



U.S. Department of the Interior
Bureau of Land Management

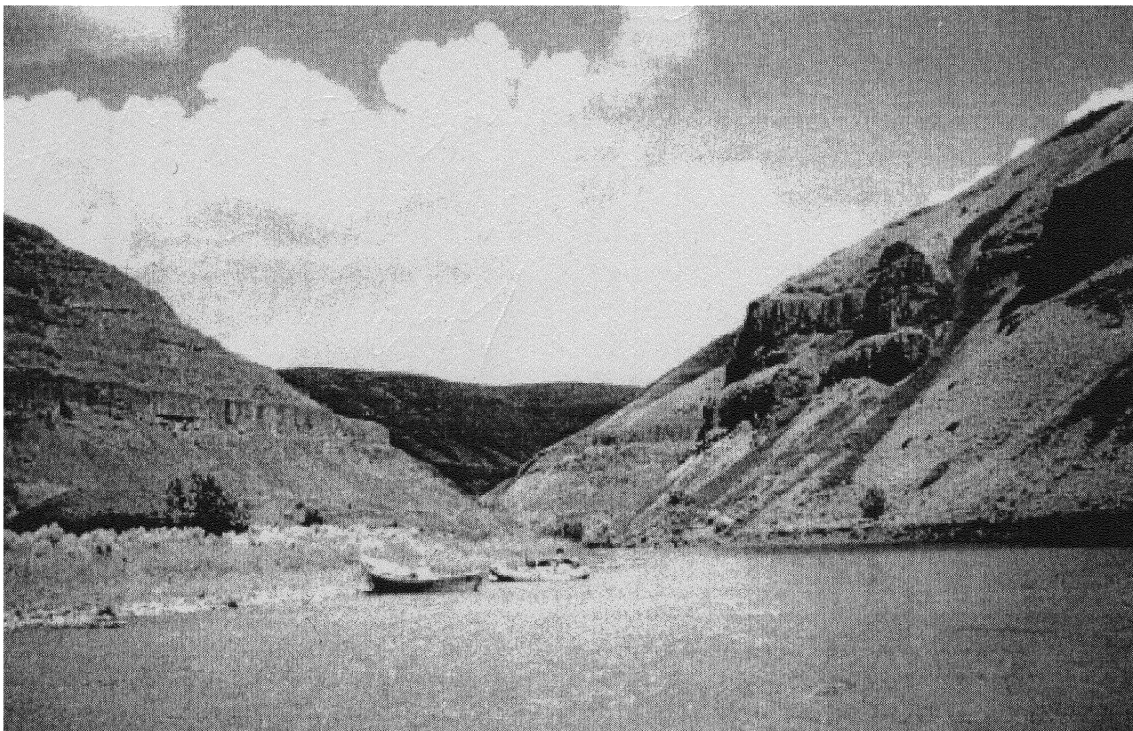
Prineville District Office
3050 N.E. 3rd Street
Prineville, Oregon 97754

February 2001



Record of Decision

John Day River Management Plan, Two Rivers, John Day, and Baker Resource Management Plan Amendments



As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interest of all our people. The Department also has a major responsibility for American Indian reservation communities and for people who live in Island Territories under U.S. administration.

BLM/OR/WA/PT-01/012+1792



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Prineville District Office
P.O. Box 550 (3050 N.E. 3rd Street)
Prineville, Oregon 97754

IN REPLY REFER TO:
8350.5

MAR 07 2001

Dear Friend of the John Day River:

The attached document is the *Record of Decision (ROD) for the John Day River Management Plan, Two Rivers Resource Management Plan Amendment, John Day Resource Management Plan Amendment, and Baker Resource Management Plan Amendment*. This document was signed by the Oregon/Washington State Director on February 28, 2001. The decisions in this document will protect and enhance the outstandingly remarkable values that motivated Congress to designate portions of the mainstem and South Fork of the John Day River a Wild and Scenic River. The ROD was prepared in conformance with 40 CFR § 1505.2. This regulation requires a concise public record of the manager's decision.

An opportunity to protest proposed decisions occurred after publication of the *John Day Proposed Management Plan, Two Rivers, and John Day Resource Management Plan Amendments and Final Environmental Impact Statement (FEIS)*. (After publication of the FEIS the BLM realized that the project area included a small portion of the Baker Resource Area. Consequently, this ROD has been expanded to include amending the Baker Resource Management Plan. This does not modify the substance of any proposed decision.) Twenty-two protests were received in a timely manner. As required by 43 CFR § 1610.5-1(b) all protests have been resolved, and there are no significant changes from the proposed decisions. Under 43 CFR § 1610.5-2(3)(b) such decisions are not appealable.

The ROD authorizes certain future non-grazing actions that will require further planning, analysis, and subsequent decisions prior to implementation. Implementation of such decisions may be subject to appeal to the Interior Board of Land Appeals under 43 CFR § 4.411.

All grazing related decisions that were specifically described and/or defined in the RMP are considered final land use plan decisions and are not appealable under 43 CFR § 4160 or 43 CFR § 4.470. This includes decisions such as adjustments in season of use due to seasonal water flow restrictions and exclusion of livestock from campgrounds. Under 43 CFR § 4100.0-5 individuals, groups, or organizations who have an interest in livestock management on specific allotments must identify themselves in writing to the Central Oregon Resource Area Field Office Manager. Such interested publics will be notified of any future grazing decisions and provided the opportunity to comment or appeal as appropriate.

This document has been sent to all individuals and groups on the mailing list for the proposed plan. In addition, public notice regarding the ROD will be published in the *Federal Register* and in the following Oregon newspapers: *Baker City Herald*, *The Record Courier* (Baker), *The Observer* (La Grande), *The East Oregonian* (Pendleton), *The Hermiston Herald*, *Heppner Gazette-Times*, *The Blue Mountain Eagle* (John Day), *The Times-Journal* (Condon), *Central Oregonian* (Prineville), *Wheeler County News* (Spray), and *The Bulletin* (Bend). Copies of the draft and final EISs will be available for inspection at the Prineville District Office and on the District's website at <http://www.or.blm.gov/Prineville>.

Thank you for your interest in the John Day River. I encourage you to stay informed and involved as the BLM and its planning partners implement this plan.

Sincerely,

Christina M. Welch
Field Manager, Central Oregon Resource Area

Record of Decision

for the

**John Day River Management Plan,
Two Rivers Resource Management Plan
Amendment,
John Day Resource Management Plan
Amendment, &
Baker Resource Management Plan
Amendment**

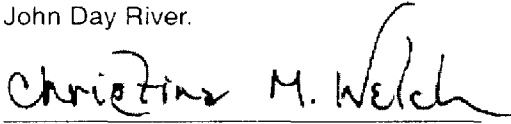
Department of the Interior
Bureau of Land Management

February 2001

RECORD OF DECISION JOHN DAY RIVER MANAGEMENT PLAN, TWO RIVERS, JOHN DAY, AND BAKER RESOURCE MANAGEMENT PLAN AMENDMENTS

Central Oregon and Baker Resource Areas Field Managers Recommendation

We recommend the John Day River Plan and associated amendments to the Two Rivers, John Day, and Baker Resource Management Plans (RMP), as described in this Record of Decision. The approved river plan addresses all issues raised that are relevant for resolution by the Bureau of Land Management and State of Oregon and meets the requirements of BLM Manual 8351 for Wild and Scenic Rivers. The RMP amendments were prepared in accordance with 43 CFR 1610.5-5 and will provide land use allocations and management direction for Bureau administered lands and resources that will protect and enhance river values adjacent to the John Day River.



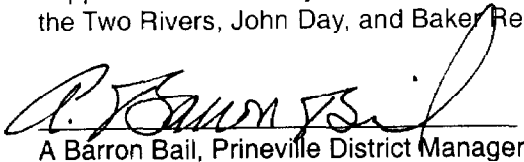
Christina M. Welch,
Central Oregon Resource Area Field Manager



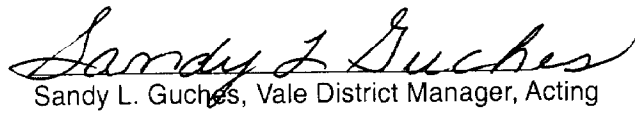
Penelope Dunn Woods,
Baker Resource Area Field Manager

Prineville District Manager Concurrence

I approve the John Day River Plan and recommend, for State Director approval, the associated amendments to the Two Rivers, John Day, and Baker Resource Management Plans, as described in this Record of Decision.



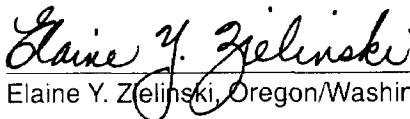
A Barron Bail, Prineville District Manager



Sandy L. Guchas, Vale District Manager, Acting

Oregon/Washington State Director Approval

I concur with the decisions in the John Day River Plan and approve the associated amendments to the Two Rivers, John Day, and Baker Resource Management Plans, as described in this Record of Decision. This document meets the requirement for agency analysis and decisionmaking as provided in 40 CFR 1500. All planning protests filed with the Director under administrative review procedures in 43 CFR 1610.5-2 have been resolved. No inconsistencies were identified after review by the Governor of Oregon, as provided by 43 CFR 11610.3.2.



Elaine Y. Zielinski, Oregon/Washington State Director

FEB 28 2001

The Bureau acknowledges the contributions of the partners in this effort. We encourage continued cooperation in the implementation by the Confederated Tribes of the Warm Springs Reservation of Oregon, John Day River Coalition of Counties, Oregon Parks and Recreation Department, Oregon State Marine Board, Oregon Department of Fish and Wildlife and USDI, Bureau of Indian Affairs.

Errata

ROD, Appendix L, page 235, Allotment #2656, Segment 3, Restricted grazing, necessary actions, Remove: "c. Allotment will be subject to the special seasonal flow restrictions."

ROD, Appendix L, page 265, Allotment #4104, Segment 11, Restricted grazing, necessary actions, Remove: "b. Allotment will be subject to the special seasonal flow restrictions."

ROD, Appendix L, page 267, Allotment #4067, Segment 11, Restricted grazing, necessary actions, Remove: "b. Allotment will be subject to the special seasonal flow restrictions."

ROD, Appendix L, page 267, Allotment #4106, Segment 11, Restricted grazing, necessary actions, Remove: "b. Allotment will be subject to the special seasonal flow restrictions."

ROD, Appendix L, page 268, Allotment #4186, Segment 11, Restricted grazing, necessary actions, Remove: "Allotment will be subject to the special seasonal flow restrictions."

These corrections will make appendix L consistent with the FEIS, Vol. 1, page 170 that specifically states that the special seasonal limitation would not apply to scattered tracts of public land in all of Allotment #2656 and all of Segment 11. The above errors were in Appendix L of Vol. 2 of the FEIS and were carried forward into the Appendix L of the ROD . This correction does not change the decision in the ROD.

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The appendices and map plates attached to this Record of Decision, as identified in the list below, should be considered part of the decision.

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MapPlates 1-6, Final Management Plan
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Summary

This Record of Decision for the John Day River Management Plan and Amendments to the Two Rivers, John Day, and Baker Resource Management Plans is the culmination of a process that began in 1988 when Congress passed the Oregon Omnibus Wild and Scenic Rivers Act and designated portions of the John Day River a Wild and Scenic River.

We are convinced that the best way to protect and enhance river values such as recreation, fish, wildlife, vegetation, scenery, and water quantity and quality is through careful management of the lands within the John Day Basin. Most of our decisions are limited to BLM-managed lands in the designated John Day and South Fork of the John Day Wild and Scenic Rivers and the undesignated portions the mainstem and major tributaries of the John Day River. We see these decisions as important and necessary steps in protecting river values.

The BLM manages 7% of the land within the John Day Basin. The land owned by the BLM within the planning area represents 2% of the land within the John Day Basin. Because of the limited area affected by most of our decisions we have concluded that cooperating with tribal, other federal, state, local government, and private land managers throughout the John Day Basin is key to protecting river values within the planning area. Proper management of lands controlled by these authorities is necessary to ensure that water flowing into the designated river segments is sufficient to protect and enhance river values, including providing fish habitat that will maintain the viability of endangered fish stocks.

The urgent need to protect Outstandingly Remarkable Values (ORVs) is the primary reason for the decisions we have chosen. However social considerations were also part of the decision making process. Where there were two or more alternatives that would equally protect and enhance river values, we have favored, where possible, the alternative that would cost the taxpayers less money, have the least adverse impact on local communities, and support the needs of the greatest proportion of river users.

Relationship Between the Original and Amended John Day, Two Rivers, and Baker Resource Management Plans

Long-term allocation of BLM-managed lands for various uses and associated management direction is developed through Resource Management Plans, prepared in accordance with BLM planning regulations at *43 Code of Federal Regulations, 1601*. The John Day Wild and Scenic River Management Plan amends applicable Resource Management Plan land use allocations and management direction within portions of the John Day River basin, with emphasis on the designated river segment corridors.

In the John Day River corridor analysis area, there are three approved RMPs which provide management direction:

- John Day RMP (approved on August 28, 1985)
- Two Rivers RMP (approved on August 6, 1986)
- Baker RMP (approved July 12, 1989)

The John Day RMP provides decisions for BLM resources in Grant County. The Two Rivers RMP provides decisions for Hood River, Wasco, Sherman, Gilliam, Wheeler, as well as portions of Crook and Jefferson counties. The Baker RMP provides decisions for all or portions of Baker, Malheur, Wallowa, Morrow, Umatilla, and Union counties in

Oregon, as well as portions of Asotin and Garfield counties in Washington. The only portion of the Baker RMP planning area that overlaps the John Day river corridor is in extreme southern Umatilla County.

The previously approved RMPs have generally established land use allocations and management direction that is protective of river-related values. Many resource management programs are subject to standard BLM manuals, handbooks, or policies that constitute program constraints. These include, but are not limited to, cultural and historic resources, anadromous and resident fish, noxious weed control, wildfire suppression and state air quality rules, etc.

The following table briefly summarizes existing management of key resources and notes when this record of decision modifies existing RMP guidance.

Administrative Record

Some of the key documents in the Administrative Record for this project include ICBEMP documents; BLM's *John Day, Two Rivers, and Baker Resource Management Plans*; all scoping letters and responses, surveys, reports, and evaluations conducted for the EIS; all appendices attached to this ROD; and both the Draft and Final EIS.

Contact Person

For additional information concerning specific activities authorized under this decision, contact:

Dan Tippy, Project Coordinator
Bureau of Land Management
P.O. Box 550
Prineville, Oregon 97754
(541) 416-6700

Table 1. Existing Management of John Day, Two Rivers, and Baker Resource Management Plans and Amendments Resulting from John Day River Plan Decisions

Note: *Shaded rows indicate resources or program elements that were not considered planning issues for the John Day Plan.*

| Resource or Program Element | 1985 John Day RMP Management Direction | 1986 Two Rivers RMP Management Direction | 1989 Baker RMP Management Direction | Amended Management Direction For BLM Lands and Resources in the John Day River Corridor |
|--|---|--|--|--|
| Air Quality | Meet State standards | Same | Same | No Change |
| Riparian Restoration | Emphasized for protection in livestock grazing allotment plans, mining and road construction. Protected from logging. Protect or enhance natural values to achieve healthy and productive ecological condition. Complete inventories and develop recovery plans to include vegetative treatments, livestock exclusion fences or other non-structural practices. | Same | Same | Continue existing management. (See additional protection provided under grazing management) |
| Rangeland Restoration and restored former agricultural lands | Focus on desirable non-native species for seeding | Focus on desirable non-native species for seeding | Restoration design dependent on site-specific needs and analysis | Amends all three RMPS by focusing on native species |
| Commercial forest products | Available case-by-case, pending site specific NEPA analysis, with standard stipulations. Constrained for critical wildlife, fisheries, visual resources. | Same [There are no BLM commercial forest lands within the river corridor.] | Same as John Day RMP | Timber removal within the river corridor will take place only when necessary to reduce risk of catastrophic timber loss due to insect infestation, disease or wildfire which would adversely affect river values. Upland sites subject to same protection as riparian sites. John Day and Baker RMPS Amended |
| Special forest, woodland and rangeland products | Available case-by-case, pending site specific NEPA analysis, with standard stipulations | Same | Same | No change |

Table 1. Existing Management of John Day, Two Rivers, and Baker Resource Management Plans and Amendments Resulting from John Day River Plan Decisions (continued)

Note: Shaded rows indicate resources or program elements that were not considered planning issues for the John Day Plan.

| Resource or Program Element | 1985 John Day RMP Management Direction | 1986 Two Rivers RMP Management Direction | 1989 Baker RMP Management Direction | Amended Management Direction For BLM Lands and Resources in the John Day River Corridor |
|---|--|---|--|--|
| Livestock grazing | Emphasis on improving ecological conditions and resolution of resource problems through grazing systems or improvements. Permits renewed for 10 years and subject to rangeland standards and guidelines. | Emphasis on improving ecological conditions and resolution of resource problems through grazing systems or improvements. Permits renewed for 10 years and subject to rangeland standards and guidelines. | Emphasis on improving ecological conditions and resolution of resource problems through grazing systems or improvements. Permits renewed for 10 years and subject to rangeland standards and guidelines. | Emphasis on improving ecological conditions and resolution of resource problems through grazing systems. Allotment specific management adjustments. 2000cfs minimum flow required for grazing to occur |
| Noxious weeds | Control noxious weeds according to regional and local plans in conjunction with local weed control boards. | Same | Same | Specified Recreation Sites closed to grazing Amends all three RMPs No Change |
| Wildfire suppression and hazard reduction | Full suppression of all fires. Prescribed fire only with project plan/NFPA and interagency and adjacent land owner coordination. | Same | Same | No change |
| Agricultural lands | No applicable direction for the John Day corridor lands in Grant County. | Allocates 450 acres of upland for continued agricultural leases under prescribed conditions. Another 300 acres to be phased out of agricultural leases and reclaimed with water rights coordinated with State agencies. | No applicable direction for the John Day corridor lands in southern Umatilla County. | Dispose of 25.6 acres through exchange for more suitable lands within the river corridor. Allocate 359 acres of public lands (historically used for irrigated agriculture) to non-commodity uses, including wildlife food and cover crops or restoration of natural vegetation. Cooperate to dedicate associated water rights to instream uses. Amends Two Rivers RMP |

Table 1. Existing Management of John Day, Two Rivers, and Baker Resource Management Plans and Amendments Resulting from John Day River Plan Decisions (continued)

Note: Shaded rows indicate resources or program elements that were not considered planning issues for the John Day Plan.

| Resource or Program Element | 1985 John Day RMP Management Direction | 1986 Two Rivers RMP Management Direction | 1989 Baker RMP Management Direction | Amended Management Direction For BLM Lands and Resources in the John Day River Corridor |
|--|---|---|--|--|
| Fisheries | Utilize PACFISH and INFISH (where Bull Trout are present) management standards and guidelines. Improve stream habitat to support resident and anadromous fish. Support State habitat goals through allocation of forage, livestock class restrictions, vegetation manipulation, road construction and human use limitations. Retain lands with high values and acquire others with important habitat. | Same | Same | No Change |
| Wildlife Habitat | Support State habitat goals through allocation of forage, livestock class restrictions, vegetation manipulation, road construction and human use limitations. Retain lands with high values and acquire others with important habitat. | Same | Same | No Change |
| Water Quantity and Quality | Meet State standards | Same | Meet State standards | No change but added emphasis and monitoring. Adopts State Scenic Waterway flows. |
| Paleontological Resources | Meet State standards | Same | Same | No Change; Clarifies RMPs but there is nothing unique to this plan |
| Cultural/historic resources | Meet State standards | Same | Same | No Change; Clarifies RMPs but there is nothing unique to this plan |
| Public Information and Education | Not Addressed in RMP | Not Addressed in RMP | Not Addressed in RMP | Provisions Amend John Day and Two Rivers RMPs |
| Law Enforcement and Emergency Services | Not Addressed in RMP | Not Addressed in RMP | Not Addressed in RMP | Provisions Amend John Day and Two Rivers RMPs |

Table 1. Existing Management of John Day, Two Rivers, and Baker Resource Management Plans and Amendments Resulting from John Day River Plan Decisions (continued)

Note: Shaded rows indicate resources or program elements that were not considered planning issues for the John Day Plan.

| Resource or Program Element | 1985 John Day RMP Management Direction | 1986 Two Rivers RMP Management Direction | 1989 Baker RMP Management Direction | Amended Management Direction For BLM Lands and Resources in the John Day River Corridor |
|---|---|--|--|--|
| Scenic Quality | Utilize standard procedures for projects which may affect areas with high visual quality. | Standard procedures for projects that may affect areas with high visual quality. The main stem John Day River from Service Creek downstream was identified as a area of high visual and natural quality. | Standard procedures for projects that may affect areas with high visual quality. | No change except, the WSAs will be managed as VRM Class I. The North Fork of the John Day river corridor and existing and proposed recreation sites will be managed as VRM III. The balance of the river corridor will be managed as VRM IV. Amends John Day, Two Rivers, Baker RMPs |
| Limits of acceptable change (LAC) Study | Not addressed in RMP | Not addressed in RMP | Not addressed in RMP | Administrative Action |
| Boating use levels | Not addressed in RMP | Not addressed in RMP | Not addressed in RMP | Specific targets for Segments 1, 2, and 3. Rely on LAC for future decisions. |
| Boating use allocation | Not addressed in RMP | Not addressed in RMP | Not addressed in RMP | Common pool. Amends Two Rivers RMP |
| Motorized boating | Not addressed in RMP | Not addressed in RMP | Not addressed in RMP | Specific guidance for Wild and Scenic River Segments Amends John Day and Two Rivers RMPs |
| Dispersed recreation | Emphasize primitive, unmotorized recreation. | Same | Same | Segment-specific decisions in Wild and Scenic River Segments. Amends John Day and Two Rivers RMPs |
| Developed recreation | Construct and maintain developed sites and trails based on public needs. | Not Addressed in RMP | Not Addressed in RMP | Proposes site-specific development in Wild and Scenic River segments. Improve or upgrade facilities when needed to protect resources. Amends John Day, Two Rivers, Baker RMPs. |

Table 1. Existing Management of John Day, Two Rivers, and Baker Resource Management Plans and Amendments Resulting from John Day River Plan Decisions (continued)

Note: *Shaded rows indicate resources or program elements that were not considered planning issues for the John Day Plan.*

| Resource or Program Element | 1985 John Day RMP Management Direction | 1986 Two Rivers RMP Management Direction | 1989 Baker RMP Management Direction | Amended Management Direction For BLM Lands and Resources in the John Day River Corridor |
|--|---|---|---|--|
| Public recreation access, Transportation system managements, road construction and maintenance | New roads considered case-by-case, pending NEPA analysis, with standard construction and maintenance stipulations. | Same | Same | Site-specific changes |
| Off-Highway Vehicle restrictions and closures | Utilize seasonal closures to enhance habitat and protect other resource values. | 10,335 acres limited to existing roads and trails within river corridor. The balance is open year-long. | Use seasonal closures to enhance habitat and protect other resource values. | No RMP change; one site-specific seasonal closure |
| Commercial Use | Not addressed in RMP | Not addressed in RMP | Not addressed in RMP | Specific guidance for permits within planning area. |
| Locatable mineral resources | Meet State standards Open to entry (claims), except for waterpower withdrawals, which are subject to revocation and opening to public land or mineral laws. No new protective withdrawals proposed. | Same | Same | Any mining activity on all segments of the John Day River shall conform to the State Scenic Waterway requirements or the regulations of the federal government, whichever requirements are more stringent. Withdraw from mineral entry all current or proposed administrative sites, riparian plant cultivation areas, campgrounds, day use, and boat ramp areas. Amends John Day, Two Rivers, Baker RMPs |

