

Table of Contents

Section	Page No.
1.0 INTRODUCTION AND PROPOSED PROJECT DESCRIPTION.....	1-1
1.1 Purpose and Need/Objectives of the MSHCP	1-3
1.1.1 Purpose and Need (USFWS and BLM).....	1-4
1.1.2 Project Objectives (Permittees)	1-5
1.1.3 Purpose of the Joint EIR/EIS	1-6
1.2 Lead Agencies: CVAG and USFWS	1-7
1.3 Responsible and Cooperating Agencies.....	1-7
1.4 CEQA AND NEPA Requirements	1-8
1.5 MSHCP Planning and Regulatory Environment	1-8
1.6 Summary of the Proposed Project and Relationship to Other Plans.....	1-13
1.7 Public Participation and Scoping Process.....	1-18
1.8 Environmental Issues Analyzed in the EIR/EIS	1-20
1.9 Regional Project Location.....	1-20
2.0 MSHCP PROPOSED PROJECT AND ALTERNATIVES.....	2-1
2.1 Introduction.....	2-1
2.2 Development of the Proposed MSHCP	2-2
2.3 Covered Species and Natural Communities.....	2-4
2.4 Species Considered but Not Covered by the MSHCP	2-6
2.5 Proposed Action/Preferred Alternative (MSHCP).....	2-7
2.5.1 MSHCP Reserve System	2-8
2.5.2 Conservation Areas.....	2-9
2.5.3 Review of Development Proposals in Conservation Areas	2-10
2.5.4 MSHCP Costs and Funding	2-10
2.5.5 Proposed MSHCP Implementation.....	2-12
2.5.6 Plan/Permit Amendments and Boundary Adjustments.....	2-13
2.5.7 Take Authorization for Covered Activities.....	2-13
2.5.7.1 Summary of Covered Activities outside Conservation Areas	2-13
2.5.7.2 Transportation and O&M Projects within and outside Conservation Areas	2-14
2.5.7.3 Activities within Conservation Areas	2-17
2.6 Public Lands Alternative	2-51
2.7 Core Habitat with Ecological Processes Alternative	2-55
2.8 Enhanced Conservation Alternative	2-58
2.9 No Action/No Project Alternative	2-63
2.10 Alternatives Considered and Eliminated from Further Review	2-64
2.11 Public Access and Use Alternatives	2-65
2.11.1 Public Access and Use Alternatives for the Santa Rosa and San Jacinto Mountains Conservation Area	2-65
2.11.2 Public Access and Use Alternatives in Other Conservation Areas.....	2-85

Table of Contents

Section	Page No.
3.0 REGIONAL ENVIRONMENTAL SETTING/AFFECTED ENVIRONMENT	3-1
3.1 Topography and Climate	3-1
3.1.1 Topography.....	3-1
3.1.2 Climate.....	3-2
3.2 Existing Land Use and Surrounding Land Use.....	3-3
3.2.1 Existing Land Use.....	3-3
3.2.2 Surrounding Land Use.....	3-14
3.3 Transportation, Traffic, and Circulation	3-15
3.4 Soils and Geology	3-24
3.5 Mineral, Energy, and Timber Resources	3-42
3.5.1 Mineral Resources	3-42
3.5.2 Energy Resources	3-46
3.5.3 Timber Resources	3-48
3.6 Agricultural Lands and Activities.....	3-48
3.7 Hydrology and Water Resources	3-52
3.7.1 Flooding and Hydrology.....	3-52
3.7.2 Water Quality/Resources	3-58
3.8 Biological Resources	3-78
3.9 Cultural Resources and Native American Concerns.....	3-87
3.10 Parks, Trails, and Recreation	3-96
3.11 Air Quality	3-113
3.12 Noise	3-122
3.13 Visual and Scenic (Aesthetic) Resources	3-131
3.14 Utilities/Public Services and Facilities	3-133
3.15 Socioeconomic Resources	3-145
3.16 Environmental Justice and Children	3-154
3.17 Hazardous and Toxic Wastes.....	3-161
4.0 ENVIRONMENTAL CONSEQUENCES AND MITIGATION MEASURES	4.1-1
4.1 Introduction and Summary of Analysis	4.1-1
4.2 Land Use Compatibility	4.2-1
4.2.1 Introduction and Background	4.2-1
4.2.2 Thresholds of Significance/Criteria for Determining Significance for CEQA Analysis.....	4.2-6
4.2.3 Land-Use-Related Project Impacts	4.2-6
4.2.4 Land-Use-Related Mitigation Measures	4.2-14
4.2.5 Levels of Significance after Mitigation for the CEQA Analysis	4.2-17
4.3 Transportation, Traffic, and Circulation	4.3-1
4.3.1 Introduction and Background	4.3-1

