SECTION 3.7

Air Quality

3.7 Air Quality

3.7.1 Introduction and Summary

This section describes the environmental setting and impacts related to air quality in the following geographic subregions: LCR, IID water service area and AAC, and Salton Sea. Regional air quality designations, ambient pollutant concentrations, and meteorological conditions, project-related sources of air pollutant emissions, and potential air quality impacts are discussed.

Air quality impacts associated with the Proposed Project and Alternatives would result from the construction and operation of new systems and facilities, and from the potential wind erosion of soil from fallowed fields and/or shoreline sediments exposed by lowered water levels in the Salton Sea. The pollutants of greatest concern are ozone and the ozone precursors, nitrogen oxides (NO_x), and volatile organic compounds (VOC), primarily from equipment exhaust, and fine particulate matter (PM_{10} and $PM_{2.5}$) from soil disturbance and wind erosion (fugitive dust). The main impacts would occur in the IID water service area because of construction activities and land fallowing, and in the Salton Sea subregion from exposure of the shoreline.

Neither LCR nor the SDCWA service area is expected to experience significant air quality impacts as a result of implementation of the Proposed Project or Alternatives. Because construction and operation of the on-farm and water delivery system conservation measures and treatment facilities would not occur in the LCR or SDCWA areas, there would be no significant air quality impacts associated with construction or operation of the Proposed Project in these subregions. Due to decreased water levels in the Colorado River between Parker Dam and Imperial Dam, there is some potential for increased fugitive dust emissions from exposed shoreline. However, the amount of land exposed by decreased water levels is relatively small, and some of the area will become re-vegetated. Backwaters would be replaced. The potential increase in windblown dust from exposed areas along the Colorado River would be minimal.

A summary of the impacts to air quality in the four geographic subregions as a result of implementation of the Proposed Project or Alternatives is presented in Table 3.7-1.

3.7.2 Regulatory Framework

Regulatory programs have been established at the national, state, and local levels to address air quality. These programs are intended to protect air quality in areas of attainment and to improve air quality in areas where pollutant concentrations exceed health-based criteria.

Air quality regulatory programs characterize the concentration of pollutants within their area of jurisdiction, and implement emissions limitations for stationary sources and other mitigation measures necessary to achieve or maintain healthy air quality.

TABLE 3.7-1
Summary of Air Quality Impacts[1]

Proposed Project: 300 KAFY All Conservation Measures	Alternative 1: No Project	Alternative 2: 130 KAFY On-farm Irrigation System Improvements Only	Alternative 3: 230 KAFY All Conservation Measures	Alternative 4: 300 KAFY Fallowing Only
LOWER COLORADO RIVER				
AQ-1: Fugitive dust from exposed riverbank and de-watered backwaters: Less than significant impact.	Continuation of existing conditions.	**Same as AQ-1.**	**Same as AQ-1.**	**Same as AQ-1.**
IID WATER SERVICE AREA AND AAC				
AQ-2: Emissions from construction and operation of on-farm and delivery system conservation measures from water conservation program: Less than significant impact.	Continuation of existing conditions.	**A2-AQ-1: Emissions from construction and operation of on-farm conservation measures from water conservation program:** Less than significant impact.	**A3-AQ-1: Emissions from construction and operation of on-farm and delivery system conservation measures from water conservation program:** Less than significant impact.	No impact.
AQ-3: Windblown dust from fallowed land: Less than significant impact with mitigation.	Continuation of existing conditions.	No impact.	**A3-AQ-2: Windblown dust from fallowed land:** Less than significant impact with mitigation.	**A4-AQ-1: Windblown dust from fallowed land:** Less than significant impact with mitigation.
AQ-4: Emissions from construction and operation of on-farm and delivery system conservation measures for compliance with the IOP: Less than significant impact with mitigation.	Not applicable.	**Same as AQ-4.**	**Same as AQ-4.**	**Same as AQ-4.**
HCP-IID-AQ-5: Emissions from construction of managed marsh and native tree habitat: Less than significant impact.	Not applicable.	**Same as HCP-IID-AQ-5.**	**Same as HCPIID-AQ-5.**	**Same as HCP-IID-AQ-5.**

TABLE 3.7-1
Summary of Air Quality Impacts[1]

Proposed Project: 300 KAFY All Conservation Measures	Alternative 1: No Project	Alternative 2: 130 KAFY On-farm Irrigation System Improvements Only	Alternative 3: 230 KAFY All Conservation Measures	Alternative 4: 300 KAFY Fallowing Only
HCP-SS-AQ-6: Windblown dust from fallowing of approximately 30,500 acres for implementation of the Salton Sea Habitat Conservation Strategy: Less than significant with mitigation.	Not applicable.	**A2-HCP-SS-AQ-2 -AQ-6: Windblown dust from fallowing of approximately 40,600 acres for implementation of the Salton Sea Habitat Conservation Strategy**: Less than significant with mitigation.	**A3-HCP-SS-AQ-3: Windblown dust from fallowing of approximately 25,100 to 67,300 acres for implementation of the Salton Sea Habitat Conservation Strategy:** Less than significant with mitigation.	**A4-HCP-SS-AQ-2: Windblown dust from fallowing of approximately 30,500 acres for implementation of the Salton Sea Habitat Conservation Strategy:** Less than significant with mitigation.
SALTON SEA				
AQ-7: Indirect air quality impacts due to the potential for windblown dust from exposed shoreline: Potentially significant unavoidable impact with mitigation.	Continuation of Baseline conditions.	**A2-AQ-3: Indirect air quality impacts due to the potential for windblown dust from exposed shoreline:** Potentially significant unavoidable impact with mitigation.	**A3-AQ-4: Indirect air quality impacts due to the potential for windblown dust from exposed shoreline:** Potentially significant unavoidable impact with mitigation.	**A4-AQ-3: Indirect air quality impacts due to the potential for windblown dust from exposed shoreline:** Potentially significant unavoidable impact with mitigation.
AQ-8: Potential for decreased water flow and quality to increase odorous impacts in proximity to the Sea: Less than significant impact.	Continuation of Baseline conditions.	**A2-AQ-4: Potential for decreased water flow and quality to increase odorous impacts in proximity to the Sea:** Less than significant impact.	**A3-AQ-5: Potential for decreased water flow and quality to increase odorous impacts in proximity to the Sea:** Less than significant impact.	**A4-AQ-4: Potential for decreased water flow and quality to increase odorous impacts in proximity to the Sea:** Less than significant impact.
SDCWA SERVICE AREA				
No impact.	Continuation of existing conditions.	No impact.	No impact.	No impact.

3.7.2.1 Federal Regulations and Standards

NATIONAL AMBIENT AIR QUALITY STANDARDS

National air quality policies are regulated through the federal Clean Air Act (CAA) of 1970 and its 1977 and 1990 amendments. Pursuant to the CAA, the U.S. Environmental Protection Agency (EPA) has established National Ambient Air Quality Standards (NAAQS) for six air

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pollutants: CO, O_3, NO_2, SO_2, PM_{10}, and lead. These pollutants are referred to as criteria pollutants because numerical health-based criteria have been established for each pollutant, which define acceptable levels of exposure. EPA has revised the NAAQS several times since their original implementation and will continue to do so as the health effects of exposure to pollution are better understood. NAAQS, and the California ambient air quality standards (CAAQS) (see Section 3.7.2.2), are summarized in Table 3.7-2.

The standards in Table 3.7-2 reflect recent changes to the ozone and PM_{10} standards, and the new $PM_{2.5}$ standard. The federal 1-hour ozone standard will remain in effect until EPA formally implements the 8-hour ozone standard.

AIR QUALITY DESIGNATIONS

Under the 1977 amendments to the CAA, states with air quality that did not achieve the NAAQS were required to develop and maintain state implementation plans (SIPs). These plans constitute a federally enforceable definition of the state's approach (or "plan") and schedule for the attainment of the NAAQS. Air quality management areas are designated as attainment, nonattainment, or unclassified for individual pollutants depending on whether or not they achieve the applicable NAAQS and CAAQS for each pollutant. In addition, California can also designate areas as transitional. It is important to note that because the NAAQS and CAAQS differ in many cases, it is possible for an area to be designated as attainment by EPA (meets the NAAQS) and nonattainment by the California Air Resources Board (CARB) (does not meet the CAAQS) for the same pollutant. Also, an area can be designated as attainment for one pollutant (e.g., NO_2) and nonattainment for others (e.g., ozone and PM_{10}).

Areas that were designated as attainment in the past, but have since achieved the NAAQS, are further classified as attainment-maintenance. The maintenance classification remains in effect for 20 years from the date that the area is determined by EPA to meet the NAAQS. There are numerous classifications of the nonattainment designation, depending on the severity of nonattainment. For example, the ozone nonattainment designation has seven subclasses: transitional, marginal, moderate, serious, severe-15, severe-17, and extreme. Areas that lack monitoring data are designated as unclassified areas. Unclassified areas are treated as attainment areas for regulatory purposes. Air quality designations for each county comprising the geographic subregions are provided in Table 3.7-3.

FEDERAL GENERAL CONFORMITY REQUIREMENTS

The CAA (1977 amendments) (42 USC 7401 *et seq.*) state that the federal government is prohibited from engaging in, supporting, providing financial assistance for, licensing, permitting, or approving any activity that does not conform to an applicable SIP. Federal actions related to transportation plans, programs, and projects developed, funded, or approved under 23 USC or the Federal Transit Act (49 USC 1601 et seq) are covered under separate regulations for transportation conformity.

In the 1990 CAA amendments, EPA included provisions requiring federal agencies to ensure that actions undertaken in nonattainment or attainment-maintenance areas are consistent with applicable SIPs. The process of determining whether or not a federal action is consistent with applicable SIPs is called conformity.

TABLE 3.7-2
National and California Ambient Air Quality Standards

Pollutant	Averaging Time	CAAQS[1]	NAAQS[2]	
			Primary[3]	Secondary[3]
Ozone (O_3)[4]	1-hour	0.09 ppm (180 µg/m^3)	0.12 ppm (235 µg/m^3)	0.12 ppm (235 µg/m^3)
	8-hour (new)	-	0.08 ppm (157 µg/m^3)	0.08 ppm (157 µg/m^3)
Coarse	24-hour	50 µg/m^3	150 µg/m^3	150 µg/m^3
particulate matter	Annual AM	-	50 µg/m^3	50 µg/m^3
(PM_{10})	Annual GM	30 µg/m^3	-	-
Fine particulate	24-hour (new)	-	65 µg/m^3	65 µg/m^3
Matter ($PM_{2.5}$)[4]	Annual AM (new)	-	15 µg/m^3	15 µg/m^3
Carbon monoxide (CO)	1-hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	-
	8-hour	9 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	-
Nitrogen dioxide (NO_2)	1-hour	0.25 ppm (470 µg/m^3)	-	-
	Annual AM	-	0.053 ppm (100 mg/m^3)	0.053 ppm (100 mg/m^3)
Lead (Pb)	30-day	1.5 µg/m^3	-	-
	Calendar Quarter	-	1.5 µg/m^3	1.5 µg/m^3
Sulfur dioxide (SO_2)	1-hour	0.25 ppm (655 µg/m^3)	-	-
	3-hour	-	-	0.5 ppm (1,300 µg/m^3)
	24-hour	0.04 ppm (105 µg/m^3)	0.14 ppm (365 µg/m^3)	-
	Annual AM	-	0.03 ppm (80 µg/m^3)	-
Visibility Reducing Particles	8-hour (10 am to 6 pm)	Extinction Coeff. = 0.23/km @ < 70% RH	-	-
Sulfates	24-hour	25 µg/m^3	-	-
Hydrogen Sulfide (H_2S)	1-hour	0.03 ppm (42 µg/m^3)	-	-

Source: CARB Fact Sheet 39 (11/91), SCAQMD Bulletin (8/97), and www.arb.ca.gov

Notes:

1 California standards for O_3, CO, SO_2 (1-hour and 24-hour), NO_2, PM_{10}, and visibility reducing particles are values not to be exceeded.

2 National standards (other than O_3, PM_{10}, and those based on annual periods) are not to be exceeded more than once per year. The new ozone standard is based on a 3-year average of the fourth highest 8-hour concentrations in each year. For PM, the 24-hour standard is based on 99 percent (PM_{10}) or 98 percent ($PM_{2.5}$) of the daily concentrations, averaged over 3 years.

3 Equivalent units given in parenthesis are based upon reference conditions of 25°C and 760 mm mercury.

4 EPA promulgated new federal 8-hour O_3 and $PM_{2.5}$ standards on July 18, 1997. The federal 1-hour O_3 standard continues to apply in areas that remain in violation of that standard.

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TABLE 3.7-3
Federal and California Air Quality Attainment Status Designations by County and Area

County	Area	Pollutant	Federal Status	California Status
Imperial	Calexico	Carbon monoxide	Unclassifiable	Nonattainment
	All Other Areas		Unclassifiable	Unclassified
	All Areas	Ozone (1-hour)	Nonattainment (Transitional)	Nonattainment
	Imperial Valley[1]	PM_{10}	Nonattainment (Moderate)	Nonattainment
	All Areas	Nitrogen dioxide	Unclassifiable	Attainment
	All Areas	Sulfur dioxide	Attainment	Attainment
Riverside	Salton Sea Air Basin	Carbon monoxide	Unclassifiable/Attainment	Attainment
	Salton Sea Air Basin - Coachella Valley[2]	Ozone (1-hour)	Nonattainment (Severe-17)	Nonattainment
	Salton Sea Air Basin	PM_{10}	Nonattainment (Serious)	Nonattainment
	All Areas	Nitrogen dioxide	Unclassifiable/Attainment	Attainment
	All Areas	Sulfur dioxide	Unclassifiable/Attainment	Attainment
San Diego	All Areas	Carbon monoxide	Attainment	Attainment
	All Areas	Ozone (1-hour)	Nonattainment (Serious)	Nonattainment
	All Areas	PM_{10}	Unclassifiable	Nonattainment
	All Areas	Nitrogen dioxide	Attainment	Attainment
	All Areas	Sulfur dioxide	Attainment	Attainment

Notes:
[1]The Imperial Valley covers the western two-thirds of Imperial County.
[2]The Coachella Valley is located immediately north of the Salton Sea and is within the Salton Sea Air Basin (SSAB) in western Riverside County.
Source: EPA 1998a, 1998b, 1999a, 1999b.

