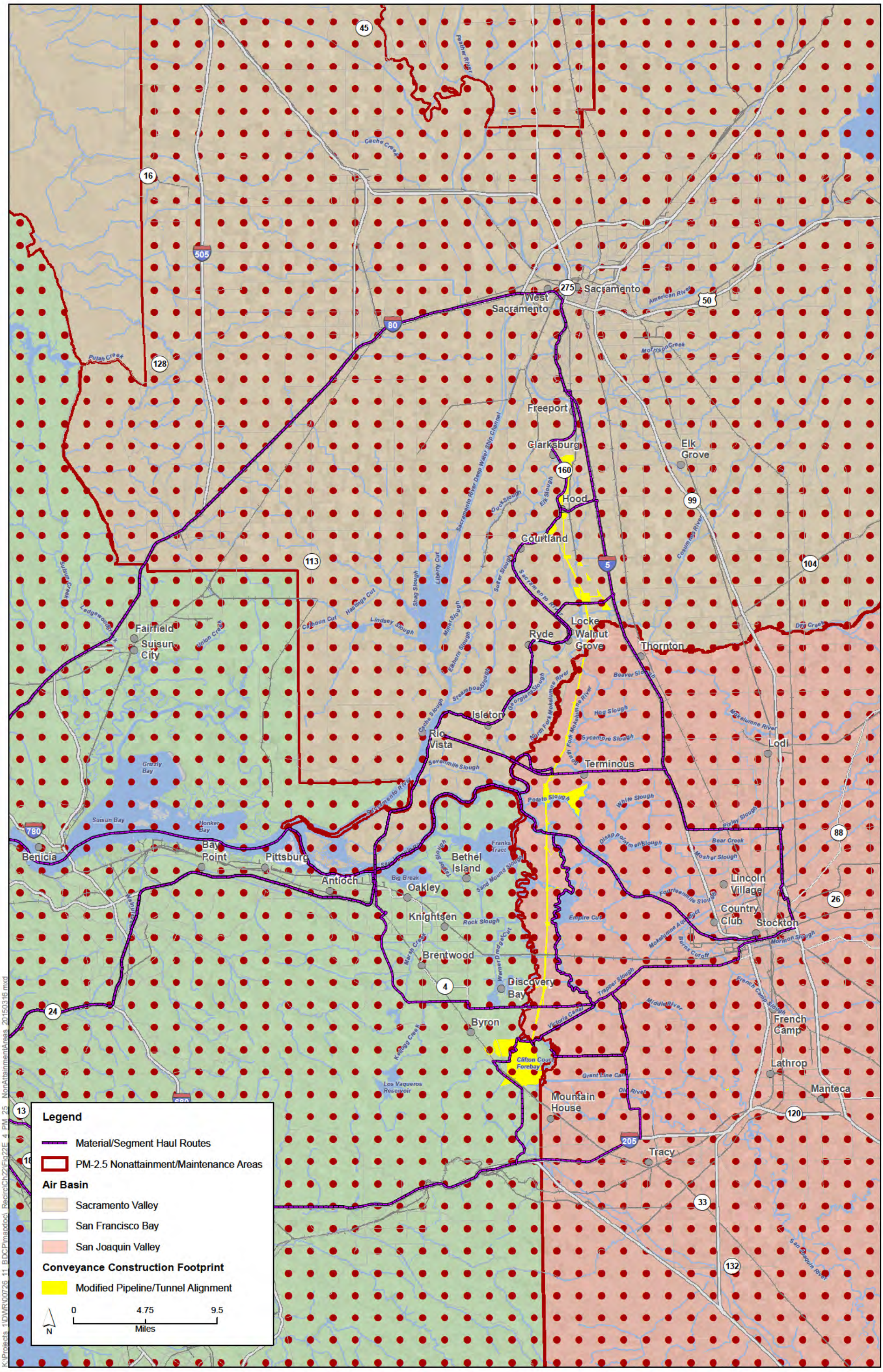
Figure 22E-3
PM - 10 Maintenance Areas



Sources: Plan Area, ICF 2012; Area of Additional Analysis, ICF 2012; ROA, SAIC 2010; Nonattainment/Maintenance Areas, EPA 2013; Air Basins, CARB 2004; Constructability (Rev 10), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 4b), DHCCP DWR 2014

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Figure 22E-4
PM - 2.5 Nonattainment and Maintenance Areas

Attachment 22E-1
Air District Coordination Letters

From:	Alison Kirk
To:	Heiland, Brian@DWR
Cc:	Yoon, Laura; Hatcher, Shannon; David Vintze; William Guy; Anthony Fournier; Henry Hilken; CHARLENE McGHEE; LARRY ROBINSON
Subject:	Bay Delta Conservation Plan construction emissions in the San Francisco Bay Area Air Basin
Date:	Thursday, April 02, 2015 9:02:53 AM

