

RECLAMATION

Managing Water in the West

Southern Delivery System Draft Environmental Impact Statement

Great Plains Region



U.S. Department of the Interior
Bureau of Reclamation
Eastern Colorado Area Office
Loveland, Colorado

February 2008

Mission Statements

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.

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.

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Eastern Colorado Area Office



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Prepared by the U.S. Department of the Interior, Bureau of Reclamation

Cooperating Agencies:

- U.S. Army Corps of Engineers
- U.S. Bureau of Land Management
- U.S. Environmental Protection Agency
- U.S. Fish and Wildlife Service

Abstract:

This Draft Environmental Impact Statement (DEIS) describes the effects of contracts requested by the City of Colorado Springs, City of Fountain, Security Water District, and Pueblo West Metropolitan District (collectively referred to as the Participants) with the U.S. Department of the Interior, Bureau of Reclamation. The contracts would allow the development of a water supply project known as the Southern Delivery System (SDS) Project.

The purpose of the SDS Project is to provide a safe, reliable, and sustainable water supply for the Participants through the foreseeable future. The primary major federal action analyzed in the DEIS is the execution of up to 40-year contracts with the Bureau of Reclamation, for the use of Fryingpan-Arkansas Project (Fry-Ark Project) facilities. To operate the SDS Project, the Participants require contracts that provide for use of excess storage capacity in Pueblo Reservoir (part of the Fry-Ark Project), conveyance of water through facilities associated with Pueblo Reservoir, and exchange of water between Pueblo Reservoir and Fry-Ark Project reservoirs in the upper Arkansas River Basin.

The DEIS describes and analyzes the potential effects of seven SDS Project alternatives, including a no action alternative, on environmental and human resources in the Arkansas River Basin in Colorado. This DEIS has been prepared in compliance with the National Environmental Policy Act.

The comment period for this DEIS ends on April 29, 2008.

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Contents

1.0	Purpose and Need	1
1.1	Introduction	1
1.1.1	Proposed Federal Action.....	1
1.1.2	Basic Project Purpose	1
1.1.3	Project Participants' Needs.....	2
1.2	Lead and Cooperating Agencies	2
1.3	Scope of this DEIS	2
1.3.1	Organization of this DEIS.....	2
1.3.2	NEPA Compliance.....	3
1.4	Project Setting	3
1.4.1	The Existing Fryingpan-Arkansas Project.....	3
1.4.2	Participants' Proposed Action.....	5
1.5	Purpose and Need.....	6
1.5.1	Needs Associated with Projected Water Demands.....	6
1.5.2	Needs Associated with Redundancy.....	12
1.5.3	Needs Associated with Water Rights Use	15
1.6	Timing of the Project.....	17
1.7	Next Steps	17
2.0	Alternatives.....	19
2.1	Alternatives Development.....	19
2.1.1	Significant Issues Identified During Scoping	19
2.1.2	Development of Alternatives	21
2.1.3	Screening Process	26
2.1.4	Alternatives Analyzed in this DEIS.....	27
2.2	Description of Alternatives Analyzed in this DEIS	35
2.2.1	No Action Alternative.....	35
2.2.2	Participants' Proposed Action.....	52
2.2.3	Wetland Alternative.....	59
2.2.4	Arkansas River Alternative.....	67
2.2.5	Fountain Creek Alternative.....	73
2.2.6	Downstream Intake Alternative	76
2.2.7	Highway 115 Alternative.....	79
2.3	Alternatives Considered But Eliminated.....	82
2.3.1	Regulating Storage.....	82
2.3.2	Untreated Water Intake and Conveyance	82
2.3.3	Terminal Storage and Water Treatment Plant	83
2.3.4	Return Flow Storage and Conveyance.....	84
2.3.5	Indirect Potable Reuse Alternatives.....	85
2.3.6	Flood Control and Related Options	86
2.3.7	Summary of Alternatives Identified by the Public	87

2.4	Elements Common to All Alternatives Analyzed.....	87
2.4.1	Participants’ Conservation Programs.....	87
2.4.2	Improvements to Existing Infrastructure	90
2.4.3	Land Acquisition.....	91
2.4.4	Additional Regulatory Requirements and Permitting.....	92
2.5	Construction and Restoration Methods Common to All Activities	94
2.5.1	Ground Water Wells	94
2.5.2	Intakes	94
2.5.3	Pipelines.....	95
2.5.4	Conveyance Channels.....	96
2.5.5	Reservoirs	98
2.5.6	Power Supplies.....	100
2.5.7	Utility and Transportation Relocations.....	100
2.5.8	Construction Impact Mitigation Measures.....	100
2.6	Summary of Environmental Consequences	101
2.7	Identification of Preferred Alternative	102
3.0	Affected Environment and Environmental Consequences	121
3.1	Terms Used in this Chapter.....	121
3.1.1	Short-term and Long-term Effects	121
3.1.2	Direct and Indirect Effects	121
3.1.3	Cumulative Effects.....	121
3.1.4	Irreversible or Irrecoverable Commitment of Resources	131
3.1.5	Mitigation Techniques	131
3.2	Environmental and Hydrologic Setting.....	131
3.2.1	Topography.....	132
3.2.2	Population Centers	132
3.2.3	Climate.....	132
3.2.4	Geology.....	132
3.2.5	Land Use	132
3.2.6	Surface Water.....	133
3.2.7	Water Storage.....	135
3.2.8	Water Quality.....	136
3.2.9	Water Use.....	136
3.2.10	Water Supplies	136
3.3	Study Area Evaluated in the EIS.....	139
3.3.1	Lake Fork and Lake Creek.....	139
3.3.2	Upper Arkansas River Basin.....	139
3.3.3	Lower Arkansas River Basin	139
3.3.4	Fountain Creek Basin.....	141
3.3.5	Denver Basin Aquifers.....	141
3.3.6	Alternative Components	141
3.4	Organization and Analysis Approach	141

