

Note to Reader: This administrative draft document is being released prior to the public draft version that will be released for formal public review and comment later in 2018. The administrative draft incorporates comments by the lead agencies on prior versions, but has not been reviewed or approved by the lead agencies for adequacy in meeting the requirements of CEQA or NEPA. All members of the public will have an opportunity to provide comments on the public draft. Responses will be prepared only on comments submitted during the formal public review and comment period on the Supplemental EIR/EIS information.

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Appendix 22C

General Conformity Determination

General Conformity Determination

22C.1 Introduction

This appendix provides the general conformity determination for the proposed project of the California WaterFix. 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), and U.S. Army Corps of Engineers (USACE) (Federal lead agencies), all direct and indirect emissions generated by the project are subject to the general conformity rule.

22C.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 (CARB) 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 *Sacramento Regional 8-Hour Attainment and Reasonable Further Progress Plan* was prepared to address ozone precursors within the Sacramento Federal Nonattainment Area (SFNA). Counties in the SFNA (Sacramento, Yolo, Placer, El Dorado, Solano, Sutter, and Butte) have also adopted the *Northern Sacramento Valley Planning Area 2015 Triennial Air Quality Attainment Plan*. SMAQMD has also adopted the *PM10 Implementation/Maintenance Plan and Redesignation Request* for Sacramento County.

1 BAAQMD and SJVAPCD have adopted air quality plans to improve air quality, protect public health,
2 and protect the climate. The *Bay Area 2001 Ozone Attainment Plan* was adopted to reduce ozone and
3 achieve the NAAQS ozone standard in the San Francisco Bay Area Air Basin (SFBAAB). BAAQMD
4 recently updated their Clean Air Plan with release of their new *2017 Clean Air Plan: Spare the Air,*
5 *Cool the Climate*. The 2017 plan includes control measures designed to reduce criteria pollutants
6 and GHG emissions with the SFBAAB. SJVAPCD's *2016 Plan for the 2008 8-Hour Ozone Standard* and
7 *2007 Ozone Plan* contain comprehensive lists of regulatory and incentive-based measures to reduce
8 ozone precursors within the San Joaquin Valley Air Basin (SJVAB). SJVAPCD's *2016 Moderate Area*
9 *Plan for the 2012 PM2.5 Standard*, *2015 Plan for the 1997 PM2.5 Standard*, and *2012 PM2.5 Plan*, and
10 *2007 PM10 Maintenance Plan and Request for Redesignation* likewise include strategies to reduce
11 particulate matter (PM) emissions throughout the air basin.

12 **22C.1.2 General Conformity Requirements**

13 The general conformity rule applies to all federal actions located in nonattainment and maintenance
14 areas that are not exempt from general conformity (are either covered by Transportation
15 Conformity or listed in the rule), are not covered by a presumed-to-conform approved list¹, or do
16 not have clearly *de minimis* emissions. In addition, the general conformity rule applies only to direct
17 and indirect emissions associated with the portions of any federal action that are subject to New
18 Source Review for which a Federal permitting agency has directly caused or initiated, has continued
19 program responsibility for, or can practically control (i.e., stationary industrial sources requiring air
20 quality permits from local air pollution control agencies are not subject to general conformity).

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

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

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.

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

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

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

11 **22C.2 Description of the Federal Action**

12 The federal agency is only required to conduct a general conformity evaluation for the specific
13 Federal action associated with the selected alternative for a project or program (U.S. Environmental
14 Project Agency 1994). The positive conformity determination must be submitted before the federal
15 action is approved. Each federal agency is responsible for determining conformity of those proposed
16 actions over which it has jurisdiction. The general conformity determination presented in this
17 appendix relates to those activities pertaining to the proposed project.

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

21 **22C.2.1 Proposed Project**

22 A complete description of the proposed project is provided in Chapter 3, *Project Description*.

23 **22C.3 Air Quality Conditions in the Plan Area**

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

26 **22C.3.1 Climate and Meteorology**

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

1 The SJVAB has an inland Mediterranean climate that is characterized by warm, dry summers and
2 cool winters. Although marine air generally flows into the basin from the Delta, the surrounding
3 mountain ranges restrict air movement through and out of the valley. The vertical dispersion of air
4 pollutants in the SJVAB is limited by the presence of persistent temperature inversion. Air pollutants
5 tend to collect under an inversion, leading to higher concentrations of emitted pollutants.
6 Conversely, precipitation and fog tend to reduce pollutant concentrations. Precipitation in the SJVAB
7 decreases from north to south, with approximately 20 inches in the north, 10 inches in the middle,
8 and less than 6 inches in the south (San Joaquin Valley Air Pollution Control District 2015).

9 The SFBAAB has a coast climate that is influenced by marine air flow and the basin's proximity to
10 the San Francisco Bay. Bay breezes push air onshore during the daytime and draw air offshore at
11 night. During the summer months, the bay helps to cool the warm onshore flows, while it warms the
12 air during the winter months. This mediating effect keeps temperatures relatively consistent
13 throughout the year. In the westernmost portion of the SFBAAB, which encompasses the study area,
14 the bay wind patterns can concentrate and carry air pollutants from other cities to the region,
15 adding to the mix of pollutants that are emitted locally (Bay Area Air Quality Management District
16 2017).

17 **22C.3.2 Ambient Air Quality**

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

1 **Table 22C-1. Ambient Air Quality Monitoring Data for the SVAB, SJVAB, SFBAAB (2014–2016)**

Pollutant Standards	SVAB (T Street & El Camino)			SJVAB (Stockton)			SFBAAB (Bethel Island & Concord)		
	2014	2015	2016	2014	2015	2016	2014	2015	2016
Ozone (O₃)									
Maximum 1-hour concentration (ppm)	0.085	0.092	0.094	0.090	0.094	0.102	0.095	0.088	0.095
Maximum 8-hour concentration (ppm)	0.072	0.076	0.074	0.077	0.078	0.078	0.080	0.073	0.074
Number of days standard exceeded ^a									
CAAQS 1-hour (>0.09 ppm)	0	0	0	0	0	2	1	0	0
CAAQS 8-hour (>0.070 ppm)	3	4	3	4	2	2	2	2	2
NAAQS 8-hour (>0.070 ppm)	3	4	3	4	2	2	2	2	2
Carbon Monoxide (CO)									
Maximum 8-hour concentration (ppm)	2.1	–	–	2.1	1.5	1.3	1.1	1.3	1.0
Maximum 1-hour concentration (ppm)	2.5	–	–	2.8	2.3	1.7	1.4	1.4	2.0
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 (NO₂)									
State ^c maximum 1-hour concentration (ppm)	0.065	0.055	0.055	0.067	0.058	0.064	0.048	0.033	0.034
National ^b 98 percentile of the 1-hour max daily concentration (ppm)	0.055	0.046	0.044	0.054	0.048	0.045	0.038	0.031	0.029
Annual average concentration (ppm)	0.011	0.011	0.010	0.013	0.012	0.012	0.008	0.007	0.006
Number of days exceeded ^a 1-hour standard									
CAAQS 1-hour (0.18 ppm)	0	0	0	0	0	0	0	0	0
NAAQS 1-hour (0.10 ppm)	0	0	0	0	0	0	0	0	0
Particulate Matter (PM₁₀)^d									
National ^b second-highest 24-hour concentration (µg/m ³)	83.5	56.2	46.4	67.8	51.8	54.1	31.4	30.4	25.5
State ^c maximum 24-hour concentration (µg/m ³)	106.4	59.1	51.4	94.0	55.3	66.5	61.3	33.0	26.0
State ^c annual average concentration (µg/m ³) ^e	–	–	19.6	24.5	28.0	26.5	16.6	–	–
Number of days standard exceeded ^a									
NAAQS 24-hour (>150 µg/m ³) ^f	0	0	0	0	0	0	0	0	0
CAAQS 24-hour (>50 µg/m ³) ^f	4	6	1	3	4	5	1	0	0

Pollutant Standards	SVAB (T Street & El Camino)			SJVAB (Stockton)			SFBAAB (Bethel Island & Concord)		
	2014	2015	2016	2014	2015	2016	2014	2015	2016
Particulate Matter (PM_{2.5})^d									
National ^b 98 th percentile of the 24-hour concentration (µg/m ³)	24.1	29.6	23.7	44.5	39.1	32.4	20.5	28.0	16.2
State ^c maximum 24-hour concentration (µg/m ³)	33.2	42.1	39.8	56.8	58.8	43.7	30.6	31.0	20.7
National ^b annual average concentration (µg/m ³)	8.0	9.5	7.6	12.1	12.6	11.7	6.7	8.8	6.1
State ^c annual average concentration (µg/m ³) ^e	8.1	9.6	7.7	12.3	12.3	-	6.7	-	-
Number of days standard exceeded ^a									
NAAQS 24-hour (>35 µg/m ³) ^f	0	1	1	16	12	4	0	0	0
Sulfur Dioxide (SO₂)									
99 th percentile of the 1-hour concentration (ppm)	-	-	-	-	-	-	0.009	0.006	0.004
Highest 24-hour concentration (ppm)	-	-	-	-	-	-	0.004	0.003	0.002
Number of days standard exceeded ^a									
NAAQS 1-hour (> 0.075 ppm) or CAAQS 1-hour (> 0.250 ppm)	-	-	-	-	-	-	0	0	0
CAAQS 24-hour (>0.140 ppm)	-	-	-	-	-	-	0	0	0

Sources: California Air Resources Board 2018; U.S. Environmental Protection Agency 2018a.

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. 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.

1 **22C.3.3 Mass Emissions**

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

10 **Table 22C-2. Yolo County Air Quality Emissions—2012**

Source Type	Annual Emissions (tons per day)					
	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.

11

1 **Table 22C-3. Sacramento County Air Quality Emissions—2012**

Source Type	Annual Emissions (tons per day)					
	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.

2

3 **Table 22C-4. San Joaquin County Air Quality Emissions—2012**

Source Type	Annual Emissions (tons per day)					
	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.

4

1 **Table 22C-5. Contra Costa County Air Quality Emissions—2012**

Source Type	Annual Emissions (tons per day)					
	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.

2

3 **22C.3.4 Federal Nonattainment Status and Conformity**
 4 **Applicably**

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

8 **Table 22C-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	Attainment	Attainment	Attainment
Coarse Particulate Matter (PM10)	Moderate Maintenance	Serious Maintenance	Attainment/Unclassified
Fine Particulate Matter (PM2.5)	Moderate Nonattainment	Serious Nonattainment	Moderate Nonattainment
Nitrogen Dioxide (NO ₂)	Attainment/Unclassified	Attainment/Unclassified	Attainment/Unclassified
Sulfur Dioxide (SO ₂)	Attainment/Unclassified	Attainment/Unclassified	Attainment/Unclassified

Sources: U.S. Environmental Protection Agency 2018b; California Air Resources Board 2017.

