Appendix D

Air Quality and Climate Change Technical Appendix

Appendix D.1

General Conformity Determination

Appendix D.1
General Conformity Determination

D.1.1 Introduction

This appendix provides the general conformity determination for the applicant-preferred alternative (APA) of the Southport Early Implementation Project (SEIP, or project). A general conformity determination is required by Section 176 of the Clean Air Act (CAA). The CAA requires states to submit a state implementation plan (SIP) for areas in nonattainment for Federal standards. Section 176(c)(1) of the CAA prohibits Federal agencies from engaging in, supporting, or providing financial assistance for licensing, permitting, or approving any activities that do not conform to an approved SIP.

The U.S. Environmental Protection Agency (EPA) enacted the Federal general conformity regulation in 1993 (40 Code of Federal Regulations [CFR] Parts 5, 51, and 93). The purpose of the general conformity rule is to ensure that Federal actions do not generate emissions that interfere with state and local agencies' SIPs and emission-reduction strategies to ensure attainment of the national ambient air quality standards (NAAQS). Specifically, projects that receive Federal funding or require Federal approval must demonstrate that they would not cause or contribute to new violations of air quality standards, exacerbate existing violations, or interfere with timely attainment or required interim emissions reductions toward attainment. Because the project is receiving Federal funds and approvals from the U.S. Army Corps of Engineers (USACE), all direct and indirect emissions generated by the project are subject to the general conformity rule.

D.1.1.1 Regulatory Status of the Study Area

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

Responsibility for attaining and maintaining air quality in California is divided between the California Air Resources Board (ARB) and regional air quality districts. The Yolo-Solano Air Quality Management District (YSAQMD), Sacramento Metropolitan Air Quality Management District (SMAQMD), and Bay Area Air Quality Management District (BAAQMD) have jurisdiction over local air quality within the study area. Although the project is located in the Yolo County under the jurisdiction of YSAQMD, the construction activities would generate indirect air pollutant emissions from activities located in SMAQMD and BAAQMD.

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

within the Sacramento Federal Nonattainment Area (SFNA) have submitted the ozone plan to the EPA and are currently waiting for the agency to approve the document. Counties in the SFNA (Sacramento, Yolo, Placer, El Dorado, Solano, Sutter, and Butte) have also adopted the Northern Sacramento Valley Planning Area 2009 Triennial Air Quality Attainment Plan (2009 Plan) (Sacramento Valley Air Quality Engineering and Enforcement Professionals 2010). This plan outlines strategies to achieve the health-based ozone standard. The Sacramento region is also in the process of developing a plan to address particulate matter (PM).

D.1.1.2 General Conformity Requirements

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

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

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

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

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

[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.

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

D.1.2 Description of the Federal Action

The Federal lead agency is only required to conduct a general conformity evaluation for the specific Federal action associated with the selected alternative for a project or program (U.S. Environmental Project Agency 1994). The positive conformity determination must be submitted before the Federal action is approved. Each Federal agency is responsible for determining conformity of those proposed actions over which it has jurisdiction. Alternative 5 has been selected as the applicant-preferred alternative (APA). The general conformity determination presented in this appendix therefore relates only to those activities included in the USACE's action pertaining to Alternative 5. If the APA is modified such that it would generate higher amount of emissions than Alternative 5, the general conformity determination would be revised to reflect the changes before the finalization of the EIR/EIS. The project is described further in Section D.1.3 below.

D.1.3 Southport Early Implementation Project

The primary purpose of the SEIP is to project to implement flood risk–reduction measures along the Sacramento River South Levee in the city of West Sacramento, Yolo County. The project is targeted at providing 200-year protection consistent with the state goal for urbanized areas, as well as providing opportunities for ecosystem restoration and public recreation. The project reach extends along the right bank of the Sacramento River, bounded on the north by the USACE Sacramento River Bank Protection Project (SRBPP) site (south of the Barge Canal) and continuing downstream approximately 5.6 miles to the South Cross Levee, adjacent to the Southport community of West Sacramento.

Alternative 5 involves the construction of setback levees in Segments B–F and the breach and degrading of the existing levee to restore the historical Sacramento River floodplain (Plates 2-6a and 2-6b of the EIS/EIR). Project elements would include slope flattening with rock slope protection in Segment A instead of an adjacent levee with rock slope protection, and would maintain the hydraulic isolation of the Bees Lakes area in Segment E from the Sacramento River through construction of a levee ring. Table 2-10 in Chapter 2, *Alternatives*, provides detail for the treatments proposed for each segment under Alternative 5.

D.1.4 Air Quality Conditions in the Study Area

The project area is in Yolo County, which are located in the Sacramento Valley Air Basin (SVAB). The SVAB is bounded on the north by the Cascade Range, on the south by the San Joaquin Valley Air Basin, on the east by the Sierra Nevada, and on the west by the Coast Ranges.

D.1.4.1 Climate and Meteorology

The SVAB has a Mediterranean climate characterized by hot, dry summers and cool, rainy winters. During winter, the North Pacific storm track intermittently dominates Sacramento Valley weather, and fair weather alternates with periods of extensive clouds and precipitation. Periods of dense and persistent low-level fog, which are most prevalent between storms, are also characteristic of winter weather in the valley. The frequency and persistence of heavy fog in the valley diminish with the approach of spring. The average yearly temperature range for the Sacramento Valley is 20 degrees Fahrenheit (°F) to 115°F, with summer high temperatures often exceeding 90°F and winter low temperatures occasionally dropping below freezing.

In general, the prevailing winds are moderate in strength and vary from moist clean breezes from the south to dry land flows from the north. The mountains surrounding the SVAB create a barrier to airflow, which can trap air pollutants under certain meteorological conditions. The highest frequency of air stagnation occurs in the autumn and early winter when large high-pressure cells collect over the Sacramento Valley. The lack of surface wind during these periods and the reduced vertical flow caused by less surface heating reduce the influx of outside air and allow air pollutants to become concentrated in a stable volume of air. The surface concentrations of pollutants are highest when these conditions are combined with temperature inversions that trap pollutants near the ground.

The ozone season (May through October) in the Sacramento Valley is characterized by stagnant morning air or light winds with the Delta sea breeze arriving in the afternoon out of the southwest. Usually the evening breeze transports the airborne pollutants to the north out of the Sacramento Valley. During about half of the days from July to September, however, a phenomenon called the *Schultz Eddy* prevents this from occurring. Instead of allowing the prevailing wind patterns to move north carrying the pollutants out, the Schultz Eddy causes the wind pattern to circle back to the south. Essentially, this phenomenon causes the air pollutants to be blown south toward the Sacramento Valley and Yolo County. This phenomenon has the effect of exacerbating the pollution levels in the area and increases the likelihood of violating Federal or state standards. The eddy normally dissipates around noon when the Delta sea breeze arrives (Yolo-Solano Air Quality Management District 2007).

D.1.4.2 Ambient Air Quality

The existing air quality conditions in the project area can also be characterized by monitoring data collected in the region. Although the project is located in Yolo County, the nearest monitoring stations in both Yolo County and Sacramento County are selected to present air quality of the project vicinity. Air quality concentrations typically are expressed in terms of parts per million (ppm) or micrograms per cubic meter ($\mu g/m^3$). The nearest monitoring stations to the project area are the West Sacramento 15th Street station, which monitors PM10; the Sacramento T Street station, which monitors ozone and PM2.5; and the Sacramento Del Paso Manor station, which monitors carbon monoxide (CO).

Table D.1-1 summarizes air quality monitoring data from the monitoring stations for the last 3 years, 2009–2011, for which complete data are available (as of the time of publication, complete 2012 monitoring data are not available). As shown in Table D.1-1, the monitoring stations have experienced occasional violations of the NAAQS and California Ambient Air Quality Standards

(CAAQS) for all pollutants except CO. However, in general, air quality is improving in the region, as indicated by the declining number of measured violations.

Table D.1-1. Ambient Air Quality Monitoring Data (2009–2011)

Pollutant Standards	2009	2010	2011
1-Hour Ozone (ppm) (Sacramento T Street)			
Maximum 1-hour concentration	0.102	0.092	0.100
1-hour California designation value	0.102	0.101	0.095
1-hour expected peak day concentration	0.103	0.103	0.092
Number of days standard exceeded[a]			
CAAQS 1-hour (>0.09 ppm)	3	0	1
8-Hour Ozone (ppm) (Sacramento T Street)			
National maximum 8-hour concentration	0.088	0.074	0.087
National second-highest 8-hour concentration	0.080	0.069	0.072
State maximum 8-hour concentration	0.089	0.074	0.087
State second-highest 8-hour concentration	0.080	0.070	0.073
8-hour national designation value	0.077	0.075	0.071
8-hour California designation value	0.092	0.089	0.080
8-hour expected peak day concentration	0.092	0.090	0.084
Number of days standard exceeded[a]			
NAAQS 8-hour (>0.075 ppm)	4	0	1
CAAQS 8-hour (>0.070 ppm)	13	1	5
CO (ppm) (Sacramento Del Paso)			
National[b] maximum 8-hour concentration	2.77	1.60	2.27
National[b] second-highest 8-hour concentration	2.19	1.45	2.23
California[c] maximum 8-hour concentration	2.77	1.60	2.27
California[c] second-highest 8-hour concentration	2.19	1.45	2.23
Maximum 1-hour concentration	3.1	1.9	2.6
Second-highest 1-hour concentration	3.0	1.9	2.5
Number of days standard exceeded[a]			
NAAQS 8-hour (≥9 ppm)	0	0	0
CAAQS 8-hour (≥9.0 ppm)	0	0	0
NAAQS 1-hour (≥35 ppm)	0	0	0
CAAQS 1-hour (≥20 ppm)	0	0	0
PM10[d] (μg/m³) (West Sacramento 15th Street)			
National[b] maximum 24-hour concentration	55.8	58.0	67.8
National[b] second-highest 24-hour concentration	49.7	48.0	52.4
State[c] maximum 24-hour concentration	59.4	58.0	72.1
State[c] second-highest 24-hour concentration	52.5	47.0	57.2
State annual average concentration[e]	21.2	18.3	20.7
National annual average concentration	20.3	17.9	20.0

Pollutant Standards	2009	2010	2011
Number of days standard exceeded[a]			
NAAQS 24-hour (>150 μg/m³)[f]	0	0	0
CAAQS 24-hour (>50 μg/m³)[f]	2	1	2
PM2.5 (μg/m³) (Sacramento **T Street)**			
National[b] maximum 24-hour concentration	37.7	30.6	50.5
National[b] second-highest 24-hour concentration	27.3	27.6	47.8
State[c] maximum 24-hour concentration	50.1	37.0	50.5
State[c] second-highest 24-hour concentration	48.1	35.1	47.8
National annual designation value	10.8	9.5	9.2
National annual average concentration	9.5	8.0	10.1
State annual designation value	10	10	10
State annual average concentration[e]	9.5	8.1	10.1
Number of days standard exceeded[a]			
NAAQS 24-hour (>35 μg/m³)[f]	1	0	6

Sources: California Air Resources Board 2012; U.S. Environmental Protection Agency 2012.

– = insufficient data available to determine the value.

[a] An exceedance is not necessarily a violation.

[b] National statistics are based on standard conditions data. In addition, national statistics are based on samplers using Federal reference or equivalent methods.

[c] State statistics are based on local conditions data, except in the South Coast Air Basin, for which statistics are based on standard conditions data. In addition, State statistics are based on California approved samplers.

[d] Measurements usually are collected every 6 days.

[e] State criteria for ensuring that data are sufficiently complete for calculating valid annual averages are more stringent than the national criteria.

[f] Mathematical estimate of how many days concentrations would have been measured as higher than the level of the standard had each day been monitored. Values have been rounded.

D.1.4.3 Mass Emissions

The ARB compiles an emissions inventory for all sources of emissions within the study area. This inventory is used by the YSAQMD, SMAQMD, BAAQMD, and ARB for regional air quality planning purposes and is the basis for the region's air quality plans, and includes such sources as stationary (e.g., landfills, electric utilities, mineral processes); area-wide (e.g., farming operations, construction/demolition activities, residential fuel combustion); and mobile sources (e.g., automobiles, aircraft, off-road equipment). Current emissions of criteria pollutants for 2008 (the most recent year for which inventory data are available) for Yolo and Sacramento Counties are summarized in Tables D.1-2 and D.1-3, respectively.

Table D.1-2. Yolo County Air Quality Emissions—2008

	Annual emissions (tons per day)					
Source type	**ROG**	**CO**	**NO_X**	**SO_X**	**PM10**	**PM2.5**
Stationary sources						
Total fuel combustion	0.24	2.37	3.48	0.25	0.54	0.53
Total waste disposal	0.1	0.05	0.01	0.07	0.01	0
Total cleaning and surface coatings	0.96	0.02	0.02	0	0.02	0.02
Total petroleum production and marketing	1.23	0.2	0.04	–	–	–
Total industrial processes	0.54	0.48	0.17	0.08	3.21	1.6
Total stationary sources	3.07	3.12	3.73	0.4	3.78	2.15
Area-wide sources						
Total solvent evaporation	2.58	–	–	–	–	–
Total miscellaneous processes	0.86	6.9	0.52	0.04	51.06	24.94
Total area-wide sources	3.44	6.9	0.52	0.04	51.06	24.94
Mobile sources						
Total on road mobile sources	3.7	36.14	10.8	0.03	0.48	0.48
Total off road mobile sources	2.66	16.28	8.14	0.09	0.46	0.45
Total mobile sources	6.36	52.42	18.93	0.12	0.94	0.93
Yolo County total	12.87	62.44	23.18	0.57	55.78	28.01

Table D.1-3. Sacramento County Air Quality Emissions—2008

	Annual emissions (tons per day)					
Source type	**ROG**	**CO**	**NO_X**	**SO_X**	**PM10**	**PM2.5**
Stationary sources						
Total fuel combustion	0.35	3.73	3.62	0.07	0.42	0.42
Total waste disposal	0.34	0.05	0.05	0	0.01	0.01
Total cleaning and surface coatings	3.99	–	–	–	–	–
Total petroleum production and marketing	2.49	0.01	0	–	–	–
Total industrial processes	0.91	0.27	0.23	0.07	2.27	1.07
Total stationary sources	8.07	4.06	3.9	0.14	2.71	1.5
Area-wide sources						
Total solvent evaporation	13.23	–	–	–	0.01	0.01
Total miscellaneous processes	4.04	40.26	3.1	0.12	74.4	39.37
Total area-wide sources	17.27	40.26	3.1	0.12	74.41	39.38
Mobile sources						
Total on road mobile sources	22.69	209.32	44.06	0.18	2.07	2.04
Total off road mobile sources	12.94	86.01	24.91	0.19	1.54	1.51
Total mobile sources	35.63	295.33	68.98	0.37	3.61	3.55
Sacramento County total	60.97	339.65	75.97	0.63	80.73	44.43

D.1.4.4 Federal Nonattainment Status and Conformity Applicably

Local monitoring data (Table D.1-1) are used to designate areas as nonattainment, maintenance, attainment, or unclassified for the NAAQS. Table D.1-4 summarizes the attainment status of the project area within YSAQMD, SMAQMD, and BAAQMD with regard to the NAAQS.

Table D.1-4. Federal Attainment Status of the Project Area within the YSAQMD, SMAQMD, and BAAQMD

Pollutant	YSAQMD NAAQS	SMAQMD NAAQS	BAAQMD NAAQS
1-hour Ozone	–	–	–
8-hour Ozone	Severe Nonattainment	Severe Nonattainment	Marginal Nonattainment
CO	Moderate Maintenance	Moderate Maintenance	Moderate Maintenance
PM10	Unclassified	Maintenance	Unclassified
PM2.5	Nonattainment[a]	Nonattainment	Nonattainment

Sources: California Air Resources Board 2011a; U.S. Environmental Protection Agency 2011.

– = No applicable standard.

[a] The EPA is currently in the process of reclassifying YSAQMD as an attainment area for the 24-hour PM 2.5 NAAQS.

BAAQMD = Bay Area Air Quality Management District.

CO = carbon monoxide.

NAAQS = national ambient air quality standards.

PM10 = particulate matter 10 microns in diameter or less.

PM2.5 = particulate matter 2.5 microns in diameter or less.

SMAQMD = Sacramento Metropolitan Air Quality Management District.

YSAQMD = Yolo-Solano Air Quality Management District.

The general conformity evaluation is made by comparing all emission sources (e.g., haul trucks, off-road equipment) to the applicable general conformity *de minimis* thresholds based on the regional nonattainment status. Table D.1-5 summarizes the *de minimis* thresholds applicable to project activities. YSAQMD and SMAQMD are located in the SVAB and BAAQMD is located in the San Francisco Bay Area Air Basin (SFBAAB).

Table D.1-5. Federal General Conformity *de Minimis* Thresholds

Air Basin	Annual Air Pollutant Emissions in Tons per Year				
	ROG	NO_X	CO	PM10	PM2.5
Sacramento Valley Air Basin (include YSAQMD and SMAQMD)	25	25	100	100	100
Bay Area Air Basin (include BAAQMD)	50	100	100	None	100

Source: 40 CFR 93.153
BAAQMD = Bay Area Air Quality Management District.
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.
SMAQMD = Sacramento Metropolitan Air Quality Management District.
YSAQMD = Yolo-Solano Air Quality Management District.

The analysis of construction-related emissions associated with Alternative 5 indicates that NO_X emissions would exceed the general conformity *de minimis* threshold under all years of construction (2014–2015) in the SFNA. There would be no violations of any other *de minimis* thresholds. As the SFNA is classified as a nonattainment area with regards to the Federal 8-hour ozone standard, the SEIP requires a general conformity determination to demonstrate how construction-related NO_X emissions under Alternative 5 will conform to the SFNA SIP.

D.1.5 Relationship to Other Environmental Analyses

A Draft EIS/EIR will be published for public review and comment in June 2013 providing an analysis of the APA (Alternative 5), with publication of the Final EIS/EIR anticipated in September 2013. The USACE is the lead Federal agency for the NEPA analysis documented in the EIS/EIR. The EIS/EIR was prepared to also be sufficient for purposes of CEQA.

NEPA requires an evaluation of air quality impacts associated with construction and operation of the proposed project. The analysis of impacts under CEQA were evaluated using the local thresholds of significance established by the YSAQMD, SMAQMD, and BAAQMD, while impacts under NEPA were made by evaluating whether the project would exceed general conformity *de minimis* thresholds. The Draft EIS/EIR presents the general conformity determination process and general findings in the general conformity determination for public and agency review, while the final general conformity determination will be published concurrent with the Record of Decision (ROD) for the Federal action.

D.1.6 Onsite Emission Reduction Measures

Mitigation measures to reduce onsite construction emissions were identified in Section 3.5.3, Effects and Mitigation Measures of the Draft EIS/EIR. These mitigation measures are consistent with NEPA and CEQA mitigation and minimization measures and will be required elements of the project, as

they will be included in the project's Mitigation Monitoring and Reporting Program, as required under CEQA. The mitigation measures required in the EIS/EIR to reduce project-related emissions are described below.

Mitigation Measure AIR-MM-1: Implement Measures to Reduce Exhaust Emissions of NO_X and PM10

According to the YSAQMD CEQA guidelines (Yolo-Solano Air Quality Management District 2007), the project lead agency is encouraged to explore and incorporate mitigation measures as technology advances and less emissive products become available at lower costs. Therefore, WSAFCA will require the construction contractor to implement the feasible and reasonable measures to reduce public nuisance and tailpipe emissions from diesel-powered construction equipment. This requirement will be incorporated into the construction contracts as part of the project's specifications. Depending on the exceedance amounts of NO_X and PM10 emissions, WSAFCA will require the construction contractor to implement either or all of following mitigation options.