FEDERAL GENERAL CONFORMITY REQUIREMENTS

The CAA (1977 amendments) (42 USC 7401 *et seq.*) state that the federal government is prohibited from engaging in, supporting, providing financial assistance for, licensing, permitting, or approving any activity that does not conform to an applicable SIP. Federal actions related to transportation plans, programs, and projects developed, funded, or approved under 23 USC or the Federal Transit Act (49 USC 1601 et seq) are covered under separate regulations for transportation conformity.

In the 1990 CAA amendments, EPA included provisions requiring federal agencies to ensure that actions undertaken in nonattainment or attainment-maintenance areas are consistent with applicable SIPs. The process of determining whether or not a federal action is consistent with applicable SIPs is called conformity.

The EPA General Conformity Rule applies only to federal actions that result in emissions of “nonattainment or maintenance pollutants”, or their precursors, in federally designated nonattainment or maintenance areas. The EPA General Conformity Rule establishes a process to demonstrate that federal actions would be consistent with applicable SIPs and would not cause or contribute to new violations of the NAAQS, increase the frequency or severity of existing violations of the NAAQS, or delay the timely attainment of the NAAQS. The emission thresholds that trigger requirements of the conformity rule for federal actions emitting nonattainment or maintenance pollutants, or their precursors, are called *de minimis* levels. The general conformity *de minimis* thresholds are defined in 40 CFR 93.153(b).

The federal General Conformity Rule does not apply to federal actions in areas designated as nonattainment of only the CAAQS.

PREVENTION OF SIGNIFICANT DETERIORATION/NEW SOURCE PERFORMANCE STANDARDS

The CAA and amendments also include regulations intended to "prevent significant deterioration" (PSD) of air quality and to establish emissions performance standards for new stationary sources or New Source Performance Standards (NSPSs). Federal PSD and NSPS regulations generally apply to major (very large) stationary sources of emissions, and would not apply to the Proposed Project or Alternatives.

3.7.2.2 State Regulations and Standards

CALIFORNIA AMBIENT AIR QUALITY STANDARDS

CARB administers the air quality policy in California. CAAQS were established in 1969 pursuant to the Mulford-Carrell Act. These standards, included with the NAAQS in Table 3.7-2, are generally more stringent and apply to more pollutants than the NAAQS. In addition to the criteria pollutants, CAAQS have been established for visibility-reducing particulates, hydrogen sulfide, and sulfates. The California Clean Air Act (CCAA), which was approved in 1988, requires each local air district in the state to prepare and maintain an Air Quality Management Plan (AQMP) to achieve compliance with CAAQS. These AQMPs also serve as the basis for preparation of the SIP for the State of California.

CARB establishes policy and statewide standards and administers the state's mobile source emissions control program. In addition, CARB oversees air quality programs established by state statute, such as Assembly Bill (AB) 2588, the Air Toxics "Hot Spots" Information and Assessment Act of 1987.

3.7.2.3 Local Regulations and Standards

AIR QUALITY PROGRAMS

In California, regional air pollution control districts have been established to oversee the attainment of air quality standards within air basins, as defined by the state. The districts have permitting authority over all stationary sources of air pollutants within their district boundaries, and act as the primary reviewer of environmental documents associated with air quality issues.

Each district has developed its own program and regulations to attain and maintain air quality standards, while integrating federal and state requirements. In addition, the South Coast Air Quality Management District (SCAQMD) has developed specific guidelines and criteria for compliance with CEQA.

The following is a list of the air districts associated with each geographic subregion:

- *Lower Colorado River.* The LCR falls under the jurisdiction of the Mojave Desert Air Quality Management District (MDAQMD) and the Imperial County Air Pollution Control District (ICAPCD). Both agencies have developed rules for implementing federal and state air quality objectives within their jurisdictions.
- *IID Water Service Area and AAC*. This area is under the jurisdiction of the ICAPCD.
- *Salton Sea*. Both the ICAPCD and the SCAQMD have jurisdiction over portions of the Salton Sea geographic subregion.
- *SDCWA Service Area.* The San Diego Air Pollution Control District (SDAPCD) regulates this area.

3.7.3 Existing Setting

ATTAINMENT STATUS DESIGNATIONS

California and federal attainment status designations are listed in Table 3.7-3 for the counties making up the four geographic subregions. Attainment status designations are not listed in Table 3.7-3 for the new federal 8-hour ozone and $PM_{2.5}$ standards because sufficient ambient monitoring data are not yet available, pending formal EPA implementation of these standards. Federal O_3, PM_{10}, and CO attainment classifications are illustrated in Figures 3.7-1, 3.7-2, and 3.7-3, respectively. Each figure shows nonattainment areas for NAAQS and the classification of each nonattainment area.

3.7.3.1 Lower Colorado River

The LCR geographic subregion encompasses the LCR and its 100-year floodplain from Parker to Imperial Dams, including the full pool elevation of Lake Havasu. This area falls under the jurisdiction of the MDAQMD and the ICAPCD. Both agencies have developed rules for implementing federal and state air quality objectives within their jurisdictions. Only minimal impacts to air quality from the Proposed Project or Alternatives would occur in the LCR geographic subregion (see Section 3.7.4 and Reclamation 2002). Therefore, information on existing air quality and meteorological conditions in this subregion is not provided.

3.7.3.2 IID Water Service Area and AAC

The following three geographic subregions are located within the SSAB and the San Diego Air Basin (SDAB): IID water service area and AAC, Salton Sea, and SDCWA service area. The three geographic subregions are also under the jurisdiction of the following three regional regulatory agencies: ICAPCD, SCAQMD, and SDAPCD. Each district develops its own program to attain and maintain air quality standards while integrating federal and state requirements. Figure 3.7-4 shows the location of each geographic subregion with respect to air basin and political boundaries.

For the purpose of assessing existing conditions of air quality, the IID water service area and AAC geographic subregion are defined as the portion of the SSAB within Imperial County. This geographic subregion is under the jurisdiction of ICAPCD.

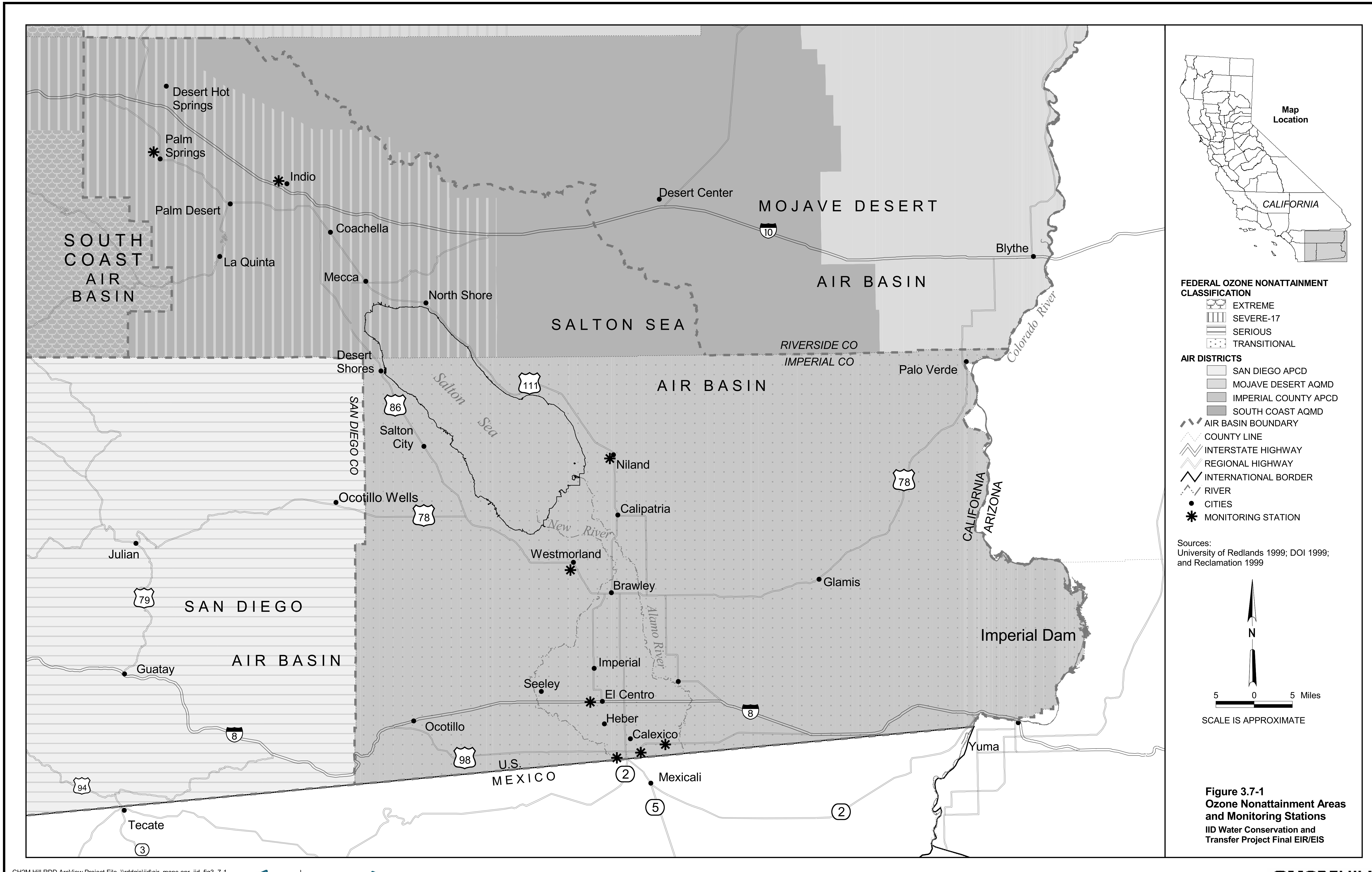

Figure 3.7-1
Ozone Nonattainment Areas and Monitoring Stations
IID Water Conservation and Transfer Project Final EIR/EIS

CH2M Hill RDD ArcView Project File \\rddgis\iid\air_maps.apr iid_fig3_7-1.

CH2MHILL

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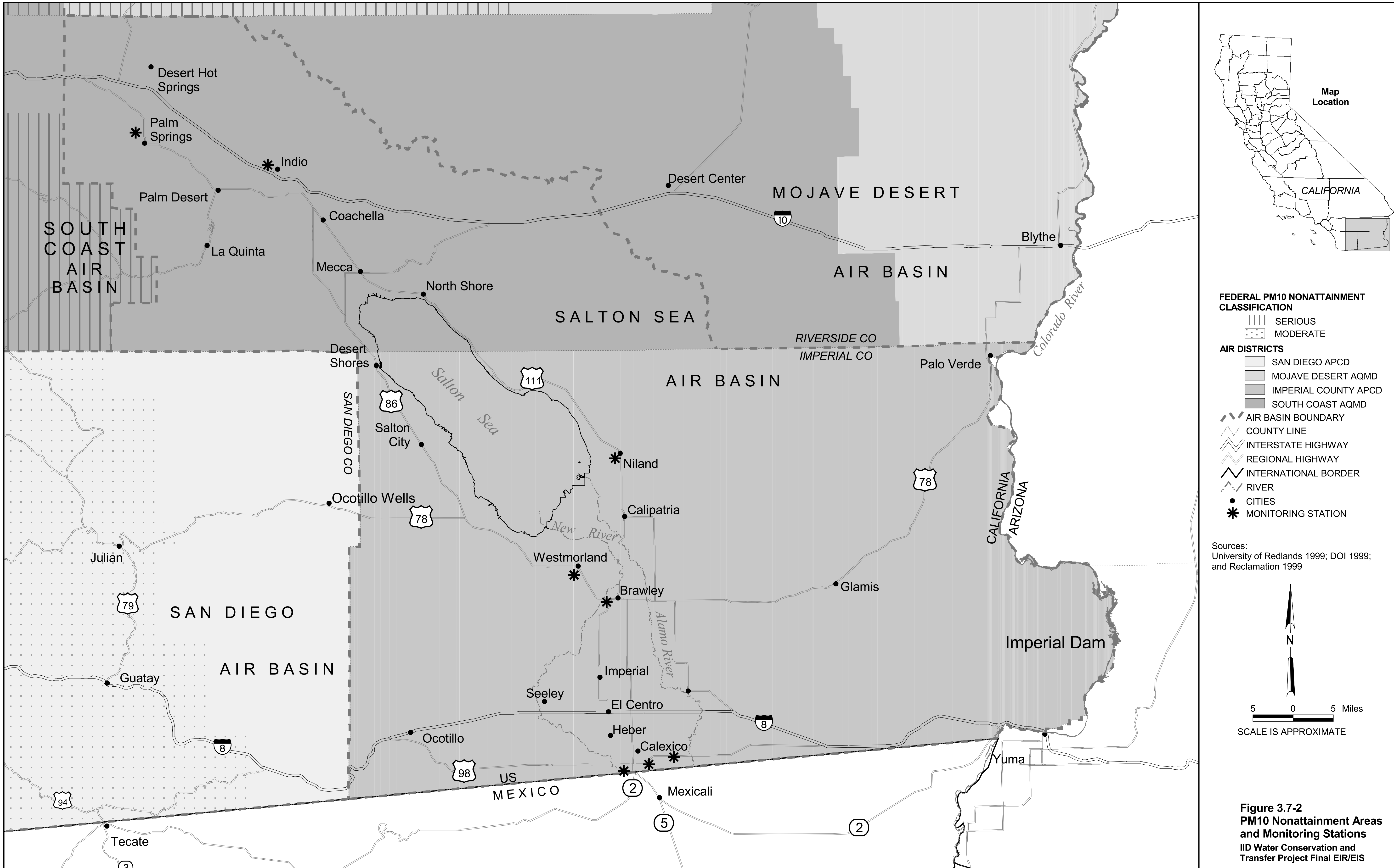

Figure 3.7-2
PM10 Nonattainment Areas and Monitoring Stations
IID Water Conservation and Transfer Project Final EIR/EIS

Figure 3.7-3
CO Nonattainment Areas and Monitoring Stations
IID Water Conservation and Transfer Project Final EIR/EIS

CH2M Hill RDD ArcView Project File \\rddgis\iid\air_maps.apr iid_fig3_7-3.2

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Figure 3.7-4
Air Basin Boundaries and Regulatory Agency Jurisdictions in the Salton Sea Area
IID Water Conservation and Transfer Project Final EIR/EIS

CH2M Hill RDD ArcView Project File \\rddgis\iid\air_maps.apr iid_fig3_7-4.2

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ATTAINMENT STATUS

Imperial County is designated as a federal transitional nonattainment area for ozone, and the IID water service area portion of the county is designated as a federal moderate nonattainment area for PM_{10}. All areas of the county are designated as attainment for NAAQS for CO, NO_2, and SO_2.