9

1 EPA’s General Conformity Rule (40 CFR Parts 51 and 93) only applies to Federal actions that are
 2 taken in EPA-designated “nonattainment” or “maintenance” areas. Accordingly, as outlined in
 3 Section III.A of the General Conformity Rule, “only actions which cause emissions in designated
 4 nonattainment and maintenance areas are subject to the regulations”. The general conformity
 5 evaluation is made by comparing all emission sources (e.g., haul trucks, off-road equipment) located
 6 in nonattainment or maintenance areas to the applicable general conformity *de minimis* thresholds
 7 shown in Table 22C-7.

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

Air Basin	Annual Air Pollutant Emissions in Tons per Year					
	ROG ^a	NO _x ^a	CO	PM10	PM2.5	SO ₂ ^b
Sacramento Valley Air Basin	25	25	None	100	100	100
San Joaquin Valley Air Basin	10	10	None	100	100	100
San Francisco Bay Area Air Basin	100	100	None	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.

SO₂ = 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 SO₂ is a precursor to PM2.5.

9

10 The majority of construction emissions would occur at construction sites along the water
 11 conveyance alignment. Emissions would also be generated along haul routes used to transport
 12 equipment and materials to construction sites. Figures 22C-1 through 22C-3 identify the federally-
 13 designated nonattainment and maintenance areas for ozone (ROG and NO_x), PM10, and PM2.5 in the
 14 Plan Area relative to the project alignment and haul routes. Table 22C-8 summaries project
 15 construction activities that would occur within the federally-designated nonattainment and
 16 maintenance areas.

1 **Table 22C-8. Construction Activities Located Within Federally-Designated Nonattainment or Maintenance Areas**

Sacramento Valley Air Basin			
Pollutant	Federal Designation (see Table 22C-6)	General Designation Boundaries (see Figures 22C-1 through 22C-3)	Project Sites Within Boundary (see Figures 22C-1 through 22C-3)
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
PM10	Moderate Maintenance	Sacramento County	Water conveyance alignment and material and equipment haul roads within Sacramento County
PM2.5	Moderate Nonattainment	Sacramento County, western El Dorado and Placer counties, and eastern Yolo and Solano counties	Water conveyance alignment and material and equipment haul roads
San Joaquin Valley Air Basin			
Pollutant	Federal Designation (see Table 22C-6)	General Designation Boundaries (see Figures 22C-1 through 22C-3)	Project Sites Within Boundary (see Figures 22C-1 through 22C-3)
Ozone (8 hr)	Extreme Nonattainment	All counties in SJVAPCD-portion of the SJVAB	Water conveyance alignment and material and equipment haul roads and segment hauling roads and waterways
PM10	Serious Maintenance	All counties in SJVAPCD-portion of the SJVAB	Water conveyance alignment and material and equipment haul roads and segment hauling roads and waterways
PM2.5	Serious Nonattainment	All counties in SJVAPCD-portion of the SJVAB	Water conveyance alignment and material and equipment haul roads and segment hauling roads and waterways
San Francisco Bay Area Air Basin			
Pollutant	Federal Designation (see Table 22C-6)	General Designation Boundaries (see Figures 22C-1 through 22C-3)	Project Sites Within Boundary (see Figures 22C-1 through 22C-3)
Ozone (8 hr)	Marginal Nonattainment	All areas in the SFBAAB	Water conveyance alignment and material and equipment haul roads and segment hauling roads and waterways
PM2.5	Moderate Nonattainment	All areas in the SFBAAB	Water conveyance alignment and material and equipment haul roads and segment hauling roads and waterways

2

1 The general conformity analysis considers all direct and indirect construction emissions associated
2 with the project activities outlined in Table 22C-8. Long-term operations and maintenance (O&M)
3 activities and associated emissions have not substantially changed relative to what were evaluated
4 in the conformity determination prepared and certified by the federal lead agencies as part of the
5 Final EIR/EIS. Accordingly, O&M emissions are not discussed further.

6 **22C.4 Relationship to Other Environmental Analyses**

7 A Final EIS/EIR for the California WaterFix was published in the Federal Register on December 30,
8 2016 (81 FR 96485). DWR also published Developments After Publication of the Proposed Final
9 Environmental Impact Report. On July 21, 2017 DWR certified the Final EIR, adopted Findings and a
10 Statement of Overriding Considerations, adopted the Mitigation and Monitoring Program, approved
11 California WaterFix (Alternative 4A) and filed a Notice of Determination (NOD) with the OPR. DWR
12 has also prepared the California WaterFix Addendum to the Final EIR, addressing transmission line
13 refinements. The Final EIR/EIS presents potentially feasible alternatives, potential environmental
14 impacts, and mitigation measures that would help avoid or minimize significant or adverse impacts
15 where feasible. This Draft Supplemental EIR/EIS is being prepared to address developments that
16 have occurred since filing of the NOD and presents the general conformity determination process
17 and general findings in the general conformity determination for public and agency review. The final
18 general conformity determination will be published concurrent with the Record of Decision (ROD)
19 for the Federal action.

20 This Draft Supplemental EIR/EIS is being prepared consistent with NEPA and California
21 Environmental Quality Act (CEQA) requirements. CEQA and NEPA requires an evaluation of air
22 quality impacts associated with construction of the proposed project. The analysis of impacts under
23 NEPA and CEQA are evaluated using the local thresholds of significance established by the YSAQMD,
24 SMAQMD, BAAQMD, and SJVAPCD.

25 **22C.5 Emission Reduction Measures**

26 **22C.5.1 Onsite Environmental Commitments**

27 Environmental commitments to reduce onsite construction emissions are identified in Appendix 3B,
28 *Environmental Commitments*, of the Draft Supplemental EIR/EIS. These commitments have been
29 incorporated into the project design and are considered a condition of project approval. The
30 environmental commitments represent all feasible actions to reduce onsite construction emissions.
31 The environmental commitments outlined in the Draft Supplemental EIR/EIS are described below.
32 The Department of Water Resources (DWR) has primary implementation responsibility for the
33 environmental commitments.

34 **22C.5.1.1 Construction Equipment Exhaust Reduction Plan**

35 Prior to construction, DWR will develop a construction equipment exhaust reduction plan to reduce
36 criteria air pollutants from construction equipment. The reduction plan will be provided to the
37 appropriate Plan Area air districts for review prior to construction. Control technology that achieves

1 equivalent or greater reductions than those identified below may be specified as new emissions
2 reduction technologies become available and cost-effective.

3 **22C.5.1.1.1 Off-Road Heavy-Duty Engines**

4 Prior to construction start for each major project feature, DWR will ensure all heavy-duty off-road
5 construction diesel equipment utilize USEPA certified Tier 4 or newer engines. A copy of each unit's
6 certified tier specification and any required ARB or air pollution control district operating permit
7 will be made available to DWR at the time of mobilization of each piece of equipment. Each
8 contractor will keep a written record (supported by equipment-hour meters where available) of
9 equipment usage during project construction for each piece of equipment. Each contractor will
10 provide DWR with monthly reports of equipment operating hours and annual reports documenting
11 compliance.

12 In addition to the Tier 4 performance standard, the following best management practices will be
13 incorporated into the reduction plan.

- 14 • Minimize idling time either by shutting equipment off when not in use or limiting the time of
15 idling to 3 minutes (5 minutes required by 13 CCR 2449[d][3], 2485). Provide clear signage that
16 posts this requirement for workers at the entrances to the site.
- 17 • Maintain all construction equipment in proper working condition according to manufacturer's
18 specifications. The equipment must be checked by an ASE- certified mechanic and determined to
19 be running in proper condition before it is placed in operation.
- 20 • Ensure that emissions from all off-road diesel-powered equipment used on the project site do
21 not exceed 40% opacity for more than 3 minutes in any 1 hour. Any equipment found to exceed
22 40% opacity (or Ringelmann 2.0²) will be repaired immediately. Noncompliant equipment will
23 be documented and a summary provided annually to the lead agency and air district with
24 jurisdiction over the construction site. A visual inspection of all in-operation equipment will be
25 made at least weekly by the contractor and witnessed monthly or more frequently by the
26 proponent agency(ies), and a periodic summary of the visual survey results will be submitted by
27 the contractor throughout the duration of the proposed project, except that the summary will
28 not be required for any 30-day period in which no construction activity occurs. The summary
29 will include the quantity and type of vehicles inspected, as well as the dates of each survey. The
30 air districts or other officials may conduct periodic site inspections to determine compliance.
31 Nothing in this measure will supersede other air district or state rules or regulations.

32 **22C.5.1.1.2 Marine Vessels**

33 Prior to construction start for each major project feature, DWR will ensure that all marine vessels
34 used to construct project facilities utilize USEPA certified Tier 3 or newer engines. As noted in
35 Appendix 22A, *Air Quality Analysis Methodology*, the air quality analysis has been performed based
36 on model year 2010 emission factors (Tier 3 compliance for new engines) obtained from the ARB
37 (2012).

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

1 **22C.5.1.1.3 Heavy Duty Haul Trucks**

2 Prior to construction start for each major project feature DWR will ensure that all on-road heavy-
3 duty diesel trucks with a gross vehicle weight rating of 19,500 pounds or greater used to construct
4 project facilities comply with at least USEPA 2007 on-road emission standards for PM10 and NO_x
5 (0.01 g/bhp-hr and 0.20 g/bhp-hr, respectively). These PM10 and NO_x standards were phased in
6 through the 2007 and 2010 model years on a percent of sales basis (50% of sales in 2007 to 2009
7 and 100% of sales in 2010). As noted in Appendix 22A, *Air Quality Analysis Methodology*, the air
8 quality analysis has been performed using emission factors based on model year 2010 or newer
9 engines, and no less than the average fleet mix for the current calendar year as set forth in the ARB's
10 EMFAC2017 model.

11 **22C.5.1.1.4 Locomotives**

12 Prior to construction start for each major project feature, DWR will ensure that all diesel tunneling
13 locomotives used to construct project facilities utilize USEPA certified Tier 4 or newer engines.

14 **22C.5.1.2 Fugitive Dust Control**

15 DWR will implement basic and enhanced control measures at all construction and staging areas to
16 reduce construction-related fugitive dust. This commitment is related to *AMM35 Fugitive Dust*
17 *Control*, described in Section 3B.4.35. The following measures are based on the SMAQMD's CEQA
18 guidelines, and are in conformance with the BAAQMD, SJVAPCD, and YSAQMD fugitive dust control
19 requirements.

