

# TABLE OF CONTENTS

## VOLUME I

SECTION	PAGE
ES.0 EXECUTIVE SUMMARY .....	ES-1
ES.1 Existing Facilities .....	ES-2
ES.2 Proposed Project .....	ES-2
ES.2.1 Dust Control Measures .....	ES-3
ES.2.1.1 Shallow Flooding .....	ES-3
ES.2.1.2 Moat & Row .....	ES-3
ES.2.1.3 Study Areas .....	ES-4
ES.2.1.4 Channel Areas .....	ES-4
ES.2.2 Other Project Elements .....	ES-4
ES.2.2.1 Water Supply Conservation .....	ES-4
ES.2.2.2 Water Supply and Conveyance .....	ES-5
ES.2.2.3 Access Roads .....	ES-5
ES.2.2.4 Power Supply .....	ES-5
ES.2.2.5 Water Distribution Facilities .....	ES-6
ES.2.2.6 Staging Areas .....	ES-6
ES.2.2.7 Effectiveness Monitoring Program .....	ES-6
ES.3 Areas of Known Controversy .....	ES-6
ES.4 Issues to be Resolved .....	ES-6
ES.4.1 Property Ownership .....	ES-7
ES.4.2 California Department of Fish and Game Jurisdiction .....	ES-7
ES.5 Potential Impacts found not to be Significant .....	ES-7
ES.6 Summary of Impacts .....	ES-7
ES.7 Project Alternatives .....	ES-29
ES.8 Unavoidable Impacts .....	ES-29
ES.9 Significant Irreversible Environmental Changes .....	ES-29
ES.10 Growth-Inducing Impacts .....	ES-29
1.0 INTRODUCTION .....	1-1
1.1 Purpose and Scope of EIR .....	1-1
1.1.1 Intent of CEQA .....	1-1
1.1.2 Environmental Review Process .....	1-2
1.2 Organization and Content .....	1-4
2.0 PROJECT DESCRIPTION .....	2-1
2.1 Proposed Project Location .....	2-1
2.2 Project Purpose and Need .....	2-2
2.3 Project Background .....	2-3
2.3.1 Areas of Previous Environmental Documentation .....	2-4
2.4 Existing Conditions .....	2-5
2.4.1 Regional Environmental Setting .....	2-5
2.4.2 Local Environmental Settings .....	2-6
2.4.3 Existing Dust Control Areas .....	2-6
2.4.4 Previous Mitigation Areas .....	2-6
2.5 General Plan Land Use and Zoning .....	2-7

2.6	Statement of Project Goals and Objectives .....	2-8
2.6.1	Project Goal .....	2-8
2.6.2	Project Objectives .....	2-8
2.7	Proposed Project .....	2-8
2.7.1	Project Elements .....	2-8
2.7.1.1	Dust Controls Measures .....	2-10
2.7.1.2	Other Project Elements .....	2-16
2.7.2	Construction Scenario.....	2-19
2.8	Intended Uses of the Subsequent EIR.....	2-24
2.9	Related Projects.....	2-26
2.10	Project Alternatives.....	2-27
3.0	EXISTING CONDITIONS, IMPACTS, MITIGATION AND LEVEL OF SIGNIFICANCE AFTER MITIGATION .....	3-1
3.1	Air Quality .....	3.1-1
3.1.1	Regulatory Framework.....	3.1-2
3.1.2	Existing Conditions .....	3.1-9
3.1.3	Significance Thresholds .....	3.1-13
3.1.4	Impact Analysis.....	3.1-15
3.1.5	Mitigation Measures .....	3.1-24
3.1.6	Level of Significance after Mitigation .....	3.1-26
3.2	Biological Resources .....	3.2-1
3.2.1	Regulatory Framework.....	3.2-3
3.2.2	Existing Conditions .....	3.2-8
3.2.3	Significance Thresholds .....	3.2-26
3.2.4	Impact Analysis.....	3.2-26
3.2.5	Mitigation Measures .....	3.2-31
3.2.6	Level of Significance after Mitigation .....	3.2-41
3.3	Cultural Resources.....	3.3-1
3.3.1	Regulatory Framework.....	3.3-2
3.3.2	Existing Conditions .....	3.3-9
3.3.2.1	Paleontological Resources.....	3.3-9
3.3.2.2	Archaeological Resources .....	3.3-10
3.3.2.3	Historical Resources.....	3.3-14
3.3.2.4	Human Remains .....	3-3-17
3.3.3	Significance Thresholds .....	3.3-17
3.3.4	Impact Analysis.....	3.3-18
3.3.4.1	Paleontological Resources.....	3.3-18
3.3.4.2	Archaeological Resources .....	3.3-19
3.3.4.3	Historical Resources.....	3.3-20
3.3.4.4	Human Remains .....	3-3-21
3.3.4.5	Cumulative Impacts .....	3-3-22
3.3.5	Mitigation Measures .....	3.3-23
3.3.6	Level of Significance after Mitigation .....	3.3-28
3.4	Hazards.....	3.4-1
3.4.1	Regulatory Framework.....	3.4-2
3.4.2	Existing Conditions .....	3.4-4
3.4.3	Significance Thresholds .....	3.4-7
3.4.4	Impact Analysis.....	3.4-8
3.4.5	Mitigation Measures .....	3.4-11

