

B.F. Sisk Dam Raise and Reservoir Expansion Project Draft General Conformity Determination

Draft



— BUREAU OF —
RECLAMATION



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Appendix A General Conformity Calculation Results Summary

Abbreviations and Acronyms

$\mu\text{g}/\text{m}^3$	micrograms per cubic meter
AQMP	air quality management plan
CAA	Clean Air Act
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CO	carbon monoxide
CVP	Central Valley Project
DWR	California Department of Water Resources
EIR	environmental impact report
EPA	U.S. Environmental Protection Agency
FONSI	Finding of No Significant Impact
FR	Federal Register
GCD	General Conformity Determination
GHG	greenhouse gas
MER	Merced
MPO	metropolitan planning organization
NAAQS	national ambient air quality standards
NEPA	National Environmental Policy Act
NO_2	nitrogen dioxide
NOD	Notice of Determination
NO_x	nitrogen oxides
NSR	New Source Review
O_3	ozone
Pb	lead
PM_{10}	inhalable particulate matter with diameters less than or equal to 10 micrometers
$\text{PM}_{2.5}$	fine particulate matter with diameters less than or equal to 2.5 micrometers
ppb	parts per billion

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ppm	parts per million
RACT	Reasonably Available Control Technology
Reclamation	U.S. Department of the Interior, Bureau of Reclamation
SEIR	supplemental environmental impact report
SEIS	supplemental environmental impact statement
SIP	state implementation plan
SJVAB	San Joaquin Valley Air Basin
SJVAPCD	San Joaquin Valley Air Pollution Control District
SLDMWA	San Luis & Delta-Mendota Water Authority
SO ₂	sulfur dioxide
SOD	Safety of Dams
SO _x	sulfur oxides
SR	State Route
SWP	State Water Project
tpy	tons per year
U.S.C.	United States Code
VERA	Voluntary Emissions Reduction Agreement
VOC	volatile organic compound

Chapter 1 Introduction

The U.S. Department of the Interior, Bureau of Reclamation (Reclamation) and the San Luis & Delta-Mendota Water Authority (SLDMWA) are proposing to increase storage capacity in the San Luis Reservoir to provide greater operational flexibility and water supply reliability for south-of-Delta Central Valley Project (CVP) and State Water Project (SWP) water contractors. The B.F. Sisk Dam Raise and Reservoir Expansion Project, which serves to increase storage capacity, is a connected action to the B.F. Sisk Dam Safety of Dams (SOD) Modification Project. The latter would raise the crest elevation of B.F. Sisk Dam by 12 feet to prevent reservoir overtopping and failure in the event of dam deformation from a seismic event. The B.F. Sisk Dam Raise and Reservoir Expansion Project proposes to increase storage capacity in San Luis Reservoir by raising the B.F. Sisk Dam embankment (across the entire dam crest) an additional 10 feet above the level proposed for dam safety purposes. This additional 10 feet of dam embankment could add approximately 130,000 acre-feet of water storage in San Luis Reservoir.

Section 176(c) of the Clean Air Act (CAA) (42 United States Code [U.S.C.] 7506(c)) requires any entity of the federal government that engages in, supports, or in any way provides financial support for, licenses or permits, or approves any activity to demonstrate that the action conforms to the applicable State Implementation Plan (SIP) required under Section 110(a) of the CAA (42 U.S.C. 7410(a)) before the action is otherwise approved. In this context, conformity means that such federal actions must be consistent with a SIP's purpose of eliminating or reducing the severity and number of violations of national ambient air quality standards (NAAQS) and achieving expeditious attainment of those standards. Each federal agency (including Reclamation) must determine that any action that is proposed by the agency and that is subject to the regulations implementing the conformity requirements will conform to the applicable SIP before the action is taken. The federal actions should be consistent with the objective of the Air Quality Management Plan (AQMP), discussed in more detail in Chapter 6.

In accordance with requirements of Section 176(c) of the CAA (40 U.S.C. 7506(c)), since the proposed project would take place in a nonattainment area and pollutant emissions generated by the federal action associated with the proposed project would equal or exceed a specified annual de minimis emission rate (i.e., for nitrogen oxides [NO_x] and volatile organic compounds [VOC] in this case), a General Conformity Determination (GCD) must be performed by the lead federal agency to ensure that it conforms with the CAA before the federal action can be approved. Reclamation is the lead federal agency for this project under the National Environmental Policy Act (NEPA) and has prepared the Draft GCD presented in this document for the activities that would require a federal action (associated with the proposed project). This GCD analyzes whether the emissions/impacts that would result from the federal action would conform to the last U.S. Environmental Protection Agency (EPA) approved SIP.

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Chapter 2 **General Conformity Requirements**

On November 30, 1993, EPA promulgated final general conformity guidance to the states at 40 Code of Federal Regulations (CFR) Part 51 Subpart W to develop general conformity regulations for all federal activities except those covered under transportation conformity. On October 20, 1994, the San Joaquin Valley Air Pollution Control District (SJVAPCD) adopted these regulations by reference as part of Rule 9110, and EPA approved this rule as part of the California SIP on April 23, 1999 (64 Federal Register [FR] 19916).

On April 5, 2010, the EPA revised the general conformity regulations at 40 CFR 93 Subpart B for all federal activities except those covered under transportation conformity (75 FR 17254). The revisions were intended to clarify, streamline, and improve conformity determination and review processes, and to provide transition tools for making conformity determinations for new NAAQS. The revisions also allowed federal facilities to negotiate a facility-wide emission budget with the applicable air pollution control agencies, and to allow the emissions of one precursor pollutant to be offset by the emissions of another precursor pollutant. The revised rules became effective on July 6, 2010.

The general conformity regulations apply to a proposed federal action in a nonattainment or maintenance area if the total of direct and indirect¹ emissions of the relevant criteria pollutants and precursor pollutants caused by the proposed action equal or exceed certain de minimis amounts, thus requiring the federal agency to make a determination of general conformity. A federal agency can indirectly control emissions by placing conditions on federal approval or federal funding.

The general conformity regulations incorporate a process that generally involves the following steps:

- Determine if the project is exempt.
- Determine if the project is presumed to conform.
- Prepare an applicability analysis (if the project is not exempt or presumed to conform), including an evaluation of whether project emissions would exceed de minimis thresholds under the regulations.
- Complete a GCD (required for projects with pollutant emissions that exceed de minimis levels).

According to EPA guidance (EPA 1994), the applicability analysis can be (but is not required to be) completed concurrently with any analysis required under NEPA. If the regulating federal agency determines that the general conformity regulations do not apply to the proposed action

¹ Direct emissions are those that are caused or initiated by the federal action and occur at the same time and place as the federal action. Indirect emissions are reasonably foreseeable emissions that are further removed from the federal action in time and/or distance and can be practicably controlled by the federal agency on a continuing basis (40 CFR 93.152).

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(meaning the project emissions do not exceed the de minimis thresholds), no further analysis or documentation is required.

If the general conformity regulations apply to the proposed action, the regulating federal agency must next conduct a conformity evaluation in accord with the criteria and procedures in the implementing regulations, publish a draft determination of general conformity for public review, and then publish the final determination of general conformity. For a required action to meet the conformity determination emissions criteria, the total of direct and indirect emissions from the action must be in compliance or consistent with all relevant requirements and milestones contained in the applicable SIP (40 CFR 93.158(c)), and must also meet other specified requirements, such as one of the following:

- For any criteria pollutant or precursor, the total of direct and indirect emissions from the action is specifically identified and accounted for in the applicable SIP's attainment or maintenance demonstration (40 CFR 93.158(a)(1)).
- For precursors of ozone (O₃), nitrogen dioxide (NO₂), or particulate matter, the total of direct and indirect emissions from the action is fully offset within the same nonattainment (or maintenance) area through a revision to the applicable SIP or a similarly enforceable measure that effects emission reductions so that there is no net increase in emissions of that pollutant (40 CFR 93.158(a)(2)).
- For O₃ or NO₂, the total of direct and indirect emissions from the action is determined and documented by the state agency primarily responsible for the applicable SIP to result in a level of emissions which, together with all other emissions in the nonattainment (or maintenance) area, would not exceed the emissions inventory specified in the applicable SIP (40 CFR 93.158(a)(5)(i)(A)).
- For O₃ or NO₂, the total of direct and indirect emissions from the action (or portion thereof) is determined by the state agency responsible for the applicable SIP to result in a level of emissions which, together with all other emissions in the nonattainment (or maintenance) area, would exceed the emissions inventory specified in the applicable SIP and the state governor or the governor's designee for SIP actions makes a written commitment to EPA for specific SIP revision measures reducing emissions to not exceed the emissions inventory (40 CFR 93.158(a)(5)(i)(B)).