20 **22C.5.1.2.1 Basic Fugitive Dust Control Measures**

21 DWR will ensure that the following measures will be implemented to control dust during
22 construction activities.

- 23 ● Water will be applied to all exposed surfaces as reasonably necessary to prevent visible dust
24 from leaving work areas. Frequency of watering will be increased during especially dry or windy
25 periods or in areas with high construction activity. Exposed surfaces include (but are not limited
26 to) soil piles, graded areas, unpaved parking areas, staging areas, and access roads. If water or
27 other dust control measures cannot be implemented to unpaved access roads, vehicle speeds
28 will be limited to 15 miles per hour on such road segments.
- 29 ● Cover or maintain at least 2 feet of freeboard space on haul trucks transporting soil, sand, or
30 other loose material on the site. Haul trucks transporting soil, sand, or other loose material that
31 will be traveling along freeways or major roadways shall be covered.
- 32 ● Use wet power vacuum street sweepers to remove any visible trackout mud or dirt onto
33 adjacent public roads at least once a day. Use of dry power sweeping is prohibited.
- 34 ● Disturbed areas should be promptly finished and/or protected and maintained in a manner to
35 control fugitive dust. Mulch, dust palliative, soil binders, or other reasonable mitigation
36 measures will be used in inactive areas.

1 **22C.5.1.2.2 Enhanced Fugitive Dust Control Measures for Land Disturbance**

2 DWR will ensure that the following measures will be implemented to control dust during soil
3 disturbance activities.

- 4 • Water exposed soil with adequate frequency for continued moist soil. However, do not
5 overwater to the extent that sediment flows off the site.
- 6 • Suspend excavation, grading, and/or demolition activity when wind speeds exceed 20 mph.
- 7 • Where appropriate, install wind breaks (e.g., plant trees, solid fencing) on windward side(s) of
8 construction areas.
- 9 • Plant vegetative ground cover (native grass/plant seed) in disturbed areas as soon as
10 reasonable after construction is completed. Water appropriately until vegetation is established.

11 **22C.5.1.2.3 Measures for Entrained Road Dust**

12 DWR will ensure that the following measures will be implemented to control entrained road dust
13 from unpaved roads, for example dust kicked up from unpaved roadway surfaces.

- 14 • Limit vehicle speeds on unpaved roads to 15 miles per hour (mph)
- 15 • Install rattle plates, stabilized construction entrances/exits, wheel washers, or wash off all
16 trucks, vehicles, and equipment leaving the site.
- 17 • Treat site accesses to a distance of 100 feet from the paved road with a 6 to 12-inch layer of
18 wood chips, mulch, or gravel to reduce generation of road dust and track out onto public roads.
- 19 • Post a publicly visible sign with the telephone number and person to contact at the lead agency
20 regarding dust complaints. This person will respond and take corrective action within 48 hours.
21 The phone number of the District will also be visible to ensure compliance.

22 **22C.5.1.2.4 Measures for New Concrete Batching Plants**

23 DWR will ensure that the following measures will be implemented to control dust during concrete
24 batching activities.

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

29 **22C.5.2 Offsite Mitigation**

30 Mitigation measures to avoid construction emissions in excess of air district and federal *de minimis*
31 thresholds are outlined in Chapter 22, *Air Quality and Greenhouse Gases*, of the Draft Supplemental
32 EIR/EIS. These measures are consistent with NEPA and CEQA mitigation and minimization
33 measures and will be required elements of the project, as they will be included in the project's
34 Mitigation Monitoring and Reporting Program, as required under CEQA. The mitigation measures
35 required in the Draft Supplemental EIR/EIS are described below. DWR has primary implementation
36 responsibility for the mitigation measures.

1 **Mitigation Measure AQ-1a: Mitigate and Offset Construction-Generated Criteria Pollutant**
2 **Emissions within the Sacramento Federal Nonattainment Area (SFNA) to Net Zero (0) for**
3 **Emissions in Excess of General Conformity *de minimis* Thresholds (Where Applicable)**
4 **and to Quantities below Applicable CEQA Thresholds for Other Pollutants³**

5 DWR will reduce criteria pollutant emissions generated by the construction of the water
6 conveyance facilities associated with the project within the Sacramento Federal Nonattainment
7 Area (SFNA) through the creation of offsetting reductions of emissions. The preferred means of
8 undertaking such offsite mitigation will be through a partnership with the Sacramento
9 Metropolitan Air Quality Management District (SMAQMD) involving the payment of offsite
10 mitigation fees. Criteria pollutants in excess of the federal *de minimis* thresholds will be reduced
11 to net zero (0) (see Table 22C-7). Criteria pollutants not in excess of the *de minimis* thresholds,
12 but above any applicable air pollution control or air quality management district CEQA
13 thresholds⁴ will be reduced to quantities below the numeric thresholds (see Table 22-3 in
14 Chapter 22, *Air Quality and Greenhouse Gases*).⁵

15 DWR will undertake in good faith an effort to enter into a development mitigation contract with
16 SMAQMD in order to reduce criteria pollutant emissions generated by the construction of the
17 water conveyance facilities associated with project. The preferred source of emissions
18 reductions for NO_x, PM, and ROG will be through contributions to SMAQMD's Heavy-Duty Low-
19 Emission Vehicle Incentive Program (HDLEVIP). The HDLEVIP is designed to reduce NO_x, PM,
20 and ROG from on- and offroad sources. The program is managed and implemented by SMAQMD
21 on behalf of all air districts within the SFNA, including the Yolo Solano Air Quality Management
22 District (YSAQMD).

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

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

- 34 • For emissions in excess of the federal *de minimis* threshold: **net zero (0)** (see Table 22C-7).
- 35 • For emissions not in excess of *de minimis* thresholds but above the appropriate SMAQMD
36 standards: **below the appropriate CEQA threshold levels** (see Table 22-3 in Chapter 22.)

³ In the title of this mitigation measure, the phrase "for other pollutants" applies to emissions that exceed SMAQMD's CEQA thresholds, but not the federal *de minimis* thresholds.

⁴ For example, NO_x emissions in a certain year may exceed SMAQMD's 85 pound per day CEQA threshold, but not the 25 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 in some construction years 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).

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

- 3 • Consult with the SMAQMD in good faith with the intention of entering into a mitigation
4 contract with SMAQMD for the HDLEVIP. Pursuant to 40 CFR 93.163(a), the necessary
5 reductions must be achieved (contracted and delivered) by the applicable year in question
6 (i.e., emissions generated in year 2022 would need to be reduced offsite in 2022). Funding
7 would need to be received prior to contracting with participants and should allow sufficient
8 time to receive and process applications to ensure offsite reduction projects are funded and
9 implemented prior to commencement of project activities being reduced. This would
10 roughly equate to the equivalent of two years prior to the required mitigation; additional
11 lead time may be necessary depending on the level of offsite emission reductions required
12 for a specific year. In negotiating the terms of the mitigation contract, DWR and SMAQMD
13 should seek clarification and agreement on SMAQMD responsibilities, including the
14 following.
 - 15 ○ Identification of appropriate offsite mitigation fees required for the project
 - 16 ○ Timing required for obtaining necessary offsite emission credits.
 - 17 ○ Processing of mitigation fees paid by DWR.
 - 18 ○ Verification of emissions inventories submitted by DWR.
 - 19 ○ Verification that offsite fees are applied to appropriate mitigation programs within the
20 SFNA.
- 21 • Quantify mitigation fees required to satisfy the appropriate reductions. As noted above, the
22 payment fees may vary by year and are sensitive to the number of projects requiring
23 reductions within the SFNA. The schedule in which payments are provided to SMAQMD also
24 influences overall cost. For example, a higher rate on a per-tonnage basis will be required
25 for project elements that need accelerated equipment turn-over to achieve near-term
26 reductions, whereas project elements that are established to contract to achieve far-term
27 reductions will likely pay a lower rate on a per-tonnage basis.
- 28 • Develop a compliance program to calculate emissions and collect fees from the construction
29 contractors for payment to SMAQMD. The program will require, as a standard or
30 specification of their construction contracts with DWR, that construction contractors
31 identify construction emissions and their share of required offsite fees, if applicable. Based
32 on the emissions estimates, DWR will collect fees from the individual construction
33 contractors (as applicable) for payment to SMAQMD. Construction contractors will have the
34 discretion to reduce their construction emissions to the lowest possible level through
35 additional onsite mitigation, as the greater the emissions reductions that can be achieved by
36 onsite mitigation, the lower the required offsite fee. Acceptable options for reducing
37 emissions may include use of late-model engines, low-emission diesel products, additional
38 electrification or alternative fuels, engine-retrofit technology, and/or after-treatment
39 products. All control strategies must be verified by SMAQMD.
- 40 • Conduct daily and annual emissions monitoring to ensure onsite emissions reductions are
41 achieved and no additional mitigation payments are required. Excess offsite funds can be
42 carried from previous to subsequent years in the event that additional reductions are
43 achieved by onsite mitigation. At the end of the project, if it is determined that excess offset

1 funds remain (outstanding contracts and administration over the final years of the contracts
2 will be taken into consideration), SMAQMD and DWR will determine the disposition of final
3 funds (e.g., additional emission reduction projects to offset underperforming contracts,
4 return of funds to DWR, etc.).

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

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

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

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

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

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

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

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

- 28 ● Total amount of offset fees received.
- 29 ● Total fees distributed to offsite projects.
- 30 ● Total fees remaining.
- 31 ● Projects funded and associated pollutant reductions realized.
- 32 ● Total emission reductions realized.
- 33 ● Total emissions reductions remaining to satisfy the requirements of Mitigation Measure AQ-
34 1b.
- 35 ● Overall cost-effectiveness of the projects funded.

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

1 **Mitigation Measure AQ-3a: Mitigate and Offset Construction-Generated Criteria Pollutant**
2 **Emissions within BAAQMD/SFBAAB to Net Zero (0) for Emissions in Excess of General**
3 **Conformity *de minimis* Thresholds (Where Applicable) and to Quantities below**
4 **Applicable BAAQMD CEQA Thresholds for Other Pollutants⁶**

5 DWR will reduce criteria pollutant emissions generated by the construction of the water
6 conveyance facilities associated with the proposed project within the Bay Area Air Quality
7 Management District (BAAQMD) through the creation of offsetting reductions of emissions
8 occurring within the SFBAAB. The preferred means of undertaking such offsite mitigation will
9 be through a partnership with the BAAQMD involving the payment of offsite mitigation fees.
10 Criteria pollutants in excess of the federal *de minimis* thresholds will be reduced to net zero (0)
11 (see Table 22C-7). Criteria pollutants not in excess of the *de minimis* thresholds, but above any
12 applicable air pollution control or air quality management district CEQA thresholds⁷ will be
13 reduced to quantities below the numeric thresholds (see Table 22-3 of Chapter 22, *Air Quality*
14 *and Greenhouse Gas*).