Imperial County is designated as a state nonattainment area for O_3 and PM_{10}. In addition, the City of Calexico is designated as nonattainment for the state CO standard. The remainder of the county is designated as unclassified for the state CO standard, and the entire county is designated as attainment for the remaining CAAQS.

The most prevalent airborne pollutant in the SSAB is PM in the form of fugitive dust (IID 1994). In the SSAB, fugitive windblown dust, wind erosion of exposed soil (from agricultural fields and the desert), and vehicle travel over unpaved roads are the major sources of PM_{10}. Table 3.7-4 summarizes the estimated annual average emissions (in tons per day) for the SSAB for each of the major PM_{10} emission source categories. Imperial County and Riverside County contributions are shown.

TABLE 3.7-4
Estimated 2000 Annual Average PM_{10} Emissions in the SSAB (tons/day)

PM10 Emission Source	Imperial County	Riverside County	Total SSAB
Farming Operations	26.66	1.48	28.14
Paved Road Operations	3.67	5.82	9.5
Unpaved Road Dust	38.92	11.16	50.09
Fugitive Windblown Dust	173.35	2.35	175.7
Other Sources	9.51	8.43	17.92
Total All Sources in Basinwide Inventory	252.11	29.24	281.35

Source: 2000 Estimated Basin Data, http://www.arb.ca.gov/emisinv/maps/basins/abssmap.htm

As a result of the area's designation as a federal moderate nonattainment area for PM_{10}, the ICAPCD has published a *State Implementation Plan for PM-10 in the Imperial Valley* (ICAPCD,

1993), and according to District staff, this document is currently being updated (Romero 2001). The ICAPCD has also promulgated Rule 800, Fugitive Dust Requirements for Control of Fine Particulate Matter (PM_{10}), to reduce the amount of PM_{10} entrained in ambient air by requiring actions to prevent, reduce, or mitigate PM_{10} emissions. However, the rule specifically exempts agricultural operations.

The SSAB also has elevated concentrations of ground-level ozone, which is transported into the basin from urban areas to the west and northwest.

METEOROLOGICAL CONDITIONS

The climate of the IID water service area is typical of a desert regime, with large daily and seasonal fluctuations and an annual average temperature of 71 degrees Fahrenheit (°F). The temperature exceeds 100°F more than 100 times a year. During the winter, temperatures can drop below freezing. Throughout the year, average daily relative humidity is low, ranging from 28 percent to 52 percent. The average rainfall is less than 3 inches a year.

Wind speed and directional frequency data were obtained from the Imperial County Air Pollution Control District for the years 2000 and 2001 at Niland, California. Niland is located east of the Salton Sea in Imperial County and is considered representative of the winds that could generate dust on the exposed shoreline of the Salton Sea. The anemometer height at the Niland station is 10 meters. Windrose diagram of conditions at Niland are provided in Figure 3.7-5a and 3.7-5b for 2000 and 2001, respectively. Measurements were obtained for 74 percent of all hours in 2000 and 89 percent of all hours in 2001. Southeast winds were the most frequent at this station, with high wind events usually from the west. The windroses for Niland show that the average hourly wind speed exceeded 8.5 m/s (19 mph) about 4 percent of the time in 2000 and 3 percent of the time in 2001. The wind speed exceeded 11.0 m/s (25 mph) about 1 percent of the time in 2000 and 1 percent of the time in 2001. Although the precise wind speed needed to generate windblown dust at the Salton Sea is not known, research from Owens Lake suggests that wind speeds exceeding 17 mph may be sufficient to generate dust.

3.7.3.3 Salton Sea

The Salton Sea geographic subregion, which is also within the SSAB, is located in both Imperial and Riverside Counties. For the purposes of this section of the EIR/EIS, the Salton Sea geographic subregion is defined as the SSAB.

The portion of the Salton Sea geographic subregion within Imperial County is under the jurisdiction of ICAPCD. The remaining portion of this geographic subregion in western Riverside County is under the jurisdiction of SCAQMD.

ATTAINMENT STATUS

The western Riverside County portion of the SSAB is designated as a federal severe-17 nonattainment area for O_3 and a federal serious nonattainment area for PM_{10}. All other areas of Riverside County are in attainment of NAAQS. The entire county is designated as a state nonattainment area for both O_3 and PM_{10}. All areas of the county are designated as being in attainment for the remaining CAAQS.

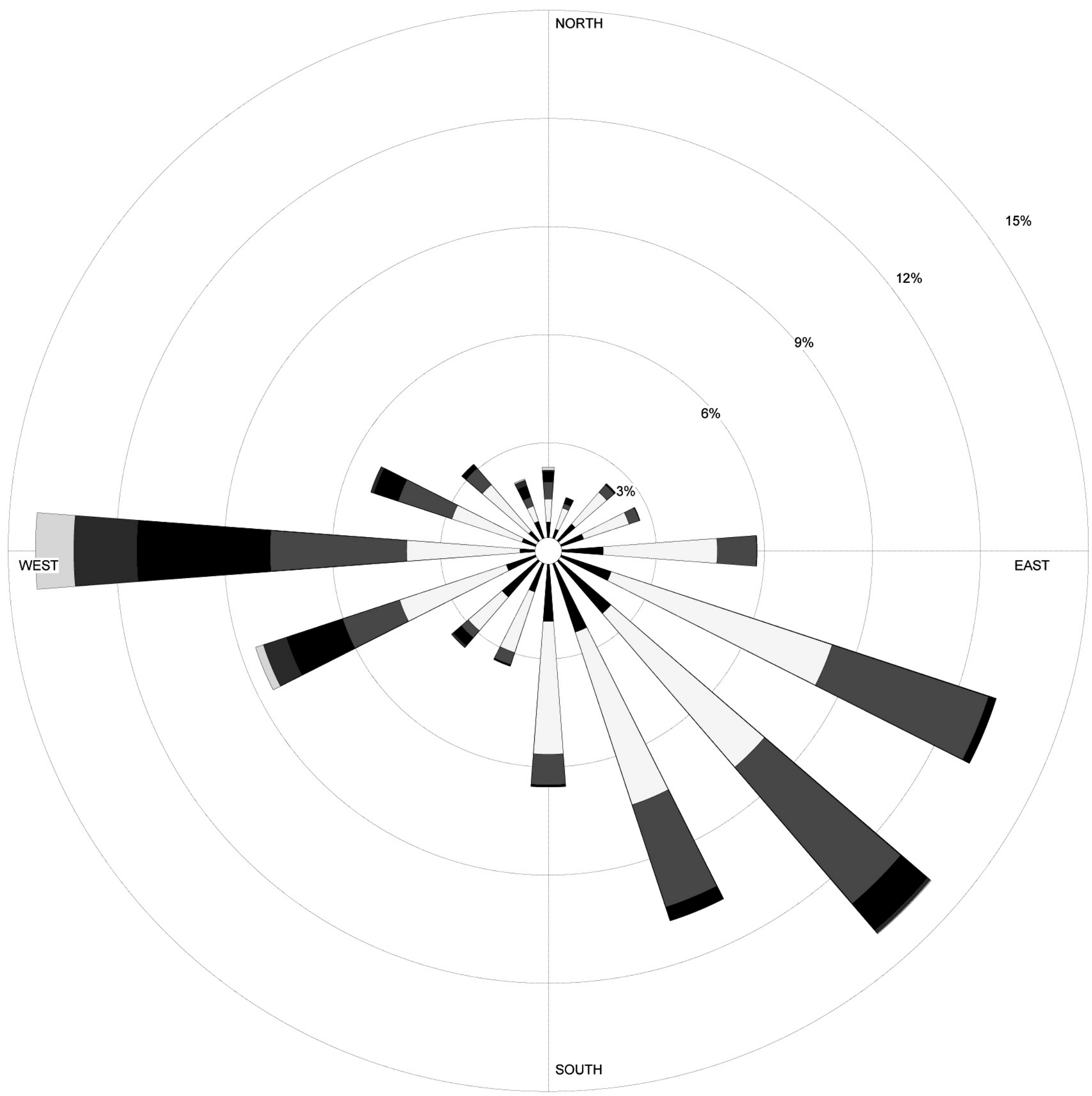
METEOROLOGICAL CONDITIONS

Discussion of meteorological conditions for the SSAB, provided below, was obtained from the Imperial County General Plan (County of Imperial 1997). The climate of the Salton Sea geographic subregion is characterized as a desert regime with a wide range in temperature fluctuations, low humidity, and thermally driven wind patterns.

Temperature patterns are similar throughout the SSAB. The climatic condition of the area is governed by large-scale warming and sinking of air in the semi-permanent subtropical high-pressure center over the Pacific Ocean. The high-pressure ridge blocks most mid-latitude storms, except in the winter when the high-pressure ridge is weakest and farthest south. The coastal mountains prevent the intrusion of the cool, damp air found in the California coastal regions (IID 1994).

WIND ROSE PLOT

Station - Niland, CA 2000



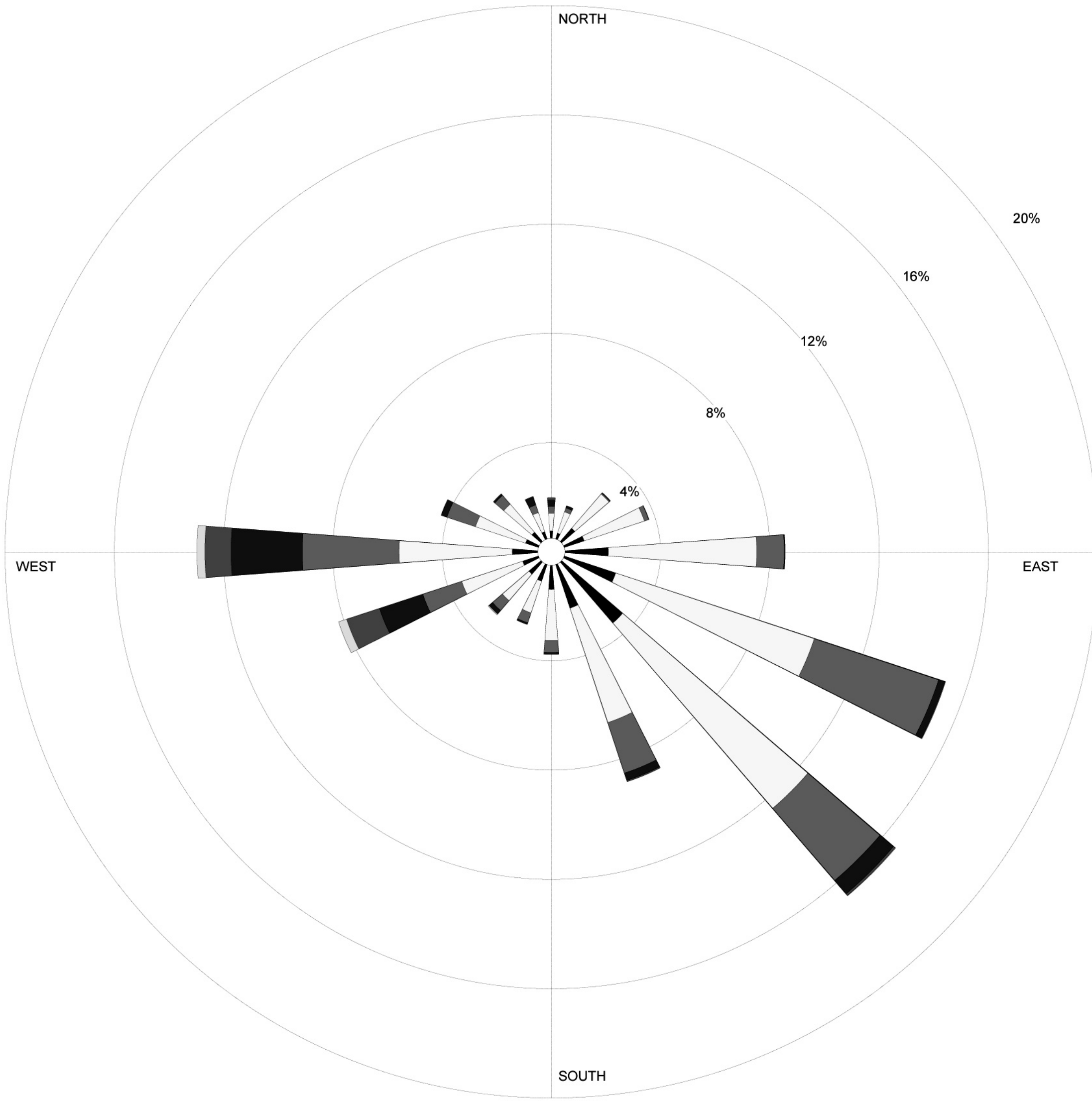
Wind Speed (m/s)			COMPANY NAME **CH2M HILL**
> 11.00 8.50 - 11.00 5.50 - 8.50 3.50 - 5.50 2.00 - 3.50 0.50 - 2.00	DISPLAY **Wind Speed**	UNIT **m/s**	**Diagram of the Frequency of Occurrence of Each Wind Direction and Wind Speed Class**
	AVG. WIND SPEED **3.36 m/s**	CALM WINDS **0.43%**	
	ORIENTATION **Direction (blowing from)**	PLOT YEAR-DATE-TIME **2000** **Jan 1 - Dec 31** **Midnight - 11 PM**	

WRPLOT View 3.5 by Lakes Environmental Software - www.lakes-environmental.com

Figure 3.7-5a
Wind Rose for Niland, California
Year 2000
IID Water Conservation and Transfer Project
Final EIR/EIS

WIND ROSE PLOT

Station - Niland, CA 2001



Wind Speed (m/s)			COMPANY NAME **CH2M HILL**
> 11.00 8.50 - 11.00 5.50 - 8.50 3.50 - 5.50 2.00 - 3.50 0.50 - 2.00	DISPLAY **Wind Speed**	UNIT **m/s**	
	AVG. WIND SPEED **3.05 m/s**	CALM WINDS **0.32%**	
	ORIENTATION **Direction (blowing from)**	PLOT YEAR-DATE-TIME **2001** **Jan 1 - Dec 31** **Midnight - 11 PM**	

WRPLOT View 3.5 by Lakes Environmental Software - www.lakes-environmental.com

Figure 3.7-5b
Wind Rose for Niland, California
Year 2001
IID Water Conservation and Transfer Project
Final EIR/EIS

The flat terrain and strong temperature differentials created by intense heating and cooling patterns produce moderate winds and deep thermal circulation systems. Thus, even though the summers are hot, the general dispersion of local air pollution is greater than in the coastal basins where polluted inversion layers may remain for long periods (IID 1994).

