

Long-term Miscellaneous Purposes Contract Final Environmental Impact Statement Eddy County, New Mexico

Statement Filing Number: FES 06-19



Red Bluff Gauge near New Mexico-Texas state line

Joint Lead Agencies

U.S. Department of the Interior
Bureau of Reclamation
Technical Service Center
Denver, Colorado

New Mexico Office of the State Engineer
Interstate Stream Commission
Santa Fe, New Mexico



Mission Statements

U.S. Department of the Interior

The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian Tribes and our commitments to island communities.

Bureau of Reclamation

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

New Mexico Office of the State Engineer and the Interstate Stream Commission

To actively protect and manage the water resources of New Mexico for beneficial uses by its people, in accordance with law:

- To investigate, measure, and distribute water in accordance with water rights and interstate obligations,
- To administer a water rights system that lawfully and effectively allocates and reallocates water and adjudicates water rights to meet the needs of New Mexico's growing population, and
- To maximize use of New Mexico's renewable interstate stream apportionments in order to improve the sustainability of New Mexico's water supplies

Final Environmental Impact Statement Long-term Miscellaneous Purposes Contract Abstract

Prepared by: U.S. Department of the Interior, Reclamation
New Mexico Office of the State Engineer, Interstate Stream Commission

For further information,
contact: Marsha Carra, Reclamation, Albuquerque Area Office, 555 Broadway NE.,
Suite 100, Albuquerque, New Mexico 87102; telephone (505) 462-3602

Reclamation proposes to enter into a long-term miscellaneous purposes contract with the Carlsbad Irrigation District to allow the use of Carlsbad Project water for purposes other than irrigation. Reclamation also would review any related separate third-party contracts between the New Mexico Interstate Stream Commission and the Carlsbad Irrigation District. Reclamation and the Carlsbad Irrigation District have entered into three previous short-term miscellaneous purposes contracts; the Final Environmental Impact Statement (FEIS) addresses the effects of a long-term, 40-year contract. In 2003, the New Mexico Office of the State Engineer, the New Mexico Interstate Stream Commission, Reclamation, the Carlsbad Irrigation District, and the Pecos Valley Artesian Conservancy District entered into a Settlement Agreement that resolves water rights litigation, implements a plan to ensure delivery of water to the Carlsbad Irrigation District and state line, and settles many water management issues on the Pecos River. The Settlement Agreement requires Reclamation and the Carlsbad Irrigation District enter into a long-term miscellaneous purposes contract that would allow the New Mexico Interstate Stream Commission to use Project water for miscellaneous purposes, specifically delivery to the state line. A long-term miscellaneous purposes contract is needed by the New Mexico Interstate Stream Commission to use up to 50,000 acre-feet of Carlsbad Project water per year for delivery to Texas. A long-term contract would also partially fulfill the Settlement Agreement. The water would be used to maintain long-term compliance with the Pecos River Compact and the United States Supreme Court Amended Decree in Texas v. New Mexico. Two alternatives, the No Action Alternative and the Proposed Action, are analyzed in detail in this FEIS.

This FEIS has been prepared in compliance with the National Environmental Policy Act and Reclamation procedures and is intended to serve environmental review and consultation requirements pursuant to Executive Order 11988 (Floodplain Management), Executive Order 11990 (Wetlands Protection), Executive Order 12898 (Environmental Justice), the National Historic Preservation Act (Section 106), Endangered Species Act (Section 7c) and Departmental and Reclamation Indian Trust Asset policies.