15 DWR will undertake in good faith an effort to enter into a development mitigation contract with
16 the Bay Area Clean Air Foundation (Foundation), a public charity and supporting organization
17 for the BAAQMD, in order to reduce criteria pollutant emissions generated by the construction
18 of the water conveyance facilities associated with the project within the BAAQMD. The preferred
19 source of emissions reductions for NO_x, ROG, and PM will be through contributions to the
20 Foundation.

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

- 25 • For emissions in excess of the federal *de minimis* threshold: **net zero (0)** (see Table 22C-7).
- 26 • For emissions not in excess of *de minimis* thresholds but above the appropriate BAAQMD
27 standards: **below the appropriate CEQA threshold levels** (see Table 22-3 in Chapter 22).

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

- 30 • Consult with the BAAQMD in good faith with the intention of entering into a mitigation
31 contract with the Foundation. Pursuant to 40 CFR 93.163(a), the necessary reductions must
32 be achieved (contracted and delivered) by the applicable year in question (i.e., emissions
33 generated in year 2022 would need to be reduced offsite in 2022). Funding would need to
34 be received prior to contracting with participants and should allow sufficient time to receive
35 and process applications to ensure offsite reduction projects are funded and implemented
36 prior to commencement of project activities being reduced. In negotiating the terms of the

⁶ In the title of this mitigation measure, the phrase “for other pollutants” applies to emissions that exceed BAAQMD’s CEQA thresholds, but not the federal *de minimis* thresholds.

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.

- 1 mitigation contract, DWR and the Foundation should seek clarification and agreement on
2 the Foundation responsibilities, including the following.
- 3 ○ Identification of appropriate offsite mitigation fees required for the project.
 - 4 ○ Timing required for obtaining necessary offsite emission credits.
 - 5 ○ Processing of mitigation fees paid by DWR.
 - 6 ○ Verification of emissions inventories submitted by DWR.
 - 7 ○ Verification that offsite fees are applied to appropriate mitigation programs within the
8 SFBAAB.
 - 9 ● Quantify mitigation fees required to satisfy the appropriate reductions. Funding for the
10 emission reduction projects will be provided in an amount up to the emission reduction
11 project cost-effectiveness limit set by the Foundation during the year that the emissions
12 from construction are emitted. An administrative fee of 5% would be paid by DWR to the
13 Foundation to implement the program. The funding would be used to fund projects eligible
14 for funding under the Foundation guidelines.
 - 15 ● Develop a compliance program to calculate emissions and collect fees from the construction
16 contractors for payment to the Foundation. The program will require, as a standard or
17 specification of their construction contracts with DWR, that construction contractors
18 identify construction emissions and their share of required offsite fees, if applicable. Based
19 on the emissions estimates, DWR will collect fees from the individual construction
20 contractors (as applicable) for payment to the Foundation. Construction contractors will
21 have the discretion to reduce their construction emissions to the lowest possible level
22 through additional onsite mitigation, as the greater the emissions reductions that can be
23 achieved by onsite mitigation, the lower the required offsite fee. Acceptable options for
24 reducing emissions may include use of late-model engines, low-emission diesel products,
25 additional electrification or alternative fuels, engine-retrofit technology, and/or after-
26 treatment products. All control strategies must be verified by BAAQMD.
 - 27 ● Conduct daily and annual emissions monitoring to ensure onsite emissions reductions are
28 achieved and no additional mitigation payments are required. Excess offsite funds can be
29 carried from previous to subsequent years in the event that additional reductions are
30 achieved by onsite mitigation. At the end of the project, if it is determined that excess offset
31 funds remain (outstanding contracts and administration over the final years of the contracts
32 will be taken into consideration), the Foundation and DWR will determine the disposition of
33 final funds (e.g., additional emission reduction projects to offset underperforming contracts,
34 return of funds to DWR, etc.).
- 35 If a sufficient number of emissions reduction projects are not identified to meet the required
36 performance standard, the DWR will coordinate with the Foundation to ensure the performance
37 standards of achieving net zero (0) for emissions in excess of General Conformity *de minimis*
38 thresholds (where applicable) and of achieving quantities below applicable BAAQMD CEQA
39 thresholds for other pollutants not in excess of the *de minimis* thresholds but above BAAQMD
40 CEQA thresholds are met.

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

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

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

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

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

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

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

- 13 • Total amount of offset fees received.
- 14 • Total fees distributed to offsite projects.
- 15 • Total fees remaining.
- 16 • Projects funded and associated pollutant reductions realized.
- 17 • Total emission reductions realized.
- 18 • Total emissions reductions remaining to satisfy the requirements of Mitigation Measure AQ-
19 3b.
- 20 • Overall cost-effectiveness of the projects funded.

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

27 **Mitigation Measure AQ-4a: Mitigate and Offset Construction-Generated Criteria Pollutant**
28 **Emissions within SJVAPCD/SJVAB to Net Zero (0) for Emissions in Excess of General**
29 **Conformity *de minimis* Thresholds (Where Applicable) and to Quantities below**
30 **Applicable SJVAPCD CEQA Thresholds for Other Pollutants⁸**

31 DWR will reduce criteria pollutant emissions generated by the construction of the water
32 conveyance facilities associated with the proposed project within the San Joaquin Valley Air
33 Pollution Control District (SJVAPCD) through the creation of offsetting reductions of emissions
34 occurring within the SJVAB. The preferred means of undertaking such offsite mitigation will be
35 through a partnership with the SJVAPCD involving the payment of offsite mitigation fees.
36 Criteria pollutants in excess of the federal *de minimis* thresholds will be reduced to net zero (0)
37 (see Table 22C-7). Criteria pollutants not in excess of the *de minimis* thresholds, but above any

⁸ In the title of this mitigation measure, the phrase "for other pollutants" applies to emissions that exceed SJVAPCD's CEQA thresholds, but not the federal *de minimis* thresholds.

1 applicable air pollution control or air quality management district CEQA thresholds⁹ will be
2 reduced to quantities below the numeric thresholds (see Table 22-3 in Chapter 22).¹⁰

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

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

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

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

- 22 • Consult with the SJVAPCD in good faith with the intention of entering into a VERA with
23 SJVAPCD. Pursuant to 40 CFR 93.163(a), the necessary reductions must be achieved
24 (contracted and delivered) by the applicable year in question (i.e., emissions generated in
25 year 2022 would need to be reduced offsite in 2022). Funding would need to be received
26 prior to contracting with participants and should allow sufficient time to receive and
27 process applications to ensure offsite reduction projects are funded and implemented prior
28 to commencement of project activities being reduced. This would roughly equate to the
29 equivalent of two months (2) prior to groundbreaking; additional lead time may be
30 necessary depending on the level of offsite emission reductions required for a specific year.
31 In negotiating the terms of the mitigation contract, DWR and SJVAPCD should seek
32 clarification and agreement on SJVAPCD responsibilities, including the following.
 - 33 ○ Identification of appropriate offsite mitigation fees required for the project.
 - 34 ○ Processing of mitigation fees paid by DWR.
 - 35 ○ 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 in some construction years 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).

- 1 ○ Verification that offsite fees are applied to appropriate mitigation programs within the
2 SJVAB.
- 3 ● Quantify mitigation fees required to satisfy the appropriate reductions. An administrative
4 fee of 4% would be paid by DWR to the SJVAPCD to implement the program. As noted above,
5 the payment fees may vary by year and are sensitive to the number of projects requiring
6 reductions within the SJVAB.
- 7 ● Develop a compliance program to calculate emissions and collect fees from the construction
8 contractors for payment to SJVAPCD. The program will require, as a standard or
9 specification of their construction contracts with DWR, that construction contractors
10 identify construction emissions and their share of required offsite fees, if applicable. Based
11 on the emissions estimates, DWR will collect fees from the individual construction
12 contractors (as applicable) for payment to SJVAPCD. Construction contractors will have the
13 discretion to reduce their construction emissions to the lowest possible level through
14 additional onsite mitigation, as the greater the emissions reductions that can be achieved by
15 onsite mitigation, the lower the required offsite fee. Acceptable options for reducing
16 emissions may include use of late-model engines, low-emission diesel products, additional
17 electrification or alternative fuels, engine-retrofit technology, and/or after-treatment
18 products. All control strategies must be verified by SJVAPCD.
- 19 ● Conduct daily and annual emissions monitoring to ensure onsite emissions reductions are
20 achieved and no additional mitigation payments are required. Excess offsite funds can be
21 carried from previous to subsequent years in the event that additional reductions are
22 achieved by onsite mitigation. At the end of the project, if it is determined that excess offset
23 funds remain (outstanding contracts and administration over the final years of the contracts
24 will be taken into consideration), SJVAPCD and DWR will determine the disposition of final
25 funds (e.g., additional emission reduction projects to offset underperforming contracts,
26 return of funds to DWR, etc.).

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

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

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

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

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

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

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

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

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

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

- 3 • Total amount of offset fees received.
- 4 • Total fees distributed to offsite projects.
- 5 • Total fees remaining.
- 6 • Projects funded and associated pollutant reductions realized.
- 7 • Total emission reductions realized.
- 8 • Total emissions reductions remaining to satisfy the requirements of Mitigation Measure AQ-
9 4b.
- 10 • Overall cost-effectiveness of the projects funded.

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

17 **22C.6 Regulatory Procedures**

18 The general conformity regulations establish certain procedural requirements that must be followed
19 when preparing a general conformity evaluation. The major applicable procedural issues associated
20 with the general conformity demonstration and a description of how these requirements are met
21 are presented in this section. As previously indicated, the Draft Supplemental EIR/EIS presents the
22 general conformity determination for public and agency review. The final general conformity
23 determination will be published concurrent with the ROD for the Federal action pursuant to 40 CFR
24 §93.156.

25 **22C.6.1 Use of Latest Planning Assumptions**

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

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

31 **22C.6.2 Use of Latest Emissions Estimation Techniques**

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

1 Per guidance from the Plan Area air districts, construction emissions were estimated using the most
2 recent modeling software, including CalEEMod (version 2016.3.2) and EMFAC2017¹¹. Refer to
3 Appendix 22A, *Air Quality Analysis Methodology*, for detailed information on the emissions
4 estimation techniques.

5 **22C.6.3 Major Construction Phase Activities**

6 Project-specific data, including construction equipment lists and the construction schedule, were
7 used to forecast construction emissions associated with the project using construction activity data
8 provided by DWR. Calculations were performed for each year of construction.

9 **22C.6.4 Emissions Scenarios**

10 The general conformity regulations require that the analysis reflect certain emission scenarios
11 (40 CFR §93.159[d]). Specifically, these scenarios generally include the evaluation of the direct and
12 indirect emissions from a proposed project for the following years.

