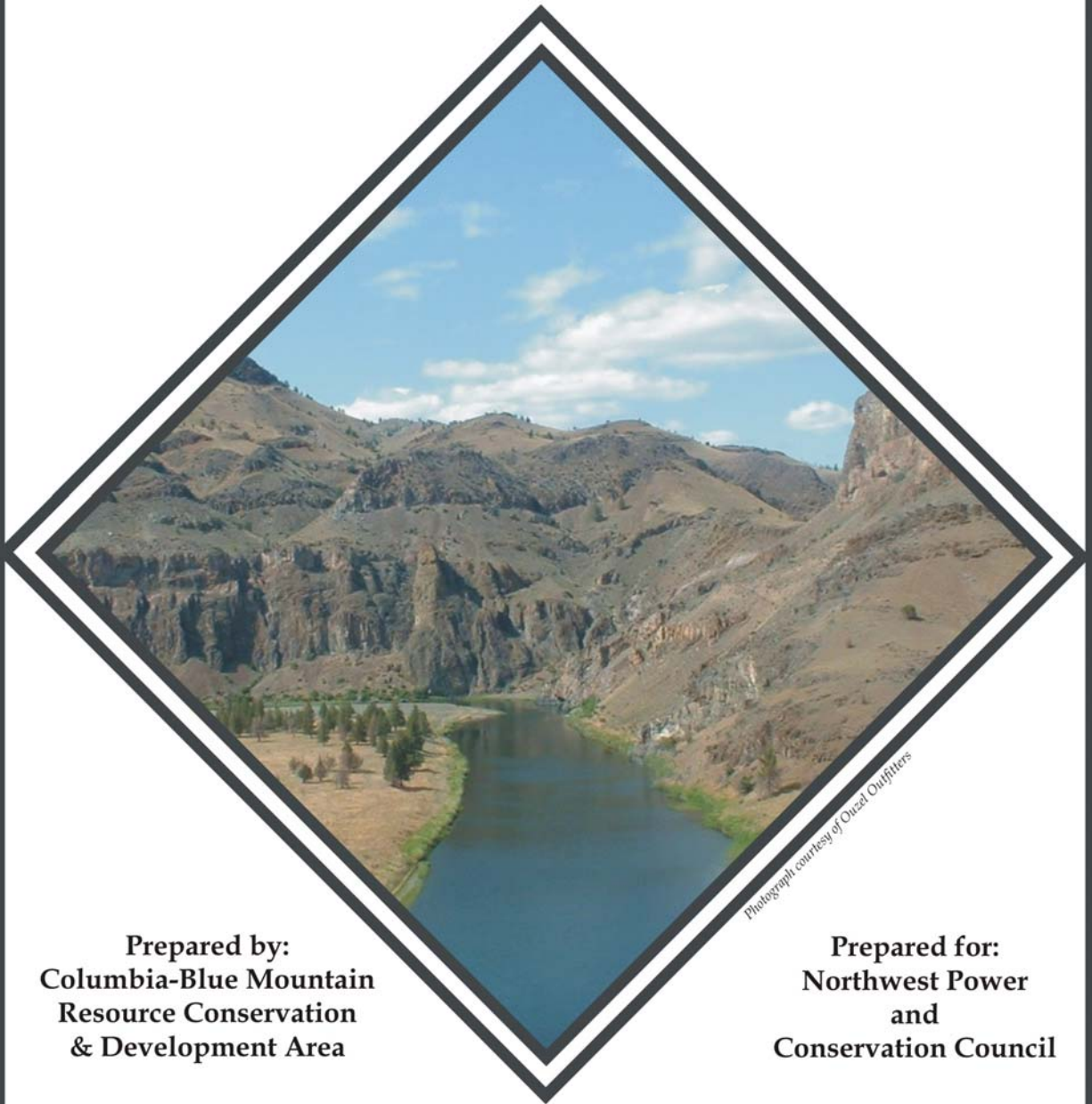


John Day Subbasin Revised Draft Plan



Photograph courtesy of Ouzel Outfitters

**Prepared by:
Columbia-Blue Mountain
Resource Conservation
& Development Area**

**Prepared for:
Northwest Power
and
Conservation Council**

March 15, 2005

Table of Contents

1. Executive Summary	1
2. Introduction.....	10
2.1 <i>Description of Planning Entity</i>	<i>10</i>
2.2 <i>List of Participants.....</i>	<i>11</i>
2.3 <i>Stakeholder Involvement Process</i>	<i>12</i>
2.4 <i>Overall Approach to the Planning Activity.....</i>	<i>15</i>
2.5 <i>Process and Schedule for Revising/Updating the Plan</i>	<i>17</i>
3. Subbasin Assessment	18
3.1 <i>Subbasin Overview.....</i>	<i>18</i>
3.1.1 <i>General Description</i>	<i>18</i>
3.1.2 <i>Subbasin Existing Water Resources</i>	<i>32</i>
3.1.3 <i>Hydrologic and Ecologic Trends in the Subbasin.....</i>	<i>43</i>
3.1.4 <i>Regional Context</i>	<i>45</i>
3.2 <i>Focal Species Characterization and Status</i>	<i>48</i>
3.2.1 <i>Native/Non-native Wildlife, Plant and Resident/Anadromous Fish of Ecological Importance</i>	<i>48</i>
3.2.2 <i>Focal Species Selection.....</i>	<i>62</i>
3.2.3 <i>Model Methods – EDT and QHA.....</i>	<i>65</i>
3.2.4 <i>Aquatic Focal Species Population Delineation and Characterization.....</i>	<i>71</i>
Summer Steelhead	<i>71</i>
Spring Chinook Salmon	<i>91</i>
Bull Trout.....	<i>108</i>
Redband Trout	<i>142</i>
Westslope Cutthroat Trout.....	<i>151</i>
3.2.5 <i>Terrestrial Focal Species Population Delineation and Characterization.....</i>	<i>165</i>
3.3 <i>Out-of-Subbasin Effects</i>	<i>180</i>
3.3.1 <i>Aquatic.....</i>	<i>180</i>
3.3.2 <i>Terrestrial.....</i>	<i>184</i>
3.4 <i>Environmental/Population Relationships</i>	<i>185</i>
3.5 <i>Identification and Analysis of Limiting Factors/Conditions.....</i>	<i>185</i>
3.5.1 <i>Aquatic Limiting Factors</i>	<i>185</i>
3.5.2 <i>Terrestrial Limiting Factors</i>	<i>185</i>
4. Inventory of Existing Activities	186
4.1 <i>Existing Legal Protection</i>	<i>186</i>
4.1.1 <i>Laws/Regulatory Programs.....</i>	<i>186</i>
4.1.2 <i>Treaties between Tribes and the Federal Government</i>	<i>199</i>
4.1.3 <i>Lands with Legal Mandates for Conservation</i>	<i>200</i>

4.2	<i>Existing Plans</i>	203
4.2.1	General Management Plans	203
4.3	<i>Existing Management Programs</i>	211
4.3.1	Voluntary Conservation Programs.....	211
4.3.2	Monitoring and Evaluation Programs.....	214
4.4	<i>Existing Restoration and Conservation Projects</i>	217
4.4.1	Restoration and Conservation Projects	217
4.4.2	Research, Monitoring and Evaluation Projects (includes studies).....	217
4.5	<i>Gap Assessment of Existing Protections, Plans, Programs and Projects</i>	218
4.5.1	Existing Legal Protection.....	218
4.5.2	Existing Plans and Studies	219
4.5.3	Existing Management Programs	222
4.5.4	Existing Restoration and Conservation Projects.....	222
5.	Management Plan	224
5.1	<i>Vision for the Subbasin</i>	224
5.1.1	Human Use of the Environment	224
5.1.2	Aquatic Species.....	228
5.1.3	Terrestrial Species.....	229
5.2	<i>Biological Objectives and Prioritized Strategies</i>	229
5.2.1	Working Hypotheses.....	230
5.2.2	Aquatic Species.....	230
5.2.2.1	Synthesis of Analytical Results	230
5.2.2.2	Biological Objectives.....	236
5.2.2.3	Habitat Objectives to Address Limiting Factors.....	242
5.2.2.4	Restoration Strategies and Priorities.....	244
5.2.2.5	Project Prioritization Framework.....	285
5.2.3	Terrestrial Species.....	288
5.3	<i>Consistency with ESA/CWA/Tribal Treaty Requirements</i>	311
5.4	<i>Research, Monitoring and Evaluation</i>	313