Chapter 3 Description of Federal Action

In accordance with applicable general conformity regulations and guidance, when a GCD is necessary, Reclamation is only required to conduct a general conformity evaluation for a specific federal action associated with the selected alternative for a project or program (EPA 1994),² and Reclamation must issue a positive conformity determination before the federal action is approved. Each federal agency is responsible for determining conformity of those proposed actions over which it has jurisdiction. The general conformity requirements only apply to federal actions proposed in nonattainment areas (i.e., areas where one or more NAAQS are not being achieved at the time of the proposed action and requiring SIP provisions to demonstrate how attainment will be achieved) and in maintenance areas (i.e., areas recently redesignated from nonattainment to attainment and requiring SIP provisions pursuant to Section 175A of the CAA to demonstrate how attainment will be maintained). The attainment status in the vicinity of B.F. Sisk Dam is discussed in Chapter 4.1.

3.1 B.F. Sisk Dam Raise and Reservoir Expansion Project

The purpose of the project is to provide greater operational flexibility and water supply reliability than existing conditions for south-of-Delta CVP and SWP water contractors by increasing storage capacity in the San Luis Reservoir. Reclamation is evaluating this project as a connected action to the B.F. Sisk Dam SOD Modification Project to create additional project benefits by increasing storage within San Luis Reservoir.

The Final Environmental Impact Report/Supplemental Environmental Impact Statement (EIR/SEIS) evaluated two action alternatives: (1) Alternative 2, Non-Structural Alternative and (2) Alternative 3, Dam Raise Alternative. Alternative 3 has been identified as the preferred alternative by Reclamation and SLDMWA. Therefore, only Alternative 3 is analyzed in the Draft GCD. Alternative 3 would be completed by placing additional fill material on the dam embankment to raise the dam crest an additional 10 feet above the 12-foot embankment raise under development by the B.F. Sisk Dam SOD Modification Project. The 10-foot embankment raise would support an increase in reservoir storage capacity of 130 thousand acre-feet. The 10-foot increase in San Luis Reservoir's maximum surface elevation would inundate 445 acres of new land around the shore of the reservoir when the reservoir is full.

The increase in storage levels will require modifications to a section of State Route (SR) 152 where it crosses over Cottonwood Bay. The current maximum water level at San Luis Reservoir is 544 feet. Under Alternative 3, the maximum water level would increase 10 feet. The current elevation of the SR 152 road surface near Cottonwood Creek crossing ranges in elevation from 555 to 558 feet and higher. With the lowest point of SR 152 approximately 1 foot above the proposed maximum water storage level, it is assumed that modifications will be needed to protect the

² The General Conformity Determination is only completed for the selected alternative and not for all of the alternatives analyzed in the B.F. Sisk Dam Raise and Reservoir Expansion Project Environmental Impact Report/Supplemental Environmental Impact Statement.

roadway from wave action. The SR 152 embankment between mileposts Merced (MER) R5.239 and MER R5.806 would be modified to allow adequate freeboard to protect against wave action. In addition to the embankment modification at Cottonwood Bay, the embankment at milepost MER R6.295 would require the placement of downslope fill to prevent inundation of the roadway when the enlarged reservoir is filled to capacity.

Reclamation and SLDMWA have prepared an extensive list of mitigation measures that they propose to implement as part of the proposed action to satisfy requirements of NEPA and the California Environmental Quality Act (CEQA); for the general conformity evaluation, the construction measures are considered part of project construction as designed. The mitigation measures related to construction include the following general approaches to reduce air quality impacts:

- **Mitigation Measure AQ-1.** Construction contractors will reduce impacts on air quality from construction activities by using construction equipment compliant with the Tier 4 emission standards for off-road diesel engines instead of the fleet average for the San Joaquin Valley Air Basin (SJVAB). Records will be maintained by the construction contractor to demonstrate that actual emissions would not exceed SJVAPCD significance criteria and will be submitted monthly to SLDMWA.

If NO_x emissions are forecasted to exceed thresholds based on the monthly recordkeeping logs, then changes will be made so that the threshold is not exceeded. Possible changes that could be made to reduce emissions include changing the project phasing so there are fewer simultaneous operations, reducing the daily number of hours worked per piece of equipment, or using alternative-fueled equipment when feasible.

- **Mitigation Measure AQ-2.** Construction contractors will ensure all haul trucks, vendor trucks, or other vehicles operating on-site with on-road engines meet Model Year 2015 or better emission standards.
- **Mitigation Measure AQ-3.** Construction contractors will install diesel oxidation catalysts on all marine construction equipment capable of achieving an 85-percent reduction in NO_x.
- **Mitigation Measure AQ-4.** Construction contractors will be required to pave all unpaved haul and access roads to and from borrow and disposal areas (i.e., Basalt Hill and Borrow Area 6) to reduce inhalable particulate matter with diameters less than or equal to 10 micrometers (PM₁₀) and fine particulate matter with diameters less than or equal to 2.5 micrometers (PM_{2.5}) emissions.
- **Mitigation Measure AQ-5.** Construction contractors will be required to incorporate the following administrative control measures to minimize air pollutant and greenhouse gas (GHG) emissions:
 - Coordinate with appropriate air quality agencies to identify a construction schedule that minimizes cumulative impacts from other planned projects in the region, if feasible.

- Locate diesel engines, motors, and equipment staging areas as far as possible from residential areas and other sensitive receptors (e.g., schools, daycare centers, hospitals, senior centers).
- Avoid routing truck traffic near sensitive land uses to the fullest extent feasible.
- Use cement blended with the maximum feasible amount of fly ash or other materials that reduce GHG emissions from cement production.
- Recycle construction debris to the maximum extent feasible.
- Prepare an inventory of all equipment prior to construction and identify the suitability of add-on emission controls for each piece of equipment before groundbreaking.³
- Reduce construction-related trips of workers and equipment, including trucks.
- Develop a construction traffic and parking management plan that minimizes traffic interference and maintains traffic flow.
- Identify all commitments to reduce construction emissions and quantify air quality improvements that would result from adopting specific air quality measures.
- Identify where implementation of mitigation measures is rejected based on economic infeasibility.

Additionally, the project would include an environmental commitment to implement dust control measures during the construction phase.

All of the mitigation measures and environmental commitments that Reclamation relied upon in this Draft GCD will become construction specifications required to be implemented by construction contractors. Inclusion of these mitigation measures as required specifications in the construction contract, and Reclamation's monitoring of the construction contractor's conformance with their contract, will ensure that they will be properly implemented.

3.2 Relationship to Other Environmental Analyses

A joint Draft EIR/SEIS was published for public review and comment in August 2020 (Reclamation and SLDMWA 2020a) and a Final EIR/SEIS was published in December 2020 (Reclamation and SLDMWA 2020b), thereby providing an analysis of two proposed action alternatives. SLDMWA is the Lead Agency pursuant to CEQA and Reclamation is the Lead Agency pursuant to NEPA. This report refers to SLDMWA and Reclamation jointly as the

³ Suitability of control devices is based on: whether there is reduce normal availability of the construction equipment due to increased downtime and/or power output, whether there may be significant damage caused to the construction equipment engine, or whether there may be a significant risk to nearby workers or the public.

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Lead Agencies. California Department of Transportation (Caltrans) is serving as a responsible agency pursuant to CEQA and as a cooperating agency pursuant to NEPA.

Reclamation evaluated this project as a connected action to the B.F. Sisk Dam SOD Modification Project to create additional project benefits by increasing storage within San Luis Reservoir. Reclamation and California Department of Water Resources (DWR) evaluated environmental impacts of the B.F. Sisk Dam SOD Modification Project in 2019 (Reclamation and DWR 2019). As a connected action, the B.F. Sisk Dam Raise and Reservoir Expansion Project EIR/SEIS used the baseline evaluation presented in the B.F. Sisk Dam SOD Modification Project Draft SEIR when the incremental impacts of the action alternatives were considered. Subsequently, minor additions to the impact area and potential addition of materials excavation sites within the previous study area of the B.F. Sisk Dam SOD Modification Project were identified. In addition, the original haul truck assumptions were adjusted to more realistically represent expected exhaust emissions.⁴ As a result of these changes, and to fulfill CEQA and NEPA requirements, DWR released the B.F. Sisk Dam SOD Modification Project Draft Supplemental EIR (SEIR) in 2021 (DWR 2021) and Reclamation released a Supplemental Environmental Assessment and Finding of No Significant Impact in 2021 (Reclamation 2021).

Both NEPA and CEQA require that the air quality impacts of the proposed action implementation be analyzed and disclosed. Regulatory guidance implementing these statutes requires that the air quality impacts from the project and its alternatives be determined by identifying the associated project incremental emissions and air pollutant concentrations and comparing them respectively to emissions thresholds and the state ambient air quality standards and NAAQS. For CEQA purposes, the air quality impacts of the proposed action alternatives were compared to the impacts of the environmental baseline to determine environmental significance and develop appropriate mitigation measures. The air quality impacts of the two action alternatives were also compared to the NEPA baseline for NEPA purposes.

⁴ In the 2019 EIS/EIR, all haul truck trips were assumed to be 40 miles one-way, which overestimated the associated emissions. This was adjusted in the 2021 SEIR to account for the shorter trip length between the borrow areas and worksites. Fifteen percent of total trips were still conservatively assumed to require 40-mile one-way trips, with the remainder of trips occurring on-site with a one-way trip length of 4 miles.