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

18 The analysis of construction activities evaluates the construction period of 2018 to 2031, with
19 maximum direct and indirect emissions expected between 2022 and 2027 (see Table 22C-11
20 below).

21 **22C.7 Applicability Analysis**

22 The general conformity rule applies to all federal actions located in nonattainment and maintenance
23 areas that are not exempt from general conformity (are either covered by Transportation
24 Conformity or listed in the rule), are not covered by a presumed-to-conform approved list¹², or do
25 not have clearly *de minimis* emissions. The first step in a general conformity evaluation is to
26 determine whether the project is located in a Federal nonattainment or a maintenance area.

27 **22C.7.1 Attainment Status of the Plan Area**

28 As indicated in Table 22C-8 and Figures 22C-1 through 22C-3, equipment and material deliveries
29 would be located along haul routes that traverse areas currently designated maintenance for the
30 federal PM10 standard. The entire project area, including all haul routes and the water conveyance
31 facility, is designated a nonattainment area for the federal ozone and PM2.5 standards.

¹¹ EPA approval of EMFAC2017 is forthcoming and expected prior to the record of decision for the proposed project (December 2018).

¹² 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.

1 Consequently, to fulfill general conformity requirements, an analysis must be undertaken to identify
2 whether the proposed project's emissions of ROG and NO_x (ozone/PM precursors), PM₁₀, PM_{2.5},
3 and SO₂ (PM_{2.5} precursor) located in nonattainment and maintenance areas are below the
4 appropriate general conformity *de minimis* levels indicated in Table 22C-7.

5 **22C.7.2 Exemptions from General Conformity Requirements**

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

15 **22C.7.3 Applicability for Federal Action**

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

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

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

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

34 **22C.7.4 *de minimis* Emissions Rates**

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

1 22C.8 Construction Activities Considered

2 The Draft Supplemental EIS/EIR estimates construction-related emissions for the proposed project.
3 Construction would generate criteria pollutant emissions that would result in short-term impacts on
4 ambient air quality in the study. Emissions would originate from off-road equipment, employee and
5 haul truck vehicles (“on-road vehicles”), marine vessels, helicopters, locomotives, site grading and
6 earth movement, concrete batching, demolition, paving, and electricity consumption. Construction-
7 related emissions vary substantially depending on the level of activity, length of the construction
8 period, specific construction operations, types of equipment, number of personnel, wind and
9 precipitation conditions, and soil moisture content.

10 Emissions for major construction activities were calculated based on information provided by DWR
11 and standard and accepted software tools, techniques, and emission factors, as summarized below.
12 A full list of assumptions used to quantify criteria pollutant emissions can be found in Appendices
13 22A, *Air Quality Analysis Methodology*, and 22B, *Air Quality Assumptions*.

- 14 • **Off-Road Equipment:** Emission factors for off-road construction equipment (e.g., loaders,
15 graders, bulldozers) were obtained from the CalEEMod (version 2016.3.2) User’s Guide
16 appendix, which provides values per unit of activity (in grams per horsepower-hour) (Trinity
17 Consultants 2017). Criteria pollutant emissions from off-road equipment were estimated by
18 multiplying the CalEEMod emission factors by the equipment inventory provided by the project
19 engineer (Gillespie pers. comm.).
- 20 • **Marine Vessels:** Criteria pollutant emission factors for marine vessels were quantified using the
21 ARB’s (2012) *Emissions Estimation Methodology for Commercial Harbor Craft Operating in*
22 *California*. Calculated emission factors were multiplied by the marine vessel activity data
23 provided by the project engineer (Gillespie pers. comm.).
- 24 • **Tunneling Locomotives:** Emissions from diesel-powered locomotives were quantified using
25 the ARB’s (2010) off-road diesel engine emission standards and a locomotive inventory
26 provided by the project engineer (Gillespie pers. comm.).
- 27 • **Helicopters:** Helicopters would be used during line stringing activities for the permeant power
28 reconductoring work. Helicopter emissions were estimated using emission factors from the
29 Federal Aviation Administration’s (FAA) Emissions and Dispersion Modeling System (EDMS),
30 version 5.1.4, and supplemental information from the EPA (1985), FAA (2012), and MD
31 Helicopters (2014).
- 32 • **Onroad Vehicles:** Onroad vehicles (e.g., pick-up trucks, flatbed trucks) would be required for
33 material and equipment hauling, tunnel segment hauling, onsite crew and material movement,
34 employee commuting, and as-needed supply and equipment pick-up. Exhaust emissions from
35 onroad vehicles were estimated using the EMFAC2017 emissions model and activity data
36 provided by the project engineer (Gillespie pers. comm.). Fugitive re-entrained road dust
37 emissions associated with the vehicle trips were estimated using EPA’s (2006a, 2011)
38 *Compilation of Air Pollutant Emission Factors* (AP-42), Sections 13.2.1 and 13.2.2.
- 39 • **Earth Movement, Demolition, and Paving:** Fugitive emissions from earth movement (i.e., site
40 grading, bulldozing, dredging, and truck loading), demolition, and paving were quantified using
41 emission factors from the CalEEMod User’s Guide. Striping acres and borrowed, excavated,
42 dredged, demolished, and paved quantities were provided by the project engineer (Gillespie
43 pers. comm.).

- 1 • **Concrete Batching:** Fugitive dust emissions from concrete batching were estimated using
2 concrete data from DWR and emission factors from EPA's AP-42 Sections 11.12 and 13.2.4 (U.S.
3 Environmental Protection Agency 2006b, 2006c; Gillespie pers. comm.).

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

8 **Table 22C-9. Project Components Located in the YSAQMD, SMAQMD, BAAQMD, and SJVAPCD**

Project Feature	YSAQMD	SMAQMD	BAAQMD	SJVAPCD
Geotechnical Investigations		X	X	X
Temporary Utilities		X	X	X
Permeant Utilities			X	
Equipment and Material Delivery	X	X	X	X
Segment Hauling			X	X
Intakes		X		
Intermediate Forebay		X		
Tunnel Reaches 1 and 2		X		
Tunnel Reach 3		X		
Tunnel Reach 4		X		X
Tunnel Reach 5				X
Tunnel Reach 6				X
Tunnel Reach 7 and Byron Tract Pump Plant			X	X
Byron Tract Forebay			X	

SMAQMD = Sacramento Metropolitan Air Quality Management District.

SJVAPCD = San Joaquin Valley Air Pollution Control District.

YSAQMD = Yolo-Solano Air Quality Management District.

BAAQMD = Bay Area Air Quality Management District.

9
10 Construction would occur in multiple phases (e.g., mobilization, land clearing). A detailed
11 construction schedule was provided by the project engineer. Geotechnical work would begin in
12 2018, following by temporary utilities in 2019. Construction of the physical water conveyance
13 facility would begin in 2021. Table 22C-10 outlines the expected construction schedule for each
14 major feature. Refer to Tables 22B-1 and 22B-2 in Appendix 22B, *Air Quality Assumptions*, for a
15 detailed schedule by construction phase for both the proposed project.

1 **Table 22C-10. General Construction Schedule for the Proposed Project**

Project Feature	Proposed Project	
	Start	Days
Geotechnical Investigations	7/1/2018	823
Temporary Utilities	7/1/2019	720
Permeant Utilities	1/1/2027	128
Equipment and Material Delivery	1/1/2021	3,277
Segment Hauling	1/4/2021	686
Intakes 2 and 3	4/25/2022	2,368
Intake 5		
Intermediate Forebay Stage 1	7/1/2026	1,326
Intermediate Forebay Stage 2		
Tunnel Reaches 1 and 2	7/5/2022	1,915
Tunnel Reach 3	7/5/2022	1,891
Tunnel Reach 4 East	1/4/2021	2,394
Tunnel Reach 4 West		
Tunnel Reach 5 East	7/1/2021	1,891
Tunnel Reach 5 West		
Tunnel Reach 6 East	7/1/2021	2,726
Tunnel Reach 6 West		
Tunnel Reach 7 and Byron Tract Pump Plant East	10/11/2021	3,304
Tunnel Reach 7 and Byron Tract Pump Plant West		
Byron Tract Forebay	1/4/2021	835

2

3 **22C.9 Estimated Emissions Rates and Comparison to**
 4 ***de minimis* Thresholds**

5 Annual criteria pollutant emissions resulting from construction of the proposed project are
 6 presented in Table 22C-11. Emissions estimates include implementation of onsite environmental
 7 commitments (see Section 22C.1.5.1). Violations of the federal *de minimis* thresholds are shown in
 8 underlined text.

1 **Table 22C-11. Criteria Pollutant Emissions from Construction of the Proposed Project in Nonattainment and Maintenance Areas of the SVAB,**
 2 **SJVAB, and SFBAAB (tons/year)**

Year	Sacramento Federal Nonattainment Area					San Joaquin Valley Air Basin					San Francisco Bay Area Air Basin			
	ROG	NO _x	PM10	PM2.5	SO ₂ ^b	ROG	NO _x	PM10	PM2.5	SO ₂ ^b	ROG	NO _x	PM2.5	SO ₂ ^b
2018	<1	1	<1	<1	<1	<1	2	1	<1	<1	<1	<1	<1	<1
2019	<1	2	1	<1	<1	<1	4	2	<1	<1	<1	<1	<1	<1
2020	<1	2	2	<1	<1	1	5	2	<1	<1	<1	<1	<1	<1
2021	1	13	7	1	<1	2	<u>14</u>	12	3	<1	3	43	3	<1
2022	2	<u>26</u>	14	3	<1	5	<u>40</u>	32	6	<1	10	<u>102</u>	7	1
2023	3	<u>31</u>	19	3	<1	5	<u>41</u>	33	7	<1	9	97	6	<1
2024	5	<u>52</u>	31	5	<1	8	<u>52</u>	38	7	<1	5	72	4	<1
2025	8	<u>66</u>	34	6	1	<u>10</u>	<u>47</u>	33	6	<1	3	53	3	<1
2026	7	<u>44</u>	23	4	<1	<u>10</u>	<u>39</u>	30	6	<1	1	24	2	<1
2027	8	<u>68</u>	26	5	1	<u>10</u>	<u>38</u>	26	5	<1	1	32	3	<1
2028	6	<u>36</u>	16	3	<1	9	<u>33</u>	23	5	<1	<1	22	2	<1
2029	5	23	11	2	<1	6	<u>26</u>	18	4	<1	<1	19	1	<1
2030	1	15	11	2	<1	4	<u>18</u>	16	3	<1	<1	13	1	<1
2031	<1	3	4	1	<1	1	4	7	2	<1	<1	4	<1	<1
<i>Threshold</i>	<i>25</i>	<i>25</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>10</i>	<i>10</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>

Sources: Gillespie pers. comm.; Valles pers. comm.; United States Environmental Protection Agency 2006a, 2006b, 2006c, 2011; California Air Resources Board 2010; EDMS (version 5.1.4); EMFAC2017; CalEEMod (version 2016.3.2).