3.4.1	Resource.....	141
3.4.2	Summary of Effects	141
3.4.3	Regulatory Framework	142
3.4.4	Analysis Area and Methods	142
3.4.5	Affected Environment.....	142
3.4.6	Environmental Consequences.....	142
3.4.7	Technical Reports	144
3.5	Surface Water Hydrology.....	145
3.5.1	Summary of Effects	145
3.5.2	Regulatory Framework	149
3.5.3	Analysis Area and Methods	149
3.5.4	Affected Environment.....	153
3.5.5	Environmental Consequences.....	160
3.6	Ground Water Hydrology.....	187
3.6.1	Summary of Effects	187
3.6.2	Regulatory Framework	188
3.6.3	Analysis Area and Methods	189
3.6.4	Affected Environment.....	193
3.6.5	Environmental Consequences.....	196
3.7	Water Quality	204
3.7.1	Summary of Effects	204
3.7.2	Regulatory Framework	207
3.7.3	Analysis Area and Methods	209
3.7.4	Affected Environment.....	215
3.7.5	Environmental Consequences.....	222
3.8	Flood Hydrology and Floodplains.....	250
3.8.1	Summary of Effects	250
3.8.2	Regulatory Framework	250
3.8.3	Analysis Area and Methods	252
3.8.4	Affected Environment.....	257
3.8.5	Environmental Consequences.....	259
3.9	Geomorphology.....	267
3.9.1	Summary of Effects	267
3.9.2	Regulatory Framework	271
3.9.3	Analysis Area and Methods	271
3.9.4	Affected Environment.....	280
3.9.5	Environmental Consequences.....	281
3.10	Aquatic Life.....	295
3.10.1	Summary of Effects	295
3.10.2	Regulatory Framework	298
3.10.3	Analysis Area and Methods	298
3.10.4	Affected Environment.....	308
3.10.5	Environmental Consequences.....	312

3.11	Wetlands, Waters, and Riparian Vegetation	324
3.11.1	Summary of Effects	324
3.11.2	Regulatory Framework	325
3.11.3	Analysis Area and Methods	326
3.11.4	Affected Environment.....	330
3.11.5	Environmental Consequences.....	332
3.12	Vegetation	344
3.12.1	Summary of Effects	344
3.12.2	Regulatory Framework	345
3.12.3	Analysis Area and Methods	346
3.12.4	Affected Environment.....	348
3.12.5	Environmental Consequences.....	352
3.13	Wildlife.....	365
3.13.1	Summary of Effects	365
3.13.2	Regulatory Framework	367
3.13.3	Analysis Area and Methods	368
3.13.4	Affected Environment.....	369
3.13.5	Environmental Consequences.....	373
3.14	Recreation.....	392
3.14.1	Summary of Effects	392
3.14.2	Regulatory Framework	393
3.14.3	Analysis Area and Methods	393
3.14.4	Affected Environment.....	398
3.14.5	Environmental Consequences.....	402
3.15	Socioeconomics and Land Use	414
3.15.1	Summary of Effects	414
3.15.2	Regulatory Framework	415
3.15.3	Analysis Area and Methods	416
3.15.4	Affected Environment.....	421
3.15.5	Environmental Consequences.....	429
3.16	Environmental Justice	441
3.16.1	Summary of Effects	441
3.16.2	Regulatory Framework	442
3.16.3	Analysis Area and Methods	442
3.16.4	Affected Environment.....	443
3.16.5	Environmental Consequences.....	447
3.17	Cultural Resources	449
3.17.1	Summary of Effects	449
3.17.2	Regulatory Framework	449
3.17.3	Analysis Area and Methods	450
3.17.4	Affected Environment.....	454
3.17.5	Environmental Consequences.....	456