Chapter 4 Regulatory Procedures

The general conformity regulations establish certain procedural requirements that must be followed when preparing a general conformity evaluation. This chapter specifies how these requirements are met for the evaluation of the federal action. The procedures required for the general conformity evaluation are similar but not identical to those for conducting an air quality impact analysis under NEPA regulations.

4.1 Use of Latest Planning Assumptions

The general conformity regulations require the use of the latest planning assumptions for the area encompassing the federal action, derived from the estimates of population, employment, travel, and congestion most recently approved by the metropolitan planning organization (MPO) (40 CFR 51.859(a)). Operation of the proposed action will not change population, employment, travel, and congestion within the MPO, and are not evaluated in the construction emissions analysis; therefore, this requirement is not applicable to the proposed action.

4.2 Use of Latest Emission Estimation Techniques

The general conformity regulations require the use of the latest and most accurate emission estimation techniques available unless such techniques are inappropriate (40 CFR 51.859(b)). Prior written approval from SJVAPCD or EPA is required to modify or substitute emission estimation techniques. The latest and most accurate emission estimation techniques available at the time of this evaluation may differ from the emission estimation techniques used in establishing the applicable SIP emissions budgets. The emissions estimates are summarized in Appendix A. The emission estimation techniques used in this evaluation are consistent with those used in preparing the Final EIR/SEIS (Reclamation and SLDMWA 2020b).

4.3 Emission Scenarios

The general conformity regulations require that the evaluation must reflect certain emission scenarios (40 CFR 51.859(d)). Specifically, these scenarios must include emissions from the federal action for the following years:

- Attainment year specified in the SIP; or, if the SIP does not specify an attainment year, the latest attainment year possible under the CAA
- Last year for which emissions are projected in the maintenance plan
- Year during which the total of direct and indirect emissions from the action is expected to be the greatest on an annual basis
- Any year for which the applicable SIP specifies an emissions budget

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These emission scenarios are described in more detail in Chapter 6. **Table 4-1** specifies the years for which the general conformity evaluation was performed for comparison to the approved SIP.

Table 4-1. Emission Scenario Years for General Conformity Evaluation

Pollutant	Attainment/Maintenance Date ¹	Greatest Emission Year	Years Analyzed for General Conformity
Ozone (VOC or NOx)	<ul style="list-style-type: none">• 2008 NAAQS: 2031• 2015 NAAQS: 2037	2027	2025 through 2032

Source: SJVAPCD 2016; EPA 2019

Note:

¹ Attainment demonstrations must be submitted to the EPA in July 2032 (2008 O₃ NAAQS) and August 2038 (2015 O₃ NAAQS) using three-year average data from prior years (i.e., 2029 to 2031, and 2035 to 2037).

Key:

NAAQS = national ambient air quality standard; NOx = nitrogen oxides; VOC = volatile organic compound

Chapter 5 Applicability Analysis

As stated previously, the first step in a general conformity evaluation is an analysis of whether the requirements apply to a federal action proposed to be taken in a nonattainment or a maintenance area. Unless exempted by the regulations or otherwise presumed to conform, a proposed federal action requires a GCD for each pollutant where the total of direct and indirect emissions caused by the proposed action would equal or exceed an annual de minimis emission level. If emissions are lower than the applicable de minimis threshold, no further analysis is needed.

5.1 Attainment Status of San Joaquin Valley Air Basin

B.F. Sisk Dam is located within Merced County in the SJVAB (the Central Valley). The SJVAPCD and California Air Resources Board (CARB) are the primary two regulatory agencies for air quality management in the SJVAB with oversight by the EPA. Pursuant to the CAA, EPA established primary NAAQS to protect the public health with an adequate margin of safety and secondary NAAQS to protect the public welfare for seven air pollutants. These pollutants are known as criteria pollutants: PM₁₀, PM_{2.5}, sulfur dioxide (SO₂), carbon monoxide (CO), O₃, NO₂, and lead (Pb). EPA has delegated authority to SJVAPCD to implement and enforce the NAAQS in the SJVAB. **Table 5-1** summarizes NAAQS attainment status in the SJVAB.

Table 5-1. NAAQS Attainment Status of the SJVAB

Criteria Pollutant	Averaging Time	Designation	Attainment Date	Is Conformity Required?
2008 O ₃	8-hour (0.0075 ppm)	Nonattainment, Extreme	12/31/2031	Yes
2015 O ₃	8-hour (0.070 ppm)	Nonattainment, Extreme	12/31/2037	Yes
CO	1-hour (35 ppm)	Attainment/Unclassifiable	11/15/1990	No
CO	8-hour (9 ppm)	Attainment/Unclassifiable	11/15/1990	No
2010 NO ₂	1-hour (100 ppb)	Attainment/Unclassifiable	1/29/2012	No
1971 NO ₂	Annual (0.053 ppm)	Attainment/Unclassifiable	4/28/1971	No
2010 SO ₂	1-hour (75 ppb)	Attainment/Unclassifiable	4/9/2018	No
1979 SO ₂	3-hour (0.5 ppm)	Attainment/Unclassifiable	3/19/1979	No
PM ₁₀	24-hour (150 µg/m ³)	Attainment/Maintenance	12/12/2008	Yes

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Criteria Pollutant	Averaging Time	Designation	Attainment Date	Is Conformity Required?
2006 PM _{2.5}	24-hour (35 µg/m ³)	Nonattainment, Serious	12/31/2019	Yes
2012 PM _{2.5}	Annual (12.0 µg/m ³)	Nonattainment, Serious	12/31/2021	Yes
Pb	Rolling 3-month average (0.15 µg/m ³)	Attainment	12/31/2010	No

Source: CARB 2016; EPA 2021a; EPA 2021b; EPA 2023 40 CFR 81.305

Key:

µg/m³ = micrograms per cubic meter; CO = carbon monoxide; NO₂ = nitrogen dioxide; O₃ = ozone; Pb = lead; PM₁₀ = inhalable particulate matter; PM_{2.5} = fine particulate matter; ppb = parts per billion; ppm = parts per million; SO₂ = sulfur dioxide

5.2 Exemptions from General Conformity Requirements

As noted previously, the general conformity requirements apply to a proposed federal action if the total project-related direct and indirect emissions equal or exceed de minimis emission levels. The only exceptions to this applicability criterion are the topical exemptions summarized below. However, the emissions attributable to the proposed project do not meet any of these exempt categories.

- Actions which would result in no emissions increase or an increase in emissions that is clearly below the de minimis levels (40 CFR 93.153(c)(2)); examples include administrative actions and routine maintenance and repair
- Actions where the emissions are not reasonably foreseeable (40 CFR 93.153(c)(3))
- Actions which implement a decision to conduct or carry out a conforming program (40 CFR 93.153 (c)(4))
- Actions which include major new or modified sources requiring a permit under the New Source Review (NSR) program (40 CFR 93.153(d)(1))
- Actions in response to emergencies or natural disasters (40 CFR 93.153(d)(2))
- Actions which include air quality research not harming the environment (40 CFR 93.153(d)(3))
- Actions which include modifications to existing sources to enable compliance with applicable environmental requirements (40 CFR 93.153(d)(4))
- Actions which include emissions from remedial measures carried out under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) that comply with other applicable requirements (40 CFR 93.153(d)(5))

In addition to these topical exemptions, the general conformity regulations allow each federal agency to establish a list of activities that are presumed to conform (40 CFR 93.153(f)). The Department of the Interior has not published a presumed-to-conform list of activities at the time of this evaluation.

5.3 De Minimis Emission Rates

The general conformity requirements will apply to a federal action for each pollutant for which the total of direct and indirect emissions caused by the federal action equal or exceed the de minimis emission rates shown in **Table 5-2**. These emission rates are expressed in units of tons per year (tpy) and are compared to the total of direct and indirect emissions caused by federal action for the calendar year during which the net emissions are expected to be the greatest. Because O₃ is a secondary pollutant (i.e., it is not emitted directly into the atmosphere but is formed in the atmosphere from the photochemical reactions of VOC and NO_x in the presence of sunlight), its de minimis emission rate is based on primary emissions of its precursor pollutants—VOC and NO_x. If the net emissions of either VOC or NO_x exceed the de minimis emission rate for O₃ (EPA 1994), then the federal action is subject to a general conformity evaluation for O₃.

Table 5-2. De Minimis Emission Rates for Determining Applicability of General Conformity Requirements to the Federal Action

Pollutant	SJVAB Attainment Status Designations	De Minimis Emission Rate (tpy)
O ₃ (VOC or NO _x)	Nonattainment/Extreme	10
PM ₁₀	Attainment/Maintenance	100
PM _{2.5} (and each precursor) ¹	Nonattainment/Serious	70

Source: 40 CFR 93.153(b)(1)

Note:

¹ The PM_{2.5} precursors in the region include SO_x, NO_x, and VOC.