ROG = reactive organic gases.

NO_x = nitrogen oxide.

CO = carbon monoxide.

PM10 = particulate matter that is 10 microns in diameter and smaller.

PM2.5 = particulate matter that is 2.5 microns in diameter and smaller.

SO₂ = sulfur dioxide.

^a The General Conformity *de minimis* thresholds for criteria pollutants are based on the federal attainment status of the project area in the SFNA, SJVAB, and SFBAAB.

^b Although the project area is in attainment for SO₂, because SO₂ is a precursor for PM2.5, the PM2.5 General Conformity *de minimis* thresholds are used.

1 22C.10 Regional Effects

2 As shown in Table 22C-11, implementation of the proposed project would exceed the following
3 federal *de minimis* thresholds.

- 4 • SVAB—NO_x, 2022 to 2028
- 5 • SJVAB—NO_x, 2021 to 2030 and ROG, 2025 to 2027
- 6 • SFBAAB—NO_x, 2022

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

12 NO_x is also a precursor to PM and can contribute to PM formation. As discussed above, Sacramento
13 County and the SJVAB are currently designated maintenance for the PM₁₀ NAAQS, whereas the
14 SJVAB, SFBAAB, and portions of the SVAB are designated nonattainment for the PM_{2.5} NAAQS. NO_x
15 emissions in excess of 100 tons per year in Sacramento County and SJVAB trigger a secondary PM₁₀
16 precursor threshold, whereas NO_x emissions in excess of 100 tons per year in the SVAB, SJVAB, or
17 SFBAAB trigger a secondary PM_{2.5} precursor threshold. Since NO_x emissions can contribute to PM
18 formation, NO_x emissions in excess of these secondary precursor thresholds could conflict with the
19 applicable PM₁₀ and PM_{2.5} SIPs.

20 As shown in Table 22C-11, NO_x emissions generated by construction activities in SFBAAB would
21 exceed 100 tons in 2022. Accordingly, the project triggers the secondary PM_{2.5} precursor threshold
22 in the SFBAAB, and secondary PM_{2.5} effects must be considered in the general conformity
23 determination.

24 No additional analyses are required for the other pollutants during construction as emission would
25 not exceed the federal *de minimis* thresholds.

26 22C.11 General Conformity Evaluation

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

31 22C.11.1 Conformity Requirements for the Proposed Project

32 As shown in Table 22C-11, construction-related NO_x emissions generated by the proposed project in
33 the SVAB and SFBAAB exceed the federal *de minimis* threshold between 2022 and 2028 and in 2022,
34 respectively. Construction-related ROG and NO_x emissions in the SJVAB would exceed the federal *de*
35 *minimis* threshold between 2021 and 2030 and 2025 and 2027, respectively. The highest annual
36 NO_x emissions in the SVAB (68 tons) and SFBAAB (102 tons) occur in 2027 and 2022, respectively.

1 The highest annual NO_x and ROG emissions in the SJVAB occur in 2024 and 2025, respectively, and
2 are 52 ton and 10 tons. Because NO_x emissions exceed the federal *de minimis* threshold in the SVAB
3 and SFBAAB and ROG and NO_x emissions exceed the federal *de minimis* threshold in the SJVAB, a
4 conformity determination is required for construction-related ROG (SJVAB only) and NO_x emissions
5 generated by the proposed project for all years in excess of the federal *de minimis* thresholds (see
6 Table 22C-11). Since NO_x emissions exceed 100 tons per year in the federally-designated PM2.5
7 nonattainment area of the SFBAAB, and because NO_x is a precursor to PM, secondary PM2.5 effects
8 must also be considered in the general conformity determination.

9 No additional analyses are required for the other pollutants during construction as emission would
10 not exceed the federal *de minimis* thresholds.

11 **22C.11.2 Compliance with Conformity Requirements**

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

19 Within the SVAB, project emissions would not result in a net increase in regional NO_x emissions, as
20 construction-related NO_x would be fully offset to zero through implementation of Mitigation
21 Measures AQ-1a and 1b, which require additional onsite mitigation and/or offsets (see Section
22 2E.1.5.2). Mitigation Measures AQ-1a and 1b will ensure the requirements of the mitigation and
23 offset program are implemented and conformity requirements for NO_x are met in the SVAB.

24 Within SJVAB, project emissions would not result in an increase in regional ROG or NO_x emissions,
25 as construction-related ROG and NO_x emissions would be fully offset to zero through
26 implementation of Mitigation Measures AQ-4a and AQ-4b, which require additional onsite
27 mitigation and/or offsets (see Section 2E.1.5.2). Mitigation Measures AQ-4a and AQ-4b will ensure
28 the requirements of the mitigation and offset program are implemented and conformity
29 requirements for ROG and NO_x are met in the SJVAB.

30 Within the SFBAAB, project emissions would not result in a net increase in regional NO_x emissions,
31 as construction-related NO_x would be fully offset to zero through implementation of Mitigation
32 Measures AQ-3a and 3b, which require additional onsite mitigation and/or offsets (see Section
33 2E.1.5.2). NO_x offsets must occur within the federally-designated PM2.5 nonattainment area of the
34 SFBAAB, which is consistent with the nonattainment boundary for ozone. Mitigation Measures AQ-
35 3a and 3b will ensure the requirements of the mitigation and offset program are implemented and
36 conformity requirements for NO_x are met in the SFBAAB.

37 **22C.11.2.1 Offset Feasibility**

38 Offsets are an enforceable mitigation measure by which DWR would provide pound-for-pound
39 offsets of emissions that exceed General Conformity thresholds through a process that develops,
40 funds, and implements emissions reduction projects.

1 Under mitigation option (a), DWR would enter into separate contractual agreements with the
2 SMAQMD, SJVAPCD, and SFBAAB in which DWR agrees to mitigate the project's emissions by
3 providing funds to SMAQMD, SJVAPCD, and SFBAAB to fund grants for projects that are designed to
4 achieve emission reductions, thus offsetting project-related impacts on air quality. SMAQMD,
5 SJVAPCD, and SFBAAB would be obligated under the agreements to seek and implement such
6 emissions reduction projects, using DWR's funds. The types of projects that have been used in the
7 past to achieve such reductions include electrification of stationary internal combustion engines;
8 replacing old trucks with new, cleaner, more efficient trucks; and a host of other stationary and
9 mobile source emissions-reducing projects.

10 In implementing the offset agreements, SMAQMD, SJVAPCD, and SFBAAB would verify the actual
11 emission reductions that have been achieved because of completed grant contracts, monitor the
12 emission reduction projects, and confirm the enforceability of achieved reductions. The initial
13 agreements are generally based on the projected maximum emissions that exceed thresholds as
14 calculated by a district-approved air quality impact assessment or the project's EIR/EIS; the
15 agreement then requires the proponent to deposit funds sufficient to offset those maximum
16 emissions exceedances. However, because the goal is to mitigate actual emissions, SMAQMD,
17 SJVAPCD, and SFBAAB has designed adequate flexibility into its agreement such that the final
18 mitigation is based on actual emissions related to the project, based on factors including actual
19 equipment used and hours of operation that the proponent tracks and reports to SMAQMD,
20 SJVAPCD, and SFBAAB during construction. After the project is mitigated, SMAQMD, SJVAPCD, and
21 SFBAAB would certify to DWR that the mitigation is completed. Thus, Mitigation Measures AQ-1a,
22 3a, and 4a provide DWR with an enforceable mitigation measure that would result in emissions
23 exceedances being fully offset by DWR.

24 Implementation of emission reduction agreements are feasible mitigation measures that effectively
25 achieve actual emission reductions, mitigating the project to a net-zero air quality impact. DWR has
26 undergone extensive coordination with the SMAQMD, SJVAPCD, and SFBAAB to confirm the
27 feasibility of local offsets. Based on the performance of current incentive programs and reasonably
28 foreseeable future growth, SMAQMD, SJVAPCD, and SFBAAB have confirmed that sufficient
29 emissions reduction credits would be available to offset emissions generated by the project for all
30 years in excess of the General Conformity *de minimis* threshold. Please refer to Attachment 22C-1 for
31 a copy of the air district coordination.

32 Under mitigation option (b), DWR will develop an offsite mitigation program to fund emission
33 reduction projects through grants and similar mechanisms. DWR will develop pollutant-specific
34 formulas to monetize, calculate, and achieve emissions reductions in a cost-effective manner. DWR
35 will conduct annual reporting to verify and document that emissions reductions projects achieve a
36 1:1 reduction with construction emissions to ensure claimed offsets meet the required performance
37 standard. DWR will serve in the role of administrator of the emissions reduction projects and
38 verifier of the successful mitigation effort. While a DWR sponsored-program is identified as a
39 mitigation option, DWR's preferred approach to offsetting pollutants is through existing air district
40 programs, as described above.

1 **22C.12 Reporting**

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

8 **22C.12.1 General Conformity Determination**

9 The general conformity determination will be available for a 45-day public review in conjunction
10 with the Draft Supplemental EIR/EIS. The Federal lead agencies will provide copies of this general
11 conformity determination to the appropriate regional offices of the EPA, CARB, YSAQMD SMAQMD,
12 BAAQMD, SJVAPCD, and other coordinating agencies consistent with general conformity public
13 noticing requirements. The Federal lead agencies will also announce the availability of the general
14 conformity determination in conjunction with the public noticing of the Final EIS and NEPA Record
15 of Decision. Such notice will be published, at a minimum, in the Federal Register. A copy of this
16 conformity determination will be made available on Reclamation's and USACE's websites, as well as
17 at local libraries.

18 **22C.12.2 Revaluation and Redetermination of General 19 Conformity**

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

24 **22C.13 Findings and Conclusions**

25 Pursuant to 40 CFR Part 93 Subpart B, the Federal lead agencies have conducted a general
26 conformity evaluation as part of the environmental review of the proposed project. The project is
27 subject to the general conformity rule because it is in an area that is designed nonattainment for the
28 8-hour ozone and PM_{2.5} standards and a partial maintenance area for the PM₁₀ standard. The
29 Federal agencies conducted the general conformity evaluation in consultation with air districts in
30 the Plan Area (YSAQMD, SMAQMD, BAAQMD, and SJVAPCD). The emissions analyses are based on
31 accepted standards and comply with all applicable regulatory criteria and procedures.

32 Based on project-specific construction analysis, NO_x emissions generated by the proposed project in
33 the SVAB and SFBAAB exceed the federal *de minimis* threshold between 2022 and 2028 and in 2022,
34 respectively. Construction-related ROG and NO_x emissions in the SJVAB would exceed the federal *de*
35 *minimis* threshold between 2021 and 2030 and 2025 and 2027, respectively.