3.18	Indian Trust Assets.....	465
3.18.1	Summary of Effects	465
3.18.2	Regulatory Framework	465
3.18.3	Analysis Area and Methods	465
3.18.4	Affected Environment.....	465
3.18.5	Environmental Consequences.....	465
3.19	Noise and Vibration	467
3.19.1	Summary of Effects	467
3.19.2	Regulatory Framework	467
3.19.3	Analysis Area and Methods	468
3.19.4	Affected Environment.....	468
3.19.5	Environmental Consequences.....	469
3.20	Visual Resources.....	473
3.20.1	Summary of Effects	473
3.20.2	Regulatory Framework	473
3.20.3	Analysis Area and Methods	473
3.20.4	Affected Environment.....	474
3.20.5	Environmental Consequences.....	475
3.21	Traffic.....	483
3.21.1	Summary of Effects	483
3.21.2	Regulatory Framework	483
3.21.3	Analysis Area and Methods	483
3.21.4	Affected Environment.....	485
3.21.5	Environmental Consequences.....	485
3.22	Geology and Paleontology	495
3.22.1	Summary of Effects	495
3.22.2	Regulatory Framework	495
3.22.3	Analysis Area and Methods	495
3.22.4	Affected Environment.....	496
3.22.5	Environmental Consequences.....	498
3.23	Soils.....	505
3.23.1	Summary of Effects	505
3.23.2	Regulatory Framework	505
3.23.3	Analysis Area and Methods	506
3.23.4	Affected Environment.....	507
3.23.5	Environmental Consequences.....	508
3.24	Air Quality.....	513
3.24.1	Summary of Effects	513
3.24.2	Regulatory Framework	513
3.24.3	Analysis Area and Methods	514
3.24.4	Affected Environment.....	514
3.24.5	Environmental Consequences.....	515

3.25	Hazardous Materials.....	518
3.25.1	Summary of Effects	518
3.25.2	Regulatory Framework	518
3.25.3	Analysis Area and Methods.....	518
3.25.4	Affected Environment and Environmental Consequences	519
3.26	Other NEPA Required Disclosures.....	520
3.26.1	Unavoidable Adverse Impacts	520
3.26.2	Relationship of Short-term Uses and Long-term Productivity	523
3.27	Effects from 2046 to 2050.....	525
3.27.1	Direct and Indirect Effects.....	525
3.27.2	Cumulative Effects.....	527
3.27.3	Unavoidable Adverse Impacts	527
3.27.4	Relationship of Short-term Uses and Long-term Productivity	527
4.0	Consultation and Coordination	529
4.1	Initial Scoping	529
4.2	Review of Preliminary Alternatives.....	530
4.3	Agency Consultation.....	531
4.4	Federal Register Notices	532
4.5	Libraries and Distribution List.....	532
4.5.1	Libraries.....	532
4.5.2	Distribution List.....	532
5.0	References Cited.....	536
6.0	Preparers	562
7.0	Index	565

Tables

Table 1. Project Yield for Each Participant.	7
Table 2. Projected Future Population and Growth Rate of El Paso County and Participants.	8
Table 3. Participants’ Existing Supplies, Future Water Demand, and Anticipated Yield from the Participants’ Proposed Action.	10
Table 4. Participants’ Water Rights Proposed for Use in the SDS Project.....	16
Table 5. Major Components and Options of Each Alternative.....	31
Table 6. Water Treatment Plant Chemical Requirements.	45
Table 7. No Action Construction Workforce.....	52
Table 8. Yield for No Action Alternative at 2046 Demands.	52
Table 9. Proposed Action Construction Workforce.....	59
Table 10. Yield for Proposed Action at 2046 Demands.	59
Table 11. Wetland Alternative Construction Workforce.	67
Table 12. Yield for Wetland Alternative at 2046 Demands.	67
Table 13. Arkansas River Alternative Construction Workforce.....	73
Table 14. Yield for Arkansas River Alternative at 2046 Demands.	73
Table 15. Fountain Creek Alternative Construction Workforce.....	74
Table 16. Yield for Fountain Creek Alternative at 2046 Demands.	76
Table 17. Downstream Intake Alternative Construction Workforce.....	78
Table 18. Yield for Downstream Intake Alternative at 2046 Demands.	79
Table 19. Highway 115 Alternative Construction Workforce.....	81
Table 20. Yield for Highway 115 Alternative at 2046 Demands.	81
Table 21. Type and Number of Options for Terminal Storage.....	83
Table 22. Alternatives Identified by the Public.	88
Table 23. Selected Federal and State Permits or Approvals Potentially Required for the SDS Project.	93
Table 24. Summary of Direct and Indirect Effects.....	103
Table 25. Summary of Past Activities that Affected the Natural and Human Characteristics of the Arkansas River Basin.	123
Table 26. Fry-Ark Project Storage Volumes.	137
Table 27. Fry-Ark Project Reservoir Spill Priorities.	138
Table 28. Summary of Fry-Ark Municipal Yield and Storage Allocations.....	138
Table 29. Average Annual Flow for the Arkansas River and Tributary Inflows 1982 - 2004.	154
Table 30. Average Annual Flow for Fountain Creek and Tributary Inflows 1982 – 2004.	154
Table 31. Average Annual Simulated Streamflow Direct Effects.....	163
Table 32. Percent of Time UAVFMP Target Flows Met – Arkansas River near Wellsville.	165
Table 33. Average Monthly Streamflow Effects — Above Pueblo Gage.	168
Table 34. Percent of Time Target Flows Met for Direct Effects Scenario – Arkansas River above Pueblo at PFMP Measurement Location.	170
Table 35. Mean Annual Simulated Reservoir Volumes Direct Effects.....	178
Table 36. Average Annual Simulated Streamflow – Cumulative Effects.	184
Table 37. Average Annual Simulated Reservoir Storage – Cumulative Effects.	185
Table 38. Summary of Municipal Ground Water Pumping from the Widefield Aquifer.....	194

