

**MRWTP Phase Two Expansion Project
Subsequent
Environmental Impact Report
Public Review Draft**

SCH Number: 2004022013

Prepared for:

Modesto Irrigation District
1231 Eleventh Street
Modesto, CA 95354
Contact: Greg Dias 209/526-7566

and

City of Modesto
1010 Tenth Street, Suite 4600
Modesto, CA 95353
Contact: Craig A. Scott 209/571-5149

Prepared by:

Jones & Stokes
268 Grand Avenue
Oakland, CA 94610-4724
Contact: Michael Murrell Stevenson 510/433-8962

November 2004

Contents

	Page
Tables	vii
Figures	x
Acronyms and Abbreviations	xii
Executive Summary	xv
Introduction	xv
Project Overview.....	xv
Project Area	xv
Project Background	xvi
Project Objectives and Need	xvii
Areas of Known Controversy	xix
Key Issues and Significant Impacts	xx
Water Transfer	xx
Agriculture.....	xxi
Aesthetics	xxi
Air Quality	xxi
Noise.....	xxii
Growth Inducement	xxii
Alternatives Considered.....	xxii
No Project Alternative	xxiii
Delayed Alternative.....	xxiii
Alternative Water Storage Tank Sites.....	xxiii
Alternative Main Pipeline Alignments	xxiii
Environmentally Superior Alternatives.....	xxiv
Summary of Impacts and Mitigation Measures and Levels of Significance	xxiv
Chapter 1 Introduction	1-1
Purpose of the Environmental Impact Report.....	1-1
CEQA EIR Process.....	1-3
Subsequent EIR.....	1-3
Initial Study and Notice of Preparation	1-3
Draft SEIR.....	1-3
Public Review	1-4
Final EIR and EIR Certification	1-4
Mitigation Monitoring and Reporting	1-5
Terminology Used in this SEIR.....	1-5
SEIR Organization	1-6

Chapter 2	Project Description.....	2-1
	Introduction	2-1
	Project Area	2-1
	Background.....	2-1
	Proposed Project	2-3
	Project Objectives and Need	2-3
	Phase Two Project Facilities.....	2-4
	Construction.....	2-15
	Operations	2-19
	Water Transfer	2-21
	Use of the 1990 MRWTP EIR.....	2-22
	Alternatives to the Proposed Project	2-22
	Environmental Commitments.....	2-23
	General Construction Measures	2-23
	Pipeline Installation in Intersections.....	2-24
	Air Quality	2-24
	Water Quality Protection Measures	2-26
	Noise-Reducing Construction Practices	2-27
	Paleontological Resources	2-28
	Hazardous Materials Phase 1 Site Assessment.....	2-28
	Construction Screening	2-29
	Site Design	2-29
	Traffic Control Plan	2-31
	Uses of this EIR	2-33
Chapter 3.0	Environmental Analysis	3.0-1
	Introduction.....	3.0-1
	Significance of Environmental Impacts	3.0-1
Chapter 3.1	Aesthetics and Visual Resources	3.1-1
	Introduction	3.1-1
	Relevant Project Characteristics.....	3.1-2
	Environmental Setting.....	3.1-2
	Visual Character of Project Region.....	3.1-2
	Aesthetic Value of Project Sites.....	3.1-3
	Regulatory Framework	3.1-9
	Local Regulations	3.1-9
	Environmental Analysis	3.1-10
	Criteria for Determining Significance	3.1-10
	Methods and Assumptions	3.1-11
	Environmental Impacts—Proposed Project	3.1-11
Chapter 3.2	Agricultural Resources	3.2-1
	Introduction	3.2-1
	Relevant Project Characteristics.....	3.2-1
	Environmental Setting.....	3.2-1
	Regulatory Framework	3.2-6
	State Regulations	3.2-6
	Local Regulations	3.2-8
	Environmental Analysis	3.2-8
	Criteria for Determining Significance	3.2-8