Table 1. Existing Management of John Day, Two Rivers, and Baker Resource Management Plans and Amendments Resulting from John Day River Plan Decisions (continued)

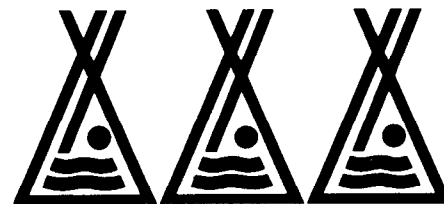
Note: Shaded rows indicate resources or program elements that were not considered planning issues for the John Day Plan.

| Resource or Program Element | 1985 John Day RMP Management Direction | 1986 Two Rivers RMP Management Direction | 1989 Baker RMP Management Direction | Amended Management Direction For BLM Lands and Resources in the John Day River Corridor |
|---|---|--|---|--|
| Salable common mineral materials | Available case-by-case, pending NEPA analysis | Same | Same | Salable mineral activity on BLM managed lands in all river segments shall be phased out as soon as regulations allow. Ongoing salable mineral activity on lands acquired in the future shall be phased out as soon as legally possible. Amends John Day, Two Rivers, Baker RMPs |
| Leasable minerals and energy | Available case-by-case, pending NEPA analysis, generally with standard stipulations | No Surface Occupancy (NSO) stipulations shall be attached to leases issued on all segments of the John Day River corridor. | Same as John Day RMP | Adds a No Surface Occupancy (NSO) stipulation to leases issued on all segments of the John Day River corridor. Future acquisitions are included. (WSAs were already protected by an NSO stipulation.) Amends John Day and Baker RMPs |
| Land-tenure Adjustment | Retain all BLM lands in the river corridor as land-tenure zone 1, except as required by the Oregon Land Exchange Act of 2000 | Retain all BLM lands in the river corridor as land-tenure zone 1. | Retain all BLM lands in the river corridor as land-tenure zone 1, and acquire lands within Wild and Scenic river corridors. | Same, except for specified agricultural lands. |
| Utility corridors and rights-of-way | Available case-by-case in designated corridors and crossings of the river corridor, pending NEPA analysis, with standard stipulations | Same | Same | No change |
| Wilderness, Wild and Scenic (W&S) rivers and Areas of Critical Environmental Concern (ACEC) | Apply interim management policy to wilderness study areas. (There were no identified potential W&S rivers and no designated ACEC). | Apply interim management policy to wilderness study areas. Apply RMP management guidelines and subordinate plan direction to ACEC (There were no identified potential W&S rivers). | Same as Two Rivers. | Designates new areas as WSAs. Amends Two Rivers RMP. |

Table 1. Existing Management of John Day, Two Rivers, and Baker Resource Management Plans and Amendments Resulting from John Day River Plan Decisions (continued)

Note: Shaded rows indicate resources or program elements that were not considered planning issues for the John Day Plan.

| Resource or Program Element | 1985 John Day RMP Management Direction | 1986 Two Rivers RMP Management Direction | 1989 Baker RMP Management Direction | Amended Management Direction For BLM Lands and Resources in the John Day River Corridor |
|--|--|---|---|---|
| Threatened, Endangered, Candidate and Sensitive Species Management | Take no actions that would jeopardize the continued existence of any federally listed threatened or endangered species. Monitor, maintain or improve habitat for threatened or endangered species. | Same as John Day | Take no actions that would jeopardize the continued existence of any federally listed threatened or endangered species. Avoid management actions that may result in disturbance and adverse impacts on crucial habitat for threatened, endangered, candidate, state listed and sensitive species. | No Change |
| Botanical resources | Inventories prior to any surface disturbing activities with appropriate mitigation or avoidance measures. | Same | Same | No Change |
| Wild horse herd management areas | Horse herd objectives established for Murderer's Creek herd on South Fork. | No designated horse herd areas established. | Same as Two Rivers | No Change |



Warm Springs, Oregon 97761 / 541 553-1161

February 13, 2001

Barron Bail, Prineville District Manager
Bureau of Land Management
3050 NE Third Street
Prineville, Oregon 97754

Dear Mr. Bail;

The Confederated Tribes of Warm Springs (the Tribes) have been active partners with the Bureau of Land Management and the State of Oregon in the development of the John Day River Management Plan, Two Rivers and John Day Resource Management Plan Amendments (the plan). This partnership was established by the Omnibus Oregon Wild and Scenic Rivers Act as well as agreements between the Bureau of Land Management, Bureau of Indian Affairs, the Tribes and the State of Oregon. The Tribes committed a significant amount of staff time to this planning effort because the John Day basin is within the Tribes' ceded area and the natural resources of the basin and our treaty rights regarding those resources are very important to us. We viewed the planning effort as a positive opportunity to work together to resolve the many significant natural resource issues that exist in the basin.

While the planning effort has been challenging and sometimes frustrating, we continue to support the process by which the plan has been developed. While we do not agree with all of the decisions contained in the plan, we are committed to working with our federal and state partners to implement the plan in a government-to-government relationship. As co-managers of fish and wildlife resources with the State of Oregon, the Tribes are committed to improving water quality and quantity, as well as vegetative condition in the John Day basin. The management of cultural resources and the protection of areas which are used by tribal members for traditional activities are also very important to the Tribes.

We believe the conflicts and adverse impacts associated with such activities as livestock grazing, recreation use, agricultural leases and noxious weeds are problems that can be resolved through cooperation to achieve the important goals the Tribes share with many other stakeholders in the basin. We look forward to strengthening our trust relationship with the Bureau of Land Management and the Bureau of Indian Affairs and continuing our partnership with the State of Oregon as we implement the plan through a formal cooperative management agreement.

Sincerely;

Robert A. Brunoe, General Manager
Natural Resources Branch



Oregon

John A. Kitzhaber, M.D., Governor

Department of Fish and Wildlife

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February 12, 2001

Elaine Zeilinski
Bureau of Land Management
P.O. Box 2965
Portland, Oregon 97208

Dear Ms. Zeilinski: *Elaine*

The BLM has been in the process of developing a plan for the publicly owned sections of the Wild and Scenic John Day River for the last two years. Oregon Department of Fish and Wildlife staff greatly appreciated the opportunity to participate in the Core Team that gave guidance to BLM in development and review of the Draft Environmental Impact Statement, the Final Environmental Impact Statement, and now the Record of Decision (ROD) for this plan.

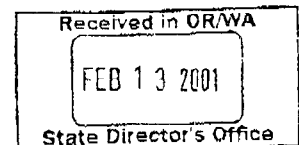
The ROD sets recreational use levels, specifies an allocation system if use levels should ever need to be reduced, restricts motorized boating to certain times of the year and to specific areas of the river, sets guidelines for additional site development, and specifies grazing strategies for the numerous allotments within the Wild and Scenic corridor. Another important component of the ROD specifies how to monitor and evaluate compliance with these management decisions.

Implementation of the ROD should result in improvements in the recreational experience for users of the John Day River and improved habitat conditions for fish and wildlife resources within the Wild and Scenic corridor. The Department looks forward to continuing its partnership with BLM and the other responsible agencies for implementation and monitoring of the plan.

Sincerely,

James W. Greer

James W. Greer
Director





Oregon

John A. Kitzhaber, M.D., Governor

Parks and Recreation Department

Office of the Director
1115 Commercial St. NE
Salem, OR 97301-1002
(503) 378-5019
FAX (503) 378-8936

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BLM PRINEVILLE
OFFICE



February 8, 2001

A. Barron Bail
District Manager
Bureau of Land Management
P.O. Box 550
Prineville, Or 97754

Dear Barron:

The Oregon Parks and Recreation Department (OPRD) participated with the Prineville District Bureau of Land Management (BLM), Warm Springs Tribes, state agencies, local governments and the public in the development of the John Day River Proposed Management Plan released in June 2000. Our interest in the plan is based on our role as an advocate for outdoor recreation in Oregon and our administrative responsibility for the John Day River Scenic Waterway system.

We believe the plan reflects a responsible and progressive resource management and protection philosophy in its various management decisions. In our opinion, the real value of the plan can only be realized through a concerted and collaborative implementation effort. This effort needs to involve all of the partners that contributed to the plan. Other interests may need to be included as well. To this end, we encourage the BLM to engage in an implementation partnership with interested agencies, tribes and the public to effect the resource and recreation benefits offered by the plan and the outstanding natural values of the John Day River system.

OPRD is prepared to participate in such an implementation partnership. We look forward to working with the BLM and other partners in this endeavor.

Sincerely,

Michael Carrier
Director

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Introduction

The decisions described in this document affect BLM-managed lands adjacent to the John Day River from Tumwater Falls, just upstream from Lake Umatilla on the Columbia River, to the upper reaches of the mainstem and the North, Middle, and South Forks. The decisions in this document also affect recreational use on the segments of the John Day River designated Wild and Scenic River by Congress.

The decisions in this document serve two purposes: (1) develop a management plan that will protect and enhance the identified outstandingly remarkable and significant values for federal lands within the designated Wild and Scenic segments of the John Day River as required by Congress in the Omnibus Oregon Wild and Scenic Rivers Act of 1988 (Public Law 100-558); and (2) amend and implement the Baker Resource Management Plan (RMP) in the Vale BLM District, and the John Day and Two Rivers Resource Management Plans in the Prineville District. Both the John Day and the Two Rivers RMPs call for developing a management plan for all of the John Day River system, not just segments designated as Wild and Scenic.

Any land use or resource allocation decisions for BLM- managed lands will be incorporated into the Two Rivers, John Day, and Baker RMP amendments following: 1. Resolution of any protests, 2. Resolution of the governor's concerns on plan consistency, and 3. State Director approval.

Generally decisions in this document apply to either specific sites or segments of the river. When segments or sites are not specified, decisions apply to all BLM managed lands within the planning area (within the boundaries of Wild and Scenic River Segments, or within 1/4 mile of the river in river segments not designated Wild and Scenic).

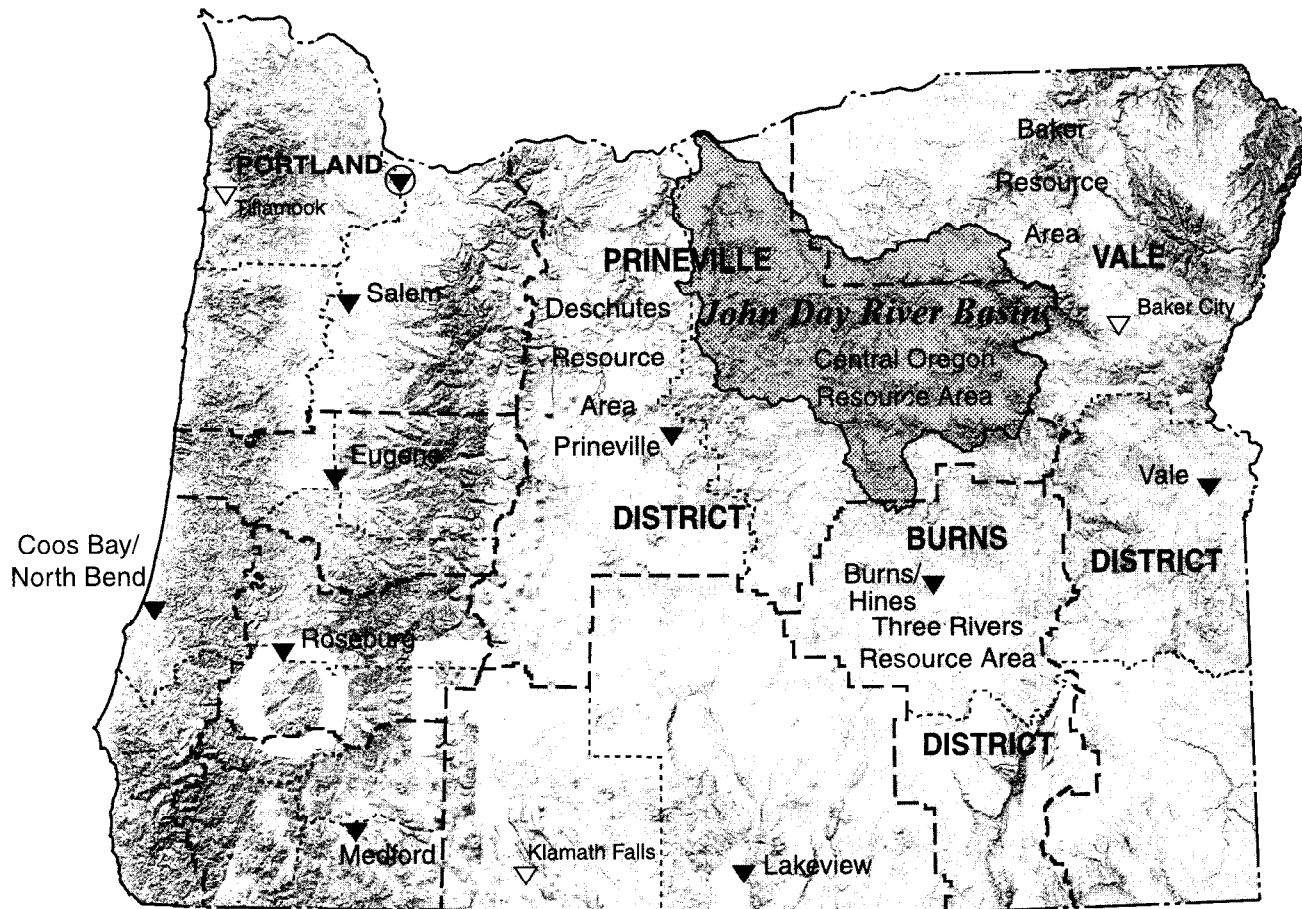
The North Fork of the John Day River may be an exception to the above paragraph. After the FEIS was published Congress passed the Oregon Land Exchange Act of 2000 (P.L. 106-257). This Act includes the following language (P.L. 106-257 SEC. 6. (g)(2)):

Lands acquired by the Secretary of the Interior pursuant to Section 4 which are within the North Fork of the John Day sub watershed shall be administered in accordance with section 205(c) of the Federal Land Policy and Management Act (43 U.S.C. 1715(c), but shall be managed primarily for the protection of native fish and wildlife habitat, and for public recreation. The secretary may permit other authorized uses within the subwatershed if the Secretary determines, through the appropriate land use planning process, that such uses are consistent with, and do not diminish these management purposes.

Because the FEIS did not analyze recently acquired lands along the North Fork of the John Day River any management actions proposed in this plan that would directly impact acquired lands may not be implemented until the required planning process is complete. This would not preclude road maintenance, temporary road closures, or special projects necessary to protect resource values.



Background

The John Day River system includes the mainstem of the John Day River and its North, Middle and South Forks. This system includes more than 500 river miles and is one of the longest free-flowing river systems in the continental United States. The system drains a large portion of northeast Oregon (Map 1-A).



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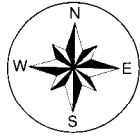
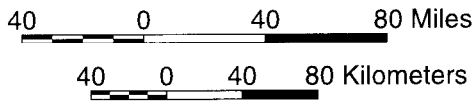
- ◉ BLM State Office
- ▼ BLM District Office
- ▽ BLM Resource Area Office
- - - BLM District Boundary
- BLM Resource Area Boundary

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Bureau of Land Management

Prineville District

**John Day River
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2000**



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Map 1-A: General Location

The river's mainstem and North and Middle Forks flow from the Blue Mountains, and the South Fork flows from the Ochoco Mountain. The mainstem begins high in the Malheur National Forest and flows west through the town of John Day to Dayville where it is joined by the South Fork. Downstream from Dayville, the river turns sharply north, flowing to Kimberly, where it is joined by the North Fork. From Kimberly, the river again turns west for another 40 miles before making its final turn north to the Columbia River. The Middle Fork flows into the North Fork above the town of Monument, about 20 miles upstream from the North Fork's confluence with the river's mainstem.

River Segments, Designations, and Values

This plan divides the John Day River system into 11 segments, based on logical divisions of the river system by land uses, ownership, access, and other factors. The segments are displayed on the attached map plates 1-6 (see Map 1-B for key to plates).

Following is an overview of important federal and state designations within the plan area along the John Day River:

Federal Wild and Scenic River

The three John Day River segments designated as Wild and Scenic are:

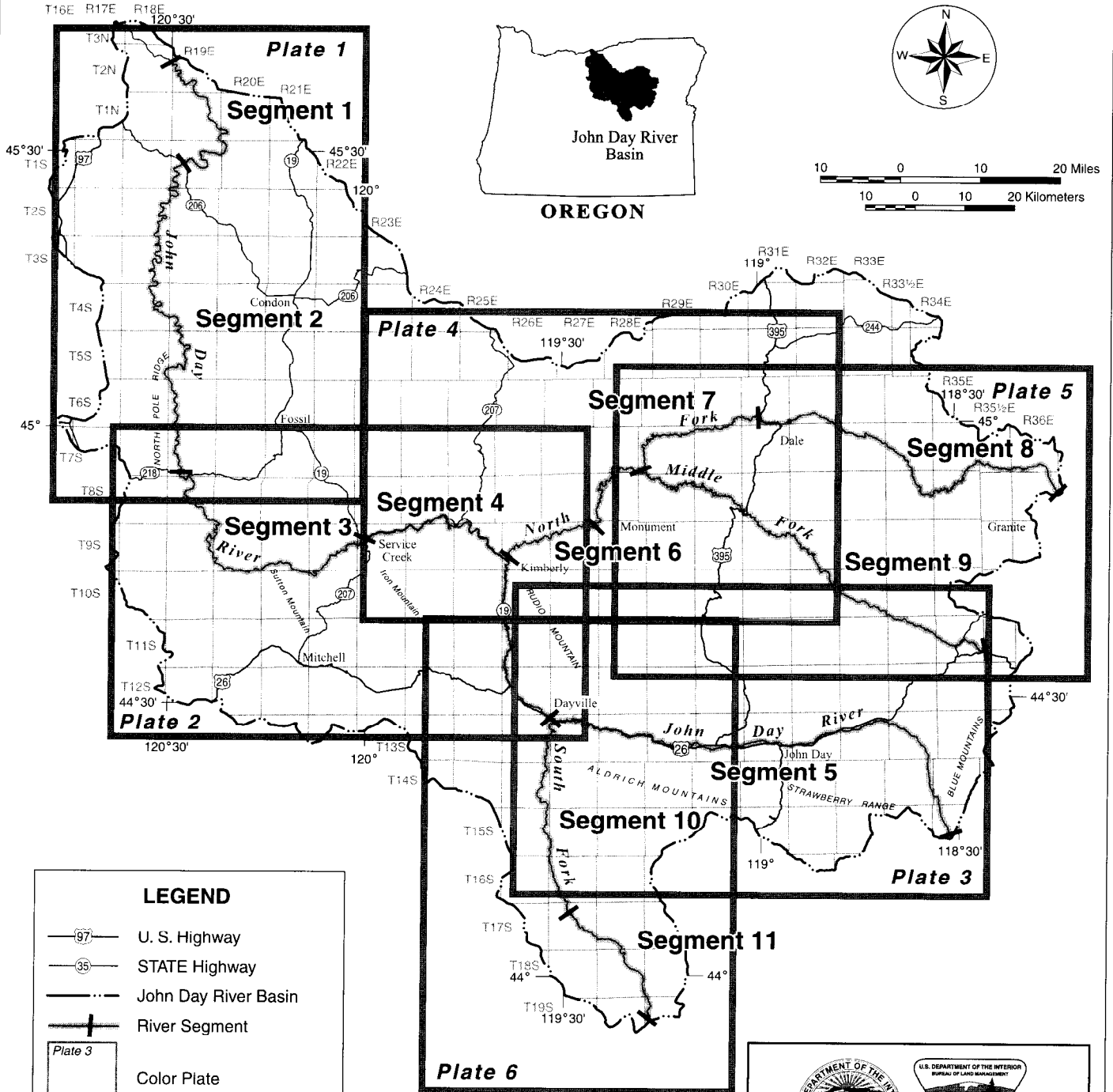
- Lower John Day River mainstem (Tumwater Falls upstream to Service Creek), classified as *Recreational*. The outstandingly remarkable values include scenic, recreation, fish, wildlife, geological, paleontological, and archaeological and historical values to be outstanding. Botanical and ecological values are significant.
- South Fork John Day River (Smokey Creek upstream to the Malheur National Forest boundary), classified as *Recreational*. The outstandingly remarkable values include scenery, recreation, fish, wildlife, and botanical resources. Geological and prehistoric/traditional use values are significant.
- North Fork John Day River (Camas Creek upstream to the headwaters). One portion of this segment is classified as *Wild*, two portions are classified as *Scenic*, and two are classified as *Recreational*. (This Wild and Scenic segment is managed by the USFS under the *North Fork of the John Day Wild and Scenic River Management Plan*.)

The term Recreational River applies to rivers or sections of rivers that, at the time of designation are readily accessible by road or railroad, may have some development along their shorelines, and may have undergone some impoundment or diversion in the past. (This definition applies to determining how the river should be classified at the time of designation but does limit management decisions.)

The Bureau of Land Management policy encourages public use of, and access to, designated Wild and Scenic Rivers classified "Recreational" to the extent consistent with protecting outstandingly remarkable river values. Public use and access may be regulated and distributed where necessary to protect and enhance recreation river values, to protect users, or to meet recreation management objectives (USDI-BLM 1992c).

State Scenic Waterway



The Oregon Scenic Waterway Program is a state-level program administered by the Oregon Parks and Recreation Department. A total of approximately 317 miles of the John Day River is included in the Oregon Scenic Waterways System (SSW). These



LEGEND

- U. S. Highway
- STATE Highway
- John Day River Basin
- River Segment
- Color Plate

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 2000**

Map 1-B: River Segments and Segment Map Index

river portions are administered by the Oregon Parks and Recreation Commission, with rules that provide generic standards to all scenic waterways.

The state's administrative rules are designed to manage development and uses within the Scenic Waterway corridor in order to maintain the natural beauty of the river. The rules do not affect development existing at the time of Scenic Waterway designation, nor do they prohibit new development. Although some types of improvements require notification, review and approval, others do not.