Daily temperature fluctuations and seasonal variations are generally extreme. Clear skies and rapid heating and cooling of desert soils create high temperatures by day and quick cooling by night. Daily temperatures range from the mid-40s to low-70s°F during winter, and from the low-70s to mid-100s°F during summer. The average annual rainfall is about 3 inches, and the average annual air temperature is about 72°F (IID 1994).

Wind patterns in the area generally align with the long axis of the Salton Sea. The prevailing wind direction during all seasons is from the northwest. During the spring and summer, winds from the east and southeast become a secondary component, while during the fall and winter, the secondary component is from the west and southwest. Wind speeds are generally moderate throughout the geographic subregion.

3.7.3.4 Ambient Air Quality Monitoring Data

Numerous air quality monitoring stations are located throughout the Project region of influence. Monitoring stations are operated and maintained by local air districts (see Figures 3.7-1 through 3.7-3).

Imperial County operates and maintains air quality monitoring stations in Brawley, Calexico (3), El Centro, Niland, Westmorland, and Winterhaven. Riverside County operates and maintains air quality monitoring stations in the Coachella Valley in Indio and Palm Springs. San Diego County operates and maintains 10 monitoring stations throughout the western two-thirds of the county. Monitoring data from San Diego County are included to allow comparison of pollutant concentrations measured throughout the study region.

OZONE

Ozone air quality monitoring data from 1994 through 1998 are summarized in Table 3.7-5. Imperial County is a federal and state nonattainment area for ozone. The number of violations of the state and federal ozone standards has decreased since 1994. The increased stringency of the new 8-hour federal ozone standard is shown by the increased number of days during which this standard would have been exceeded relative to the 1-hour ozone standard. The state ozone standard, which is more stringent, was exceeded more frequently than the federal 8-hour standard. The fourth highest ozone concentration during the 3-year period from 1996 and 1998 is listed as 0.14 ppm, which is slightly above the federal 1-hour ozone standard of 0.12 ppm.

Values shown for Riverside County were obtained from an Indio (Jackson Street) monitoring station. Violations of the state and federal ozone standards were measured in 1995 and 1998, but not in 1997. The state standard was violated most frequently at this station. Three-year ozone concentrations for comparison to the federal 8-hour standard were not available from EPA's AIRS database. The CARB database also lacked data for 1996 from this station. CARB data indicate that 8-hour ozone concentrations remain above the state standard at this station. Data are also available for the Palm Springs Fire Station monitoring station in Riverside County, but this station is farther from the Project region of influence

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than the Indio station. Higher ozone concentrations were measured at the Palm Springs station.

TABLE 3.7-5
Ozone Data Summary for Monitoring Stations in Imperial, Riverside (Indio), and San Diego Counties, 1994–1998

	Number of Days Standard Exceeded			Ozone Concentrations in ppm				
				1-hour			8-hour	
Year	State 1-hour	Federal 1-hour	Federal 8-hour	Maximum	3 Year 4th High	EPDC	Maximum	3 Year Average 4th High
CAAQS	—	—	—	—	—	—	0.090	—
NAAQS	—	—	—	—	0.120	—	—	0.080
Imperial County								
1998	40	3	16	0.14	0.14	0.142	0.104	0.093
1997	69	10	50	0.16	0.16	0.157	0.120	0.103
1996	69	10	34	0.18	0.18	0.155	0.117	0.103
1995	83	22	49	0.23	0.18	0.163	0.116	0.105
1994	75	8	47	0.18	0.15	0.154	0.116	0.104
Riverside County (Indio: Jackson Street)								
1998	16	2	12	0.134	NA	NA	0.115	NA
1997	0	0	0	0.102	NA	NA	0.070	NA
1996	NA	0	NA	0.118	NA	NA	NA	NA
1995	25	3	17	0.142	NA	0.127	0.111	NA
1994	NA	0	NA	0.124	NA	NA	NA	NA
San Diego County								
1998	47	9	33	0.16	0.14	0.135	0.141	0.102
1997	43	1	16	0.14	0.14	0.132	0.112	0.099
1996	51	2	31	0.14	0.14	0.142	0.117	0.104
1995	96	12	48	0.16	0.15	0.148	0.122	0.108
1994	79	9	46	0.15	0.15	0.147	0.121	0.109

Note: EPDC = expected peak day concentration
NA = not available
ppm = parts per million
Source: CARB 1999b.

The number of ozone violations in San Diego County is similar to the number of ozone violations in Imperial County. Transport from the South Coast Air Basin accounts for approximately 75 percent of the ozone violations in San Diego County. The highest ozone concentrations in San Diego County typically occur following mild Santa Ana meteorological conditions and are associated with transport of pollution from the SCAQMD. High concentrations are typically observed first at the Oceanside and Del Mar monitoring stations in northern San Diego County, and later at the Escondido and Alpine monitoring stations in the foothills of the mountains.

PM_{10}

PM_{10} air quality monitoring data from 1994 through 1999 are summarized in Table 3.7-6. Values shown for Riverside County were obtained from the Indio Monitoring Station. Violations of the state 24-hour PM_{10} standard occurred during this period in all three counties. Imperial and Riverside Counties are also in violation of the federal 24-hour PM_{10} standard, and the number of violations appears to be increasing. The number of violations of the state and federal 24-hour PM_{10} standards in San Diego County has remained relatively constant during the same time period. All of the highest PM_{10} concentrations in San Diego County were measured at the Otay Mesa monitoring station, and all of the highest PM_{10} concentrations in Imperial County were measured at the three monitoring stations in Calexico.

TABLE 3.7-6
PM_{10} Data Summary for Monitoring Stations in Imperial, Riverside (Indio), and San Diego Counties, 1994-1999

	% of Samples Above 24-hour Standard		PM_{10} Concentration in µg/m^3				
Year	State > 50 µg/m^3	Federal > 150 µg/m^3	Maximum 24-hour	Maximum AGM	Maximum AAM	Max EPDC	Maximum 99th Percentile
Imperial County[1]							
1999	NA	11	291	NA	140.5	NA	NA
1998	NA	19	287	NA	90.7	NA	NA
1997	77	11	199	76.9	86.8	228.6	532
1996	79	22	441	90.3	109.8	223.0	441
1995	71	5	229	59.6	72.0	166.8	229
1994	71	5	258	106.8	120.2	168.5	258
Riverside County (Indio: Jackson Street)[1]							
1999	NA	0	119	NA	54.5	NA	NA
1998	NA	0	114	NA	47.2	NA	NA
1997	46	4	144	46.4	49.7	208.5	182
1996	52	3	215	48.3	53.6	168.8	215
1995	44	2	133	47.2	49.7	134.7	199
1994	37	0	97	45.3	48.3	117.3	97
San Diego County (Otay Mesa)[1]							
1999	NA	0	121	NA	47.0	NA	NA
1998	NA	0	89	NA	42.8	NA	NA
1997	26	0	125	41.9	46.6	134.7	125
1996	18	0	93	38.9	42.9	148.6	93
1995	27	0	121	39.8	47.1	160.9	121
1994	29	0	129	45.2	50.8	79.5	129

Notes: AAM = annual arithmetic mean
AGM = annual geometric mean
EPDC = expected peak day concentration
NA = not available
Source: CARB 1999c.

µg/m^3 = micrograms per cubic meter
[1]CARB monitoring data missing for 1998 and 1999.

CO, NO_2, and SO_2.

CO, NO_2, and SO_2 air quality monitoring data from 1994 through 1999 are summarized in Table 3.7-7. These data were obtained from EPA's AIRS Database. In Imperial County, concentrations of CO have exceeded the state 1-hour standard and both the state and federal 8-hour standards. In addition, concentrations of NO_2 appear to be increasing and exceeded the state 1-hour standard in 1998 and 1999. Annual NO_2 and all SO_2 concentrations remain below state and federal standards.

Ambient concentrations of CO, NO_2, and SO_2 remain well below all standards at the Palm Springs Monitoring Station in Riverside County and at all monitoring stations in San Diego County.

TABLE 3.7-7
Ambient CO, NO_2, and SO_2 Concentrations in Imperial, Riverside (Palm Springs), and San Diego Counties, 1994-1999

	Concentrations in ppm							
	CO		NO_2		SO_2			
Year	2nd Maximum 1-hour	2nd Maximum 8-hour	Maximum 1-hour	AAM	Maximum 1-hour	2nd Maximum 3-hour	2nd Maximum 24-hr	AAM
CAAQS[1]	20	9.0	0.25	-	0.25	-	0.04	-
NAAQS[2]	35	9	-	0.053	-	0.5	0.14	0.030
Imperial County								
1999	20.6	13.3	0.286	0.016	0.027	0.022	0.013	0.003
1998	19.0	13.3	0.257	0.014	0.035	0.025	0.017	0.003
1997	21.8	16.7	0.128	0.015	0.040	0.023	0.011	0.002
1996	26.2	14.1	0.164	0.014	0.036	0.028	0.013	0.003
1995	29.8	19.7	0.217	0.016	0.039	0.024	0.017	0.005
1994	25.7	12.9	0.227	0.015	0.060	0.028	0.017	0.006
Riverside County (Palm Springs)								
1999	2.4	1.6	0.065	0.016	0.034	0.015	0.009	0.001
1998	2.5	1.7	0.070	0.016	0.031	0.015	0.009	0.002
1997	2.4	1.3	0.069	0.015	0.036	0.010	0.005	0.001
1996	3.0	1.3	0.080	0.020	0.010	0.006	0.004	0.001
1995	3.1	1.5	0.082	0.021	0.012	0.007	0.004	0.001
1994	3.5	1.7	0.080	0.021	0.017	0.010	0.004	0.001
San Diego County								
1999	9.2	4.5	0.133	0.021	0.084	0.047	0.016	0.002
1998	9.8	4.7	0.132	0.023	0.149	0.059	0.016	0.003
1997	9.3	4.9	0.142	0.024	0.081	0.042	0.016	0.004
1996	11.1	6.0	0.124	0.022	0.087	0.053	0.017	0.004
1995	9.9	5.5	0.140	0.026	0.081	0.048	0.015	0.003
1994	11.0	7.0	0.157	0.024	0.098	0.044	0.015	0.003

[1]CAAQS are not to be exceeded.
[2]NAAQS are not to be exceeded more than once per year (except for annual standards).
AAM = annual arithmetic mean
Source: CARB 2000b.

3.7.4 Impacts and Mitigation Measures

3.7.4.1 Methodology

Methods used to quantify potential air quality impacts attributable to implementing the Proposed Project and Alternatives are described in this section.

Separate analysis of potential impacts from construction and operation is necessary because the nature and duration of emissions from these activities are different.

The methods used to quantify emissions and characterize the significance of impacts from construction activities, subsequent on-going operations, and windblown dust are presented below.

Construction Methodology

Construction activities result in pollutant emissions from mobile construction equipment and soil disturbance activities. Emission sources include engine exhaust from construction equipment, dust generated from the movement of construction equipment, and dust generated from soil disturbance activities.

Air quality impacts from construction activities are difficult to quantify because they occur on a temporary basis, are mobile, and fluctuate in relative strength. To the extent possible, air quality impacts from construction activities have been quantified according to the methodology presented below. Construction emissions are compared to the appropriate air quality significance criteria.

Exhaust emissions occur from the operation of mobile construction equipment at each work site, such as tractors, bulldozers, and backhoes. Emissions are proportional to the amount of work performed by each piece of equipment; therefore, emissions were calculated by multiplying emission factors by the number of hours of operation, and average operating load for each piece of equipment. For the system measures, emissions estimated for construction of the 15 potential lateral interceptor systems varied somewhat due to different sizes for the various Proposed Project components. Because of this variation, estimated emissions were averaged to simplify the analysis.

Based on the estimated annual incremental increase in conservation and transfer rate of 20 KAFY, approximately 470 80-acre farms (average size) per year would be needed to construct and implement some form of conservation measure. Lists of the types of equipment required and estimates of the length of time the equipment would need to operate to construct the various on-farm and water delivery system conservation measures were developed based on experience with construction of similar systems at other locations (Mattingly 2000). Emission factors from the SCAQMD CEQA *Air Quality Handbook* were used to estimate exhaust emissions associated with operation of the construction equipment (SCAQMD 1993).

Soil disturbance activities, such as soil grading, excavation, and equipment and vehicle travel on unpaved roads, represent sources of windblown dust. Construction emission estimates prepared for this air quality analysis did not include fugitive dust emissions associated with soil disturbance, because normal operations at farms involve so much soil disturbance that installation of the conservation measures is assumed to be within the range of typical activities. Nor did this air quality impact analysis include exhaust emissions for employees commuting to the farms for construction of the on-farm measures. Again, normal operations at farms involve employee and owner vehicle commute activities not substantively different than those proposed for construction of the on-farm measures. For both the on-farm and system conservation measures, this analysis assumed that any construction-related increases in emissions of fugitive dust and exhaust from employee commute vehicles would be temporary and localized.

Operation Methodology

Operational impacts include emissions from new stationary sources, operation of mobile equipment, and increased potential for suspension of dust from agricultural areas. Lists were developed of the types of equipment and labor required, and estimates of the length of time the equipment or laborers would need to work to operate and maintain the various on-farm and water delivery, system conservation measures, based on experience with O&M of similar systems at other locations (Mattingly 2000).

Operation of the on-farm and water-delivery system conservation measures would occur over the lifetime of the Proposed Project, up to 75 years, depending on when the measures are constructed. The O&M activities expected for the on-farm conservation measures range from an increase in labor over existing practices for narrow border strips and drip irrigation systems, to some minor amount of equipment use periodically (e.g., use of a scraper every 5 years for laser leveling and multi-slope systems), to use of a backhoe once a year for sediment cleanup for cascading tailwater systems, to use of a pump for 24 hours every 2 weeks for tailwater return / pumpback systems. The O&M activities expected for the water delivery system conservation measures include additional labor for visual inspections, maintenance, and patrolling of systems, as well as a small amount of equipment use periodically (e.g., use of a backhoe two to three times a year for channel cleanup for lateral interceptor and conveyance lining systems, and use of a utility truck for monthly pump and motor service for seepage interceptor systems). This air quality analysis assumes that these O&M activities are within the range of normal activities in the area. This air quality analysis also assumes that the O&M activities associated with on-farm irrigation management measures are within the range of normal activities in the area.

Windblown Dust From Exposed Shoreline Methodology

Hydrologic modeling of the Salton Sea was performed to determine the effect of reduced inflow volumes on salinity, surface area, and Sea level elevation (Reclamation 2001b). The Proposed Project consists of incremental increases in water conservation of about 25 KAFY per year until the total volume of water conserved for transfer reaches 300 KAFY. An additional 59 KAFY would be conserved for compliance with the IOP. This would reduce the volume of water entering the Sea, resulting in a decrease in the surface area and the exposure of areas formerly submerged. The Sea would decrease in elevation and surface area at a rate greater than that predicted for Baseline conditions.