- Reduce use, trips, and unnecessary idling of heavy equipment. Shut down idling equipment that is not used for more than 5 consecutive minutes as required by California law.
- Maintain all construction equipment in proper tune according to manufacturer's specifications.
- Use a modern equipment fleet meeting at least Tier 2 engines for off-road heavy-duty diesel engines.
- The fleet average of active on-road diesel haul trucks over 14,000 GVWR shall be equipped with either an ARB verified Level 3 particulate filter or an engine that meets the 2007 model year ARB emission standard or cleaner.
- Off-road diesel haul trucks will comply with all State off-road regulations. As feasible, existing haul trucks within the contractor's fleet with newer engines will be prioritized.
- Locate stationary diesel-powered equipment and haul truck staging areas as far as practicable from sensitive receptors.
- Use existing power sources (e.g., power lines) or clean fuel generators rather than conventional diesel generators, when feasible
- Substitute gasoline-powered for diesel-powered equipment when feasible.
- Use alternatively fueled construction equipment on site where feasible, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane, or biodiesel.
- Use ARB and/or EPA-verified particulate traps and other appropriate controls (i.e., diesel oxidation catalyst or diesel particular filters) where feasible to reduce emissions of NO_X, DPM, and other pollutants at the construction site.
- Use towboats with newer or remanufactured engines that comply with the EPA Tier 2 or Tier 3 emission standards.
- The construction contractor will provide a plan, for approval by WSAFCA and the local air district, demonstrating that the heavy-duty off-road equipment to be used at the project sites, including owned, leased, and subcontractor equipment, will achieve a project-wide fleet-average reduction of 20% for NO_X and 45% for diesel particulate, compared to the

most recent ARB fleet average at time of construction. A construction mitigation calculator may be downloaded from the SMAQMD web site to perform the fleet average evaluation (Sacramento Metropolitan Air Quality Management District 2011b).

- The project representative will submit to WSAFCA and the local air district a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used an aggregate of 40 or more hours during any portion of the construction project. The inventory will include the horsepower rating, engine production year, and projected hours of use for each piece of equipment. The inventory will be updated and submitted monthly throughout the duration of the project, except that an inventory will not be required for any 30-day period in which no construction activity occurs. At least 48 hours prior to the use of subject heavy-duty off-road equipment, the project representative will provide SMAQMD with the anticipated construction timeline, including start date, and name and phone number of the project manager and on-site foreman.
- The construction contractor will monitor and ensure that emissions from all off-road diesel-powered equipment used on the project site do not exceed 40% opacity for more than 3 minutes in any 1 hour. Any equipment found to exceed 40% opacity (or Ringelmann 2.0) will be repaired immediately, and WSAFCA and the local air district will be notified within 48 hours of identification of noncompliant equipment. A visual survey of all in-operation equipment will be made at least weekly, and a monthly summary of the visual survey results will be submitted throughout the duration of the project, except that the monthly summary will not be required for any 30-day period in which no construction activity occurs. The monthly summary will include the quantity and type of vehicles surveyed as well as the dates of each survey. The local air district and/or other officials may conduct periodic site inspections to determine compliance. Nothing in this section will supersede other local air district or state rules or regulations.

Mitigation Measure AIR-MM-2: Implement Fugitive Dust Control Plan

The construction contractor will implement all applicable and feasible fugitive dust control measures required by the YSAQMD including those listed below. This requirement will be incorporated into the construction contract.

- Post a publicly visible sign with the telephone number and person to contact regarding dust complaints. This person would respond and take corrective action within 48 hours. The phone number of the YSAQMD also will be visible to ensure compliance with the YSAQMD Rule 2.5, Nuisance.
- Water active unpaved areas at all construction sites at least twice daily in dry conditions, with the frequency of watering based on the type of operation, soil, and wind exposure.
- Prohibit all grading activities and water all areas of disturbed soil under windy conditions (winds more than 20 miles per hour).
- Limit on-site vehicles to a speed that prevents visible dust emissions to extend beyond unpaved roads.
- Cover all trucks hauling dirt, sand, or loose materials.
- Cover active and inactive storage piles where appropriate.
- Cover or hydroseed unpaved areas that will remain inactive for extended periods.

- Apply soil stabilizers to active and inactive areas where appropriate.
- Stabilize visible soil material and sediment at the entrance to construction sites.
- Sweep streets if visible soil material is carried out from the construction sites.
- Phase grading operations where appropriate.

However, with the implementation of above mitigations, daily fugitive dust emissions along with the diesel exhaust emissions would still exceed the YSAQMD's threshold for PM10. The construction contractor shall implement all feasible, cost-effective mitigation measures to reduce fugitive dust emissions.

Mitigation Measure AIR-MM-3: Provide Advance Notification of Construction Schedule and 24-Hour Hotline to Residents

WSAFCA will provide advance written notification of the proposed construction activities to all residences and other air quality-sensitive uses within 500 feet of the construction site. Notification will include a brief overview of the proposed project and its purpose, as well as the proposed construction activities and schedule. It will also include the name and contact information of WSAFCA's project manager or a representative for ensuring that reasonable measures are implemented to address the problem.

Mitigation Measure AIR-MM-4: Mitigate and Offset Construction-Generated NO_X Emissions to Net Zero (0) for Emissions in Excess of General Conformity *de Minimis* Threshold (Where Applicable) and to Quantities below Applicable YSAQMD and SMAQMD CEQA Thresholds

WSAFCA will reduce NO_X emissions generated by the construction of the project through the payment of off-site fees. NO_X emissions in excess of the Federal *de minimis* threshold of 25 tons per year will be reduced to net zero (0). NO_X emissions not in excess of the *de minimis* thresholds, but above the YSAQMD's and SMAQMD's NO_X thresholds, will be reduced to quantities below thresholds.

WSAFCA will make best efforts to enter into a development mitigation contract with YSAQMD and SMAQMD to reduce NO_X emissions generated by the construction through contributions to YSAQMD's Incentive Programs and SMAQMD's Heavy-Duty Low-Emission Vehicle Incentive Programs (HDLEVIP).

YSAQMD's Incentive Programs are designed to reduce NO_X from on-road sources. SMAQMD's incentive programs are a means of funding projects and programs capable of achieving emissions reductions. The HDLEVIP is designed to reduce NO_X, PM, and ROG from on- and off-road sources. The payment fee is based on the average cost to achieve 1 ton per day (tpd) of reductions based on the average cost for reductions over the previous year. Onroad reductions averaged (nominally) $44 million ($NO_X$ only) and off-road reductions averaged $36 million ($NO_X$ only) over the previous year, thus working out to approximately $40 million per 1 tpd of reductions. This roughly correlates to the average cost effectiveness of the Carl Moyer Incentive Program.

Using YSAQMD's and local mitigation contract programs, WSAFCA will enter into mitigation contracts with YSAQMD and SMAQMD to reduce NO_X emissions to the required levels. The required levels are:

- For NO_X emissions in excess of the Federal *de minimis* threshold: **net zero (0)**.
- For NO_X emissions not in excess of *de minimis* threshold but above YSAQMD's and SMAQMD's thresholds: **below the appropriate CEQA threshold levels**.

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

- Consult with the YSAQMD and SMAQMD in good faith to enter into a mitigation contract for YSAQMD's Incentive Programs and SMAQMD's HDLEVIP. For NO_X emissions occurring within Yolo County, YSAQMD staff will determine whether projects exist within the YSAQMD that can be funded to fully offset these emissions. If sufficient projects cannot be identified, any remaining offsets would need to be achieved through the HDLEVIP by funding projects elsewhere in the Sacramento Region. For SIP purposes, the necessary reductions must be achieved (contracted and delivered) by the applicable year in question (i.e., emissions generated in year 2014 would need to be reduced off-site in 2014). Funding would need to be received prior to contracting with participants and should allow sufficient time to receive and process applications to ensure off-site reduction projects are funded and implemented prior to commencement of SEIP activities being reduced. This would roughly equate to the equivalent of 2 years prior to the required mitigation; additional lead time may be necessary depending on the level of off-site emission reductions required for a specific year. In negotiating the terms of the mitigation contract, the WSAFCA, YSAQMD, and SMAQMD should seek clarification and agreement on air district responsibilities, including those following.
    - Identification of appropriate off-site mitigation and air district administrative fees required for the project.
    - Timing required for obtaining necessary off-site emission credits.
    - Processing of mitigation fees surrendered by WSAFCA.
    - Verification of emissions inventories submitted by WSAFCA.
    - Verification that off-site fees are applied to appropriate mitigation programs within the SFNA.
- Quantify mitigation fees required to satisfy the appropriate reductions. As noted above, the payment fees may vary by year and are sensitive to the number of projects requiring reductions within the SFNA. The schedule in which payments are surrendered to the air district also influences overall cost. For example, a higher rate on a per ton basis will be required for project elements that need accelerated equipment turnover to achieve near-term reductions, whereas project elements that are established to contract to achieve far-term reductions will likely pay a lower rate on a per-tonnage basis.
- Develop a compliance program to calculate emissions and collect fees from the construction contractors for payment to the appropriate air district. The program will require, as a standard or specification of their contract, construction contractors to identify construction emissions and their share of required off-site fees, if applicable. Based on the emissions estimates, WSAFCA will collect fees from the individual construction contractors (as applicable) for payment to the air district. Construction contractors will have the discretion to reduce their construction emissions to the lowest possible level through on-site mitigation (Mitigation Measure AIR-MM-1), as the greater the emissions reductions that can

be achieved by on-site mitigation, the lower the required off-site fee. All control strategies must be verified by YSAQMD and SMAQMD.

- Conduct daily and annual emissions monitoring to ensure on-site emissions reductions are achieved and no additional mitigation payments are required. The construction contractor will be required to ensure the requirement is met. This requirement will be incorporated into the construction contracts as part of the project's specifications. Excess off-site funds can be carried from previous to subsequent years in the event that additional reductions are achieved by on-site mitigation. At the end of the project, if it is determined that excess offset funds remain (outstanding contracts and administration over the final years of the contracts will be taken into consideration) the SMAQMD, YSAQMD, and WSAFCA Proponents shall determine the disposition of final funds (e.g., additional emission reduction projects to offset underperforming contracts, return of funds to WSAFCA, etc.).

The amount of NO_X reductions that can be obtained is ultimately dependent on the number and type of projects available. The total pool of potential projects may be limited in any given year by other development projects seeking to offset their own emissions. If a sufficient number of emissions reduction projects are not identified to meet the required performance standard, the WSAFCA will coordinate with YSAQMD and SMAQMD to meet the performance standards of achieving net zero (0) for emissions in excess of General Conformity *de minimis* thresholds (where applicable) and of achieving quantities below applicable YSAQMD and SMAQMD CEQA thresholds for other pollutants not in excess of the *de minimis* thresholds, but above YSAQMD and SMAQMD CEQA thresholds.

D.1.7 Regulatory Procedures

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

D.1.7.1 Use of Latest Planning Assumptions

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

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

D.1.7.2 Use of Latest Emissions Estimation Techniques

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

Per guidance from the YSAQMD, construction emissions were estimated using the most recent version of the ARB's emission factor program, EMission FACtors 2011 (EMFAC2011), which is the emission model used in the preparation of the SIP.

D.1.7.3 Major Construction Phase Activities

Project-specific data, including construction equipment lists and the construction schedule, were used to forecast construction emissions associated with the project using construction activity data provided by HDR, WSAFCA's professional engineering team. Calculations were performed for each year of construction (2014–2015).

D.1.7.4 Emissions Scenarios

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

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

Question 1 is not applicable to the construction analysis, as construction years associated with Alternative 5 (2014–2015) do not include the year in which attainment is designated for the region for the 8-hour ozone standard. Question 2 is not applicable to the construction analysis, as there is currently no approved 8-hour ozone SIP in which there is an approved emissions budget. The analysis of construction activities evaluates the construction period of 2014–2015, with maximum direct and indirect emissions expected in the first year (see Table D.1-8 below).

D.1.8 Applicability Analysis

The general conformity rule applies to all Federal actions located in nonattainment and maintenance areas that are not exempt from general conformity (are either covered by Transportation Conformity or listed in the rule), are not covered by a presumed-to-conform approved list[2], or do not have clearly *de minimis* emissions. The first step in a general conformity evaluation is to determine whether the project is located in a Federal nonattainment or a maintenance area.

D.1.8.1 Attainment Status of the Study Area

As previously indicated in Table D.1-4, activities occurring under Contract D are located in an area currently designated moderate maintenance for the federal CO standard and marginal nonattainment for the federal 8-hour ozone standard. Activities occurring between Reaches 1 and 2

[2] 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.

(Contract A) are located in an area designated severe nonattainment for the federal 8-hour ozone standard. The entire project area, including all activities under Contracts A through D, is designated a nonattainment area for the federal PM2.5 standard. Consequently, to fulfill general conformity requirements, an analysis must be undertaken to identify whether the proposed project's total emissions of ozone, PM2.5, and CO are below the appropriate general conformity *de minimis* levels indicated in Table D.1-5.

D.1.8.2 Exemptions from General Conformity Requirements

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

D.1.8.3 Applicability for Federal Action

If it is determined a project is not exempt from general conformity, the applicability of the general conformity requirements to the Federal action is evaluated by comparing total direct and indirect emissions for each calendar year of to the appropriate general conformity *de minimis* thresholds indicated in Table D.1-5.

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

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

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

D.1.8.4 *de Minimis* Emissions Rates

General conformity *de minimis* thresholds applicable to the project are summarized in Table D.1-5.

D.1.9 Construction Activities Considered

The project would rehabilitate 5.6 miles of existing levee within Yolo County. Operation of the new facilities would require periodic maintenance, although activities are expected to be less extensive than existing conditions and would only take place over a few days per year. Accordingly, long-term operational emissions are part of the existing environmental baseline and thus would not create a substantial source of new emissions. The general conformity determination therefore focuses exclusively on construction-related emissions because there would be no effect related to project operations.

The EIS/EIR estimates construction-related emissions for each alternatives currently being considered for the SEIP. However, this conformity determination only includes an analysis of Alternative 5 because it has been selected as the APA, as discussed in Section D.1.2 above. For additional information on Alternatives 1, 2, 3, and 4, please refer to Section 3.5, Air Quality.

Construction of Alternative 5 would generate criteria pollutant emissions that would result in short-term impacts on ambient air quality in the study. Emissions would originate from mobile and stationary construction equipment exhaust, employee vehicle exhaust, haul truck exhaust, and dust from earthmoving and clearing the land. Construction-related emissions vary substantially depending on the level of activity, length of the construction period, specific construction operations, types of equipment, number of personnel, wind and precipitation conditions, and soil moisture content.

Emissions rates for major construction activities were calculated based on information provided by HDR (Appendix D.2), as summarized below.

- Levee construction would occur in two years (2014–2015). The maximum daily and annual activity would take place in the first year, when majority of project segments would undergo extensive construction in this year.
- The type of each construction equipment, number of pieces of each type, and the duration of each type of construction activity. The forecast equipment usage is listed in Appendix D.2.
- Duration of each type of construction activity in each project segment.
- Quantities of borrow material, spoil material, and supplies to be delivered to the project, for each project segment.
- Number of haul truck trips and hauling distances for importing and exporting materials.
- Operating parameters for each type of construction equipment (horsepower and hours per day of usage).

For the EIS/EIR, the project alternatives were evaluated using conservative construction scenarios referred to as “unfavorable scenarios” to estimate the maximum construction emissions generated by each alternative. The unfavorable scenarios assumed all the excavated material and demolished debris would be hauled off site and would not be reused for the project, which would result in a longer construction schedule, requiring additional equipment and longer truck hauling trips, resulting in larger fleet sizes. Detailed assumptions of the construction data for unfavorable scenarios of project alternatives are provided in Appendix D.2.

Models, tools, and assumptions used to calculate the emissions associated with off-road equipment, on-road vehicles, on-water hauling, site fugitive dust, and electricity consumptions are described below.

Table D.1-6 summarizes the emission sources associate with the project construction that would occur in the YSAQMD, SMAQMD, and BAAQMD.

Table D.1-6. Emission Sources occurring in the YSAQMD, SMAQMD, BAAQMD

Emission Sources	YSAQMD	SMAQMD	BAAQMD
Off-Road Construction Equipment	X		
On-Road Vehicles	X	X	
On-Water Towboats	X	X	X
Dust Emissions from Land Disturbance and Earth Moving	X		
Off-Site Material Borrow, including fugitive dust, off-road construction equipment, and on-road vehicles associated with the activity.	X	X	

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

D.1.9.1 Construction Schedule

Table D.1-7 outlines the expected construction schedule and phases for Alternative 5.

Table D.1-7. Construction Schedule and Phasing (Alternative 5)

		Construction Time Frame	
Segment	**Construction Phase/Activity**	**Start**	**Max Days**
Year 1			
C	Roadway Removal	May 1	1
	Building Demo	May 1	7
	Utility Relocation	May 10	22
	Stripping	June 1	27
	Levee Degrade	June 28	37
	Soil Borrow Extraction/Levee Placement	August 3	61
	Planting	October 1	27
	Irrigation	October 1	15
	Drainage	October 4	1
	Roadway Replace	October 5	2
	Rip Rap Installation	October 7	44
D	Roadway Removal	May 1	1
	Building Demo	May 1	17
	Utility Relocation	May 18	11
	Stripping	May 28	11
	SB Cutoff Wall Installation	June 9	7
	Soil Borrow Extraction/Levee Placement	June 16	15

Segment	Construction Phase/Activity	Construction Time Frame	
		Start	Max Days
	Drainage	July 1	8
	Roadway Replace	July 9	2
	Rip Rap Installation	July 11	1
E	Stripping	May 1	10
	Utility Relocation	May 11	18
	SB Cutoff Wall Installation	June 26	11
	Soil Borrow Extraction/Levee Placement	May 29	23
	Drainage	June 21	1
	Roadway Replace	June 22	4
	Rip Rap Installation	June 26	4
F	Existing Pump Station Removal	May 1	2
	Roadway Removal	May 1	1
	Building Demo	May 1	30
	Utility Relocation	May 31	29
	Stripping	June 29	29
	Levee Degrade	July 28	45
	Soil Borrow Extraction/Levee Placement	September 11	62
	Drainage	November 12	3
	Roadway Replace	November 15	5
	Rip Rap Installation	November 20	58
G	Building Demo	May 1	5
	Utility Relocation	May 6	13
	Stripping	May 19	10
	SB Cutoff Wall Installation	May 29	10
	Soil Borrow Extraction/Levee Placement	June 8	10
	Drainage	June 18	1
	Roadway Replace	June 19	1
	Rip Rap Installation	June 20	20

Segment	Construction Phase/Activity	Construction Time Frame	
		Start	Max Days
Year 2			
A	Roadway Removal	May 1	2
	Building Demo	May 1	25
	Utility Relocation	May 26	18
	Stripping	June 13	17
	Levee Degrade	June 30	70
	SB Cutoff Wall Installation	September 8	9
	Soil Borrow Extraction/Levee Placement	September 17	19
	Drainage	October 6	2
	Roadway Replace	October 8	4
	Rip Rap Installation	October 12	21
B	Roadway Removal	May 1	1
	Building Demo	May 1	23
	Utility Relocation	May 24	23
	Stripping	June 16	31
	Levee Degrade	July 17	39
	SB Cutoff Wall Installation	August 25	1
	Drainage	August 26	4
	Soil Borrow Extraction/Levee Placement	August 26	80
	Roadway Replace	August 30	6
	Planting	October 1	3
	Irrigation	October 1	4
	Rip Rap Installation	November 14	38
C	Inlet Outlet Degrade	November 2	11
F	Inlet Outlet Degrade	November 9	11

D.1.9.2 Off-Road Equipment

Exhaust emissions from operation of on-site equipment are calculated using URBEMIS 2007 model (Version 9.2.4). The load factors for construction equipment are updated to reflect the values presented the 2011 Carl Moyer Guidelines, which are based on ARB's most recently released load factor data (California Air Resources Board 2011b).

D.1.9.3 On-Road Vehicles

Exhaust emissions from truck haul trips and worker commute trips are calculated using the EMFAC2011 emissions model. The numbers of haul trips and hauling distances are provided by HDR for each construction year. The numbers of workers required to complete construction activities are estimated based on a daily workforce of 20 workers plus one person per piece of construction equipment. The commute distance is based on the average work-related trip length estimated by the URBEMIS. It is assumed that 70% of the truck and commute trips would be generated in the YSAQMD and 30% of the trips would be generated in the SMAQMD.

D.1.9.4 On-Water Towboats

The project would use barges powered by towboats to carry the riprap material from the San Rafael Rock Quarry through the Bay-Delta and the Sacramento River to the project sites. Exhaust emissions from towboats are quantified using emission factors and the load factor developed for EPA (2009). For a conservative estimate, the emission factors for Tier 0 Category 2 towboats are used to calculate the emissions. The average one-way hauling distance between the San Rafael Rock Quarry and the project area is approximately 90 miles, of which 22.5 miles would be in the YSAQMD, 36 miles in the SMAQMD, and 41.5 miles in the BAAQMD.

D.1.9.5 Fugitive Dust from Land Clearing

Fugitive dust emissions generated by building demolition, land disturbance, and earth moving are quantified using the URBEMIS with the disturbed acreages and earthwork volume provided by HDR.