The State Scenic Waterway segments are located on:

- Mainstem, from Tumwater Falls to Parrish Creek. (Tumwater Falls to Service Creek is also a Federal WSR)
- North Fork, from near Monument upstream to the North Fork John Day Wilderness boundary. (Camas Creek to the North Fork John Day Wilderness is also a Federal WSR).
- Middle Fork John Day River, from its confluence with the North Fork John Day River upstream to the Crawford Creek Bridge.
- South Fork, from the north boundary of Phillip W. Schneider Wildlife Management Area (formerly Murderer's Creek Wildlife Management Area) to County Road 63. (Smokey Creek to County Road 63 is also a Federal Wild and Scenic River)

Other Designations

The John Day basin watershed falls within the ceded lands of the Confederated Tribes of the Warm Springs Reservation of Oregon (CTWSRO) and the Confederated Tribes of the Umatilla (CTUIR). These lands are considered ancestral to different Native American Indian groups under treaties signed and ratified by Congress in 1855. These confederated tribes retain certain lawful rights and privilege in these lands, in common with U.S. citizens, for the purpose of sustaining important lifeway practices. This is a special relationship. The U.S. Government is responsible for meeting the obligations of these treaties by consulting on a government-to-government basis and considering the effects of its actions which might impact economic and religious aspects of these ongoing lifeways.

Other important designations also exist along the river, including: Wilderness Areas, Wilderness Study Areas, State Wildlife Refuges, and the John Day Fossil Beds National Monument.

Wilderness Areas, designated by the U.S. Congress, have special management rules, including a prohibition of motorized use and rules regulating "no surface" disturbance. There are two Wilderness Areas along the John Day River system, both managed by the USFS. The North Fork John Day Wilderness is located on the upper North Fork John Day River, and the Black Canyon Wilderness is on the South Fork.

Wilderness Study Areas (WSAs) located partly within the Wild and Scenic River boundaries are being studied for possible Wilderness designation by Congress. Use in these areas may include motorized use, limited to designated roads and ways, and activities must be managed in a way that does not impair the suitability of such areas for preservation as wilderness. Normally, this means that no surface-disturbing activities are allowed.

The State of Oregon established the John Day Wildlife Refuge in 1933 along the lower mainstem of the John Day River for the primary purpose of protecting the wintering and

nesting waterfowl. This refuge includes all land within 1/4 mile of the John Day River mean high water line, from the Columbia River upstream to Thirtymile Creek. The area is open to hunting of deer and upland game birds during authorized seasons only between September 1 and October 31, but is closed to all waterfowl hunting. Hunting on private lands within this refuge requires landowner permission.

The Phillip W. Schneider Wildlife Area, formerly the Murderer's Creek Wildlife Management Area, is located in Segment 10, along the South Fork John Day. This area was acquired in 1972 by the ODFW, primarily to protect and enhance a major wintering range for mule deer, and also to control wildlife damage and protect riparian zones.

Planning Process

Planning Partners

Although the decisions in this record are those of the BLM, they have been significantly influenced by public input and through extensive consultation with our planning partners. These partners include:

- USDI Bureau of Land Management, Prineville District
- Confederated Tribes of the Warm Springs Reservation of Oregon (CTWSRO)
- State of Oregon, by and through Oregon Parks and Recreation Department (OPRD), Oregon Department of Fish and Wildlife (ODFW), Oregon State Marine Board (OSMB)
- John Day River Coalition of Counties (including the counties of Gilliam, Grant, Jefferson, Sherman, Wasco, and Wheeler)
- USDI Bureau of Indian Affairs, Warm Springs Agency

Relationship of BLM's Decision to Partners

This Record of Decision is the BLM's decision for the river management plan. Planning partners may adopt the BLM plan to provide policy or direction for actions under their responsibility.

An example of interagency plan adoption is the John Day River Scenic Waterway administrative rules. Those rules were presented in Chapter 4, Volume 1 of the Proposed John Day River Management Plan and Final Environmental Impact Statement, and the decision on those rule is independent of this Record of Decision. The Oregon Scenic Waterway Program is a state-level program administered by the Oregon Parks and Recreation Department. The Oregon Parks and Recreation Commission adopted the John Day River Scenic Waterway rules of land management on May 31, 2000. The Oregon Water Resources Commission officially concurred with the rules on August 25, 2000. The rules were filed with the Oregon Secretary of State and became effective on September 1, 2000. The BLM will manage public lands in a manner consistent with these rules.

Native American Planning Role

Certain Treaties, Federal laws, and Executive Orders give special and unique standing in this planning process to Native American Tribes. Tribes most affected by this plan include the Confederated Tribes of the Warm Springs Reservation of Oregon (CTWSRO) and the Confederated Tribes of the Umatilla Indian Reservation (CTUIR). The Klamath Tribe and the Burns Paiute Tribe also have interest in portions of this same area. All of these tribes have recognized traditional uses established on and/or near the John Day River. The CTWSRO is an active partner in developing this plan.

Consultation with recognized tribal entities has been, and will continue to be, an integral component of this planning process. The BLM is guided by national policy and law and is committed to continuing constructive consultation and cooperative management whenever possible.

The decisions made in this planning effort are consistent with maintaining or enhancing efforts in areas of resource management that will allow for continuation of tribal lifeway practices. Because proposed decisions are designed to protect and enhance Outstandingly Remarkable Values (ORVs) associated with the river, the Plan will enhance the resources for which the Tribes have expressed concerns. The decisions affect change most directly through improvement of habitat conditions, and by extension, to the specific species of tribal interest. The proposed decisions will provide tribal members the opportunity to pursue treaty-related resource procurement activities and access usual and accustomed fishing locations.

Public Involvement

This Record of Decision is the culmination of a multi-stage process. The progress of this process has been marked by the production of the following documents:

- *A Draft John Day River Plan and EIS* was developed by BLM and the State of Oregon and released for public review and comment in October 1993. The Draft Plan and EIS proposed important decisions that primarily affected recreational use of federal land on the river and all lands on the portion of the river designated as a State Scenic Waterway. Response to this draft prompted the BLM to revise the scope of the Plan and to review grazing practices along the John Day River.
- The second revised *Draft John Day River Management Plan and EIS* was developed by the planning partners. Public review of the Draft occurred during a 90-day public comment period that ended on March 3, 2000. Six public meetings were held and were attended by 173 people. In addition, 503 public responses (letters, email, and telephone calls) were received during the comment period (see Volume III). These public comments were analyzed and carefully considered by the partners in developing the *John Day River Management Plan, Two Rivers and John Day Resource Management Plan (RMP) Amendments and Final EIS*.
- *John Day River Proposed Management Plan, Two Rivers and John Day Resource Management Plan (RMP) Amendments and Final EIS* was developed to direct management of the river on public lands within the planning area. Interested parties who had participated in the planning process were provided 30 days from the date of availability to protest any proposed decision within the plan. Twenty three protests were received. The Director of the BLM responded directly to the protesters. The decisions in this document are consistent with the Director's responses.

During the planning process, the BLM was advised by the John Day/Snake Resource Advisory Council (RAC), which is a citizens group appointed by the Secretary of the Interior to advise BLM on land management issues. The RAC appointed a subgroup to focus on developing this plan.

Analysis

The data and level of analysis used in the FEIS are commensurate with the importance of the possible impacts (40 CFR 1502.15). When encountering a gap in information, the interdisciplinary team (IDT) took one of two approaches: (1) they collected additional

information and/or conducted the analysis necessary to identify important relationships; or (2) they concluded that, although additional information would have added precision to estimates or better specified a relationship, the basic data and central relationships are sufficiently understood that additional information would be very unlikely to impact understanding. Therefore, any information missing from the Final EIS did not preclude making a reasoned choice among the alternatives. In accordance with the Endangered Species Act, a Biological Assessment (BA) for fish and wildlife was completed and submitted to National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (USFWS) for consultation (see Appendix C).

Decisions

Decisions made in this document are designed to address and resolve the 14 issues and their subsets described in Chapter 1, pages 17-26, of the *John Day River Management Plan*, and the *Two Rivers and John Day Resource Management Plan (RMP) Amendments and Final EIS*. Some decisions also amend the Baker RMP. Several decisions reaffirm existing management direction found in the three RMP's.

Emphasis has been given to developing decisions for the federally designated Wild and Scenic and State Scenic Waterway segments of the river system. The remainder of this section provides a summary of the issues and the decisions that resolve them. The type of decision is important because different types of decisions have different appeal rights. Where the decision includes detailed guidance for implementation, the reader is referred to an associated appendix.

The success of some decisions could depend on cooperative and direct involvement from the planning partners. Cooperative management agreements (CMAs) may be developed to address specific implementation or monitoring activities. CMAs could address resource allocations, funding strategies, and work priorities towards specific on-the-ground activities for which the partners share common goals or objectives. It is anticipated that the partners would, at a minimum, meet annually to discuss accomplishments, monitoring results, and develop a plan for the next year's implementation and monitoring program. Areas of interest and intent for involvement in implementation and monitoring by the partners is described in some specific decisions.

All management actions occurring as a result of this decision will be monitored. Specific resources/activities subject to monitoring under this plan will include: riparian recovery, upland vascular vegetation and cover, biological soil crust recovery, watershed improvement projects, anadromous fish spawning, temperature, implementation of instream conversion of irrigation flows, channel morphology, vegetation on converted agricultural fields, utilization, special status species, recreation, noxious weeds, Limits of acceptable change for resource conditions, social preferences and maintaining desired future conditions. See Appendix E for monitoring plans.

Some decisions contained in this ROD were already under BLM's authority to make, prior to the onset of this planning process. In some cases specific actions mentioned in the plan have been implemented since the DEIS was released, including applying surfacing gravel to the road to Priest Hole and installing a boater registration station at Rock Creek.

Vegetation

Issue #1. What management actions are needed to protect and enhance vegetation-related values?

The decisions listed below will protect and enhance special status plant species, promote quality habitat, enhance visual quality, and promote plant communities that support watershed function, healthy ecosystems, river values, and human uses. Most of the decisions that will protect and enhance vegetation-related values are described under Issues 1 and 1a through 1d. However, some decisions concerning recreational use and mining will also protect and enhance vegetation. The decisions concerning Riparian and Aquatic Habitat Restoration, Rangeland Restoration, and Forestlands Management, described below, did not correspond to the specific issues 1a through 1d but are essential elements of our concern to protect and enhance vegetation in order to protect and enhance river values.

Riparian and Aquatic Habitat Restoration

Decision: In order to protect and enhance riparian/wetland areas we have decided to continue existing management for riparian and aquatic habitat restoration.

The current program of riparian outplanting will continue. The BLM maintains a cottonwood stock nursery in the Clarno area where seed stock from throughout the basin have been planted and cataloged. Cuttings from this stock are taken for planting in suitable areas throughout the basin to enhance riparian productivity, diversity and structure, and to eventually provide a seed source for natural propagation of cottonwood throughout the basin. In addition, other species of riparian shrubs and trees are planted throughout the basin with the same goals and objectives.

Any activities involving ground disturbance will require further consultation with the ODFW, Oregon Division of State Lands, and OPRD, State Scenic Waterways Division. There are no specific projects of this type planned or described in this plan. Any future proposed projects of this nature on public lands will be subject to public review and appropriate federal, state and tribal consultation. In addition, prescriptions within the WSR segments will be designed and evaluated for concurrence with PACFISH guidance.

Rangeland Restoration

Decision: We have decided to utilize existing management direction for rangeland restoration to protect and enhance river values.

When seeding is used in restoration and rehabilitation projects, native species will be used where feasible. Following the Standards for Rangeland Health and Guidelines for Grazing Management, as described under the Accelerating Rangeland Recovery section, we will employ "Seedings and plantings of non-native species only in those cases where native species are not available in sufficient quantities; where native species are incapable of maintaining or achieving the standards; or where non-native species are essential to the functional integrity of the site." Ideally, seeding with non-natives should be a short-term measure to protect resource values until natives can re-establish.

The objectives of each particular project, both short and long term, will influence the process of species selection. If research or information becomes available on a particular species that causes concern for the invasive potential of that species, it would not be included in a species mix. No non-native species would be planted where the potential to compete directly with special status plant species occurs. No non-native species will be planted in WSAs.

Forestlands

Decision: In order to Protect and enhance river values in both Segments 7 and 10 (the only segments with forestlands,) we have decided to apply the existing John Day RMP (USDI-BLM, 1985a), as amended by PACFISH, guidelines for management of forestlands in riparian areas to all areas within these segments.

Timber removal will take place only when necessary to reduce the risk of catastrophic timber loss due to insect infestation, disease, wildfire, or when public safety is of concern.

Grazing:

Issue #1a - How should grazing be managed to protect and enhance river values?

Decision: We have decided to require that grazing on BLM-managed lands within the river corridor protect and enhance river values by modifying existing grazing management, where necessary.

This decision includes the following measures: (See FEIS, Vol. 1, pg. 170-172.)

1. Dates of annually authorized use will be determined by plant phenology, herd size, and available forage.
2. Except for allotments with small parcels of public lands surrounded by private land grazing will normally be restricted to not more than 60 days between November 1 to June 1 (often between March 1 to May 1).
3. A special seasonal limitation to grazing will be established. To protect public land riparian areas, grazing in pastures where livestock have access to river bank will be limited to periods when river flows at the USGS Service Creek gauging station are at least 2,000 cubic feet per second (cfs). The 50% exceedence value for the monthly natural stream flows are as follows: February, 2,060 cfs; March, 2,860 cfs; April, 4,610 cfs; May, 4,770; and June, 2,410.
4. When needed, grazing will be managed by fencing and use of natural features to physically prevent cattle from entering riparian areas, and by resting certain allotments.
5. When proposed grazing management blocks livestock access to water, new water sources will be developed.
6. Grazing will be managed to discourage livestock from concentrating in areas having possible cultural or paleontological resource values.
7. Within WSAs fencing and other developments must be determined to not impair the suitability of a WSA or a portion of a WSA for preservation as wilderness. Location of fencing or water developments, materials used, method of construction and maintenance would be subject to site specific analysis. If it is determined that fencing or other developments impair wilderness suitability other means would be required to manage livestock.
8. Monitoring of compliance with authorized grazing schedules will be increased over normal frequencies.
9. In the lower John Day River mainstem, most livestock use on public land riparian areas will end prior to the start of the high use boating season.
10. Ten popular camp sites known to have conflicts with livestock are identified for exclusion fencing (see Appendix I).
11. Comprehensive monitoring will be implemented
 - A. Levels of grazing or browsing use on important vegetative components of the riparian ecosystem will be monitored.
 - B. Increased vegetation and river channel monitoring will be established on grazed and ungrazed areas to verify that recovery rates are equal. In the event the above measure is not met, appropriate action will be taken (mid

term determinations may result in changes in season of use, changes in duration of grazing, changes in AUMs, exclusion, or some combination of the above, as described in the monitoring section. Final determinations of above measures not being met would result in livestock use being canceled in that portion of the pasture (FEIS, Vol 1, p. 196)). The Confederated Tribes of Warm Springs have indicated an interest in participating in vegetation and grazing monitoring.

- C. At campsites where livestock use creates a conflict as documented in Limits of Acceptable Change (LAC) monitoring, grazing will be excluded. The LAC study is described under Recreation and Appendix H.
- 12. Any campsite closed to recreation use for recovery will also be closed to grazing.
- 13. To protect California Bighorn Sheep, no sheep or goat permits (domestic or non-native) will be allowed in the future on BLM allotments within and adjacent to Segments 1, 2, 3, or 10. Conversion of permits from cattle or horses, to sheep or goats will not be allowed in the future in Segments 1, 2, 3, and 10. Any use of domestic sheep or goats for weed control will be closely monitored and done in accordance with the BLM's Bighorn Sheep Management Guidelines. No reduction in present livestock permit levels are proposed to accommodate bighorn sheep, just a restriction on livestock class. Currently, there are no active domestic sheep or goat permits in Segments 1, 2, 3, 10.

See Appendix L (Allotment Summaries) for decisions by individual allotment. See also Map plates 1a, 2a, and 6a for depiction of grazing management.

Noxious Weed Control Issue #1b - How should noxious weed invasions be managed to protect and enhance river values?

Decision: We have decided to continue implementation of the existing Integrated Weed Management Program to prevent the spread of noxious weeds and to prevent the development of monocultures that eliminate the diversity of habitat required by many wildlife species.

Mitigations/stipulations for noxious weed control activities are fully described in the FEIS (pages 156-158).

Fire Management Issue #1c - How should fire be managed to protect and enhance vegetation, scenery, recreation, and wildlife resources on public lands?

Decision: We have decided to implement the District Fire Management Plan to protect property and riparian, range, and forest habitats.

Fire control actions in the John Day River basin are selected to minimize visual and ecological impacts and, when needed, aggressively suppress wildfire. Additional fire management and rehabilitation efforts will be covered in supplemental environmental assessments or fire management plans.

Agricultural Lands Issue #1d - How should public agricultural (cultivated) lands be managed to protect and enhance river values?

Decision: We have decided to phase out commercial, cultivated agriculture and to protect and enhance river values by utilizing these lands to provide wildlife habitat, food

and cover for wildlife, or to provide cottonwood stock for reintroduction of hardwoods to riparian areas. We have decided to cooperate with our planning partners and the Oregon Department of Water Resources to return water not needed for managing these lands to instream uses.

As a result of this decision the BLM will phase out from commercial agriculture production on 195 acres of BLM managed land within 10 years according to the following schedule:

- Segment 1 - RM23 - One tract of 8.7 acres within 5 years.
- Segment 2 - RM98.75- One tract of 3.4 acres within 8 years.
RM101.5 - One tract of 43 acres within 8 years.
RM 107 - One tract of 70 acres within 5 years.
- Segment 3 - RM136 - One tract of 23.4 acres within 10 years.
RM 137 - One tract of 46 acres within 10 years.
(Two tracts totaling 26 acres in Segment 3 are identified for disposal.)

Dispose of 26 acres of agriculture land, through the land exchange process, for lands of equal or greater value within the designated Wild and Scenic River boundary. Pursue implementation of this exchange as soon as possible. A conservation easement, in exchange for these parcels, could also be pursued if the opportunity arises.

These 26 acres are in Segment 3 and include RM 112; T8S, R19E, Section 3, NE1/4SW1/4 and Section 4, NW1/4SE1/4 (15.3 acres) and RM 119; T8S, R19E, Section 25, SW1/4NW1/4 (10.3 acres)[legal descriptions corrected from FEIS]. Pending any exchange, these lands will continue to be leased for continued use in conjunction with adjacent private lands.

Some agricultural lands will continue to be irrigated to: 1. Provide for tree and shrub propagation (such as cottonwood, willow, aspen), 2. Provide, short term water for the reestablishment of perennial vegetation (native and/or desirable non-native grasses, forbs, shrubs and trees) that will not require irrigation after establishment, 3. Establish wildlife food and cover plots.

When conditions permit small portions of the 43-acre field in Segment 2 (RM 101.5) and 46-acre field in Segment 3 (RM 137) will be converted to perennial vegetation in order to open sites for dispersed camping and increase recreational opportunities.

Any BLM-managed land on which unauthorized agriculture is discovered in the future will be managed in a manner consistent with this decision (that is, it will be converted to perennial vegetation, tree and shrub propagation, wildlife food and cover plots, or disposal).

As tracts are converted to perennial vegetation, and irrigation is no longer required for establishment. Beneficial use would be maintained and associated water rights would be or transferred to instream use in cooperation with Oregon Water Resources Department.

Fish

Issue #2 - How can management actions best contribute to protection and enhancement of fisheries values in the John Day River system?

Decision: In order to protect and enhance fish in the John Day River we have decided to continue to support ongoing implementation of conservation measures by federal, state, county, tribal, and private entities within the John Day basin. Other decisions for

managing grazing, forestlands, weeds, fire, agricultural lands, mining, and recreation, along with the ability to implement fish habitat enhancement projects when determined appropriate, are the best means to protect and enhance fisheries values in the John Day River System.

Direct fisheries habitat restoration actions will follow guidance identified under Riparian and Aquatic Habitat Restoration and also be subject to public review, and appropriate federal, state, and tribal consultation. Formal and informal consultation with the U.S. Fish and Wildlife Service or National Marine Fisheries Service will be initiated on any proposed actions that may affect Federally listed threatened or endangered species. No activities will be permitted in threatened, endangered, or sensitive species habitat that would jeopardize the continued existence of such species. The habitat of threatened, endangered and special status species will continue to be monitored, maintained, and/or improved.

Wildlife

Issue #3 - How can management actions best contribute to protection and enhancement of wildlife within the John Day Wild and Scenic River?

Decision: Continue existing management of wildlife habitat, as described in the three RMPs, other supplemental coordinated RMPs, habitat management plans, environmental assessments, and the Endangered Species Act.

Actions that support this decision include maintaining all existing improvements and continue existing activity plans.

Formal and informal consultation with the U.S. Fish and Wildlife Service will be initiated on any proposed actions that may affect Federally listed threatened or endangered species. No activities will be permitted in threatened, endangered, or sensitive species habitat that would jeopardize the continued existence of such species. The habitat of threatened, endangered and special status species will continue to be monitored, maintained, and/or improved.

Forage will be provided to meet ODFW management objective numbers for deer and elk. Additional forage may be allocated to livestock whenever present big game population objectives are exceeded.

Public land use by exotic and/or feral sheep, goats, and pigs is not and will not be authorized. The BLM supports removal of these species by the use of BLM regulations and/or cooperation and coordination with the Oregon Department of Agriculture, ODFW, and private landowners. (This action is also described under Actions/Implementation for grazing

Crucial habitats will be monitored for forage production, habitat condition changes, and overall effectiveness of improvements. Existing improvements that relate to wildlife habitat will be maintained. Habitat management plans will be written for selected areas of wildlife habitat, and specific wildlife objectives will be included in all activity plans. Seasonal restrictions will continue to be applied to mitigate impacts of human activities on important seasonal wildlife habitat.

Native American Trust Responsibilities Issue #4 - How should the John Day Wild and Scenic River be managed to honor federal trust responsibilities to recognized Native Americans Indian tribes?

The BLM is guided by national policy and law and is committed to continuing consultation and cooperative management whenever possible. See the discussion about the role of Native American Indian tribes in the BLM planning process in this document.

Water Quantity and Quality Issues #5 and 6 - What land management activities can address water quantity and quality relative to the protection and enhancement of river values meet the requirements of the Clean Water Act, Endangered Species Act, and Wild and Scenic Rivers Act?

Decisions: We have decided to manage lands adjacent to the river to meet state water quality requirements, satisfy obligations of the Clean Water Act, and to protect and enhance outstandingly remarkable values, especially anadromous salmonids.

The BLM will continue to encourage and participate in independent and cooperative efforts by doing the following:

- Establish instream water rights under state appropriative or federal law.
- Enter into water-sharing agreements between private landowners, OWRD and ODFW.
- Leasing (in the short term) and transferring to instream uses existing consumptive irrigation rights
- Push-up dam removal and diversion modification (such as infiltration galleries).
- Irrigation efficiency projects (for example, conversion from flood to sprinkler or gated pipe).
- Riparian fencing projects.
- Fencing and spring developments to implement grazing systems that improve and maintain riparian and upland vegetation.
- Fish screening of irrigation systems.
- Off-channel or headwater check dams.
- Juniper and noxious weed control.
- Prescribed burning.
- Wildlife food and cover seeding.
- Riparian plantings.

The above activities may be implemented by individual landowners and agencies, or through various levels of coordination of individuals, watershed councils, and local, state, federal, and tribal governments.