Table 39. Denver and Arapahoe Aquifer Properties for Northern El Paso County.....	196
Table 40. Average Annual Change in Alluvial Ground Water Level – Direct Effects.	197
Table 41. Average and Maximum Denver Basin Aquifer Drawdown – Direct Effects.	201
Table 42. Alluvial Ground Water – Cumulative Effects.	201
Table 43. Average and Maximum Denver Basin Aquifer Drawdown – Cumulative Effects.	202
Table 44. Water Quality Standards and Thresholds Used in Water Quality Analysis.	208
Table 45. Dissolved Selenium Existing Conditions (µg/L).	218
Table 46. Summary of Low Flow Direct Effects for All Alternatives.	225
Table 47. Specific Conductance Direct Effects.	226
Table 48. Direct Effects Simulated Irrigation Season TDS and Estimated Effects on Crop Yield – Catlin Dam Gage.	228
Table 49. Dissolved Selenium Direct Effects.	228
Table 50. Summary of Highway 115 Return Flow Pipeline Effects on Upper Arkansas River Metals.	231
Table 51. Average Water Depth Direct Effects – Pueblo Reservoir.	236
Table 52. Average Residence Time Direct Effects – Pueblo Reservoir.	236
Table 53. Simulated Average Depth and Average Residence Time in Lake Meredith and Lake Henry.	240
Table 54. Predicted Median Nutrient Concentrations in Fountain Creek and Williams Creek Reservoir.....	244
Table 55. Specific Conductance Cumulative Effects.	246
Table 56. Dissolved Selenium Cumulative Effects.	247
Table 57. Existing Instantaneous Peak Flows.....	258
Table 58. Inundation Area for Proposed Reservoirs.....	261
Table 59. Peak Flows Cumulative Effects – Jimmy Camp Creek at Fountain.....	263
Table 60. 100-Year Floodplain Cumulative Effects – Jimmy Camp Creek at Fountain.	263
Table 61. Peak Flows Cumulative Effects – Williams Creek at the Mouth.	263
Table 62. 100-Year Floodplain Cumulative Effects – Williams Creek at Mouth.	264
Table 63. Peak Flows Cumulative Effects – Fountain Creek from Jimmy Camp Creek to the Arkansas River.	265
Table 64. 100-Year Floodplain Cumulative Effects – Fountain Creek from Jimmy Camp Creek to the Arkansas River.....	265
Table 65. Peak Flows Cumulative Effects – Arkansas River from Fountain Creek to the Catlin Dam Gage.....	266
Table 66. 100-Year Floodplain Cumulative Effects – Arkansas River from Fountain Creek Confluence to Catlin Dam Gage.....	266
Table 67. Peak Flow Sediment Transport Capacity Potential Effects.	276
Table 68. Baseflow Mobile Grain Size Potential Effects.	278
Table 69. Criteria Used to Establish Intensity of Geomorphology Effects.	279
Table 70. Existing Geomorphic Characteristics of Analysis Area Streams.	280
Table 71. Indirect Geomorphic Effects of the No Action Alternative on the Arkansas River.	283
Table 72. Indirect Geomorphic Effects of the Wetland and Arkansas River Alternatives on the Arkansas River.	284
Table 73. Indirect Geomorphic Effects of the No Action Alternative on Fountain Creek.....	284

Table 74. Indirect Geomorphic Effects of the Wetland and Arkansas River Alternatives on Fountain Creek.....	285
Table 75. Indirect Geomorphic Effects of the Fountain Creek Alternative on Fountain Creek.....	286
Table 76. Indirect Geomorphic Effects of the Proposed Action, Downstream Intake, and Highway 115 Alternatives on Fountain Creek.....	286
Table 77. Indirect Geomorphic Effects of the No Action Alternative on Jimmy Camp Creek.....	287
Table 78. Direct and Indirect Geomorphic Effects of the Wetland and Arkansas River Alternatives on Williams Creek.....	288
Table 79. Indirect Geomorphic Effects of the Proposed Action, Fountain Creek, Downstream Intake, and Highway 115 Alternatives on Williams Creek.....	288
Table 80. Cumulative Geomorphic Effects of the Wetland and Arkansas River Alternatives on Arkansas River.....	292
Table 81. Cumulative Geomorphic Effects of the No Action Alternative on Fountain Creek.....	292
Table 82. Cumulative Geomorphic Effects of the Wetland and Arkansas River Alternatives on Fountain Creek.....	292
Table 83. Fish and Benthic Invertebrate Parameters Used as Indicators to Characterize Existing Conditions and Evaluate Effects.....	299
Table 84. Summary of Analysis Categories and Methods in Water Bodies of the Analysis Area..	300
Table 85. List of Key IHA Parameters for Effects Analysis in Coldwater Streams, Warmwater Streams, and Reservoirs.....	302
Table 86. Summary of IFIM Habitat Simulation in the Streams in the Analysis Area.....	303
Table 87. Summary of Effect Intensity on Fish and Invertebrates.....	305
Table 88. Summary of Existing Conditions for Fish and Benthic Invertebrates in the Analysis Area.....	309
Table 89. Permanent (P) and Temporary (T) Direct Effects on Wetlands, Waters, and Riparian Vegetation by Alternative.....	333
Table 90. Direct Effects on each Montana Method Wetland Functional Category by Alternative.....	334
Table 91. Summary of Potential Indirect and Cumulative Effects on Riparian Vegetation.....	335
Table 92. Permanent (P) and Temporary (T) Direct Effects on Vegetation Cover Types for Each Alternative.....	353
Table 93. Permanent (P) and Temporary (T) Direct Effects on Plant Species and Plant Communities of Concern for each Alternative.....	356
Table 94. Permanent (P) and Temporary (T) Effects on Habitat for Federally Listed Threatened and Endangered Species by Alternative.....	374
Table 95. Permanent (P) and Temporary (T) Direct Effects on Habitat for State Threatened and Endangered Wildlife Species and Wildlife Species of Special Concern by Alternative.....	376
Table 96. Permanent (P) and Temporary (T) Effects on Terrestrial Wildlife Habitat by Alternative.....	380
Table 97. Acreage and Percentage of Permanent Impact to Big Game Seasonal Ranges at the Local Scale.....	385
Table 98. Acreage and Percentage of Temporary Impact to Big Game Seasonal Ranges at the Local Scale.....	386
Table 99. General Trail Groupings Used for Effects Analysis.....	396
Table 100. General PFMP Flow Targets.....	399