D.1.9.6 Off-Site Material Borrow

Sources of borrow material are described in Chapter 2. For the air quality and GHG analysis, it is conservatively assumed that embankment material excavated as part of construction would not be reused as the levee fill material to analyze the maximum air emissions generated by material borrow activities. The borrow material is assumed to be imported from the dredged material previously removed from the DWSC to account for the longest truck hauling distance (6.6 round trip miles) among the potential off-site borrow pits identified for the project. The construction emissions associated with on-road hauling trucks, off-road equipment, and fugitive dust at the borrow sites would be generated entirely within the YSAQMD. For construction emissions associated with worker commute trips, it is assumed that 70% of the truck and commute trips would be generated in the YSAQMD and 30% of the trips would be generated in the SMAQMD

D.1.10 Estimated Emissions Rates and Comparison to *de Minimis* Thresholds

Annual criteria pollutant emissions resulting from construction of Alternative 5 are presented in Table D.1-8. Emissions estimates include implementation of onsite mitigation identified in the EIS/EIR (AQ-MM-1 through AQ-MM-3). Violations of the Federal *de minimis* thresholds are shown in underlined text.

Table D.1-8. Annual Construction Emissions for Alternative 5

Construction Year	Annual Emissions in Tons				
	ROG	NO_X	CO	PM10	PM2.5
Emissions generated in SFNA (YSAQMD and SMAQMD[a]) subject to conformity					
Year 1 On-site Construction	4.3	34.2	17.1	0.2	2.9
Year 1 Off-site Soil Borrow	1.6	12.7	5.9	0.0	1.3
Year 1 Total	5.9	46.9	22.9	0.2	4.2
Year 2 On-site Construction	3.3	27.0	12.7	0.1	1.9
Year 2 Off-site Soil Borrow	1.0	8.1	3.7	0.0	0.9
Year 2 Total	4.3	35.0	16.4	0.1	2.8
General Conformity *de Minimis* Threshold	25	25	100	100	100
Exceed Threshold?	No	**Yes**	No	No	No
Emissions generated in BAAQMD/SFBAAB[b]					
Year 1	0.1	2.6	1.3	0.2	0.2
Year 2	0.1	1.1	0.5	0.1	0.1
CEQA Threshold					
Exceed Threshold?					
General Conformity *de Minimis* Threshold	50	100	100	NA	100
Exceed Threshold?	No	No	No		No

[a] PM10 emissions are for those within Sacramento County (SMAQMD), as Yolo County (YSAQMD) is an attainment area for PM10 and is not subject to general conformity requirements for PM10.
[b] Only on-water exhaust emissions generated from towboats are expected to occur within the BAAQMD.

D.1.11 Regional Effects

As shown in Table D.1-8, construction of Alternative 5 would exceed the federal *de minimis* threshold for NO_X in the SFNA. There would be no violations of any other *de minimis* thresholds. NO_X is a precursor to ozone, for which SFNA are in nonattainment for the NAAQS. Since the emissions exceed the Federal *de minimis* threshold for NO_X, a general conformity determination must be made to demonstrate that total direct and indirect emissions of NO_X would conform to the appropriate ozone SIP for each year of construction (2014–2015). No additional analyses are required for the other pollutants or contracts.

D.1.12 General Conformity Evaluation

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

D.1.12.1 Conformity Requirements for the Applicant-Preferred Alternative

As described in Section D.1.2, Alternative 5 has been selected as APA. As shown in Table ~~E~~D.1-8, construction-related NO_X emissions generated Alternative 5 exceed the Federal *de minimis* threshold (25 tons per year) during both construction years in the SFNA. The highest annual emissions are 49 tons, which occur in the first year, while emissions in the second year would amount to 31 tons. Because NO_X emissions exceed the Federal *de minimis* threshold, a conformity determination is required for construction-related NO_X emissions generated by Alternative 5 for years 2014 and 2015.

D.1.12.2 Compliance with Conformity Requirements

USACE herein demonstrates that construction-related NO_X emissions generated by the APA would not result in a net increase in regional NO_X emissions within the SFNA. This will be achieved by offsetting NO_X emissions generated during both years of construction (2014 and 2015) to net zero. Purchasing offsets is consistent with the general conformity rule, which states that a positive conformity determination may be reached if project-related emissions are offset to net zero for all years in which pollutants exceed applicable *de minimis* thresholds (refer to Section D.1.1.2).

The project proponents (WSAFCA) will enter into a development mitigation contract with YSAQMD and SMAQMD to reduce NO_X emissions generated by the construction of the APA to net zero through the procurement of offsite mitigation fees. The requirement for the mitigation contract would be imposed on the project through the following mitigation measure from the EIS/EIR.

Mitigation Measure AIR-MM-4: Mitigate and Offset Construction-Generated NO_X Emissions to Net Zero (0) for Emissions in Excess of General Conformity *de Minimis* Threshold (Where Applicable) and to Quantities below Applicable YSAQMD and SMAQMD CEQA Thresholds

WSAFCA will reduce NO_X emissions generated by the construction of the project through the payment of off-site fees. NO_X emissions in excess of the Federal *de minimis* threshold of 25 tons per year will be reduced to net zero (0). NO_X emissions not in excess of the *de minimis* thresholds, but above the YSAQMD's and SMAQMD's NO_X thresholds, will be reduced to quantities below thresholds.

WSAFCA will make best efforts to enter into a development mitigation contract with YSAQMD and SMAQMD to reduce NO_X emissions generated by the construction through contributions to SMAQMD's HDLEVIP. The HDLEVIP is designed to reduce NO_X, PM, and ROG from on- and off-road sources.

SMAQMD's incentive programs are a means of funding projects and programs capable of achieving emissions reductions. The payment fee is based on the average cost to achieve 1 ton per day (tpd) of reductions based on the average cost for reductions over the previous year. Onroad reductions averaged (nominally) $44 million ($NO_X$ only) and off-road reductions averaged $36 million ($NO_X$ only) over the previous year, thus working out to approximately $40 million per 1 tpd of reductions. This roughly correlates to the average cost effectiveness of the Carl Moyer Incentive Program.

Using the SMAQMD's local mitigation contract programs, WSAFCA will enter into mitigation contracts with YSAQMD and SMAQMD to reduce NO_X emissions to the required levels. The required levels are:

- For NO_X emissions in excess of the Federal *de minimis* threshold: **net zero (0)**.
- For NO_X emissions not in excess of *de minimis* threshold but above YSAQMD's and SMAQMD's thresholds: **below the appropriate CEQA threshold levels**.

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

- Consult with the YSAQMD and SMAQMD in good faith to enter into a mitigation contract for the HDLEVIP. For SIP purposes, the necessary reductions must be achieved (contracted and delivered) by the applicable year in question (i.e., emissions generated in year 2014 would need to be reduced off-site in 2014). Funding would need to be received prior to contracting with participants and should allow sufficient time to receive and process applications to ensure off-site reduction projects are funded and implemented prior to commencement of SEIP activities being reduced. This would roughly equate to the equivalent of 2 years prior to the required mitigation; additional lead time may be necessary depending on the level of off-site emission reductions required for a specific year. In negotiating the terms of the mitigation contract, the WSAFCA, YSAQMD, and SMAQMD should seek clarification and agreement on air district responsibilities, including those following.
    - Identification of appropriate off-site mitigation fees required for the project.
    - Timing required for obtaining necessary off-site emission credits.
    - Processing of mitigation fees surrendered by WSAFCA.
    - Verification of emissions inventories submitted by WSAFCA.
    - Verification that off-site fees are applied to appropriate mitigation programs within the SFNA.
- Quantify mitigation fees required to satisfy the appropriate reductions. As noted above, the payment fees may vary by year and are sensitive to the number of projects requiring reductions within the SFNA. The schedule in which payments are surrendered to the air district also influences overall cost. For example, a higher rate on a per ton basis will be required for project elements that need accelerated equipment turnover to achieve near-term reductions, whereas project elements that are established to contract to achieve far-term reductions will likely pay a lower rate on a per-tonnage basis.
- Develop a compliance program to calculate emissions and collect fees from the construction contractors for payment to the appropriate air district. The program will require, as a standard or specification of their contract, construction contractors to identify construction emissions and their share of required off-site fees, if applicable. Based on the emissions estimates, WSAFCA will collect fees from the individual construction contractors (as applicable) for payment to the air district. Construction contractors will have the discretion to reduce their construction emissions to the lowest possible level through on-site mitigation (Mitigation Measure AIR-MM-1), as the greater the emissions reductions that can be achieved by on-site mitigation, the lower the required off-site fee. All control strategies must be verified by YSAQMD and SMAQMD.

- Conduct daily and annual emissions monitoring to ensure on-site emissions reductions are achieved and no additional mitigation payments are required. The construction contractor will be required to ensure the requirement is met. This requirement will be incorporated into the construction contracts as part of the project's specifications. Excess off-site funds can be carried from previous to subsequent years in the event that additional reductions are achieved by on-site mitigation. At the end of the project, if it is determined that excess offset funds remain (outstanding contracts and administration over the final years of the contracts will be taken into consideration) the SMAQMD, YSAQMD, and WSAFCA Proponents shall determine the disposition of final funds (e.g., additional emission reduction projects to offset underperforming contracts, return of funds to WSAFCA, etc.).

D.1.13 Reporting

USACE is issuing this general conformity determination for public and agency review for a 30-day period as required by 40 CFR §§93.155 and 93.156. Emissions from construction of the project have been assessed and quantified using standard and accepted tools, techniques, and emission factors. Additional technical details are provided in the EIS/EIR. The air quality analysis, including this draft conformity determination, is based on consultation with YSAQMD and SMAQMD.

D.1.13.1 General Conformity Determination

The general conformity determination was available for a 45-day public review period in conjunction with the circulation of the Southport draft EIS/EIR. USACE provided copies of this general conformity determination to the appropriate regional offices of the EPA, ARB, YSAQMD and SMAQMD, and other coordinating agencies. The USACE will also announce the availability of the general conformity determination in conjunction with the public noticing of the Final EIS and NEPA Record of Decision. Such notice will be published, at a minimum, in the Federal Register. A copy of this conformity determination will be made available on USACE's and WSAFCA's websites, as well as at local libraries.

D.1.13.2 Revaluation and Redetermination of General Conformity

General conformity determinations are valid for a period of 5 years after the date of public notification for the final documentation (40 CFR §93.157(a)). Ongoing Federal activities at a given site that show continuous progress after a 5-year period do not require a redetermination so long as the activities are within the scope of the final conformity determination. Because construction of the APA is expected to require no more than 2 years, the final general conformity determination will remain valid through completion of the Federal action.

D.1.14 Findings and Conclusions

Pursuant to 40 CFR Part 93 Subpart B, USACE has conducted a general conformity evaluation as part of the environmental review of the SEIP. The project is subject to the general conformity rule because it is located an area that is designed nonattainment for the 8-hour ozone standard (severe

and moderate), nonattainment for PM2.5, and a (partial) moderate maintenance area for CO. USACE conducted the general conformity evaluation in consultation with air districts in the study area (YSAQMD and SMAQMD). Moreover, the emissions analyses are based on accepted standards and are in compliance with all applicable regulatory criteria and procedures.

Based on project-specific construction analysis, NO_X emissions generated by construction of the APA would exceed the Federal *de minimis* threshold during all years of construction (2014 and 2015) in the SFNA. USACE concluded that construction emissions would not result in a net increase in regional NO_X emissions, as construction-related NO_X emissions would be fully offset to zero through implementation of Mitigation Measure AQ-MM-4, which requires the payment of offsite mitigation fees. Accordingly, USACE has determined that the APA, as designed, will conform to the approved SIP, based on the findings below.

- A commitment from the WSAFCA that NO_X emissions generated by the APA will be offset consistent with the applicable Federal regulations through a development mitigation contract with the YSAQMD and SMAQMD. The following actions will be taken to execute the conformity determination contained herein.
    - WSAFCA, YSAQMD, and SMAQMD will enter into a contractual agreement to mitigate the NO_X emissions in excess of the Federal *de minimis* threshold to net zero.
    - WSAFCA will surrender moneys to SMAQMD's Heavy-Duty Low-Emission Vehicle Incentive Programs (HDLEVIP) to fund grants for projects that achieve the necessary emission reductions.
    - SMAQMD will seek and implement the necessary emission reduction measures, using WSAFCA funds.
    - SMAQMD will serve in the role of administrator of the emissions reduction projects and verifier of the successful mitigation effort.

Therefore, USACE herewith concludes that the APA, as designed, conforms to the purpose of the approved SIP and is consistent with all applicable requirements.

D.1.15 References

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Appendix D.2

Construction Data, Calculation Spreadsheets, and Supporting Information

SOUTHPORT SACRAMENTO RIVER EIP SITE
HIGH EMISSIONS ESTIMATE SUMMARY - (Unfavorable Scenario)

CMA #1 PHASE 1 Project Site Related Activities

S	Construction Phase	Equipment	#	Days	Truck Trips	RT Miles	Daily Earthwork Rate	Projected Time Frame	
C	Roadway Replace	Dump Truck	9	1	15	20			
C	Roadway Replace	Vibratory Compactor	1	1					
C	Roadway Replace	Asphalt Paver	1	1					
C	Roadway Replace	Asphalt Compactor	1	1					
C	Roadway Replace	Motor Grader	1	1					
C	Roadway Replace	Bulldozer	1	1					
C	Roadway Replace	Worker Commute	5	1	1	22			
C	Roadway Replace								
C	Stripping	Wheel Tractor Scraper	3	26			4.79 Ac per day	May 1 to	June 2
C	Stripping	Bulldozer	1	33					
C	Stripping	Dump Truck	10	33	17	20			
C	Stripping	Excavator	1	33					
C	Stripping	Worker Commute	15	33	1	22			
C	Stripping	Dust Emission	4.8	33					
C									
C	Soil Borrow Extraction/	Scraper	14	38			21,537 CY per day	June 3 to	July 10
C	Soil Borrow Extraction/	Excavator	6	38					
C	Soil Borrow Extraction/	Dump Truck	117	38	0	0			
C	Soil Borrow Extraction/	Sheeps Foot Compactor	1	38					
C	Soil Borrow Extraction/	Bulldozer	2	38					
C	Soil Borrow Extraction/	Motor Grader	1	38					
C	Soil Borrow Extraction/	Water Truck	2	6					
C	Soil Borrow Extraction/	Worker Commute	26	38	1	22			
C	Soil Borrow Extraction/	Dust Emission	2.2	38					
C									
C	Rip Rap Installation	Crane	10	38				July 12 to	August 18
C	Rip Rap Installation	Bulldozer	5	38					
C	Rip Rap Installation	Hydraulic Excavator	5	38					
C	Rip Rap Installation	Towboat	1	38	1.5	180			
C	Rip Rap Installation	Worker Commute	41	38	1	22			
C	Rip Rap Installation								
C	Utility Relocation	Utility/Pole Truck	4	22				May 10 to	May 31
C	Utility Relocation	Utility/Pole Truck	4	22					
C	Utility Relocation	Worker Commute	8	22	1	22			
C	Utility Relocation								
C	Drainage	Excavator	2	1				October 4 to	October 4
C	Drainage	Front End Loader	1	1					
C	Drainage	Dump Truck	3	1					
C	Drainage	Compressor	1	1					
C	Drainage	Worker Commute	4	1	1	22			
C	Drainage								
D	Building Demo	Bulldozer	1	17				May 1 to	May 17
D	Building Demo	Front End Loader	1	17					
D	Building Demo	Excavator	1	17					
D	Building Demo	Haul Truck	1	1	7	20			
D	Building Demo	Worker Commute	3	17	1	22			
D	Building Demo	Dust Emission	1.0	1					
D	Building Demo								
D	Roadway Removal	Cold Planer	1	1				May 1st	
D	Roadway Removal	Scraper	1	1					
D	Roadway Removal	Dump Truck	1	1	17	20			
D	Roadway Removal	Bulldozer	1	1					
D	Roadway Removal	Excavator	1	1					
D	Roadway Removal	Worker Commute	4	1	1	22			
D	Roadway Removal								
D	Roadway Replace	Dump Truck	13	3	14	20		June 3 to	June 5
D	Roadway Replace	Vibratory Compactor	1	3					

D	Roadway Replace	Asphalt Paver	1	1					
D	Roadway Replace	Asphalt Compactor	1	3					
D	Roadway Replace	Motor Grader	1	3					
D	Roadway Replace	Bulldozer	1	3					
D	Roadway Replace	Worker Commute	5	3	1	22			
D	Roadway Replace								
D	Stripping	Wheel Tractor Scraper	3	5			4.80 Ac per day	May 18	May 23
D	Stripping	Bulldozer	1	6					
D	Stripping	Dump Truck	10	6	17	20			
D	Stripping	Excavator	1	6					
D	Stripping	Worker Commute	5	6	1	22			
D	Stripping	Dust Emission	4.8	6					
D	Stripping								
D	SB Cutoff Wall Installati	Dump Truck	3	2	53	0.25		May 24	May 25
D	SB Cutoff Wall Installati	Bulldozer	1	2					
D	SB Cutoff Wall Installati	Long Reach Excavator	1	2					
D	SB Cutoff Wall Installati	Hydraulic Excavator	1	2					
D	SB Cutoff Wall Installati	Rough Terrain/Telehandler F	1	2					
D	SB Cutoff Wall Installati	Worker Commute	4	2	1	22			
D	SB Cutoff Wall Installation								
D	Soil Borrow Extraction/	Scraper	10	8			14,539 CY per day	May 26	June 2
D	Soil Borrow Extraction/	Excavator	4	8					
D	Soil Borrow Extraction/	Dump Truck	84	8	0	0			
D	Soil Borrow Extraction/	Sheeps Foot Compactor	1	8					
D	Soil Borrow Extraction/	Bulldozer	2	8					
D	Soil Borrow Extraction/	Motor Grader	1	8					
D	Soil Borrow Extraction/	Water Truck	2	2					
D	Soil Borrow Extraction/	Worker Commute	20	8	1	22			
D	Soil Borrow Extraction/	Dust Emission	1.5	8					
D	Soil Borrow Extraction/Levee Placement								
D	Rip Rap Installation	Crane	2	33				June 6	July 8
D	Rip Rap Installation	Bulldozer	1	33					
D	Rip Rap Installation	Hydraulic Excavator	1	33					
D	Rip Rap Installation	Towboat	1	33	1.5	180			
D	Rip Rap Installation	Worker Commute	5	33	1	22			
D	Rip Rap Installation								
D	Utility Relocation	Utility/Pole Truck	3	11				May 18 to	May 28
D	Utility Relocation	Utility/Pole Truck	3	11					
D	Utility Relocation	Worker Commute	6	11	1	22			
D	Utility Relocation								
D	Drainage	Excavator	3	3				July 1 to	July 8
D	Drainage	Front End Loader	1	3					
D	Drainage	Dump Truck	6	3					
D	Drainage	Compressor	1	8					
D	Drainage	Worker Commute	5	8	1	22			
D	Drainage								
E	Roadway Replace	Dump Truck	14	3	14	20		May 29	
E	Roadway Replace	Vibratory Compactor	2	4					
E	Roadway Replace	Asphalt Paver	1	1					
E	Roadway Replace	Asphalt Compactor	1	4					
E	Roadway Replace	Motor Grader	2	4					
E	Roadway Replace	Bulldozer	2	4					
E	Roadway Replace	Worker Commute	8	4	1	22			
E	Roadway Replace								