The development of a Water Quality Restoration Plan (WQRP) (see Appendix G) will guide restoration actions to improve water quality in those areas where BLM land management actions have an effect. The goals of the WQRP are: 1) to protect existing areas where water quality meets standards and avoid future impairments, and 2) to restore existing areas that do not currently meet water quality standards.

The BLM adopts the recommended flows identified in the John Day River Scenic Waterway Flow Assessment (see FEIS, Volume 1, Table 2-J) as provisional instream flow goals for the John Day River Plan. These flow levels were identified to support recreation needs (OWRD 1986), and meet or exceed optimal flows for anadromous fish (Lauman 1977).

The managing agencies will use a two-pronged approach to achieve these flow goals and meet state water quality requirements. First, the agencies will continue their present individual and cooperative efforts to improve instream flows and water quality in the John Day River basin as described above. Second, the John Day River planning partners (BLM, CTWSRO, State of Oregon, and Counties) will coordinate to identify, prioritize, and facilitate actions to help achieve the identified flow goals and state water quality requirements. The information-sharing process will be open to tribal, local, state, federal, business/industry, recreational, and conservation/environmental representation to:

- Develop basin-wide priorities and recommendations for water quantity and quality improvement projects and practices.
- Provide guidance and technical assistance to cooperative individuals and groups, such as Watershed Councils.
- Coordinate funding sources to assist in implementing identified projects.
- Modify management practices based on results of monitoring, new information, or meaningful changes in conditions.

Other decisions described in this ROD that address grazing, agricultural lands, and recreation will also protect and enhance water quantity and quality values.

Paleontological Resources

Issue #7 - How will paleontological resources within the river corridor be protected and enhanced, while allowing for other uses?

Decision: We have decided to continue existing management that will preserve and protect paleontological resources and will make them available for viewing, education and research purposes when appropriate. Additional actions consistent with existing guidance will be taken to protect and enhance paleontological resources.

Existing management will continue in accordance with current laws, policy and agreements to protect and enhance paleontological resources and to prevent unauthorized disturbances. The actions include: conduct reactive inventory, record and evaluate on a project- specific level, maintain files and maps, monitor on an irregular basis for unauthorized disturbances and locality condition, conduct periodic public outreach and education efforts, and consult with the National Park Service at the John Day Fossil Beds National Monument on all proposed actions that might affect fossil resources.

To further protect these resources, we will take the following additional actions:

- Conduct inventory and cyclic prospecting at all potential fossiliferous exposures.
- Coordinate with the National Park Service and other outside entities to conduct appropriate scientific research on identified localities within the corridor
- Implement appropriate interpretive/public outreach/educational techniques
- Pursue development of partnerships with external entities to accomplish any or all of the above.

Cultural Resources

Issue #8 - How will cultural resources within the corridor be protected and enhanced, while allowing for other uses?

Decision: We have decided to continue existing management that will preserve and protect cultural resources (both historic and prehistoric) and make them available for cultural, educational and/or research purposes. Also take additional actions that will further contribute to protection and enhancement of cultural resources and prevent unauthorized disturbances.

Cultural resources will continue to be managed in accordance with current laws, policy and agreements for protection and enhancement of cultural resources, and to prevent unauthorized disturbances. Tasks will include: reactive inventory, record and evaluate on a project-specific level, maintain files and maps, monitor for ARPA violations and site condition on an irregular basis, conduct periodic outreach and education efforts, and consult with appropriate tribal groups on specific proposed actions.

Additional actions will include the following tasks:

- Re-record known sites.
- Evaluate sites for appropriate BLM Use Categories/National Register eligibility.
- Conduct Class III inventory in areas of high probability and/or potential high use not previously inventoried and which are not necessarily associated with specific projects.
- Conduct limited site testing/salvage excavation, where appropriate.
- Apply appropriate rehabilitation/stabilization techniques to sites as needed.
- Develop and implement appropriate interpretive/public outreach/educational techniques.
- Pursue development of a more active role for tribal involvement (beyond that required by law) in any or all of the above (participating in the rehabilitation of a damaged site).
- Pursue development of partnerships with various internal and external entities to accomplish any or all of the above.

The BLM considers these actions to protect and enhance cultural resources to be a high priority and will actively seek funding to accomplish them.

Public Information and Education

Issue #8 - How and where should public information and education efforts be concentrated?

Decision: We have decided to develop and implement a more focused information and education effort that will help the users and public understand and appreciate the Wild and Scenic River values, the need to protect and enhance these values, and their role in that effort.

Currently, the BLM disseminates information to users through information boards at major access points, responses to written and telephone information requests, outfitter and guide meetings, and visitor contact with BLM employees and volunteers stationed in the office, on public lands, and on the river. Presentations to schools and interest groups are conducted by request. The BLM will continue these actions, as well as continue the current policy of discouraging media coverage and public outreach that is intended to bring more users to the John Day River.

In addition, the BLM will install information boards at more public access points; increase personnel contacts with visitors; and create new user brochures, detailed land ownership maps, and interpretive signs. The BLM will also increase cooperative efforts with counties, local businesses, state agencies, and others to provide river users with consistent information. An information kiosk will be constructed on the South Fork John Day Backcountry Byway to educate the public about wildlife, riparian, wilderness, and weed management programs. Where trespass is a problem, ownership identification markers will be installed between BLM, state, and private lands to clearly identify land ownership and reduce trespass potential.

Actions listed for nearly all issues contained in this plan will involve communicating with the public about management goals and actions through various forms.

Law Enforcement and Emergency Services Issue #9 - How should law enforcement and emergency services be provided as visitation increases on the John Day River?

Decision: We have decided to improve management of law enforcement and emergency services by increasing levels of cooperation and support for BLM and local agencies to provide needed services.

The BLM will seek additional funding (this is in response to a letter protesting the propose decision in the FEIS) and improve coordination with state and local agencies by organizing a work group comprised of representatives of agencies providing law enforcement and emergency services along the John Day River. The BLM will encourage joint emergency training exercises for agencies, fire districts, outfitters, and private individuals.

Scenery Issue #10 - How should the outstanding scenic qualities of the river corridor be protected and enhanced?

Decisions: We have decided to amend the John Day and Two Rivers RMPs by changing the VRM classification in the following Wilderness Study Areas (WSAs) to VRM I: Aldrich Mountain, Strawberry Mountain, Spring Basin, North Pole Ridge, Thirtymile, Lower John Day, Sutton Mountain, and Pat's Cabin.

We have decided to amend the John Day and Baker RMPs by changing the VRM classification of BLM-administered or acquired lands in Segment 7 on the North Fork of the John Day River to VRM Class III.

We have decided to manage existing recreational developments located in river segments with a VRM Class II designation, as VRM Class III "islands." New recreational development under this plan would be required to meet VRM Class III standards.

Recreation Use - Limits of Acceptable Change Issue #11 - How should increasing recreation use be managed to protect and enhance river values?

Decision: We have decided to continue a Limits of Acceptable Change (LAC) study, already in progress in a monitoring phase, to determine appropriate use levels in all areas where visitor use has potential to adversely impact the desired future condition of resource values and/or the quality of visitor experience. Through the LAC study, determine appropriate levels for boating use for Segments 2 and 3 and make other recreation management decisions, within three years of signing the ROD.

We have decided to utilize the LAC study for other segments of the river when needed to address recreation management issues.

The BLM will continue collecting LAC monitoring data for Segments 2 and 3 in the years 2001 and 2002 and will expand the study to include a social monitoring component. The data collected during the monitoring phase of the LAC study will guide the decisions made during the planning phase of the study. The initial focus of the LAC monitoring is to determine the appropriate levels for boating use and make other recreation management decisions. Management decisions will be based on resource conditions, social preferences, and maintaining the desired future condition of these river segments. Resource indicators, standards, and management actions will be developed through an environmental assessment process (see Appendix H). LAC monitoring will continue in

future years to track resource changes over time, provide feedback on the effectiveness of the management actions employed, as well as alert managers to the need to consider further management actions to meet standards identified in the LAC study. The Confederated Tribes of Warm Springs have indicated an interest in being involved in the LAC study. Other planning partners will also be invited to participate, as will private and commercial recreation users and other interested publics.

Recreation - Boating Use Levels

Issue #12a - How should boating use levels be managed to protect and enhance river values and minimize social conflict?

Decision: We have decided to utilize the findings of a Limits of Acceptable Change (LAC) study to establish appropriate levels for boating use and make other recreation management decisions that protect and enhance river values. If the LAC study determines that boating use is above acceptable levels, mandatory limits on boat launching for overnight trips or day use may be imposed for the days during which acceptable levels are exceeded. This would require boaters to participate in a limited entry permitting process if they wish to launch when actual use levels are above desired levels.

While awaiting the results of the LAC study, interim daily launch targets will be set for overnight trips based on campsite availability. Daily launch targets will be set at a level equal to 70 percent of the available public land campsites within the first 15 river miles of the primary launch points in Segments 2 and 3. Interim launch targets will be a maximum of 10 daily launches for overnight trips in Segment 3 and a maximum of 8 daily launches in Segment 2. In Segment 1, use levels will be evaluated annually to determine if launch targets are necessary.

In the year 2003, the BLM plans to use monitoring data gathered through the LAC study to begin a LAC planning process. This process will help determine appropriate levels for boating use and make other recreation management decisions for Segments 2 and 3 (see Issue 11 - LAC). Data collected in the LAC study will provide the basis to determine if and when a mandatory, limited-entry permit system is necessary to protect and enhance outstandingly remarkable river values over the long term.

While awaiting the results of the LAC study, the boating public would be asked to voluntarily launch during off-peak periods to maintain use levels at or below the interim daily launch targets. During this interim period, non-permit measures that may be employed to manage use levels include letters to users and the media encouraging off-peak use, required no impact camping, equipment restrictions, party size limits, a campsite reservation system, or use fees.

Boating Use Allocation

Issue #12b - How should boating use be limited if boating use limits are needed in a river segment, and non-permit measures to adjust use are unsuccessful?

Decision: We have decided that, if it is determined that limits are necessary to keep use within the LAC (see 11 and 12a above and Appendix H), use will be allocated through a limited entry permit system. Trip permits would be allocated through a first-come, first-served common pool reservation system to all users in the same manner. The applicable use fee would be due in advance to hold a reservation. Any canceled trip permits would again become available for reservation.

Conditions for implementing a common pool allocation are:

- Such a system is successfully phased in on at least one segment of the Deschutes River.
- An independent evaluation of the successfully phased in Deschutes River allocation system, including a survey of Deschutes River boaters (non-guided users, guided users, and commercial guides and outfitters), and agency personnel including field staff and managers, must indicate the allocation system implemented on the Deschutes River has proven workable for each of these groups.
- If a common pool system on the Deschutes River has not been successfully phased in, an historical split allocation method will be implemented on the John Day, on an interim basis, if a limited entry permit system is needed. (The effects of an historical split allocation method were presented and analyzed as Alternative B in the FEIS.)
- If the independent evaluation and internal review indicate the common pool system implemented on the Deschutes River does not meet public and administrative needs while protecting the ORVs, and cannot be adjusted to do so on the John Day River, the BLM in cooperation with the planning partners will reconsider a range of alternatives for allocating use on the John Day River, through a plan amendment.

Motorized Boating

Issue #12c - How should motorized boating be managed to minimize social conflicts and protect river values?

Decisions: Existing state regulations will continue to prohibit the use of personal watercraft upstream of Tumwater Falls.

We have decided to take no action in Segment 1. Existing state regulations will continue to seasonally close Segment 1 to motorized boating from May 1 to October 1.

We have decided to close Segment 3 to motorized boating between May 1 and October 1, except use of one small electric motor (40 lbs. thrust or less) per boat will be permitted during this period.

We have decided to close Segments 2, 10 and 11 to motorized boating year-round.

The BLM will publish supplemental rules for motorized boating in the Federal Register to implement the decisions described above.

Dispersed and Developed Recreation

Issue #12d - How should camping be managed to protect resource and social conditions, and if visitor facilities are developed, where and what type of facilities should be developed?

Dispersed Recreation

Decision: To protect river values we have decided to manage dispersed use in areas that can best sustain impacts of camping.

Future actions (not described in this document) designed to protect dispersed river campsites will be based on recommendations of an LAC study.

We have decided to create a map to identify river campsites in Segments 2 and 3 that can best handle human use, identify preferred dispersed camping areas in Segments 10 and 11, and install signs and parking barriers to protect riparian vegetation.

We have decided to identify an area suitable for camping on the west bank of the river near Clarno. Actions to protect resources, such as campsite rehabilitation or closure, may be taken in any segment at any time, if necessary.

The ODFW will participate in locating vehicle barriers.

Developed Recreation

Decision: We have decided to improve or upgrade existing facilities where needed to protect resources.

We have decided to improve or upgrade existing facilities, where needed, or to replace those that are permanently closed (but not develop additional recreation sites) to better meet the needs of the recreational user. Included in our decision:

- Segment 1: The BLM will: 1. Improve parking facilities, add a primitive boat ramp, and a boater registration station at Rock Creek; 2. Add picnic tables, plant shade trees, and provide water for dump station at Cottonwood; and 3. Pursue a Cooperative Management Agreement (CMA) with the Sherman County Historical Society to manage and maintain the Oregon Trail interpretive site, John Day Crossing (west side); develop a small parking area; install access signing; and implement regular maintenance at this interpretive site.
- Segment 2: The BLM will add additional launch lanes, a pay phone, and provide water for the dump station at Clarno.
- Segment 3: The BLM will develop a primitive boat ramp and boater registration station at a site downstream from the existing Burnt Ranch dispersed site; and develop a public site at Twickenham with parking, primitive boat ramp, boater registration station, and toilet to replace the existing Twickenham (private) site. The BLM will also install a vault toilet at Priest Hole.
- Segment 10: Approximately 10 years after initiation of this plan, the BLM will develop a campground near Ellingson Mill including a vault toilet, tables, information board, signs, and parking barriers.

Prior to implementation of these actions, the BLM will coordinate with Oregon Parks and Recreation Department (OPRD) to ensure that proposed projects are consistent with State Scenic Waterway regulations, where applicable. Further coordination with OPRD will take place prior to implementation of actions on state land (Clarno and Cottonwood). Coordination will also take place with ODFW, Division of State Lands, Army Corp of Engineers, Confederated Tribes of Warm Springs, affected counties, and others depending on permit requirements and interest. The BLM will reestablish communications concerning maintenance of historical sites with the Sherman County Historical Society. Prior to developing a campground near Ellingson Mill, the appropriate level of NEPA analysis will be completed and necessary permits obtained.

Public Access

Issue #12e - How much, and where should, public access be provided to the John Day River, and how should trespass problems be addressed?

Decision: We have decided to maintain public access at existing levels, except as noted below. The BLM will:

- Grade, surface, or widen roads as needed, including the BLM road on the west bank from Clarno to Clarno Homestead and the road to Priest Hole.

- Improve ditches, culverts, and apply gravel to surface of the South Fork Road.
- Clarify the status of access to the Oregon Trail interpretive site (west side) and McDonald Crossing, and mark public access to these sites.
- Close the existing Burnt Ranch site to motor vehicles and maintain a trail for foot access.
- Improve access to Lower Burnt Ranch dispersed use area.
- Seasonally close the BLM road to the north of Clarno Homestead during the first 10 days of pheasant season.

We have decided to consolidate public land ownership patterns through purchase or exchange, acquisition of easements, and through partnership agreements with willing landowners to resolve public access issues and provide access to high value recreation opportunities (See decision for Issue 14 and Appendix F, Lands Suitable for Acquisition). Seek to acquire a river access point at Twickenham from a willing seller to replace the current private access.

The BLM will consult with ODFW about road maintenance procedures and the placement of ditches and culverts along the South Fork Road, prior to beginning this work. The BLM will coordinate with local governments and landowners to clarify legal public access to the Oregon Trail interpretive site (west side) and McDonald Crossing, prior to placing signs that identify legal access routes and parking areas associated with these sites. The BLM will coordinate with Oregon Parks and Recreation Department to ensure that road and access improvements are consistent with State Scenic Waterway regulations, where applicable.

Commercial Uses

Issue #12f - How much, and what type of, commercial recreation use should be permitted on the John Day River?

Decision: In order to protect and enhance river values and to provide safe, reliable service to the outfitted public, the BLM will continue to adhere to Bureau policy when determining whether to award commercial permits. This policy includes the following criteria:

- Type of public service to be provided by the permittee or applicant and consistency with management goals and objectives.
- Ability of that person to provide the service and make a business profit
- Safety of commercial customers.
- BLM workload in administering and monitoring permits.
- Other ramifications of that decision.

Until the LAC study on Segments 2 and 3 is completed, within three years of this ROD, the current moratorium on new permits for all river segments will be continued and no permit transfers will be allowed. Following completion of the LAC study, the BLM will complete a needs assessment for commercial services that considers BLM mission, existing opportunities, land capability, demand/supply, and input from others.

Additional measures to be taken by BLM in administering John Day River permits are listed below:

- The requirements for permits and permit transfers will be increased to include training in river rescue, Leave No Trace skills, and interpretive techniques.
- New applicants will pay a non-refundable application fee to cover the cost of verifying that application requirements are met.
- The BLM will conduct independent random audits of permit records.
- The BLM may issue new permits at the discretion of the Authorized Officer, if a needs assessment identifies a need for a particular service. After a specific need is identified, permits will be issued by competitive prospectus among those applicants

- meeting specific criteria identified by the needs assessment.
- After the initial moratorium, transfers will be allowed in accordance with BLM transfer policies.

Concession permits will be considered based on the results of a needs assessment. Shuttle service providers will be subject to the BLM permitting process. Minimum use requirements for commercial permits will be increased to 20 paying client user days during any consecutive, overlapping two-year period, commencing with the year 2002. The first two-year period for calculating this minimum use will be 2002-2003, followed by 2003-2004, 2004-2005, etc.

The Confederated Tribes of Warm Springs have indicated an interest in providing input into the needs assessment process.

Energy and Mineral Resources

Issue #13 - How will BLM manage mineral and energy resource exploration and development while protecting and enhancing river values?

Decision: We have decided to withdraw recreation sites from all mineral entry to protect and enhance recreational values (See Appendix J for list of sites.)

Leasable Minerals

Decision: We have decided to require no surface occupancy within the river corridor for exploration and extraction of leasable minerals. (This decision continues existing management under the Two Rivers RMP for leasable minerals in the lower John Day basin and amends the Baker (1989) and John Day (1986) RMPs for leasable minerals in the upper John Day basin.)

Locatable Minerals

Decision: We have decided to require that, in areas not specifically withdrawn from locatable mineral entry under the Mining Law of 1872, as amended, locatable mineral entry be subject to stipulations that protect water quality and native vegetation. Stipulations include, but are not limited to, those for screening and road building restrictions in State Scenic Waterways as published in Chapter 4 of the FEIS. (If the State subsequently revises these rules the BLM will adopt such changes only if the changes provide more protection for river values than existing rules.)

Salable Minerals:

Decision: To protect river values we have decided not to permit new sites for production of salable minerals on public lands within the River corridor. Existing permits will either not be renewed when they expire or will be renegotiated.

Land Ownership, Classifications, and Use Authorizations

Issue #14 - What type and where should new utility or transportation facilities be permitted, or land acquisitions, exchanges, or disposals be authorized along and across the John Day River?

Decision: We have decided to continue to follow the direction of the Two Rivers, John Day, and Baker RMPs, as amended, when processing requests for utility and transportation rights-of-way and for land acquisitions, exchanges, and disposals.

The BLM has identified land parcels for acquisition that meet the needs of the plan (see Appendix F).

Land use authorization of newly acquired lands adjacent to the Northpole Ridge in Segment 2 and the Sutton Mountain and Pats's Cabin WSAs adjacent to Segment 3 will be amended to WSA status in the Two Rivers RMP. (See FEIS, Vol. 1, pg. 191).

The Oregon Land Exchange Act of 2000 has affected, or will affect, the public-private land ownership pattern within the river corridor, particularly Segment 7. Management of newly acquired public lands within the North Fork of the John Day subwatershed will be addressed in a future land use planning process.

Reasons for Decisions

The decisions made in this document resulted from careful analysis of available data. These decisions respond to issues raised during scoping and to public comments on the Final EIS.

We have considered all issues, competing interests, opinions, and values of the public. There were divergent opinions expressed during this project. This decision will likely not completely satisfy any particular group or individual. However, after giving consideration to all views, we believe the decision is reasonable and provides the best balance of protecting and enhancing river values and consideration of community needs. The decisions provide a beneficial mix of values for the public within a framework of the existing laws, regulations, policies, public needs and desires, and capabilities of the land, while meeting the stated purpose and need for this river plan.

The John Day River basin is recognized as one of two remaining core areas containing wild populations of salmon and steelhead in the Columbia Basin (*An Assessment of Ecosystem Components in the Interior Columbia Basin and Portions of the Klamath and Great Basins, Volume III, pp. 1223 and 1226*). The ICBEMP *Eastside Draft Environmental Impact Statement*, volume 1, notes that "in areas where present habitat is degraded and hydropower effects are smaller, such as the John Day and Deschutes Rivers, habitat improvements could result in immediate increases in numbers of fish (Chapter 2, p. 158). The ICBEMP identifies both the lower and upper John Day Subbasins as High Priority Subbasins for Restoration. We believe that, the decisions we are making for agricultural lands, grazing management and forests are the primary actions that will affect river values and habitat restoration. The direct actions called for to restore riparian and aquatic habitat, rangeland, fisheries, wildlife, and water quantity and quality protection have secondary benefits. The decisions in this document will provide the opportunity to improve upland, riparian and aquatic habitat adjacent to the river to benefit salmon, steelhead, and bull trout. The decisions in this document are consistent with and in some cases directed by: Implementation of Interim Strategies for Managing Anadromous Fish-producing Watersheds in Eastern Oregon and Washington, Idaho, and Portions of California EA (PACFISH), Inland Fish EA, and Rangeland Standards and Guidelines EIS.

Comparing our decisions with the other alternatives disclosed the following benefits and risks:

Riparian and Aquatic Restoration

Our decision allows the BLM to respond to site specific problems in and adjacent to the river. Other alternatives were not considered. The emphasis, however is protecting and enhancing these values through land management decisions concerning grazing, agriculture, mining, and recreation.

Rangeland Restoration

Where there is a high risk of noxious weed invasion active rangeland restoration is necessary to prevent the establishment of monocultures of noxious weeds. No other alternative was considered.

Forestlands

Our decision is to allow timber removal only to protect forest health and to otherwise continue existing management, except to extend existing protective standards for riparian areas to upland areas within the planning area will ensure that management will protect and enhance river values compared to existing management.

Grazing

The proposed decision selected for grazing is Alternative B. This alternative is an improvement over Alternative A (No Action), because some allotments under existing management do not have managed grazing consistent with protecting and enhancing ORVs. Because of the mixture of managed grazing and physical exclusion from riparian areas with managed grazing under Alternative B, we are able to restore riparian vegetation as well would occur under Alternatives C (riparian exclusion through fences and natural barricades on BLM managed lands) and D (corridor exclusion). However, this same benefit will occur at lower cost to taxpayers, because less fence and fewer water developments will be constructed and maintained than under Alternatives C and D. Where riparian-oriented grazing has been implemented on the John Day River, we have documented improvement in vegetative conditions (FEIS, Vol 1, p.60) As this continues to occur and riparian oriented-grazing is implemented on additional allotments, we expect that monitoring associated with our Water Quality Restoration Plan will find that inputs into the John Day River off BLM-managed lands will improve.