	3.4.6	Level of Significance after Mitigation .....	3.4-12
3.5		Hydrology and Water Quality .....	3.5-1
	3.5.1	Regulatory Framework.....	3.5-1
	3.5.2	Existing Conditions .....	3.5-6
	3.5.3	Significance Thresholds .....	3.5-12
	3.5.4	Impact Analysis.....	3.5-13
	3.5.5	Mitigation Measures .....	3.5-19
	3.5.6	Level of Significance after Mitigation .....	3.5-22
3.6		Land Use and Planning.....	3.6-1
	3.6.1	Regulatory Framework.....	3.6-2
	3.6.2	Existing Conditions .....	3.6-5
	3.6.3	Significance Thresholds .....	3.6-6
	3.6.4	Impact Analysis.....	3.6-7
	3.6.5	Mitigation Measures .....	3.6-9
	3.6.6	Level of Significance after Mitigation .....	3.6-9
3.7		Mineral Resources .....	3.7-1
	3.7.1	Regulatory Framework.....	3.7-1
	3.7.2	Existing Conditions .....	3.7-3
	3.7.3	Significance Threshold.....	3.7-3
	3.7.4	Impact Analysis.....	3.7-3
	3.7.5	Mitigation Measures .....	3.7-5
	3.7.6	Level of Significance after Mitigation .....	3.7-6
3.8		Traffic and Transportation .....	3.8-1
	3.8.1	Regulatory Framework.....	3.8-2
	3.8.2	Existing Conditions .....	3.8-3
	3.8.3	Significance Threshold.....	3.8-8
	3.8.4	Impact Analysis.....	3.8-8
	3.8.5	Mitigation Measures .....	3.8-12
	3.8.6	Level of Significance after Mitigation .....	3.8-13
3.9		Utilities and Service Systems .....	3.9-1
	3.9.1	Regulatory Framework.....	3.9-2
	3.9.2	Existing Conditions .....	3.9-3
	3.9.3	Significance Threshold.....	3.9-5
	3.9.4	Impact Analysis.....	3.9-5
	3.9.5	Mitigation Measures .....	3.9-7
	3.9.6	Level of Significance after Mitigation .....	3.9-8
4.0		ALTERNATIVES TO THE PROPOSED PROJECT .....	4-1
4.1		No Project Alternative .....	4-2
	4.1.1	Alternative Components .....	4-3
	4.1.2	Objectives and Feasibility .....	4-3
	4.1.3	Construction Scenario.....	4-3
	4.1.4	Comparative Impacts .....	4-3
4.2		Alternative 1: All Shallow Flooding .....	4-6
	4.2.1	Alternative Components .....	4-6
	4.2.2	Objectives and Feasibility .....	4-6
	4.2.3	Construction Scenario.....	4-6
	4.2.4	Comparative Impacts .....	4-6
4.3		Alternative 2: All Managed Vegetation.....	4-9
	4.3.1	Alternative Components .....	4-9