Key:

NO_x = nitrogen oxides; O₃ = ozone; PM₁₀ = inhalable particulate matter; PM_{2.5} = fine particulate matter; SJVAB = San Joaquin Valley Air Basin; tpy = tons per year; VOC = volatile organic compound

Furthermore, the pollutant PM_{2.5} consists of primary particulate matter (directly emitted) and secondary particulate matter (formed in the atmosphere from precursor compounds) and may ultimately be composed of many separate chemical compounds. Generally, the main precursors of secondary PM_{2.5} include NO_x, oxides of sulfur (SO_x), and ammonia, although organic carbon compounds (VOC) also contribute to the formation of PM_{2.5}. Dynamic reactions between these precursor compounds emitted into the atmosphere by the sources of interest will affect the amount of PM_{2.5} attributable to the federal action. If the net emissions of any of these precursor compounds exceed the de minimis emission rate for PM_{2.5}, then the federal action is subject to a general conformity evaluation for PM_{2.5}.

5.4 Applicability for Federal Action

The applicability of the general conformity requirements to the federal action was evaluated by comparing the total of direct and indirect emissions (as presented in Appendix A) for the calendar year of greatest emissions to the de minimis emission rates specified in Table 5-2. Those pollutants that could not be excluded from applicability underwent a complete general conformity evaluation consistent with the procedures in Chapter 4 (using the methods in Appendix A and the criteria in Chapter 6).

5.4.1 Methodology

Appendix A presents the summary of the calculations used to estimate emissions associated with the proposed federal actions. Equipment parameters and construction activities have been described in the Final EIR/SEIS (Reclamation and SLDMWA 2020b).

5.4.2 Estimated Emissions and Comparison to De Minimis

Emissions were calculated for VOC, NO_x, PM₁₀, and PM_{2.5} (including precursors) for construction activities associated with the federal action and any connected action. These emissions are associated with mobile and area sources expected to be used for on-site construction-related purposes. Off-site construction-related emission sources (e.g., construction worker commute trips, material delivery hauling trips, debris/spoils disposal hauling trips) are also included in the emission estimates.

Table 5-3 summarizes the annual emissions from each year of construction. Emissions include all overlapping construction activities associated with the B.F. Sisk Dam Raise and Reservoir Expansion Project (including SR 152 modifications) and the B.F. Sisk SOD Modification Project. These data show that annual emissions from construction activities would exceed the conformity de minimis thresholds for VOC in 2027 and 2028 and for NO_x in 2025 through 2032. Therefore, a GCD is required for proposed VOC and NO_x emissions.

Table 5-3. Federal Action Emission Rates and Comparison to De Minimis Thresholds

Construction Year	VOC, tpy ¹	NOx, tpy ¹	CO, tpy ¹	SOx, tpy ¹	PM ₁₀ , tpy ¹	PM _{2.5} , tpy ¹
2021	<0.1	0.1	0.6	<0.1	0.1	0.1
2022	0.1	0.6	2.2	<0.1	0.3	0.2
2023	0.5	0.6	2.3	<0.1	0.2	0.1
2024 ²	n/a	n/a	n/a	n/a	n/a	n/a
2025	6.8	41.5	92.4	0.5	28.5	5.5
2026	6.8	41.5	92.4	0.5	46.7	7.7
2027 ³	16.1	75.5	168.3	0.7	30.6	7.1
2028 ³	16.1	75.5	168.3	0.7	12.3	4.9
2029	6.8	41.5	92.4	0.5	10.2	3.4
2030	6.8	41.5	92.4	0.5	10.2	3.4
2031	6.8	41.5	92.4	0.5	10.2	3.4
2032	6.8	41.5	92.4	0.5	10.2	3.4
Maximum	16.1	75.5	168.3	0.7	46.7	7.7
General conformity de minimis threshold	10	10	n/a	100	100	100
Is de minimis threshold exceeded?	Yes	Yes	n/a	No	No	No

Source: Reclamation and SLDMWA 2020b; Reclamation and DWR 2019; DWR 2021

Notes:

¹ Construction emission estimates represent a worst-case estimation of emissions based on a typical equipment fleet mix and maximum annual operating hours per year. While emission factors are expected to decrease in future years, no adjustments to emission factors were made in the analysis; however, the conformity requirements would not change with revised emission factors.

² No construction activities are predicted to occur in 2024; therefore, emissions are shown as not applicable (n/a).

³ Construction of the SR 152 modifications would only occur over two years (2027 and 2028); therefore, these years show higher emissions than other construction years for most pollutants.

Key:

CO = carbon monoxide; n/a = not applicable; NOx = nitrogen oxides; PM₁₀ = inhalable particulate matter; PM_{2.5} = fine particulate matter; SOx = sulfur oxides; tpy = tons per year; VOC = volatile organic compound

5.4.3 Applicability Determination

The total of direct and indirect emissions of SOx, PM₁₀, and PM_{2.5} from the federal action are less than the general conformity de minimis threshold emission rates shown in Table 5-2. Because the proposed area is located in an area designated attainment for the CO NAAQS, general conformity is not applicable for this pollutant. Therefore, the general conformity regulations do not apply to CO, SOx, PM₁₀, and PM_{2.5}, and no additional conformity evaluation need be made for these pollutants.

Because the total of direct and indirect emissions of NOx and VOC from the federal action exceeds the “extreme” O₃ nonattainment area conformity de minimis threshold, the general conformity requirements apply to NOx and VOC emissions from the action. Subsequent sections of this document will address the general conformity evaluation of NOx and VOC, as applicable to the federal action.

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Chapter 6 General Conformity Evaluation

For federal actions subject to a general conformity evaluation, the regulations delineate several criteria that can be used to demonstrate conformity (40 CFR 51.858). In fact, a combination of these criteria may be used to support a positive GCD (EPA 1994). The approach to be taken to evaluate the federal action relies on a combination of these available criteria, and the remainder of this chapter summarizes the findings to make the determination.

6.1 Designation of Applicable SIP

Section 110(a) of the CAA (42 U.S.C. 7410(a)) requires each state to adopt and submit to EPA a plan that provides for the implementation, maintenance, and enforcement of each NAAQS. This plan is known as the SIP. Over time, states have made and continue to make many such submittals to EPA to address issues as they arise related to the various NAAQS. As EPA reviews these submittals, it can either approve or disapprove them in whole or in part. The compilation of a state's approved submittals constitutes that state's applicable SIP. In California, the state agency responsible for preparing and maintaining the SIP is the CARB.

6.1.1 SIP Process in the SJVAB

California law provides for the establishment of air quality management districts and air pollution control districts within California for the purpose of implementing and enforcing ambient air quality standards on a county or regional (airshed) basis. State law also requires the districts in areas with poor air quality to prepare regional plans (Air Quality Management Plans [AQMPs]) to support the broader SIP, as well as to meet the goals of the California CAA. The SJVAPCD is the local air district for B.F. Sisk Dam.

Every three years, SJVAPCD must prepare and submit to CARB an AQMP to demonstrate how the SJVAB will attain and maintain the NAAQS and the California ambient air quality standards. The AQMP contains extensive emissions inventories of all emission sources in the SJVAB as well as various control measures applicable to most of these sources. Once CARB approves the AQMP, it is submitted to EPA for approval into the SIP. The EPA-approved O₃ SIP for the SJVAB is based on the AQMP that SJVAPCD submitted to CARB in 2007 (SJVAPCD 2007). The EPA-approved PM₁₀ SIP is based on the *2007 PM₁₀ Maintenance Plan and Request for Redesignation* approved by EPA in November 2008 (73 FR 66759).

In June 2016, SJVAPCD submitted to CARB the final *2016 Ozone Plan* (SJVAPCD 2016), and this formed the basis of a proposed SIP revision submitted by CARB to EPA on August 24, 2016.⁵ At the time of this writing, the EPA has not approved the *2016 Ozone Plan* in full. The EPA approved the portions of the plan that (1) address the requirement for a base year emissions inventory, and (2) address the requirements for a reasonable further progress demonstration and motor vehicle

⁵ Recent court decisions related to O₃ reasonable further progress baseline inventory years and contingency measures required updates to the *2016 Ozone Plan*. CARB adopted the *2018 Updates to the California State Implementation Plan* on October 25, 2018 to update the necessary SIP elements in the *2016 Ozone Plan* (CARB 2018).

emissions budgets for the SJVAB; the EPA also conditionally approved the contingency measure element of the plan (84 FR 11198). In 2019, the EPA also approved the portions of the plan that (1) address the requirements to demonstrate attainment by the applicable attainment date and implementation of reasonably available control measures, (2) relate to O₃ control strategy for the 2008 O₃ standards, and (3) address the emission statement requirement for O₃ nonattainment areas (84 FR 3302). In October 2022, EPA withdrew conditional approval of the original *2016 Ozone Plan* and *2018 Updates to the California SIP submissions to address contingency measure requirements for the 2008 Ozone NAAQS in the SJVAB Ozone nonattainment area* (87 FR 31510). This action included partial approval and partial disapproval of these SIP submissions.

The SJVAPCD has developed an attainment plan for the 2015 O₃ NAAQS of 0.070 parts per million (ppm). As a first step, the SJVAPCD released the *2020 Reasonably Available Control Technology (RACT) Demonstration for the 2015 8-Hour Ozone Standard* (SJVAPCD 2020). The *2022 Plan for the 2015 8-Hour Ozone Standard* was adopted by SJVAPCD in December 2022 and, at the time of this writing, has not yet been approved by CARB or EPA.