There are other problems associated with Alternatives C and D. Alternative D has the additional cost of slightly reducing cattle production in counties with depressed economies. We have also concluded that, in at least one sense, riparian areas will have a greater level of protection under the proposed decision than with either Alternative C or D. Because C and D are much more likely to involve grazing on uplands and private lands adjacent to riparian areas, and because of their dependence on fences, implementation of these alternatives would be more subject to breaks in fences and cattle circumventing fences by entering the river during low water periods than under the proposed decision. Riparian oriented grazing greatly reduces that possibility of inadvertent trespass throughout the year.

Our grazing management decisions affect several key concerns that are related to protecting and enhancing outstandingly remarkable values. The following describes how our grazing decisions will affect those concerns.

In many cases, the current authorized grazing season is winter and/or spring. The associated action will be limited to adjusting grazing leases in order to formalize the current arrangement. These actions will establish a relatively standard grazing period for the public lands along the river. A uniform season, during which river flow levels are sufficient to permit the river to be used as a barrier to livestock movement, reduces the incidence of trespass from livestock which, during low flows, are able to travel up and down the river banks and freely cross the river (see FEIS, Vol. 2, Appendix M, photos 11-14).

Discussions are provided below about implementation of grazing in relation to various resource values, including water quality, riparian condition, special status plants, fish listed under the ESA, noxious weeds, some early seral status lands and biodiversity, erosion and soils, and campsites.

Water Quality: Our decision is a first step in improving water quality because it will protect and or restore vegetation on public lands within the planning unit. The key to better water quality is improving the health of its watershed, that is, the ability of the land to capture, store and beneficially release water (see FEIS, Vol.1, pages 241-246). Upland soil cover prevents a rain drop from striking and dislodging soil particles. Soil cover slows the movement of water and enables infiltration. Riparian soils act like a sponge which absorb excess water and release water as the water table drops. Water released from riparian soils are typically cooler and cleaner than the water found in the river on hot summer days. In order to improve upland and riparian conditions, grazing management must encourage the livestock to spend less time in riparian ecosystems and allow upland plants to grow and reproduce. The grazing systems used in this plan have been shown to facilitate rapid recovery of upland and riparian vegetation (see FEIS, Vol.1, pages 274-281). Because of the function of vegetation, the recovery provided by the grazing systems will directly promote improved water quality.

Consistency with protecting and enhancing Outstandingly Remarkable Values: Water quality is the basis of high quality recreation experience and fish ORVs.

Riparian Condition: Our decision protects riparian vegetation by managing grazing in a manner that serves as a defacto exclusion, employs fences and natural barriers to exclude livestock, or rets entire pastures for a period of 3 to 5 years. Livestock prefer riparian areas during periods of high temperature and dry upland feed because of their need to drink and desire to rest in shade and eat green vegetation. Livestock use of riparian areas can be controlled by fencing, or by grazing a pasture containing riparian areas when temperatures are cool, upland vegetation is green, or when riparian vegetation is inundated by high flow levels. When relieved from constant pressures of livestock use, riparian areas recover rapidly to the point that differences are undetectable between areas with limited livestock use and areas with no livestock use (see FEIS, Vol.1, pages 274-278). Because our decision provides for grazing that meets these criteria, riparian vegetation will be protected and permitted to recover where recovery is needed.

Consistency with protecting and enhancing Outstandingly Remarkable Values:

- Several of the ORVs of the JDWSR are indirectly related to the condition of riparian areas. Many species included in the wildlife ORV depend more heavily on riparian areas than other types of habitat.
- The ORV of fish, as well as fish and wildlife habitat, require water of high quality and vegetation for cover.
- Fish and wildlife are related to the recreation opportunity ORV.
- The ORV of scenery is enhanced by the contrast between dry upland vegetation and green riparian vegetation.

Special Status Plants: Our decision protects and enhances special statue plants by providing the basis for restoration of native vegetation. (FEIS, Vol. 1, pages 281-282). By increasing the proportion of native plants in the ecosystem, conditions are created which are similar to the competitive environment under which the rare plant evolved. Grazing management which allows native species to grow and reproduce contributes to improving the proportion of native species to non native species. Grazing systems used in the plan permit rapid recovery of native species.

Consistency with protecting and enhancing Outstandingly Remarkable Values: Botanical value is an ORV for the mainstem JDWSR. Also, rare or unique plant species provide a recreational opportunity.

Fish Listed Under Endangered Species Act: The status of steelhead and bull trout in the John Day basin is tied to dams on the Columbia River, ocean conditions and international harvests as well as conditions in the basin. These fish require clean cold water habitat. Grazing management systems resulting from our decisions will promote healthy uplands and riparian areas. These healthy plant communities in turn will contribute to fisheries values by improving infiltration of water on the uplands, increasing storage capacity of riparian areas, buffering of high summer water temperatures through water release from storage and shading of tributaries, increasing root masses which stabilize river banks, and protecting fish from high water velocities during high flows with submerged riparian vegetation (see FEIS, Vol. 1, pages 220-221).

Consistency with protecting and enhancing Outstandingly Remarkable Values: Fish are listed as an ORV. Fish are indirectly related to the recreational opportunities ORV.

Noxious Weeds: Our decision reduces the spread of noxious weeds by livestock by employing grazing during a period which transport of seeds is unlikely or by excluding livestock from certain areas. The possibility of seed transport is reduced by grazing a weed-infested pasture prior to seed production and when weed seeds from the previous year have already fallen. There are well documented cases of devastating weed infestations occurring in areas free from grazing for long periods of time, which illustrate that weeds do not need livestock for spread. The river and its tributaries are the two most common pathways for weed transport into the Wild and Scenic River (see FEIS, Vol. 3, page 133). Healthy plant communities have not been a barrier to weed invasion. To date, the best approach developed for controlling noxious weeds is an integrated approach of public education, prevention, continual inventory, and rapid response.

Consistency with protecting and enhancing Outstandingly Remarkable Values: Reductions in noxious weeds will increase native vegetation vigor and diversity, which in turn will enhance wildlife habitat, watershed health, and recreation experience (see FEIS, Vol. 3, page 136).

Some Early-Seral Status Lands and Biodiversity: Our decision is a first step in improving seral status of vegetative communities because it will protect and or restore vegetation on public lands within the planning unit. Please refer to the discussion under riparian conditions, special status plants and noxious weeds. As explained in the FEIS, Vol. 1 page 60, the early-seral status of a site does not necessarily imply opportunities exist for improving the site to mid-seral or late-seral through changes in grazing management alone. In those instances where improvement could be achieved by implementing changes in grazing, systems that provide for the physiological needs of native perennial species (and favor defoliation of undesirable annual species) will encourage improvement (see FEIS, Vol. 1, pages 278-281).

Consistency with protecting and enhancing Outstandingly Remarkable Values:

- Protecting and or enhancing vegetative communities will restore the watershed function of early-seral status lands has been compromised, affecting the land's ability to capture and store water and, indirectly, affecting water quality and fish habitat.
- Protecting and or enhancing vegetative communities will restore Botanical diversity which affects the ability of native and special status species to occupy the site, which affects botanical and ecological values.

Erosion and Soils: Our decision will reduce erosion by protecting and or restoring upland and riparian vegetation. Upland soil cover prevents a rain drop from striking and

dislodging soil particles. Soil cover slows the movement of water and enables infiltration. Less water moving across the soil surface decreases the opportunity for soil movement off of a site. Riparian soils act like a sponge which absorb excess water and release water as the water table drops, evening out the flows and encouraging the persistence of root masses which stabilize the river banks. To improve upland and riparian conditions, grazing management must encourage livestock to spend less time in riparian ecosystems and allow upland plants to grow and reproduce. The grazing systems used in this plan have been shown to permit rapid recovery (see FEIS, Vol. 1, pages 274-281).

Consistency with protecting and enhancing Outstandingly Remarkable Values: Proper functioning of watersheds is indirectly related to water quality and fish habitat.

Campsites: Our decision protects campsites by excluding livestock from sites with identified conflicts. The LAC process will provide the opportunity to identify additional sites from which livestock should be excluded.

Consistency with protecting and enhancing Outstandingly Remarkable Values:

- Recreation opportunities is an ORV that is affected by the conditions at camp sites.
- Fences will be designed to be unobtrusive, by blending in with the line, form and color of the natural landscape to minimize the impact on the scenery ORV (FEIS, Vol. 1, page 267).

Biological Soil Crusts: Our decision protects biological soil crusts by limiting grazing to a season when soil crusts are hydrated or frozen. The degree that biological soil crusts are impacted by trampling varies according to soil texture and water content of the crusts (FEIS, Vol. 1, pages 279-281). Grazing during periods when livestock tend to disperse evenly across the landscape and when the crusts are hydrated and tolerant of some disturbance allows the crusts to grow and reproduce.

Consistency with protecting and enhancing Outstandingly Remarkable Values: Biological soil crusts are among the soil cover elements that provide for proper functioning of the watershed and improving water quality and fish habitat.

Protection of Cultural Resources: Our decision for grazing protects cultural resources by protecting and restoring vegetation. The most accessible or sensitive cultural resources were impacted prior to Wild and Scenic River designation through vandalism, farming, erosion, fire and trampling. The current level of livestock trampling is likely to have an impact similar to erosive forces (such as freeze-thaw soil action and river flooding) and far less of an impact than biological disturbance such as rodent burrowing. By managing livestock use in a manner that allows native plants to grow and reproduce, the soil surface will be protected and erosion will not be exacerbated.

Consistency with protecting and enhancing Outstandingly Remarkable Values: Cultural resources are among ORVs.

Noxious Weed Control

We have decided to continue the existing weed management program because it has been recently developed with full knowledge of the special status of the John Day River. A range of alternatives were examined both in documents of the weed management program and the documents to which they are tied. We are confident of our decision because all facets of our integrated weed management program have been subject to public and court review as described in Chapter 3 of the FEIS.

The Prineville District's primary weed management document is the Prineville District Integrated Weed Management EA (OR-053-3-062). This district-wide EA analyzed two alternatives. Alternative 1, a full IWM program for all BLM-administered lands (including herbicide use), had provisions for more detailed weed management EAs for Wilderness Study Areas (such as the Lower John Day River IWM EA). Alternative 2 was the same as Alternative 1, except that herbicide use would not be permitted within Wilderness Study Areas or potential future Wilderness Areas. Three other alternatives (No Use of Herbicides, No Aerial Herbicide Application, and No Action) were considered, but not analyzed in this EA because these alternatives were all analyzed in the Vegetative Treatment on BLM Lands in Thirteen Western States FEIS 1991 and the Northwest Area Noxious Weed Control Final EIS 1985 and Supplemental FEIS 1987 and their respective RODs. No further analysis of these alternatives was included in the EA, because analysis in the FEISs and RODs were considered applicable to the district level. Alternative 1 was selected. The analysis and Finding of No Significant Impact (FONSI) for EA # OR-053-3-062 and its tiered documents (Vegetative Treatment on BLM Lands in Thirteen Western States FEIS 1991; Northwest Area Noxious Weed Control Program Supplemental FEIS 1987; and Northwest Area Noxious Weed Control Program FEIS 1985) were affirmed in IBLA 94-692, 94-726, 94-727, decided July 7, 1997.

The Prineville District's most recent document pertaining to weed control (Lower John Day River Integrated Weed Management EA #OR-054-3-063) analyzed two alternatives as a result of the provisions for more detailed planning needs for Special Emphasis Areas outlined in the district-wide IWM EA: Alternative 1, a full Integrated Weed Management (IWM) program including the use of herbicides within the river corridor's four Wilderness Study Areas; and Alternative 2, the same program as Alternative 1, except for no use of herbicides in Wilderness and Wilderness Study Areas. The Proposed Decision (Alternative 1) included all weed management practices (preventive [cultural], manual, mechanical, prescribed fire, biological, and chemical) on BLM-managed lands along the Lower River (RM 10 to 122) in four Wilderness Study Areas (WSAs); potential future WSAs along the lower John Day River; and the designated Wild and Scenic River. As in the Prineville District IWM EA, the alternatives of No Use of Herbicides, No Aerial Herbicide Application, and No Action were considered but not analyzed, because these alternatives were all analyzed in the Vegetative Treatment on BLM Lands in Thirteen Western States FEIS 1991 and the Northwest Area Noxious Weed Control Final EIS 1985 and Supplemental FEIS 1987 and their respective RODs. No further analysis of these alternatives was included in the EA, because the analysis in the FEISs and RODs was considered applicable to the district level. Alternative 1 was selected for implementation on the lower John Day River and the four WSAs within this corridor.

Fire Management

The Prineville District Fire Management Plan is based on interdisciplinary land use decisions. Its goal is to provide fire management services that minimize the total cost (suppression cost plus net value change of affected resources) of suppressing a fire. The above mentioned concept requires flexibility in the use of suppression resources and methods of fire attack and use of prescribed fire. No other alternatives were considered

Agricultural Lands

Our decision selects Alternative C for management of BLM-managed Agricultural Lands. This alternative will provide more native wildlife habitat than existing management (Alternative A) and Alternative B. Our decision provides the opportunity to provide much of the water now diverted for irrigation on public lands for instream uses. Alternative D is the same as the proposed decision, except that after the agricultural land is restored to

natural vegetation, irrigation would no longer be permitted and all water would be converted to instream beneficial use. Compared to our decision, Alternative D would provide the opportunity to keep slightly more water for instream use but would eliminate the opportunity to provide supplemental food and cover plots for wildlife or the opportunity grow hardwood stock for rehabilitation adjacent to the river. Our decision to dispose of 26 acres of land that are intrinsic parts of private agricultural fields (a common part of Alternatives B, C, and D) will eliminate an inconsistent use of BLM lands and provide a partial basis for acquisition of lands that would serve to protect and enhance river values.

This decision supports management of these lands to provide wildlife habitat, food and cover for wildlife, or to provide cottonwood stock for reintroduction of cottonwoods to riparian areas. This decision also will slightly reduce water consumption from the John Day River and consequently provide an opportunity to dedicate some additional water to instream flow.

A phased process is required because of expected funding levels for implementation and to continue weed control during the process. This schedule is considered a realistic and cost-efficient strategy; however, it may be accelerated by availability of additional funds, contributions, cooperative agreements or termination and/or abandonment of leases by lessees ahead of the BLM schedule.

Fish

This decision will help protect and enhance fisheries values in the John Day River. Other decisions for managing grazing, forestlands, weeds, fire, agricultural lands, mining, and recreation, along with the ability to implement fish habitat enhancement projects when determined appropriate, are the best means to protect and enhance fisheries values in the John Day River System. These decisions focus on developing natural, native vegetation to protect and enhance watershed conditions.

Wildlife

This decision will help protect and enhance diversity of wildlife habitat and the resulting wildlife species diversity, which includes special status species. Our decisions for managing grazing, forestlands, weeds, fire, agricultural lands, mining, and recreation are the best means to protect and enhance wildlife values in the John Day River System, because they focus on management and habitat improvements to meet wildlife species needs.

Native American Trust Responsibilities

Though Native Trust Responsibilities were treated as an issue throughout the planning process there is no decision to be made in this document because trust responsibilities are a matter of law and BLM policy.

Water Quantity and Quality

Our decisions for managing grazing, forestlands, weeds, fire, agricultural lands, mining, and recreation, coupled with cooperative management, are the best means to protect and enhance water quantity and quality. These actions support river values by focusing on development of natural, native vegetation to protect and enhance watershed conditions. Adopting the flows identified in the John Day River Scenic Waterway as provisional instream flow goals provides a target for judging the progress of

management actions toward flow goals. The development of a Water Quality Restoration Plan (see Appendix G) will provide standards and a monitoring plan for determining progress toward meeting Clean Water Act Standards.

We are mindful, however, that our management decisions in this plan cover about 2 percent of the land in the John Day Basin. It is for this reason that cooperative planning and management is emphasized to protect and enhance water quantity and quality. We must encourage cooperation and work with land managers of the 93 percent of the John Day Basin not managed by the BLM to manage their lands in a manner that promotes good instream habitat and, consequently, will continue to support river values including endangered fish and wildlife.

Paleontological Resources

Decisions protecting and enhancing paleontological resources are based on existing laws, Bureau policy and existing agreements, but are characterized by a more proactive approach that encourages cooperation, partnership, funding and implementation opportunities.

Cultural Resources

Decisions protecting and enhancing historic and archaeological (cultural) resources are based on existing laws and Bureau policy, but are characterized by a more proactive approach that encourages cooperation, partnership, funding and implementation opportunities.

Public Information and Education

We believe that a well informed public is more likely to follow rules and regulations, practice Leave No Trace outdoor skills, be less likely to trespass on private property, and generally take better care of the public lands.

Law Enforcement and Emergency Services

To protect and enhance river values and improve public safety, it is imperative that local, state, and federal agencies work together to set and accomplish common goals.

Scenery

The VRM classification of WSAs to VRM Class I is consistent with BLM policy; the amendment to the VRM classification of Segment 7 to VRM Class III will provide greater VRM protection to these lands; and identifying VRM Class III "islands" will allow continued use, upkeep and expansion of recreational facilities within the corridor.

Limits of Acceptable Change Study

Existing policy directs BLM to establish appropriate carrying capacity in all areas where visitor use has potential to adversely impact significant resource values and/or the quality of visitor experience. The LAC study is a basis for making informed, defensible recreation management decisions that are based on physical and social monitoring data. The LAC methodology is well respected and commonly used among land managing agencies.

Boating Use Levels

Our decision to establish interim targets of launches for overnight use in Segments 2 and 3 equal to 70 percent of campsites within 15 miles of launch points (Alternative C) is designed to provide adequate recreational opportunities, preserve the recreational experience by avoiding overcrowding, and protect riparian vegetation from over use. Existing management in these segments would result in unlimited recreational opportunity but would allow overcrowding and would not protect resources from overuse. By targeting 1998 daily use levels, Alternative B would permit increases in off peak use. As a result, recreational opportunities would be maintained but recreational experience during off peak periods would change as use shifts to these periods. Increases in overall use would likely increase impacts to river values in and near existing sites. Alternative D would provide an uncrowded recreational experience and protect resources, but would reduce recreational opportunities. Alternative E would have the same launch target as our decision, except that in Segments 1 and 2 within the limits prescribed, motorized boating would have a target of one motorized boat launched per day in March and two motorized boats launched per day in April. Our decision to rely on a Limits of Acceptable Change study to determine if and when formal limits for boating should be required (common to Alternatives B-E) will provide specific criteria for limits and an opportunity for public review.

Establishing interim launch targets for overnight use in Segments 2 and 3 equal to 70 percent of campsites within 15 miles of launch points is designed to reduce the number of boating parties on peak use days so that it does not exceed the number of available public land campsites, forcing boaters to camp on private lands. Non-permit measures will be used to encourage boaters to voluntarily shift their use to non-peak periods, as it is BLM policy to implement the least restrictive management actions needed to accomplish the objective.

Boating Use Allocation System

Our decision to implement a common pool, first-come first served allocation system (Alternative D), if such a system is needed, will allow all users equal access to the river. We are concerned that implementation of such a system may make it difficult for commercial use permittees to provide their services to the outfitted public. As a result, we have chosen to make selection of the common pool system contingent on successful implementation of a similar system on the Deschutes River where a common pool system is now being developed. A common system on both rivers will result in less confusion for the users. If such a system is not successfully developed before the need to allocate use, we will implement an allocation system that is based on historical proportions of commercial and non-commercial use because it is a proven system. Specifying an interim allocation method would ensure the BLM the opportunity to evaluate information derived from a phased in Deschutes allocation system, even if it means waiting for this information prior to implementation of a common pool system on the John Day.

Alternative B would result in an allocation system based on historical proportions of commercial and non-commercial use. Although the historical proportion (split allocation system) would proportionally serve the existing demand, it would not respond to changes in demands for commercial or non-commercial access to the river. A common pool lottery system, as required by Alternative C, would provide equal access to commercial and non-commercial users but would make it difficult for boaters to initiate trips on peak use days on short notice.

If and when LAC monitoring indicates that a limited entry permit system is necessary, requiring advance permits on peak use days only will ensure that permitted days are kept to the minimum necessary to meet LAC standards.

Motorized Boating

Our decision implements several different alternatives, depending on the river segment. When viewed as a whole, the proposed decision meets the Desired Future Condition for the Recreation Opportunity ORV by providing an opportunity for a variety of on-river recreation experiences within the John Day River system, including motorized and non-motorized boating on specific segments. In Segment 1, where there is currently very limited opportunity for the public to access the river below Rock Creek by any means other than a motorized boat, Alternative A (closed to motorized boating from May 1 to October 1) was selected to allow the current level of public access to continue with no further restrictions. In Segment 2, Alternative D (closed to motorized boating all year) was chosen to provide an opportunity for a more primitive recreational experience for boaters within the river system as a whole, because this is the most primitive segment along the John Day River. In Segment 3, Alternative E (closed to motorized boating May 1 to October 1) was chosen to promote public safety and to minimize conflicts between motorized and non-motorized users during peak use periods. The closed season does not apply to small electric motors with a 40 lb thrust or less because use of such motors would not likely result in conflicts between users or cause safety concerns, and would not negatively affect the Desired Future Condition for recreation experience identified for the majority of Segment 3 (FEIS, Vol. 1, pages 137-138. Segments 10 and 11 were closed to motorized boating because these segments seldom, if ever, have sufficient flows for safe boating.

As a result of these decisions the opportunity for a motorized recreation experience would be available seasonally in Segments 1 and 3 and year-round in Segment 4. The opportunity for a non-motorized experience would be available seasonally in Segments 1 and 3 and year round in Segment 2. While opportunities for motorized boating would be reduced by this decision, opportunities for this activity would remain available all year in Segments 4, 5, 6 and 7 depending on flow level. If these restrictions for motorized had been established in 1999, there would have been 42 recorded motorized use days lost out of a total of 16,215 recorded boating use days (motorized and non-motorized) in Segments 1, 2, and 3.

Dispersed Recreation

We have decided to use LAC monitoring to alert the manager to areas where dispersed recreation is affecting physical resources and/or recreation experience. This will permit managers to make informed, defensible recreation management decisions. This decision also identifies specific actions that will be taken to protect areas where known problems exist:

- Creating a user map for Segments 2 and 3 to identify public/private land boundaries and campsites that can best sustain impacts of camping will allow dispersed camping to continue, but will encourage boaters away from both private lands and sensitive sites.
- Identifying an area for dispersed camping on the west side of the river near Clarno will protect sensitive resources by channeling use to a more suitable camping area.
- Installing signs and parking barriers to identify suitable parking and camping areas in Segments 10 and 11 will allow dispersed use and protect riparian vegetation.
- Rehabilitating damaged sites will correct resource impacts.