Table 101. Upper Arkansas River Recreation Flow Targets.....	402
Table 102. Upper Arkansas River Flows Compared to Recreation Flow Targets.....	407
Table 103. Socioeconomic Effects Classification and Thresholds.....	419
Table 104. Summary of Socioeconomic Effects in El Paso County.....	430
Table 105. Summary of Socioeconomic Effects in the Upper Arkansas Valley.....	432
Table 106. Summary of Socioeconomic Effects in Pueblo County.....	434
Table 107. Summary of Socioeconomic Effects in the Lower Arkansas Valley.....	435
Table 108. Aboveground Disturbances by Alternative.....	437
Table 109. Baseline Socioeconomic Characteristics of Key Arkansas River and Fountain Creek Segments Census Block Groups, 2000.....	446
Table 110. Baseline Socioeconomic Characteristics of Areas in Proximity to SDS Project Features Census Block Groups, 2000.....	447
Table 111. Number of Significant Cultural Resource Sites Directly and Indirectly Affected by Alternative.....	449
Table 112. Percentage of SDS Project Analysis Area and APE Subjected to Class I Field-Check and Class III Level of Investigations.....	454
Table 113. Known NRHP Eligible or Unevaluated Sites within the APE by Alternative.....	457
Table 114. Known NRHP Eligible and Unevaluated Sites by Effect Type and Alternative.....	457
Table 115. Maximum Noise Levels for Land Use Zones.....	467
Table 116. Estimated Increase in Traffic Volume due to Construction.....	484
Table 117. Existing and Anticipated Traffic on Major Access Roads to Reservoir and Water Treatment Plant Sites.....	486
Table 118. Existing and Anticipated Traffic on Major Access Roads to Pipeline Corridors and Pump Stations.....	488
Table 119. Existing and Anticipated Traffic on Major Access Roads to Return Flow Conveyances.	492
Table 120. Geologic Hazards along Pipeline Corridors.....	501
Table 121. Permanent and Temporary Disturbance by Alternative.....	508
Table 122. Area with High Susceptibility to Erosion by Alternative.....	509
Table 123. Topsoil Suitability Rating of Soils in Analysis Area.....	511
Table 124. Prime Farmland Affected by Each Alternative.....	511
Table 125. Estimated Carbon Dioxide Emissions by Alternative at 2046 Water Demands.....	515
Table 126. SDS Project Scoping Meeting Dates, Locations, and Attendance.....	529
Table 127. Native American Tribes Consulted during Scoping Process.....	530
Table 128. Alternatives Workshop Meeting Dates, Location and Attendance.....	531
Table 129. Agencies and Organizations Consulted.....	531