36 The Federal agencies concluded that construction emissions would not result in a net increase in
37 regional ROG (SJVAB only) or NO_x emissions, as construction-related ROG (SJVAB only) and NO_x
38 emissions would be fully offset to zero through implementation of Mitigation Measures AQ-1a, AQ-

1 1b, AQ-3a, AQ-3b, AQ-4a, and AQ-4b, which require the payment of offsite mitigation fees.
2 Accordingly, the Federal lead agencies have determined that the proposed project, as designed, will
3 conform to the approved SIPs, based on the findings below.

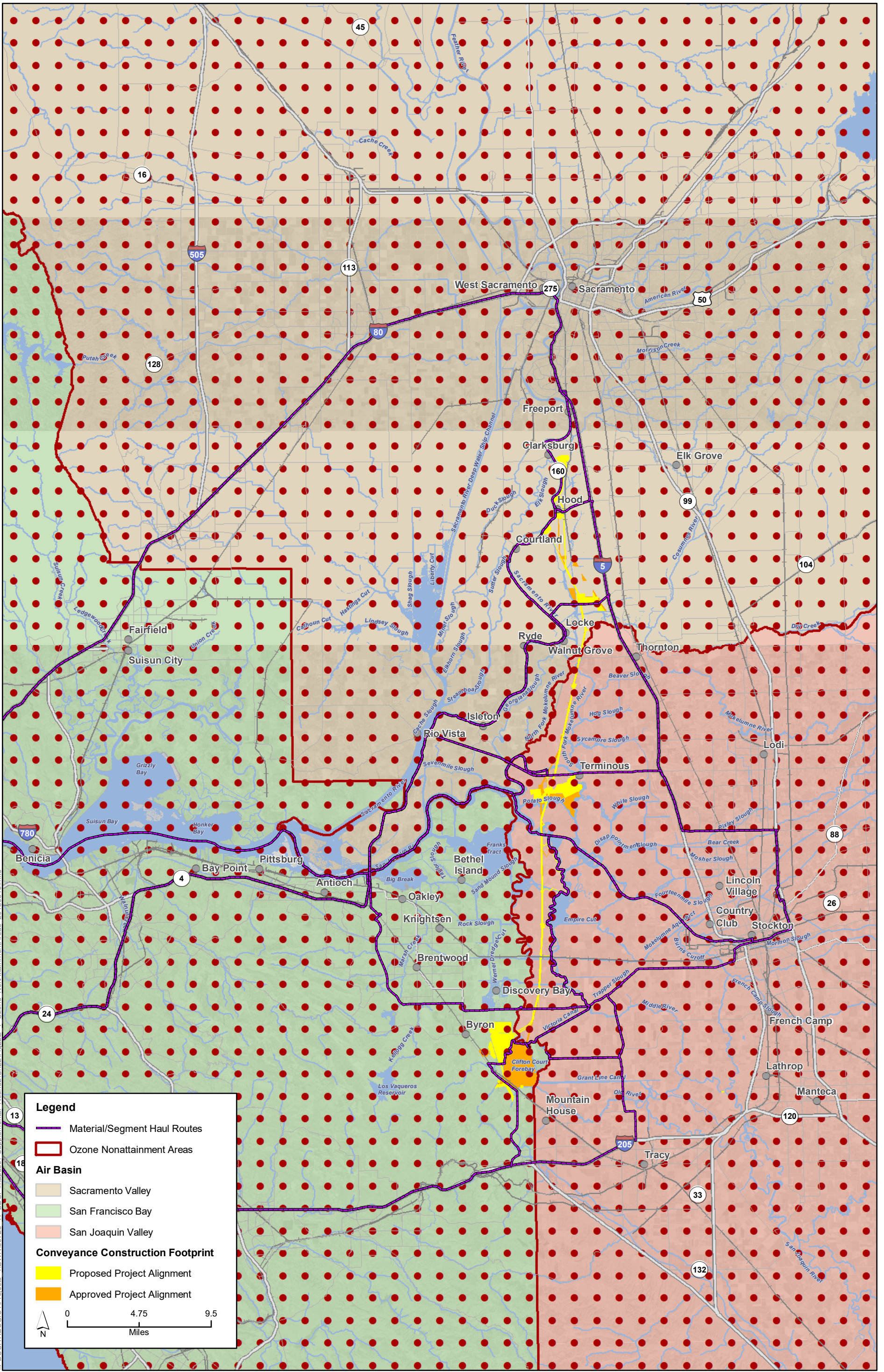
- 4 ● A commitment from DWR that ROG (SJVAB only) and NO_x emissions generated by the proposed
5 project will be offset consistent with the applicable federal regulations through development of
6 a mitigation contract with Plan Area air districts or through the development of an alternative
7 offsite mitigation program managed by DWR. The following actions will be taken to execute the
8 conformity determination contained herein under an air district sponsored offset program:
 - 9 ○ DWR will enter into a contractual agreement with SMAQMD and BAAQMD to mitigate NO_x
10 emissions in excess of the federal *de minimis* threshold to net zero.
 - 11 ○ DWR will enter into a contractual agreement with SJVAPCD to mitigate ROG and NO_x
12 emissions in excess of the federal *de minimis* threshold to net zero.
 - 13 ○ DWR will surrender moneys to the following air district approved incentive programs to
14 fund grants for projects that achieve the necessary emission reductions.
 - 15 ● SMAQMD's HDLEVIP
 - 16 ● BAAQMD's Foundation
 - 17 ● SJVAPCD's Incentive Programs
 - 18 ○ SMAQMD, BAAQMD, and SJVAPCD will seek and implement the necessary emission
19 reduction measures, using DWR funds.
 - 20 ○ SMAQMD, BAAQMD, and SJVAPCD will serve in the role of administrator of the emissions
21 reduction projects and verifier of the successful mitigation effort.
- 22 ● The following actions will be taken to execute the conformity determination contained herein
23 under a DWR-sponsored offset program:
 - 24 ○ DWR will develop an offsite mitigation program to fund emission reduction projects through
25 grants and similar mechanisms.
 - 26 ○ DWR will develop pollutant-specific formulas to monetize, calculate, and achieve emissions
27 reductions in a cost-effective manner.
 - 28 ○ DWR will conduct annual reporting to verify and document that emissions reductions
29 projects achieve a 1:1 reduction with construction emissions to ensure claimed offsets meet
30 the required performance standard.
 - 31 ○ DWR will serve in the role of administrator of the emissions reduction projects and verifier
32 of the successful mitigation effort.

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

22C.14 References Cited

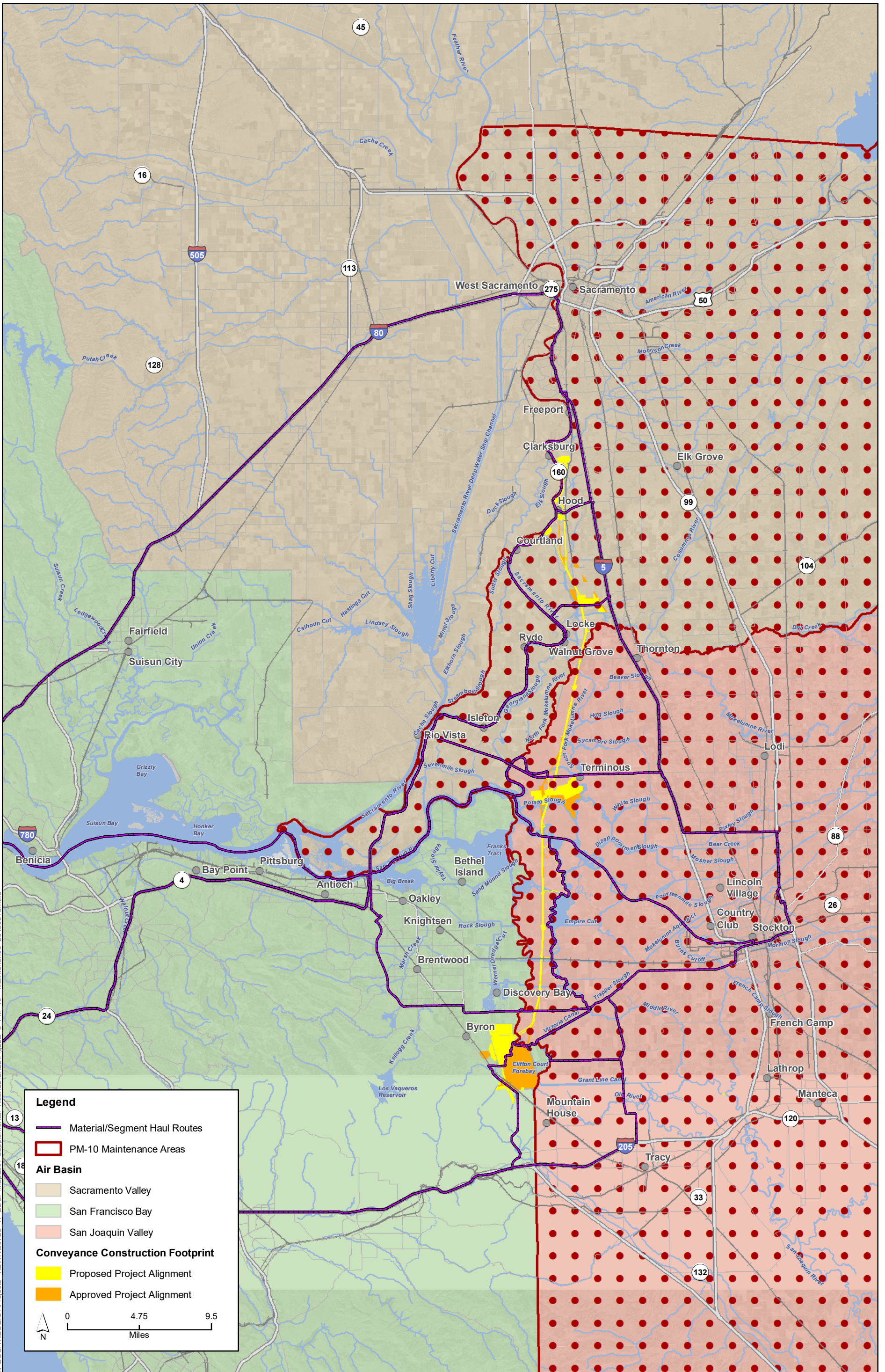
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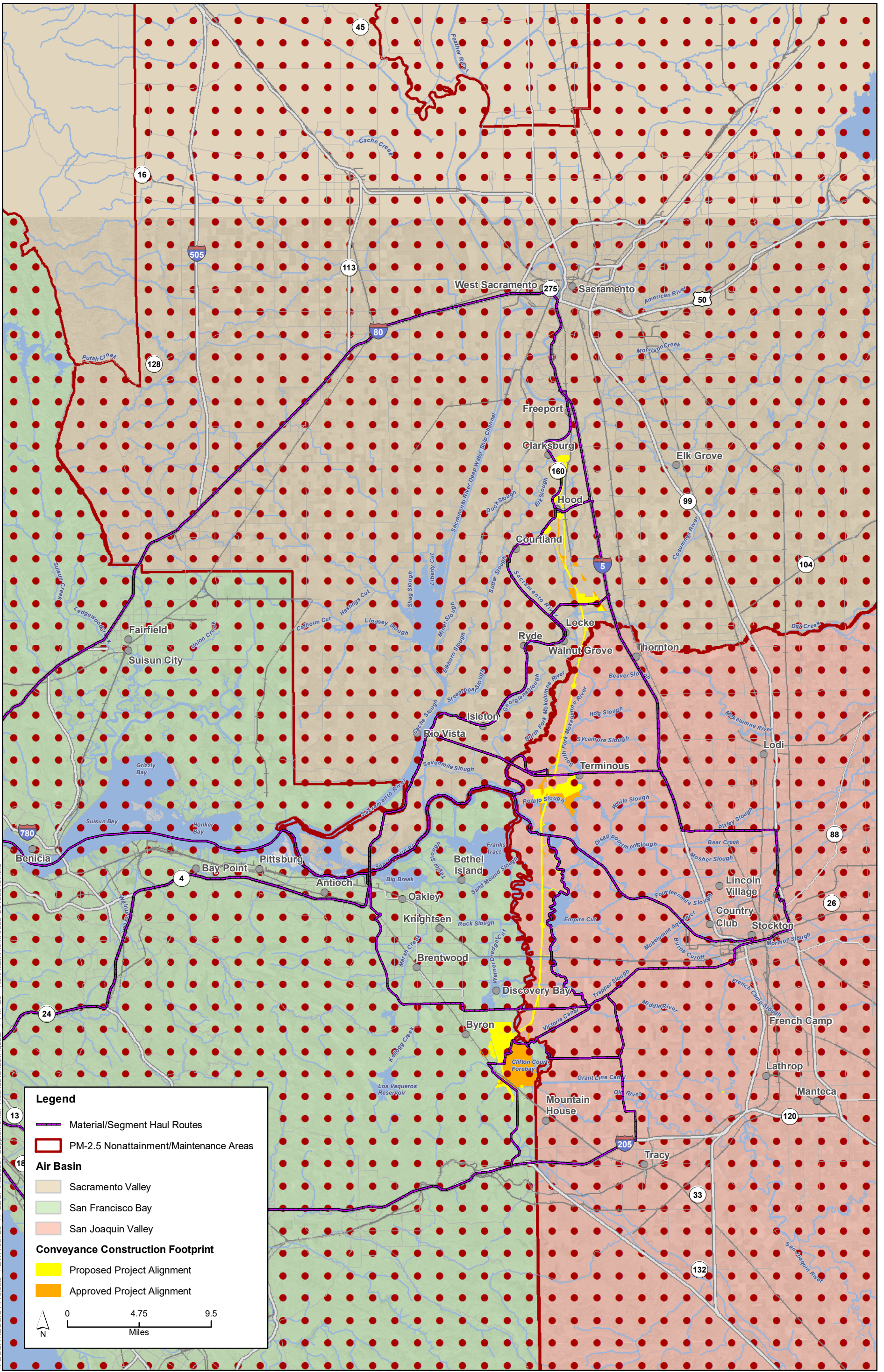
Sources: Plan Area, ICF 2012; Area of Additional Analysis, ICF 2012; ROA, SAIC 2010; Nonattainment/Maintenance Areas, EPA 2013; Air Basins, CARB 2004; Constructability (BTF Rev1e), DHCCP DWR 2018; Constructability (CCO Rev 5c), DHCCP DWR 2018