E	Stripping	Wheel Tractor Scraper	3	6			4.53 Ac per day	May 1 to	May 7
E	Stripping	Bulldozer	1	7					
E	Stripping	Dump Truck	10	7	17	20			
E	Stripping	Excavator	1	7					
E	Stripping	Worker Commute	5	7	1	22			
E	Stripping	Dust Emission	4.5	7					
E	Stripping								
E	SB Cutoff Wall Installati	Dump Truck	3	9	53	0.25		May 8 to	May 16
E	SB Cutoff Wall Installati	Bulldozer	1	9					
E	SB Cutoff Wall Installati	Long Reach Excavator	1	9					
E	SB Cutoff Wall Installati	Hydraulic Excavator	1	9					
E	SB Cutoff Wall Installati	Rough Terrain/Telehandler F	1	9					
E	SB Cutoff Wall Installati	Worker Commute	4	9	1	22			
E	SB Cutoff Wall Installation								
E	Soil Borrow Extraction/	Scraper	10	12			14,335 CY per day	May 17 to	May 28
E	Soil Borrow Extraction/	Excavator	4	12					
E	Soil Borrow Extraction/	Dump Truck	84	12	0	0			
E	Soil Borrow Extraction/	Sheeps Foot Compactor	1	12					
E	Soil Borrow Extraction/	Bulldozer	2	12					
E	Soil Borrow Extraction/	Motor Grader	1	12					
E	Soil Borrow Extraction/	Water Truck	2	3					
E	Soil Borrow Extraction/	Worker Commute	20	12	1	22			
E	Soil Borrow Extraction/	Dust Emission	1.4	12					
E	Soil Borrow Extraction/Levee Placement								
E	Wet Well Excavation/In	Crane	1	2				May 30 to	May 31 to
E	Wet Well Excavation/In	Front End Loader	1	1					
E	Wet Well Excavation/In	Dump Truck	2	1	1	20			
E	Wet Well Excavation/In	Worker Commute	2	2	1	22			
E	Wet Well Excavation/Installation								
E	Rip Rap Installation	Crane	4	4				June 26 to	June 29
E	Rip Rap Installation	Bulldozer	2	4					
E	Rip Rap Installation	Hydraulic Excavator	2	4					
E	Rip Rap Installation	Towboat	5	4	1.5	180			
E	Rip Rap Installation	Worker Commute	13	0	0	0			
E	Rip Rap Installation								
E	Trench Excavation & Fo	Excavator	1	1			596 CY per day	June 3 to	June 7
E	Trench Excavation & Fo	Dump Truck	3	1	1	20			
E	Trench Excavation & Fo	Front End Loader	1	1					
E	Trench Excavation & Fo	Pipe Layer	1	5					
E	Trench Excavation & Fo	Worker Commute	3	5	1	22			
E	Trench Excavation & Fo	Dust Emission	0.1	5					
E	Trench Excavation & Forcemain Installation								
E	Utility Relocation	Utility/Pole Truck	3	18				May 11 to	May 28
E	Utility Relocation	Utility/Pole Truck	3	18					
E	Utility Relocation	Worker Commute	6	18	1	22			
E	Utility Relocation								
E	Drainage	Excavator	2	1				June 21 to	June 21
E	Drainage	Front End Loader	1	1					
E	Drainage	Dump Truck	3	1					
E	Drainage	Compressor	1	1					
E	Drainage	Worker Commute	4	1	1	22			
E	Drainage								
F	Building Demo	Bulldozer	2	20				May 1 to	May 20
F	Building Demo	Front End Loader	2	20					
F	Building Demo	Excavator	2	20					
F	Building Demo	Haul Truck	1	2	13	20			
F	Building Demo	Worker Commute	6	20	1	22			
F	Building Demo	Dust Emission	1.9	2					
F	Building Demo								

F	Roadway Removal	Cold Planer	1	1				May 1	
F	Roadway Removal	Scraper	1	1					
F	Roadway Removal	Dump Truck	1	1	17	20			
F	Roadway Removal	Bulldozer	1	1					
F	Roadway Removal	Excavator	1	1					
F	Roadway Removal	Worker Commute	4	1	1	22			
F	Roadway Removal								
F	Roadway Replace	Dump Truck	13	3	14	20		July 14 to	July 16
F	Roadway Replace	Vibratory Compactor	2	3					
F	Roadway Replace	Asphalt Paver	1	1					
F	Roadway Replace	Asphalt Compactor	1	3					
F	Roadway Replace	Motor Grader	2	3					
F	Roadway Replace	Bulldozer	2	3					
F	Roadway Replace	Worker Commute	8	3	1	22			
F	Roadway Replace								
F	Stripping	Wheel Tractor Scraper	3	19			4.75 Ac per day	May 21 to	June 13
F	Stripping	Bulldozer	1	24					
F	Stripping	Dump Truck	10	24	17	20			
F	Stripping	Excavator	1	24					
F	Stripping	Worker Commute	5	24	1	22			
F	Stripping	Dust Emission	4.7	24					
F	Stripping								
F	Soil Borrow Extraction/	Scraper	14	30			21,456 CY per day	June 14 to	July 13
F	Soil Borrow Extraction/	Excavator	6	30					
F	Soil Borrow Extraction/	Dump Truck	117	30	0	0			
F	Soil Borrow Extraction/	Sheeps Foot Compactor	1	30					
F	Soil Borrow Extraction/	Bulldozer	2	30					
F	Soil Borrow Extraction/	Motor Grader	1	30					
F	Soil Borrow Extraction/	Water Truck	2	5					
F	Soil Borrow Extraction/	Worker Commute	26	30	1	22			
F	Soil Borrow Extraction/	Dust Emission	2.1	30					
F	Soil Borrow Extraction/Levee Placement								
F	Rip Rap Installation	Crane	6	33				July 17 to	August 18
F	Rip Rap Installation	Bulldozer	3	33					
F	Rip Rap Installation	Hydraulic Excavator	3	33					
F	Rip Rap Installation	Towboat	1	33	1.5	180			
F	Rip Rap Installation	Worker Commute	13	33	1	22			
F	Rip Rap Installation								
F	Existing Pump Station R	Bulldozer	1	2				May 1 to	May 2
F	Existing Pump Station R	Front End Loader	1	2					
F	Existing Pump Station R	Excavator	1	2					
F	Existing Pump Station R	Haul Truck	1	2	1	20			
F	Existing Pump Station R	Worker Commute	3	2	1	22			
F	Existing Pump Station R	Dust Emission	0.1	2					
F	Existing Pump Station Removal								
F	Utility Relocation	Utility/Pole Truck	3	29				May 31 to	June 28
F	Utility Relocation	Utility/Pole Truck	3	29					
F	Utility Relocation	Worker Commute	6	29	1	22			
F	Utility Relocation								
F	Drainage	Excavator	3	2				November 12 to	November 14
F	Drainage	Front End Loader	1	2					
F	Drainage	Dump Truck	6	2					
F	Drainage	Compressor	1	3					
F	Drainage	Worker Commute	5	3	1	22			
F	Drainage								
G	Building Demo	Bulldozer	1	3				May 1 to	May 3
G	Building Demo	Front End Loader	1	3					
G	Building Demo	Excavator	1	3					
G	Building Demo	Haul Truck	1	1	1	20			

G	Building Demo	Worker Commute	3	3	1	22			
G	Building Demo	Dust Emission	0.1	1					
G	Building Demo								
G	Roadway Replace	Dump Truck	8	1	15	20		June 8	
G	Roadway Replace	Vibratory Compactor	1	1					
G	Roadway Replace	Asphalt Paver	0	0					
G	Roadway Replace	Asphalt Compactor	0	0					
G	Roadway Replace	Motor Grader	1	1					
G	Roadway Replace	Bulldozer	1	1					
G	Roadway Replace	Worker Commute	3	1	1	22			
G	Roadway Replace								
G	Stripping	Wheel Tractor Scraper	3	9			4.86 Ac per day	May 4 to	May 14
G	Stripping	Bulldozer	1	11					
G	Stripping	Dump Truck	11	11	17	20			
G	Stripping	Excavator	1	11					
G	Stripping	Worker Commute	5	11	1	22			
G	Stripping	Dust Emission	4.9	11					
G	Stripping								
G	SB Cutoff Wall Installati	Dump Truck	3	11	53	0.25		May 15 to	May 25
G	SB Cutoff Wall Installati	Bulldozer	1	11					
G	SB Cutoff Wall Installati	Long Reach Excavator	1	11					
G	SB Cutoff Wall Installati	Hydraulic Excavator	1	11					
G	SB Cutoff Wall Installati	Rough Terrain/Telehandler F	1	11					
G	SB Cutoff Wall Installati	Worker Commute	4	11	1	22			
G	SB Cutoff Wall Installation								
G	Soil Borrow Extraction/	Scraper	10	13			14,526 CY per day	May 26 to	June 7
G	Soil Borrow Extraction/	Excavator	4	13					
G	Soil Borrow Extraction/	Dump Truck	84	13	0	0			
G	Soil Borrow Extraction/	Sheeps Foot Compactor	1	13					
G	Soil Borrow Extraction/	Bulldozer	2	13					
G	Soil Borrow Extraction/	Motor Grader	1	13					
G	Soil Borrow Extraction/	Water Truck	2	3					
G	Soil Borrow Extraction/	Worker Commute	20	13	1	22			
G	Soil Borrow Extraction/	Dust Emission	1.5	13					
G	Soil Borrow Extraction/Levee Placement								
G	Utility Relocation	Utility/Pole Truck	3	13				May 6 to	May 18
G	Utility Relocation	Utility/Pole Truck	3	13					
G	Utility Relocation	Worker Commute	6	13	1	22			
G	Utility Relocation								
G	Drainage	Excavator	3	1				June 18 to	June 18
G	Drainage	Front End Loader	1	1					
G	Drainage	Dump Truck	6	1					
G	Drainage	Compressor	1	1					
G	Drainage	Worker Commute	5	1	1	22			
G	Drainage								
G	Rip Rap Installation	Crane	4	21				June 9 to	June 29
G	Rip Rap Installation	Bulldozer	2	21					
G	Rip Rap Installation	Hydraulic Excavator	2	21					
G	Rip Rap Installation	Towboat	1	21	1.5	180			
G	Rip Rap Installation	Worker Commute	9	21	1	22			
G									

Worker Commute	**20**	**109**	**1**	**22**

te Material Borrow Activities

Segment	Construction Phase	Equipment	Number of Equi	9 Hrs. Work Days	Daily Truck Trips per	Roundtrip Miles	Daily Earthwork Rate (Dust Emissions)	Projected Time Frame	
C	Off-Site Material Borro	Scraper	6	38			21,537 CY per day	June 3 to	July 10
C	Off-Site Material Borro	Excavator	6	38					

C	Off-Site Material Borrow	Dump Truck	117	38	8	6.6			
C	Off-Site Material Borrow	Sheeps Foot Compactor	0	38					
C	Off-Site Material Borrow	Bulldozer	6	38					
C	Off-Site Material Borrow	Motor Grader	0	38					
C	Off-Site Material Borrow	Water Truck	2	6					
C	Off-Site Material Borrow	Worker Commute	20	38	1	22			
C	Off-Site Material Borrow	Dust Emission	2.2	38					
C	Off-Site Material Borrow								
D	Off-Site Material Borrow	Scraper	6	8			14,539 CY per day	May 26	June 2
D	Off-Site Material Borrow	Excavator	6	8					
D	Off-Site Material Borrow	Dump Truck	84	8	8	6.6			
D	Off-Site Material Borrow	Sheeps Foot Compactor	0	8					
D	Off-Site Material Borrow	Bulldozer	6	8					
D	Off-Site Material Borrow	Motor Grader	0	8					
D	Off-Site Material Borrow	Water Truck	2	2					
D	Off-Site Material Borrow	Worker Commute	20	8	1	22			
D	Off-Site Material Borrow	Dust Emission	1.5	8					
D	Off-Site Material Borrow								
E	Off-Site Material Borrow	Scraper	6	12			14,335 CY per day	May 17 to	May 28
E	Off-Site Material Borrow	Excavator	6	12					
E	Off-Site Material Borrow	Dump Truck	84	12	8	6.6			
E	Off-Site Material Borrow	Sheeps Foot Compactor	0	12					
E	Off-Site Material Borrow	Bulldozer	6	12					
E	Off-Site Material Borrow	Motor Grader	0	12					
E	Off-Site Material Borrow	Water Truck	2	3					
E	Off-Site Material Borrow	Worker Commute	20	12	1	22			
E	Off-Site Material Borrow	Dust Emission	1.4	12					
E	Off-Site Material Borrow								
F	Off-Site Material Borrow	Scraper	6	30			21,456 CY per day	June 14 to	July 13
F	Off-Site Material Borrow	Excavator	6	30					
F	Off-Site Material Borrow	Dump Truck	117	30	8	6.6			
F	Off-Site Material Borrow	Sheeps Foot Compactor	0	30					
F	Off-Site Material Borrow	Bulldozer	6	30					
F	Off-Site Material Borrow	Motor Grader	0	30					
F	Off-Site Material Borrow	Water Truck	2	5					
F	Off-Site Material Borrow	Worker Commute	20	30	1	22			
F	Off-Site Material Borrow	Dust Emission	2.1	30					
F	Off-Site Material Borrow								
G	Off-Site Material Borrow	Scraper	6	13			14,526 CY per day	May 26 to	June 7
G	Off-Site Material Borrow	Excavator	6	13					
G	Off-Site Material Borrow	Dump Truck	84	13	8	6.6			
G	Off-Site Material Borrow	Sheeps Foot Compactor	0	13					
G	Off-Site Material Borrow	Bulldozer	6	13					
G	Off-Site Material Borrow	Motor Grader	0	13					
G	Off-Site Material Borrow	Water Truck	2	3					
G	Off-Site Material Borrow	Worker Commute	20	13	1	22			
G	Off-Site Material Borrow	Dust Emission	1.5	13					

SOUTHPORT SACRAMENTO RIVER EIP SITE
HIGH EMISSIONS ESTIMATE SUMMARY - (Unfavorable Scenario)

CMA #1 PHASE 2 Project Site Related Activities

S	Construction Phase	Equipment	#	Days	Truck Trips	RT Miles	Daily Earthwork Rate	Projected Time Frame	
	Building Demo	Bulldozer	1	21					
		Front End Loader	1	21					
		Excavator	1	21				May 1 to	May 21
		Haul Truck	1	1	8	20			
		Worker Commute	3	21	1	22			
		Dust Emission	1.1	1					
	Roadway Removal	Cold Planer	1	2					
		Scraper	2	2					
		Dump Truck	5	2	17	20		May 1 to	May 2
		Bulldozer	1	2					
		Excavator	1	2					
		Worker Commute	5	2	1	22			
	Roadway Replace	Dump Truck	14	4	15	20			
		Vibratory Compactor	2	6					
		Asphalt Paver	1	2					
		Asphalt Compactor	1	6				June 25 to	June 30
		Motor Grader	2	6					
		Bulldozer	2	6					
		Worker Commute	8	6	1	22			
	Stripping	Wheel Tractor Scraper	3	8					
		Bulldozer	1	11					
		Dump Truck	10	11	17	20	4.02 Ac per day	May 22 to	June 1
		Excavator	1	11					
		Worker Commute	5	11	1	22			
		Dust Emission	4.0	11					
A	SB Cutoff Wall Installation	Dump Truck	3	7	53	0.25			
		Bulldozer	1	7					
		Long Reach Excavator	1	7				June 2 to	June 8
		Hydraulic Excavator	1	7					
		Rough Terrain/Telehanc	1	7					
		Worker Commute	4	7	1	22			
	Soil Borrow Extraction/Levee Placement	Scraper	10	16					
		Excavator	4	16					
		Dump Truck	84	16	0	0			
		Sheeps Foot Compactor	1	16					
		Bulldozer	2	16			13,493 CY per day	June 9 to	June 24
		Motor Grader	1	16					
		Water Truck	2	4					
		Worker Commute	20	16	1	22			
		Dust Emission	1.3	16					
		Crane	6	12					

	Rip Rap Installation	Bulldozer	3	12				July 1 to	July 12
		Hydraulic Excavator	3	12					
		Towboat	1	12	1.5	180			
		Worker Commute	13	12	1	22			
	Utility Relocation	Utility/Pole Truck	4	18				May 26 to	June 12
		Utility/Pole Truck	4	18					
		Worker Commute	8	18	1	22			
	Drainage	Excavator	3	2				October 6 to	October 7
		Front end loader	1	2					
		Dump Truck	6	2					
		Compressor	1	2					
		Worker Commute	5	2	1	22			
B	Building Demo	Bulldozer	6	31				May 1 to	May 31
		Front End Loader	6	31					
		Excavator	6	31					
		Haul Truck	1	6	13	20			
		Worker Commute	18	31	1	22			
		Dust Emission	1.9	6					
	Roadway Removal	Cold Planer	1	1				May 1	
		Scraper	1	1					
		Dump Truck	2	1	17	20			
		Bulldozer	1	1					
		Excavator	1	1					
		Worker Commute	4	1	1	22			
	Roadway Replace	Dump Truck	13	3	15	20		August 18 to	August 21
		Vibratory Compactor	2	4					
		Asphalt Paver	1	1					
		Asphalt Compactor	1	4					
		Motor Grader	2	4					
		Bulldozer	2	4					
		Worker Commute	8	4	1	22			
	Stripping	Wheel Tractor Scraper	3	22			4.73 Ac per day	June 1 to	June 28
		Bulldozer	1	28					
		Dump Truck	10	28	17	20			
		Excavator	1	28					
		Worker Commute	5	28	1	22			
		Dust Emission	4.7	28					

	Soil Borrow Extraction/Levee Placement	Scraper	10	50			14,647 CY per day	June 29 to	August 17
		Excavator	4	50					
		Dump Truck	84	50	0	0			
		Sheeps Foot Compactor	1	50					
		Bulldozer	2	50					
		Motor Grader	1	50					
		Water Truck	2	10					
		Worker Commute	20	50	1	22			
		Dust Emission	1.5	50					
	Utility Relocation	Utility/Pole Truck	4	23				May 24 to	June 15
		Utility/Pole Truck	4	23					
		Worker Commute	8	50	1	22			
	Drainage	Excavator	3	2				August 26 to	August 29
		Front end loader	1	2					
		Dump Truck	6	2					
		Compressor	1	4					
		Worker Commute	5	4	1	22			
	Rip Rap Installation	Crane	6	46				August 22 to	October 6
		Bulldozer	3	46					
		Hydraulic Excavator	3	46					
		Towboat	1	46	1.5	180			
		Worker Commute	13	46	1	22			

Worker Commute	**20**	**159**	**1**	**22**		

CMA #1 PHASE 2 Off-Site Material Borrow Activities									
S	**Construction Phase**	**Equipment**	**#**	**Days**	**Truck Trips**	**RT Miles**	**Daily Earthwork Rate**	**Projected Time Frame**	
A	Off-Site Material Borrow	Scraper	6	16			13,493 CY per day	June 9 to	June 24
		Excavator	6	16					
		Dump Truck	84	16	8	6.6			
		Sheeps Foot Compactor	0	16					
		Bulldozer	6	16					
		Motor Grader	0	16					
		Water Truck	2	4					
		Worker Commute	20	16	1	22			
		Dust Emission	1.3	16					
B	Off-Site Material Borrow	Scraper	6	50			14,647 CY per day	June 29 to	August 17
		Excavator	6	50					
		Dump Truck	84	50	8	6.6			
		Sheeps Foot Compactor	0	50					
		Bulldozer	6	50					
		Motor Grader	0	50					
		Water Truck	2	10					
		Worker Commute	20	50	1	22			
		Dust Emission	1.5	50					

SOUTHPORT SACRAMENTO RIVER EIP SITE
HIGH EMISSIONS ESTIMATE SUMMARY - (Unfavorable Scenario)
(Sequential Borrow Restoration)
CMA #2 PHASE 1 Project Site Related Activities

S	Construction Phase	Equipment	#	Days	Truck Trips	RT Miles	Projected Time Frame	
	Building Demo	Bulldozer	1	7			May 1 to	May 9
		Front End Loader	1	7				
		Excavator	1	7				
		Haul Truck	1	1	3	20		
		Worker Commute	3	7	1	22		
		Dust Emission	0.4	1				
	Roadway Removal	Cold Planer	1	1			May 1	
		Scraper	2	1				
		Dump Truck	7	1	15	20		
		Bulldozer	1	1				
		Excavator	1	1				
		Worker Commute	5	1	1	22		
	Roadway Replace	Dump Truck	12	2	15	20	October 5 to	October 6
		Vibratory Compactor	1	2				
		Asphalt Paver	1	1				
		Asphalt Compactor	1	2				
		Motor Grader	1	2				
		Bulldozer	1	2				
		Worker Commute	5	2	1	22		
	Stripping	Wheel Tractor Scraper	3	21			June 1 to	June 27
		Bulldozer	1	27				
		Dump Truck	10	27	17	20		
		Excavator	1	27				
		Worker Commute	5	27	1	22		
		Dust Emission	4.8	27				
	Levee Degrade	Scraper	6	29			June 28 to	August 3
		Bulldozer	1	37				
		Dump Truck	10	36	17	20		
		Excavator	1	37				
		Worker Commute	8	37	1	22		
		Dust Emission	0.4	37				
C								
	Soil Borrow Extraction/Levee Placement	Scraper	10	60			August 4 to	October 3
		Excavator	4	60				
		Dump Truck	84	60	0	0		
		Sheeps Foot Compactor	1	61				
		Bulldozer	2	60				
		Motor Grader	1	61				
		Water Truck	2	13				
		Worker Commute	20	61	1	22		
		Dust Emission	1.5	61				
	Rip Rap Installation	Crane	4	44			October 7 to	November 19
		Bulldozer	2	44				
		Hydraulic Excavator	2	44				
		Towboat	1	44	1.5	180		
		Worker Commute	9	44	1	22		
	Planting	Worker Commute	10	27	1	22	October 1	October 27
		Pickup	1	27	1	10		
		OffRoad Truck	2	27	1	10		
	Irrigation	Trencher	1	15	0	0	October 1	October 15
		Worker Commute	5	15	1	22		
		Pickup	1	15	1	10		
		Drill Rig	1	1	0	0		