Figures

Figure 1. Regional Setting.	4
Figure 2. Colorado Springs' Projected Future Water Demands.	9
Figure 3. Projected Location of Colorado Springs' Future Population Growth.....	11
Figure 4. Colorado Springs' Existing Delivery Systems, Percent of Total Firm Yield.	13
Figure 5. Project Components.....	24
Figure 6. Alternatives Development and Screening Process.	28
Figure 7. Schematic of No Action Alternative.	29
Figure 8. Schematic of Proposed Action.	29
Figure 9. Schematic of Wetland Alternative.....	29
Figure 10. Schematic of Arkansas River Alternative.	29
Figure 11. Schematic of Fountain Creek Alternative.	30
Figure 12. Schematic of Downstream Intake Alternative.....	30
Figure 13. Schematic of Highway 115 Alternative.	30
Figure 14. Proposed Schedule for Component Implementation.....	34
Figure 15. No Action Alternative.	37
Figure 16. Preliminary Layout of Highway 115 Intake and Pump Station No. 1)	39
Figure 17. Preliminary Layout of Jimmy Camp Creek Reservoir.	42
Figure 18. Preliminary Layout for Jimmy Camp Creek Water Treatment Plant.....	44
Figure 19. Preliminary Layout of Williams Creek Reservoir.....	46
Figure 20. Proposed Action.	54
Figure 21. Preliminary Layout of Pueblo Dam Intake and Juniper Pump Station.	55
Figure 22. Wetland Alternative.....	60
Figure 23. Preliminary Layout of Upper Williams Creek Reservoir.....	61
Figure 24. Preliminary Layout of Highway 115 Return Flow Site.....	66
Figure 25. Comparison of Firm Yield and SMAPD.....	68
Figure 26. Arkansas River Alternative.	70
Figure 27. Preliminary Layout for Arkansas River Upstream of Confluence Intake and Pump Station.....	71
Figure 28. Computer Rendering of Typical Arkansas River Intake.	72
Figure 29. Fountain Creek Alternative.	75
Figure 30. Downstream Intake Alternative.....	77
Figure 31. Highway 115 Alternative.	80
Figure 32. Typical Cross Section of Ditch Improvements.	97
Figure 33. Typical Slope Protection using Riprap (A) and Vegetation (B).....	99
Figure 34. Recreational Flow Targets at Above Pueblo Gage for Pueblo Flow Management Program.	134
Figure 35. General Study Area for this DEIS.....	140
Figure 36. Summary of Mean Annual Direct Effects for Stream Flow and Reservoir Storage.	146
Figure 37. Statistics of a Boxplot.....	152
Figure 38. Average Annual Flow Volume, Arkansas River at Cañon City Gage.	153
Figure 39. Wellsville Gage Daily Average Historical Streamflow Summary.....	155
Figure 40. Above Pueblo Gage Daily Average Historical Streamflow Summary.	156

Figure 41. Avondale Gage Daily Average Historical Streamflow Summary.....	156
Figure 42. Las Animas Gage Daily Average Historical Streamflow Summary.	157
Figure 43. Fountain Creek near Fountain Gage Daily Average Historical Streamflow Summary.	158
Figure 44. Fountain Creek at Pueblo Gage Daily Average Historical Streamflow Summary.	159
Figure 45. Turquoise Lake Daily Historical Storage Summary.	159
Figure 46. Twin Lakes Daily Historical Storage Summary.....	161
Figure 47. Pueblo Reservoir Daily Historical Storage Summary.....	161
Figure 48. Boxplot of Daily Direct Effects Analysis Streamflow - Arkansas River near Wellsville Gage.....	164
Figure 49. Boxplot of Daily Direct Effects Analysis Streamflow – Arkansas River at Portland....	166
Figure 50. Boxplot of Daily Direct Effects Analysis Streamflow – Arkansas River above Pueblo.	169
Figure 51. Boxplot of Daily Direct Effects Analysis Streamflow – Arkansas River near Avondale.	172
Figure 52. Boxplot of Daily Direct Effects Analysis Streamflow - Fountain Creek at Security.....	174
Figure 53. Boxplot of Daily Direct Effects Analysis Streamflow – Fountain Creek at Pueblo.	175
Figure 54. Storage in Pueblo Reservoir for All Alternatives.....	179
Figure 55. Water Surface Elevation (WSEL) in Pueblo Reservoir for All Alternatives.	181
Figure 56. Storage in Lake Meredith for All Alternatives.....	181
Figure 57. Water Surface Elevation (WSEL) in Lake Meredith for All Alternatives.	183
Figure 58. Location and Extent of Major Aquifers.....	190
Figure 59. Denver Basin Cross Section and Cross Section Location.	195
Figure 60. Drawdown Cone Cross-Section for City of Fountain No Action Alternative Ground Water Pumping.....	198
Figure 61. Summary of Water Quality Direct Effects.	205
Figure 62. Summary of Salinity Direct Effects.	206
Figure 63. Summary of Current Water Quality Impairments and Concerns in the Analysis Area.	216
Figure 64. Trophic State Continuum.	217
Figure 65. Layers of Stratified Reservoir	217
Figure 66. Average Monthly Specific Conductance at USGS Gages.....	220
Figure 67. Median Suspended Sediment Concentrations – Fountain Creek Basin.	220
Figure 68. Hypothetical Schematic of Low Flow Analysis.....	223
Figure 69. Granite Gage Direct Effects Daily Model Simulated Streamflows – Average Years....	230
Figure 70. Average Annual Simulated Streamflow in Fountain Creek – Direct Effects.....	231
Figure 71. Basis of Stormflow Bacteria Effects Analysis.	233
Figure 72. Direct Effects Stormflows at Fountain Creek Gages for Bacteria Analysis.	234
Figure 73. Arkansas River at Portland Estimated Temperature for Direct Effects.	235
Figure 74. Simulated Dissolved Ammonia in Pueblo Reservoir Epilimnion near Dam.	238
Figure 75. Simulated Chlorophyll <i>a</i> in Pueblo Reservoir Epilimnion near Dam.	238
Figure 76. Simulated Dissolved Oxygen Concentrations in Pueblo Reservoir Hypolimnion near Dam.	239
Figure 77. Daily Model-Simulated Lake Meredith Daily Surface Elevation – Direct Effects.....	240
Figure 78. Daily Model-Simulated Storage in Williams Creek Reservoir – Direct Effects.....	241
Figure 79. Simulated Chlorophyll <i>a</i> Concentrations in Williams Creek Reservoir.	243
Figure 80. Simulated Chlorophyll <i>a</i> TSI in Williams Creek Reservoir.....	243