Table of Contents

Section	Page No.
4.3.2	Thresholds of Significance/Criteria for Determining Significance for CEQA Analysis 4.3-5
4.3.3	Project Impacts to Transportation, Traffic, and Circulation 4.3-6
4.3.4	Transportation-, Traffic-, and Circulation-Related Mitigation Measures 4.3-14
4.3.5	Levels of Significance after Mitigation for CEQA Analysis 4.3-15
4.4	Mineral, Energy, and Timber Resources 4.4-1
4.4.1	Introduction and Background 4.4-1
4.4.2	Thresholds of Significance/Criteria for Determining Significance for CEQA Analysis 4.4-1
4.4.3	Project Impacts on Timber, Mineral, and Energy Resources 4.4-2
4.4.4	Mitigation Measures 4.4-9
4.4.5	Levels of Significance after Mitigation for CEQA Analysis 4.4-10
4.5	Agricultural Resources 4.5-1
4.5.1	Introduction and Background 4.5-1
4.5.2	Thresholds of Significance/Criteria for Determining Significance for CEQA Analysis 4.5-1
4.5.3	Project Impacts to Agricultural Resources 4.5-1
4.5.4	Agriculture-Related Mitigation Measures for all Alternatives 4.5-8
4.5.5	Levels of Significance after Mitigation for CEQA Analysis 4.5-8
4.6	Hydrology and Water Quality 4.6-1
4.6.1	Introduction and Background 4.6-1
4.6.2	Thresholds of Significance/Criteria for Determining Significance for CEQA Analysis 4.6-2
4.6.3	Hydrology- and Water-Quality-Related Project Impacts 4.6-3
4.6.4	Hydrology- and Water-Quality-Related Mitigation Measures 4.6-11
4.6.5	Levels of Significance after Mitigation for CEQA Analysis 4.6-11
4.7	Biological Resources 4.7-1
4.7.1	Introduction and Background 4.7-1
4.7.2	Thresholds of Significance/Criteria for Determining Significance for CEQA Analysis 4.7-1
4.7.3	Biological-Resources-Related Project Impacts 4.7-2
4.7.4	Mitigation Measures 4.7-125
4.7.5	Levels of Significance after Mitigation for CEQA Analysis 4.7-126
4.8	Socioeconomic Resources: Population, Housing, and Employment 4.8-1
4.8.1	Introduction and Background 4.8-1
4.8.2	Thresholds of Significance/Criteria for Determining Significance for CEQA Analysis 4.8-5
4.8.3	Population-, Housing-, and Employment-Related Project Impacts 4.8-6
4.8.4	Mitigation Measures 4.8-30
4.8.5	Levels of Significance after Mitigation for CEQA Analysis 4.8-31

Table of Contents

Section	Page No.
4.9	Effects Found Not to Be Significant..... 4.9-1
4.9.1	Soils and Geology 4.9-1
4.9.2	Cultural Resources and Native American Concerns..... 4.9-2
4.9.3	Parks, Trails, and Recreation 4.9-10
4.9.4	Air Quality 4.9-12
4.9.5	Noise 4.9-16
4.9.6	Visual/Scenic Resources..... 4.9-17
4.9.7	Utilities/Public Services and Facilities 4.9-19
4.9.8	Environmental Justice and Children 4.9-24
4.9.9	Hazards and Hazardous Materials 4.9-28
5.0	SANTA ROSA AND SAN JACINTO MOUNTAINS TRAILS PLAN: ENVIRONMENTAL CONSEQUENCES AND MITIGATION MEASURES..... 5-1
5.1	Introduction and Summary of Alternatives..... 5-1
5.2	Land Use Compatibility for the Santa Rosa and San Jacinto Mountains Trails Plan..... 5-12
5.2.1	Introduction and Background 5-12
5.2.2	Thresholds of Significance/Criteria for Determining Significance for CEQA Analysis 5-12
5.2.3	Land-Use-Related Project Impacts 5-12
5.2.4	Land-Use-Related Mitigation Measures 5-15
5.2.5	Levels of Significance after Mitigation for CEQA Analysis 5-15
5.3	Biological Resources and the Santa Rosa and San Jacinto Mountains Trails Plan..... 5-15
5.3.1	Introduction and Background 5-15
5.3.2	Thresholds of Significance/Criteria for Determining Significance for CEQA Analysis 5-16
5.3.3	Biological-Resource-Related Project Impacts 5-16
5.3.3.1	Proposed Trails Plan (Alternative A)..... 5-16
5.3.3.2	Trails Plan Alternative B 5-25
5.3.3.3	Trails Plan Alternative C (No Action Alternative)..... 5-34
5.3.4	Biological Mitigation for Impacts..... 5-40
5.3.5	Levels of Significance after Mitigation for CEQA Analysis 5-49
5.4	Cultural Resources and Native American Concerns for the Proposed Santa Rosa and San Jacinto Mountains Trails Plan 5-49
5.4.1	Introduction and Background 5-49
5.4.2	Thresholds of Significance/Criteria for Determining Significance for CEQA Analysis 5-53