	Utility Relocation	Utility/Pole Truck	4	22			May 10 to	May 31
		Utility/Pole Truck	4	22				
		Worker Commute	8	22	1	22		
	Drainage	Excavator	2	1			October 4 to	October 4
		Front End Loader	1	1				
		Dump Truck	3	1				
		Compressor	1	1				
		Worker Commute	4	1	1	22		
D	Building Demo	Bulldozer	1	17			May 1 to	May 17
		Front End Loader	1	17				
		Excavator	1	17				
		Haul Truck	1	1	7	20		
		Worker Commute	3	17	1	22		
		Dust Emission	1.0	1				
	Roadway Removal	Cold Planer	1	1			May 1	
		Scraper	1	1				
		Dump Truck	3	1	15	20		
		Bulldozer	1	1				
		Excavator	1	1				
		Worker Commute	4	1	1	22		
	Roadway Replace	Dump Truck	11	2	14	20	July 9 to	July 10
		Vibratory Compactor	1	2				
		Asphalt Paver	1	1				
		Asphalt Compactor	1	2				
		Motor Grader	1	2				
		Bulldozer	1	2				
		Worker Commute	5	2	1	22		
	Stripping	Wheel Tractor Scraper	3	9			May 29 to	June 8
		Bulldozer	1	11				
		Dump Truck	10	11	17	20		
		Excavator	1	11				
		Worker Commute	5	11	1	22		
		Dust Emission	4.5	11				
	SB Cutoff Wall Installation	Dump Truck	3	7	53	0.25	June 9 to	June 15
		Bulldozer	1	7				
		Long Reach Excavator	1	7				
		Hydraulic Excavator	1	7				
		Rough Terrain/Telehandler Forklift	1	7				
		Worker Commute	4	7	1	22		
	Soil Borrow Extraction/Levee Placement	Scraper	10	15			June 16 to	June 30
		Excavator	4	15				
		Dump Truck	84	15	0	0		
		Sheeps Foot Compactor	1	15				
		Bulldozer	2	15				
		Motor Grader	1	15				
		Water Truck	2	3				
		Worker Commute	20	15	1	22		
		Dust Emission	1.4	15				

	Rip Rap Installation	Crane	4	1			July 11 to	July 11
		Bulldozer	2	1				
		Hydraulic Excavator	2	1				
		Towboat	1	1	1.5	180		
		Worker Commute	9	1	1	22		
	Utility Relocation	Utility/Pole Truck	3	11			May 18 to	May 28
		Utility/Pole Truck	3	11				
		Worker Commute	6	11	1	22		
	Drainage	Excavator	3	3			July 1 to	July 8
		Front End Loader	1	3				
		Dump Truck	6	3				
		Compressor	1	8				
		Worker Commute	5	8	1	22		
E	Roadway Replace	Dump Truck	15	3	14	20	July 3 to	July 6
		Vibratory Compactor	2	4				
		Asphalt Paver	1	1				
		Asphalt Compactor	1	4				
		Motor Grader	2	4				
		Bulldozer	2	4				
		Worker Commute	8	4	1	22		
	Stripping	Wheel Tractor Scraper	3	8			May 1 to	May 10
		Bulldozer	1	10				
		Dump Truck	10	10	17	20		
		Excavator	1	10				
		Worker Commute	5	10	1	22		
		Dust Emission	4.4	10				
	SB Cutoff Wall Installation	Dump Truck	3	11	53	0.25	May 29 to	June 8
		Bulldozer	1	11				
		Long Reach Excavator	1	11				
		Hydraulic Excavator	1	11				
		Rough Terrain/Telehandler Forklift	1	11				
		Worker Commute	4	11	1	22		
	Soil Borrow Extraction/Levee Placement	Scraper	10	23			June 9 to	July 1
		Excavator	9	23				
		Dump Truck	95	23	0	0		
		Sheeps Foot Compactor	1	23				
		Bulldozer	2	23				
		Motor Grader	1	23				
		Water Truck	2	5				
		Worker Commute	25	23	1	22		
		Dust Emission	1.5	23				
	Rip Rap Installation	Crane	4	4			July 7 to	July 10
		Bulldozer	2	4				
		Hydraulic Excavator	2	4				
		Towboat	5	4	1.5	180		
		Worker Commute	13	4	1	22		
	Utility Relocation	Utility/Pole Truck	3	18			May 11 to	May 28
		Utility/Pole Truck	3	18				
		Worker Commute	6	18	1	22		
	Drainage	Excavator	2	1			July 2 to	July 2
		Front End Loader	1	1				
		Dump Truck	3	1				
		Compressor	1	1				
		Worker Commute	4	1	1	22		
		Bulldozer	2	30				

	Building Demo	Front End Loader	2	30			May 1 to	May 30
		Excavator	2	30				
		Haul Truck	1	2	13	20		
		Worker Commute	6	30	1	22		
		Dust Emission	1.9	2				
	Roadway Removal	Cold Planer	1	1			May 1	
		Scraper	2	1				
		Dump Truck	7	1	15	20		
		Bulldozer	1	1				
		Excavator	1	1				
		Worker Commute	5	1	1	22		
	Roadway Replace	Dump Truck	16	3	14	20	November 15 to	November 19
		Vibratory Compactor	2	5				
		Asphalt Paver	1	1				
		Asphalt Compactor	1	5				
		Motor Grader	2	5				
		Bulldozer	2	5				
		Worker Commute	8	5	1	22		
	Stripping	Wheel Tractor Scraper	3	23			June 29 to	July 27
		Bulldozer	1	29				
		Dump Truck	10	29	17	20		
		Excavator	1	29				
		Worker Commute	5	29	1	22		
		Dust Emission	4.8	29				
	Levee Degrade	Scraper	6	36			July 28 to	September 10
		Bulldozer	1	45				
		Dump Truck	10	45	17	20		
		Excavator	1	45				
		Worker Commute	8	45	1	22		
F		Dust Emission	0.4	45				
	Soil Borrow Extraction/Levee Placement	Scraper	10	62			September 11 to	November 11
		Excavator	4	62				
		Dump Truck	84	62	0	0		
		Sheeps Foot Compactor	1	62				
		Bulldozer	2	62				
		Motor Grader	1	62				
		Water Truck	2	13				
		Worker Commute	20	62	1	22		
		Dust Emission	1.5	62				
	Rip Rap Installation	Crane	4	58			November 20 to	January 16
		Bulldozer	2	58				
		Hydraulic Excavator	2	58				
		Towboat	1	58	1.5	180		
		Worker Commute	9	58	1	22		

	Existing Pump Station Removal	Bulldozer	1	2			May 1 to	May 2
		Front End Loader	1	2				
		Excavator	1	2				
		Haul Truck	1	2	1	20		
		Worker Commute	3	2	1	22		
		Dust Emission	0.1	2				
	Utility Relocation	Utility/Pole Truck	3	29			May 31 to	June 28
		Utility/Pole Truck	3	29				
		Worker Commute	6	29	1	22		
	Drainage	Excavator	3	2			November 12 to	November 14
		Front End Loader	1	2				
		Dump Truck	6	2				
		Compressor	1	3				
		Worker Commute	5	3	1	22		
G	Building Demo	Bulldozer	1	5			May 1 to	May 5
		Front End Loader	1	5				
		Excavator	1	5				
		Haul Truck	1	1	1	20		
		Worker Commute	3	5	1	22		
		Dust Emission	0.1	1				
	Roadway Replace	Dump Truck	8	1	14	20	June 21	
		Vibratory Compactor	1	1				
		Asphalt Paver	0	0				
		Asphalt Compactor	0	0				
		Motor Grader	1	1				
		Bulldozer	1	1				
		Worker Commute	3	1	1	22		
	Stripping	Wheel Tractor Scraper	3	8			May 19 to	May 28
		Bulldozer	1	10				
		Dump Truck	10	10	17	20		
		Excavator	1	10				
		Worker Commute	5	10	1	22		
		Dust Emission	4.4	10				
	SB Cutoff Wall Installation	Dump Truck	3	12	53	0.25	May 29 to	June 9
		Bulldozer	1	12				
		Long Reach Excavator	1	12				
		Hydraulic Excavator	1	12				
		Rough Terrain/Telehandler Forklift	1	12				
		Worker Commute	4	12	1	22		
	Soil Borrow Extraction/Levee Placement	Scraper	10	10			June 10 to	June 19
		Excavator	9	10				
		Dump Truck	95	10	0	0		
		Sheeps Foot Compactor	1	10				
		Bulldozer	2	10				
		Motor Grader	1	10				
		Water Truck	2	2				
		Worker Commute	25	10	1	22		
		Dust Emission	1.4	10				
	Utility Relocation	Utility/Pole Truck	3	13			May 6 to	May 18
		Utility/Pole Truck	3	13				
		Worker Commute	6	13	1	22		
	Drainage	Excavator	3	1			June 20 to	June 20
		Front End Loader	1	1				
		Dump Truck	6	1				
		Compressor	1	1				
		Worker Commute	5	1	1	22		
	Rip Rap Installation	Crane	4	20			June 22 to	July 11
		Bulldozer	2	20				
		Hydraulic Excavator	2	20				
		Towboat	1	20	1.5	180		

		Worker Commute	9	20	1	22	

		Worker Commute	**20**	**244**	**1**	**22**	

CMA #2 PHASE 1 Off-Site Material Borrow Activities							
S	**Construction Phase**	**Equipment**	**#**	**Days**	**Truck Trips**	**RT Miles**	**Projected Time Frame**
C	Off-Site Material Borrow	Scraper	14	14			August 4 to October 3
		Excavator	6	14			
		Dump Truck	84	14	8	6.6	
		Sheeps Foot Compactor	1	14			
		Bulldozer	2	14			
		Motor Grader	1	14			
		Water Truck	2	2			
		Worker Commute	26	14	1	22	
		Dust Emission	2.2	14			
D	Off-Site Material Borrow	Scraper	14	14			June 16 to June 30
		Excavator	6	14			
		Dump Truck	84	14	8	6.6	
		Sheeps Foot Compactor	1	14			
		Bulldozer	2	14			
		Motor Grader	1	14			
		Water Truck	2	2			
		Worker Commute	26	14	1	22	
		Dust Emission	2.2	14			
E	Off-Site Material Borrow	Scraper	14	14			June 9 to July 1
		Excavator	6	14			
		Dump Truck	95	14	7	6.6	
		Sheeps Foot Compactor	1	14			
		Bulldozer	2	14			
		Motor Grader	1	14			
		Water Truck	2	2			
		Worker Commute	26	14	1	22	
		Dust Emission	2.2	14			
F	Off-Site Material Borrow	Scraper	14	14			September 11 to November 11
		Excavator	6	14			
		Dump Truck	84	14	8	6.6	
		Sheeps Foot Compactor	1	14			
		Bulldozer	2	14			
		Motor Grader	1	14			
		Water Truck	2	2			
		Worker Commute	26	14	1	22	
		Dust Emission	2.2	14			
G	Off-Site Material Borrow	Scraper	14	14			June 10 to June 19
		Excavator	6	14			
		Dump Truck	95	14	7	6.6	
		Sheeps Foot Compactor	1	14			
		Bulldozer	2	14			
		Motor Grader	1	14			
		Water Truck	2	2			
		Worker Commute	26	14	1	22	
		Dust Emission	2.2	14			

SOUTHPORT SACRAMENTO RIVER EIP SITE
HIGH EMISSIONS ESTIMATE SUMMARY - (Unfavorable Scenario)
(Sequential Borrow Restoration)
CMA #2 PHASE 2 Project Site Related Activities

S	Construction Phase	Equipment	#	Days	Truck Trips	RT Miles	Daily Earthwork Rate	Projected Time Frame	
	Building Demo	Bulldozer	2	25				May 1 to	May 25
		Front End Loader	2	25					
		Excavator	2	25					
		Haul Truck	1	4	13	20			
		Worker Commute	6	25	1	22			
		Dust Emission	1.9	4					
	Roadway Removal	Cold Planer	1	2				May 1 to	September 20
		Scraper	2	2					
		Dump Truck	5	2	15	20			
		Bulldozer	1	2					
		Excavator	1	1					
		Worker Commute	5	2	1	22			
	Roadway Replace	Dump Truck	9	2	15	20		October 8 to	October 10
		Vibratory Compactor	1	3					
		Asphalt Paver	1	2					
		Asphalt Compactor	1	3					
		Motor Grader	1	3					
		Bulldozer	1	3					
		Worker Commute	5	3	1	22			
	Stripping	Wheel Tractor Scraper	3	13				June 13 to	June 29
		Bulldozer	1	17					
		Dump Truck	10	17	17	20	4.47 Ac per day		
		Excavator	1	17					
		Worker Commute	5	17	1	22			
		Dust Emission	4.5	17					
	Levee Degrade	Scraper	6	54				June 30 to	September 7
		Bulldozer	1	70			3,682 CY per day		
		Dump Truck	10	70	17	20			
		Excavator	1	70					
		Worker Commute	8	70	1	22			
A		Dust Emission	0.4	70					
	SB Cutoff Wall Installation	Dump Truck	3	9	53	0.25		September 8 to	September 16
		Bulldozer	1	9					
		Long Reach Excavator	1	9					
		Hydraulic Excavator	1	9					
		Rough Terrain/Telehandle	1	9					
		Worker Commute	4	9	1	22			
	Soil Borrow Extraction/Leve e Placement	Scraper	10	19				September 17 to	October 5
		Excavator	4	19					
		Dump Truck	84	19	0	0			
		Sheeps Foot Compactor	1	19			14,024 CY per day		
		Bulldozer	2	19					
		Motor Grader	1	19					

	Water Truck	2	4				
	Worker Commute	20	19	1	22		
	Dust Emission	1.4	19				
Rip Rap Installation	Crane	8	21				October 11 to October 31
	Bulldozer	4	21				
	Hydraulic Excavator	4	21				
	Towboat	1	21	1.5	180		
	Worker Commute	17	21	1	22		
Utility Relocation	Utility/Pole Truck	4	18				May 26 to June 12
	Utility/Pole Truck	4	18				
	Worker Commute	8	21	1	22		
Drainage	Excavator	3	2				October 6 to October 7
	Front end loader	1	2				
	Dump Truck	6	2				
	Compressor	1	2				
	Worker Commute	5	2	1	22		
Building Demo	Bulldozer	3	23				May 1 to May 23
	Front End Loader	3	23				
	Excavator	3	23				
	Haul Truck	1	7	13	20		
	Worker Commute	9	23	1	22		
	Dust Emission	1.9	7				
Roadway Removal	Cold Planer	1	1				May 1
	Scraper	2	1				
	Dump Truck	6	1	17	20		
	Bulldozer	1	1				
	Excavator	1	1				
	Worker Commute	5	1	1	22		
Roadway Replace	Dump Truck	18	3	15	20		August 29 to September 3
	Vibratory Compactor	2	6				
	Asphalt Paver	1	1				
	Asphalt Compactor	1	6				
	Motor Grader	1	3				
	Bulldozer	1	3				
	Worker Commute	6	6	1	22		
Stripping	Wheel Tractor Scraper	3	24			4.74 Ac per day	June 16 to July 16
	Bulldozer	1	31				
	Dump Truck	10	31	17	20		
	Excavator	1	31				
	Worker Commute	5	31	1	22		
	Dust Emission	4.7	31				

Levee Degrade	Scraper	6	31			3,873 CY per day	July 17 to	August 24
	Bulldozer	1	39					
	Dump Truck	10	38	17	20			
	Excavator	1	39					
	Worker Commute	8	39	1	22			
	Dust Emission	0.4	39					
SB Cutoff Wall Installation	Dump Truck	3	1	53	0.25		September 4 to	September 4
	Bulldozer	1	1					
	Long Reach Excavator	1	1					
	Hydraulic Excavator	1	1					
	Rough Terrain/Telehandle	1	1					
	Worker Commute	4	1	1	22			
B Soil Borrow Extraction/Leve e Placement	Scraper	10	67			14,956 CY per day	September 5 to	November 10
	Excavator	9	67					
	Dump Truck	95	67	0	0			
	Sheeps Foot Compactor	1	67					
	Bulldozer	2	67					
	Motor Grader	1	67					
	Water Truck	2	14					
	Worker Commute	25	67	1	22			
	Dust Emission	1.5	67					
Rip Rap Installation	Crane	6	38				November 11 to	December 18
	Bulldozer	3	38					
	Hydraulic Excavator	3	38					
	Towboat	1	38	1.5	180			
	Worker Commute	13	38	1	22			
On-Site Material Borrow Restoration	Scraper	0	0			21,518 CY per day	October 9 to	October 20
	Excavator	0	0					
	Dump Truck	0	0	0	0			
	Sheeps Foot Compactor	0	0					
	Bulldozer	0	0					
	Motor Grader	0	0					
	Water Truck	0	0					
	Worker Commute	0	0	0	0			
	Dust Emission	0.0	0					
Off-Site Material Borrow Restoration	Scraper	0	0			22,186 CY per day	October 9 to	November 1
	Excavator	0	0					
	Dump Truck	0	0	0	0			
	Sheeps Foot Compactor	0	0					
	Bulldozer	0	0					
	Motor Grader	0	0					
	Water Truck	0	0					
	Worker Commute	0	0	0	0			
Utility Relocation	Utility/Pole Truck	4	23				May 24 to	June 15
	Utility/Pole Truck	4	23					
	Worker Commute	8	23	1	22			
Drainage	Excavator	3	2				August 25 to	August 28
	Front end loader	1	2					
	Dump Truck	6	2					
	Compressor	1	4					
	Worker Commute	5	4	1	22			

Planting	Worker Commute	10	3	1	22		October 1 to	October 3
	Pickup	1	3	1	10			
	OffRoad Truck	2	3	1	10			
Irrigation	Trencher	1	4	0	0		October 2 to	October 5
	Worker Commute	5	4	1	22			
	Pickup	1	4	1	10			

Worker Commute	**20**	**231**	**1**	**22**	

CMA #2 PHASE 2 Off-Site Material Borrow Activities

S	Construction Phase	Equipment	#	Days	Truck Trips	RT Miles	Daily Earthwork Rate	Projected Time Frame	
A	Off-Site Material Borrow	Scraper	14	24			22,186 CY per day	September 17 to	October 5
		Excavator	6	24					
		Dump Truck	84	24	8	6.6			
		Sheeps Foot Compactor	1	24					
		Bulldozer	2	24					
		Motor Grader	1	24					
		Water Truck	2	4					
		Worker Commute	26	24	1	22			
		Dust Emission	2.2	24					
B	Off-Site Material Borrow	Scraper	14	24			22,186 CY per day	September 5 to	November 10
		Excavator	6	24					
		Dump Truck	95	24	7	6.6			
		Sheeps Foot Compactor	1	24					
		Bulldozer	2	24					
		Motor Grader	1	24					
		Water Truck	2	4					
		Worker Commute	26	24	1	22			
		Dust Emission	2.2	24					

SOUTHPORT SACRAMENTO RIVER EIP SITE
HIGH EMISSIONS ESTIMATE SUMMARY - (Unfavorable Scenario)

CMA #3 PHASE 1 Project Site Related Activities

S	Construction Phase	Equipment	#	Days	Truck Trips	RT Miles	Projected Time Frame
C	Roadway Removal	Cold Planer	1	1			May 1
		Scraper	2	1			
		Dump Truck	6	1	17	20	
		Bulldozer	1	1			
		Excavator	1	1			
		Worker Commute	5	1	1	22	
	Roadway Replace	Dump Truck	14	1	17	20	June 29
		Vibratory Compactor	1	1			
		Asphalt Paver	1	1			
		Asphalt Compactor	1	1			
		Motor Grader	1	1			
		Bulldozer	1	1			
		Worker Commute	5	1	1	22	
	Stripping	Wheel Tractor Scraper	3	13			May 2 to May 19
		Bulldozer	1	18			
		Dump Truck	10	18	17	20	
		Excavator	1	18			
		Worker Commute	5	18	1	22	
		Dust Emission	4.4	18			
	Soil Borrow Extraction/Levee Placement	Scraper	10	40			May 20 to June 28
		Excavator	4	40			
		Dump Truck	84	40	0	0	
		Sheeps Foot Compactor	1	40			
		Bulldozer	2	40			
		Motor Grader	1	40			
		Water Truck	2	8			
		Worker Commute	20	40	1	22	
		Dust Emission	1.4	40			
	Rip Rap Installation	Crane	6	87	10	20	June 30 to September 24
		Bulldozer	3	87			
		Hydraulic Excavator	3	87			
		Towboat	1	87	1.5	180	
		Worker Commute	13	87	1	22	
	Utility Relocation	Utility/Pole Truck	4	22			May 10 to May 31
		Utility/Pole Truck	4	22			
		Worker Commute	8	22	1	22	
	Drainage	Excavator	2	1			October 4 to October 4
		Front End Loader	1	1			
		Dump Truck	3	1			
		Compressor	1	1			
		Worker Commute	4	1	1	22	
	Building Demo	Bulldozer	1	5			May 1 to May 5
		Front End Loader	1	5			
		Excavator	1	5			
		Haul Truck	1	1	2	20	
		Worker Commute	3	5	1	22	
		Dust Emission	0.3	1			
	Roadway	Cold Planer	1	1			
		Scraper	1	1			