Table of Figures

Figure 1. Overview of the John Day Subbasin.	20
Figure 2. Precipitation map for the John Day Subbasin.	22
Figure 3. Ownership map for the John Day Subbasin as of June, 2003.	26
Figure 4. Reserved areas of the John Day Subbasin.	30
Figure 5. Fourth and fifth field watersheds in the John Day Subbasin.	35
Figure 6. Mean annual flows in the John Day Subbasin (McDonald Ferry gage #14048000).	36
Figure 7. Mean monthly discharge from 1904 to 2002 (McDonald Ferry gage #14048000).	36
Figure 8. Columbia Basin Ecological Provinces and Subbasins.	47
Figure 9. Distribution of summer steelhead in the John Day Subbasin.	74
Figure 10. Estimates of total John Day adult summer steelhead numbers with trend line (ODFW estimates).	76
Figure 11. Distribution of John Day steelhead populations as estimated by EDT for the years 1992-1997.	80
Figure 12. Distribution of John Day steelhead populations as estimated by fish managers for the years 1992-1997.	80
Figure 13. Stock recruitment curves produced by EDT baseline report for the five steelhead populations of the John Day Subbasin.	82
Figure 14. Limiting factors for summer steelhead by percentage of geographic areas (John Day Subbasin HUC5s).	90
Figure 15. Spring chinook distribution in the John Day Subbasin.	93
Figure 16. Estimates of total spring chinook escapement in the John Day Subbasin, 1964 to 2000 (estimate data per ODFW).	95
Figure 17. Estimates of adult spring chinook escapement for each John Day population, with trend lines. (estimate data per ODFW)	96
Figure 18. Stock recruitment curves produced by EDT baseline report for the four populations of the John Day Subbasin.	100
Figure 19. Limiting factors for spring chinook by percentage of geographic areas (HUC5s of the John Day Subbasin).	107
Figure 20. Bull trout distribution and Recovery Unit core areas in the John Day Subbasin.	110
Figure 21. Bull trout local populations within the Upper Mainstem John Day Core Area.	113
Figure 22. Bull trout local populations within the Middle Fork John Day Core Area.	115
Figure 23. Bull trout local populations within the North Fork John Day Core Area.	117
Figure 24. QHA results of protection quartiles by reach for bull trout.	133
Figure 25. QHA results of restoration quartiles by reach for bull trout.	134
Figure 26. Limiting factors for habitat attributes for lower mainstem John Day.	137
Figure 27. Limiting factors for habitat attributes for the North Fork John Day.	138
Figure 28. Limiting factors for habitat attributes for the Middle Fork John Day.	139
Figure 29. Limiting factors for habitat attributes for the Upper John Day.	140
Figure 30. Distribution of redband trout in the John Day Subbasin.	148
Figure 31. Westslope cutthroat trout distribution across the west.	156
Figure 32. Distribution of westslope cutthroat in the John Day Subbasin.	158
Figure 33. California bighorn sheep habitat potential in the John Day Subbasin.	168
Figure 34. Ferruginous hawk habitat potential in the John Day Subbasin.	169

Figure 35. Grasshopper sparrow habitat potential in the John Day Subbasin.	170
Figure 36. Pileated woodpecker habitat potential in the John Day Subbasin.	171
Figure 37. Red-naped sapsucker habitat potential in the John Day Subbasin.	172
Figure 38. Sage sparrow habitat potential in the John Day Subbasin.	173
Figure 39. White-headed woodpecker habitat potential in the John Day Subbasin.	174
Figure 40. Current (1999) wildlife habitat distribution in the John Day Subbasin.	176
Figure 41. Historic (c. 1850) wildlife habitat distribution in the John Day Subbasin.	177
Figure 42. Protection status of lands in the John Day Subbasin.	178
Figure 43. Protection status of HUC6 watersheds in the John Day Subbasin.	179
Figure 44. Ceded territory of the CTWSRO.	225
Figure 45. Ceded territory of the CTUIR.	225
Figure 46. Projected base case timber harvest and inventory levels for non-industrial private forestlands (NIPF) in eastern Oregon.	227
Figure 47. Projected base case timber harvest and inventory levels on industrial forestlands in eastern Oregon.	227
Figure 48. Grant County population, 1969 - 2001.	228
Figure 49. Wheeler County population, 1969 - 2001.	228
Figure 50. First quartile HUC5s for restoration potential of nine chinook and steelhead populations identified by EDT and QHA analysis in the John Day Subbasin.	233
Figure 51. Map illustrating relative priority for improving fish passage by HUC5.	254
Figure 52. Map illustrating relative priority for installing fish screens by HUC5.	256
Figure 53. Map illustrating relative priority for flow restoration by HUC5.	259
Figure 54. Map illustrating relative priority for in-stream activities by HUC5.	262
Figure 55. Map illustrating relative priority for riparian habitat improvements by HUC5.	266
Figure 56. Map illustrating relative priority for controlling pollution sources by HUC5.	269
Figure 57. Map illustrating relative priority for protecting high quality habitat by HUC5.	272
Figure 58. Map illustrating relative priority for upland improvement projects by HUC5.	277
Figure 59. Map illustrating relative priority for education/outreach by HUC5.	280
Figure 60. Map illustrating relative priority for managing recreational/tribal fisheries by HUC5.	284
Figure 61. Subbasin assessment framework.	313
Figure 62. The adaptive management cycle, showing the roles of research, monitoring and evaluation.	316

Table of Tables

Table 1. County populations according to U.S. Census Bureau (USCB 2004).....	24
Table 2. City populations according to U.S. Census Bureau (USCB 2004).....	24
Table 3. USGS gaging station summary, John Day Subbasin, Oregon.....	33
Table 4. Principal aquifers in John Day Subbasin watersheds.	37
Table 5. North Fork John Day River watershed 303(d) listed stream segments and water quality parameters of concern (ODEQ 2002).....	38
Table 6. Middle Fork John Day River watershed 303(d) listed stream segments and parameters of concern (ODEQ 2002).....	39
Table 7. Upper John Day River watershed 303(d) listed stream segments and parameters of concern (ODEQ 2002).....	40
Table 8. Lower John Day River watershed 303(d) listed stream segments and parameters of concern (ODEQ 2002).....	40
Table 9. Wildlife species of the John Day Subbasin listed as threatened or endangered at the state or federal level (ODFW 2003, USFWS 2003).....	49
Table 10. Wildlife species of the John Day Subbasin that are candidates for federal listing (USFWS 2003).	49
Table 11. Sensitive wildlife species of the John Day Subbasin that fall into one of four categories: critical, vulnerable, peripheral or naturally rare, or of undetermined status (ODFW 1997).....	49
Table 12. Threatened, endangered and sensitive plant species documented or suspected to occur in the John Day Subbasin (Source: USFS 1999).....	51
Table 13. Landbird species with declining population trends inhabiting the John Day Subbasin.	53
Table 14. Functional specialists occurring in the John Day Subbasin (IBIS 2003).	55
Table 15. List of critical functional link terrestrial wildlife species in the John Day Subbasin (IBIS 2003).....	56
Table 16. List of wildlife species in the John Day Subbasin that eat different stages of salmonids (IBIS 2003).....	56
Table 17. Common names of the 78 John Day Subbasin bird species on the Oregon PIF list (IBIS 2003).....	57
Table 18. Managed game species and fur-bearing mammals in the John Day Subbasin.	58
Table 19. HEP species selected for the John Day and McNary dams (IBIS 2003).....	60
Table 20. Noxious weeds found in the John Day Subbasin.....	60
Table 21. Some examples of the importance of animals and plants in the cultural and spiritual lives of CTUIR Native Americans.	61
Table 22. Terrestrial focal species selected for the John Day Subbasin.....	64
Table 23. Estimated catch of wild and hatchery steelhead in the John Day Subbasin as reported on steelhead punch cards (ODFW 2001).....	77
Table 24. Description of Time Periods in which Fisheries Occur within the John Day Subbasin (USBR 2003).....	78
Table 25. Summer steelhead population averages historic abundance potential, baseline abundance and baseline capacity based on EDT results, observed averages, and interim targets.....	79