Figure 81. Diagram of the Adaptive Management Process.....	249
Figure 82. Peak Flow Hydrology and Floodplains Analysis Area.....	253
Figure 83. Floodplain Effects Parameters Diagram.....	256
Figure 84. Existing Conditions 100-Year Floodplain.....	260
Figure 85. Summary of Geomorphology Direct Effects.....	269
Figure 86. Geomorphic Effects Analysis Area.....	272
Figure 87. Geomorphic Conceptual Model.....	274
Figure 88. Lake Creek Direct and Indirect Effects Exceedance Flow Curves.....	282
Figure 89. Williams Creek Unconfined Flow Area.....	290
Figure 90. Summary of Aquatic Resources Direct Effects.....	296
Figure 91. Summary of Aquatic Resources Cumulative Effects.....	320
Figure 92. Key Recreation Resources.....	394
Figure 93. Socioeconomic Analysis Area.....	417
Figure 94. Study Area Block Group Analysis.....	445
Figure 95. Cultural Resource Area of Potential Effect.....	451
Figure 96. Number of Roadways with at Least 5 Percent Increase in Traffic Volume.....	484
Figure 97. Length of Pipeline to be Installed Under Roadways.....	493
Figure 98. Number of Roadways Affected by Open-Cut Construction.....	493
Figure 99. Paleontological Resources and Proposed Project Facilities in the Jimmy Camp Creek Area.....	500
Figure 100. Comparison of Water Demand Used for Hydrologic Modeling and Extensions of Colorado Springs' Demand Forecasts from 2046 to 2050.....	526

Appendices

Appendix A. Supporting Information for Purpose and Need

Appendix B. Operational Characteristics of EIS Alternatives

Appendix C. Conceptual Geomorphology Mitigation Plan

Appendix D. Conceptual Aquatic Resources Mitigation Plan

Appendix E. Conceptual Wetland Mitigation Plan

Appendix F. Programmatic Agreement for Cultural Resources

Appendix G. Conceptual Cultural Resources Mitigation Plan

Appendix H. Conceptual Adaptive Management Plan and Environmental Management System

Abbreviations and Acronyms

°C	Celsius
ac	acres
ac-ft	acre-foot
ac-ft/yr	acre-feet per year
ACHP	Advisory Council on Historic Preservation
ADT	Average Daily Traffic
AFA	Air Force Academy
AHRA	Arkansas Headwaters Recreation Area
AIRFA	American Indian Religious Freedom Act
APE	Area of Potential Effect
Ark-Otero Intake	Otero Intake on the Arkansas River
ARUCPS	Arkansas River Upstream of Confluence Pump Station
ARWNA	Arkansas River Water Needs Assessment
ASCE	American Society of Civil Engineers
ASTM	American Society of Testing Materials
AVC	Arkansas Valley Conduit
BASH	Bird Aircraft Strike Hazard
BBC	BBC Research and Consulting
BG	Block Group
BLM	U.S. Bureau of Land Management
BMP	best management practice
CCPA	Colorado Council of Professional Archaeologists
CDLE/OPS	Colorado Division of Labor and Employment Division of Oil and Public Safety
CDNIS	Colorado Natural Diversity Information System
CDNR	Colorado Department of Natural Resources
CDOLA	Colorado Department of Local Affairs
CDOT	Colorado Department of Transportation
CDOW	Colorado Division of Wildlife
CDP	census designated place
CDPHE	Colorado Department of Public Health and Environment
CDPOR	Colorado Division of Parks and Outdoor Recreation
CDPS	Colorado Discharge Permit System
CDSS	Colorado Decision Support System
CDWR	Colorado Division of Water Resources
CEC	Chadwick Ecological Consultants, Inc.
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act

CF&I	Colorado Fuel and Iron Corporation
CFR	Code of Federal Regulation
cfs	cubic feet per second
CGS	Colorado Geological Survey
CL	centerline
CLG	Certified Local Governments
CLOMR	Conditional Letter of Map Revision
CMP	Construction Management Plan
CNHP	Colorado Natural Heritage Program
CO ₂	carbon dioxide
Colorado Springs	City of Colorado Springs or Colorado Springs Utilities
Corps	U.S. Army Corps of Engineers
COS/Peterson	Colorado Springs Airport/Peterson Air Force Base
CP	Comprehensive Plan
CROA	Colorado River Outfitters Association
CSLB	Colorado State Land Board
CSP	Colorado State Parks
CSRWRF	Clear Spring Regional Water Reclamation Facility
CSU	Colorado Springs Utilities
cutbow	cutthroat-rainbow
CWA	Clear Water Act
CWCB	Colorado Water Conservation Board
dB	decibels
dba	decibels A scale
DBPS	Drainage Basin Planning Study
DEIS	Draft Environmental Impact Statement
E&H	Engineering and Hydrosystems
<i>E. coli</i>	<i>Escherichia coli</i>
EG	existing ground surface
EIS	Environmental Impact Statement
ELEV	elevation
EPA	U.S. Environmental Protection Agency
EPCDOT	El Paso County Department of Transportation
ERO	ERO Resources Corporation
ESA	Endangered Species Act
ET	evapotranspiration
FEIS	Final Environmental Impact Statement
FEMA	Federal Emergency Management Agency
FG	finished ground surface
FHWA	Federal Highway Administration