Analysis of soils and sediments surrounding the Salton Sea indicates that acceleration of the predicted decrease in Sea level would also increase the potential for dust suspension. Spatial variations in sediment characteristics and soil erodibility, temporal variations in wind conditions, and variation in factors contributing to the formation of salt crusts prevent any reasonable quantitative estimate of emissions and associated impacts from the predicted increase in exposed shoreline. However, a qualitative assessment of the potential for dust suspension is possible.

Windblown Dust From Fallowed Lands Methodology

Fallowing of agricultural lands is one of the conservation methods proposed under the Proposed Project and fallowing may also be used to provide mitigation water to implement the Salton Sea Habitat Conservation Strategy. Baseline conditions include approximately 20,000 acres of fallowed lands. The potential maximum fallowed acres that might be required for all project components for the Proposed Project or Alternatives and the Salton Sea Habitat Conservation Strategy might be as great as 90,300 acres, assuming use of fallowing is maximized for conservation and the HCP and the IOP.

It is not possible to quantify emissions and associated impacts from potential increases in fallowing of agricultural lands, at a variety of locations over time, for water conservation. On one hand, emissions would decrease because the fallowed land would not be subject to plowing or the other agricultural activities that disturb soil. On the other hand, fallowed lands that are not properly retired or mitigated may be subject to wind erosion, creating fugitive dust impacts. A qualitative assessment is provided.

Subregions Excluded From Impact Analysis. No impacts to air quality resources would occur in the SDCWA service area geographic subregion because no construction of new facilities or changes in operation of existing facilities would occur in this subregion; therefore, this area is not discussed in the impact discussions.

3.7.4.2 Significance Criteria

The Proposed Project or Alternatives would have a significant impact on air quality if total direct and indirect emissions from the Proposed Project or Alternatives would:

- Violate any air quality standard or contribute substantially to an existing or projected air quality violation.
- Conflict with or obstruct implementation of an applicable air quality plan.
- Expose sensitive receptors to substantial pollutant concentrations.
- Create objectionable odors affecting a substantial number of people.
- Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region of influence is nonattainment under an applicable federal or state ambient air quality standard.

Significance Criteria During Construction and Operation

Impacts would be considered significant if any total direct and / or indirect emissions resulting from construction and implementation of the Proposed Project or Alternatives exceed the federal general conformity *de minimis* thresholds. These thresholds apply only to pollutants designated as nonattainment or attainment-maintenance.

Compliance with the conformity rule is presumed if the *de minimis* thresholds are not exceeded. The conformity rule process is intended to demonstrate that the Proposed Project:

- Will not cause or contribute to new violations of federal air quality standards.
- Will not increase the frequency or severity of existing violations of federal air quality standards.
- Will not delay the timely attainment of federal air quality standards.

If the *de minimis* thresholds would be exceeded, compliance with the general conformity rule must be demonstrated before the Proposed Project can continue. This is accomplished by means of a formal conformity determination process involving dispersion modeling, comparison to SIP requirements, and, possibly, emission offsetting or revisions to the SIP to accommodate emissions.

Significance thresholds for toxic air contaminants are also defined by some air districts. Emissions of toxic air contaminants would be significant if the emissions exceed the cancer risk, cancer burden, or health hazard indexes. MDAQMD and ICAPCD have not established significance criteria for toxic air contaminant emissions.

Colorado River Area –MDAQMD and ICAPCD Jurisdiction. Other than the general conformity *de minimis* thresholds, the MDAQMD and ICAPCD have not established significance criteria for projects in the Colorado River area.

The MDAQMD is designated as a serious federal PM_{10} nonattainment area. The general conformity *de minimis* threshold for serious PM_{10} nonattainment areas is 70 tons per year. Projects in the MDAQMD with emissions of PM_{10} in excess of 70 tons per year would be considered significant.

Imperial Valley – ICAPCD Jurisdiction. The study area is located in a federally designated nonattainment area for PM_{10} and ozone. Therefore, the general conformity rule is applicable in the study area for emissions of PM_{10} and for ROC (or VOC) and NO_x as precursors to ozone. Table 3.7-8 presents *de minimis* thresholds for the Imperial Valley contained in ICAPCD Rule 925, General Conformity. Exceedance of *de minimis* thresholds would require that a general conformity demonstration be performed prior to approval of a project by the air district.

TABLE 3.7-8
Significance Criteria for the IID Water Service Area

Pollutant	BACT Thresholds[a] (lbs/day) (ICAPCD Rule 207)	General Conformity[b] (tons/yr)
ROC	25	100 (VOC)
NO_x	25	100
CO	550	NA
PM_{10}	25	100
SO_x	NA	NA
Pb	3.3	NA

NA = not applicable because Imperial in County is in attainment of the NAAQS standard for CO.
ROC = reactive organic compound
[a] Source: ICAPCD Rule 207, New and Modified Stationary Source Review
[b] Source: ICAPCD Rule 925, General Conformity

The ICAPCD follows the requirements set forth by its planning division, which tend to follow the state's CEQA guidelines. For Imperial County, air quality impacts from proposed projects are evaluated on a case-by-case basis. There are two types of operational significance criteria in the Imperial Valley: criteria related to New Source Review (NSR) and criteria related to general conformity. The NSR criteria only apply to stationary sources. Both types are listed in Table 3.7-8.

Salton Sea Area –SCAQMD and ICAPCD Jurisdiction. The SCAQMD has established construction-related thresholds of significance for the portion of Riverside County that is in the SCAQMD. This portion includes part of the SSAB, including the Coachella Valley. Construction-related emissions in excess of any of the criteria listed in Table 3.7-9 are considered significant in this area. Significance criteria for construction activities have not been established in the Imperial County portion of the SSAB, other than the general conformity *de minimis* thresholds.

TABLE 3.7-9
Construction Emissions Thresholds of Significance for the Portion of the Salton Sea Air Basin within the South Coast AQMD (Riverside County)

	Threshold	
Pollutant	Daily (lb)	Quarterly (tons)
ROC	75	2.5
NO_x	100	2.5
CO	550	24.75
PM_{10}	150	6.75
SO_x	-	6.75

Projects in the Riverside County portion of the SSAB are subject to the requirements of the SCAQMD. Projects with peak operation-related emissions that exceed any of the criteria listed in Table 3.7-10 would be considered significant.

There are three types of operational significance criteria in the Riverside County portion of the SSAB: criteria related to NSR, criteria related to general conformity, and SSAB-specific criteria related to CEQA. In addition, maximum allowable changes in pollutant concentrations attributed to projects in the SSAB also constitute significance criteria. These criteria are summarized in Table 3.7-11. Projects in the portion of the SSAB located in Imperial County must comply with the ICAPCD's requirements, as described in the previous subsection.

TABLE 3.7-10
Operational Significance Criteria for the Riverside County Portion of the Salton Sea Air Basin

Pollutant	SCAQMD NSR[a] (Rules 1303 and 1401)	CEQA[b] (lb/day)	General Conformity[c] (tons/yr)
ROC	NA	75	25
NO_x	40 tons/yr	100	25
CO	NA	550	N/A
PM_{10}	15 tons/yr	150	70
SO_x	NA	150	NA
Cancer Risk		NA	NA
with TBACT	10^{-5} or 10 in 1 million		
without TBACT	10^{-6} or 1 in 1 million		
Cancer Burden	0.5	NA	NA
Acute HHI	1.0	NA	NA
Chronic HHI	1.0	NA	NA

HHI = Health Hazard Index
NA = not applicable
NSR = New Source Review (applicable to stationary sources only)
ROC = reactive organic compound
TBACT = toxics best available control technology
[a] Source: SCAQMD Rule 1303, Section (b)5(C)(I); Rule 1401, Section (d)
[b] Source: SCAQMD. CEQA Air Quality Handbook. November 1993.
[c] Source: SCAQMD Rule 1901; 40 CFR 51, General Conformity

TABLE 3.7-11
Most Stringent Ambient Air Quality Standard and Allowable Change in Concentration[a]

Air Contaminant	Averaging Time	Most Stringent Air Quality Standard	Significant Change in Air Quality Concentration
NO_2	1-hour Annual	25 pphm (500 $\mu g/m^3$) 5.3 pphm (100 $\mu g/m^3$)	1 pphm (20 $\mu g/m^3$) 0.05 pphm (1 $\mu g/m^3$)
CO	1-hour 8-hour	20 ppm (23 mg/m^3) 9.0 ppm (10 mg/m^3)	1 ppm (1.1 mg/m^3) 0.45 ppm (0.50 mg/m^3)
PM_{10}	24-hour Annual GM	50 $\mu g/m^3$ 30 $\mu g/m^3$	2.5 $\mu g/m^3$ 1 $\mu g/m^3$
Sulfate	24-hour	25 $\mu g/m^3$	1 $\mu g/m^3$

[a] Source: SCAQMD Rule 1303

3.7.4.3 Proposed Project

LOWER COLORADO RIVER

Water Conservation and Transfer

Impact AQ-1: Fugitive dust from exposed riverbank and de-watered backwaters. Construction and operation of the on-farm and water delivery system conservation measures and treatment facilities would not occur in the LCR, so few air quality impacts would occur in this subregion. As a result of decreased water levels in the Colorado River between Parker

Dam and Imperial Dam, there is some potential for increased fugitive dust emissions from exposed shoreline. However, the amount of land exposed by decreased water levels is relatively small, and some of the area will become re-vegetated. Backwaters would be replaced. The potential increase in windblown dust from exposed areas along the Colorado River would be minimal. (Less than significant impact.)

Biological Conservation Measures in USFWS' Biological Opinion

Air quality impacts from implementation of biological conservation measures would result from combustion emissions due to the use of fossil fuel-fired construction equipment and fugitive dust emissions due to ground-disturbing activities. The proposed conservation measures that would produce the most emissions would include the restoration of backwaters and creation of willow flycatcher habitat. No specific locations or designs have been formulated for these measures. Some of the activities needed to implement these measures could include dredging, grading, vegetation clearing, and channel deepening. It is expected that the impact of combustion emissions from these activities would not be large enough in a localized area to cause an exceedance of an ambient air quality standard, as most emission sources would be mobile and intermittent in nature. Fugitive dust emissions could be substantial from activities that disturb large amounts of soil. However, implementation of fugitive dust control measures outlined in the IA EIS would effectively minimize PM_{10} emissions from proposed construction activities (Reclamation 2002).

Impacts resulting from the implementation of the biological conservation measures in USFWS' Biological Opinion would be the same for Alternatives 2, 3, and 4; therefore, they are not discussed under each Alternative.

IID WATER SERVICE AREA AND AAC

Water Conservation and Transfer

Impact AQ-2: Emissions from construction and operation of on-farm and delivery system conservation measures from water conservation program. Because the IID water service area subregion, and in particular, the IID water service area, is where most of the construction activities for on-farm and system conservation measures would occur, this subregion has the greatest potential for construction–related air quality impacts from the Proposed Project.

Potential annual equipment exhaust emissions from construction activities for on-farm conservation measures are summarized in Table 3.7-12. Each column in the table presents emissions estimated for construction of the indicated conservation measure at five hundred 80-acre farms, to conserve an estimated 20 KAFY of water. (The actual number of 80-acre farms would be approximately 470, so 500 is being used for a conservative estimate of emissions). This amount represents the maximum construction level anticipated in any given year over the life of the Proposed Project for construction of on-farm conservation measures for transfer. Emissions for the measures, therefore, should not be summed, but can be compared from measure to measure to determine a range of annual emissions that have the potential to occur with construction of on-farm conservation measures.

TABLE 3.7-12
Estimated Annual Equipment Exhaust Emissions for Construction of On-Farm Measures to Conserve 20 KAFY

		Annual Emissions from Construction Activities (ton/yr)			
Conservation Measures	**Applied (acres/yr)**	**CO**	**ROC**	**NO_x**	**PM_{10}**
Tailwater Return/Pumpback Systems	40,000	46.2	6.5	76.8	4.6
Cascading Tailwater	40,000	8.0	1.1	15.9	0.9
Level Basins	40,000	55.7	5.9	60.8	3.5
Shorten Furrows/Border Strip Improvements	40,000	55.7	5.9	60.8	3.5
Narrow Border Strips	40,000	11.8	1.1	3.9	0.3
Laser Leveling	40,000	22.4	2.2	23.8	1.6
Multi Slope	40,000	22.4	2.2	23.8	1.6
Drip Irrigation	40,000	101.6	9.7	64.3	4.4

Note: Emission factors from Table A9-8 on page A9-82 of the SCAQMD CEQA *Air Quality Handbook* were used to estimate exhaust emissions associated with operation of the construction equipment. 20KAFY was selected because this amount represents the maximum construction level anticipated in any given year over the life of the project for construction of conservation measures.

The highest annual emissions associated with constructing conservation measures to yield 20 KAFY using on-farm measures are estimated based on the assumption that the farms would install drip irrigation. The lowest annual emissions are estimated based on the assumption that the farms would install cascading tailwater systems or narrow border strips. Neither of these options is likely, but they are presented to show the range of air emission rates that could be emitted as exhaust from construction equipment for on-farm measures on an annual basis.

The potential annual equipment exhaust emissions from construction activities for water delivery system conservation measures are summarized in Table 3.7-13. As indicated in the column labeled "Units or Miles Assumed," assumptions were made for the number of systems, reservoirs, or miles to be installed per year. The timeframe for installation has been used to adjust the total amount of water per year estimated to be available for conservation by the listed conservation measure. To evaluate other options—for example, if more than one lateral interceptor system or reservoir were proposed to be installed in a given year—the annual emissions would need to be multiplied by the number of systems or reservoirs proposed, and the amount of water conserved would increase proportionally (up to the total amount assumed to be available for conservation by that measure).

As indicated in Table 3.7-12, annual estimated emissions for on-farm conservation measures of: ROC from construction equipment exhaust range from 1.1 to 9.7 tons per year; nitrogen oxide (NO_x) emissions estimates range from 3.9 to 64.3 tons per year; PM_{10} emissions estimates range from 0.3 to 4.6 tons per year; and CO emissions estimates range from 8.0 to 101.6 tons per year.