Table 26. Top quartile protection and restoration geographic areas with important restoration attributes as estimated by EDT (black), with additional attributes listed by the subbasin planners (gray) for Lower John Day summer steelhead.	84
Table 27. Top quartile protection and restoration geographic areas with important restoration attributes as estimated by EDT for North Fork John Day summer steelhead.	85
Table 28. Top quartile protection and restoration geographic areas with important restoration attributes as estimated by EDT (black), with additional attributes listed by the subbasin planners (gray) for Middle Fork John Day summer steelhead.	86
Table 29. Top quartile protection and restoration geographic areas with important restoration attributes as estimated by EDT (black), with additional attributes listed by the subbasin planners (gray) for South Fork John Day summer steelhead.	87
Table 30. Top quartile protection and restoration geographic areas with important restoration attributes as estimated by EDT for Upper John Day summer steelhead.	88
Table 31. First quartile geographic areas with the high and moderate ranked restoration attributes as estimated by EDT.	89
Table 32. Distribution of spring chinook salmon (including juveniles) in John Day Subbasin streams. (Source: StreamNet).....	94
Table 33. Spring chinook adult population averages.....	99
Table 34. Spring chinook juvenile population averages from EDT.	101
Table 35. Top quartile protection and restoration geographic areas with important restoration attributes as estimated by EDT (black), with additional attributes listed by the subbasin planners (gray) for Granite Creek spring chinook.	103
Table 36. Top quartile protection and restoration geographic areas with important restoration attributes as estimated by EDT (black), with additional attributes listed by the subbasin planners (gray) for Middle Fork John Day spring chinook.	104
Table 37. Top quartile protection and restoration geographic areas with important restoration attributes as estimated by EDT for North Fork John Day spring chinook.	105
Table 38. Top quartile protection and restoration geographic areas with important restoration attributes as estimated by EDT (black), with additional attributes listed by the subbasin planners (gray) for Upper John Day spring chinook.	106
Table 39. List of current and potential local bull trout populations in the Upper John Day River subwatershed.	112
Table 40. List of current and potential local bull trout populations in the Middle Fork John Day River subwatershed.....	114
Table 41. List of current local bull trout populations in the North Fork John Day River subwatershed.	116
Table 42. Significance of past (last 100 years) and present threats to bull trout within the Upper Mainstem John Day Core Area of the John Day River Recovery Unit.....	126
Table 43. Significance of past (last 100 years) and present threats to bull trout within the Middle Fork John Day Core Area of the John Day River Recovery Unit.	126
Table 44. Significance of past (last 100 years) and present threats to bull trout within the North Fork John Day Core Area of the John Day River Recovery Unit.	127
Table 45. Total historic and current John Day Subbasin bull trout habitat by land ownership category.....	128
Table 46. Total historic and current North Fork John Day Drainage bull trout habitat by land ownership category.....	128

Table 47. Total historic and current Upper John Day Drainage bull trout habitat by land ownership category.....	129
Table 48. Total historic and current Middle Fork John Day Drainage bull trout habitat by land ownership category.....	129
Table 49. Mean QHA attribute values over all reaches under reference and current conditions and the percent reduction of that attribute for bull trout in the John Day Subbasin.....	129
Table 50. Bull Trout QHA habitat protection rankings.....	131
Table 51. Bull trout QHA habitat restoration rankings.....	132
Table 52. Top priority protection reaches and top restoration reaches as determined from QHA rankings and technical team analysis.....	135
Table 53. Priority QHA restoration geographic areas and the top four ranked QHA restoration attributes for priority reaches in those geographic areas.....	141
Table 54. Density of 1+ <i>O. mykiss</i> in the John Day Subbasin, based on sampling in 43.....	144
Table 55. Total number and pounds of rainbow trout stocked in Upper John Day Subbasin waterbodies, 1925-2001.....	149
Table 56. Mileages of WCT Occupancy, Land Ownership - Upper John Day River.....	157
Table 57. Habitat type changes from historic (c.1850) to current (1999) times.....	175
Table 58. Smolt-to-Adult (SAR) survival estimates (%) with range limits for John Day chinook outmigrants based upon in-river survival studies.....	181
Table 59. Smolt-to-Adult (SAR) survival point estimates (%) with range limits for John Day steelhead outmigrants.....	182
Table 60. Biological opinions issued by NOAA Fisheries in the John Day Subbasin since 1999.....	186
Table 61. In-stream water rights in the John Day Subbasin as of April, 2004.....	197
Table 62. Monitoring programs in the John Day Subbasin.....	215
Table 63. Cattle Commodity figures for Grant and Wheeler counties.....	226
Table 64. First quartile Geographic Areas for restoration as determined by EDT or QHA and compared to the presence.....	232
Table 65. Baseline and PFC results from EDT modeling for summer steelhead populations..	234
Table 66. Baseline and PFC results from EDT modeling for spring chinook populations.....	234
Table 67. Subbasin objectives for chinook and steelhead escapement by population with historic and recent population estimates included.....	237
Table 68. Subbasin objectives in terms of smolt per spawner.....	238
Table 69. Hypothetical Linkages between Restoration Strategies and Habitat Objectives.....	245
Table 70. Lower and Middle Mainstem John Day River (below Kimberly) Priority Rankings	249
Table 71. Strategies Ranking for Lower and Middle Mainstem John Day River (below Kimberly).....	249
Table 72. Middle Fork and North Fork John Day River Priority Rankings.....	250
Table 73. Strategy Rankings for North Fork and Middle Fork John Day.....	250
Table 74. Upper Mainstem and South Fork John Day River Priority Rankings.....	251
Table 75. Strategies Ranking for Upper Mainstem and South Fork John Day River.....	251
Table 76. Linkage between Passage Improvements and EDT Attributes.....	253
Table 77. Linkage between Fish Screen Improvements and EDT Attributes.....	255
Table 78. Linkage between Flow Restoration and EDT Attributes.....	258
Table 79. Linkage between In-stream Activities and EDT Attributes.....	261
Table 80. Linkage between Riparian Habitat Improvements and EDT Attribute.....	264

Table 81. Linkage between Controlling Pollution Sources and EDT Attributes.....	268
Table 82. Linkage between Protecting High Quality Habitat Areas and EDT Attributes.....	271
Table 83. Linkage between Upland Improvement Vegetation Projects and EDT Attributes....	275
Table 84. Linkage between Upland Physical/Structural Improvements and EDT Attributes ...	276
Table 85. Linkage between Education and Outreach with EDT Variables	279
Table 86. Linkage between Recreational and Tribal Fisheries with EDT Variables.....	282
Table 87. Wildlife, plant and fish species of the John Day Subbasin listed as threatened or endangered at the state or federal level.....	311