Statement Filing Number: FES 06-19

Date filed with the Environmental Protection Agency: July 21, 2006

Abbreviations and Acronyms

mg/L	milligrams per liter	NHL	National Historic Landmark
μS/cm	microsiemens per centimeter	NHPA	National Historic Preservation Act of 1966
APE	Area of Potential Effect	NMDGF	New Mexico Department of Game and Fish
ARMS	Archaeological Records Management System	NMISC	New Mexico Interstate Stream Commission
BLM	Bureau of Land Management	NMOSE	New Mexico Office of State Engineer
BE	Biological Evaluation	NMRPTC	New Mexico Rare Plant Technical Council
CFR	Code of Federal Regulations	NMSA	New Mexico Statutes Annotated
cfs	cubic feet per second	NMWQCC	New Mexico Water Quality Control Commission
CID	Carlsbad Irrigation District	NOA	Notice of Availability
Compact	Pecos River Compact	NOI	Notice of Intent
Corps	U.S. Army Corps of Engineers	NRCS	Natural Resources Conservation Service
FEIS	Final Environmental Impact Statement	NRHP	National Register of Historic Places
EA	Environmental Assessment	NWIS	National Water Information System
EIS	Environmental Impact Statement	PVACD	Pecos Valley Artesian Conservancy District
EPA	U.S. Environmental Protection Agency	Reclamation	Bureau of Reclamation
ESA	Endangered Species Act of 1973	ROD	Record of Decision
FSID	Fort Sumner Irrigation District	USFWS	U.S. Fish and Wildlife Service
HIC	Hagerman Irrigation Company	SHPO	State Historic Preservation Office
MOA	Memorandum of Agreement	USGS	U.S. Geological Survey
NEPA	National Environmental Policy Act of 1969		

Contents

<ul style="list-style-type: none"> SummaryS-1 Lead AgenciesS-1 Purpose and NeedS-2 Background.....S-2 Alternatives.....S-4 Comparison of Impacts of Alternatives.....S-5 <ul style="list-style-type: none"> Direct and Indirect ImpactsS-5 Cumulative Impacts.....S-5 Issues Raised by Public and Agencies.....S-5 Areas of Controversy.....S-6 Chapter 1. Purpose and Need 1 <ul style="list-style-type: none"> 1.1 Lead Agencies..... 1 1.2 Purpose and Need 2 <ul style="list-style-type: none"> 1.2.1 Purpose 2 1.2.2 Need 4 1.3 Background..... 6 <ul style="list-style-type: none"> 1.3.1 History of Water Use in the Lower Pecos River Basin..... 6 1.3.2 Pecos River Compact and Amended Decree 9 1.3.3 NMISC’s Leasing Program 10 1.3.4 Ad Hoc Pecos River Basin Committee and Settlement Agreement 11 1.3.5 Relevant State Statutes and Regulations..... 13 1.4 Permits or Approvals 13 <ul style="list-style-type: none"> 1.4.1 Endangered Species Act..... 13 1.4.2 National Historic Preservation Act... 14 Chapter 2. Alternatives 15 <ul style="list-style-type: none"> 2.1 No Action Alternative..... 15 2.2 Proposed Action..... 17 2.3 Alternatives Considered but Eliminated from Detailed Analysis 19 <ul style="list-style-type: none"> 2.3.1 A Series of Short-term Miscellaneous Purposes Contracts ... 19 2.3.2 25-Year Contract Term Length 19 2.3.3 Priority Call 19 2.4 Comparison of Effects of Alternatives.... 19 <ul style="list-style-type: none"> 2.4.1 Direct and Indirect Effects 19 2.4.2 Cumulative Effects 20 	<ul style="list-style-type: none"> Chapter 3. Affected Environment and Environmental Consequences26 <ul style="list-style-type: none"> 3.1 Terms Used in This Chapter26 <ul style="list-style-type: none"> 3.1.1 Effects and Analysis Area.....26 3.1.2 Short-term and Long-term Effects28 3.2 Hydrology.....28 <ul style="list-style-type: none"> 3.2.1 Background.....28 3.2.2 Affected Environment.....32 3.2.3 Environmental Consequences.....34 3.3 Water Quality39 <ul style="list-style-type: none"> 3.3.1 Affected Environment.....39 3.3.2 Environmental Consequences.....41 3.4 Geomorphology.....43 <ul style="list-style-type: none"> 3.4.1 Affected Environment.....43 3.4.2 Environmental Consequences.....44 3.5 Wetlands.....45 <ul style="list-style-type: none"> 3.5.1 Regulatory Overview45 3.5.2 Affected Environment.....45 3.5.3 Environmental Consequences.....47 3.6 Vegetation.....47 <ul style="list-style-type: none"> 3.6.1 Affected Environment.....49 3.6.2 Environmental Consequences.....51 3.7 Wildlife.....51 <ul style="list-style-type: none"> 3.7.1 Affected Environment.....51 3.7.2 Environmental Consequences.....53 3.8 Threatened and Endangered Species54 <ul style="list-style-type: none"> 3.8.1 Listing and Monitoring Process54 3.8.2 Affected Environment.....56 3.8.3 Environmental Consequences.....62 3.9 Soils64 <ul style="list-style-type: none"> 3.9.1 Affected Environment.....64 3.9.2 Environmental Consequences.....66 3.10 Land Use.....66 <ul style="list-style-type: none"> 3.10.1 Affected Environment.....66 3.10.2 Environmental Consequences.....67 3.11 Recreation.....68 <ul style="list-style-type: none"> 3.11.1 Affected Environment.....68 3.11.2 Environmental Consequences.....69 3.12 Socioeconomics.....69 <ul style="list-style-type: none"> 3.12.1 Affected Environment.....69 3.12.2 Environmental Consequences74
---	--