TABLE 3.7-13
Estimated Annual Equipment Exhaust Emissions for Construction of Water Delivery System Measures to Conserve 20 KAFY

Conservation Measures	Units or Miles Assumed	Water Conserved AFY (estimate)	Annual Emissions from Construction (ton/yr)			
			CO	ROC	NO_x	PM_{10}
Lateral Interceptor Systems (Estimated Water Conservation 82,882 AFY)	1 system/yr for 15 years	5,525	16.1 (avg.)	1.6 (avg.)	19.4 (avg.)	1.3 (avg.)
Mid-Lateral Reservoirs (Estimated Water Conservation 5,255 AFY)	1 reservoir/yr for 5 years	1,051	1.9	0.2	2.2	0.1
Seepage Interceptors (Estimated Water Conservation 42,000 AFY)	5 miles/yr for 3 years	14,000	1.3	0.1	1.7	0.1
Conveyance Lining (Estimated Water Conservation 224 AFY)	1.73 miles/yr for 1 year	224	0.2	0.0	0.4	0.0
Total		**20,800**				

Note: Emission factors from Table A9-8 on page A9-82 of the SCAQMD California Environmental Quality Act (CEQA) *Air Quality Handbook* were used to estimate exhaust emissions associated with operation of the construction equipment.

As shown in Table 3.7-13, the lowest annual construction exhaust emissions associated with conservation of 20 KAFY using water delivery system conservation measures would be associated with the installation of 5 to 8 miles of seepage interceptors. The highest annual emissions would be associated with construction of three to four lateral interceptor systems per year. Assuming four lateral interceptor systems would be constructed per year, emissions would be approximately 6.4 tons per year of ROC, 77.6 tons per year of NO_x, 5.2 tons per year of PM_{10} and 64.4 tons per year of CO.

The applicable significance criteria in the Imperial Valley area are the general conformity *de minimis* thresholds (100 tons per year) for the nonattainment pollutants ozone (ROC and NO_x) and PM_{10}. Compared to these significance criteria, the estimated emissions would be less than significant.

As discussed in Section 3.7.4.1, soil disturbance associated with conservation measures is assumed to be within the range of typical historic and existing activities. Any construction-related increases in emissions of fugitive dust and exhaust from employee commute vehicles would be temporary and localized, thus less than significant. (Less than significant impact.)

The IID water service area is the subregion where the operations associated with on-farm and water delivery system conservation measures would occur in the Proposed Project. This is the area with the greatest potential for operation–related air quality impacts, other than the Salton Sea subregion, where indirect air-quality impacts could result from operation of the Proposed Project (associated with lowered water levels in the Salton Sea). Operation of the on-farm irrigation management measures would occur over the lifetime of the Proposed Project, up to 75 years, depending on when the measures are implemented.

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As discussed in Section 3.7.4.1, other than a substantial increase in fallowing, the construction and O&M activities are within the range of typical activities in the area, and the air quality impacts of construction and operation of the on-farm and water delivery system conservation measures would be negligible. (Less than significant impact.)

Mitigation Measure AQ-2: Although impacts are less than significant, implementation of BMPs during construction and site restoration and operation following construction would help to minimize PM_{10} emissions. BMPs could include, but are not limited to, the following:

- Equip diesel powered construction equipment with particulate matter emission control systems, where feasible.
- Use paved roads to access the construction sites when possible.
- Minimize the amount of disturbed area, and apply water or soil stabilization chemicals periodically to areas undergoing ground-disturbing activities. Limit vehicular access to disturbed areas, and minimize vehicle speeds.
- Reduce ground disturbing activities as wind speeds increase. Suspend grading and excavation activities during windy periods (i.e., surface winds in excess of 20 miles per hour).
- Limit vehicle speeds to 10 mph on unpaved roads.
- Cover trucks that haul soils or fine aggregate materials.
- Enclose, cover, or water excavated soil twice daily.
- Cover stockpiles of excavated soil at all times when the stockpile is not in use. Secure the covers.
- Replant vegetation in disturbed areas where water is available, following the completion of grading and / or construction activities.
- Designate personnel to monitor dust control measures to ensure effectiveness in minimizing fugitive dust emissions.

Impact AQ-3: Windblown dust from fallowed lands. Fallowing of agricultural lands is one of the potential water conservation methods for the Proposed Project. Baseline conditions include approximately 20,000 acres of fallowed lands per year. The potential maximum fallowed acres that might be required each year under the Proposed Project would include 50,000 acres to create 300 KAFY for transfer, 30,500 acres to create mitigation water for the Salton Sea Habitat Conservation Strategy, and 9,800 acres for the IOP, totaling 90,300 acres. It is not possible to quantify emissions and associated impacts from potential increases in fallowing of agricultural lands, at a variety of locations over time, for water conservation. On one hand, emissions would decrease because the fallowed land would not be subject to plowing or the other agricultural activities that disturb soil. On the other hand, fallowed lands that are not properly retired or mitigated may be subject to wind erosion, resulting in fugitive dust impacts.

Depending on the amount of land that is fallowed, and the way the land is managed before and during fallowing, the potential exists for fugitive dust impacts. On occasion, existing concentrations of PM_{10} in the IID water service area violate national and state ambient air quality standards. To be conservative, this analysis concludes that the fugitive windblown dust emissions associated with additional exposed areas due to fallowing would be potentially significant. (Potentially significant impact.)

Mitigation Measure AQ-3: As lands are fallowed, at least one of the following BMPs to minimize PM_{10} emissions must be implemented. BMPs could include, but are not limited to, the following:

- Implement conservation cropping sequences and wind erosion protection measures as outlined by the US Department of Agriculture Natural Resources Conservation Service, such as:
  - Plan ahead to start with plenty of vegetation residue, and maintain as much residue on fallowed fields as possible. Residue is more effective for wind erosion protection if left standing.
  - If residues are not adequate, small grain can be seeded about the first of the year to take advantage of the winter rains and irrigated with a light irrigation if needed to get adequate growth.
  - Avoid any tillage if possible.
  - Avoid any traffic or tillage when fields are extremely dry to avoid pulverization.
- Apply soil stabilization chemicals to fallowed lands.
- Re-apply drain water to allow protective vegetation to be established.
- Reuse irrigation return flows to irrigate windbreaks across blocks of land including many fields to reduce wind fetch and reduce emissions from fallowed, farmed, and other lands within the block. Windbreak species, management, and layout would be optimized to achieve the largest feasible dust emissions reduction per unit water available for their irrigation. Windbreak corridors would provide ancillary aesthetic and habitat benefits.

With implementation of one or more of the above BMPs, impacts would be less than significant. (Less than significant impact with mitigation.)

Inadvertent Overrun and Payback Policy (IOP)

Impact AQ-4. Emissions from construction and operation of on-farm and delivery system conservation measures for compliance with the IOP. In the worst case scenario for air quality impacts, conservation of an average 59 KAFY for the IOP would be generated by constructing on-farm and system based conservation measures. This scenario is highly unlikely because IID is required to payback overruns within 1-3 years and it would be onerous to construct sufficient conservation measures as quickly as the payback would be required. A more likely scenario is that IID would fallow lands on a rotational basis to comply with the IOP. However, IID could potentially elect to construct conservation measures to comply with the IOP and in the worst case if they constructed conservation measures to generate 59 KAFY it could result in an annual emissions rate approximately 3 times as high as the emissions presented in Table 3.7-12 or 3.7-13, indicating the potential for significant air quality impacts. Comparison to the general conformity de minimis thresholds (100 tons per year) for the nonattainment pollutants ozone (ROC and NOx) and

PM_{10} would indicate the potential for significant emission rates to occur, if construction of certain on-farm measures is undertaken to conserve more than about 25 to 30 KAFY in any given year. (Potentially significant impact.)

Mitigation Measure AQ-4: If construction of sufficient magnitude is proposed for any given year, assuming construction emissions are determined to be the direct or indirect result of a federal action, a general conformity determination for that federal action would be required. General conformity requirements in the IID water service area are outlined in Rule 925 of the ICAPCD and the EPA General Conformity Rule. However, the only project component that could involve the construction of conservation measures that is considered to be a federal action is implementation of the Salton Sea Habitat Conservation Strategy. The selection of conservation measures for transfer or for compliance with the IOP is not a federal action.

If general conformity requirements are triggered, the federal agency must conduct a full-scale conformity analysis, culminating in a conformity determination. Opportunity for review and comment by the public and other interested federal, state, and local agencies must be provided. The analysis must demonstrate that the project satisfies the criteria in the ICAPCD Rule and 40 CFR 93.158 and 93.159. If the action does not satisfy the criteria, the federal agency must take mitigation measures to arrive at a positive conformity determination. Methods for determining conformity include the following:

- The proposed emissions are specifically identified and accounted for in the applicable SIP.
- The proposed emissions are fully offset through reductions elsewhere in the same non-attainment or maintenance area.
- Air quality modeling demonstrates emissions would not cause or contribute to new violations of air quality standards, increase the frequency or severity of existing violations, or delay the timely attainment of the NAAQS.
- Emissions would not exceed the emissions budgets available for this type of emission source in the applicable SIP.
- State would sign a commitment to revise the SIP to include the proposed action.

(Less than significant impact with mitigation.)

Impacts resulting from the implementation of the IOP would be the same for Alternatives 2, 3, and 4; therefore, they are not discussed under each Alternative.

Habitat Conservation Plan (HCP-IID) (IID Water Service Area Portion)

Impact HCP-IID-AQ-5: Emissions from construction of the managed marsh and native tree habitat. Construction would result in a temporary increase in PM_{10} (dust) emissions, temporary increases in soil erosion potential, and increase in traffic and transportation impacts resulting from construction activities. Most of these impacts would be temporary and could be reduced substantially with implementation of BMPs during construction and site restoration following construction. Further, these impacts would be offset by the long-term benefit to air quality by converting areas that would potentially be barren, or cultivated every year, into more stable habitats. (Less than significant impact.)

Mitigation Measure AQ-5: Implement BMPs as listed under Mitigation Measure AQ-2, above, during construction and site restoration following construction. (Less than significant.)

Operation of the elements of the HCP will not result in emissions in the IID water service area, and no impacts to air quality would occur.

Impacts resulting from the implementation of the IID Water Service Area Portion of the HCP would be the same for Alternatives 2, 3 and 4; therefore, they are not discussed under those Alternatives.

Salton Sea Habitat Conservation Strategy (HCP-SS)

Impact HCP-SS-AQ-6 Windblown dust from fallowed lands. As described in Section 2.2.6.7, the Salton Sea Habitat Conservation Strategy has been evaluated in this final EIR/EIS with the assumption that mitigation water would be generated by fallowing within the IID water-service area. Other sources of water could be used, but they have not been evaluated in this EIR/EIS.

Additionally, under the Proposed Project, the implementation of the Salton Sea Habitat Conservation Strategy in concert with the on-farm irrigation system improvement approach to conserving water for transfer was determined not to be feasible because of the number of total acres that would be needed. This is because the "efficiency conservation" measures require a 1 to 1 ratio of mitigation water to the Sea. Therefore, the combination of only on-farm and/or delivery system efficiency conservation measures required to produce 300 KAFY for transfer plus fallowing within the IID water service area as the sole method of providing the mitigation water associated with the Salton Sea Habitat Conservation Strategy has not been assessed in this final EIR/EIS.

Additional details of the Salton Sea Habitat Conservation Strategy can be found in Section 2.2.6.7.

If fallowing is implemented, impacts would be similar in type to those described under Impact AQ-3. Conservation for the Salton Sea Habitat Conservation Strategy would be in addition to the up to 300 KAFY for transfer and the 59 KAFY for the IOP. If fallowing is the sole mitigation water source for the Salton Sea Habitat Conservation Strategy, approximately 30,500 fallowed acres would be required. This acreage is in addition to the fallowed acreage required to generate conserved water for transfer. The total fallowed acreage under the Proposed Project would be about 90,300 acres as discussed under Impact AQ-3. (Potentially significant impact.)

Mitigation Measure PP-HCP-SS-AQ-6. This impact would be less than significant with implementation of Mitigation Measures AQ-2 and AQ-3. (Less than significant impact with mitigation.)

SALTON SEA

Water Conservation and Transfer

Construction of the on-farm and water delivery system conservation measures would not occur in the Salton Sea subregion. There would be no air quality impacts associated with construction of the Proposed Project in this subregion.

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No direct air quality impacts would be associated with operation of the Proposed Project in the Salton Sea subregion. Operation of the on-farm conservation measures would not occur in this subregion.

Impact AQ-7: Indirect air quality impacts from potential for windblown dust from exposed shoreline. Implementation of the Proposed Project would result in the conservation of up to 300 KAFY for transfer and a reduction in the volume of water discharged to the Salton Sea. The amount of water conserved is expected to increase at a rate of approximately 25 KAFY as conservation measures are implemented incrementally, until the full amount of conservation is reached. The effect of the conservation measures and reduced inflow volumes on the Sea would not be noticeable in the short-term. The water level and the total surface area of the Salton Sea would, however, decrease in the long term.

Under the Proposed Project, if on-farm and/or system based conservation measures are implemented to conserve water for transfer, the elevation of the Salton Sea would decrease from the Baseline level of –235 feet msl to –250 feet msl by the year 2077, a decrease of 15 feet. The total surface area of the Sea would decrease exposing about 49,500 more acres of currently submerged bottom sediments or playa, compared to the Baseline. If fallowing is implemented to conserve water for transfer, the elevation of the Sea is projected to decline to –241 feet msl by 2077, exposing 15,800 acres more than under the Baseline. With implementation of the Salton Sea Habitat Conservation Strategy the elevation of the Sea is predicted to be –240 feet msl in 2077, exposing 15,100 acres more than under the Baseline.

As described in Section 2.2.6.7, the Salton Sea Habitat Conservation Strategy has been evaluated in this final EIR/EIS with the assumption that mitigation water would be generated by fallowing within the IID water service area. Other sources of water could be used, but they have not been evaluated in this EIR/EIS.

Additional details of the Salton Sea Habitat Conservation Strategy can be found in Section 2.2.6.7.

The predicted decrease in Sea level and increase in exposed area would increase the potential for dust suspension. Spatial variations in sediment characteristics and soil erodibility, temporal variations in wind conditions, and variation in factors contributing to the formation of salt crusts prevent any reasonable quantitative estimate of emissions and associated impacts from the exposed shoreline. Therefore, a qualitative assessment of the potential for dust suspension is provided in this EIR/EIS.

Several conditions at the Salton Sea currently exist or would be expected to exist in the future as a result of lowered Sea levels. Qualitatively, it is anticipated that the combination of moisture present in the unsaturated zone beneath the exposed playa, the probable formation of dried algal mats and stable efflorescent salt crusts consisting of chloride and sulfate salts, and the relatively low frequency of high wind events at the Salton Sea would inhibit the suspension of dust. It is likely, however, that these assumptions would not apply to all areas of exposed playa or shoreline at all times, so dust events could potentially occur.