6.1.2 Status of Applicable SIP and Emissions Budgets by Pollutant

The CAA requires attainment of the NAAQS as expeditiously as practicable, but no later than the statutory dates for those criteria pollutants for which the SJVAB is designated nonattainment and for which a finding of general conformity must be determined for the federal actions. Upon redesignation of an area from nonattainment to attainment for each standard, the area will be considered to be a maintenance area for that standard (pursuant to Section 175A of the CAA), and as such, must meet all applicable requirements to maintain the standard.

To support the GCD, Reclamation demonstrates herein that the emissions of VOC and NO_x (as O₃ precursors) caused by the federal action either will result in a level of emissions which, together with all other emissions in the nonattainment area, will not exceed the emissions budgets specified in the approved SIP (criterion at 40 CFR 51.858(a)(5)(i)(A)) or, in the alternative, will not exceed the emissions budgets specified in the *2016 Ozone Plan*, see Chapter 6.2 below. The currently approved SIPs for the SJVAB are summarized as follows:

- *2007 Ozone Plan* (addresses 1997 eight-hour O₃ NAAQS of 0.08 ppm), approved by EPA on March 1, 2012 (77 FR 12652)
- *2007 PM₁₀ Maintenance Plan and Request for Redesignation*, approved by EPA on November 12, 2008 (73 FR 66759)
- *2013 Plan for the Revoked 1-Hour Ozone Standard* (SJVAPCD 2013) (addresses 1979 one-hour O₃ NAAQS of 0.12 ppm); approved by EPA on April 5, 2016 (81 FR 19492)⁶

SJVAPCD adopted the *2016 Ozone Plan* on June 16, 2016, and (as noted above) the AQMP formed the basis of a proposed SIP revision submitted to EPA. SJVAPCD adopted the *2022 Ozone Plan* on December 15, 2022, which—while not yet approved by CARB—will be the basis for developing subsequent proposed SIP revisions for submittal to EPA. The *PM₁₀ Maintenance Plan* was adopted by SJVAPCD on September 20, 2007. This evaluation will make comparisons both to applicable emissions inventories in the current EPA-approved O₃ SIP (*2007*

⁶ On July 18, 2016, the EPA determined that the San Joaquin Valley nonattainment area had attained the 1-hour O₃ NAAQS (81 FR 46609).

Ozone Plan) and to applicable emissions inventories contained in the *2016 Ozone Plan* and *2022 Ozone Plan*. For purposes of the GCD, the applicable SIP will be the most recent EPA-approved SIP at the time of the release of the Final GCD.

6.2 Comparison to SIP Emissions Inventories

As noted in the preceding section, the most recent EPA-approved SIP at the time of the release of the Final GCD must be used for emission budget analyses. The *2007 Ozone Plan* forms the basis for the current EPA-approved O₃ SIP. However, the EPA may approve all or part of the *2016 Ozone Plan* or *2022 Ozone Plan* before the Final GCD is published. Therefore, to avoid revisions to and/or recirculation of the Final GCD, emissions for the federal actions presented in this section are compared to both the currently approved SIP emissions budgets and to the *2016 Ozone Plan* and *2022 Ozone Plan* emissions budgets.

The emissions inventories developed by SJVAPCD and fully documented in the AQMPs are delineated by source types. **Table 6-1** provides a concordance between the emission source categories that characterize the federal actions and the emission source types in the O₃ AQMPs.

Table 6-1. Relationship of Federal Actions Source Categories and AQMP Source Types

Federal Action Source Category	2007 O ₃ Plan Source Type	2016 O ₃ Plan Source Type	2022 O ₃ Plan Source Type
On-site Construction Equipment (including marine emissions)	Off-Road Equipment	Off-Road Equipment	Off-Road Equipment
Haul Trucks	Heavy-Duty Diesel Trucks (HHDV)	Heavy-Duty Diesel Trucks (HHDV)	Heavy-Duty Diesel Trucks (HHDV)

While the AQMPs also include a category for “Ships and Commercial Boats,” which includes vessels such as tugboats, marine emissions associated with material transport during SR 152 modifications were included in the “Off-Road Equipment” category in these calculations. Because the tugboats will be used to support construction-related activities, it was determined that this category would be most representative of ship emissions.

6.2.1 Comparison of Project Emissions with Approved SIP Budgets

The general conformity regulations require evaluating the total of direct and indirect emissions for the federal action for the mandated attainment year for an extreme nonattainment area (2031),⁷ the year of maximum project emissions (2027), and any years for which the SIP identifies an emissions budget (40 CFR 51.859(d)). The approved O₃ SIP, the *2007 O₃ Plan*, is based on the 1997 eight-hour O₃ NAAQS, which has an attainment date of 2023. Because construction would not start

⁷ While the attainment deadline for the 2015 O₃ NAAQS is 2037, this year is not analyzed in the evaluation because the project would not be expected to produce emissions beyond the 8-year construction period (ending in 2032).

until 2025, the emissions budget for 2023 (the last year identified in the O₃ SIP) was used for comparison during all years of construction.

6.2.1.1 Comparison of Project VOC and NOx Emissions with Approved SIP Budgets

Table 6-2 and **Table 6-3** summarize the comparison of estimated VOC and NOx emissions from construction activities under the federal action, respectively, to the applicable source types under the approved SIP for the years noted in Table 4-1. Project VOC and NOx emissions would exceed both VOC and NOx de minimis emission rates; therefore, to demonstrate conformity with the SIP, Reclamation or SLDMWA will enter a Voluntary Emissions Reduction Agreement (VERA) with the SJVAPCD.

VERA is an enforceable mechanism by which project emissions are mitigated pound-for-pound by funding emission reduction projects administered through the SJVAPCD's emission reduction incentive grant program. By executing a VERA with the District, Reclamation or SLDMWA will provide mitigation for the federal action by purchasing mitigation to offset as much as 401.11 tons and 73.86 tons of the project's NOx and VOC construction emissions, respectively. The SJVAPCD will administer grants on behalf of Reclamation or SLDMWA, quantify and enforce the emission reductions, and certify that project emissions have been mitigated. The execution of the proposed VERA is conditioned upon Reclamation's issuance of a Record of Decision for the project. The VERA would be executed before emissions associated with project construction begin, which is projected for fall 2025.

Table 6-2. Comparison of Construction-Related VOC Emissions to Approved SIP Emissions Budgets

Year and Source Type ¹	Federal Action VOC Emissions (tpy)	Approved SIP VOC Emissions (tpy) ²	Relative Contribution to VOC SIP Inventories
2025			
On-site Construction Equipment	3.84	4,197.5	0.09%
Haul Trucks	0.22	2,664.5	0.01%
2026			
On-site Construction Equipment	3.84	4,197.5	0.09%
Haul Trucks	0.22	2,664.5	0.01%
2027			
On-site Construction Equipment	13.06	4,197.5	0.31%
Haul Trucks	0.25	2,664.5	0.01%
2028			
On-site Construction Equipment	13.06	4,197.5	0.31%
Haul Trucks	0.25	2,664.5	0.01%
2029			
On-site Construction Equipment	3.84	4,197.5	0.09%
Haul Trucks	0.22	2,664.5	0.01%
2030			
On-site Construction Equipment	3.84	4,197.5	0.09%
Haul Trucks	0.22	2,664.5	0.01%
2031			
On-site Construction Equipment	3.84	4,197.5	0.09%
Haul Trucks	0.22	2,664.5	0.01%
2032			
On-site Construction Equipment	3.84	4,197.5	0.09%
Haul Trucks	0.22	2,664.5	0.01%

Source: Reclamation and DWR 2019; Reclamation and SLDMWA 2020b; SJVAPCD 2007

Note:

¹ Emissions from the proposed campground improvements analyzed in the Draft SEIR (DWR 2021) are not summarized because emissions would not exceed the general conformity de minimis thresholds during the construction years.

² 2025 through 2032 emissions budgets are based on emissions budgets in 2023, the latest available emissions inventory included in the 2007 O₃ Plan (SJVAPCD 2007).

Key:

SIP = state implementation plan; tpy = tons per year; VOC = volatile organic compound

Table 6-3. Comparison of Construction-Related NOx Emissions to Approved SIP Emissions Budgets

Year and Source Type ¹	Federal Action NOx Emissions (tpy)	Approved SIP NOx Emissions (tpy) ²	Relative Contribution to NOx SIP Inventories
2025			
On-site Construction Equipment	11.01	10,256.5	0.11%
Haul Trucks	21.53	29,857.0	0.07%
2026			
On-site Construction Equipment	11.01	10,256.5	0.11%
Haul Trucks	21.53	29,857.0	0.07%
2027			
On-site Construction Equipment	41.26	10,256.5	0.40%
Haul Trucks	25.22	29,857.0	0.08%
2028			
On-site Construction Equipment	41.26	10,256.5	0.40%
Haul Trucks	25.22	29,857.0	0.08%
2029			
On-site Construction Equipment	11.01	10,256.5	0.11%
Haul Trucks	21.53	29,857.0	0.07%
2030			
On-site Construction Equipment	11.01	10,256.5	0.11%
Haul Trucks	21.53	29,857.0	0.07%
2031			
On-site Construction Equipment	11.01	10,256.5	0.11%
Haul Trucks	21.53	29,857.0	0.07%
2032			
On-site Construction Equipment	11.01	10,256.5	0.11%
Haul Trucks	21.53	29,857.0	0.07%

Source: Reclamation and DWR 2019; Reclamation and SLDMWA 2020b; SJVAPCD 2007

Note:

¹ Emissions from the proposed campground improvements analyzed in the Draft SEIR (DWR 2021) are not summarized because emissions would not exceed the general conformity de minimis thresholds during the construction years

² 2025 through 2032 emissions budgets are based on emissions budgets in 2023, the latest available emissions inventory included in the 2007 O₃ Plan (SJVAPCD 2007).