Table of Contents

Section	Page No.
5.4.3	Cultural-Resource-Related Project Impacts..... 5-56
5.4.3.1	Public Use and Trails in the Santa Rosa and San Jacinto Mountains 5-56
5.4.4	Cultural-Resource-Related Mitigation Measures for CEQA Analysis 5-64
5.4.5	Levels of Significance after Mitigation for CEQA Analysis 5-65
5.5	Parks, Trails, and Recreation for the Santa Rosa and San Jacinto Mountains Trails Plan..... 5-66
5.5.1	Introduction and Background 5-66
5.5.2	Thresholds of Significance/Criteria for Determining Significance for CEQA Analysis 5-66
5.5.3	Parks, Trails, and Recreation-Related Project Impacts 5-67
5.5.3.1	Proposed Trail Plan (Alternative A) 5-67
5.5.3.2	Alternative B..... 5-74
5.5.3.3	Alternative C (No Action Alternative) 5-78
5.5.4	Parks, Trails, and Recreation-Related Mitigation Measures..... 5-80
5.5.5	Levels of Significance after Mitigation 5-81
5.6	Visual/Scenic Resources 5-81
5.6.1	Introduction and Background 5-81
5.6.2	Thresholds of Significance/Criteria for Determining Significance for CEQA Analysis 5-82
5.6.3	Visual/Scenic-Resources-Related Project Impacts 5-85
5.6.4	Visual/Scenic-Resources-Related Mitigation Measures for CEQA Analysis..... 5-86
5.6.5	Levels of Significance after Mitigation for CEQA Analysis 5-89
6.0	UNAVOIDABLE SIGNIFICANT IMPACTS..... 6-1
6.1	Land Use Compatibility 6-2
6.2	Biological Resources 6-3
6.3	Traffic and Circulation..... 6-4
6.4	Flooding and Hydrology 6-4
6.5	Socio-Economic Resources 6-5
7.0	SHORT-TERM USE VERSUS LONG-TERM PRODUCTIVITY 7-1
8.0	IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF ENVIRONMENTAL RESOURCES..... 8-1
9.0	GROWTH-INDUCING AND CUMULATIVE IMPACTS 9-1
9.1	Introduction..... 9-1
9.2	Development Context in Assessing Cumulative and Growth-Inducing Impacts..... 9-5

Table of Contents

Section	Page No.
9.3	Cumulative Impacts to Land Use Compatibility..... 9-11
9.4	Cumulative Impacts to Transportation, Traffic, and Circulation..... 9-14
9.5	Cumulative Impacts to Mineral, Energy, and Timber Resources 9-17
9.6	Cumulative Impacts to Agricultural Lands and Activities..... 9-19
9.7	Cumulative Impacts to Hydrology and Water Quality 9-21
9.7.1	Cumulative Impacts to Flooding and Hydrology..... 9-21
9.7.2	Cumulative Impacts to Water Resources/Quality 9-25
9.8	Cumulative Impacts to Biological Resources 9-29
9.9	Cumulative Impacts to Cultural Resources and Native American Concerns 9-44
9.10	Cumulative Impacts to Parks Trails and Recreation 9-45
9.11	Cumulative Impacts to Air Quality..... 9-48
9.12	Cumulative Impacts to Noise..... 9-48
9.13	Cumulative Impacts to Visual/Scenic Resources..... 9-49
9.14	Cumulative Impacts to Utilities/Public Services and Facilities 9-49
9.15	Cumulative Impacts to Socioeconomic Resources: Population, Housing, and Employment 9-50
9.16	Cumulative Impacts to Environmental Justice and Children..... 9-51
9.17	Growth-Inducing Impacts 9-52
10.0	ORGANIZATIONS, PERSONS, AND DOCUMENTS CONSULTED 10-1
10.1	Introduction..... 10-1
10.2	Project Proponents 10-1
10.3	Planning/Environmental Consultant 10-1
10.4	Biological Consultants/Trails Plan 10-2
10.5	Cultural Consultants/Trails Plan 10-2
10.6	County of Riverside..... 10-2
10.7	Cities 10-3
10.8	Utilities 10-3
10.9	Public and Quasi-Public Agencies..... 10-3
10.10	Organizations and Interested Parties..... 10-4
10.11	Documents 10-4
10.12	References..... 10-12