	Roadway Removal	Dump Truck	3	1	17	20	May 1	
		Bulldozer	1	1				
		Excavator	1	1				
		Worker Commute	4	1	1	22		
	Roadway Replace	Dump Truck	16	2	17	20	June 12 to	June 13
		Vibratory Compactor	1	2				
		Asphalt Paver	1	1				
		Asphalt Compactor	1	2				
		Motor Grader	1	2				
		Bulldozer	1	2				
		Worker Commute	5	2	1	22		
	Stripping	Wheel Tractor Scraper	3	4			May 6 to	May 9
		Bulldozer	1	4				
		Dump Truck	10	4	17	20		
		Excavator	1	4				
		Worker Commute	5	4	1	22		
		Dust Emission	4.8	4				
	Levee Degrade	Scraper	17	6			May 10 to	May 31
		Bulldozer	1	22				
		Dump Truck	10	22	17	20		
		Excavator	1	22				
		Worker Commute	19	22	1	22		
D		Dust Emission	0.4	22				
	SB Cutoff Wall Installation	Dump Truck	3	2	53	0.25	June 1 to	June 2
		Bulldozer	1	2				
		Long Reach Excavator	1	2				
		Hydraulic Excavator	1	2				
		Rough Terrain/Telehandle	1	2				
		Worker Commute	4	2	1	22		
	Soil Borrow Extraction/Levee Placement	Scraper	10	9			June 3 to	June 11
		Excavator	4	9				
		Dump Truck	84	9	0	0		
		Sheeps Foot Compactor	1	9				
		Bulldozer	2	9				
		Motor Grader	1	9				
		Water Truck	2	2				
		Worker Commute	20	9	1	22		
		Dust Emission	1.4	9				
	Rip Rap Installation	Crane	2	62			June 14 to	August 14
		Bulldozer	1	62				
		Hydraulic Excavator	1	62				
		Towboat	1	62	1.5	180		
		Worker Commute	5	62	1	22		
	Utility Relocation	Utility/Pole Truck	3	11			May 18 to	May 28
		Utility/Pole Truck	3	11				
		Worker Commute	6	11	1	22		
	Drainage	Excavator	3	3			July 1 to	July 8
		Front End Loader	1	3				
		Dump Truck	6	3				
		Compressor	1	8				
		Worker Commute	5	8	1	22		
	Roadway	Dump Truck	17	2	17	20		
		Vibratory Compactor	2	2				
		Asphalt Paver	1	1				

Replace	Asphalt Compactor	1	2			July 4 to	July 5	
	Motor Grader	2	2					
	Bulldozer	2	2					
	Worker Commute	8	2	1	22			

Stripping	Wheel Tractor Scraper	3	4			May 1 to	May 6
	Bulldozer	1	6				
	Dump Truck	10	6	17	20		
	Excavator	1	6				
	Worker Commute	5	6	1	22		
	Dust Emission	4.1	6				
Levee Degrade	Scraper	17	10			May 7 to	June 10
	Bulldozer	1	35				
	Dump Truck	10	35	17	20		
	Excavator	1	35				
	Worker Commute	19	35	1	22		
	Dust Emission	0.4	35				
SB Cutoff Wall Installation	Dump Truck	3	9	53	0.25	June 11 to	June 19
	Bulldozer	1	9				
	Long Reach Excavator	1	9				
	Hydraulic Excavator	1	9				
	Rough Terrain/Telehandle	1	9				
	Worker Commute	4	9	1	22		
Soil Borrow Extraction/Levee Placement	Scraper	10	14			June 20 to	July 3
	Excavator	4	14				
	Dump Truck	84	14	0	0		
	Sheeps Foot Compactor	1	14				
	Bulldozer	2	14				
	Motor Grader	1	14				
	Water Truck	2	3				
E	Worker Commute	20	14	1	22		
	Dust Emission	1.4	14				
Rip Rap Installation	Crane	4	4			July 10 to	September 7
	Bulldozer	2	4				
	Hydraulic Excavator	2	4				
	Towboat	5	4	1.5	180		
	Worker Commute	0	0	0	0		
Wet Well Excavation/Installation	Crane	1	2			July 6 to	July 7
	Front End Loader	1	1				
	Dump Truck	2	1	1	20		
	Worker Commute	2	2	1	22		
Pump Station Installation	Crane	0	0			July 8 to	July 9
	Front End Loader	0	0				
	Concrete Truck	0	0	0	0		
	Worker Commute	0	0	0	0		
Trench Excavation & Forcemain Installation	Excavator	1	1			July 10 to	July 14
	Dump Truck	3	1	1	20		
	Front End Loader	1	1				
	Pipe Layer	1	5				
	Worker Commute	3	5	1	22		
	Dust Emission	0.1	5				
Utility Relocation	Utility/Pole Truck	3	18			May 11 to	May 28
	Utility/Pole Truck	3	18				
	Worker Commute	6	18	1	22		
Drainage	Excavator	2	1			July 2 to	July 2
	Front End Loader	1	1				
	Dump Truck	3	1				
	Compressor	1	1				

		Worker Commute	4	1	1	22		
	Building Demo	Bulldozer	2	18			May 1 to	May 18
		Front End Loader	2	18				
		Excavator	2	18				
		Haul Truck	1	2	13	20		
		Worker Commute	6	18	1	22		
		Dust Emission	1.9	2				
	Roadway Removal	Cold Planer	1	1			May 1	
		Scraper	2	1				
		Dump Truck	6	1	17	20		
		Bulldozer	1	1				
		Excavator	1	1				
		Worker Commute	5	1	1	22		
	Roadway Replace	Dump Truck	17	2	17	20	June 29 to	June 30
		Vibratory Compactor	2	2				
		Asphalt Paver	1	1				
		Asphalt Compactor	1	2				
		Motor Grader	2	2				
		Bulldozer	2	2				
		Worker Commute	8	2	1	22		
	Stripping	Wheel Tractor Scraper	3	4			May 19 to	May 23
		Bulldozer	1	5				
		Dump Truck	10	5	17	20		
		Excavator	1	5				
		Worker Commute	5	5	1	22		
		Dust Emission	4.2	5				
F	Soil Borrow Extraction/Levee Placement	Scraper	10	36			May 24 to	June 28
		Excavator	4	36				
		Dump Truck	84	36	0	0		
		Sheeps Foot Compactor	1	36				
		Bulldozer	2	36				
		Motor Grader	1	36				
		Water Truck	2	8				
		Worker Commute	20	36	1	22		
		Dust Emission	1.5	36				
	Rip Rap Installation	Crane	6	74			July 1 to	September 12
		Bulldozer	3	74				
		Hydraulic Excavator	3	74				
		Towboat	1	74	1.5	180		
		Worker Commute	13	74	1	22		
	Existing Pump Station Removal	Bulldozer	1	2			May 1 to	May 2
		Front End Loader	1	2				
		Excavator	1	2				
		Haul Truck	1	2	1	20		
		Worker Commute	3	2	1	22		
		Dust Emission	0.1	2				
	Utility Relocation	Utility/Pole Truck	3	29			May 31 to	June 28
		Utility/Pole Truck	3	29				
		Worker Commute	6	29	1	22		
	Drainage	Excavator	3	2			November 12 to	November 14
		Front End Loader	1	2				
		Dump Truck	6	2				
		Compressor	1	3				
		Worker Commute	5	3	1	22		

G	Building Demo	Bulldozer	1	5			May 1 to	May 5
		Front End Loader	1	5				
		Excavator	1	5				
		Haul Truck	1	1	1	20		
		Worker Commute	3	5	1	22		
		Dust Emission	0.1	1				
	Roadway Replace	Dump Truck	12	1	17	20	June 24	
		Vibratory Compactor	1	1				
		Asphalt Paver	1	1				
		Asphalt Compactor	1	1				
		Motor Grader	1	1				
		Bulldozer	1	1				
		Worker Commute	5	1	1	22		
	Stripping	Wheel Tractor Scraper	3	4			May 6 to	May 10
		Bulldozer	1	5				
		Dump Truck	10	5	17	20		
		Excavator	1	5				
		Worker Commute	5	5	1	22		
		Dust Emission	4.2	5				
	Levee Degrade	Scraper	17	7			May 11 to	June 4
		Bulldozer	1	25				
		Dump Truck	10	25	17	20		
		Excavator	1	25				
		Worker Commute	19	25	1	22		
		Dust Emission	0.4	25				
	SB Cutoff Wall Installation	Dump Truck	3	9	53	0.25	June 5 to	June 13
		Bulldozer	1	9				
		Long Reach Excavator	1	9				
		Hydraulic Excavator	1	9				
		Rough Terrain/Telehandle	1	9				
		Worker Commute	4	9	1	22		
	Soil Borrow Extraction/Levee Placement	Scraper	10	10			June 14 to	June 23
		Excavator	4	10				
		Dump Truck	84	10	0	0		
		Sheeps Foot Compactor	1	10				
		Bulldozer	2	10				
		Motor Grader	1	10				
		Water Truck	2	2				
		Worker Commute	20	10	1	22		
		Dust Emission	1.5	10				
	Utility Relocation	Utility/Pole Truck	3	13			May 6 to	May 18
		Utility/Pole Truck	3	13				
		Worker Commute	6	13	1	22		
	Drainage	Excavator	3	1			June 20 to	June 20
		Front End Loader	1	1				
		Dump Truck	6	1				
		Compressor	1	1				
		Worker Commute	5	1	1	22		
	Rip Rap Installation	Crane	4	43			June 25 to	August 6
		Bulldozer	2	43				
		Hydraulic Excavator	2	43				
		Towboat	1	43	1.5	180		
		Worker Commute	9	43	1	22		

Worker Commute	**20**	**146**	**1**	**22**

CMA #3 PHASE 1 Off-Site Material Borrow Activities

CMA #3 PHASE 1 Off-Site Material Borrow Activities

S	Construction Phase	Equipment	#	Days	Truck Trips	RT Miles	Projected Time Frame
C	Off-Site Material Borrow	Scraper	6	40			May 20 to June 28
		Excavator	6	40			
		Dump Truck	84	40	8	6.6	
		Sheeps Foot Compactor	0	40			
		Bulldozer	6	40			
		Motor Grader	0	40			
		Water Truck	2	8			
		Worker Commute	20	40	1	22	
		Dust Emission	1.4	40			
D	Off-Site Material Borrow	Scraper	6	9			June 3 to June 11
		Excavator	6	9			
		Dump Truck	84	9	8	6.6	
		Sheeps Foot Compactor	0	9			
		Bulldozer	6	9			
		Motor Grader	0	9			
		Water Truck	2	2			
		Worker Commute	20	9	1	22	
		Dust Emission	1.4	9			
E	Off-Site Material Borrow	Scraper	6	14			June 20 to July 3
		Excavator	6	14			
		Dump Truck	84	14	8	6.6	
		Sheeps Foot Compactor	0	14			
		Bulldozer	6	14			
		Motor Grader	0	14			
		Water Truck	2	3			
		Worker Commute	20	14	1	22	
		Dust Emission	1.4	14			
F	Off-Site Material Borrow	Scraper	6	36			May 24 to June 28
		Excavator	6	36			
		Dump Truck	84	36	8	6.6	
		Sheeps Foot Compactor	0	36			
		Bulldozer	6	36			
		Motor Grader	0	36			
		Water Truck	2	8			
		Worker Commute	20	36	1	22	
		Dust Emission	1.5	36			
G	Off-Site Material Borrow	Scraper	6	10			June 14 to June 23
		Excavator	6	10			
		Dump Truck	84	10	8	6.6	
		Sheeps Foot Compactor	0	10			
		Bulldozer	6	10			
		Motor Grader	0	10			
		Water Truck	2	2			
		Worker Commute	20	10	1	22	
		Dust Emission	1.5	10			

SOUTHPORT SACRAMENTO RIVER EIP SITE
HIGH EMISSIONS ESTIMATE SUMMARY - (Unfavorable Scenario)

CMA #3 PHASE 2 Project Site Related Activities

S	Construction Phase	Equipment	#	Days	Truck Trips	RT Miles	Daily Earthwork Rate	Projected Time Frame	
A	Roadway Removal	Cold Planer	1	2				May 1 to	May 2
		Scraper	2	2					
		Dump Truck	5	2	17	20			
		Bulldozer	1	2					
		Excavator	1	2					
		Worker Commute	5	2	1	22			
	Roadway Replace	Dump Truck	18	3	17	20		July 23 to	July 26
		Vibratory Compactor	2	4					
		Asphalt Paver	1	2					
		Asphalt Compactor	1	4					
		Motor Grader	2	4					
		Bulldozer	2	4					
		Worker Commute	8	4	1	22			
	Stripping	Wheel Tractor Scraper	3	9			4.17 Ac per day	May 3 to	May 14
		Bulldozer	1	12					
		Dump Truck	10	12	17	20			
		Excavator	1	12					
		Worker Commute	5	12	1	22			
		Dust Emission	4.2	12					
	Levee Degrade	Scraper	17	12			3,667 CY per day	May 15 to	June 26
		Bulldozer	1	43					
		Dump Truck	10	43	17	20			
		Excavator	1	43					
		Worker Commute	19	43	1	22			
		Dust Emission	0.4	43					
	SB Cutoff Wall Installation	Dump Truck	3	7	53	0.25		June 27 to	July 3
		Bulldozer	1	7					
		Long Reach Excavator	1	7					
		Hydraulic Excavator	1	7					
		Rough Terrain/Telehandle	1	7					
		Worker Commute	4	7	1	22			
	Soil Borrow Extraction/Levee Placement	Scraper	10	19			14,024 CY per day	July 4 to	July 22
		Excavator	4	19					
		Dump Truck	84	19	0	0			
		Sheeps Foot Compactor	1	19					
		Bulldozer	2	19					
		Motor Grader	1	19					
		Water Truck	2	4					
		Worker Commute	20	19	1	22			
		Dust Emission	1.4	19					

	Rip Rap Installation	Crane	6	59				July 27 to	September 23
		Bulldozer	3	59					
		Hydraulic Excavator	3	59					
		Towboat	1	59	1.5	180			
		Worker Commute	13	59	1	22			
	Utility Relocation	Utility/Pole Truck	4	18				May 26 to	June 12
		Utility/Pole Truck	4	18					
		Worker Commute	8	59	1	22			
	Drainage	Excavator	3	2				October 6 to	October 7
		Front end loader	1	2					
		Dump Truck	6	2					
		Compressor	1	2					
		Worker Commute	5	2	1	22			
	Building Demo	Bulldozer	6	31				May 1 to	May 31
		Front End Loader	6	31					
		Excavator	6	31					
		Haul Truck	1	6	13	20			
		Worker Commute	18	31	1	22			
		Dust Emission	1.9	6					
	Roadway Removal	Cold Planer	1	1				May 1	
		Scraper	2	1					
		Dump Truck	6	1	17	20			
		Bulldozer	1	1					
		Excavator	1	1					
		Worker Commute	5	1	1	22			
	Roadway Replace	Dump Truck	15	3	15	20		July 13 to	July 17
		Vibratory Compactor	2	5					
		Asphalt Paver	1	1					
		Asphalt Compactor	1	5					
		Motor Grader	2	5					
		Bulldozer	2	5					
		Worker Commute	8	5	1	22			
B	Stripping	Wheel Tractor Scraper	3	6			4.43 Ac per day	June 1 to	June 7
		Bulldozer	1	7					
		Dump Truck	10	7	17	20			
		Excavator	1	7					
		Worker Commute	5	7	1	22			
		Dust Emission	4.4	7					

	Soil Borrow Extraction/Levee Placement	Scraper	10	35			14,487 CY per day	June 8 to	July 12
		Excavator	4	35					
		Dump Truck	84	35	0	0			
		Sheeps Foot Compactor	1	35					
		Bulldozer	2	35					
		Motor Grader	1	35					
		Water Truck	2	7					
		Worker Commute	20	35	1	22			
		Dust Emission	1.4	35					
	Utility Relocation	Utility/Pole Truck	4	23				May 24 to	June 15
		Utility/Pole Truck	4	23					
		Worker Commute	8.0	35	1	22			
	Drainage	Excavator	3	2				August 26 to	August 29
		Front end loader	1	2					
		Dump Truck	6	2					
		Compressor	1	4					
		Worker Commute	5	4	1	22			
	Rip Rap Installation	Crane	6	68				July 18 to	September 23
		Bulldozer	3	68					
		Hydraulic Excavator	3	68					
		Towboat	1	68	1.5	180			
		Worker Commute	13	68	1	22			

Worker Commute	**20**	**145**	**1**	**22**	

CMA #3 PHASE 2 Off-Site Material Borrow Activities

S	Construction Phase	Equipment	#	Days	Truck Trips	RT Miles	Daily Earthwork Rate	Projected Time Frame	
A	Off-Site Material Borrow	Scraper	6	19			14,024 CY per day	July 4 to	July 22
		Excavator	6	19					
		Dump Truck	84	19	8	6.6			
		Sheeps Foot Compactor	0	19					
		Bulldozer	6	19					
		Motor Grader	0	19					
		Water Truck	2	4					
		Worker Commute	20	19	1	22			
		Dust Emission	1.4	19					
B	Off-Site Material Borrow	Scraper	6	35			14,487 CY per day	June 8 to	July 12
		Excavator	6	35					
		Dump Truck	84	35	8	6.6			
		Sheeps Foot Compactor	0	35					
		Bulldozer	6	35					
		Motor Grader	0	35					
		Water Truck	2	7					
		Worker Commute	20	35	1	22			
		Dust Emission	1.4	35					

SOUTHPORT SACRAMENTO RIVER EIP SITE
HIGH EMISSIONS ESTIMATE SUMMARY - (Unfavorable Scenario)
(Sequential Borrow Restoration)
CMA #4 PHASE 1 Project Site Related Activities

S	Construction Phase	Equipment	#	Days	Truck Trips	RT Miles	Daily Earthwork Rate	Projected Time Frame	
	Building Demo	Bulldozer	1	7				May 1 to	May 7
		Front End Loader	1	7					
		Excavator	1	7					
		Haul Truck	1	1	3	20			
		Worker Commute	3	7	1	22			
		Dust Emission	0.4	1					
	Roadway Removal	Cold Planer	1	1				May 1	
		Scraper	2	1					
		Dump Truck	7	1	15	20			
		Bulldozer	1	1					
		Excavator	1	1					
		Worker Commute	5	1	1	22			
	Roadway Replace	Dump Truck	12	2	15	20		October 3 to	October 4
		Vibratory Compactor	1	2					
		Asphalt Paver	1	1					
		Asphalt Compactor	1	2					
		Motor Grader	1	2					
		Bulldozer	1	2					
		Worker Commute	5	2	1	22			
	Stripping	Wheel Tractor Scraper	3	21			4.78 Ac per day	May 30 to	June 25
		Bulldozer	1	27					
		Dump Truck	10	27	17	20			
		Excavator	1	27					
		Worker Commute	5	27	1	22			
		Dust Emission	4.8	27					
	Levee Degrade	Scraper	6	29			3,861 CY per day	June 26 to	August 1
		Bulldozer	1	37					
		Dump Truck	10	36	17	20			
		Excavator	1	37					
		Worker Commute	8	37	1	22			
		Dust Emission	0.4	37					
C									
	Soil Borrow Extraction/Levee Placement	Scraper	10	60			14,736 CY per day	August 2 to	October 1
		Excavator	4	60					
		Dump Truck	84	60	0	0			
		Sheeps Foot Compactor	1	61					
		Bulldozer	2	60					
		Motor Grader	1	61					
		Water Truck	2	13					
		Worker Commute	20	61	1	22			
		Dust Emission	1.5	61					
	Rip Rap Installation	Crane	4	44				October 5 to	November 1
		Bulldozer	2	44					
		Hydraulic Excavator	2	44					
		Towboat	1	44	1.5	180			
		Worker Commute	9	44	1	22			
	Planting	Worker Commute	10	27	1	22		October 1	October 27
		Pickup	1	27	1	10			
		OffRoad Truck	2	27	1	10			
	Irrigation	Trencher	1	15	0	0		October 1	October 15
		Worker Commute	5	15	1	22			
		Pickup	1	15	1	10			
		Drill Rig	1	1	0	0			