Based on the factors influencing emissions at the Salton Sea as discussed above, the extent of any increases in dust emissions and associated increases in ambient concentrations of the nonattainment pollutant PM_{10} in the future, as shoreline conditions change, is unknown. On occasion, existing concentrations of PM_{10} in the Salton Sea area violate national and state

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ambient air quality standards. Wind erosion of natural desert soils and vehicle travel over unpaved roads are expected to continue to represent the predominant source of dust emissions around the Salton Sea.

To further consider the potential impact of emissions from the Salton Sea, a comparison was made to existing dry lake beds where dust impacts have been observed. Fortunately, conditions found to produce dust storms on dry salt lake beds, such as Owens Lake, were not found to be present at the Salton Sea. The following three primary factors would be expected to make the situation at the Salton Sea much less severe than at Owens Lake:

- **Soil chemistry**: As a result of the relatively high salinity of groundwater beneath the playa at the Salton Sea, formation of an efflorescent salt crust on the surface of the playa is likely to occur. The soil system at the Salton Sea is predominately sodium sulfate and sodium chloride. These salts do not change in volume significantly with fluctuations in temperature, so the crust at the Salton Sea should be fairly stable and resistant to erosion. This anticipated situation at the Salton Sea is different from similar current situations at Owens and Mono Lakes, where a significant portion of the salinity is in the form of carbonates. The volume of carbonate salts is much more sensitive to temperature fluctuations, and desiccation of these salts produces fines that are readily suspended from playa at these lakes. Therefore, the salt crust on the exposed playa at the Salton Sea should be more stable and less emissive than Owens Lake. Also, distribution of mobile sand on the dry lakebed at Owens Lake is part of what drives high emissions rates, and comparable conditions are not expected at the Salton Sea.

- **Meteorology**: The frequency of high wind events at the Salton Sea is lower than at Owens Lake; therefore, the dust storms at the Salton Sea would be less frequent than at Owens Lake. Table 3.7-14 compares the frequency of high wind speeds at Owens Lake to that of Niland for the year 2000. The Owens Lake data were measured from Tower N3, which was located in the southern portion of the dry lakebed in an area of frequent large dust storms. The anemometer height was 10 meters at both the Owens Lake and the Niland stations. The wind frequency table for Owens Lake shows that the average hourly wind speed exceeded 8.5 m/s (19 mph) about 18.9 percent of the time in 2000. The wind speed exceeded 11.0 m/s (25 mph) about 7.9 percent of the time in 2000. A comparison of these results for the Owens Lake station to those for the Niland station show that the Owens Lake station has a substantially greater frequency of higher wind speeds. Therefore, based on these data, the wind conditions at Owens Lake provide a much greater potential for frequent or severe dust events than at the Salton Sea.

TABLE 3.7-14
Comparison of Wind Speed Frequency at 10 m Above the Ground Surface for Salton Sea and Owens Lake, Year 2000

Site	>8.5 m/s (19 mph)	>11.0 m/s (25 mph)
Niland (near Salton Sea)	4.4%	1.4%
Tower N3 (Owens Lake)	18.9%	7.9%

- **Recession Rate**: The anticipated decline in water levels at the Salton Sea is predicted to be significantly slower than what occurred at Owens Lake (only about 20 percent as fast). Natural processes may contribute more to controlling dust emissions at the Salton Sea than they have at Owens. These natural processes could include (a) the enabling of vegetation through development of soil conditions favorable to plant growth (including improvement in natural drainage); (b) development of native plant communities; (c) sequestration of sand into relatively stable dunes; and (d) formation of relatively stable crusts.

As discussed in Section 3.1, Hydrology and Water Quality, a reduction of the Salton Sea surface elevation, and resulting exposure of playa, is expected even in the absence of the Proposed Project, but it would be accelerated when the Proposed Project or Alternatives are implemented. It should be noted that the model projections included throughout the document for the Proposed Project reflect the worst-case scenario for the Proposed Project. The projections for the Salton Sea assume a maximum level of conservation of 300 KAFY accomplished via on-farm irrigation improvements and water delivery system improvements with no fallowing. This scenario also includes the additional 59 KAFY conservation required to comply with the IOP. As described in Section 2, the Proposed Project could be implemented with lesser amounts of conservation and using fallowing, both of which would result in lesser impacts to the Salton Sea as described in Alternative 4.

To be conservative, this analysis concludes that windblown dust from exposed shoreline may result in potentially significant air quality impacts. (Potentially significant impact.)

Mitigation Measure AQ-7: Implementation of the Salton Sea Habitat Conservation Strategy would maintain the elevation of the Salton Sea at Baseline levels until the year 2035. This approach would also maintain the amount of exposed shoreline at Baseline levels until the year 2035. Beyond year 2035 the elevation of the Sea would decline to approximately –240 feet msl, exposing approximately 15,100 acres by the year 2077.

Rather than focusing on site-specific and costly dust control mitigation for an undefined and future potential problem, a phased approach is proposed to detect, locate, assess, and resolve this potentially significant impact. The following 4-step plan would be implemented to mitigate significant PM_{10} emissions and incremental health effects (if any) from Salton Sea sediments exposed by the Proposed Project:

(1) **Restrict Access.** Public access, especially off-highway vehicle access, would be limited, to the extent legally and practicably feasible, to minimize disturbance of natural crusts and soils surfaces in future exposed shoreline areas. Prevention of crust and soil disturbance is viewed as the most important and cost-effective measure available to avoid future dust impacts. IID or other governmental entities own or control most of the lands adjacent to and under the Salton Sea. Fencing and posting would be installed on these lands in areas adjacent to private lands or public areas to limit access.

(2) **Research and Monitoring.** A research and monitoring program would be implemented incrementally as the Sea recedes. The research phase would focus on development of information to help define the potential for problems to occur in the future as the Sea elevation is reduced slowly over time. Research would:

(a) Study historical information on dust emissions from exposed shoreline areas.

(b) Determine how much land would be exposed over time and who owns it.

(c) Conduct sampling to determine the composition of “representative” shoreline sediments and the concentrations of ions and minerals in salt mixtures at the Sea. Review results from prior sampling efforts. Identify areas of future exposed shoreline with elevated concentrations of toxic substances relative to background.

(d) Analyze to predict response of Salton Sea salt crusts and sediments to environmental conditions, such as rainfall, humidity, temperature, and wind.

(e) Implement a meteorological, PM_{10}, and toxic air contaminant monitoring program to begin under existing conditions and continue as the Proposed Project is implemented. Monitoring would take place both near the sources (exposed shoreline caused by the Project) and near the receptors (populated areas) in order to assess the source-receptor relationship. The goal of the monitoring program would be to observe PM_{10} problems or incremental increases in toxic air contaminant concentrations associated with the Proposed Project and to provide a basis for mitigation efforts.

(f) If incremental increases in toxic air contaminants (such as arsenic or selenium, for example) are observed at the receptors and linked to emissions from exposed shoreline caused by the Project, conduct a health risk assessment to determine whether the increases exceed acceptable thresholds established by the governing air districts and represent a significant impact.

(g) If potential PM_{10} or health effects problem areas are identified through research and monitoring and the conditions leading to PM_{10} emissions are defined, study potential dust-control measures specific to the identified problems and the conditions at the Salton Sea.

(3) **Create or Purchase Offsetting Emission Reduction Credits.** This step would require negotiations with the local air pollution control districts to develop a long-term program for creating or purchasing offsetting PM_{10} emission reduction credits. Credits would be used to offset emissions caused by the Proposed Project, as determined by monitoring (see measure 2, above). IID proposes negotiation of an offset program that would allow purchase of credits available under banking programs, such as Imperial County Air Pollution Control District Rule 214 for agricultural burning. Other means of dust control and PM_{10} emissions reductions available for application to agricultural operations in the IID service area would also be pursued for credit banking opportunities (e.g., managing vacant lands, improving farming practices to reduce PM_{10}, and paving roads). This step would not be used to mitigate toxic air contaminants (if any); Step 4 would be necessary if toxic air contaminants pose a significant health issue.

(4) **Direct Emission Reductions at the Sea.** If sufficient offsetting emission reduction credits are not available or feasible, Step 4 of this mitigation plan would be implemented. It would include either, or a combination of:

(a) Implementing feasible dust mitigation measures. This includes the potential implementation of new (and as yet unknown or unproven) dust control technologies that may be developed at any time during the term of the Proposed Project; and / or

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(b) If feasible, supplying water to the Sea to re-wet emissive areas exposed by the Proposed Project, based on the research and monitoring program (Step 2 of this plan). This approach could use and extend the duration of the Salton Sea Habitat Conservation Strategy.

If, at any time during the Project term, additional feasible dust mitigation measures are identified, these could be implemented in lieu of other dust mitigation measures or the provision of mitigation water to the Sea. Thus, it is anticipated that the method or combination of methods could change from time to time over the Project term.

The success of the proposed mitigation plan is dependent on coordination and cooperation of the involved parties and the air quality regulatory agencies. Coordination, communication, staff commitment, and funding will be required in each phase of the proposed research, monitoring, and emissions reduction program.

The proposed mitigation is potentially sufficient to avoid or suppress PM_{10} emissions to less than significant levels. However, a level of uncertainty remains regarding whether short-term and long-term impacts can be mitigated to a less-than-significant level, as described below. Therefore, the conservative conclusion—that these impacts are potentially significant and cannot be mitigated—has been retained in this Final EIR/EIS.

The mitigation plan described above works in concert with the Salton Sea Habitat Conservation Strategy and is expected to reduce air quality impacts and PM_{10}-related health effects. However, problem assessment and mitigation implementation would occur subsequent to the development of potential dust emissions. Therefore, interim impacts could be significant.

It is uncertain what the conditions in the Salton Sea Air Basin will be as of 2035 when Project impacts may begin to occur. The Imperial Valley portion of the Salton Sea Air Basin is currently a moderate nonattainment area and the Riverside County/Coachella Valley portion is currently a serious nonattainment area for the National Ambient Air Quality Standard for PM_{10}. The attainment status of the Basin in 2035 cannot be ascertained; however, the Clean Air Act requires a plan for attainment well in advance of that date.

Impact AQ-8: Potential for decreased water flow and quality to increase odorous impacts in proximity to the Sea. Decreased water flow and quality in the Salton Sea could contribute to the premature death of flora or fauna and/or increase the summertime algae blooms, either or both of which would contribute to odorous emissions. However, as a result of low population levels around the Sea, it is not likely that "objectionable odors would affect a substantial number of people." This impact is expected to be less than significant.

3.7.4.4 Alternative 1: No Project

LOWER COLORADO RIVER

Water Conservation and Transfer

Implementation of the No Project would result in no air quality impacts in the LCR subregion.

IID WATER SERVICE AREA AND AAC

Water Conservation and Transfer

Implementation of the No Project would result in no air quality impacts in the IID water service area and AAC subregion.

SALTON SEA

Water Conservation and Transfer

With the No Project Alternative, water levels and surface area in the Salton Sea would decline. Water levels are projected to decline from an existing level of –228 to –235 msl (a decline of 7 feet) and total surface area is projected to decline from approximately 233,000 to approximately 217,000 acres, exposing about 16,000 acres over the next 75 years. The exposure of this previously inundated area may result in windblown dust as described in Impact AQ-7.

3.7.4.5 Alternative 2 (A2): Water Conservation and Transfer of Up To 130 KAFY to SDCWA (On-farm Irrigation System Improvements as Exclusive Conservation Measure)

IID WATER SERVICE AREA AND AAC

Water Conservation and Transfer

Impact A2-AQ-1: Emissions from construction and operation of on-farm conservation measures from the water conservation program. As discussed above for the Proposed Project, annual estimated construction emissions for on-farm conservation measures for 130 KAFY would be 1.1 to 9.7 tons per year of ROC, 3.9 to 64.3 tons per year NO_x, 0.3 to 4.6 tons per year PM_{10}, and 8.0 to 101.6 tons per year CO. These levels are less than the *de minimis* thresholds [100 tons per year] for the nonattainment pollutants ozone [ROC and NO_x] and PM_{10} in the Imperial Valley area. Impacts from the estimated emissions would be less than significant.

As discussed in Section 3.7.4.1, soil disturbance associated with the construction of conservation measures is assumed to be within the realm of typical activities. Any construction-related increases in emissions of fugitive dust and exhaust from employee commute vehicles would be temporary and localized, thus, less than significant.

Overall construction emissions from Alternative 2 would be expected to be similar to the Proposed Project however they would likely occur over a shorter duration because only 130KAFY would be conserved for transfer compared to 300 KAFY for transfer for the Proposed Project.

As discussed in Section 3.7.4.1, construction and O&M activities are within the realm of typical activities in the area, and the air quality impacts of construction and operation of the on-farm conservation measures would be negligible. (Less than significant impact.)

Mitigation Measure A2-AQ-1: Although impacts are less than significant, implementation of BMPs, as described under Mitigation Measure AQ-2 above, during construction and site restoration and operation following construction would help to minimize PM_{10} emissions. (Less than significant impact.)

Salton Sea Habitat Conservation Strategy (HCP-SS)

Impact A2-HCP-SS-AQ-2: Windblown dust from fallowed lands. Mitigation water for the Salton Sea Habitat Conservation Strategy could be generated via fallowing, although other sources of water could be used as described in Section 2.2.6.7. If fallowing is implemented, impacts would be similar in type to those described under Impact AQ-3. Conservation for the Salton Sea Habitat Conservation Strategy would be in addition to the up to 130 KAFY for transfer and the 59 KAFY for the IOP. If fallowing is implemented for the Salton Sea Habitat Conservation Strategy under Alternative 2, a maximum of approximately 40,600 fallowed acres (for a total of approximately as 50,400 acres, including the IOP) would be required. (Potentially significant impact.)

Mitigation Measure A2-HCP-SS-AQ-2. This impact would be less than significant with implementation of Mitigation Measures AQ-2 and AQ-3. (Less than significant impact with mitigation.)

SALTON SEA

Water Conservation and Transfer

Construction of the on-farm and water delivery system conservation measures would not occur in the Salton Sea subregion. No air quality impacts would be associated with construction of the Alternative 2 in this subregion.

No direct air quality impacts would be associated with operation of Alternative 2 in the Salton Sea subregion. Operation of the on-farm conservation measures would not occur in this subregion.