Figure 22C-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 (BTF Rev1e), DHCCP DWR 2018; Constructability (CCO Rev 5c), DHCCP DWR 2018

Figure 22C-2
PM - 10 Maintenance Areas



Sources: Plan Area, ICF 2012; Area of Additional Analysis, ICF 2012; ROA, SAIC 2010; Nonattainment/Maintenance Areas, EPA 2015; Air Basins, CARB 2004; Constructability (BTF Rev1e), DHCCP DWR 2018; Constructability (CCO Rev 5c), DHCCP DWR 2018

Figure 22C-3
PM - 2.5 Nonattainment and Maintenance Areas

Note to Reader: This administrative draft document is being released prior to the public draft version that will be released for formal public review and comment later in 2018. The administrative draft incorporates comments by the lead agencies on prior versions, but has not been reviewed or approved by the lead agencies for adequacy in meeting the requirements of CEQA or NEPA. All members of the public will have an opportunity to provide comments on the public draft. Responses will be prepared only on comments submitted during the formal public review and comment period on the Supplemental EIR/EIS information.

1

2

Attachment 22C-1 **Air District Coordination Letters**



May 25, 2018

SENT VIA E-MAIL ONLY

Mr. Marcus L. Yee
California Department of Water Resources
901 P Street, Room 411B
Sacramento, CA 95814

**California Water Fix Air Quality General Conformity Mitigation Strategy
(SMAQMD Project # SAC201201424)**

Dear Mr. Yee:

Thank you for consulting with the Sacramento Metropolitan Air Quality Management District (SMAQMD) on the revised air emissions calculations for construction of the California Water Fix project. Calculations demonstrate nitrogen oxide emissions (NO_x) are expected to exceed the Federal General Conformity de minimis threshold of 25 tons per year in 7 of the 14 years of planned construction.

Mitigation measure AQ-1 commits the Department of Water Resources (DWR) to mitigate and offset construction emissions in the Sacramento Federal Nonattainment Area to net zero for emissions exceeding the Federal General Conformity de minimis thresholds where applicable and to quantities below SMAQMD's California Environmental Quality Act (CEQA) thresholds of significance for other pollutants.¹ For this project, NO_x and particulate matter (PM₁₀) are the pollutants expected to exceed SMAQMD CEQA thresholds. The preferred strategy to implement this measure includes DWR entering into a development mitigation contract with SMAQMD to identify and implement emission reduction projects that will satisfy AQ-1.

SMAQMD appreciates the consultation and commits to continue working with DWR to identify the needed emission reduction projects and to develop a mitigation contract with DWR to secure the necessary funds to initiate and complete the emission reduction projects in the appropriate timeframe(s) to mitigate emissions from the California Water Fix project.

Since construction is expected to occur over 14 years, DWR should be fully aware that emission reduction projects become more difficult to identify and can become extremely costly to implement as time passes. DWR must ensure adequate funds are

¹ Final Mitigation Monitoring and Reporting Program for the California WaterFix, December 2016, page 2-102.

Mr. Yee
California Water Fix
May 25, 2018
Page 2

available to implement AQ-1 and other air quality mitigation measures required of the project.

My staff will continue to be available to assist DWR in implementing AQ-1 and other mitigation measures designed to reduce air quality impacts and protect public health as the project moves forward. Please contact Paul Philley at 916-874-4882 or pphilley@airquality.org if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read 'Alberto Ayala', with a long horizontal flourish extending to the right.

Alberto Ayala, Ph.D., M.S.E.
Executive Director/Air Pollution Control Officer

Cc: Paul Philley, SMAQMD



APR - 5 2018

Marcus L. Yee
CA Department of Water Resources
901 P. Street, Suite 411b
Sacramento, CA 95814

Subject: Availability of Emission Reductions for the Proposed Voluntary Emission Reduction Agreement for the Bay Delta Conservation Plan/California WaterFix

Dear Mr. Yee:

The San Joaquin Valley Air Pollution Control District (District) has received your request seeking confirmation from the District whether emissions reductions needed for the Bay Delta Conservation Plan/California WaterFix project (Project) can be achieved through a Voluntary Emissions Reduction Agreement (VERA) with the District as outlined under Mitigation Measure AQ-4a of the Supplemental Environmental Impact Report/Statement.

Based on currently estimated construction emissions and reasonably foreseeable emission reduction projects in the San Joaquin Valley Air Basin, the District is confirming that it anticipates sufficient quantities of emissions reductions to be available to mitigate each of the water conveyance facility alternatives, as outlined under Mitigation Measure AQ-4.

Furthermore, since 2005, the District has been developing and implementing VERAs with project proponents to mitigate air quality impacts of their projects through its highly successful incentive programs. The District has entered into 35 VERAs, received over \$47 million, and achieved total emission reductions of over 3,500 tons of Nitrogen Oxides (NOx), 300 tons of Volatile Organic Compounds (VOC), and 450 tons of Particulate Matter 10 microns or less in size (PM10).

Over the years, the District has built a reputation for excellence in the implementation of these programs, as highlighted in multiple audits by state agencies that lauded the District's incentive programs for their efficiency and effectiveness. The District's incentive programs have invested over \$2 billion in public and private funding for clean air projects reducing more than 139,800 tons of emissions.

Seyed Sadredin
Executive Director/Air Pollution Control Officer

Northern Region
4800 Enterprise Way
Modesto, CA 95356-8718
Tel: (209) 557-6400 FAX: (209) 557-6475

Central Region (Main Office)
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244
Tel: (559) 230-6000 FAX: (559) 230-6061

Southern Region
34946 Flyover Court
Bakersfield, CA 93308-9725
Tel: 661-392-5500 FAX: 661-392-5585

Page 2
Mr. Yee

The District appreciates your efforts to mitigate the air quality impacts of the Project through a VERA and the ongoing discussions, and looks forward to developing a VERA to reduce construction emissions and avoid adverse effects to the regional and local air quality.

If you have any questions, please contact Patia Siong at (559) 230-5930.

Sincerely,

Arnaud Marjollet
Director of Permits Services

A handwritten signature in black ink, appearing to read "Brian Clements". The signature is written in a cursive style with a large initial "B" and "C".

Brian Clements
Program Manager

AM: ps

cc: Laura Yoon, ICF International

From: David Vintze

Sent: Monday, June 11, 2018 2:03 PM

To: Yee, Marcus@DWR

Subject: RE: California WaterFix-- Update and Request for letter confirming intention to work with Ca WaterFix

Marcus,

The Air District is committed to working with the California Department of Water Resources to mitigate construction-related air quality impacts identified in the California WaterFix Supplemental EIR/S. The Air District's intent was spelled out in a April 2, 2015 email from Air District staff, which has not changed. Please let me know if you need anything further to demonstrate the Air District's commitment. Dave

Dave Vintze

Air Quality Planning Manager

Bay Area Air Quality Management District

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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 (SO2). 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 BDCP 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