Acronyms

AgWQM	Agricultural Water Quality Management Act
AgWQMAP	Agricultural Water Quality Management Area Plans
BCWC	Bridge Creek Watershed Council
BLM	U.S. Bureau of Land Management
BPA	Bonneville Power Administration
BRT	Biological Review Team
CAFO	Confined Animal Feeding Operation
CBMRC&D	Columbia-Blue Mountain Resource Conservation & Development Area
CCRP	Continuous Conservation Reserve Program
CEP	Coordinated Enforcement Program
cfs	cubic feet per second
CREP	Conservation Reserve Enhancement Program
CRFMP	Columbia River Fish Management Plan
CRITFC	Columbia River Intertribal Fish Commission
CRMP	Coordinated Resource Management Planning
CRP	Conservation Reserve Program
CTUIR	Confederated Tribes of Umatilla Indian Reservation
CTWSRO	Confederated Tribes of the Warm Springs Reservation of Oregon
CWA	Clean Water Act
DBH	diameter at breast height (4.5 feet above ground)
DEAR	Deer Enhancement & Restoration
DEQ	Oregon Department of Environmental Quality
DPS	distinct population segment
DSL	Division of State Lands
EDT	Ecosystem Diagnosis and Treatment model
EPA	Environmental Protection Agency
EQIP	Environmental Quality Incentive Program
ESA	Endangered Species Act
ESU	Evolutionarily Significant Unit
FCRPS	Federal Columbia River Power System
FS	U.S. Forest Service
FSA	U.S. Farm Service Agency
GA	geographic area
GRTS	generalized random tessellated sampling
GSWCD	Grant Soil and Water Conservation District
HCP	Habitat Conservation Plan
HUC	hydrologic unit code
HUC5	fifth field watershed
IBIS	Interactive Biological Information System
ICBEMP	Interior Columbia Basin Ecosystem Management Project
INFISH	Inland Native Fish Strategy Environmental Assessment
ISWR	in-stream water right
JAR	juvenile-to-adult ratios

JD	John Day
JDR	John Day River
MCR	Mid-Columbia River
MF	Middle Fork
MJDWC	Mid John Day Watershed Council
MNF	Malheur National Forest
MOA	memorandum of agreement
NED	Northwest Environmental Data Network
NF	National Forest
NF	North Fork
NFJDWC	North Fork John Day Watershed Council
NFWF	National Fish and Wildlife Federation
NIPF	non-industrial private forestlands
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NOALE	Northeastern Oregon Assembled Land Exchange
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NWPCC	Northwest Power and Conservation Council
NWPPC	Northwest Power Planning Council
O & M	Operation and Maintenance
OAR	Oregon Administrative Rule
OCG	Oregon Subbasin Planning Coordinating Group
ODA	Oregon Department of Agriculture
ODEQ	Oregon Department of Environmental Quality
ODF	Oregon Department of Forestry
ODFW	Oregon Department of Fish and Wildlife
OOSE	out-of-subbasin effects
OSP	Oregon State Police
OSU	Oregon State University
OWC	Oregon Wildlife Coalition
OWEB	Oregon Watershed Enhancement Board
OWRD	Oregon Water Resources Department
OWT	Oregon Water Trust
PACFISH	Environmental Assessment for the Implementation of Interim Strategies for Managing Anadromous Fish-producing Watersheds in Eastern Oregon and Washington, Idaho, and Portions of California
PDO	Pacific Decadal Oscillation
PFC	properly functioning conditions
PNAMP	Pacific Northwest Aquatic Monitoring Partnership
QHA	Qualitative Habitat Assessment model
R&E	Restoration and Enhancement Board
RD	Ranger District
RHCA	Riparian Habitat Conservation Area
RM	river mile
RME	Research, Monitoring and Evaluation

RPA	Reasonable and Prudent Alternative
SAR	smolt-to-adult return rate
SF	South Fork
SSWCD	Sherman County Soil and Water Conservation District
SWCD	Soil and Water Conservation District
TMDL	Total Maximum Daily Load
TNC	The Nature Conservancy
TOAST	Oregon Technical Outreach and Assistance Team
TRT	Technical Recovery Team
UNF	Umatilla National Forest
USACE	U.S. Army Corps of Engineers
USBR	U.S. Bureau of Reclamation
USDA	U.S. Department of Agriculture
USDI	U.S. Department of the Interior
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WC	watershed council
WCT	westslope cutthroat trout
WHIP	Wildlife Habitat Incentives Program
WSWCD	Wheeler Soil and Water Conservation District
WWNF	Wallowa – Whitman National Forest

1. Executive Summary

Overview

The John Day Subbasin Plan is one of 62 plans throughout the Columbia Basin that will guide implementation of the Northwest Power and Conservation Council's (NWPCC, or Council) Fish and Wildlife Program for the next 10 to 15 years. The NWPCC is required to mitigate for fish and wildlife losses resulting from hydropower dams built on the Columbia River. Subbasin plans will help direct Bonneville Power Administration (BPA) funding of projects that protect, mitigate, and enhance fish and wildlife that have been adversely affected by the development and operation of the Columbia River hydropower system. NOAA Fisheries, the U.S. Fish & Wildlife Service and other federal and state agencies with jurisdiction in this region will also use the plans.

The subbasin plan reflects wide stakeholder involvement. This involvement began in February 2003 when natural resource specialists and other subbasin stakeholders came together to initiate the planning process. At that time the stakeholders requested that the Columbia-Blue Mountain Resource Conservation & Development Area (CBMRC&D) lead the process. They also created the John Day Subbasin Coordination Team (coordination team), consisting of the following organizations:

- Sherman County
- Grant Soil and Water Conservation District (SWCD)
- Gilliam County SWCD
- Monument SWCD
- Wheeler SWCD
- Wasco County SWCD
- Sherman County SWCD
- North Fork John Day Watershed Council
- Mid John Day Watershed Council
- Gilliam-East John Day Watershed Council
- Bridge Creek Watershed Council
- Paleo Project
- Oregon Department of Fish and Wildlife
- Oregon Water Resources Department
- Oregon Department of Environmental Quality
- U.S. Bureau of Reclamation
- U.S. Bureau of Land Management

The coordination team played a key role during the planning process. As a first step, each of the coordination team members signed a Memorandum of Agreement that specified the stakeholders on the coordination team, the method for decision-making, expectations of the team, the fiscal agent, an outline of the planning process, and the structure for public involvement. They developed a work plan, which was approved by NWPCC in May 2003, and chose subcontractors to serve as the project manager, technical writer and public outreach coordinator. The

subcontractors began work on the assessment, inventory, and management plan on July 21, 2003. The formal contract from NWPPC was signed on August 27, 2003.

During the next nine months, the coordination team worked with subcontractors to draft the John Day Subbasin Plan. The initial draft – developed in half the time originally provided by the NWPPC to develop a complete assessment, inventory, and management plan – was delivered to the NWPPC on schedule on May 28, 2004. However, upon review by the Independent Scientific Advisory Board, the NWPPC decided additional time and funding was needed to do further work on the plan and revise the May 28 draft.

This revised draft incorporates revisions made by the coordination team as requested by the NWPPC in October 2004. Funding was authorized from the NWPPC and the Oregon Watershed Enhancement Board to complete the revision. In October 2004 the coordination team reconvened to begin the revision process. The CRITFC, under the leadership of Phil Roger, played a key role in the revision process by completing the assessment as well as assisting with other sections of this plan. Revisions to the plan, including substantial improvements to the assessment and management plan, were completed and the revised draft submitted to the NWPPC on March 15, 2005.

Key Components of the Plan

The John Day Subbasin Plan includes:

- An assessment, providing the technical foundation for the plan, of the current condition of fish and wildlife in the subbasin and their limiting factors.
- An inventory of recent and ongoing projects to protect, mitigate, and enhance fish and wildlife in the subbasin.
- A management plan describing the coordination team's vision for the subbasin, biological and habitat objectives, and prioritized strategies for achieving those objectives in the subbasin.