FMP	Flow Management Program
Fountain	City of Fountain
Fry-Ark Project	Fryingpan-Arkansas Project
ft/d	feet per day
ft ² /1000 ft	square feet of Weighted Usable Area per 1,000 feet of stream
FVA	Fountain Valley Authority
GEI	GEI Consultants, Inc.
GHG	greenhouse gases
GIS	Geographic Information System
gpcd	gallons per capita-day
gpd	gallons per day
gpm	gallons per minute
GPS	Global Positioning System
HARP	Historic Arkansas Riverwalk of Pueblo
HEAP	Home Efficiency Assistance Program
HEC-RAS	Hydrologic Engineering Center River Analysis System
HGM	Hydrogeomorphic
Homestake	Otero Homestake System
HRS	HRS Water Consultants
I-25	Interstate 25
IFIM	Instream Flow Incremental Methodology
IGA	Intergovernmental Agreement
IHA	indicators of hydrologic alteration
IPCC	Intergovernmental Panel of Climate Change
ITA	Indian Trust Assets
JD Phillips WRF	J.D. Phillips Water Reclamation Facility
km	kilometer
Kw	soil erodibility factor
lbs/ac	pounds (of fish) per acre
LDC	Land Development Consultants
LOMR	Letter of Map Revision
LVSWWTF	Las Vegas Street Wastewater Treatment Facility
MBTA	Migratory Bird Treaty Act
MCL	Maximum Contaminant Level
mg/L	milligrams per liter
mgd	million gallons per day
MIN	minimum
mL	milliliter
Montana Method	Montana Wetland Assessment Method
MWH/d	megawatt hours per day

NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NASS	National Agriculture Statistics Service
NAST	National Assessment Synthesis Team
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NLCD	National Land Cover Data
NOI	Notice of Intent
NPC	Noise Pollution Clearinghouse
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
OAHP	Office of Archaeology and Historic Preservation
P	probability of a flood value being equaled or exceeded in a given year
PA	Programmatic Agreement
PAC	Primary Activity Areas
PACOG	Pueblo Area Council of Governments
PBWW	Pueblo Board of Water Works
PCE	Primary Constituent Elements
PFMP	Pueblo Flow Management Program
PHABSIM	Physical Habitat Simulation Model
PM _{2.5}	Particulate Matter less than 2.5 microns in diameter
PM ₁₀	Particulate Matter less than 10 microns in diameter
PMF	Probable Maximum Flood
Policy Plan	County-Wide Policy Plan
PPACG	Pike Peak Area Council of Governments
PPRBD	Pikes Peak Regional Building Department
Preble's	Preble's meadow jumping mouse
PSOP	Preferred Storage Options Plan
Pueblo West	Pueblo West Metropolitan District
PUMS	Public Use Microdata
PWMD	Pueblo West Metropolitan District
RCRA	Resource Conservation and Recovery Act
Reclamation	U.S. Bureau of Reclamation
ROD	Record of Decision
ROY	Restoration of Yield
S1	critically imperiled
S2	imperiled
SCADA	Supervisory Control and Data Acquisition
SDS	Southern Delivery System
Security	Security Water District

SECWCD	Southeastern Colorado Water Conservation District
SEO	Colorado State Engineer's Office
Service	U.S. Fish and Wildlife Service
SFE	Single Family Equivalents
SHPO	State Historic Preservation Officer
SMAD	Simulated Mean Annual Deliveries
SMAPD	Simulated Mean Annual Project Deliveries
sq mi	square mile
SWA	State Wildlife Areas
SWSI	Statewide Water Supply Initiative
T	recurrence interval
T3	Third Terrace
TCP	Traditional Cultural Property
TDS	total dissolved solids
TE&C	Threatened, Endangered and Candidate
TOPS	Trails, Open Space and Parks
TSI	Trophic State Index
TYP	typical
U.S. DOI	U.S. Department of the Interior
UAVFMP	Upper Arkansas Voluntary Flow Management Program
URS	URS Corporation
USC	United States Code
USDA	U.S. Division of Agriculture
USFS	U.S. Forest Service
USGS	U.S. Geological Survey
VCRA	Voluntary Cleanup and Redevelopment Act
VRM	Visual Resource Management System
WCRM	Western Cultural Resource Management, Inc.
WEG	Wind Erodibility Group
WMO	World Meteorological Organization
WQCD	Water Quality Control Division
WQS	Water Quality Standards
WSEL	Water Surface Elevation
WUA	Weighted Usable Area
WWSP	Winter Water Storage Program
WWTF	wastewater treatment facility
µg/L	micrograms per liter
µS/cm	microsiemens per centimeter