4.3.2	Objectives and Feasibility .....	4-9
4.3.3	Construction Scenario.....	4-10
4.3.4	Comparative Impacts .....	4-10
4.4	Alternative 3: Gravel Application.....	4-12
4.4.1	Alternative Components .....	4-12
4.4.2	Objectives and Feasibility .....	4-12
4.4.3	Construction Scenario.....	4-13
4.4.4	Comparative Impacts .....	4-13
5.0	UNAVOIDABLE IMPACTS .....	5-1
6.0	SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES RELATED TO IMPLEMENTATION OF THE PROPOSED PROJECT .....	6-1
7.0	GROWTH-INDUCING IMPACTS.....	7-1
8.0	ORGANIZATIONS AND PERSONS CONSULTED .....	8-1
8.1	Public Agencies.....	8-1
8.1.1	Federal .....	8-1
8.1.2	State .....	8-1
8.1.3	Regional .....	8-2
8.1.4	Inyo County.....	8-2
8.1.5	City of Los Angeles .....	8-3
8.2	Private Organizations .....	8-3
9.0	REPORT PREPARATION PERSONNEL .....	9-1
9.1	Great Basin Unified Air Pollution Control District.....	9-1
9.2	Sapphos Environmental, Inc. ....	9-1
9.3	Subconsultants .....	9-2
10.0	REFERENCES.....	10-1
11.0	DISTRIBUTION LIST .....	11-1
11.1	Great Basin Unified Air Pollution Control District.....	11-1
11.2	Federal Agencies .....	11-2
11.3	State Agencies .....	11-3
11.4	Regional Agencies .....	11-4
11.5	Local .....	11-4
11.6	Native American Tribes .....	11-6
11.7	City of Los Angeles.....	11-8
11.8	Other Interested Parties .....	11-8

<b>TABLES</b>		<b>PAGE</b>
ES.6-1	Summary of Significant Impacts .....	ES-8
2.4.4-1	Existing Mitigation Areas .....	2-7
2.7.1-1	Comparison of Proposed Project Elements.....	2-9
2.7.2-1	Temporary Construction Impact Areas .....	2-20
2.7.2-2	Anticipated Construction Equipment and Work Crews.....	2-21
2.8-1	Permit Requirements .....	2-24

3.1.1-1	Ambient Air Quality Standards .....	3.1-4
3.1.2-1	Summary of PM <sub>10</sub> Data .....	3.1-11
3.1.2-2	Summary of PM <sub>2.5</sub> Data.....	3.1-12
3.1.4-1	Construction Emissions.....	3.1-18
3.1.4-2	Diesel Generator Emissions .....	3.1-19
3.1.4-3	Daily Worker Vehicle Emissions.....	3.1-19
3.1.4-4	Construction GHG Emissions .....	3.1-21
3.2.2-1	Plant Communities Present within the Proposed Project Area .....	3.2-11
3.2.2-2	Listed Species with the Potential to Occur within the Proposed Project Area ..	3.2-14
3.2.2-3	Sensitive Wildlife Species with the Potential to Occur within the Proposed Project Area .....	3.2-17
3.2.2-4	Locally Important Species with the Potential to Occur within the Proposed Project Area .....	3.2-22
3.2.2-5	Jurisdictional Wetlands.....	3.2-25
3.2.5-1	Biology-7, Postconstruction Bioaccumulation Monitoring Schedule.....	3.2-36
3.2.5-2	Biology 10, Postconstruction Lake-wide Plover Population Monitoring Schedule .....	3.2-39
3.2.5-3	Biology 12, Schedule of Percent Surface Area Wetted Required to Achieve Level of Control Efficiency after June 30.....	3.2-40
3.3.2.2-1	Previously Recorded Prehistoric Archaeological Sites Located below the Historic Shoreline.....	3.3-11
3.3.2.2-2	Projectile Point Types Represented during the Phase I Archaeological Survey .....	3.3-14
3.5.2-1	Estimated Surface and Groundwater Inflows .....	3.5-10
3.5.2-2	Estimated Surface and Groundwater Outflows .....	3.5-10
3.5.5-1	Daily Monitoring and Reporting Schedule .....	3.5-21
3.8.2-1	Level of Service .....	3.8-6
4-1	Summary of Proposed Project and Alternatives' Ability to Attain Project Objectives.....	4-2

**FIGURES**

**FOLLOWS PAGE**

2.1-1	Regional Vicinity Map .....	2-1
2.1-2	USGS 7.5-Minute Map Index.....	2-1
2.1-3	Project Vicinity Map.....	2-1
2.2-1	Owens Valley Planning Area .....	2-2
2.2-2	Owens Valley Dust Storms .....	2-2
2.3-1	Owens Lake Historic Shoreline.....	2-3
2.3-2	Photograph of Owens Lake Circa 1891.....	2-3
2.3-3	Los Angeles Aqueduct .....	2-3
2.3-4	Sources of PM <sub>10</sub> Emissions .....	2-4
2.3-5	Sensit Grid .....	2-4
2.3-6	2003 SIP Project Area.....	2-4
2.3.1-1	Previous SIP Analysis Areas .....	2-4
2.4.1-1	Bird Habitat.....	2-5
2.4.1-2	Existing Human Settlements: Keeler.....	2-5
2.4.1-3	Cattle Grazing in Project Vicinity.....	2-6
2.4.1-4	Existing Mining Operations.....	2-6
2.4.1-5	Mt. Whitney Golf Club Near Lone Pine .....	2-6