3.13 Environmental Justice	80	4.3 Water Quality	99
3.13.1 Affected Environment.....	80	4.3.1 Cumulative Effects of the	
3.13.2 Environmental Consequences	80	Settlement Agreement	99
3.14 Cultural Resources.....	81	4.3.2 Cumulative Effects of the Malaga	
3.14.1 Affected Environment.....	81	Bend Salinity Alleviation Project...	100
3.14.2 Environmental Consequences	84	4.4 Geomorphology	100
3.15 Indian Trust Assets	86	4.4.1 Cumulative Effects of the	
3.15.1 Affected Environment and		Calloway Culvert Reconstruction...	100
Environmental Consequences	86	4.5 Wetlands and Riparian Areas.....	100
3.16 Other NEPA Disclosures	86	4.6 Vegetation	101
3.16.1 Unavoidable Adverse Impacts	86	4.7 Wildlife	101
3.16.2 Relationship of Short-term Uses		4.8 Threatened and Endangered Species....	101
and Long-term Productivity	87	4.9 Soils.....	101
3.16.3 Irreversible and Irretrievable		4.10 Land use	102
Commitment of Resources.....	87	4.11 Recreation	102
Chapter 4. Cumulative Effects	88	4.12 Socioeconomics	103
4.1 Reasonably Foreseeable Actions.....	88	4.12.1 Analysis Methods	103
4.1.1 Analysis Area and Geographic		4.12.2 Cumulative Effects of the	
Area.....	88	Settlement Agreement	103
4.1.2 Pecos River Settlement Agreement ..	90	4.12.3 Cumulative Effects of the	
4.1.3 Active Water Resource		Operations EIS	103
Management.....	92	4.12.4 Direct Effects of Reasonably	
4.1.4 Actions Analyzed in the Carlsbad		Foreseeable Actions	103
Project Operations EIS.....	92	4.12.5 Cumulative Effects on Crop	
4.1.5 Vegetation Management Projects	93	Production	105
4.1.6 Brantley and Avalon Reservoirs		4.12.6 Cumulative Regional Economic	
Resource Management Plan.....	93	Impacts	105
4.1.7 Malaga Bend Salinity Alleviation		4.13 Cultural Resources	107
Project	94	Chapter 5. Consultation and Coordination	108
4.1.8 NMISC Water Resources		5.1 Scoping	108
Conservation Project.....	94	5.1.1 Notices and Announcements	108
4.1.9 Calloway Culvert Reconstruction	95	5.1.2 Public Scoping Meeting	109
4.2 Hydrology.....	95	5.1.3 Major Issues Identified During	
4.2.1 Cumulative Effects of the		Scoping.....	109
Settlement Agreement.....	95	5.1.4 Draft EIS Public Meeting	110
4.2.2 Cumulative Effects of NMOSE		5.2 Native American Tribe Consultation	111
Active Water Resource		5.3 Interagency Coordination.....	111
Management.....	97		
4.2.3 Cumulative Effects of the Carlsbad			
Project Operations EIS.....	98		
4.2.4 Cumulative Effects of the			
Vegetation Management Programs...	99		
4.2.5 Cumulative Effects of the			
Calloway Culvert Reconstruction	99		