Subbasin planners followed guidelines presented in the NWPPC Technical Guide for Subbasin Planners (NWPPC 2001). It was developed in accordance with the Council vision, scientific principles, and biological objectives for the Columbia River Basin, as described in the 2000 Fish and Wildlife Program. Additionally, the John Day subbasin planners worked closely with the Oregon Subbasin Planning Coordinating Group (OCG) and their Technical Outreach and Assistance Team (TOAST). The resulting John Day Subbasin Plan follows the outline developed by the OCG in their Oregon Specific Guidance document.

Stakeholder Involvement

Public outreach played an integral role in the development of this plan. The coordination team made a concerted effort to reach out to other stakeholders in the subbasin throughout the planning process. Initial presentations were given to numerous community groups in late 2003. A preliminary draft plan was distributed at public meetings held in Canyon City and Condon in May 2004. Comments on the draft were solicited through May 21, 2004.

Public involvement was also encouraged during development of the revised plan. The coordination team met frequently between August 2004 and March 2005 to further develop and revise the assessment and management portions of the original plan. These meetings were well publicized. Team members stated that their respective boards of directors and local stakeholders were kept informed. Meetings were held at Spray, Fossil, Monument, and John Day. Additionally, the board of directors of CBMRC&D was kept up-to-date regarding the plan's revision process. All meetings were open to the public and meeting notes were sent directly to watershed councils, soil and water conservation districts and involved state and federal agencies. The NWPCC will receive additional oral and written comments on the revised draft at a public meeting before it is adopted.

Vision for the John Day Subbasin

In many ways, the vision is the centerpiece of the subbasin plan. It describes a desired future condition for the subbasin that reflects its unique conditions, values, and priorities. The coordination team developed the following vision for the John Day Subbasin:

A healthy and productive landscape where diverse stakeholders from within and outside the subbasin work together to maintain and improve fish and wildlife habitat in a manner that supports the stewardship efforts of local land managers, makes efficient use of resources and respects property rights. The result will be sustainable, resource-based activities that contribute to the social, cultural and economic well-being of the subbasin and the Pacific Northwest.

This vision reflects the team's belief that watershed management in the John Day Subbasin is necessary to improve and maintain watershed health. It recognizes the important role that local stakeholders, including individual landowners, play in meeting these needs.

Assessment

Information gained during the assessment formed the foundation for development of the subbasin biological objectives, priorities, and strategies. Subbasin planners conducted the assessment using analytical models to compare historic and current conditions for selected focal fish and wildlife species. They worked with the coordination team to make several key decisions that focused the scope and breadth of the planning effort. These decisions led to the selection of focal fish and wildlife species and the use of several analytical models to assess conditions.

Focal Species. Five aquatic species and 11 terrestrial species in the John Day Subbasin were selected as the focal species for the subbasin plan. Criteria used in selecting the focal species include a) designation as a federal threatened or endangered species, b) cultural significance, c) local significance, and d) ecological significance, or ability to serve as an indicator of environmental health for other aquatic or wildlife species.

The five aquatic focal species include: summer steelhead, spring chinook, bull trout, redband trout, and westslope cutthroat trout. The John Day Subbasin is considered one of the most

important subbasins in the Columbia River system, as it supports two of the last remaining intact wild anadromous fish populations in the Columbia River Basin. An additional determining factor specific to the selection of aquatic focal species was the availability of information on population status, life history, and habitat requirements.

The eleven terrestrial focal species include: pileated woodpecker, white-headed woodpecker, red-naped sapsucker, ferruginous hawk, grasshopper sparrow, California bighorn sheep, sage sparrow, Columbia spotted frog, yellow warbler, American beaver, and great blue heron. These species were chosen because they are locally significant as components of terrestrial wildlife diversity in the John Day Subbasin.

Assessment Tools. Several tools were used to assess subbasin characteristics and their relationship with focal species productivity. The Ecosystem Diagnosis and Treatment model (EDT) was used to produce quantitative measures of the potential impacts of environmental factors on the abundance and productivity of the anadromous focal species in the John Day Subbasin. It was also used to examine a Properly Functioning Condition (PFC) scenario and its potential impact on populations. PFC represents an approximation of the “best” possible state of the environment with respect to the local economic, social, and political constraints on the environment (at approximately 70% of the historic, undisturbed habitat conditions). To complete the EDT analysis, the streams in the John Day Subbasin were broken into 1,264 individual reaches, 1,158 of which were used in the EDT model for the analysis of spring chinook and summer steelhead. The 106 reaches not rated using EDT is habitat currently available only to resident species, usually above natural and human-made barriers.

The Qualitative Habitat Assessment (QHA) modeling tool was used to assess bull trout habitat in the John Day Subbasin. For QHA modeling, a reach system consisting of 61 reaches was developed by the John Day fisheries technical team. The reach system encompassed all streams that bull trout presently inhabit, or are believed to formerly inhabit. The QHA model determined which attributes are most important in each geographic area in terms of limiting bull trout productions. The QHA for bull trout provided a ranking of stream reaches for both habitat protection and habitat restoration.

Information from the Northwest Habitat Institute’s Interactive Biological Information System (IBIS) was used to assess conditions for the terrestrial focal species. Historic and current habitats from IBIS were examined and compared to identify focal habitats and to assess habitat changes that have occurred in the subbasin.

Inventory

The inventory identifies fish and wildlife projects undertaken in the John Day Subbasin. This extensive inventory database identifies and describes fish and wildlife programs. It also identifies existing natural resource laws, regulations, and management plans in the subbasin. The inventory summarizes 339 specific projects that have been undertaken in the subbasin to improve conditions for fish and wildlife. The high number of projects identified in the inventory illustrates a strong commitment by local landowners and citizens in the John Day Subbasin to provide sound stewardship of natural resources.

The inventory was placed in a database that provides the ability to query for project information in a multitude of ways. This capability is useful for evaluating project effectiveness relative to the biological objectives and strategies of the plan. The final section of the inventory is a gap assessment identifying the gaps between existing protections, plans, programs, and projects and the respective needs for each.

Management Plan

The management plan describes desired direction for the subbasin. It begins with the vision, which takes into account socio-economic factors in the subbasin, then outlines biological objectives and restoration strategies to achieve the objectives. It also includes a prioritization framework to ensure that restoration efforts are conducted in the most efficient manner. In addition, it defines biological objectives and strategies for nine focal habitats used by the 11 terrestrial focal species.

Socio-economic Factors. The John Day Subbasin includes human factors unique to the subbasin which require consideration as aquatic and wildlife plans are implemented. These factors include the involvement of two Indian tribes (Warm Springs and Umatilla), a strong reliance on natural resources for the economic base, the high percentage of economically-distressed communities, and the high percentage and ecological significance of privately owned land in the subbasin. The success of the strategic projects proposed in this management plan depends on acknowledging these human factors and locating funding sources to help offset any economic loss to private landowners.

Biological Objectives and Strategies for Aquatic Focal Species. Based on the results of the assessment and inventory, teams of resource managers, technical experts, and stakeholders throughout the subbasin developed biological objectives, habitat objectives, restoration strategies, and restoration priorities for aquatic focal species in the John Day Subbasin. These objectives, strategies, and priorities can be found in Sections 5.2.2.2, 5.2.2.3, and 5.2.2.4.

Biological objectives describe, in quantitative terms, the focal species performance needed to achieve the subbasin vision. They also define the environmental conditions needed to provide those biological responses. Because the aquatic focal species are all salmonids and have distributions with substantial overlap, they all use and respond to changes in the same environment. Following are the objectives developed for summer steelhead and spring chinook populations at 25 years and 50 years. Objectives for the other species can be found in Section 5.2.