	Environmental Impacts—Proposed Project	3.2-9
Chapter 3.3	Air Quality.....	3.3-1
	Introduction	3.3-1
	Relevant Project Characteristics	3.3-1
	Environmental Setting.....	3.3-1
	Regional Climate and Meteorology.....	3.3-2
	Criteria Pollutants and Local Air Quality	3.3-2
	Sensitive Land Uses	3.3-5
	Regulatory Framework	3.3-6
	Federal Regulations.....	3.3-6
	State Regulations	3.3-6
	Local Regulations	3.3-7
	Toxic Air Contaminants.....	3.3-8
	Environmental Analysis	3.3-8
	Criteria for Determining Significance	3.3-8
	Methods and Assumptions	3.3-9
	Environmental Impacts—Proposed Project	3.3-9
Chapter 3.4	Water Resources	3.4-1
	Introduction	3.4-1
	Relevant Project Characteristics.....	3.4-1
	Modesto Irrigation District	3.4-1
	City of Modesto.....	3.4-1
	Environmental Setting.....	3.4-2
	Water Supply and Demand Setting	3.4-2
	Hydrology.....	3.4-5
	Water Quality	3.4-7
	Regulatory Framework	3.4-8
	Federal Regulations.....	3.4-8
	State Regulations	3.4-9
	Local Regulations	3.4-13
	Environmental Analysis	3.4-15
	Criteria for Determining Significance	3.4-15
	Environmental Impacts—Proposed Project	3.4-16
Chapter 3.5	Noise	3.5-1
	Introduction	3.5-1
	Terminology	3.5-1
	Relevant Project Characteristics.....	3.5-2
	Environmental Setting.....	3.5-3
	Ambient Noise Environment	3.5-3
	Noise-Sensitive Receptors	3.5-3
	Regulatory Framework	3.5-4
	State Regulations	3.5-4
	Local Regulations	3.5-4
	Other Relevant Criteria	3.5-6
	Environmental Analysis	3.5-7
	Criteria for Determining Significance	3.5-7
	Methods and Assumptions	3.5-8
	Environmental Impacts—Proposed Project	3.5-8

Chapter 3.6	Population and Housing	3.6-1
	Introduction	3.6-1
	Relevant Project Characteristics.....	3.6-1
	Environmental Setting.....	3.6-1
	Regulatory Framework	3.6-2
	Local Regulations	3.6-2
	Environmental Analysis	3.6-2
	Criteria for Determining Significance	3.6-2
	Environmental Impacts—Proposed Project	3.6-3
Chapter 3.7	Recreation	3.7-1
	Introduction	3.7-1
	Relevant Project Characteristics.....	3.7-1
	Modesto Irrigation District	3.7-1
	City of Modesto	3.7-1
	Environmental Setting.....	3.7-2
	Regulatory Framework	3.7-2
	Environmental Analysis	3.7-2
	Criteria for Determining Significance	3.7-2
	Environmental Impacts—Proposed Project	3.7-3
Chapter 3.8	Cultural Resources	3.8-1
	Introduction	3.8-1
	Relevant Project Characteristics.....	3.8-1
	Environmental Setting.....	3.8-1
	Prehistoric Setting.....	3.8-1
	Ethnographic Setting	3.8-3
	Historic Context	3.8-5
	Methods	3.8-7
	Regulatory Framework	3.8-13
	State Regulations	3.8-13
	Local Regulations	3.8-15
	Environmental Analysis	3.8-16
	Criteria for Determining Significance	3.8-16
	Environmental Impacts—Proposed Project	3.8-19
Chapter 3.9	Biological Resources	3.9-1
	Introduction	3.9-1
	Environmental Setting.....	3.9-1
	Methods	3.9-1
	Existing Conditions	3.9-5
	Regulatory Framework	3.9-11
	Federal Regulations.....	3.9-11
	State Regulations	3.9-13
	Local Regulations	3.9-14
	Environmental Analysis	3.9-15
	Criteria for Determining Significance	3.9-16
	Assumptions and Mechanisms	3.9-17
	Environmental Impacts—Proposed Project	3.9-18