Key:

NOx = nitrogen oxides; SIP = state implementation plan; tpy = tons per year

6.2.2 Comparison of Project Emissions with 2016 and 2022 Ozone Plan Budgets

If the 2016 Ozone Plan (e.g., reasonable further progress schedules, attainment and maintenance demonstrations, and contingency measures) or the 2022 Ozone Plan were to be approved by EPA as the applicable SIP, the general conformity regulations would require evaluating the total of direct and indirect emissions for the federal action for the mandated attainment year for an extreme nonattainment area (2031 and 2037 for the 2008 and 2015 O₃ standards, respectively), the year of maximum project emissions (2027), and any years for which the SIP identifies an emissions budget (40 CFR 51.859(d)). Because construction would occur between 2025 and 2032, the emissions budgets for 2031 under the 2016 Ozone Plan (the last year an emissions budget is identified under that plan) was used for comparison to 2032 emissions.

6.2.2.1 Comparison of Project VOC and NOx Emissions with 2016 Ozone Plan Budgets

Table 6-4 and Table 6-5 summarize the comparison of estimated VOC and NOx emissions from construction activities under the federal action to the applicable source types under the 2016 Ozone Plan for the years noted in Table 4-1. As described in Section 6.2.1.1., Reclamation will enter a VERA with the District and purchase mitigation to offset up to 401.11 tons and 73.86 tons of the project’s NOx and VOC construction emissions, respectively, to conform to the SIP.

Table 6-4. Comparison of Construction-Related VOC Emissions to 2016 Ozone Plan Emissions Budgets

Year and Source Type ¹	Federal Action VOC Emissions (tpy)	2016 O ₃ Plan VOC Emissions (tpy)	Relative Contribution to VOC SIP Inventories
2025			
On-site Construction Equipment	3.84	3,212.0	0.12%
Haul Trucks	0.22	474.5	0.05%
2026			
On-site Construction Equipment	3.84	3,212.0	0.12%
Haul Trucks	0.22	474.5	0.05%
2027			
On-site Construction Equipment	13.06	3,212.0	0.41%
Haul Trucks	0.25	474.5	0.05%
2028			
On-site Construction Equipment	13.06	3,212.0	0.41%
Haul Trucks	0.25	474.5	0.05%
2029			
On-site Construction Equipment	3.84	3,212.0	0.12%
Haul Trucks	0.22	474.5	0.05%
2030			
On-site Construction Equipment	3.84	3,212.0	0.12%
Haul Trucks	0.22	474.5	0.05%
2031			
On-site Construction Equipment	3.84	3,248.5	0.12%
Haul Trucks	0.22	474.5	0.05%
2032²			
On-site Construction Equipment	3.84	3,248.5	0.12%
Haul Trucks	0.22	474.5	0.05%

Source: Reclamation and DWR 2019; Reclamation and SLDMWA 2020b; SJVAPCD 2016

Note:

¹ Emissions from the proposed campground improvements analyzed in the Draft SEIR (DWR 2021) are not summarized because emissions would not exceed the general conformity de minimis thresholds during the construction years.

² 2032 emissions budgets are based on emissions budgets in 2031, the latest available emissions inventory included in the 2016 O₃ Plan (SJVAPCD 2016).

Key:

O₃ = ozone; SIP = state implementation plan; tpy = tons per year; VOC = volatile organic compound

Table 6-5. Comparison of Construction-Related NOx Emissions to 2016 Ozone Plan Emissions Budgets

Year and Source Type ¹	Federal Action NOx Emissions (tpy)	2016 O ₃ Plan NOx Emissions (tpy)	Relative Contribution to NOx SIP Inventories
2025			
On-site Construction Equipment	11.01	5,621.0	0.20%
Haul Trucks	21.53	11,534.0	0.19%
2026			
On-site Construction Equipment	11.01	5,402.0	0.20%
Haul Trucks	21.53	11,461.0	0.19%
2027			
On-site Construction Equipment	41.26	5,183.0	0.80%
Haul Trucks	25.22	11,315.0	0.22%
2028			
On-site Construction Equipment	41.26	5,037.0	0.82%
Haul Trucks	25.22	11,278.5	0.22%
2029			
On-site Construction Equipment	11.01	4,891.0	0.23%
Haul Trucks	21.53	11,205.5	0.19%
2030			
On-site Construction Equipment	11.01	4,781.5	0.23%
Haul Trucks	21.53	11,169.0	0.19%
2031			
On-site Construction Equipment	11.01	4,672.0	0.24%
Haul Trucks	21.53	11,132.5	0.19%
2032²			
On-site Construction Equipment	11.01	4,672.0	0.24%
Haul Trucks	21.53	11,132.5	0.19%

Source: Reclamation and DWR 2019; Reclamation and SLDMWA 2020b; SJVAPCD 2016

Note:

¹ Emissions from the proposed campground improvements analyzed in the Draft SEIR (DWR 2021) are not summarized because emissions would not exceed the general conformity de minimis thresholds during the construction years.

² 2032 emissions budgets are based on emissions budgets in 2031, the latest available emissions inventory included in the 2016 O₃ Plan (SJVAPCD 2016).

Key:

NOx = nitrogen oxides; O₃ = ozone; SIP = state implementation plan; tpy = tons per year

6.2.2.2 Comparison of Project VOC and NOx Emissions with 2022 Ozone Plan Budgets

Table 6-6 and Table 6-7 summarize the comparison of estimated VOC and NOx emissions from construction activities under the federal action to the applicable source types under the 2022 Ozone Plan for the years noted in Table 4-1. As described in Section 6.2.1.1., Reclamation will enter a VERA with the District and purchase mitigation to offset up to 401.11 tons and 73.86 tons of the project’s NOx and VOC construction emissions, respectively, to conform to the SIP.

Table 6-6. Comparison of Construction-Related VOC Emissions to 2022 Ozone Plan Emissions Budgets

Year and Source Type ¹	Federal Action VOC Emissions (tpy)	2016 O ₃ Plan VOC Emissions (tpy)	Relative Contribution to VOC SIP Inventories
2025			
On-site Construction Equipment	3.84	4,635.5	0.08%
Haul Trucks	0.22	292.0	0.07%
2026			
On-site Construction Equipment	3.84	4,270.5	0.09%
Haul Trucks	0.22	292.0	0.07%
2027			
On-site Construction Equipment	13.06	3,905.5	0.33%
Haul Trucks	0.25	292.0	0.09%
2028			
On-site Construction Equipment	13.06	3,613.5	0.36%
Haul Trucks	0.25	292.0	0.09%
2029			
On-site Construction Equipment	3.84	3,321.5	0.12%
Haul Trucks	0.22	292.0	0.07%
2030			
On-site Construction Equipment	3.84	3,066.0	0.13%
Haul Trucks	0.22	292.0	0.07%
2031			
On-site Construction Equipment	3.84	2,847.0	0.13%
Haul Trucks	0.22	292.0	0.07%
2032		2701	
On-site Construction Equipment	3.84	2,701.0	0.14%
Haul Trucks	0.22	292.0	0.07%

Source: Reclamation and DWR 2019; Reclamation and SLDMWA 2020b; SJVAPCD 2016

Note:

¹ Emissions from the proposed campground improvements analyzed in the Draft SEIR (DWR 2021) are not summarized because emissions would not exceed the general conformity de minimis thresholds during the construction years.

Key:

O₃ = ozone; SIP = state implementation plan; tpy = tons per year; VOC = volatile organic compound

Table 6-7. Comparison of Construction-Related NOx Emissions to 2022 Ozone Plan Emissions Budgets

Year and Source Type ¹	Federal Action NOx Emissions (tpy)	2016 O ₃ Plan NOx Emissions (tpy)	Relative Contribution to NOx SIP Inventories
2025			
On-site Construction Equipment	11.01	5,657.5	0.19%
Haul Trucks	21.53	6,898.5	0.31%
2026			
On-site Construction Equipment	11.01	5,292.5	0.21%
Haul Trucks	21.53	6,460.5	0.33%
2027			
On-site Construction Equipment	41.26	5,000.5	0.83%
Haul Trucks	25.22	5,913.0	0.43%
2028			
On-site Construction Equipment	41.26	4,708.5	0.88%
Haul Trucks	25.22	5,621.0	0.45%
2029			
On-site Construction Equipment	11.01	4,453.0	0.25%
Haul Trucks	21.53	5,365.5	0.40%
2030			
On-site Construction Equipment	11.01	4,270.5	0.26%
Haul Trucks	21.53	5,183.0	0.42%
2031			
On-site Construction Equipment	11.01	4,088.0	0.27%
Haul Trucks	21.53	5,000.5	0.43%
2032			
On-site Construction Equipment	11.01	3,905.5	0.28%
Haul Trucks	21.53	4,891.0	0.44%

Source: Reclamation and DWR 2019; Reclamation and SLDMWA 2020b; SJVAPCD 2016

Note:

¹ Emissions from the proposed campground improvements analyzed in the Draft SEIR (DWR 2021) are not summarized because emissions would not exceed the general conformity de minimis thresholds during the construction years.