Within 25 years:

1. Restore the freshwater productivity of steelhead and chinook populations to the 25-year levels identified in Table 68.
2. Restore adult returns of steelhead and chinook populations to the 25-year levels identified in Table 67.
3. Allow limited fisheries on the strongest populations.

Within 50 years:

4. Achieve the freshwater productivity of steelhead and chinook populations to the 50-year levels identified in Table 68.
5. Achieve adult returns of steelhead and chinook populations to the 50-year levels identified in Table 67.
6. Support annual fisheries on all populations.
7. Reestablish connected environments between existing populations to allow metapopulation interactions.
8. Some populations should be expanding beyond their baseline distributions.

Restoration Strategies. The character of restoration opportunities in the John Day Subbasin is unique. As noted throughout this plan, the John Day is renowned for its spring chinook salmon and summer steelhead populations – two of the last remaining intact wild populations of anadromous fish in the Columbia River Basin, though now considerably reduced from their historic abundance. Further, aquatic habitats in the John Day are affected by a variety of local historic and ongoing influences instead of by a single dam or other large structure, as is the case in many other subbasins. Consequently, successful aquatic habitat restoration in the John Day Subbasin will require widespread efforts to implement a range of project types.

The management plan defines 10 broad restoration strategies to achieve the biological objectives for the aquatic focal species and 42 specific types of actions that make up these strategies. These strategies and actions, which were identified by the coordination team, are described in detail in Section 5.2.2.4.

The 10 restoration strategies are:

- Strategy A: Improve fish passage
- Strategy B: Install fish screens on water diversions
- Strategy C: Flow restoration
- Strategy D: In-stream activities
- Strategy E: Riparian habitat improvements
- Strategy F: Control pollution sources
- Strategy G: Protect existing high quality habitat areas
- Strategy H: Upland improvement projects
- Strategy I: Education/outreach
- Strategy J: Manage recreational/tribal fisheries

Priority Rankings. The plan identifies restoration priorities within three geographic areas of the John Day Subbasin:

- Lower and Middle Mainstem John Day River (below Kimberly)
- Middle Fork and North Fork John Day River
- Upper Mainstem and South Fork John Day River

During the planning process, technical teams within the three geographic areas set priorities within each fifth field watershed (HUC5) for restoration strategies and established a restoration priority ranking between the HUC5s. EDT restoration and protection priority rankings provided the basis for prioritization between the HUC5s. The technical teams then revised the rankings

based on professional opinion. The largest general difference they found was that EDT gave high priorities to HUC5s that contain mainstem reaches. While these HUC5s are of high importance to both the local and upstream spawning populations, the teams felt that restoration work in tributary streams would be the most cost-effective strategy to achieve mainstem improvements. Therefore, the team tended to rank the HUC5s with large tributaries as high priorities for restoration. Also, HUC5s ranked highly for protection by EDT tend to be limited in their restoration opportunities by their relatively intact habitat.

John Day Subbasin planners frequently rated six strategies as “very high” or “high” priorities within the 43 HUC5s in the subbasin: riparian habitat improvements, improving fish passage, upland improvements, fish screening, flow restoration, and protection of existing habitat. Improving and expanding on existing, successful efforts and applying these watershed strategies broadly will be critical to meeting restoration goals within the subbasin.

The restoration priority rankings established by the local technical teams were reviewed by the coordination team and presented to watershed councils and soil and water conservation districts for comment at regularly scheduled meetings. Following is a brief summary of the established priorities for each of the geographic areas:

- Lower and Middle Mainstem John Day River (below Kimberly) Priorities:
 - First priority – Protection of existing habitat
 - Second priority – Passage
 - Third priority – Flow restoration
 - Fourth priority – Riparian habitat improvements
- Middle Fork and North Fork John Day River Priorities:
 - First priority – Protection of existing habitat
 - Second priority – Passage and riparian habitat improvements
 - Third priority – Fish screens
 - Fourth priority – Instream habitat improvements, upland restoration, and flow restoration.
- Mainstem and South Fork John Day River Priorities:
 - First priority – Protection of existing habitat
 - Second priority – Passage
 - Third priority – Flow restoration
 - Fourth priority – Riparian habitat improvements

Prioritization Framework. The plan includes a prioritization framework to help ensure that proposed projects promote widespread restoration efforts and are done in the most efficient manner. The John Day Subbasin is a large watershed with widespread fish habitat and diverse stressors. The wide dispersal of focal species throughout the area and the need to address widespread changes in habitat make prioritizing specific actions challenging. Fisheries project proposals will be evaluated based on three sets of criteria that address 1) the benefits to focal species, 2) technical soundness, and 3) socio-economic appropriateness.

Biological Objectives and Strategies for Terrestrial Focal Species. Biological objectives and strategies were also developed for each of the nine focal habitats used by the 11 terrestrial focal

species (see Section 5.2.3 for these objectives and strategies). In addition, the following general objective covers all nine focal habitats:

- Complete a comprehensive review by 2007 of each of the nine focal habitat types in the John Day Subbasin, which can then be used to prioritize and guide habitat preservation and restoration activities.

Associated strategies with this terrestrial objective include:

- Identify the location, size, and spatial distribution of each of the focal habitat types existing in the subbasin.
- For each of the focal habitat types, determine the quality of all existing habitat in the subbasin and its ecological function as related to the habitat needs of selected focal species and other obligate species.
- Refine and update data currently available on the protected status of each focal habitat.
- Identify areas not currently supporting focal habitats, which, if converted to the focal habitat, would enlarge remnant size or provide connectivity between two or more extant remnants.
- Identify areas not proximate with extant remnants of focal habitat that could be rehabilitated to provide new reservoir habitats for selected focal species and other obligate species.
- Use data obtained by the above strategies to create GIS overlays with areas prioritized for protection, enhancement, or restoration for each focal habitat type.

Although the general terrestrial objective is not a biological objective in the sense of providing a quantitative expression of biological and physical changes needed to address the limiting factors, it is included in the management plan because it forms the most necessary and integral step towards achieving the objectives for each focal habitat type. It should be noted that action on strategies associated with habitat-specific terrestrial objectives should not wait until the completion of this general objective because much can be done with the current state of knowledge.

Research, Monitoring, and Evaluation

In the future, the management plan will be updated periodically through an adaptive management process that includes research, monitoring, and evaluation (RME). Research and monitoring results will be used to update the scientific foundation so that the knowledge base for actions remains current and incorporates the best technical knowledge. Research, monitoring, and evaluation will be necessary to assure implemented projects are effective and that priorities are in keeping with this plan. Monitoring will be done consistent with protocol established for the entire Columbia River Basin to the extent feasible. A representative sample of project types will be monitored to help evaluate project effectiveness and lend feedback for improvements to the plan.

A detailed gap assessment is discussed in Section 4.5. The RME discussed in Section 5.4 addresses the issues identified in the gap assessment.

Acknowledgement

The development of this plan took an incredible amount of time and effort on the part of the coordination team and its consultants. Without their perseverance throughout the entire process the completion of this plan would not have been possible. The coordination team and their consultants are to be commended for their hard work and dedication to the completion of this plan.

2. Introduction

2.1 Description of Planning Entity

The John Day Subbasin Plan was prepared as part of the Northwest Power and Conservation Council's (NWPCC) Fish and Wildlife Program in order to guide the investment of fish and wildlife restoration funds by the Bonneville Power Administration (BPA). The NWPCC's 2000 Fish and Wildlife Program required the NWPCC to adopt subbasin plans in each major subbasin of the Columbia River Basin between 2002 and 2004.