Impact A2-AQ-3: Indirect air quality impacts from potential for windblown dust from exposed shoreline. As described above, the impacts and potential for impacts would increase because implementation of the proposed water conservation measures would reduce the volume of water discharged to the Salton Sea. Alternative 2 would result in a decline in elevation of the Sea from the Baseline condition of -235 to –242 feet msl (a decline of 7 feet) and a reduction in surface area, exposing about 21,700 acres of shoreline more than the Baseline. With implementation of the Salton Sea Habitat Conservation Strategy, the elevation of the Salton Sea at the end of the Project term (2077) would be approximately –242 feet msl, leaving approximately 21,200 acres of shoreline exposed compared to the Baseline.

As described above and in Section 2.2.6.7, the Salton Sea Habitat Conservation Strategy has been evaluated in this final EIR/EIS with the assumption that mitigation water would be generated by fallowing within the IID water service area. Other sources of water could be used but they have not been evaluated in this EIR/EIS.

Additional details of the Salton Sea Habitat Conservation Strategy can be found in Section 2.2.6.7.

It is anticipated that the Salton Sea level would decrease over time and expose the shoreline even in the absence of implementation of the Proposed Project or its Alternatives. Implementation of Alternative 2 would accelerate the shoreline exposure, and result in approximately 42 percent more exposed area compared to the Baseline. The predicted increase in exposed area would increase the potential for dust suspension. The extent of any potential increases in dust emissions and ambient PM_{10} concentrations in the future is unknown. The impacts from Alternative 2 in the Salton Sea area would be expected to be similar to, but less than for the Proposed Project, because the Sea would recede at a slower rate, and substantially less area would ultimately be exposed. To be conservative, this analysis concludes that windblown dust from exposed shoreline may still result in potentially significant impacts. (Potentially significant, unavoidable impact).

Mitigation Measure A2-AQ-3: The same mitigation measures described in AQ-7 would be implemented for Alternative 2. (Potentially significant, unavoidable impact with mitigation.)

Impact A2-AQ-4: Potential for decreased water flow and quality to increase odorous impacts in proximity to the Sea. Decreased water flow and quality in the Salton Sea could contribute to the premature death of flora or fauna and / or increase the summertime algae blooms, either or both of which would contribute to odorous emissions. However, due to low population levels around the Sea, it is not likely that "objectionable odors would affect a substantial number of people." This impact is expected to be less than significant (Less than significant impact.)

3.7.4.6 Alternative 3 (A3): Water Conservation and Transfer of Up To 230 KAFY to SDCWA, CVWD, and/or MWD (All Conservation Measures)

IID WATER SERVICE AREA AND AAC

Water Conservation and Transfer

Impact A3-AQ-1: Emissions from construction and operation of on-farm and delivery system conservation measures from the water conservation program. As discussed above for the Proposed Project, annual estimated construction emissions for on-farm conservation measures or water delivery system conservation measures would be less than the applicable *de minimis* thresholds [100 tons per year] for the nonattainment pollutants ozone [ROC and NO_x] and PM_{10} in the IID water service area. Impacts from the estimated emissions would be less than significant.

As discussed in Section 3.7.4.1, soil disturbance associated with conservation measures is assumed to be within the realm of typical activities. Any construction-related increases in emissions of fugitive dust and exhaust from employee commute vehicles would be temporary and localized, and thus less than significant.

Overall construction and operation emissions from Alternative 3 would be expected to be similar to the Proposed Project; however, they would likely occur over a shorter duration because only 230 KAFY would be conserved for transfer compared to 300 KAFY for transfer for the Proposed Project. As discussed in Section 3.7.4.1, construction and O&M activities are within the range of typical activities in the area, and the air quality impacts of construction and operation of the on-farm and delivery system conservation measures would be negligible. (Less than significant impact.)

Mitigation Measure A3-AQ-1. Although impacts are less than significant, implementation of BMPs, as described under Mitigation Measure AQ-2, during construction and site restoration and operation following construction will help to minimize PM_{10} emissions. (Less than significant impact.)

Impact A3-AQ-2: Windblown dust from fallowed lands. Fallowing of agricultural lands is one of the potential water conservation methods for Alternative 3. Baseline conditions include approximately 20,000 acres of fallowed lands per year. The potential maximum fallowed acres that might be required each year for Alternative 3 would be approximately 67,300 acres to create mitigation water for the Salton Sea Habitat Conservation Strategy (if fallowing is the sole source of mitigation water) and 9,800 acres for the IOP, totaling 77,100 acres if on-farm conservation measures are used to create water for transfer. A lesser amount of total fallowing (73,200) would be required if fallowing is used to generate water for transfer. It is not possible to quantify emissions and associated impacts from potential increases in fallowing of agricultural lands at a variety of locations over time for water conservation. On one hand, emissions would decrease because the fallowed land would not be subject to plowing or the other agricultural activities that disturb soil. On the other hand, fallowed lands that are not properly retired or mitigated may be subject to wind erosion, resulting in fugitive dust impacts.

Depending on the amount of land that is fallowed, and the way the land is managed before and during fallowing, the potential exists for fugitive dust impacts. On occasion, existing concentrations of PM_{10} in the IID water service area violate national and state ambient air quality standards. To be conservative, this analysis concludes that the fugitive windblown dust emissions associated with additional exposed areas resulting from fallowing would be potentially significant. (Potentially significant impact.)

Mitigation Measure A3-AQ-2: Implement BMPs, as described in Mitigation Measure AQ-3. With implementation of one or more of the BMPs, impacts would be less than significant. (Less than significant impact with mitigation.)

Salton Sea Habitat Conservation Strategy (HCP-SS)

Impact A3-HCP-SS-AQ-3: Windblown dust from fallowed lands. As described above and in Section 2.2.6.7, the Salton Sea Habitat Conservation Strategy has been evaluated in this final EIR/EIS with the assumption that mitigation water would be generated by fallowing within the IID water service area. Other sources of water could be used, but they have not been evaluated in this EIR/EIS.

Additional details of the Salton Sea Habitat Conservation Strategy can be found in Section 2.2.6.7.

If fallowing were implemented for the Salton Sea Habitat Conservation Strategy with Alternative 3 the quantity of acres required would depend on the method of conservation used to generate water for transfer. If on-farm conservation measures are used to generate 230 KAFY for transfer, then an additional 67,300 acres would be required to be fallowed to meet the requirements of the Salton Sea Habitat Conservation Strategy for a total of 77,100 acres (including the 9,800 acres for the IOP), if fallowing is the sole source of mitigation water. However, if fallowing is used to generate 230 KAFY for transfer (approximately 38,300 acres) then 25,100 would be required to meet the requirements of the Salton Sea Habitat Conservation Strategy for a total of 73,200 acres (including the 9,800 acres for the IOP). If fallowing is implemented, impacts would be similar in type to those described under Impact A3-AQ-2 and AQ-3. (Potentially significant impact.)

Mitigation Measure A3-HCP-SS-AQ-3. This impact would be less than significant with implementation of Mitigation Measures AQ-2 and AQ-3. (Less than significant impact with mitigation.)

SALTON SEA

Water Conservation and Transfer

Construction of the on-farm and water delivery system conservation measures would not occur in the Salton Sea subregion. No air quality impacts would be associated with construction of the Alternative 3 in this subregion.

No direct air quality impacts would be associated with operation of Alternative 3 in the Salton Sea subregion. Operation of the on-farm conservation measures would not occur in this subregion.

Impact A3-AQ-4: Indirect air quality impacts from the potential for windblown dust from exposed shoreline. As described above, the impacts and potential for impacts would increase because implementation of the proposed water conservation measures would reduce the volume of water discharged to the Salton Sea. If on-farm and/or system-based conservation measures are implemented to generate water for transfer, Alternative 3 would result in a decline in elevation of the Sea to –247 feet msl (a decline of 12 feet compared to the Baseline) and expose about 39,000 acres of shoreline. If fallowing is implemented to generate water for transfer, Alternative 3 would result in a decline in elevation of the Sea to –239 feet (a decline of 4 feet compared to the Baseline) and expose about 11,600 acres of shoreline. With implementation of the Salton Sea Habitat Conservation Strategy, if on-farm or system-based conservation measures are used to generate water for transfer, the elevation of the Sea is projected to decline to –246 feet msl. If fallowing is used to generate water for transfer, with implementation of the Salton Sea Habitat Conservation Strategy, the Sea is projected to decline to –239 feet msl.

As described above and in Section 2.2.6.7, the Salton Sea Habitat Conservation Strategy has been evaluated in this final EIR/EIS with the assumption that mitigation water would be generated by fallowing within the IID water service area. Other sources of water could be used, but they have not been evaluated in this EIR/EIS.

Additional details of the Salton Sea Habitat Conservation Strategy can be found in Section 2.2.6.7.

It is anticipated that the Salton Sea level would decrease over time and expose the shoreline even in the absence of implementation of the Proposed Project or its Alternatives. Implementation of Alternative 3 would accelerate the shoreline exposure, and result in almost 3.5 times as much exposed area compared to the Baseline. The predicted increase in exposed area would increase the potential for dust suspension. The extent of any potential increases in dust emissions and ambient PM_{10} concentrations in the future is unknown. The impacts from Alternative 3 in the Salton Sea area would be expected to be similar to, but less than for the Proposed Project, because the Sea would be receding at a slower rate, and less area would be exposed. To be conservative, this analysis concludes that windblown dust from exposed shoreline may still result in potentially significant impacts. (Potentially significant and unavoidable impact.)

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Mitigation Measure A3-AQ-4: The same mitigation measures described in AQ-7 would be implemented for Alternative 3. (Potentially significant and unavoidable with mitigation.)

Impact A3-AQ-5: Potential for decreased water flow and quality to increase odorous impacts in proximity to the Sea. Decreased water flow and quality in the Salton Sea could contribute to the premature death of flora or fauna and/or increase the summertime algae blooms, either or both of which would contribute to odorous emissions. However, as a result of low population levels around the Sea, it is not likely that "objectionable odors would affect a substantial number of people." This impact is expected to be less than significant. (Less than significant impact.)

3.7.4.7 Alternative 4 (A4): Water Conservation and Transfer of Up To 300 KAFY to SDCWA, CVWD, and/or MWD (Fallowing As Exclusive Conservation Measure)

IID WATER SERVICE AREA AND AAC

Water Conservation and Transfer

Because conservation would be achieved exclusively through fallowing, no construction activities would be required, and no construction-related air emissions would occur. In addition, no air emissions from operation and maintenance of conservation facilities would occur because no facilities for conservation would be constructed.

Impact A4-AQ-1: Windblown dust from fallowed lands. Fallowing of agricultural lands is the water conservation method proposed for Alternative 4. Baseline conditions include approximately 20,000 acres of fallowed lands per year. The potential maximum fallowed acres that might be required each year would include 50,000 acres to create 300 KAFY for transfer, 30,500 acres to create mitigation water for the Salton Sea Habitat Conservation Strategy, and 9,800 acres for the IOP, totaling 90,300 acres. Impacts for Alternative 4 would be similar to those discussed for the Proposed Project. (Potentially significant impact.)

Mitigation Measure A4-AQ-1: Implement BMPs, as described in Mitigation Measure AQ-3. With implementation of one or more of the BMPs, impacts would be less than significant. (Less than significant impact with mitigation.)

Salton Sea Habitat Conservation Strategy (HCP-SS)

Impact A4-HCP-SS-AQ-2: Windblown dust from fallowed lands. As described above and in Section 2.2.6.7, the Salton Sea Habitat Conservation Strategy has been evaluated in this final EIR/EIS with the assumption that mitigation water would be generated by fallowing within the IID water service area. Other sources of water could be used, but they have not been evaluated in this EIR/EIS.

Additional details of the Salton Sea Habitat Conservation Strategy can be found in Section 2.2.6.7.

If fallowing were implemented, impacts would be similar in type to those described under Impact AQ-3. Fallowing to create water for the Salton Sea Habitat Conservation Strategy would be in addition to the up to 300 KAFY for transfer and the 59 KAFY for the IOP. Under Alternative 4 approximately 50,000 acres could be required to create water for transfer, 30,500 acres for the Salton Sea Habitat Conservation Strategy, and 9,800 for the IOP, for a total of approximately 90,300 acres. (Potentially significant impact.)

Mitigation Measure A4-HCP-SS-AQ-2. This impact would be less than significant with implementation of Mitigation Measures AQ-2 and AQ-3. (Less than significant impact with mitigation.)

SALTON SEA

Water Conservation and Transfer

Conservation measures would not be implemented in the Salton Sea subregion. No air quality impacts would be associated with construction of Alternative 4 in this subregion.

No direct air quality impacts would be associated with operation of Alternative 4 in the Salton Sea subregion. Operation of the on-farm conservation measures would not occur in this subregion.

Impact A4-AQ-3: Indirect air quality impacts due to the potential for windblown dust from exposed shoreline. As described above, the impacts and potential for impacts would increase because implementation of the proposed water conservation measures would reduce the volume of water discharged to the Salton Sea. Alternative 4 would result in a projected decline in elevation of the Sea to –241 feet msl, compared to the Baseline elevation of –235 feet msl (a decline of about 5 feet), and expose about 15,800 acres of shoreline. It is anticipated that the Salton Sea level would decrease over time and expose the shoreline even in the absence of implementation of the Proposed Project or its Alternatives. Implementation of Alternative 4 would accelerate the shoreline exposure and result in approximately 50 percent more exposed area compared to the Baseline. With implementation of the Salton Sea Habitat Conservation Strategy, the elevation of the Salton Sea at the end of the Project term (2077) would be about –240 feet msl exposing about 15,100 acres of shoreline compared to the Baseline.

The predicted increase in exposed area would increase the potential for dust suspension. The extent of any potential increases in dust emissions and ambient PM_{10} concentrations in the future is unknown. The impacts from Alternative 4 in the Salton Sea area would be expected to be similar to, but less than for the Proposed Project, because the Sea would be receding at a slower rate, and substantially less area would be exposed. To be conservative, this analysis concludes that windblown dust from exposed shoreline may still result in potentially significant impacts. (Potentially significant and unavoidable impact.)

Mitigation Measure A4-AQ-3. The same mitigation measures described in AQ-7 would be implemented for Alternative 4. (Significant and unavoidable impact with mitigation.)

Impact A4-AQ-4: Potential for decreased water flow and quality to increase odorous impacts in proximity to the Sea. Decreased water flow and quality in the Salton Sea could contribute to the premature death of flora or fauna and/or increase the summertime algae blooms, either or both of which would contribute to odorous emissions. However, because of low population levels around the Sea, it is not likely that "objectionable odors would affect a substantial number of people." This impact is expected to be less than significant. (Less than significant impact.)