Key:

NOx = nitrogen oxides; O₃ = ozone; SIP = state implementation plan; tpy = tons per year

6.3 Consistency with Requirements and Milestones in Applicable SIP

The general conformity regulations state that, notwithstanding the other requirements of the rule, a federal action may not be determined to conform unless the total of direct and indirect emissions from the federal action is in compliance or consistent with all relevant requirements and milestones in the applicable SIP (40 CFR 51.858(c)). This includes but is not limited to such issues as reasonable further progress schedules, assumptions specified in the attainment or maintenance

demonstration, prohibitions, numerical emission limits, and work practice standards. This chapter briefly addresses how the federal actions were assessed for SIP consistency for this evaluation.

6.3.1 Applicable Requirements from EPA

EPA has already promulgated, and will continue to promulgate, numerous requirements to support the goals of the CAA with respect to the NAAQS. Typically, these requirements take the form of rules regulating emissions from significant new sources, including emission standards for major stationary point sources and classes of mobile sources as well as permitting requirements for new major stationary point sources. Since states have the primary responsibility for implementation and enforcement of requirements under the CAA and can impose stricter limitations than EPA, the EPA requirements often serve as guidance to the states in formulating their air quality management strategies.

6.3.2 Applicable Requirements from CARB

In California, to support the attainment and maintenance of the NAAQS, CARB is primarily responsible for regulating emissions from mobile sources. In fact, EPA has delegated authority to CARB to establish emission standards for on-road and some non-road vehicles separate from the EPA vehicle emission standards, although CARB is preempted by the CAA from regulating emissions from many non-road mobile sources, including tugboats. Emission standards for preempted equipment can only be set by EPA.

6.3.3 Applicable Requirements from SJVAPCD

To support the attainment and maintenance of the NAAQS in the SJVAB, SJVAPCD is primarily responsible for regulating emissions from stationary sources. As noted above, SJVAPCD develops and updates its AQMP regularly to support the California SIP. While the AQMP contains rules and regulations geared to attain and maintain the NAAQS, these rules and regulations also have the much more difficult goal of attaining and maintaining the California ambient air quality standards.

6.3.4 Consistency with Applicable Requirements

Reclamation and SLDMWA already comply with, and will continue to comply with, a myriad of rules and regulations implemented and enforced by federal, state, regional, and local agencies to protect and enhance ambient air quality in the SJVAB. In particular, because of the long persistence of challenges to attain the ambient air quality standards in the SJVAB, the rules and regulations promulgated by CARB and SJVAPCD are among the most stringent in the United States. Reclamation and SLDMWA will continue to comply with all existing applicable air quality regulatory requirements for activities over which they have direct control and will meet in a timely manner all regulatory requirements that become applicable in the future.

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Chapter 7 Reporting

To support a decision concerning the federal action, Reclamation is issuing this Draft GCD.

7.1 Draft General Conformity Determination

Reclamation is providing copies of the Draft GCD—to the appropriate regional offices of EPA, CARB, SJVAPCD, the Merced County Association of Governments (the local MPO), and tribes within the nonattainment area, and the National Park Service (because it manages Pinnacles Wilderness [Class I Lands within 100 km of the project])—for a 30-day review. Reclamation is also placing a notice in a daily newspaper of general circulation in the SJVAB announcing the availability of the Draft GCD and requesting written public comments for a 30-day period.

7.2 Final General Conformity Determination

Reclamation will provide copies of the Final GCD—to the appropriate regional offices of EPA, CARB, SJVAPCD, the Merced County Association of Governments (the local MPO), tribes within the nonattainment area, and the National Park Service (because it manages Pinnacles Wilderness [Class I Lands within 100 km of the project])—within 30 days of its promulgation. Reclamation will also place a notice in a daily newspaper of general circulation in the SJVAB announcing the availability of its Final GCD within 30 days of its promulgation. As part of the general conformity evaluation, Reclamation will document its responses to all comments received on the Draft GCD and will make both the comments and responses available upon request by any person within 30 days of the promulgation of the Final GCD.

As project details become more available and a change in feasibility or design results in a change to estimated emissions summarized in this Draft GCD, modifications to the VERA may be necessary, and additional NEPA review may be required. Per VERA requirements, all emissions above de minimus thresholds described in **Table 5-2** will be mitigated pound-for-pound.

7.3 Frequency of General Conformity Determinations

The general conformity regulations state that the status of a specific conformity determination lapses five years after the date of public notification for the Final GCD, unless the action has been completed or a continuous program has been commenced to implement the action (40 CFR 51.857(a)). Because the federal action envisions a construction program extending beyond five years, the Final GCD will remain active only under this “continuous program to implement.”

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Chapter 8 Findings and Conclusion

As part of the environmental review of the federal action, Reclamation conducted a general conformity evaluation pursuant to SJVAPCD Rule 9110 and 40 CFR Part 51 Subpart W. The general conformity regulations apply at this time to any action at B.F. Sisk Dam requiring Reclamation approval because the SJVAB is situated in a nonattainment area for O₃ and PM_{2.5} and a maintenance area for PM₁₀. Reclamation conducted the general conformity evaluation following all regulatory criteria and procedures and in coordination with EPA, CARB, and SJVAPCD. Reclamation proposes that the federal action, as designed, will conform to the approved SIP, based on the following findings:

- The federal action is not subject to a GCD for NO_x (as a PM_{2.5} precursor), VOC (as a PM_{2.5} precursor), PM₁₀, PM_{2.5}, or SO_x (as a PM_{2.5} precursor) because the net emissions associated with the federal action are less than the general conformity de minimis thresholds.
- By entering a VERA with the District, Reclamation will provide mitigation for the federal action by purchasing mitigation to offset up to 401.11 tons and 73.86 tons of the project's NO_x and VOC construction emissions, respectively. The SJVAPCD will administer grants on behalf of Reclamation, quantify and enforce the emission reductions, and certify that project emissions have been mitigated.

Therefore, Reclamation concludes that the federal action, as designed, conforms to the purpose of the approved SIP and it is consistent with all applicable requirements.

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Appendix A General Conformity Calculation Results Summary

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Table 1. Comparison of Federal Action VOC Emissions for Construction to Proposed 2022 O₃ Plan Emissions Budgets for Construction-Related Source Types

Year and Source Type	Federal Action VOC Emissions (tpy)	Approved SIP VOC Emissions (tpy)	Relative Contribution to VOC SIP Inventories
2025			
Onsite Construction Equipment	3.84	4,635.5	0.08%
Haul Trucks	0.22	292.0	0.07%
2026			
Onsite Construction Equipment	3.84	4,270.5	0.09%
Haul Trucks	0.22	292.0	0.07%
2027			
Onsite Construction Equipment ¹	13.06	3,905.5	0.33%
Haul Trucks ¹	0.25	292.0	0.09%
2028			
Onsite Construction Equipment ¹	13.06	3,613.5	0.36%
Haul Trucks ¹	0.25	292.0	0.09%
2029			
Onsite Construction Equipment	3.84	3,321.5	0.12%
Haul Trucks	0.22	292.0	0.07%
2030			
Onsite Construction Equipment	3.84	3,066.0	0.13%
Haul Trucks	0.22	292.0	0.07%
2031			
Onsite Construction Equipment	3.84	2,847.0	0.13%
Haul Trucks	0.22	292.0	0.07%
2032			
		2701	
Onsite Construction Equipment	3.84	2,701.0	0.14%
Haul Trucks	0.22	292.0	0.07%

Notes:

1. Construction of the SR 152 Modification will only occur in 2027 and 2028. Therefore, construction for all other years only includes emissions associated with the dam raise and the SOD Modification Project.

Table 2. Comparison of Federal Action NOx Emissions for Construction to Proposed 2022 O₃ Plan Emissions Budgets for Construction-Related Source Types

Year and Source Type	Federal Action NOx Emissions (tpy)	Approved SIP NOx Emissions (tpy)	Relative Contribution to NOx SIP Inventories
2025			
Onsite Construction Equipment	11.01	5,657.5	0.19%
Haul Trucks	21.53	6,898.5	0.31%
2026			
Onsite Construction Equipment	11.01	5,292.5	0.21%
Haul Trucks	21.53	6,460.5	0.33%
2027			
Onsite Construction Equipment ¹	41.26	5,000.5	0.83%
Haul Trucks ¹	25.22	5,913.0	0.43%
2028			
Onsite Construction Equipment ¹	41.26	4,708.5	0.88%
Haul Trucks ¹	25.22	5,621.0	0.45%
2029			
Onsite Construction Equipment	11.01	4,453.0	0.25%
Haul Trucks	21.53	5,365.5	0.40%
2030			
Onsite Construction Equipment	11.01	4,270.5	0.26%
Haul Trucks	21.53	5,183.0	0.42%
2031			
Onsite Construction Equipment	11.01	4,088.0	0.27%
Haul Trucks	21.53	5,000.5	0.43%
2032			
Onsite Construction Equipment	11.01	3,905.5	0.28%
Haul Trucks	21.53	4,891.0	0.44%

Notes:

1. Construction of the SR 152 Modification will only occur in 2027 and 2028. Therefore, construction for all other years only includes emissions associated with the dam raise and the SOD Modification Project.