The purpose of subbasin plans is to direct BPA funding to projects that enhance, mitigate and protect fish and wildlife populations that have been adversely impacted by the operation and maintenance of the Columbia River hydroelectric power system. Such mitigation is mandated by the Northwest Power Planning Act of 1980. The NWPCC, BPA, the U.S. Bureau of Reclamation (USBR), the National Oceanic and Atmospheric Administration - Fisheries (NOAA Fisheries) and the U.S. Fish and Wildlife Service (USFWS) also intend to use adopted subbasin plans to help meet requirements of the 2000 Federal Columbia River Power System Biological Opinion (NMFS 2000), which details conditions that the agencies are to meet in order to avoid jeopardizing the existence of endangered and threatened species. Further, NOAA Fisheries and the USFWS intend to use subbasin plans as building blocks in the development of Endangered Species Act (ESA)-mandated recovery plans for threatened and endangered species. The Oregon Watershed Enhancement Board (OWEB) will also consider adopting the plan's recommendations for watershed restoration in the John Day Subbasin under ORS 541.371(1)(c).

This John Day Subbasin Plan has been developed under the guidance of the John Day Subbasin Coordination Team. The coordination team includes representatives from 17 stakeholder organizations in the subbasin who are all party to a Memorandum of Agreement (MOA) for subbasin planning. The MOA established the processes that were used by cooperating local stakeholders; private citizens; public organizations; and local, tribal, state and federal governments to develop this subbasin plan. Appendix A contains the memorandum. The members of the coordination team are listed in Section 2.2.

The involvement of stakeholders in the John Day Subbasin planning process was initiated in September 2002. At that time, no local stakeholder was able to assume the lead entity role to direct the subbasin planning process. At the first actual meeting of the stakeholders on February 4, 2003, the stakeholders requested that the Columbia-Blue Mountain Resource Conservation & Development Area (CBMRC&D) take on the lead role responsibility.

The MOA was distributed to the stakeholders for signature on March 21, 2003. Nearly all the stakeholders had signed the agreement by August, thus formally creating the John Day Subbasin Coordination Team. The coordination team was responsible for developing the MOA, informing stakeholders, setting procedures for decision-making, developing a work plan, determining technical and local input needs, establishing subcontracting procedures, reviewing subcontract applications and recommending the subcontractors to develop the plan. The formalized coordination team first met to start plan development on September 3, 2003.

2.2 List of Participants

The John Day Subbasin Coordination Team consists of the following organizations:

- Sherman County
- Grant Soil and Water Conservation District (SWCD)
- Gilliam County SWCD
- Monument SWCD
- Wheeler SWCD
- Wasco County SWCD
- Sherman County SWCD
- North Fork John Day Watershed Council
- Mid John Day Watershed Council
- Gilliam-East John Day Watershed Council
- Bridge Creek Watershed Council
- Paleo Project
- Oregon Department of Fish and Wildlife
- Oregon Water Resources Department
- Oregon Department of Environmental Quality
- U.S. Bureau of Reclamation
- U.S. Bureau of Land Management

The CBMRC&D served as the administrative organization under contract with the Northwest Power and Conservation Council NWPCCC to facilitate the development of the John Day Subbasin Plan. The work plan authorizing NWPCCC to release funds was signed on May 6, 2003. The contract between CBMRC&D and the NWPCCC was signed on August 27, 2003. Funding from the NWPCCC to pay for subbasin plan expenses was first received later that autumn, 2003.

Administrative oversight was provided directly by Karl Niederwerfer, Natural Resources Conservation Service Coordinator for CBMRC&D. CBMRC&D was the lead entity for development of this plan, serving as facilitator for the coordination team and as fiscal agent, managing the contract with the NWPCCC and contracting for other services as required in preparing the subbasin plan.

The contractors which assisted in the development of this plan are:

Barnes & Associates, Inc., a natural resources consulting firm based in Roseburg, Oregon, was placed under contract to perform project management and technical writing for the plan. Rick Barnes was the project manager and Jay Walters was the technical writer.

Provisions, a consulting firm in Fossil, Oregon, was placed under contract to carry out community outreach in development of the plan. Lyn Craig provided this service.

Canyon Mountain Technical Services was placed under contract to provide assistance with assigning attributes for the aquatic habitat modeling process. Errol Claire with Canyon

Mountain Technical Services (and retired District Fish Biologist from Oregon Department of Fish and Wildlife at Canyon City) assisted Tim Unterwegner, District Fish Biologist with Oregon Department of Fish and Wildlife at Canyon City, with the aquatic habitat assessment.

The Confederated Tribes of the Warm Springs Reservation (CTWSRO) was placed under contract to assist with data input for the assessment phase of the plan. Michelle Newman provided this service and assisted Tim Unterwegner and Errol Claire with assigning attributes for the habitat modeling process.

Kathy Ferge was contracted to assist the project manager with various portions of the plan during the last few months of the planning process.

2.3 Stakeholder Involvement Process

Public outreach was an integral part of this plan. The coordination team was comprised of 17 key stakeholders in the subbasin, representing soil and water conservation districts, watershed councils, local and regional government and the private sector across the many counties that the subbasin reaches. Coordination team meetings were held at Fossil, Monument, John Day and Condon during the course of this project. Technical staff from a number of stakeholders, including the CTWSRO, Confederated Tribes of Umatilla Indian Reservation (CTUIR), U.S. Forest Service (USFS), NOAA Fisheries and USFWS assisted the coordination team with plan development.

The coordination team made a concerted effort to reach out to other stakeholders in the subbasin. Presentations were given to numerous community groups during the planning process, including members of area soil and water conservation districts, watershed councils, commodity groups, counties and natural resource organizations. These community members were urged to provide input and participate in the planning process.

Due to the geographic size of the John Day Subbasin, presentations about the subbasin plan were given to board members of soil and water conservation districts and watershed councils in Grant, Sherman and Wheeler counties at their regular monthly meetings in October, November and December 2003. Presentations were given at regular meetings of these groups so that the greatest number of people would hear about the initial planning process. All were kept apprised of the subbasin plan development through ongoing email correspondence throughout the planning process.

Informational presentations were also given by the outreach coordinator and members of the John Day Subbasin Coordination Team to all county boards of commissioners in Sherman, Gilliam, Wheeler and Grant Counties. Wasco, Umatilla and Morrow counties were kept informed through correspondence about the John Day Subbasin Plan and were served in person by team members from the Umatilla and Wasco subbasins planning teams.

Additionally, John Day Subbasin Plan newsletters distributed in January, March and May of 2004 provided further outreach to keep the public and stakeholders informed. The newsletters

were printed by the regional North Central Education Service District at a significant discount because the district considers itself a collaborator in the outreach process. Newsletters were distributed to natural resource agency offices, courthouses, city halls and public libraries throughout the subbasin. They were also distributed through mailings to all subbasin coordination team members and key stakeholder individuals and groups. The newsletters were also mailed to state and federal agencies based in Oregon and Washington that expressed interest in the planning process. See Appendix B for copies of these newsletters.

In February of 2004 the John Day Subbasin website – www.johndaysubbasin.org – was registered. The website was designed to enhance communication to the general public about the plan and to facilitate discussion and review of the plan and planning process among all interested parties and stakeholders. The site was formally launched in April of 2004 and is updated periodically.

In April of 2004 the project development and coordination teams gave a presentation on the planning process and plan development to commodity group members in Grant County as requested by the county judge (chair of the Grant County Board of Commissioners), who had asked that commodity groups be directly informed at a special meeting before open public meetings were held in the region. Nearly two dozen organizations – ranging from cattlemen’s associations to outdoor recreational clubs to timber industry interests – were invited. The meeting included a lengthy question and answer period.

The draft plan was presented at public meetings on May 10, 2004 at Canyon City and on May 11, 2004 at Condon as part of a concerted effort to take the plan “on the road” to maximize outreach. At each of these meetings, various media were used to communicate key elements of the plan and the planning process: handouts, a PowerPoint presentation and newsletters. Oversized maps of the John Day Subbasin were provided gratis by the Gilliam County Soil and Water Conservation District. Attendees were informed about the public comment period to follow submission of the draft plan.