	Utility Relocation	Utility/Pole Truck	4	22				May 8 to	May 29
		Utility/Pole Truck	4	22					
		Worker Commute	8	22	1	22			
	Drainage	Excavator	2	1				October 2 to	October 2
		Front End Loader	1	1					
		Dump Truck	3	1					
		Compressor	1	1					
		Worker Commute	4	1	1	22			
	Building Demo	Bulldozer	1	17				May 1 to	May 17
		Front End Loader	1	17					
		Excavator	1	17					
		Haul Truck	1	1	7	20			
		Worker Commute	3	17	1	22			
		Dust Emission	1.0	1					
	Roadway Removal	Cold Planer	1	1				May 1	
		Scraper	1	1					
		Dump Truck	3	1	15	20			
		Bulldozer	1	1					
		Excavator	1	1					
		Worker Commute	4	1	1	22			
	Roadway Replace	Dump Truck	11	2	14	20		July 9 to	July 10
		Vibratory Compactor	1	2					
		Asphalt Paver	1	1					
		Asphalt Compactor	1	2					
		Motor Grader	1	2					
		Bulldozer	1	2					
		Worker Commute	5	2	1	22			
	Stripping	Wheel Tractor Scraper	3	9			4.55 Ac per day	May 29 to	June 8
		Bulldozer	1	11					
		Dump Truck	10	11	17	20			
		Excavator	1	11					
		Worker Commute	5	11	1	22			
		Dust Emission	4.5	11					
D	SB Cutoff Wall Installation	Dump Truck:	3	7	53	0.25		June 9 to	June 15
		Bulldozer	1	7					
		Long Reach Excavator	1	7					
		Hydraulic Excavator	1	7					
		Rough Terrain/Telehandler	1	7					
		Worker Commute	4	7	1	22			
	Soil Borrow Extraction/Levee Placement	Scraper	10	15			14,077 CY per day	June 16 to	June 30
		Excavator	4	15					
		Dump Truck	84	15	0	0			
		Sheeps Foot Compactor	1	15					
		Bulldozer	2	15					
		Motor Grader	1	15					
		Water Truck	2	3					
		Worker Commute	20	15	1	22			
		Dust Emission	1.4	15					

	Rip Rap Installation	Crane	4	1				July 11 to	July 16
		Bulldozer	2	1					
		Hydraulic Excavator	2	1					
		Towboat	1	1	1.5	180			
		Worker Commute	9	1	1	22			
	Utility Relocation	Utility/Pole Truck	3	11				May 18 to	May 28
		Utility/Pole Truck	3	11					
		Worker Commute	6	11	1	22			
	Drainage	Excavator	3	3				July 1 to	July 8
		Front End Loader	1	3					
		Dump Truck	6	3					
		Compressor	1	8					
		Worker Commute	5	8	1	22			
	Roadway Replace	Dump Truck	15	3	14	20		July 3 to	July 6
		Vibratory Compactor	2	4					
		Asphalt Paver	1	1					
		Asphalt Compactor	1	4					
		Motor Grader	2	4					
		Bulldozer	2	4					
		Worker Commute	8	4	1	22			
	Stripping	Wheel Tractor Scraper	3	8				May 1 to	May 10
		Bulldozer	1	10			4.41 Ac per day		
		Dump Truck	10	10	17	20			
		Excavator	1	10					
		Worker Commute	5	10	1	22			
		Dust Emission	4.4	10					
	SB Cutoff Wall Installation	Dump Truck	3	11	53	0.25		May 29 to	June 8
		Bulldozer	1	11					
		Long Reach Excavator	1	11					
		Hydraulic Excavator	1	11					
		Rough Terrain/Telehandler	1	11					
		Worker Commute	4	11	1	22			
	Soil Borrow Extraction/Levee Placement	Scraper	10	23				June 9 to	July 1
		Excavator	9	23					
		Dump Truck	95	23	0	0			
		Sheeps Foot Compactor	1	23			14,806 CY per day		
		Bulldozer	2	23					
		Motor Grader	1	23					
		Water Truck	2	5					
		Worker Commute	25	23	1	22			
		Dust Emission	1.5	23					
E	Rip Rap Installation	Crane	4	4				June 26 to	June 29
		Bulldozer	2	4					
		Hydraulic Excavator	2	4					
		Towboat	5	4	1.5	180			
		Worker Commute	0	4	1	22			
	Wet Well Excavation/Installation	Crane	0	2				June 13 to	June 14
		Front End Loader	0	1					
		Dump Truck	0	1	1	20			
		Worker Commute	0	2	1	22			
	Pump Station Installation	Crane	0	0				June 15 to	June 16
		Front End Loader	0	0					
		Concrete Truck	0	0	0	0			
		Worker Commute	0	0	0	0			
	Trench	Excavator	0	1					

	Excavation & Forcemain Installation	Dump Truck	0	1	1	20	596 CY per day	June 17 to	June 21
		Front End Loader	0	1					
		Pipe Layer	0	5					
		Worker Commute	0	5	1	22			
		Dust Emission	0.0	5					
	Utility Relocation	Utility/Pole Truck	3	18				May 11 to	May 28
		Utility/Pole Truck	3	18					
		Worker Commute	6	18	1	22			
	Drainage	Excavator	2	1				July 2 to	July 2
		Front End Loader	1	1					
		Dump Truck	3	1					
		Compressor	1	1					
		Worker Commute	4	1	1	22			
	Building Demo	Bulldozer	2	30				May 1 to	May 30
		Front End Loader	2	30					
		Excavator	2	30					
		Haul Truck	1	2	13	20			
		Worker Commute	6	30	1	22			
		Dust Emission	1.9	2					
	Roadway Removal	Cold Planer	1	1				May 1	
		Scraper	2	1					
		Dump Truck	7	1	15	20			
		Bulldozer	1	1					
		Excavator	1	1					
		Worker Commute	5	1	1	22			
	Roadway Replace	Dump Truck	16	3	14	20		August 30 to	September 3
		Vibratory Compactor	2	5					
		Asphalt Paver	1	1					
		Asphalt Compactor	1	5					
		Motor Grader	2	5					
		Bulldozer	2	5					
		Worker Commute	8	5	1	22			
	Stripping	Wheel Tractor Scraper	3	23			4.78 Ac per day	June 29 to	July 27
		Bulldozer	1	29					
		Dump Truck	10	29	17	20			
		Excavator	1	29					
		Worker Commute	5	29	1	22			
		Dust Emission	4.8	29					
F	Soil Borrow Extraction/Levee Placement	Scraper	14	30			22,462 CY per day	July 28 to	August 26
		Excavator	6	30					
		Dump Truck	117	30	0	0			
		Sheeps Foot Compactor	1	30					
		Bulldozer	2	30					
		Motor Grader	1	30					
		Water Truck	2	5					
		Worker Commute	26	30	1	22			
		Dust Emission	2.2	30					
	Rip Rap Installation	Crane	10	20				September 4 to	September 23
		Bulldozer	5	20					
		Hydraulic Excavator	5	20					
		Towboat	1	20	1.5	180			
		Worker Commute	21	20	1	22			
	Existing Pump Station Removal	Bulldozer	1	2				May 1 to	May 2
		Front End Loader	1	2					
		Excavator	1	2					
		Haul Truck	1	2	1	20			
		Worker Commute	3	2	1	22			

	Dust Emission	0.1	2					
Utility Relocation	Utility/Pole Truck	3	29				May 31 to	June 28
	Utility/Pole Truck	3	29					
	Worker Commute	6	29	1	22			
Drainage	Excavator	3	2				August 27 to	August 29
	Front End Loader	1	2					
	Dump Truck	6	2					
	Compressor	1	3					
	Worker Commute	5	3	1	22			

G	Building Demo	Bulldozer	1	5				May 1 to	May 5
		Front End Loader	1	5					
		Excavator	1	5					
		Haul Truck	1	1	1	20			
		Worker Commute	3	5	1	22			
		Dust Emission	0.1	1					
	Roadway Replace	Dump Truck	8	1	14	20		June 9	
		Vibratory Compactor	1	1					
		Asphalt Paver	0	0					
		Asphalt Compactor	0	0					
		Motor Grader	1	1					
		Bulldozer	1	1					
		Worker Commute	3	1	1	22			
	Stripping	Wheel Tractor Scraper	3	8			4.40 Ac per day	May 19 to	May 28
		Bulldozer	1	10					
		Dump Truck	10	10	17	20			
		Excavator	1	10					
		Worker Commute	5	10	1	22			
		Dust Emission	4.4	10					
	SB Cutoff Wall Installation	Dump Truck	3	10	53	0.25		May 29 to	June 7
		Bulldozer	1	10					
		Long Reach Excavator	1	10					
		Hydraulic Excavator	1	10					
		Rough Terrain/Telehandler	1	10					
		Worker Commute	4	10	1	22			
	Soil Borrow Extraction/Levee Placement	Scraper	10	10			14,235 CY per day	June 8 to	June 17
		Excavator	9	10					
		Dump Truck	95	10	14	20			
		Sheeps Foot Compactor	1	10					
		Bulldozer	2	10					
		Motor Grader	1	10					
		Water Truck	2	2					
		Worker Commute	25	10	1	22			
		Dust Emission	1.4	10					
	Utility Relocation	Utility/Pole Truck	3	13				May 6 to	May 18
		Utility/Pole Truck	3	13					
		Worker Commute	6	13	1	22			
	Drainage	Excavator	3	1				June 8 to	June 8
		Front End Loader	1	1					
		Dump Truck	6	1					
		Compressor	1	1					
		Worker Commute	5	1	1	22			
	Rip Rap Installation	Crane	8	10				June 10 to	June 19
		Bulldozer	4	10					
		Hydraulic Excavator	4	10					
		Towboat	1	10	1.5	180			
		Worker Commute	17	10	1	22			
		Worker Commute	**20**	**244**	**1**	**22**			

CMA #4 PHASE 1 Off-Site Material Borrow Activities									
S	**Construction Phase**	**Equipment**	**#**	**Days**	**Truck Trips**	**RT Miles**	**Daily Earthwork Rate**	**Projected Time Frame**	
C	Off-Site Material Borrow	Scraper	14	25			21,772 CY per day	August 2 to	October 1
		Excavator	6	25					
		Dump Truck	84	25	16	6.6			
		Sheeps Foot Compactor	1	25					
		Bulldozer	2	25					
		Motor Grader	1	25					
		Water Truck	2	4					
		Worker Commute	26	25	1	22			
		Dust Emission	2.2	25					

D	Off-Site Material Borrow	Scraper	14	25			14,077 CY per day	June 16 to	June 30
		Excavator	6	25					
		Dump Truck	84	25	17	6.6			
		Sheeps Foot Compactor	1	25					
		Bulldozer	2	25					
		Motor Grader	1	25					
		Water Truck	2	4					
		Worker Commute	26	25	1	22			
		Dust Emission	1.4	25					
E	Off-Site Material Borrow	Scraper	14	25			14,928 CY per day	June 9 to	July 1
		Excavator	6	25					
		Dump Truck	95	25	14	6.6			
		Sheeps Foot Compactor	1	25					
		Bulldozer	2	25					
		Motor Grader	1	25					
		Water Truck	2	4					
		Worker Commute	26	25	1	22			
		Dust Emission	1.5	25					
F	Off-Site Material Borrow	Scraper	14	25			22,196 CY per day	July 28 to	August 26
		Excavator	6	25					
		Dump Truck	117	25	17	6.6			
		Sheeps Foot Compactor	1	25					
		Bulldozer	2	25					
		Motor Grader	1	25					
		Water Truck	2	4					
		Worker Commute	26	25	1	22			
		Dust Emission	2.2	25					
G	Off-Site Material Borrow	Scraper	14	25			14,235 CY per day	June 8 to	June 17
		Excavator	6	25					
		Dump Truck	95	25	14	6.6			
		Sheeps Foot Compactor	1	25					
		Bulldozer	2	25					
		Motor Grader	1	25					
		Water Truck	2	4					
		Worker Commute	26	25	1	22			
		Dust Emission	1.4	25					

SOUTHPORT SACRAMENTO RIVER EIP SITE
HIGH EMISSIONS ESTIMATE SUMMARY - (Unfavorable Scenario)
(Sequential Borrow Restoration)
CMA #4 PHASE 2 Project Site Related Activities

S	Construction Phase	Equipment	#	Days	Truck Trips	RT Miles	Daily Earthwork Rate	Projected Time Frame	
	Building Demo	Bulldozer	2	25				May 1 to	May 25
		Front End Loader	2	25					
		Excavator	2	25					
		Haul Truck	1	4	13	20			
		Worker Commute	6	25	1	22			
		Dust Emission	1.9	4					
	Roadway Removal	Cold Planer	1	2				May 1 to	May 2
		Scraper	2	2					
		Dump Truck	5	2	15	20			
		Bulldozer	1	2					
		Excavator	1	1					
		Worker Commute	5	2	1	22			
	Roadway Replace	Dump Truck	9	2	15	20		October 7 to	October 9
		Vibratory Compactor	1	3					
		Asphalt Paver	1	2					
		Asphalt Compactor	1	3					
		Motor Grader	1	3					
		Bulldozer	1	3					
		Worker Commute	5	3	1	22			
	Stripping	Wheel Tractor Scraper	3	13			4.47 Ac per day	June 13 to	June 29
		Bulldozer	1	17					
		Dump Truck	10	17	17	20			
		Excavator	1	17					
		Worker Commute	5	17	1	22			
		Dust Emission	4.5	17					
	Levee Degrade	Scraper	6	54			3,736 CY per day	June 30 to	September 6
		Bulldozer	1	69					
		Dump Truck	10	69	17	20			
		Excavator	1	69					
		Worker Commute	8	69	1	22			
A		Dust Emission	0.4	69					
	SB Cutoff Wall Installation	Dump Truck	3	9	53	0.25		September 7 to	September 15
		Bulldozer	1	9					
		Long Reach Excavator	1	9					
		Hydraulic Excavator	1	9					
		Rough Terrain/Telehandler	1	9					
		Worker Commute	4	9	1	22			
	Soil Borrow Extraction/Leve e Placement	Scraper	10	19			14,024 CY per day	September 16 to	October 4
		Excavator	4	19					
		Dump Truck	84	19	0	0			
		Sheeps Foot Compactor	1	19					
		Bulldozer	2	19					
		Motor Grader	1	19					

		Water Truck	2	4				
		Worker Commute	20	19	1	22		
		Dust Emission	1.4	19				
	Rip Rap Installation	Crane	8	9				
		Bulldozer	4	9				
		Hydraulic Excavator	4	9			October 10 to	October 18
		Towboat	1	9	1.5	180		
		Worker Commute	17	9	1	22		
	Utility Relocation	Utility/Pole Truck	4	18				
		Utility/Pole Truck	4	18			May 26 to	June 12
		Worker Commute	8	18	1	22		
	Drainage	Excavator	3	2				
		Front end loader	1	2				
		Dump Truck	6	2			October 5 to	October 6
		Compressor	1	2				
		Worker Commute	5	2	1	22		
	Building Demo	Bulldozer	3	23				
		Front End Loader	3	23				
		Excavator	3	23			May 1 to	May 23
		Haul Truck	1	7	13	20		
		Worker Commute	9	23	1	22		
		Dust Emission	1.9	7				
	Roadway Removal	Cold Planer	1	1				
		Scraper	2	1				
		Dump Truck	6	1	17	20	May 1	
		Bulldozer	1	1				
		Excavator	1	1				
		Worker Commute	5	1	1	22		
	Roadway Replace	Dump Truck	18	3	15	20		
		Vibratory Compactor	2	6				
		Asphalt Paver	1	1				
		Asphalt Compactor	1	6			November 4 to	November 9
		Motor Grader	1	3				
		Bulldozer	1	3				
		Worker Commute	6	6	1	22		
	Stripping	Wheel Tractor Scraper	3	24				
		Bulldozer	1	31			4.74 Ac per day	
		Dump Truck	10	31	17	20		
		Excavator	1	31			June 16 to	July 16
		Worker Commute	5	31	1	22		
		Dust Emission	4.7	31				

B	Levee Degrade	Scraper	6	31			3,873 CY per day	July 17 to	August 24
		Bulldozer	1	39					
		Dump Truck	10	38	17	20			
		Excavator	1	39					
		Worker Commute	8	39	1	22			
		Dust Emission	0.4	39					
	SB Cutoff Wall Installation	Dump Truck	3	1	53	0.25		August 25 to	August 25
		Bulldozer	1	1					
		Long Reach Excavator	1	1					
		Hydraulic Excavator	1	1					
		Rough Terrain/Telehandler	1	1					
		Worker Commute	4	1	1	22			
	Soil Borrow Extraction/Leve e Placement	Scraper	10	67			14,956 CY per day	August 25 to	October 30
		Excavator	9	67					
		Dump Truck	95	67	0	0			
		Sheeps Foot Compactor	1	67					
		Bulldozer	2	67					
		Motor Grader	1	67					
		Water Truck	2	14					
		Worker Commute	25	67	1	22			
		Dust Emission	1.5	67					
	Utility Relocation	Utility/Pole Truck	4	23				May 24 to	June 15
		Utility/Pole Truck	4	23					
		Worker Commute	8.0	67	1	22			
	Drainage	Excavator	3	2				October 31 to	November 3
		Front end loader	1	2					
		Dump Truck	6	2					
		Compressor	1	4					
		Worker Commute	5	4	1	22			
	Rip Rap Installation	Crane	6	40				November 10 to	December 19
		Bulldozer	3	40					
		Hydraulic Excavator	3	40					
		Towboat	1	40	1.5	180			
		Worker Commute	13	40	1	22			

Worker Commute	**20**	**232**	**1**	**22**		

CMA #4 PHASE 2 Off-Site Material Borrow Activities								
S	**Construction Phase**	**Equipment**	**#**	**Days**	**Truck Trips**	**RT Miles**	**Daily Earthwork Rate**	**Projected Time Frame**
	Off-Site	Scraper	14	26				
		Excavator	6	26				
		Dump Truck	84	26	8	6.6		
		Sheeps Foot Compactor	1	26				

A	Material Borrow	Bulldozer	2	26			14,024 CY per day	September 16 to	October 4
		Motor Grader	1	26					
		Water Truck	2	4					
		Worker Commute	26	26	1	22			
		Dust Emission	1.4	26					
B	Off-Site Material Borrow	Scraper	14	26			14,024 CY per day	August 25 to	October 30
		Excavator	6	26					
		Dump Truck	95	26	14	6.6			
		Sheeps Foot Compactor	1	26					
		Bulldozer	2	26					
		Motor Grader	1	26					
		Water Truck	2	4					
		Worker Commute	26	26	1	22			
		Dust Emission	1.4	26					

SOUTHPORT SACRAMENTO RIVER EIP SITE
HIGH EMISSIONS ESTIMATE SUMMARY - (Unfavorable Scenario)
(Sequential Borrow Restoration)
CMA #5 PHASE 1 Project Site Related Activities

S	Construction Phase	Equipment	#	Days	Truck Trips	RT Miles	Projected Time Frame
	Building Demo	Bulldozer	1	7			May 1 to May 9
		Front End Loader	1	7			
		Excavator	1	7			
		Haul Truck	1	1	3	20	
		Worker Commute	3	7	1	22	
		Dust Emission	0.4	1			
	Roadway Removal	Cold Planer	1	1			May 1
		Scraper	2	1			
		Dump Truck	7	1	15	20	
		Bulldozer	1	1			
		Excavator	1	1			
		Worker Commute	5	1	1	22	
	Roadway Replace	Dump Truck	12	2	15	20	October 5 to October 6
		Vibratory Compactor	1	2			
		Asphalt Paver	1	1			
		Asphalt Compactor	1	2			
		Motor Grader	1	2			
		Bulldozer	1	2			
		Worker Commute	5	2	1	22	
	Stripping	Wheel Tractor Scraper	3	21			June 1 to June 27
		Bulldozer	1	27			
		Dump Truck	10	27	17	20	
		Excavator	1	27			
		Worker Commute	5	27	1	22	
		Dust Emission	4.8	27			
	Levee Degrade	Scraper	6	29			June 28 to August 3
		Bulldozer	1	37			
		Dump Truck	10	36	17	20	
		Excavator	1	37			
		Worker Commute	8	37	1	22	
		Dust Emission	0.4	37			
C							
	Soil Borrow Extraction/Levee Placement	Scraper	10	60			August 4 to October 3
		Excavator	4	60			
		Dump Truck	84	60	0	0	
		Sheeps Foot Compactor	1	61			
		Bulldozer	2	60			
		Motor Grader	1	61			
		Water Truck	2	13			
		Worker Commute	20	61	1	22	
		Dust Emission	1.5	61			
	Rip Rap Installation	Crane	4	44			October 7 to November 19
		Bulldozer	2	44			
		Hydraulic Excavator	2	44			
		Towboat	1	44	1.5	180	
		Worker Commute	9	44	1	22	
	Planting	Worker Commute	10	27	1	22	October 1 October 27
		Pickup	1	27	1	10	
		OffRoad Truck	2	27	1	10	
	Irrigation	Trencher	1	15	0	0	October 1 October 15
		Worker Commute	5	15	1	22	
		Pickup	1	15	1	10	
		Drill Rig	1	1	0	0	