Table 3. Comparison of Federal Action VOC Emissions for Construction to 2016 O₃ Plan Emissions Budgets for Construction-Related Source Types

Year and Source Type	Federal Action VOC Emissions (tpy)	Approved SIP VOC Emissions (tpy)	Relative Contribution to VOC SIP Inventories
2025			
Onsite Construction Equipment	3.84	3,212.0	0.12%
Haul Trucks	0.22	474.5	0.05%
2026			
Onsite Construction Equipment	3.84	3,212.0	0.12%
Haul Trucks	0.22	474.5	0.05%
2027			
Onsite Construction Equipment ¹	13.06	3,212.0	0.41%
Haul Trucks ¹	0.25	474.5	0.05%
2028			
Onsite Construction Equipment ¹	13.06	3,212.0	0.41%
Haul Trucks ¹	0.25	474.5	0.05%
2029			
Onsite Construction Equipment	3.84	3,212.0	0.12%
Haul Trucks	0.22	474.5	0.05%
2030			
Onsite Construction Equipment	3.84	3,212.0	0.12%
Haul Trucks	0.22	474.5	0.05%
2031			
Onsite Construction Equipment	3.84	3,248.5	0.12%
Haul Trucks	0.22	474.5	0.05%
2032			
Onsite Construction Equipment ²	3.84	3,248.5	0.12%
Haul Trucks ²	0.22	474.5	0.05%

Notes:

1. Construction of the SR 152 Modification will only occur in 2027 and 2028. Therefore, construction for all other years only includes emissions associated with the dam raise and the SOD Modification Project.
2. 2016 O₃ Plan Budgets only extend to 2031; therefore, 2032 budget equal to 2031 budget.

Table 4. Comparison of Federal Action NOx Emissions for Construction to 2016 O₃ Plan Emissions Budgets for Construction-Related Source Types

Year and Source Type	Federal Action NOx Emissions (tpy)	Approved SIP NOx Emissions (tpy)	Relative Contribution to NOx SIP Inventories
2025			
Onsite Construction Equipment	11.01	5,621.0	0.20%
Haul Trucks	21.53	11,534.0	0.19%
2026			
Onsite Construction Equipment	11.01	5,402.0	0.20%
Haul Trucks	21.53	11,461.0	0.19%
2027			
Onsite Construction Equipment ¹	41.26	5,183.0	0.80%
Haul Trucks ¹	25.22	11,315.0	0.22%
2028			
Onsite Construction Equipment ¹	41.26	5,037.0	0.82%
Haul Trucks ¹	25.22	11,278.5	0.22%
2029			
Onsite Construction Equipment	11.01	4,891.0	0.23%
Haul Trucks	21.53	11,205.5	0.19%
2030			
Onsite Construction Equipment	11.01	4,781.5	0.23%
Haul Trucks	21.53	11,169.0	0.19%
2031			
Onsite Construction Equipment	11.01	4,672.0	0.24%
Haul Trucks	21.53	11,132.5	0.19%
2032			
Onsite Construction Equipment ²	11.01	4,672.0	0.24%
Haul Trucks ²	21.53	11,132.5	0.19%

Notes:

1. Construction of the SR 152 Modification will only occur in 2027 and 2028. Therefore, construction for all other years only includes emissions associated with the dam raise and the SOD Modification Project.
2. 2016 O₃ Plan Budgets only extend to 2031; therefore, 2032 budget equal to 2031 budget.

Table 5. Comparison of Federal Action VOC Emissions for Construction to Approved SIP (2007) O₃ Plan Emissions Budgets for Construction-Related Source Types

Year and Source Type	Federal Action VOC Emissions (tpy)	Approved SIP VOC Emissions (tpy) ²	Relative Contribution to VOC SIP Inventories
2025			
Onsite Construction Equipment	3.84	4,197.5	0.09%
Haul Trucks	0.22	2,664.5	0.01%
2026			
Onsite Construction Equipment	3.84	4,197.5	0.09%
Haul Trucks	0.22	2,664.5	0.01%
2027			
Onsite Construction Equipment ¹	13.06	4,197.5	0.31%
Haul Trucks ¹	0.25	2,664.5	0.01%
2028			
Onsite Construction Equipment ¹	13.06	4,197.5	0.31%
Haul Trucks ¹	0.25	2,664.5	0.01%
2029			
Onsite Construction Equipment	3.84	4,197.5	0.09%
Haul Trucks	0.22	2,664.5	0.01%
2030			
Onsite Construction Equipment	3.84	4,197.5	0.09%
Haul Trucks	0.22	2,664.5	0.01%
2031			
Onsite Construction Equipment	3.84	4,197.5	0.09%
Haul Trucks	0.22	2,664.5	0.01%
2032			
Onsite Construction Equipment	3.84	4,197.5	0.09%
Haul Trucks	0.22	2,664.5	0.01%

Notes:

1. Construction of the SR 152 Modification will only occur in 2027 and 2028. Therefore, construction for all other years only includes emissions associated with the dam raise and the SOD Modification Project.
2. 2007 O₃ Plan addresses 1997 O₃ NAAQS of 0.08 ppm and emissions budgets only extend to 2023. Therefore, emissions budgets based on 2023 only and are flatlined.

Table 6. Comparison of Federal Action NOx Emissions for Construction to Approved SIP (2007) O₃ Plan Emissions Budgets for Construction-Related Source Types

Year and Source Type	Federal Action NOx Emissions (tpy)	Approved SIP NOx Emissions (tpy) ²	Relative Contribution to NOx SIP Inventories
2025			
Onsite Construction Equipment	11.01	10,256.5	0.11%
Haul Trucks	21.53	29,857.0	0.07%
2026			
Onsite Construction Equipment	11.01	10,256.5	0.11%
Haul Trucks	21.53	29,857.0	0.07%
2027			
Onsite Construction Equipment ¹	41.26	10,256.5	0.40%
Haul Trucks ¹	25.22	29,857.0	0.08%
2028			
Onsite Construction Equipment ¹	41.26	10,256.5	0.40%
Haul Trucks ¹	25.22	29,857.0	0.08%
2029			
Onsite Construction Equipment	11.01	10,256.5	0.11%
Haul Trucks	21.53	29,857.0	0.07%
2030			
Onsite Construction Equipment	11.01	10,256.5	0.11%
Haul Trucks	21.53	29,857.0	0.07%
2031			
Onsite Construction Equipment	11.01	10,256.5	0.11%
Haul Trucks	21.53	29,857.0	0.07%
2032			
Onsite Construction Equipment	11.01	10,256.5	0.11%
Haul Trucks	21.53	29,857.0	0.07%

Notes:

1. Construction of the SR 152 Modification will only occur in 2027 and 2028. Therefore, construction for all other years only includes emissions associated with the dam raise and the SOD Modification Project.
2. 2007 O₃ Plan addresses 1997 O₃ NAAQS of 0.08 ppm and emissions budgets only extend to 2023. Therefore, emissions budgets based on 2023 only and are flatlined.

Table 7. Maximum Annual Mitigated Emissions

Scenario	Federal Action VOC Emissions (tpy)	Federal Action NOx Emissions (tpy)
Dam Raise		
Onsite Construction Equipment	3.84	11.01
Haul Trucks	0.22	21.53
Construction and Demolition	n/a	n/a
Paved Road Dust	n/a	n/a
Unpaved Road Dust	n/a	n/a
SR 152 Improvements		
Onsite Construction Equipment (incl. Marine Emissions [Tugboats])	9.22	30.25
Haul Trucks	0.04	3.69
Construction and Demolition	n/a	n/a
Paved Road Dust	n/a	n/a
Unpaved Road Dust	n/a	n/a
Combined Emissions (Dam Raise + SR 152)		
Onsite Construction Equipment (incl. Marine Emissions [Tugboats])	13.06	41.26
Haul Trucks	0.25	25.22
Construction and Demolition	n/a	n/a
Paved Road Dust	n/a	n/a
Unpaved Road Dust	n/a	n/a
Safety of Dams (Connected Action)		
Onsite Construction Equipment	2.70	8.20
Haul Trucks	0.02	0.26
Construction and Demolition	n/a	n/a
Paved Road Dust	n/a	n/a
Unpaved Road Dust	n/a	n/a
Total Including Connected Action		
Onsite Construction Equipment (incl. Marine Emissions [Tugboats])	15.76	49.46
Haul Trucks	0.27	25.48
Construction and Demolition	n/a	n/a
Paved Road Dust	n/a	n/a
Unpaved Road Dust	n/a	n/a
Total	16.03	74.94