The following are the stakeholders identified for the John Day Subbasin Plan:

- Private landowners within the John Day Subbasin.
- Tribes
 - Confederated Tribes of the Warm Springs Reservation of Oregon
 - Confederated Tribes of the Umatilla Indian Reservation
 - Columbia River Intertribal Fish Commission
- Soil and Water Conservation Districts
 - Grant SWCD
 - Sherman County SWCD
 - Gilliam County SWCD
 - Wheeler SWCD
 - Monument SWCD
 - Wasco County SWCD
 - Morrow SWCD
 - Umatilla County SWCD

- Watershed Councils
 - Pinehollow/Jackknife Watershed Council
 - North Fork John Day Watershed Council
 - South Fork John Day Watershed Council
 - Mid John Day Watershed Council
 - Gilliam East John Day Watershed Council
 - Grass Valley Canyon Watershed Council
 - North Sherman County Watershed Council
 - Bridge Creek Watershed Council
- Municipalities (incorporated cities)
 - City of Canyon City
 - City of Condon
 - City of Dayville
 - City of Fossil
 - City of Grass Valley
 - City of John Day
 - City of Lonerock
 - City of Long Creek
 - City of Mitchell
 - City of Monument
 - City of Moro
 - City of Mount Vernon
 - City of Prairie City
 - City of Spray
 - City of Ukiah
 - City of Wasco
- Counties
 - Lower John Day Partnership (representing Sherman, Gilliam, Wheeler and Wasco counties)
 - Grant County
 - Umatilla County
 - Morrow County
- State Agencies
 - Oregon Department of Fish and Wildlife
 - Oregon Department of Agriculture
 - Oregon Department of Environmental Quality
 - Oregon Water Resources Department
 - Oregon Department of Parks and Recreation
 - Oregon Department of Forestry
 - Oregon Division of State Lands
 - Oregon State Police
 - Oregon State University Extension
 - Oregon Department of Transportation
 - Oregon Watershed Enhancement Board

- Federal Management Agencies
 - U.S. Bureau of Reclamation
 - U.S. Forest Service
 - U.S. Fish & Wildlife Service
 - U.S. Bureau of Land Management
 - National Park Service
 - USDA Natural Resources Conservation Service
 - USDA-Agriculture Research Service
 - National Oceanic and Atmospheric Administration - Fisheries
 - U.S. Army Corps of Engineers
- Other
 - Eastern Oregon Miner's Association
 - Paleo Project

2.4 Overall Approach to the Planning Activity

The John Day Subbasin Plan identifies the goals for watershed restoration, establishes the strategies to meet the goals and defines objectives to measure progress toward the goals. It was drafted in accordance with the Technical Guide for Subbasin Planning (NWPPC 2001a) and the Oregon Specific Guidance document (OSPCG 2003) and has been submitted to the NWPPC for adoption as a subbasin plan under the NWPPC's Fish and Wildlife Program.

The plan consists of three main parts: an assessment of biological potential and opportunities for restoration, an inventory of existing programs and projects and a management plan. The management plan includes a vision statement, biological objectives and strategies for implementation. The coordination team has followed guidance provided by the NWPPC for the subbasin planning process.

The approach followed these general steps:

1. The general resources in the subbasin – physical (location/size, climate and hydrologic), socioeconomic (land use/ownership, population and economic) and fish/wildlife – were described and assessed.
2. Aquatic and terrestrial focal species and their habitats were selected, characterized and assessed.
3. A comprehensive inventory of the existing laws/regulatory programs, existing plans and existing management programs was assembled. These laws, plans and programs establish many of the constraints in which natural resources are managed in the John Day Subbasin.
4. An inventory of 339 completed restoration and conservation projects across the subbasin was presented in a relational database. A sample of the fields in this database includes: project focus (fisheries vs. wildlife), project type, beginning and ending dates, fifth field

watershed, steelhead population area, organizations involved and contact person. Any of these fields may be queried for analysis and reporting purposes.

5. The Ecosystem Diagnostic and Treatment model (EDT) was used to produce quantitative measures of the potential impact of environmental factors on the abundance and productivity of the anadromous focal species in the John Day Subbasin. The EDT process involved rating fish-bearing stream reaches for hydrologic characteristics, stream corridor structure, water quality, and biological community. The EDT model essentially provides a working hypothesis for a watershed and fish population. In theory, EDT can predict the performance of a population subject to current, historic, or hypothetical environmental conditions. For a complete description of EDT, see www.mobrand.com/MBI/edt.html.

To complete the EDT analysis the streams in the John Day Subbasin were broken into 1,264 individual reaches; 1,158 of which were used in the EDT model for the analysis of spring chinook and summer steelhead. The 106 reaches not rated using EDT provide habitat currently available only to resident species, usually above natural and human-made barriers.

EDT was also used to examine a Properly Functioning Condition scenario (PFC) and its potential impact on populations. PFCs represent the “best” possible state of the environment with respect to the local economic, social and political constraints on the environment at approximately 70% of the historic, undisturbed habitat conditions.

6. The Qualitative Habitat Assessment (QHA) model was utilized to identify limiting factors and potential protection/restoration measures for bull trout. A total of 61 reaches providing present or historic habitat for bull trout were rated for 11 factors (riparian condition, channel stability, habitat diversity, fine sediment, high and low flow, oxygen, high and low temperature, pollutants, and obstructions), while habitat usage was rated for four bull trout life stages (spawning and incubation, summer rearing, winter rearing, and migration). The bull trout stream reach system was set up at a workshop on October 19 and 20, 2004. The reaches and habitat usage were rated at that workshop along with an additional workshop on November 12, 2004. TOAST did the data analysis, with the assistance of John Day personnel.
7. A synthesis was done by melding information from the assessment and project inventory to help with identifying biological objectives and set restoration and protection priorities. The Columbia River Intertribal Fish Commission (CRITFC), under the leadership of Phil Roger, was contracted to conduct the vast majority of assessment and synthesis for the revised draft subbasin plan.
8. Biological objectives, habitat objectives and restoration strategies were established by the John Day Subbasin Coordination Team. This group synthesized information from the assessment and inventory to develop the key components of the management plan. Habitat objectives were established for 12 different limiting factors. The group also developed 10 different restoration strategies.

9. A technical team was established for each of three geographic regions of the John Day Subbasin:
 - Lower and Middle Mainstem John Day (below Kimberly)
 - North Fork John Day and Middle Fork John Day
 - South Fork John Day and Upper Mainstem John Day.

Each technical team included stakeholders from the local area and at least one fisheries biologist with local expertise. These technical teams developed and prioritized management strategies for each of 43 fifth field watersheds in the subbasin. Once the technical teams completed their work, the priorities and strategies were reviewed by the coordination team for approval. This analysis was completed for the fifth field watersheds rather than the 256 sixth field watersheds in the subbasin due to time and budget constraints. The coordination team made the determination early on in the planning process that it was not feasible to do the analysis, synthesis, and management strategy-setting at this fine of a scale given time and budget constraints.

2.5 Process and Schedule for Revising/Updating the Plan

The subbasin plan was developed within the timeline and budget available for the planning process, utilizing the best information available. The plan will be reviewed and revised as necessary with more complete and better information as it becomes available. Plan revisions will incorporate the current and future needs of the subbasin. Specifically, the coordination team recommends the following:

1. Revise the subbasin plan as necessary to ensure consistency with current ESA listings and recovery plans as well as all other applicable laws and regulations.
2. Maintain a feedback loop from research, monitoring, and evaluation efforts in the subbasin to ensure this dynamic plan is updated with the best available science at the time.
3. Review the subbasin plan every five years and update the subbasin plan at least every 15 years, which is the designed life span for this plan.