	Utility Relocation	Utility/Pole Truck	4	22			May 10 to May 31
		Utility/Pole Truck	4	22			
		Worker Commute	8	22	1	22	
	Drainage	Excavator	2	1			October 4 to October 4
		Front End Loader	1	1			
		Dump Truck	3	1			
		Compressor	1	1			
		Worker Commute	4	1	1	22	
	Building Demo	Bulldozer	1	17			May 1 to May 17
		Front End Loader	1	17			
		Excavator	1	17			
		Haul Truck	1	1	7	20	
		Worker Commute	3	17	1	22	
		Dust Emission	1.0	1			
	Roadway Removal	Cold Planer	1	1			May 1
		Scraper	1	1			
		Dump Truck	3	1	15	20	
		Bulldozer	1	1			
		Excavator	1	1			
		Worker Commute	4	1	1	22	
	Roadway Replace	Dump Truck	11	2	14	20	July 9 to July 10
		Vibratory Compactor	1	2			
		Asphalt Paver	1	1			
		Asphalt Compactor	1	2			
		Motor Grader	1	2			
		Bulldozer	1	2			
		Worker Commute	5	2	1	22	
	Stripping	Wheel Tractor Scraper	3	9			May 29 to June 8
		Bulldozer	1	11			
		Dump Truck	10	11	17	20	
		Excavator	1	11			
		Worker Commute	5	11	1	22	
		Dust Emission	4.5	11			
D	SB Cutoff Wall Installation	Dump Truck	3	7	53	0.25	June 9 to June 15
		Bulldozer	1	7			
		Long Reach Excavator	1	7			
		Hydraulic Excavator	1	7			
		gh Terrain/Telehandler For	1	7			
		Worker Commute	4	7	1	22	
	Soil Borrow Extraction/Levee Placement	Scraper	10	15			June 16 to June 30
		Excavator	4	15			
		Dump Truck	84	15	0	0	
		Sheeps Foot Compactor	1	15			
		Bulldozer	2	15			
		Motor Grader	1	15			
		Water Truck	2	3			
		Worker Commute	20	15	1	22	
		Dust Emission	1.4	15			

	Rip Rap Installation	Crane	4	1			July 11 to July 11
		Bulldozer	2	1			
		Hydraulic Excavator	2	1			
		Towboat	1	1	1.5	180	
		Worker Commute	9	1	1	22	
	Utility Relocation	Utility/Pole Truck	3	11			May 18 to May 28
		Utility/Pole Truck	3	11			
		Worker Commute	6	11	1	22	
	Drainage	Excavator	3	3			July 1 to July 8
		Front End Loader	1	3			
		Dump Truck	6	3			
		Compressor	1	8			
		Worker Commute	5	8	1	22	
	Roadway Replace	Dump Truck	15	3	14	20	June 22 to June 25
		Vibratory Compactor	2	4			
		Asphalt Paver	1	1			
		Asphalt Compactor	1	4			
		Motor Grader	2	4			
		Bulldozer	2	4			
		Worker Commute	8	4	1	22	
	Stripping	Wheel Tractor Scraper	3	8			May 1 to May 10
		Bulldozer	1	10			
		Dump Truck	10	10	17	20	
		Excavator	1	10			
		Worker Commute	5	10	1	22	
		Dust Emission	4.4	10			
	SB Cutoff Wall Installation	Dump Truck	3	11	53	0.25	June 26 to July 6
		Bulldozer	1	11			
		Long Reach Excavator	1	11			
		Hydraulic Excavator	1	11			
		gh Terrain/Telehandler For	1	11			
		Worker Commute	4	11	1	22	
E	Soil Borrow Extraction/Levee Placement	Scraper	10	23			May 29 to June 20
		Excavator	9	23			
		Dump Truck	95	23	0	0	
		Sheeps Foot Compactor	1	23			
		Bulldozer	2	23			
		Motor Grader	1	23			
		Water Truck	2	5			
		Worker Commute	25	23	1	22	
		Dust Emission	1.5	23			
	Rip Rap Installation	Crane	4	4			June 26 to June 29
		Bulldozer	2	4			
		Hydraulic Excavator	2	4			
		Towboat	5	4	1.5	180	
		Worker Commute	13	4	1	22	
	Utility Relocation	Utility/Pole Truck	3	18			May 11 to May 28
		Utility/Pole Truck	3	18			
		Worker Commute	6	18	1	22	
	Drainage	Excavator	2	1			June 21 to June 21
		Front End Loader	1	1			
		Dump Truck	3	1			
		Compressor	1	1			
		Worker Commute	4	1	1	22	
		Bulldozer	2	30			

	Building Demo	Front End Loader	2	30			May 1 to May 30
		Excavator	2	30			
		Haul Truck	1	2	13	20	
		Worker Commute	6	30	1	22	
		Dust Emission	1.9	2			
	Roadway Removal	Cold Planer	1	1			May 1
		Scraper	2	1			
		Dump Truck	7	1	15	20	
		Bulldozer	1	1			
		Excavator	1	1			
		Worker Commute	5	1	1	22	
	Roadway Replace	Dump Truck	16	3	14	20	November 15 to November 19
		Vibratory Compactor	2	5			
		Asphalt Paver	1	1			
		Asphalt Compactor	1	5			
		Motor Grader	2	5			
		Bulldozer	2	5			
		Worker Commute	8	5	1	22	
	Stripping	Wheel Tractor Scraper	3	23			June 29 to July 27
		Bulldozer	1	29			
		Dump Truck	10	29	17	20	
		Excavator	1	29			
		Worker Commute	5	29	1	22	
		Dust Emission	4.8	29			
	Levee Degrade	Scraper	6	36			July 28 to September 10
		Bulldozer	1	45			
		Dump Truck	10	45	17	20	
		Excavator	1	45			
		Worker Commute	8	45	1	22	
F		Dust Emission	0.4	45			
	Soil Borrow Extraction/Levee Placement	Scraper	10	62			September 11 to November 11
		Excavator	4	62			
		Dump Truck	84	62	0	0	
		Sheeps Foot Compactor	1	62			
		Bulldozer	2	62			
		Motor Grader	1	62			
		Water Truck	2	13			
		Worker Commute	20	62	1	22	
		Dust Emission	1.5	62			
	Rip Rap Installation	Crane	4	58			November 20 to January 16
		Bulldozer	2	58			
		Hydraulic Excavator	2	58			
		Towboat	1	58	1.5	180	
		Worker Commute	9	58	1	22	

	Existing Pump Station Removal	Bulldozer	1	2			May 1 to May 2
		Front End Loader	1	2			
		Excavator	1	2			
		Haul Truck	1	2	1	20	
		Worker Commute	3	2	1	22	
		Dust Emission	0.1	2			
	Utility Relocation	Utility/Pole Truck	3	29			May 31 to June 28
		Utility/Pole Truck	3	29			
		Worker Commute	6	29	1	22	
	Drainage	Excavator	3	2			November 12 to November 14
		Front End Loader	1	2			
		Dump Truck	6	2			
		Compressor	1	3			
		Worker Commute	5	3	1	22	
	Building Demo	Bulldozer	1	5			May 1 to May 5
		Front End Loader	1	5			
		Excavator	1	5			
		Haul Truck	1	1	1	20	
		Worker Commute	3	5	1	22	
		Dust Emission	0.1	1			
	Roadway Replace	Dump Truck	8	1	14	20	June 19
		Vibratory Compactor	1	1			
		Asphalt Paver	0	0			
		Asphalt Compactor	0	0			
		Motor Grader	1	1			
		Bulldozer	1	1			
		Worker Commute	3	1	1	22	
	Stripping	Wheel Tractor Scraper	3	8			May 19 to May 28
		Bulldozer	1	10			
		Dump Truck	10	10	17	20	
		Excavator	1	10			
		Worker Commute	5	10	1	22	
		Dust Emission	4.4	10			
	SB Cutoff Wall Installation	Dump Truck	3	10	53	0.25	May 29 to June 7
		Bulldozer	1	10			
		Long Reach Excavator	1	10			
		Hydraulic Excavator	1	10			
		gh Terrain/Telehandler For	1	10			
G		Worker Commute	4	10	1	22	
	Soil Borrow Extraction/Levee Placement	Scraper	10	10			June 8 to June 17
		Excavator	9	10			
		Dump Truck	95	10	0	0	
		Sheeps Foot Compactor	1	10			
		Bulldozer	2	10			
		Motor Grader	1	10			
		Water Truck	2	2			
		Worker Commute	25	10	1	22	
		Dust Emission	1.4	10			
	Utility Relocation	Utility/Pole Truck	3	13			May 6 to May 18
		Utility/Pole Truck	3	13			
		Worker Commute	6	13	1	22	
	Drainage	Excavator	3	1			June 18 to June 18
		Front End Loader	1	1			
		Dump Truck	6	1			
		Compressor	1	1			
		Worker Commute	5	1	1	22	
	Rip Rap Installation	Crane	4	20			June 20 to July 9
		Bulldozer	2	20			
		Hydraulic Excavator	2	20			
		Towboat	1	20	1.5	180	

		Worker Commute	9	20	1	22	

Worker Commute	**20**	**244**	**1**	**22**	

CMA #2 PHASE 1 Off-Site Material Borrow Activities

S	Construction Phase	Equipment	#	Days	Truck Trips	RT Miles	Projected Time Frame
C	Off-Site Material Borrow	Scraper	14	14			August 4 to October 3
		Excavator	6	14			
		Dump Truck	84	14	8	6.6	
		Sheeps Foot Compactor	1	14			
		Bulldozer	2	14			
		Motor Grader	1	14			
		Water Truck	2	2			
		Worker Commute	26	14	1	22	
		Dust Emission	2.2	14			
D	Off-Site Material Borrow	Scraper	14	14			June 16 to June 30
		Excavator	6	14			
		Dump Truck	84	14	8	6.6	
		Sheeps Foot Compactor	1	14			
		Bulldozer	2	14			
		Motor Grader	1	14			
		Water Truck	2	2			
		Worker Commute	26	14	1	22	
		Dust Emission	2.2	14			
E	Off-Site Material Borrow	Scraper	14	14			May 29 to June 20
		Excavator	6	14			
		Dump Truck	95	14	7	6.6	
		Sheeps Foot Compactor	1	14			
		Bulldozer	2	14			
		Motor Grader	1	14			
		Water Truck	2	2			
		Worker Commute	26	14	1	22	
		Dust Emission	2.2	14			
F	Off-Site Material Borrow	Scraper	14	14			September 11 to November 11
		Excavator	6	14			
		Dump Truck	84	14	8	6.6	
		Sheeps Foot Compactor	1	14			
		Bulldozer	2	14			
		Motor Grader	1	14			
		Water Truck	2	2			
		Worker Commute	26	14	1	22	
		Dust Emission	2.2	14			
G	Off-Site Material Borrow	Scraper	14	14			June 8 to June 17
		Excavator	6	14			
		Dump Truck	95	14	7	6.6	
		Sheeps Foot Compactor	1	14			
		Bulldozer	2	14			
		Motor Grader	1	14			
		Water Truck	2	2			
		Worker Commute	26	14	1	22	
		Dust Emission	2.2	14			

SOUTHPORT SACRAMENTO RIVER EIP SITE
HIGH EMISSIONS ESTIMATE SUMMARY - (Unfavorable Scenario)
(Sequential Borrow Restoration)
CMA #5 PHASE 2 Project Site Related Activities

S	Construction Phase	Equipment	#	Days	Truck Trips	RT Miles	Daily Earthwork Rate	Projected Time Frame	
	Building Demo	Bulldozer	2	25				May 1 to	May 25
		Front End Loader	2	25					
		Excavator	2	25					
		Haul Truck	1	4	13	20			
		Worker Commute	6	25	1	22			
		Dust Emission	1.9	4					
	Roadway Removal	Cold Planer	1	2				May 1 to	September 20
		Scraper	2	2					
		Dump Truck	5	2	15	20			
		Bulldozer	1	2					
		Excavator	1	1					
		Worker Commute	5	2	1	22			
	Roadway Replace	Dump Truck	12	3	15	20		October 8 to	October 11
		Vibratory Compactor	1	4					
		Asphalt Paver	1	2					
		Asphalt Compactor	1	4					
		Motor Grader	1	4					
		Bulldozer	1	4					
		Worker Commute	5	4	1	22			
	Stripping	Wheel Tractor Scrape	3	13			4.47 Ac per day	June 13 to	June 29
		Bulldozer	1	17					
		Dump Truck	10	17	17	20			
		Excavator	1	17					
		Worker Commute	5	17	1	22			
		Dust Emission	4.5	17					
A	Levee Degrade	Scraper	6	54			3,682 CY per day	June 30 to	September 7
		Bulldozer	1	70					
		Dump Truck	10	70	17	20			
		Excavator	1	70					
		Worker Commute	8	70	1	22			
		Dust Emission	0.4	70					
	SB Cutoff Wall Installation	Dump Truck	3	9	53	0.25		September 8 to	September 16
		Bulldozer	1	9					
		Long Reach Excavato	1	9					
		Hydraulic Excavator	1	9					
		Rough Terrain/Telehand	1	9					
		Worker Commute	4	9	1	22			
	Soil Borrow Extraction/Leve e Placement	Scraper	10	19			14,024 CY per day	September 17 to	October 5
		Excavator	4	19					
		Dump Truck	84	19	0	0			
		Sheeps Foot Compac	1	19					
		Bulldozer	2	19					
		Motor Grader	1	19					

	Water Truck	2	4				
	Worker Commute	20	19	1	22		
	Dust Emission	1.4	19				
Rip Rap Installation	Crane	8	21				October 12 to November 1
	Bulldozer	4	21				
	Hydraulic Excavator	4	21				
	Towboat	1	21	1.5	180		
	Worker Commute	17	21	1	22		
Utility Relocation	Utility/Pole Truck	4	18				May 26 to June 12
	Utility/Pole Truck	4	18				
	Worker Commute	8	21	1	22		
Drainage	Excavator	3	2				October 6 to October 7
	Front end loader	1	2				
	Dump Truck	6	2				
	Compressor	1	2				
	Worker Commute	5	2	1	22		
Building Demo	Bulldozer	3	23				May 1 to May 23
	Front End Loader	3	23				
	Excavator	3	23				
	Haul Truck	1	7	13	20		
	Worker Commute	9	23	1	22		
	Dust Emission	1.9	7				
Roadway Removal	Cold Planer	1	1				May 1
	Scraper	2	1				
	Dump Truck	6	1	17	20		
	Bulldozer	1	1				
	Excavator	1	1				
	Worker Commute	5	1	1	22		
Roadway Replace	Dump Truck	18	3	15	20		August 30 to September 4
	Vibratory Compactor	2	6				
	Asphalt Paver	1	1				
	Asphalt Compactor	1	6				
	Motor Grader	1	3				
	Bulldozer	1	3				
	Worker Commute	6	6	1	22		
Stripping	Wheel Tractor Scrape	3	24			4.74 Ac per day	June 16 to July 16
	Bulldozer	1	31				
	Dump Truck	10	31	17	20		
	Excavator	1	31				
	Worker Commute	5	31	1	22		
	Dust Emission	4.7	31				

Levee Degrade	Scraper	6	31			3,873 CY per day	July 17 to	August 24
	Bulldozer	1	39					
	Dump Truck	10	38	17	20			
	Excavator	1	39					
	Worker Commute	8	39	1	22			
	Dust Emission	0.4	39					
SB Cutoff Wall Installation	Dump Truck	3	1	53	0.25		August 25 to	August 25
	Bulldozer	1	1					
	Long Reach Excavato	1	1					
	Hydraulic Excavator	1	1					
	Rough Terrain/Teleha	1	1					
	Worker Commute	4	1	1	22			
Soil Borrow Extraction/Leve e Placement	Scraper	10	80			14,854 CY per day	August 26 to	November 13
	Excavator	9	80					
	Dump Truck	95	80	0	0			
	Sheeps Foot Compac	1	80					
	Bulldozer	2	80					
	Motor Grader	1	80					
	Water Truck	2	16					
	Worker Commute	25	80	1	22			
	Dust Emission	1.5	80					
Rip Rap Installation	Crane	6	38				November 14 to	December 21
	Bulldozer	3	38					
	Hydraulic Excavator	3	38					
	Towboat	1	38	1.5	180			
	Worker Commute	13	38	1	22			
On-Site Material Borrow Restoration	Scraper	0	0			21,518 CY per day	October 9 to	October 20
	Excavator	0	0					
	Dump Truck	0	0	0	0			
	Sheeps Foot Compactor	0	0					
	Bulldozer	0	0					
	Motor Grader	0	0					
	Water Truck	0	0					
	Worker Commute	0	0	0	0			
	Dust Emission	0.0	0					
Off-Site Material Borrow Restoration	Scraper	0	0			22,186 CY per day	October 9 to	November 1
	Excavator	0	0					
	Dump Truck	0	0	0	0			
	Sheeps Foot Compactor	0	0					
	Bulldozer	0	0					
	Motor Grader	0	0					
	Water Truck	0	0					
	Worker Commute	0	0	0	0			
Utility Relocation	Utility/Pole Truck	4	23				May 24 to	June 15
	Utility/Pole Truck	4	23					
	Worker Commute	8	23	1	22			
Drainage	Excavator	3	2				August 26 to	August 29
	Front end loader	1	2					
	Dump Truck	6	2					
	Compressor	1	4					
	Worker Commute	5	4	1	22			

B

Planting	Worker Commute	10	3	1	22		October 1 to October 3
	Pickup	1	3	1	10		
	OffRoad Truck	2	3	1	10		
Irrigation	Trencher	1	4	0	0		October 2 to October 5
	Worker Commute	5	4	1	22		
	Pickup	1	4	1	10		

Worker Commute	**20**	**234**	**1**	**22**	

CMA #2 PHASE 2 Off-Site Material Borrow Activities

S	Construction Phase	Equipment	#	Days	Truck Trips	RT Miles	Daily Earthwork Rate	Projected Time Frame
A	Off-Site Material Borrow	Scraper	14	24			22,186 CY per day	September 17 to October 5
		Excavator	6	24				
		Dump Truck	84	24	8	6.6		
		Sheeps Foot Compac	1	24				
		Bulldozer	2	24				
		Motor Grader	1	24				
		Water Truck	2	4				
		Worker Commute	26	24	1	22		
		Dust Emission	2.2	24				
B	Off-Site Material Borrow	Scraper	14	24			22,186 CY per day	August 26 to November 13
		Excavator	6	24				
		Dump Truck	95	24	7	6.6		
		Sheeps Foot Compac	1	24				
		Bulldozer	2	24				
		Motor Grader	1	24				
		Water Truck	2	4				
		Worker Commute	26	24	1	22		
		Dust Emission	2.2	24				

Activities Removed from Levee Degrade								
S	**Construction Phase**	**Equipment**	**#**	**Days**	**Truck Trips**	**RT Miles**	**Daily Earthwork Rate**	**Projected Time Frame**
C	Inlet Outlet Degrade	Scraper	6	8.3333				Removed from last two weeks of Levee Degrade
		Bulldozer	1	10.667				
		Dump Truck	10	10.667	17	20		
		Excavator	1	10.667				
		Worker Commute	8	10.6667	1	22		
F	Inlet Outlet Degrade	Scraper	6	8.3333				Removed from last two weeks of Levee Degrade
		Bulldozer	1	10.667				
		Dump Truck	10	10.667	17	20		
		Excavator	1	10.667				
		Worker Commute	8	10.6667	1	22		