Chapter 3.10	Transportation	3.10-1
	Introduction	3.10-1
	Terminology	3.10-1
	Relevant Project Characteristics.....	3.10-2
	Environmental Setting.....	3.10-2
	Regional Setting	3.10-2
	Local Setting	3.10-3
	Regulatory Framework	3.10-9
	Local Regulations	3.10-9
	Environmental Analysis	3.10-11
	Criteria for Determining Significance	3.10-11
	Environmental Impacts—Proposed Project	3.10-13
Chapter 4.0	Other CEQA Considerations.....	4.0-1
	Introduction	4.0-1
Chapter 4.1	Irreversible Impacts.....	4.1-1
	Significant Irreversible Environmental Changes	4.1-1
	Significant and Unavoidable Impacts.....	4.1-2
Chapter 4.2	Growth-Inducing Impacts	4.2-1
	Purpose of Growth Inducing Impact Analysis	4.2-1
	Modesto Urban Area General Plan.....	4.2-1
	Overview and Scope.....	4.2-1
	Growth-Inducing Impact Mitigation in the Modesto Urban Area General Plan	4.2-2
	Growth-Related Impacts of the Proposed Project	4.2-3
	Direct Impacts	4.2-3
	Indirect Impacts	4.2-4
Chapter 4.3	Cumulative Impacts.....	4.3-1
	Legal Requirements for Analysis of Cumulative Impacts	4.3-1
	Methods Used in this Analysis.....	4.3-2
	Cumulative Impact Analysis.....	4.3-3
	Agricultural Resources.....	4.3-3
	Air Quality	4.3-5
	Water Resources	4.3-7
	Noise.....	4.3-9
	Biological Resources	4.3-10
	Transportation and Circulation.....	4.3-11
	MID versus City Cumulative Impacts.....	4.3-12
Chapter 5	Alternatives	5-1
	Introduction	5-1
	1990 EIR Alternatives	5-2
	Phase Two Alternatives	5-3
	Alternatives Considered, but Dismissed from Further Consideration.....	5-4
	Alternatives Considered.....	5-4
	No Project Alternative	5-4
	Delayed Alternative.....	5-8

	Alternative MRWTP Expansion Options	5-10
	Alternative Water Storage Tank Sites.....	5-11
	Alternative Main Pipeline Alignments	5-10
	Environmentally Superior Alternative.....	5-11
	MRWTP Expansion Options	5-12
	Water Storage Tank Sites.....	5-13
	Main Pipeline Alignments	5-13
Chapter 6	Water Transfer Petition Information	6-1
Chapter 7	Report Preparation	7-1
	Lead Agencies	7-1
	Draft SEIR Authors	7-1
Chapter 8	References Cited	8-1
	Printed References	8-1
	Personal Communications.....	8-10
Appendix A.	Notice of Preparation and Initial Study	
Appendix B.	Comment Letters Received on the Notice of Preparation and Initial Study	
Appendix C.	Significant Impacts and Mitigations, Alternative A3, Modesto Surface Water Treatment Plant	
Appendix D.	Visual Analysis Concepts and Definitions	
Appendix E.	Water Supply Modeling	
Appendix F.	Background Information on Acoustics	
Appendix G.	City of Modesto Noise Policies	

Tables

	Page
ES-1. Summary of Impacts and Mitigation Measures.....	follows xxiv
2-1 San Joaquin Valley Unified Air Pollution Control District Regulation VIII Control Measures for Construction Emissions of PM-10.....	2-25
2-2 Summary of Local, State, and Federal Discretionary Actions.....	2-33
3.1-1 Visual Resources and Sources of Light and Glare at Proposed Reservoir Sites.....	3.1-5
3.1-2 Residential Views of Proposed Reservoir Sites.....	3.1-8
3.1-3 Summary of Impacts and Mitigation Measures, Aesthetics.....	follows 3.1-12
3.2-1 Summary of Impacts and Mitigation Measures, Agricultural Resources.....	follows 3.2-12
3.3-1 Ambient Air Quality Standards Applicable in California.....	follows 3.3-2
3.3-2 Ambient Air Quality Monitoring Data from 14th Street, Modesto.....	follows 3.3-4
3.3-3 Summary of Impacts and Mitigation Measures, Air Quality....	follows 3.3-14
3.4-1 Joint Service Area Water Demand Projections.....	3.4-4
3.4-2 BMP Expected Pollutant Removal Efficiency.....	3.4-12
3.4-3 Average Changes in Don Pedro Reservoir Storage, Proposed Project Minus Baseline Conditions (in thousands of acre feet and percent).....	3.4-19