Developed Recreation

Our decision for Developed Recreation implements Alternative B in Segments 1, 2 and 3, Alternative C in Segment 10, and continues existing management in Segment 11. Overall our decision is designed to manage for the Recreation Opportunity ORV while protecting resources and ensuring that recreation development is consistent with the

Desired Future Condition for specific river segments as well as future funding and maintenance capabilities. Improving facilities at Cottonwood, Clarno and Rock Creek will improve the recreational experience for visitors. Developing two new sites in Segment 3; a primitive site at Lower Burnt Ranch, and a developed site at Twickenham (contingent upon acquiring land from a willing seller) will shift use from an existing sensitive site and a current private land site, respectively. Installing a toilet at Priest Hole will improve the recreational experience, help to prevent unsanitary conditions, and protect water quality. Improving river toilet dump stations will aid boaters in complying with regulations requiring the use of portable toilets and installing additional boater registration stations will supplement current monitoring efforts. Improving access signing, parking, and maintenance of the Oregon Trail interpretive site will promote local involvement and stewardship in managing this historical site and help reduce private land trespass. Developing a new campground with toilet facilities near Ellingson Mill in approximately 10 years (Alternative C) will improve the recreational experience, help to prevent unsanitary conditions, and protect water quality when it is estimated that increased use levels will necessitate such action. In Alternative D, reducing facilities, closing sites, and/or discouraging use would shift resource impacts from developed sites to dispersed sites, which are more difficult to monitor and less able to handle the impacts of recreation use.

Public Access

Maintaining current BLM access routes in all segments, while upgrading the quality of some routes, will allow public access to continue at existing locations, with the exception of a 10 day seasonal road closure near Clarno Homestead which will provide the opportunity for a non-motorized pheasant hunting experience. Improving the quality of several existing BLM routes with culverts, ditches or surfacing material, and improving directional and informational signing on others, will enhance fish protection efforts by reducing surface runoff and improve safety and convenience for users. Clarifying the status of public access routes and signing these routes for public use will reduce confusion for users. Continuing to consolidate public land ownership patterns through exchanges with willing landowners for state and private lands, through an active easement acquisition program and through partnership agreements, will help to resolve public access issues and provide address to high value recreation opportunities. Continuing to seek a river access point on public land at Twickenham to replace the current private access, will assure that historical river access in this area is maintained. Redirecting vehicle access to a new site in the Burnt Ranch area will protect fragile resources at the existing site. Providing additional access to the river via roads and trails, as described in Alternative C, would in some cases be inconsistent with the Desired Future Condition identified for specific river segments, and where it would be consistent, exchange or purchase of land from a willing seller is unlikely at this time. Reducing the current level of public access to the river, as described in Alternative D, would protect and enhance other ORVs, but would neglect to balance protection of other ORVs with that of the Recreation Opportunity ORV.

Commercial Use

Completing a needs assessment process prior to considering whether to issue any new commercial permits will insure that new permits will be issued only if there will be a benefit to the public and to river values. Using a competitive prospectus process to award permits, if and when they are available, will ensure that available permits are awarded to the most qualified applicants who meet an pre-identified public need. Placing a temporary moratorium on new permits and permit transfers until after the LAC study determines appropriate boating use levels (within three years of this ROD), will provide a prospective applicant with information necessary to evaluate the probable success of a business venture. Charging a fee to cover application costs, expanding

application requirements, and increasing minimum use requirements will discourage the incidence of speculative permits. Determining a minimum level of training or knowledge required of permittees such as training in river rescue/first aid, Leave No Trace skills, and interpretive techniques will help to promote a safe, quality experience for the outfitted public and increase compliance with permit stipulations. While Alternative C would also use a needs assessment process to identify a public need prior to issuing permits by competitive prospectus, it would not increase training requirements designed to improve the quality of services provided by permittees. In addition, Alternative C would significantly limit the opportunity for permit transfers by allowing transfers to only those service providers who could meet a newly identified need, rather than those who would continue to provide the type of service authorized by the existing permit. Maintaining the level of commercial permits at 34, as described in Alternative D, would define a permit quantity which may not correlate with the public demand for services. In addition, discontinuing the opportunity to seek a permit transfer would be inconsistent with BLM policy.

Energy and Mineral Resources

The decision to implement Alternative B was chosen as the best balance between the existing management (Alternative A) and complete closure of the public lands within the WSR corridor (Alternative D). Our decision provides virtually the same protection of river values as Alternative D but would be easier to implement and would not preclude development that would not affect river values.

Our decision to amend the John Day and Baker RMPs by requiring No Surface Occupancy stipulations on oil and gas and geothermal leases protects and enhances river values and provides consistency among the three plans.

Our decision to withdraw Recreational sites from mineral entry will protect other resources and the recreational experience. Our decision to not withdraw the public lands within the Wild and Scenic River corridor from locatable mineral entry will have a minimum effect compared to Alternative D (withdrawal of Wild and Scenic River and State Scenic Waterway Segments from mineral entry) on the environmental and aesthetic integrity of the river corridor. Adoption of the State Scenic Waterway Rules which include screening, road building, and dredging restrictions as rules for the Federal WSR, will protect the ORVs of the corridor. There are currently no mining claims on the federal lands within the corridor and there is low potential for the development of locatable mineral resources within the corridor.

Our decision to eliminate new permits for salable mineral sites (rock or sand pits) and not renewing or renegotiating existing permits will protect views, prevent unnecessary sedimentation, and introduction of weeds into the riparian communities.

Under Alternative A the John Day and Baker RMPs would not be amended to include the "no surface occupancy" stipulation contained in the Two Rivers RMP, which limits leasable mineral development. Our decision and alternative B would prevent the extraction of Salable minerals while the limited extraction of such materials could continue to be taken from the corridor as long as the operations met the State regulations for dredging and screening and the policies of the Prineville District BLM. In contrast, Alternative D would close the WSR corridor to all mineral entry and would exclude the possibility of developing any commercial deposit of leasable or locatable minerals under any circumstance.

The No Surface Occupancy stipulations on oil and gas and geothermal leases add more protection to river values. This rule is already in place in the Two Rivers RMP but would amend the John Day and Baker RMPs

Land Ownership, Classification, and Use Authorizations

The direction of the existing RMPs will allow BLM to make decisions concerning right-of-way locations and land acquisitions consistent with protecting and enhancing the river values. Further protecting some lands adjacent to the Wild and Scenic River corridor by giving them WSA status will protect and enhance the ORVs and resources within the corridor.

Consistency with ICBEMP

The decisions in this document are consistent with the Scientific Assessment of the Interior Columbia Basin Ecosystem Management Project (ICBEMP). The ICBEMP Scientific Assessment provides a multi-state context to view this plan. Among the trends noted in the assessment is a decline in the “system integrity” of forest and range lands, as well as a reduction in both biological and social resilience. A contributing factor to these trends has been a lack of integration between resource disciplines and a lack of coordination between management regions (for instance, the assessment noted a lack of connected ownerships and administrative areas), which precludes achieving a landscape perspective. Although a final decision has not been made for ICBEMP, the goals outlined in the scientific assessment are the foundation for any selected alternative.

Our decision is consistent with the following goals:

- Maintain evolutionary and ecological process.
- Manage with an understanding of multiple ecological domains and evolutionary time frames.
- Maintain viable populations of native and desired non-native species.
- Encourage social and economic resiliency.
- Manage for places with definable value.
- Manage to maintain the mix of ecosystem goods, functions and conditions that society wants.

Achieving these goals will ensure that our decision will meet the requirements of the Federal Lands Policy and Management Act (43 USC 1732) and the Wild and Scenic Rivers Act (43 CFR 1271-1281).

Description of Alternatives Considered in Detail

Many decisions in this document are simply to follow existing RMP guidance. Other decisions are to follow RMP guidance, but to emphasize activities that are consistent with existing guidance but are not now being undertaken as frequently as they might be to promote conditions that protect and enhance river values. When incorporating existing guidance as the key to responding to issues, the BLM’s interdisciplinary planning team and the Interagency/ Intergovernmental Core Team did not develop new alternatives. The following table compares the key elements of the alternatives where alternatives were considered for resolving significant issues.

Table 2. Issues Addressed by Multiple Action Alternatives (Decision in Bold)

| Issue | Alternative A | Alternative B | Alternative C | Alternative D | Alternative E |
|-----------------------|--|---|---------------|---|----------------|
| Scenery | | | | | |
| VRM Classification | Manage Scenery consistent with VRM classifications identified in current RMPs: Class II within all W&S segments, most non-designated segments, and portions of some tributaries. | Manage Scenery consistent with VRM classifications in current RMPs (Class II within all Wild and Scenic segments, most non-designated segments, and portions of some tributaries), except change classification in WSAs to VRM I to be consistent with updated BLM guidance. | | Manage Scenery consistent with VRM classifications in current RMPs (Class II within all Wild and Scenic segments, most non-designated segments, and portions of some tributaries), except change classification in WSAs to VRM I to be consistent with updated BLM guidance. | No Alternative |
| Vegetation | | Allow continued use, maintenance, and expansion of existing BLM recreational facilities within the river corridor, including boat ramps and parking lots. Such facilities will be designated and managed as VRM Class III islands within the river corridor VRM Class II designation. New campgrounds within the corridor will be designated and managed consistent with the VRM Class III. | | VRM classifications in Grant County (under the John Day RMP) for portions of Segments 6 and 7, on the North Fork John Day River, will be reclassified from VRM IV to VRM III to provide greater VRM protection. This will apply to current BLM lands, as well as any acquired lands until the John Day RMP is amended or revised. | |
| Special Status plants | Continue existing management | | | | |
| Weeds | Continue existing management | | | | |
| Fire | Continue existing management | | | | |
| Forestlands | Continue existing management | | | Continue existing management, plus substitute John Day RMP guidelines for management of riparian areas for existing management guidelines for upland areas within the planning area in Segments 7 and 10. | |

Table 2. Issues Addressed by Multiple Action Alternatives (Decision in Bold) (continued)

| Issue | Alternative A | Alternative B | Alternative C | Alternative D | Alternative E |
|---------|---|---|--|--|----------------|
| Grazing | Continue existing management by applying varying management practices that emphasize riparian oriented management that protects and enhances river values. Some allotments do not meet this goal. (See Table 3-E, FEIS) | <p>Manage grazing to protect and enhance ORVs.</p> <p>105 Bank miles managed grazing. Season not to exceed 2 months, primarily late winter early spring. In pastures with riparian areas within designated corridor that are currently grazed in spring, grazing authorized only when flows exceed 2,000cfs to aid in protection of riparian vegetation. For such pastures that are currently winter grazed, the 2000 cfs restriction is an interim measure(see Monitoring in Chapter 3). Establish compliance, utilization and trend standards for continued grazing. If grazed riparian areas within designated corridor are not improving at same rate as similar ungrazed areas within 10-15 years, exclude grazing permanently.</p> <p>72 Bank miles riparian exclusion (fence or natural barriers)</p> <p>18 Bank miles rest at least 3 years.</p> | Restrict grazing to outside of riparian areas to protect and enhance ORVs. | Restrict grazing to outside of Wild and Scenic River Boundary to protect and enhance ORVs. | No Alternative |

Table 2. Issues Addressed by Multiple Action Alternatives (Decision in Bold) (continued)

| Issue | Alternative A | Alternative B | Alternative C | Alternative D | Alternative E |
|---|--|--|--|---|--|
| Agricultural Lands | Continue Existing Management | Modify existing management as necessary to protect and enhance river values. | Manage land with emphasis on protecting and enhancing terrestrial wildlife values and restore native vegetation. Phase out commercial agriculture on BLM lands | Manage land with emphasis on protecting and enhancing instream values and restoring native vegetation. Phase out irrigation of BLM-managed lands. | No Alternative |
| Acres Irrigated for Commodity Use | 221-385± | 195± | 0 in 10 years | 0 in 20 years | |
| Acres Potentially Irrigated for Non-Commodity Use | 0-164± *Not all acres will be irrigated every year | 164± *Not all acres will be irrigated every year | 359± Acres irrigated as needed to establish perennial vegetation. Number of acres irrigated will be reduced by stage of restoration and need for hardwood stock or wildlife food and cover. | 0 in 20 years | |
| Acres Restored to Native Vegetation | 0-164 | 0-164 | Approximately 300-359 (long-term goal). Approx. 60 acres of agricultural lands will be kept in wildlife food and cover crops. | 359± *All acres would be restored to native vegetation. | |
| Acres disposed | 0 | | | | |
| Recreation | | | | | |
| Boating Use Levels | | | | | |
| Monitoring | | | | | |
| Interim | Use non-permit measures to encourage launches during off-peak periods. | Segment 1: Same as A Segments 2 and 3: Same as A but target Launches at 1998 levels. | Segment 1: Use non-permit measures to encourage launches during off-peak periods. Segment 2 and 3: Same as Segment 1, but target launches equal to 70% of campsites within 15 miles of launch points. | Segment 1: Same as A Segments 2 and 3: Same as A but target launches to equal historical average of peak period daily launches. | Launch target same as C except: Segments 1 and 2: March: Target of 1 motorized boat launched per day. April: Target of 2 motorized boats launched per day. |
| Long Term | No restrictions planned. | Future decisions based on LAC study, mandatory launch limits may be imposed. | | | |
| Allocation System | Allocation not needed. | Historical proportions | Annual common pool lottery system | Common pool; first-come first served (see text). | No Alternative. |

Table 2. Issues Addressed by Multiple Action Alternatives (Decision in Bold) (continued)

| Issue | Alternative A | Alternative B | Alternative C | Alternative D | Alternative E |
|-----------------------------|---|--|---|------------------------------------|--|
| Motorized Boating | Continue existing LAC monitoring to inform future decision making | | | | |
| Segment 1 | Closed to motorized use May 1 to October 1. | Closed March 1 to December 1 | Closed April 1 to December 1 | Closed to motorized boating. | Segments 1 and 2 : Motorized boating permitted only December 1 to end of April. |
| Segment 2 | Closed to motorized use May 1 to October 1. | Closed March 1 to December 1. Recommend to Congress that motorized boats be excluded in WSAs if designated Wilderness. | Closed April 1 to October 1 between Clarno and Clarno Rapids (electric motors <40 lb. thrust permitted) Closed year round below Clarno Rapids | Closed to motorized boating | Recommend closure to motorized travel in Segment 2 below Clarno rapids if WSAs become designated wilderness |
| Segment 3 | Open to motorized river travel all year | Except for small electric motors (40 pound thrust or less), closed April 1 to October 1. | Segment 3: Closed April 1 to October 1. | | Segment 3: Closed to motorized travel May 1 to October 1 (Except for 40 pound thrust or less electric motors. |
| Segments 10 and 11 | Open | Closed to Motorized Boating | | | |
| Dispersed Recreation | Manage dispersed use in areas that can sustain impacts of camping. Future Management decisions will be based on LAC study. | | | | |
| | Decisions made on case-by-case basis. | Segments 1 and 3: No actions. Segments 2 & 3: Create user map identifying campsites that best sustain impacts of camping Segment 2: Identify a designated area on west bank near Clarno for dispersed camping. Segments 10-11: Identify preferred camping areas and install signs and parking barriers to protect vegetation. | | | |

Table 2. Issues Addressed by Multiple Action Alternatives (Decision in Bold) (continued)

| Issue | Alternative A | Alternative B | Alternative C | Alternative D | Alternative E |
|-----------------------------|---|---|--|---|---------------|
| Developed Recreation | Based on public need | Improve or upgrade existing facilities when needed to protect resources | | | |
| Segment 1 | Maintain Cottonwood and Rock Creek facilities. No scheduled maintenance for Oregon Trail interpretive site (west side). | Maintain Cottonwood & Rock Creek facilities. No scheduled maintenance for Oregon Trail interpretive site (west side). Also add boat ramp and boater registration station at Rock Creek and provide picnic tables, plant trees, and provide water for dump station at Cottonwood. Provide parking and signs and maintain Oregon Trail interpretive site (west side). | Same as Alternative B. | Same as Alternative A, except close existing facilities at Rock Creek. | |
| Segment 2 | Maintain Clarno. | Expand launch capability, provide water for dump station, and add pay phone at Clarno | | Same as A | |
| Segment 3 | Maintain Service Creek and Priest Hole facilities. | Maintain Service Creek & Priest Hole facilities. Also install toilet at Priest Hole. Replace existing Burnt Ranch site with primitive launch at Lower Burnt Ranch. Replace existing private Twickenham launch with new developed site. | Same as Alternative B, plus make improvements to Clarno East, develop Lower Burnt Ranch into camping area with signs, information board, parking barriers, and toilet. | Same as Alternative A except discourage use at Clarno East. and close the existing Burnt Ranch site to vehicles | |
| Segment 10 | No developed sites. | Same as Alternative A. | Approximately 10 years after ROD, create campground near Ellingson Mill with toilet, tables, information board, signs, and parking barriers. | Same as Alternative A | |
| Segment 11 | No developed sites. | | | | |

Table 2. Issues Addressed by Multiple Action Alternatives (Decision in Bold) (continued)

| Issue | Alternative A | Alternative B | Alternative C | Alternative D | Alternative E |
|--------------------|---|--|---|---|------------------------|
| Public Access | <p>Segment 1: Clarify status of access to Oregon Trail Monument (west side). Segment 3: Acquire public access to river near Twickenham. Segments 10 and 11: Improve ditches and culverts on the South Fork Road.</p> | | | | |
| Segment 1 | Continue existing management. | Eliminate motorized access to existing Burnt Ranch site; maintain trail for foot access. | Eliminate Rock Creek road access. | No Alternative | No Alternative |
| Segment 2 | Continue existing management. | <p>Continue existing management, except improve BLM road on west bank of the river from Clarno to Clarno Homestead.</p> | <p>Same as Alternative B, plus seek to acquire public access to Tumwater Falls and the confluence of Hay Creek and the John Day River</p> <p>Same as Alternative B, plus seek public access easement to the river via Butte Creek Road. Seek to acquire public access on East bank from Clarno to Clarno Rapid.</p> | <p>Seasonally close BLM road on the west bank to vehicle traffic past the Clarno Homestead.</p> <p>Same as B, except do not provide motor vehicle access to Lower Burnt Ranch.</p> <p>Same as Alternative A.</p> | No Alternative |
| Segment 3 | Continue existing management. | <p>Provide access to Lower Burnt Ranch dispersed use area.</p> | Same as Alternative B. | Same as B, except do not provide motor vehicle access to Lower Burnt Ranch. | Same as Alternative A. |
| Segments 10 and 11 | Continue existing management. | <p>Continue existing management, plus apply gravel surface of South Fork Road.</p> | Same as Alternative B, plus widen South Fork Road. | | |

Table 2. Issues Addressed by Multiple Action Alternatives (Decision in Bold) (continued)

| Issue | Alternative A | Alternative B | Alternative C | Alternative D | Alternative E |
|----------------|--|---|---|---|---------------|
| Commercial Use | Continue existing Management. Case by case review. No limit on number of permits and permits are transferable. | <p>Decisions concerning commercial services will fully consider type of service, consistency with management goals and objectives, the ability of applicants to provide service, opportunity to make a profit, public safety, and BLM workload. Determinations made through a needs assessment process and issued by competitive prospectus. Moratorium on new permits and transfers until launch numbers are finalized in approximately 3 years. Increase minimum use requirements. Require shuttle services to obtain Special Recreation Permits.</p> <ol style="list-style-type: none"> 1. Increase permit requirements for training in river rescue, Leave No Trace, and Interpretation. 2. Charge a non-refundable application fee to cover costs of verifying that application requirements are met. 3. Conduct independent random audits of permit records. 4. Issue new permits at discretion of authorized officer. 5. After initial moratorium, Permits transferable | Permit numbers adjusted on basis of needs assessment. Transfer of Permits allowed in accordance with BLM transfer policies. | Limit number of permits to 34. Permits not transferrable. Available permits granted based on needs assessment and competitive prospectus. Concession permits based on needs assessment may be issued and would be in addition to 34 permits | |

Table 2. Issues Addressed by Multiple Action Alternatives (Decision in Bold) (continued)

| Issue | Alternative A | Alternative B | Alternative C | Alternative D | Alternative E |
|---|------------------------------|--|---------------|--|---------------|
| Minerals | Continue Existing Management | Continue existing management, except: <ol style="list-style-type: none"> 1. No surface occupancy restriction for Leasable Minerals in Grant and Umatilla County within Planning area. 2. Adopt State Scenic Waterway rules (Ch. 4). Where permitted, mining will be subject to stipulations to protect river values. 3. On BLM lands, new sites for production of salable minerals will not be permitted within State Scenic Waterways or Wild and Scenic Rivers. 4. Facilities such as established campgrounds and launches will be closed to leasing and salable minerals, and also withdrawn from entry under the Mining Law of 1872 for locatable minerals. | | Close BLM-managed lands in Wild and Scenic River Segments and State Scenic Waterway segments to leasing and saleable mineral activity and withdraw locatable minerals from entry under the Mining Law of 1872. | |
| Land Ownership, Classifications, and Use Authorizations | Continue Existing Management | Continue existing management, plus identify parcels for acquisition to protect and enhance river values and to facilitate administration. Amend land use authorization of newly acquired WSA lands in Segments 2 and 3 to WSA status. | | Same as B and C, plus seek to acquire additional lands in order to facilitate Alternative D for grazing. | |

Environmentally Preferred Alternative

Environmental preferability is judged using the criteria expressed in the National Environmental Policy Act of 1969 (NEPA). Title 1, Section 101(b) of NEPA establishes the following goals:

- Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
- Assure for all Americans safe, healthful productive, and esthetically and culturally pleasing surroundings;
- Attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;
- Preserve important historic, cultural, and natural aspects of our national heritage, and maintain, whenever possible, an environment which supports diversity, and variety of individual choice;
- Achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities;
- Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

Our decisions in this ROD comprise the selected alternative, which is actually a composite of various elements of the five alternatives (A to E) considered and analyzed in the EIS (See Table 2). The mix of alternative solutions to issues involves land use allocations and management directions which are compatible with one another and blends the best solutions for overall river environment management. We find our composite preferred alternative ranked first in overall environmental preferability, because it best meets the six broad policy NEPA goals. Although no single factor can be used to determine which alternative best meets these goals, our decisions will provide the opportunity to provide better habitat for wildlife and aquatic species over the long term and maintain public access to publicly owned lands, and to more efficiently manage public lands consistent with public interests compared to the other alternatives.

For each of the significant issues the Alternatives considered were in varying degrees of compliance with the goals. Overall as the selected alternative was considered to have the highest compliance with the goals. For example, for leased agricultural lands alternative A was less likely to fully meet goals 2, 3 and 4 and continued use of some areas and resources was more likely to lead to resource degradation or less likely to lead to resource protection and restoration than any of the action alternatives. While each action alternative provided for progressively more restoration of natural conditions, our decision, Alternative C, exceeds Alternative D for every goal because it provides the basis for ongoing restoration and the protection and enhancement of diversity within the river corridor. For grazing, our decision provides virtually the same levels of protection as Alternatives C and D and meets all of the goals. But Alternatives C and D contained elements, such as substantial fencing of livestock exclusion areas that would have created adverse impacts to other resources, such as wildlife passage and visual resources. Substantial exclusion of livestock also would not fully meet NEPA goals 5 and 6. In a similar manner closure of mineral and energy opportunities in Alternative D, did not provide significantly greater protection of river values than the protections provided in Alternative B which we have decided to adopt. However Alternative D did preclude development that would not affect river values and also precluded future development via new technology that would not affect river values. Consequently while our decision and Alternative D are virtually equal concerning criteria 1,2,4, and 6 our decision better meets criteria 3 and 5. Based on the comparison of the Alternatives in Chapter 5 of the Final EIS, our decision will best protect, preserve, and enhance historic, cultural, and natural resources for future generations while providing increased choice of recreational opportunities for all Americans, and therefore is the environmentally preferred alternative.