Chapter 6. Preparers	113
6.1 Reclamation	113
6.2 New Mexico Interstate Stream Commission.....	113
6.3 ERO Resources Corp. and Subconsultants.....	114
6.4 Hydrosphere Resource Consultants, Inc.	114
Chapter 7. Agencies and Individuals To Whom This FEIS Was Sent.....	115
7.1 Agencies and Organizations.....	115
7.2 Individuals.....	115
Chapter 8. References.....	116

Tables

Table S-1. Comparison of direct and indirect effects.	S-7
Table S-2. Summary of cumulative effects.....	S-10
Table 1. Accumulated state line credit with Project water releases.	5
Table 2. Summary of the No Action Alternative and Proposed Action.....	16
Table 3. NMISC's leases and land fallowing.	18
Table 4. Comparison of direct and indirect effects.	21
Table 5. Summary of cumulative effects.	24
Table 6. Probable causes and sources of water quality impairment in Pecos River below Avalon Dam.	40
Table 7. Estimated changes in specific conductance from the No Action Alternative.	42
Table 8. Estimated changes in specific conductance under the Proposed Action for years when 50,000 acre-feet would be released.	43
Table 9. Wetlands in the analysis area.....	46
Table 10. Noxious weed species in the analysis area.	50
Table 11. Threatened, endangered and other species of concern.	55
Table 12. Average labor force statistics for Eddy and Chaves counties (2003).....	70
Table 13. Industry earnings leaders (1999).	71
Table 14. Selected agricultural production statistics for Eddy and Chaves Counties.	72
Table 15. Eddy and Chaves County cropping patterns for principal crops (1992 – 2003 acreage harvested).....	73
Table 16. Chaves County crop acreage by water source (1999).....	75
Table 17. Eddy County crop acreage by water source (1999).....	75
Table 18. CID crop acreages by category (1992 – 2001).....	76
Table 19. CID crop acreage complied by NMOSE (1999).....	76
Table 20. RAB crop acreage by County (1999).....	76
Table 21. Percent whites and non-whites in Eddy and Chaves counties (2000).....	80
Table 22. Elements of the CID National Historic Landmark.	82
Table 23. Additional elements recommended as contributing to the CID National Historic Landmark.....	84
Table 24. Cultural resource sites within the analysis area.	85
Table 25. Summary of key physical and operational components of the Settlement Agreement.....	91
Table 26. Cumulative effects of the Settlement Agreement and Proposed Action on crop production.	105

Figures

Figure 1. Location of Proposed Action.	3
Figure 2. Carlsbad Project facilities.	8
Figure 3. Accumulated state line water deliveries.	12
Figure 4. Analysis areas.	27
Figure 5. Pecos River south of Fort Sumner.	29
Figure 6. Ten years of daily flow data at the USGS gauge “Pecos River below Avalon Dam” (1992-2001).	32
Figure 7. Flow frequency at USGS stream gauges at Red Bluff and Below Avalon Dam.	33
Figure 8. Effect of alternatives on flows below Avalon Dam (releases) and at Red Bluff.	37
Figure 9. Comparison of annual diversions to the CID Main Canal.	38
Figure 10. Estimated base inflows to the Pecos River between Avalon Dam and Malaga.	39
Figure 11. Specific conductance at four water quality stations.	41
Figure 12. Estimated total sediment transport in the Pecos River under both alternatives.	44
Figure 13. Vegetation types in analysis area.	48
Figure 14. Reasonably foreseeable actions.	89

Appendices

Appendix A — Draft Long-term Miscellaneous Purposes Contract
Appendix B — Miscellaneous Purposes Act of 1920
Appendix C — Scoping Report
Appendix D — Biological Evaluation
Appendix E — Pecos River Settlement Agreement
Appendix F — Responses to Comments on DEIS