Dear B.G.,

The purpose of this email is to confirm with the Department of Water Resources (DWR) the Bay Area Air Quality Management District's (Air District) intention to work with DWR to mitigate the construction related air quality impacts in the San Francisco Bay Area Air Basin associated with the Bay Delta Conservation Plan (BDCP). According to the analysis in the draft environmental impact report (DEIR), implementation of the BDCP will exceed the air quality significance thresholds for approximately 7 years of construction activity, and will exceed the federal general conformity de minimis thresholds in one of those years. In the San Francisco Bay Area Air Basin the general conformity de minimis threshold is 100 tons per year for the following pollutants: reactive organic gases (ROG), oxides of nitrogen (NOx), carbon monoxide (CO), particulate matter 2.5 (PM2.5), and sulfur dioxide (S02). Based on the most recent BDCP project emissions estimate provided by DWR, construction emissions associated with preferred Alternative 4 exceeds this de minimis threshold for NOx emissions in years 2024 and 2025.

DWR has proposed mitigating the BDCP air quality impacts through an offsite mitigation program administered by the Air District to reduce all emissions above the CEQA thresholds and the general conformity de minimis threshold in the Bay Area. DWR would provide the funding necessary for the Air District to provide incentives for emission reduction projects that are not required by law to reduce their emissions, thereby offsetting the BDCP construction emissions. The Air District has implemented this type of incentive program for approximately the past 20 years.

DWR and the Air District would need to develop a memorandum of understanding establishing the methodology and process for the offsetting of the BDCP construction emissions, such as the cost per ton of emissions to be reduced, the timing of the payments and the administrative costs to the Air District. The Air District is confident that the amount of emission reductions needed by the project can be achieved and endeavors to work with DWR to offset the DBCP significant air quality impacts.

We look forward to working with the DWR to improve air quality in the Air District.

Please contact me with any questions.

Sincerely,

Alison Kirk, AICP
Senior Environmental Planner
Bay Area Air Quality Management District

Yoon, Laura

Sent:
To:
Subject:

Yes, for all BDCP alternatives, we anticipate there would be sufficient funding projects to secure the necessary credits.

Regarding the statement, it'd more appropriate to describe the cost as an estimated cost. It hasn't changed for more than five years, thus it doesn't vary by year, but we do want to let all developers know that there's always the possibility of an increase cost. Here's my suggested changes:

From: Yoon, Laura
Sent: Wednesday, March 25, 2015 4:31 PM
To: Patia Siong; 'Heiland, Brian@DWR'; Mark Montelongo
Subject: RE: BDCP Revised Emissions Results and General Conformity Discussion (SJVAPCD)

Hi Patia,

Thank you for providing the email confirmation. Am I correct in assuming that sufficient emissions reduction credits are forecasted for all BDCP alternatives (not just Alternative 4)? The general conformity determination is limited to Alternative 4, but we use Mitigation Measure AQ-4 to address CEQA impacts for the alternatives.

SACRAMENTO METROPOLITAN
AIR QUALITY
MANAGEMENT DISTRICT

Larry Greene
AIR POLLUTION CONTROL OFFICER

January 28, 2016

SENT VIA EMAIL

Cassandra Enos-Nobriga
Department of Water Resources
1416 Ninth Street
P.O Box 942836
Sacramento, CA 94236-0001

RE: Bay Delta Conservation Plan (BDCP) General Conformity Mitigation Strategy for the Sacramento Valley Air Basin

Dear Ms. Enos-Nobriga:

Based upon the most recent project emissions estimates provided in the BDCP Recirculated Draft Environmental Impact Report/Supplemental Draft Environmental Impact Statement (RDEIR/SEIS), the construction emissions for the preferred Alternative 4A exceed the Sacramento Valley Air Basin (SVAB) general conformity de minimis threshold for NOx of 25 tons per year in 8 of 13 years. With that in mind, at the request of the California Department of Water Resources (DWR), the purpose of this letter is to reiterate the intention of the Sacramento Metropolitan Air Quality Management District (SMAQMD) to continue to work with DWR staff and consultants in their efforts to meet general conformity by implementing Mitigation Measures AQ-1a and AQ-1b[1] as set forth in the RDEIR/SEIS.

The SMAQMD values all consultation, both now and in the future, on a project of this scope and magnitude in the SVAB. However, as the proposed construction timeline is lengthy, DWR should be aware that toward the middle of the construction time period it will become more difficult to identify off-site emission reduction options for mitigation measure AQ-1a. Consequently, it is likely that mitigation measures will become increasingly expensive. DWR should ensure that adequate funds will be available.

[1] Bay Delta Conservation Plan Partially Recirculated DEIR/Supplemental DEIS; Chapter 22, pages 22-60 through 22-65.

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www.airquality.org

As this project moves forward my staff is available to answer questions or provide any information that may help DWR to mitigate project emissions in the Sacramento Valley Air Basin.

Regards,

Larry Greene
Executive Director/Air Pollution Control Officer
Sacramento Metropolitan AQMD

c: Laura Yoon, ICF International
Brian Heiland, Department of Water Resources
Marcus Yee, Department of Water Resources
Paul Philley, Sacramento Metropolitan AQMD
Charlene McGhee, Sacramento Metropolitan AQMD