Appendices

The appendices attached to this Record of Decision, as identified in the list below, should be considered part of the decision. There is no Appendix K. Appendix L is a revision of Appendix L from Vol. 2 of the FEIS because it focuses the decision for each allotment.

- A - Errata sheet for FEIS
- B - References
- C - Documentation of consultation with National Marine Fisheries Service and US Fish and Wildlife Service concerning Threatened or Endangered Species
- D - Comment letter from the Environmental Protection Agency concerning draft FEIS that was omitted from FEIS
- E - Monitoring Plan
- F - Lands suitable for acquisition
- G - Water Quality Restoration Plan
- H - Limits of Acceptable Change
- I - Campsites with Grazing exclusions
- J - Recreation sites to be Withdrawn from Mineral Entry
- L - Grazing Decisions by Allotment

APPENDIX A

John Day River Management Plan - Errata

VOLUME I

page vii - Table S-1, Commercial Use, Key Elements: omit ***"No limit on # of outfitter guide permits."***

Page xv - Table S-3, Summary of Direct Impacts, under Grazing Issue, Management in WSR Grazing Excluded, Alternative A, **Present** Public and Private (miles of riverbank) should read **41.7** for Public and **50.9** for Private.

Page 27 - Third paragraph, end of last sentence, prior to (see Figure 2A) insert **(USDI-USGS 2000a)**. Figure II-A: The title for this figure should read, **"John Day River Hydrograph (1989-1998) at McDonald Ferry, Oregon"**

Page 42 - Energy and Minerals: Agencies Regulating Mining; end of first paragraph, **insert** the following: **"In addition, to operate a mine on any land in Oregon, the claimant must obtain an operating permit from Mined Land Reclamation Program, Oregon Department of Geology and Mineral Industries if over 5,000 cubic yards is moved, or over one acre is disturbed within a 12 month period. They must also obtain a reclamation bond from Mined Land Reclamation Program, Oregon Department of Geology and Mineral Industries"**; the beginning sentence of the third paragraph under this heading should read, "The Oregon Division of State Lands (ODSL) issues prospecting permits for exploration and mining activities **on state lands and the beds and banks of waterways.**"

Page 44 - Caves, first paragraph, end of third sentence, reference to 36 CFR should read, "....36 CFR, Part 290.3 **(c)** and (d)."

Page 51 - Consumptive Use, after fifth (last) paragraph, add the following: **Withdrawals and Reservations Under Public Water Reserve No. 107**

Springs in the planning area can qualify as a Public Water Reserve No. 107 if they meet the criteria for that reservation. In 1926, President Calvin Coolidge signed an executive order entitled "Public Water Reserve No. 107". The order states that "every smallest legal subdivision of public land surveys which is vacant, unappropriated, unreserved public land and contains a spring or water hole, and all land within one quarter of a mile of every spring or water hole... be...withdrawn from settlement, location, sale or entry, and reserved for public use...".

Public Water Reserve 107 was a general withdrawal of public lands made in response to the fact that, prior to that time, effective control over vast areas of the public domain could be gained merely by securing patents to small tracts surrounding available water sources for a given area. The 1926 reservation was designed to prevent this private monopolization of water on the public domain by withdrawing land and maintaining water open and free for the public use.

With the enactment of FLPMA in 1976, Congress limited the authority of the Executive Branch to make future withdrawals of land from the public domain. However, FLPMA stipulated that withdrawals and reservations existing at the time of its enactment shall

remain in effect. Therefore, even today the BLM can assert its PWR 107 claims and reserve and withdraw certain springs and waterholes from the public domain. The priority date of this reservation is April 17, 1926, the day the Executive Order was signed.

Because the 1926 Executive Order did not provide for individual land descriptions, it was left to the Secretary of the Interior to identify land and water areas subject to the order and note the land office records accordingly. Therefore, all springs and water holes that qualify as a Public Water Reserve No. 107 that existed as of the date of the Executive Order April 26, 1926 have been reserved even though they have not been recorded on a Master Title Plat or other document. However, Public Water Reserve No. 107 does not apply to lands acquired after April 17, 1926.

To date, no determination of which springs in the planning area qualify as a Public Water Reserve No. 107 has been made. We estimate that the amount of water encompassed by this Federal reserved water right is minimal (less than 1 cfs).

Page 52 - State and Federal Recommended Flows, replace second paragraph with the following:

Two types of water rights exist on the public lands: federal water rights, which consist of reserved water rights that originate under Federal law; and water rights which are acquired pursuant to State water law. Federal reserved water rights are a judicial creation; they are derived from Federal, not state, law. The doctrine of reserved rights holds: "That when the Federal Government withdraws its lands from the public domain and reserves it for a federal purpose, the Government, by implication, reserves appurtenant water then unappropriated to the extent needed to accomplish the purpose of the reservation. In doing so the United States acquires a reserved water right in unappropriated water which vests on the date of the reservation and is superior to the rights of future appropriators" (*Cappaert v. United States*, 1976). Thus, on withdrawn lands the reserved rights doctrine allows the federal government to remove water from availability for appropriation under state law.

The amount of water that the United States can claim under reserved rights depends on the purposes for which the lands were reserved. The reserved right must relate to the original primary purposes for which the land was withdrawn, and it is limited to the amount of water necessary for the reservation's specific purposes. The priority date for a federal reserved water right for the purposes of determining seniority relative to other rights obtained under state or federal law is the date when a reservation is established—the date of the statute, executive order, agreement, or treaty setting aside the land. Water rights already existing on a stream when a reservation is established are superior to the reserved rights of the federal government; federal reserved rights are superior only to subsequently established rights. This greatly limits the federal government's rights for newer reservations on heavily or fully appropriated streams, but it does provide protection against future uses.

The designation of a river as a wild, scenic or recreational river under the Wild and Scenic Rivers Act of October 2, 1968 explicitly reserves sufficient unappropriated water to fulfill the purposes of the Act. The amount of water reserved is the minimum amount necessary to protect the particular aesthetic, recreational, scientific, biotic or historic features ("values") which led to the river's designation. The amount of flow reserved will vary on a case-by-case basis. Segments of the John Day river system were designated by the Congress in 1988.

Page 54 - reference to (Collette and Harrison 1992a,b) has also been cited as (Northwest Power Planning Council 1992) in different places in the document. They are one in the same.

Page 55 - Third paragraph, end of last sentence, Unterwagner reference should read, **(ODFW 1999)**.

Page 61 - Noxious Weeds, first paragraph, fourth sentence, complete sentence with **“are affected by noxious weeds.”**

Page 76 - Water Quantity and Water Quality, second paragraph, delete second and third sentences and **insert** the following, **“The 11 instantaneous measurements for June averaged 66* F. According to 18 afternoon measurements, the average daily afternoon water temperature was about 75* F in July and August.”**

Page 83 - Water Quantity and Water Quality, second paragraph, delete last sentence and **insert** the following, **“Eleven instantaneous water measurements (1985-1998) averaged 66* F. Based on 18 afternoon measurements, the average daily afternoon water temperature was about 75* F in July and August (Cude 2000).”**

Page 91 - Water Quantity and Water Quality, second paragraph, end of third sentence, USGS reference should read, **(USDI-USGS 1998)**.

Page 92 - Water Quantity and Water Quality, first paragraph, **delete** seventh sentence to end of paragraph. In its place, **insert** **“The 13 instantaneous measurements for June averaged 64* F. Service Creek during July and August averaged 23 C (73.4*F), and temperatures of samples taken at Cottonwood Bridge about two hours later in the day averaged 24 C (75*F) for the same dates (Cude 2000 - 20 data points 1981-1998). During the summer months, there is very little input of water into the system between Service Creek and McDonald Crossing, so decreases in temperature within stream are not likely below Service Creek”**.

Page 99 - Water Quantity and Water Quality, second paragraph, end of third sentence, insert **(USDI-USGS 1999)**.

Page 107 - Water Quantity and Quality, second paragraph, second sentence, USGS citation should read **(USDI-USGS 1999)**; and fourth paragraph, second sentence, reference to the North Fork Agricultural WQMP should be cited as **(ODA 2000)**.

Page 122 - Segment 10: South Fork, Land Ownership and Classification, second paragraph, first sentence should read, “Most of this segment...is included in the federally designated **South** Fork of the John Day Wild and Scenic River...”

Page 143 - First full paragraph should be deleted and replaced with the following: Protection of instream flows in the John Day River system will rely, in part, on existing instream water rights that have been issued by the State of Oregon for some segments. These rights are subject to senior priority appropriations and do not actually ensure that flows are sufficient to support the Outstandingly Remarkable Values. When flows are available, however, existing instream rights protect that flow from junior priority consumptive use. The Oregon Water Resources Department has identified desired flow levels to protect recreation, fish, and wildlife in the John Day River and its forks. These flow levels are not water rights; rather, the OWRD uses them in its calculations of water availability during low flows.

The BLM will use a variety of tools, authorities and strategies to achieve instream flow levels that support the river values. These tools include: leasing (in the short term) and transferring existing BLM consumptive use rights to instream uses (in the long term); entering cooperative agreements with the State of Oregon and other agencies for the purchase of water rights from willing sellers for transfer to instream uses; and, if these other tools are not effective, quantification and assertion of the BLM’s Federal reserved water right.

Page 150 - Table 3-D. Issue - Dispersed Recreation, Alternative B, C, and D, Segment 2, omit the word "**Creek**" after Clarno.

Page 152 - Table 3-D. Issue - Commercial Use, Alternative B, **omit statement number 4 and change number 5 to number 4.**

Pages 155-156 - Noxious Weed Control, throughout this highlighted section, references should be cited accordingly: Northwest Area Noxious Weed Control Program FEIS (**USDI-BLM 1985b**); Northwest Area Noxious Weed Control Program Supplement (**USDI-BLM 1987a**); Vegetation Treatment on BLM Lands in Thirteen Western States FEIS (**USDI-BLM 1991c**); EA #OR-053-3-062 (**USDI-BLM 1994**); EA #OR-054-3-063 (**USDI-BLM 1997b**).

Page 169 - Table 3-E. Segment 11, 4067 Sheep Ck. B, Riparian Grazing Mgt., **omit the numbers 3 and 5**

Page 170 - Alternative B (Proposed Decision), Measure 1, end of second sentence, insert (**USDI-USGS 2000b**).

Page 171 - Last paragraph, fourth sentence, delete "Following three years rest...", **begin** sentence with "**Grazing in the new riparian pasture...**".

Page 175 - Management Common to All Action Alternatives, first paragraph, second to last sentence, legal descriptions should read "**...RM 112; T8S, R19E, Section 3, NE1/4SW1/4 and Section 4, NW1/4SE1/4 (15.3 acres) and RM 119; T8S, R19E, Section 25, SW1/4NW1/4 (10.3 acres).**"

Page 182 - Dispersed Recreation, the first occurrence of **Common to All Alternatives (Proposed Decision)** and all associated text should be moved to occur before Alternative A. The second occurrence of Common to All Alternatives should read, **Common to All Action Alternatives (Proposed Decision)**.

Page 184 - Public Access, the second occurrence of the heading Common to All Alternatives should read "**Common to All Action Alternatives (Proposed Decision)**."

Page 185 - Commercial Uses, immediately after the first occurrence of the heading Common to All Alternatives **insert (Proposed Decision)**. The second occurrence of the heading Common to All Alternatives should read, **Common to All Action Alternatives (Proposed Decision)**. In the second paragraph after this last heading, **delete the last sentence.**

Page 186 - Alternative B (Proposed Decision), last paragraph, last sentence, reference to USDA-FS should be cited as (**USDA-FS 1997**).

Page 187 - Leasable Minerals, first paragraph, second sentence should read, "In the Two Rivers RMP..."

Page 187 - Alternative B (Proposed Decision), Replace 1. With the following:
1. The John Day and Baker RMP's would be amended by subjecting leasable minerals on public lands falling within the John Day River Canyon to a no surface occupancy restriction (remaining portions of planning area already have this restriction under the Two Rivers RMP). This applies to Segments 5, 6, 7, 8, 9, 10, 11, and the Grant County portion of Segment 4 for the John Day RMP and to the Umatilla County portion of Segment 7 for the Baker RMP.

Page 217 - Noxious Weed Control, first paragraph, references to EA OR-053-3-062 should read **(USDI-BLM 1994)**, EA OR-054-3-063 should read **(USDI-BLM 1997b)**, Northwest Area Noxious Weed Control FEIS should read **(USDI-BLM 1985)**, Supplemental FEIS should read **(USDI-BLM 1987)** and Vegetation Treatment on BLM Lands FEIS should read **(USDI-BLM 1991c)**.

Page 241 - Riparian and Aquatic Habitat Restoration, fourth paragraph, third sentence, citation of BLM 1996a should read **USDI-BLM 1996a** and **insert a period** after the parentheses.

Page 246 - Boating Use Levels, Alternative C, insert the word **“be”** between the words would and small.

Page 361 - Oregon Parks and Recreation Department reference should extend to left margin.

Page 365 - References, Steward, O.C. should read **Stewart**, O.C.

Page 367 - reference USDI-BLM 1994, **delete** “District-Wide Interim...” and **insert** “Prineville District Integrated...”.

Page 368 - reference USDI-BLM 1997b, should read **“Lower John Day River Integrated Weed Management Environmental Assessment/Decision Record #OR-054-3-063”**.

VOLUME II

Page 11 - Appendix E, Special Status Wildlife Species, the columns for Columbian Sharp-tailed Grouse and Washington Ground Squirrel have shifted to the right.

Page 175 - 2656 Dry Knob, **omit** “Special Seasonal Limitation...” statement at bottom of page.

Page 197 - Appendix L, AUM's Within Lease, should read **436**, not 7,698.

Page 234 - Appendix L, Allotment Summary, 4122 Big Bend, Riparian management in 1999, should read, **“Exclusion”**

Page 240 - **Omit** allotment 4046 Three Mile, it is no longer a BLM allotment due to the Northeast Oregon Assembled Land Exchange.

VOLUME III

Page ii - Contents, 2400 Public Access, 2502, should read, **“Limits** of Acceptable Change”

Page 16 - S-026.3, second response, third sentence, **insert** the word **“not”** between the words ‘will’ and ‘seriously’.

Page 18 - J-002.7, Response, the reference to the (Northwest Area Noxious Weed Control Program Supplemental FEIS, 1987) should read **(USDI, BLM 1987)**.

Page 34 - B-042.1, Response, second paragraph, the Northwest Area Noxious Weed Control Program Supplemental FEIS (1987) should be referenced as **(USDI, BLM 1987)** and the Northwest Area Noxious Weed Control Program FEIS (1985) should be referenced as **(USDI, BLM 1985b)**.

Page 34 - B-042.1, Response, fourth paragraph, the Stohlgren reference should be cited **Stohlgren et al. (1999a)**.

Page 36 - B-042.3, Response, EA #OR-054-3-063 should be referenced as **(USDI, BLM 1997b)** and EA # OR-053-3-062 should be referenced as **(USDI, BLM 1994)**.

Page 72 - B-042.6, second response, first paragraph, the citation for (USDA, 1977) should be referenced as **(USDA, SCS and OAES, 1977)**.

Page 74 - B-042.6, Response, third paragraph, first sentence, insert **1985** after Bohn and Buckhouse reference.

Page 75 - B-042.6, Response, end of paragraph at top of page, citation should read **(Buckhouse, 2000)**. Likewise, in the second full paragraph, the reference to the personal communication should read **(Buckhouse, 2000)**.

Page 80 - B-042.22, Response, second sentence, reference to Larson and others (1998) should read **Larson et al. (1998)**.

Page 96 - Reference to Stohlgren et al. (1999) should read **Stohlgren et al. (1999a)**

Page 99 - F-006.4, Response, second paragraph, references to 'Managing Change' should be cited as **Chaney et al. 1993**.

Page 101 - H-032.1, Response, second paragraph, reference to 'Managing Change' should be cited as **Chaney et al. 1993**.

Page 102 - K-021.6, Response, second paragraph, citation CRITFC 1995 should read **CRITFC 1996**.

Page 131 - C-038.12, Response, first paragraph, references in this paragraph should be cited as follows: EA's (OR-054-3-063) should read **(USDI, BLM 1997b)** and (OR-053-3-062) should read **(USDI, BLM 1994)**. The Vegetation Treatment on BLM Lands in Thirteen Western States FEIS reference should be cited as **(USDI, BLM 1991c)** and The Northwest Area Noxious Weed Control Program FEIS should be cited as **(USDI, BLM 1985b)**.

Page 136 - B-042.12, Response, second paragraph, references to EA OR-053-3-062 and EA OR-054-3-063, should be cited as **USDI, BLM 1994** and **USDI, BLM 1997b**, respectively. The Vegetation Treatment on BLM Lands FEIS should be cited as **(USDI, BLM 1991c)** and Northwest Area Noxious Weed FEIS should be cited as **(USDI, BLM 1987)**. In the third paragraph, EA OR-053-3-062 should be cited as **(USDI, BLM 1991c)**, Vegetation Treatment in Thirteen Western States FEIS (1997) should be cited as **(USDI, BLM 1997b)**, and the Northwest Area Noxious Weed FEIS (1987) should be cited as **(USDI, BLM 1987)**.

Page 152 - 2502, should read, "**Limits** of Acceptable Change"

Page 176 - C-029.8, Response, **omit** the sentence, "Wilderness Study Areas (WSAs) are closed to all motorized and mechanized use."

Page 184 - A-007.5, Response, last paragraph, end of sentence, **insert “the”** between the words on and John Day River.

Page 209 - B-042.5, Response, first paragraph, fifth sentence, **insert “not”** between the words ‘will’ and ‘be’; second paragraph, **insert “of”** between efforts and private landowners.

Page 226 - 3003 Affected Environment, B-042.4, Response, third paragraph, **delete all but first sentence**, indented statement.

Page 227 - B-042.4, Response at top of page, first paragraph, sixth sentence, reference to the Willow Study (BLM 1996a) should correctly be cited as **(USDI, BLM 1996a)**. Response at bottom of page, first paragraph, reference to EA OR-054-3-063 should be cited as **(USDI, BLM 1997b)** and EA OR-053-3-062 should be cited as **(USDI, BLM 1994)**.

Page 230 - B-042.4, Response, beginning of reference listing, insert **1995** after Belnap, J. and K.T. Harper. At end of page, **capitalize A** in Arbelbide.

Page 231 - The paragraph beginning with “Upland Vegetation” is a comment and should be indented and italicized.

APPENDIX B

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APPENDIX C

John Day River Management Plan ESA Consultation Summary

1. AQUATIC SPECIES

Mid-Columbia Steelhead - The following consultations have been completed with NMFS

- a. Endangered Species Act - Section 7 Consultation Biological Opinion Ongoing and Proposed Bureau of Land Management Activities Affecting Middle Columbia River Steelhead, John Day River Basin. Dated: November 30, 1999.
- b. Section 7 Informal Consultation on Ongoing and Proposed Actions in the Central Oregon Resource Area, Prineville District, Bureau of Land Management, John Day River Basin. Dated: June 28, 2000.
- c. Endangered Species Act - Section 7 Consultation Biological Opinion and Magnuson-Stevens Act Essential Fish Habitat Consultation, Livestock Grazing on Lands Administered by the Bureau of Land Management in the John Day River Basin, Oregon 2000 & 2001. Dated: January 17, 2001.
- d. Endangered Species Act - Section 7 Informal Consultation and Magnuson-Stevens Act Essential Fish Habitat Consultation for the John Day River Proposed Management Plan, John Day River Basin, Prineville District Office, BLM. Dated: February 16, 2001.

Bull Trout - The following consultation has been completed with USFWS

- a. Informal Consultation on Proposed Grazing and Timber Harvest Activities in the Middle Fork and Upper John Day River Subbasins, Oregon. Dated: July 12, 1999.
- b. Formal Consultation for Ongoing Activities on the North Fork John Day River (1-7-00-F-422) [Grazing - Vale District]. Dated: June 12, 2000.
- c. Formal Consultation for Ongoing Activities on the North Fork John Day River (1-7-01-F-281) [Grazing - Prineville District]. Dated: February 26, 2001.
- d. John Day River Management Plan Section 7 Consultation [1-7-10-I-254(01)]. Dated: February 27, 2001.
- e. Consultation for Activities in the John Day River Basin (1-7-01-TA-311). Dated: February 27, 2001.

2. TERRESTRIAL SPECIES

- a. Wildlife Assessment for Listed, Proposed, and Special Status Species for the John Day River Management Plan and Environmental Impact Statement. Dated: August 29, 2000.

APPENDIX D

EPA Comments and Responses



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, WA 98101

November 15, 2000

Reply To
Attn Of: ECO-088

Mr. Dan Wood
Bureau of Land Management
Prineville District Office
P.O. Box 550
Prineville, Oregon 97754

Dear Mr. Wood:

The Environmental Protection Agency has reviewed the John Day River Proposed Management Plan, Two Rivers and John Day Resource Management Plan Amendments and Final Environmental Impact Statement (FEIS). We would like to offer comments as a follow-up to those we made on the Draft EIS and to our site visit with your staff.

We appreciate the work of your staff in revising the EIS. We understand that it was a great deal of work, and it has made a difference in terms of the document's clarity and content. The additions pertaining to water quality are particularly helpful in laying the groundwork for developing a Water Quality Restoration Plan and future TMDL. We want to thank you for your responsiveness and for your intentions to fully cooperate with ODEQ to improve water quality.

We are also encouraged to see modifications to proposed decisions that are responsive to some of the comments made by EPA and others. We have noted the changes regarding water quality and water quantity within the FEIS Volume 1, although we did not find any EPA comments/responses in Volume 3, Summary of Public Comments and Responses; please advise if we have overlooked them. Thus, for our comments on other subjects, we derived your responses from those prepared in reply to other parties in Volume 3, as well as from the review of Volume 1. We have a few remaining comments and, as can be expected, some of the changes have stimulated new questions. Briefly, we'd like to share the following:

Desired conditions. Criteria for assessing the health or condition of some resources are ambiguous. For example, there are no criteria listed for evaluating the condition/level of protection for paleontological resources or cultural resources. What specifically will trigger action to increase protection?

For microbiotic crusts, the FEIS (p. 137) states that "large portions of the landscape" should have biological soil crusts, and litter. How much or what percentage of the landscape should support these features, and what will define an unacceptable condition that stimulates further management action? What mitigation measures are feasible for damages to microbiotic crusts (FEIS, p. 230)?

Agriculture. We commend BLM for the proposed decision to terminate irrigation for ag lands owned and managed by BLM, and we support the proposed decision to phase out commodity production on BLM ag lands. Both of these actions should contribute in a positive way to water quantity and water quality in the John Day River.