2.4.1-6	Los Angeles Aqueduct West of Owens Lake .....	2-6
2.4.1-7	Dirty Socks Air Monitoring Station.....	2-6
2.4.3-1	Existing Dust Control Measures: Shallow Flooding .....	2-6
2.4.3-2	Existing Dust Control Measures: Managed Vegetation.....	2-6
2.4.3-3	Approved Dust Control Measure: Gravel Cover .....	2-6
2.4.4-1	Existing Mitigation Areas .....	2-7
2.7.1-1	Proposed Project Elements.....	2-8
2.7.1-2	Existing Dust Control Areas .....	2-9
2.7.1.1-1a	Typical Irrigation Layout for Two Blocks of Shallow Flooding.....	2-10
2.7.1.1-1b	Typical Layout for Two Blocks of Ponded Flooding .....	2-10
2.7.1.1-1c	Typical Ponded Flood Details.....	2-10
2.7.1.1-1d	Typical Layout for Two Blocks of Shallow Flooding with Whiplines .....	2-10
2.7.1.1-2	Moat & Row DCM.....	2-10
2.7.1.1-3	Moat & Row Test Sites.....	2-11
2.7.1.1-4	Moat & Row Enhancements.....	2-11
2.7.1.1-5	Typical Irrigation Layout for a 40-Acre Block of Managed Vegetation .....	2-12
2.7.1.1-6	Irrigation Distribution System .....	2-13
2.7.1.2-1	Minimum Dust Control Efficiency Map.....	2-16
2.7.1.2-2	Shallow Flood Control Efficiency Curve.....	2-16
2.7.2-1	Temporary Construction Impact Areas .....	2-19
3.1.2-1	Sensitive Airsheds in the Project Vicinity .....	3.1-10
3.1.2-2	Air Quality Monitoring Stations .....	3.1-11
3.2.2-1	Jurisdictional Wetlands and Waters Survey Areas.....	3.2-10
3.2.2-2	Plant Communities .....	3.2-11
3.2.2-3	Pre-1997 Estimated Snowy Plover Habitat at Owens Lake .....	3.2-19
3.2.2-4	Current Estimated Snowy Plover Habitat at Owens Lake.....	3.2-19
3.2.2-5	Post-2008 Estimated Western Snowy Plover Habitat at Owens Lake .....	3.2-19
3.2.2-6	Proposed Project Area: 2007 Adult Western Snowy Plover Observations.....	3.2-20
3.2.2-7	Proposed Project Area: 2007 Western of Snowy Plover Nests and Broods .....	3.2-20
3.2.2-8	Jurisdictional Waters of the United States Analysis.....	3.2-24
3.2.2-9	CDFG Jurisdictional Waters Analysis .....	3.2-24
3.2.2-10	Nursery Locations.....	3.2-25
3.2.5-1	Conceptual Owens Lake Operational Calendar .....	3.2-40
3.2.5-2	Shallow Flooding Management for the Month of July .....	3.2-40
3.3-1	Cultural Resources Survey Area .....	3.3-1
3.3.2.3-1	Historic Period Resources.....	3.3-15
3.4.2-1	Fertilizer Injection System Locations.....	3.4-4
3.4.2-2	Fertilizer Injection System Tank Layout.....	3.4-4
3.5.2-1	100-year Flood Zone Map .....	3.5-12
3.6.1-1	Existing Land Uses in the Owens Lake Area.....	3.6-2
3.6.2-1	Land Ownership in the Owens Lake Area.....	3.6-6
3.7.2-1	Mineral Resource Lease Areas .....	3.7-3
3.8.2-1	Existing Regional Roadway System .....	3.8-3
3.8.2-2	Existing Roadway Configuration .....	3.8-3
3.8.2-3	Existing Annual Average Daily Traffic Volumes .....	3.8-5
4.2-1	Alternative 1: All Shallow Flooding .....	4-6
4.3-1	Alternative 2: All Managed Vegetation.....	4-9
4.4-1	Alternative 3: Gravel Application.....	4-12

**VOLUME II**

**APPENDICES**

- A NOP, Comment Letters, and Response Matrix
- B 2006 Settlement Agreement
- C Air Quality Technical Memorandum
- D Biological Resources Technical Report
- E Cultural Resources Technical Reports
- F Environmental Records Search: Owens Lake PM, Lone Pine, California
- G Screening Level Ecological Risk Assessment
- H Traffic Study