LIST OF APPENDICES

Appendix A	Notice of Preparation
Appendix B	NEPA Notice of Intent and Responses to NOI
Appendix C	Santa Rosa and San Jacinto Mountains Trails Plan
Appendix D	Geotechnical Background Report
Appendix E	Water Resources Background Report

Table of Contents

Section	Page No.
Appendix F	Cultural Resources Background Report
Appendix G	Visual Contrast Ratings for New Trail Construction
Appendix H	General Plan Goals, Objectives, Policies, and Programs of Counties and Cities Permittees
Appendix I	Actual and Potential Use of Trails Subject to the Santa Rosa and San Jacinto Mountains Trails Plan
Appendix J	Economic/Fiscal Impact Analysis Summary Report
Appendix K	Covered Activities under the Coachella Valley Multiple Species Habitat Conservation Plan, Natural Community Conservation Plan, and Santa Rosa and San Jacinto Mountains Trails Plan
Appendix L	Air Quality Background Report and Clean Air Act Conformity Analysis

LIST OF TABLES

E-1	Coachella Valley MSHCP EIR/EIS Environmental Summary/Matrix	ESM-1
E-2	Santa Rosa and San Jacinto Mountains Trails Plan Environmental Summary/Matrix	ESM-6
2-1	Species Proposed to Be Covered under the Plan	2-5
2-2	Natural Communities Covered by the Plan	2-6
2-3	Species Considered but Not Covered by the Plan	2-6
2-4	MSHCP Reserve System Lands	2-9
2-5	Public Lands Alternative Compared to Proposed Action/Preferred Alternative Species Habitat Conserved	2-53
2-6	Public Lands Alternative – Summary of MSHCP Reserve System Lands	2-54
2-7	Summary of Core Habitat/Ecological Process Alternative MSHCP Reserve System Lands ...	2-57
2-8	Core Habitat/Ecological Processes Alternative Compared to Proposed Action/Preferred Alternative Species Habitat Conserved	2-57
2-9	Enhanced Conservation Alternative: Summary of MSHCP Reserve System Lands	2-60
2-10	Enhanced Conservation Alternative Compared to Proposed Action/ Preferred Alternative Species Habitat Conserved	2-60
2-11	Comparison of Trails Plan Alternatives	2-65
3-1	Land Ownership in the MSHCP Plan Area	3-5
3-2	Land Use Designations in the Plan Area	3-9
3-3	Land Use Planning Summary: Land Use Plans Encompassing the Plan Area	3-10
3-4	Geologic Units in the Coachella Valley	3-25
3-5	Abridged Modified Mercalli Intensity Scale	3-38
3-6	Important Major Drainages MSHCP Plan Area	3-57
3-7	Groundwater in Storage in the Coachella Valley Groundwater Basin	3-59
3-8	Historical Water Demand in the Coachella Valley, 1936–1999	3-65