3.4-4	Average Changes in Tuolumne River Releases from LaGrange Dam, Proposed Project Minus Baseline Conditions (in average cubic feet per second and percent of flow)	3.4-20
3.4-5	Summary of Impacts and Mitigation, Water Resources.....	follows 3.4-28
3.5-1	State Land Use Compatibility Standards for Community Noise Environment	follows 3.5-4
3.5-2	Federal Transit Administration Suggested Construction Noise Criteria	3.5-7
3.5-3	Construction Equipment Noise Emission Levels	3.5-10
3.5-4	Estimated Construction Noise in the Vicinity of an Active Construction Site	3.5-11
3.5-5	Summary of Impacts and Mitigation Measures, Noise	follows 3.5-14
3.6-1	Summary of Impacts and Mitigation Measures, Population, Employment and Housing.....	follows 3.6-4
3.7-1	Summary of Impacts and Mitigation Measures, Recreation	follows 3.7-4
3.8-1	Summary of Impacts and Mitigation Measures, Cultural Resources.....	follows 3.8-24
3.9-1	Special-Status Plant Species Identified During the Prefield Investigation as Potential Occurring in the Project Area.....	follows 3.9-4
3.9-2	Special-Status Wildlife Species Identified During the Prefield Investigation as Potential Occurring in the Project Area	follows 3.9-4
3.9-3	Summary of Biological Communities Located on each Project Components	follows 3.9-6
3.9-4	Summary of Impacts and Mitigation Measures, Biological Resources.....	follows 3.9-26
3.10-1	Regional State Routes and AADT	3.10-4
3.10-2	Roadway Characteristics in the Vicinity of the Proposed Project	3.10-4
3.10-3	LOS Description.....	3.10-6
3.10-4	Existing Roadway Segment PM Peak Hour LOS	3.10-8

3.10-5 Roadway PM Peak Hour LOS During Pipeline Construction.....3.10-16

3.10-6 Summary of Impacts and Mitigation Measures,
Transportation..... follows 3.10-22

4.3-1 Key Planning Documents Used in Cumulative Impacts
Analysis follows 4.3-4

4.3-2 Principal Impaired Water Bodies in Stanislaus County..... 4.3-8

4.3-3 Summary of Cumulative Impacts and Mitigation Measures... follows 4.3-12

5-1 Summary of Impacts and Mitigation Measures related to
Alternative Reservoir Sites follows 5-12

5-2 Summary of Impacts and Mitigation Measures related to
Alternative Main Pipeline Alignments follows 5-12

Figures

	Follows Page
2-1. Location Map	2-2
2-2. Modesto Regional Water Treatment Facility Expansion, Conventional Option	2-4
2-3. Modesto Regional Water Treatment Facility Expansion, Membrane Option	2-6
2-4. MRWTP Phase Two Expansion Project	2-6
2-5. North Tank	2-8
2-6. West Tank	2-8
2-7. Southeast Tank	2-8
2-8. Distribution Pipelines	2-12
3.1-1 Photo 1	3.1-10
3.1-1 Photo 2	3.1-10
3.1-1 Photo 3	3.1-10
3.1-1 Photo 4	3.1-10
3.1-1 Photo 5	3.1-10
3.1-1 Photo 6	3.1-10
3.1-1 Photo 7	3.1-10
3.1-1 Photo 8	3.1-10
3.1-1 Photo 9	3.1-10
3.4-1. City of Modesto Water Supply and Demand	3.4-4

3.4-2. Modesto Reservoir Operating Levels3.4-18

3.4-3. Don Pedro End of Month Storage.....3.4-18

3.4-4 Tuolumne River Releases from La Grange Dam, Average
Cubic Feet Per Second Per Month, Scatter Plot3.4-20

3.9-1 Location of Elderberry Shrubs and Valley Elderberry
Longhorn Beetle3.9-10