Table of Contents

Section	Page No.
3-9	Comparison of Historical Inflows and Outflows in the Coachella Valley, 1936–1999 3-67
3-10	Annual Historical Water Production, Mission Creek Subbasin 3-70
3-11	Mineral Analysis of Representative Surface Waters 3-75
3-12	Natural Communities Covered by the Plan 3-86
3-13	Municipal Parks in the Coachella Valley 3-101
3-14	State and Federal Ambient Air Quality Standards 3-114
3-15	Coachella Valley Air Quality Trends Exceedances of Ozone Standards 3-118
3-16	Coachella Valley Air Quality Trends Exceedances of PM ₁₀ Standards 3-120
3-17	Land Use Compatibility for Community Noise Environment 3-124
3-18	Existing Noise Contours along Major Roadways in the MSHCP Plan Area 3-126
3-19	Population Trends for Coachella Valley Cities, 1980–2000 3-145
3-20	Ethnicity in Coachella Valley Cities, 2000 3-146
3-21	Coachella Valley Jobs by Sector, 1991–1999 3-148
3-22	Median Household Income in the Coachella Valley, 1990–1998 3-150
3-23	Agricultural Profile for Riverside County, 1987–1997 3-151
3-24	Gross Value of Agricultural Production in Riverside County, by Commodity Groups, 1995–2000 3-152
3-25	Hotel/Motel Trends in the Coachella Valley, 1995–1999 3-153
3-26	Racial Composition of the MSHCP Plan Area, 2000 3-157
3-27	Comparison of Income Levels in the MSHCP Plan Area, 2000 3-158
3-28	Children in MSHCP Plan Area, 2000 3-160
4-1	Land Use Designations on Private Lands in Conservation Areas 4.2-5
4-2	Summary of Transportation-Related Impacts by Alternative 4.3-13
4-3	Summary of Impact by Alternative Energy and Mineral Resources 4.4-9
4-4	Agricultural Resources Summary of Impact by Alternative 4.5-8
4-5	MSHCP Plan Area: Mineral Analysis of Representative Surface Waters 4.6-6
4-6	Hydrology and Water Quality Summary of Impact by Alternative 4.6-11
4-7	Total Assessed Valuation per City Fiscal Year 2003–2004 4.8-2
4-8	Total Developable Lands in the Plan Area 4.8-4
4-9	Acreage and Potential Cash Flow at Buildout of Developable Conservation Lands by Jurisdiction 4.8-7
4-10	Cathedral City Land Uses within and outside Conservation Areas 4.8-9
4-11	City of Coachella Land Uses within and outside Conservation Areas 4.8-10
4-12	Desert Hot Springs Land Uses within and outside Conservation Areas 4.8-11
4-13	Indian Wells Land Uses within and outside Conservation Areas 4.8-12
4-14	Indio Land Uses within and outside Conservation Areas 4.8-13
4-15	La Quinta Land Uses within and outside Conservation Areas 4.8-14
4-16	Palm Desert Land Uses within and outside Conservation Areas 4.8-15
4-17	Palm Springs Land Uses within and outside Conservation Areas 4.8-16

Table of Contents

Section	Page No.
---------	----------

4-18	Rancho Mirage Land Uses within and outside Conservation Areas	4.8-18
4-19	Riverside County Land Uses within and outside Conservation Areas	4.8-19
4-20	Potential Impacts to Residential Lands in the Plan Area.....	4.8-20
4-21	Potential Impacts to Commercial Lands in the Plan Area.....	4.8-21
4-22	Potential Impacts to Industrial Lands in the Plan Area	4.8-21
4-23	Medium- to High-Density Residential Lands in the Plan Area.....	4.8-22
4-24	Racial Composition of the Plan Area, 2000	4.9-25
5-1	Comparison of Management Prescriptions for Specific Trails	5-10
9-1	Developable Status of Residential Lands in the Planning Area	9-6
9-2	Developable Status of Commercial Lands in the Planning Area	9-7
9-3	Developable Status of Industrial Lands in the Planning Area.....	9-7
9-4	Coachella Valley MSHCP Population Growth Trends	9-9
9-5	Coachella Valley MSHCP Household Growth Trends	9-10
9-6	Coachella Valley MSHCP Employment Growth Trends.....	9-10
9-7	CV MSHCP/Preferred Alternative (A) Trip Generation Potential by Land Use Type	9-15
9-8	Demand for Water Resources MSHCP Proposed Action/Preferred Alternative.....	9-27

LIST OF EXHIBITS

1-1	Regional Context Map.....	1-21
1-2	Project Boundary Map.....	1-22
2-2	Alternative 1	2-52
2-3	Alternative 2	2-56
2-4	Alternative 3	2-59
3-1	Current Land Ownership in the Plan Area	3-7
3-2	Future Land Use Without the Plan	3-8
3-3	Wind Erosion Susceptibility Map	3-30
3-4	Alquist-Priolo Earthquake Fault Zone.....	3-33
3-5	Mean Annual Rainfall	3-53
3-6	Groundwater Basin Subdivisions	3-60
3-7	Land Status as of June 2003	3-82
3-8	Major Utility Transmission Lines	3-137
4-1	Additional CalTrans Projects	4.3-2
4-2a	Regional Roads (TPPS).....	4.3-3
4-3	Wind Energy Potential	4.4-7
4-4	Important Farmlands	4.5-4

Table of Contents

Section	Page No.
4-4a	Agricultural Land in the Conservation Areas Proposed Action/Preferred Alternative4.5-6
4-5	Natural Communities and Development4.7-3
5-1	Santa Rosa and San Jacinto Mountains Trails Plan – West Trails Plan Area5-2
5-2	Santa Rosa and San Jacinto Mountains Trails Plan – Palm Hills Study Area.....5-3
5-3	Santa Rosa and San Jacinto Mountains Trails Plan – Middle Trails Plan Area5-4
5-4	Santa Rosa and San Jacinto Mountains Trails Plan – East Trails Plan Area.....5-5
5-5	Santa Rosa and San Jacinto Mountains Trails Plan – Palm Desert to La Quinta Cove Connector Trail Alternatives5-6