Grazing. The proposed decisions with respect to grazing rely heavily on the expectation by BLM that cool season grazing (winter/spring) is essentially equivalent to rest from grazing in terms of fostering vegetative recovery in riparian areas. To test this, we are pleased that BLM intends to monitor areas rested from grazing with those that are grazed in winter/spring. Where and to what extent will exclusion of grazing be implemented to compare differences in results, and when, how, and with whom will the results of the comparison be shared? We would like to be informed of the outcomes.

It appears that the timeframe for making assessments of the efficacy of cool season grazing prescriptions, and consequently for making needed adjustments is quite long (mid-term determinations of 3 and 7 years for winter grazed pastures, and years 5-6 for spring-grazed pastures, FEIS p. 196). Thus, it appears that any decision to adopt complete rest from grazing, should it be necessary to enable acceptable recovery, would not likely occur until at least 14 and 12 years respectively. Given the condition of areas within the WSR corridor that have historically suffered from improper grazing practices, it seems a long time to wait to make needed adjustments.

On page 243 of the FEIS, BLM advocates active management for grazing as opposed to elimination of grazing based on their theory that land management partners and neighbors will be positively influenced by BLM's efforts and level of success. This rationale seems reasonable, and it offers a theory that may be worth testing. Would BLM be willing to monitor or report on change (human behavioral change as well as environmental change) within the corridor to validate this view?

The focus of recovery appears to be centered upon vegetative recovery, which does not fully account for other related impacts due to grazing, such as impacts to wildlife. Installation of additional fencing can result in wildlife collisions, entanglements, and entrapments (FEIS p. 233). Soil disturbance can impact amphibians, reptiles, and small mammals, which depend upon subterranean habitats. With the application of spring grazing, ground nesting birds and other species are affected at the time of year when they are most vulnerable to disturbance, trampling, and loss of vegetation that provides hiding cover. In order to protect the Outstanding Resource Values (ORVs) in the John Day corridor, it will be necessary to evaluate grazing impacts and recovery with respect to all of the ORVs and their supporting factors that can be affected by grazing cattle.

The FEIS also proposes a 2000 cfs grazing restriction. There is no explanation as to how the BLM arrived at this flow level as an effective grazing restriction, and there is no description of the flows at 2000 cfs that would characterize the advantages of using it. In order to evaluate the potential effectiveness of the 2000 cfs restriction, it is important to describe what the river flows tend to be on a calendar-year basis. To what extent do river flows fluctuate above and below this level, and at what times of the year? On page 245 of the FEIS, BLM states that the "John Day River is subject to dramatic fluctuations in flow from year to year, season to season, and even day to day." If fluctuations are so frequent and dramatic, how will grazing be effectively managed to respond to these fluctuations?

BLM also proposes to eliminate the 2000 cfs restrictions if winter grazing evaluations indicate that [grazing] standards are being met. If this restriction enables standards to be met, why eliminate it? Wouldn't evidence of recovery be a good reason to continue the restriction as long as it was, in fact, instrumental in achieving recovery?

In Segment 1, BLM proposes to establish new riparian grazing pastures (FEIS p. 171). Why institute new grazing in a Wild and Scenic River corridor that is in need of recovery and protection?

Finally, the FEIS indicates that funding is assumed to continue similar to current levels (FEIS, p. 194). We are concerned that the BLM may not have the resources necessary to adequately implement and monitor compliance with all prescriptions on the 122 allotments within the John Day WSR

corridor, as well as their work outside the corridor. What measures will be taken to ensure implementation and enforcement?

Tribal trust responsibility, ESA compliance. Because this has been a collaborative planning process involving several agencies and tribes, we ask that BLM include in the Record of Decision (ROD) the views of the Tribes and other planning partners with respect to the decisions being made. We urge BLM to fully factor the Tribal interests and treaty rights into the decision making process, and to document the roles of the planning partners as co-managers of the WSR corridor. We also ask that the results of consultation with the Services be included in the ROD with respect to ESA listed species that are directly or indirectly affected by this plan.

Again, we would like to thank the BLM for their work on the John Day Wild and Scenic River Management Plan, and encourage the agency to continue to work collaboratively with management partners to successfully protect and restore the outstandingly remarkable resource values in this important watershed. If you would like to discuss these comments, please contact Elaine Somers of my staff at 206/553-2966.

Sincerely,



Richard B. Parkin, Manager
Geographic Implementation Unit

APPENDIX D

Response to Comment Letter From United States Environmental Protection Agency (EPA), Region 10, dated Nov. 15, 2000.

The following are the key questions/issues raised in the November 15, 2000 comment letter from the EPA and our responses.

We have noted the changes regarding water quality and water quantity within the FEIS Volume 1, although we did not find any EPA comments/responses in Volume 3....

We regret the omission of the EPA comment letter dated March 15, 2000 from Volume 3 of the John Day River Proposed Management Plan, Two Rivers and John Day Resource Management Plan Amendments and Final Environmental Impact Statement (FEIS). As you noted in your letter we did modify the plan and analysis in response to your stated concerns. Your March 15, 2000 comment letter is attached to this response.

Criteria for assessing the health or condition of some resources are ambiguous. For example, there are no criteria listed for evaluating the condition/level of protection for paleontological resources or cultural resources. What specifically will trigger action to increase protection?

Typically, when cultural sites are recorded, part of the site record is an assessment of condition. As indicated in the preferred alternative, we will be doing irregular monitoring (based on time, dollars, and workloads), where and when sites are visited they are again assessed as to condition. When disturbances are reported to us from others, we will react in a prescribed manner, which includes visitation, evaluation and "recommended" actions. This could include a wide range of alternatives. Protection is **NOT** a cookie-cutter process. It is done on a case-by-case basis, considering a variety of factors - not the least of which is financing to perform the action. As for paleontology, we state in the preferred alternative that irregular monitoring will occur and that we will conduct cyclic prospecting at all potential fossiliferous exposures. Because we are tied to the NPS Research Strategy Plan (through our interagency agreement), we will rank the frequency of monitoring/cyclic prospecting occurring at any particular locality on accessibility and its ability to contribute significantly to our current understanding of its bio- and geo-stratigraphic placement. The "triggers" will be mostly reactive in nature, though some will be based on proactive actions, such as at the Sorefoot Creek Locality where we have been in a cooperative management mode with the NPS and OMSI for approximately 8 years. The answer to this concern appears to be in the details of our standard operational procedures.

For microbiotic crusts, the FEIS (p. 137) states that "large portions of the landscape" should have biological soil crusts, and litter. How much or what percentage of the landscape should support these features, and what will define an unacceptable condition that stimulates further management action? What mitigation measures are feasible for damages to microbiotic crusts (FEIS, p. 230)?

This is another issue that will be resolved through monitoring. There has been no research yet to establish optimal soil crust and litter cover. It depends on many factors including soil type, slope, aspect, natural disturbances (such as burrowing rodents and ants, or natural fire regimes) and climate.

Monitoring of non-grazed sites will establish an acceptable rate of change for grazed sites. The rate of change would be ruled unacceptable and stimulate further management action if the change in cover of biological soil crust is shown, through monitoring, to be less desirable than the rate of change on non-grazed sites.

Feasible mitigation measures for damages to microbiotic crusts include rest, changing season of use, changing grazing strategy, changing AUMs, or permanently eliminating grazing.

Grazing. The proposed decisions with respect to grazing rely heavily on the expectation by BLM that cool season grazing (winter/spring) is essentially equivalent to rest from grazing in terms of fostering vegetative recovery riparian areas.

This 'expectation' is a conclusion based on analysis of numerous published scientific experiments, extensive experience in western arid ecosystems and results of current monitoring studies in the John Day River basin (see analysis beginning on page 274 of FEIS).

....Where and to what extent will exclusion of grazing be implemented to compare differences in results, and when, how, and with whom will the results of the comparison be shared? We would like to be informed of the outcomes.

As described in our monitoring plan, sites will be selected to monitor and compare consequences of exclusion and managed grazing. Areas subject to exclusion or managed grazing are described in Appendix L. The reporting of monitoring results is detailed in the monitoring plan.

...It appears that the time frame for making assessments of the efficacy of cool season grazing prescriptions, and consequently for making needed adjustments is quite long term...

The efficacy of cool season grazing has been assessed in scientific publications, in extensive experience throughout western arid ecosystems and within the John Day basin (see analysis beginning page 274). The efficacy is not in question, it has been demonstrated that John Day River riparian areas respond dramatically to cool season grazing. The Wild and Scenic River Plan describes the grazing adjustments which have been made since the river was designated (see Table S-3, page xv). In 1986, less than 8% of the public land river bank miles were in exclusion or riparian oriented grazing management. With the implementation of this plan, over 98% of the public land river bank miles will have had the needed adjustments for rapid riparian recovery. However, given the political sensitivity of grazing within Wild and Scenic Rivers, it is necessary to verify, on a site specific basis, that the fastest rates of recovery possible (assumed by many to occur under no grazing) are in fact occurring.

The time required to determine the adequacy of any grazing alternative is a function of the variation in natural conditions (FEIS, Volume 3, page 79)-the more variation the longer it takes to determine whether the condition of vegetation is the result of management or year to year variation in weather. The John Day Basin is subject to dramatic variation in weather conditions (primarily amount of seasonal precipitation). The basin has a great potential for catastrophic floods. These two factors can have a greater impact on vegetation condition than the impacts of grazing. As a consequence, the time-line proposed is necessary to determine whether changes in vegetation determined by monitoring result from management or natural conditions. The BLM does not want to assume the risk of concluding either that positive changes are the result of management when in fact it is simply the result of favorable weather conditions or reject good management when negative changes are the effect of unfavorable weather conditions.

Evaluation of the proposed decision would actually occur sooner than would evaluation of Alternatives C and D. This is because implementation of the proposed decision would occur more rapidly than Alternatives C and D. Under the Proposed Decision, management changes would take approximately 3 years to implement. Monitoring and evaluation of recovery with and without grazing would take 10 -15 years. In contrast, the FEIS, Volume 1, page 195, estimates that implementation of Alternative D would take 12 years, but that the exact time would be dependent on landowner willingness to negotiate easements and land exchanges. Alternative C would take an estimated 8 years and would also be dependent on the willingness of landowners to negotiate easements and land exchanges.

...Would BLM be willing to monitor or report on change (human behavioral change as well as environmental change) within the corridor to validate this view?

We think this is an excellent suggestion. The monitoring plan in Appendix E describes our intent to collect information on watershed improvement projects near the Wild and Scenic River corridor. The information will be collected from any landowners who volunteer to participate.

...Installation of additional fencing can result in wildlife collisions, entanglements, and entrapments (FEIS p 233).

As you noted we have described these impacts. Our selection of Alternative B reduces the amount of fence that will be constructed compared to Alternatives C and D. Alternatives C and D rely solely on fences to protect vegetation and wildlife habitat.

... Soil disturbance can impact amphibians, reptiles, and small mammals, which depend upon subterranean habitats. With the application of spring grazing, ground nesting birds and other species are affected at the time of year when they are most vulnerable to disturbance, trampling, and loss of vegetation that provides hiding cover.

The spring grazing systems in Alternative B are designed so that they take place when the cattle are least likely to concentrate on a particular area (i.e. riparian habitats) and tend to distribute throughout a pasture better than other times of the year. The impacts to wildlife species that use subterranean habitats and ground nesting birds is thus minimized. Livestock grazing systems that provide for the physiological needs of riparian and upland vegetation generally are the most suitable to those wildlife species that utilize those habitats.

To what extent do river flows fluctuate above and below this level (2000cfs), and at what times of the year?

Table 2-J of the FEIS presents monthly values and exceedence probabilities for natural stream flow as well as recommended minimal and optimal instream flow for the Outstandingly Remarkable Values (ORVs) of Fish, Scenery, and Recreation.

If (flow) fluctuations are so frequent and dramatic, how will grazing be effectively managed to respond to these fluctuation?

The 2000 cfs seasonal limitation was developed to provide additional protection to riparian areas within the Wild and Scenic River corridor. Within the designated segments, grazing would be limited by both date and flow levels. Outside the designated segments, grazing would be limited by date (that generally corresponds to flow). As described on page 170, in the FEIS, Volume 1, the limitation would not be required on scattered tracts of public land (all of Segment 11, all of allotment 2656, the Rayburn Pasture of allotment 2584, and the Sherman Pasture of allotment 2598; a total of approximately 5 public land river bank miles).

The strategy relies on three factors, inundation of herbaceous riparian species, cool air drainage, and high relative palatability of upland vegetation to create a 'fenceless exclusion' of riparian areas. This flow level was selected as a trigger activated by unusual circumstances during the authorized grazing season when the efficacy of the three factors to provide a 'fenceless exclusion' might be compromised. This limitation also establishes a relatively standard grazing season during which river flows are sufficient to act as a barrier to livestock movement, reducing the incidence of livestock trespass from one allotment to the next.

The new limitation will appear as a condition of authorized grazing in permit/lease Wild and Scenic portions of the river. The BLM, in consultation with ranch operators, will need to decide when it is appropriate to turn out livestock without the threat of having to round them up a couple days later. This dilemma is expected to be strongest during the winter grazing period. The protection this limitation offers those areas grazed during spring is an unusual circumstances, like a drought, when the factors encouraging livestock to disperse to the uplands are less likely to be effective.

...BLM also proposes to eliminate the 2000 cfs restrictions if winter grazing evaluations indicate that [grazing] standards are being met. If this restriction enables standards to be met, why eliminate it?

Two of the three factors are still in operation with winter grazing, cool air drainage and higher palatability of upland vegetation. The inundation factor would be used at first, but the restriction would be lifted from the winter-grazed pastures if recovery rates are equal to non-grazed pastures because the limitation was designed as a trigger activated by unusual circumstances during which the efficacy of the three factors to operate as a 'fenceless exclusion' could be compromised. The circumstances are much less unusual in the winter than during spring. Once the grazed versus ungrazed monitoring is in place and if it demonstrates no detectable differences, additional restrictions would not be needed.

In segment 1, BLM proposes to establish new riparian grazing pastures (FEIS p.171). Why institute new grazing in a Wild and Scenic River corridor that is in need of recovery and protection?

In Segment 1, pasture division fences would create riparian pastures on allotments 2595 and 2597. Grazing on the new riparian pastures would be limited to winter and/or spring, with grazing occurring most often in March and April. (FEIS p.171) The land within the new pastures has been grazed previously. The division fences reconfigure the land management units in a manner that better protects and enhances ORVs than existing management.

We are concerned that the BLM may not have the resources necessary to adequately implement and monitor compliance with all prescriptions on the 122 allotments within the John Day WSR corridor... What measures will be taken to ensure implementation and enforcement?

Before responding to the substance of the comment it must be pointed out that of the 122 Allotments addressed in the FEIS only 64 are located within or partly within designated Wild and Scenic River. The other allotments have portions that fall within 1/4 mile of the non designated portions of the river.

This plan provided the foundation for requesting the increased funding for the management and monitoring of this special area in 2001. Cooperative efforts can be used for implementation of monitoring. The BLM will seek to develop Cooperative Management Agreements to meet monitoring needs.

The BLM shares your concern about future funding levels. That is one reason why Alternative B was selected. Implementation, monitoring and maintenance of the hundreds of miles of fence and hundreds of water developments demanded in Alternatives C and D would have taken funding levels that are considerably higher than current levels (see impacts on Human Uses and Values beginning on page 325). This excessive level of expense (and its associated risks of wildlife collision) would have to be justified by the unsupported assumption that no grazing provides detectably faster rates of recovery than proper grazing.

We urge the BLM to fully factor the Tribal interests and treaty rights into the decision making process, and to document the roles of the planning partners as co-managers of the WSR corridor.

These concerns are reflected in the Record of Decision and in the Administrative Record.

We also ask that the results of consultation with the Services be included in the ROD with respect to ESA listed species that are directly or indirectly affected by this plan.

The results of consultation are included in Appendix C of the ROD.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 10
1200 Sixth Avenue
Seattle, WA 98101

March 15, 2000

Reply To
Attn Of: ECO-088

Mr. Dan Wood
Bureau of Land Management
Prineville District Office
P.O. Box 550
Prineville, Oregon 97754

Dear Mr. Wood:

The Environmental Protection Agency has reviewed the Draft John Day River Management Plan and Environmental Impact Statement (Plan/EIS). We are submitting comments on the Plan/EIS in accordance with our responsibilities pursuant to the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act. Thank you for agreeing to accept our comments.

As stated in the Plan/EIS, the John Day River is regionally significant. It is one of the longest free flowing river systems in the continental U.S. and contains one of the few remaining wild fish runs in the Pacific Northwest, and the largest entirely wild run of steelhead and spring chinook in the mid and upper Columbia River Basin. Its riparian habitat is important to both fish and wildlife due to the scarcity of riparian habitats in the general area.

The John Day River Management Plan covers resources and programs along almost 200 river bank miles of the system, 147.5 miles of which are federally designated as Wild and Scenic River (WSR). Within the WSR designated areas, the BLM is responsible to protect and enhance the outstandingly remarkable resource values (ORVs), which include fish, wildlife, scenery, recreational opportunities, geology, paleontology, archeology, botany, and history.

The planning area, which includes portions of the mainstem, North Fork, Middle Fork, and South Fork of the John Day River, is divided into 11 different segments for management purposes. Due to the segmented management approach to the corridor, the Plan/EIS generally differs from most land use plans in that it presents a range of alternatives for several individual management issues, including grazing, agricultural lands, recreation, public access, commercial service, mining, and land acquisition, rather than packaging a suite of management actions

to achieve an overall effect or vision for the planning area.

Our comments focus on the adequacy of the Plan/EIS, and on environmental concerns. The BLM can improve the document by establishing clear, measureable goals and objectives for the river segments and the corridor, by improving the characterization of the affected environment with respect to these goals in each segment, and by including a range of alternatives for all management issues.

Our environmental concerns focus on the degraded environmental conditions in the wild and scenic corridor. Most of the management prescriptions in the plan are business as usual with minor improvements. We are concerned that they may not be sufficient to protect and enhance the outstandingly remarkable and significant resource values (ORVs), or comply with state water quality standards. It is essential that the plan include both implementation and effectiveness monitoring to measure progress in meeting the goals and objectives, and to enable the BLM and partners to make adjustments as necessary.

We have given the Plan/EIS a rating of EC-2, Environmental Concerns, Insufficient Information. An explanation of this rating is enclosed with this letter. If you have questions or would like to discuss these comments further, please contact Elaine Somers of my staff at (206) 553-2966. Thank you for the opportunity to comment.

Sincerely,



Richard B. Parkin, Manager
Geographic Implementation Unit

Enclosures

**Draft John Day River Management Plan and EIS
U.S. EPA
Detailed Comments**

Adequacy of the document

Organization of the Plan/EIS. It is a particularly challenging task to develop a management plan that integrates designated and undesignated lands, private and public lands, and the mandates, authorities, interests, and rights of private land owners, Tribes, federal, state, and local government entities. To address this task and to perhaps facilitate presentation of the information to the public and decision makers, we would like to offer a few suggestions:

According to information on page 3, it appears that the primary purpose for this plan is to protect and enhance the identified outstandingly remarkable and significant values and special attributes for those portions of the John Day River that were designated by federal and state legislation. It would be helpful to include in the introductory portion of the document a brief explanation of the scope and directives of the federal and state legislation that drive the plan. This should be described and illustrated in an integrated manner, in order to lay a framework for what is to follow, and enable the reader to understand their relevance to the plan and the decisions to be made.

For instance, at the start, the reader should be informed that the federal Wild and Scenic River designation identifies the outstandingly remarkable values (ORVs) and special attributes needing protection within the corridor and classifies segments as wild, scenic, or recreational. The Oregon State Scenic Waterway designations, which focus on scenic values, segment and classify the corridor according to established uses and levels of development at the time of designation. These classifications are then used as a basis for guiding development and management within each segment.

Using both text and tables, we suggest that the BLM organize all information and alternatives according to the river segments, listing each segment's associated

classifications under the Wild & Scenic Rivers Act and the Oregon State Scenic Waterway Act, the ORVs to be protected within each segment according to their Wild & Scenic River designation, and the condition of the affected environment within each segment. Then, again using text and tables, discuss and display the various alternatives, so that the reader can absorb them within the context of the overall character and management of each segment and the protection and enhancement/restoration needs. This approach could also help to establish and clarify goals, objectives, and measures of performance that require implementation and effectiveness monitoring and reporting.

Management goals and monitoring. Due to the segmented management approach to the corridor, the Plan/EIS differs from most land use plans in that it presents a range of alternatives for several individual management issues, including grazing, agricultural lands, recreation, public access, commercial service, mining, and land acquisition rather than packaging a suite of management actions to achieve an overall effect or vision for the planning area. Consequently, we would expect to see a vision and goals defined for individual segments according to their designations and the outstandingly remarkable and significant resource values assigned under federal and state laws. While some proposed management alternatives are specific to river segments, a unified approach or expected outcome for individual segments or for the corridor as a whole is not evident. Land management goals are expressed as very general desired conditions (Chapter 3) and the limited monitoring program (p. 170) does not adequately support an assessment of these conditions.

For example, to assess whether water quantity and quality meet state requirements, satisfy the Clean Water Act, and protect and enhance ORVs, especially anadromous salmonids, the Plan/EIS states that temperature will be monitored in the Plan area. This information is too limited to inform regarding the adequacy of the temperature monitoring program, and there is no commitment to address sedimentation, fecal coliform, low flows, and other parameters for which several segments within the Plan area are listed as water quality limited on ODEQ's 303(d) list.

Specific measurable goals and objectives for the protection of ORVs need to be articulated in the Plan. Otherwise, there will be no way to assess the Plan's effectiveness for adequately protecting and enhancing the outstandingly remarkable and significant resource values (ORVs). The monitoring plan should be coupled with the goals and objectives and routine reporting should be performed to enable necessary changes to be made where ORVs are not adequately protected or enhanced.

Management issues lacking alternatives. There are three management elements for which only one alternative is offered for consideration: weeds, special status plants, and fire. We suggest that these subjects receive further attention in the Final Plan/EIS as per the following:

Weeds. For management of weeds, the BLM indicates that they use an Integrated Weed Management Program (IWM), which mainly focuses on reduction and containment of existing infestations, and control of new infestations (p.136). While it is stated that the IWM includes preventative practices, it is not clear whether the IWM program adequately examines the causes of weed establishment and promotes management measures designed to address the causes. In a WSR area, a preventative approach would do the most to protect ORVs.

The Executive Order on Invasive Species directs federal agencies to (1) identify their actions that may affect the status of invasive species; (2) use their existing programs and authorities to prevent the introduction of invasive species; and (3) to refrain from carrying out actions that promote the introduction or spread of invasive species.

Accordingly, we recommend that the Plan/EIS include a discussion of the causes of weed establishment, and present management alternatives for addressing the causes. BLM indicates (p. 12) that weeds are spread by wind, water, horses, motor vehicles, recreation users, wildlife, and livestock. However, the chief causes of weed establishment are not acknowledged. Livestock grazing is without question a major cause of weed infestation and spread throughout the planning area because it removes native vegetation, destroys

the microbiotic crust, and bares the soil. This can and does occur in riparian and upland areas that, for the most part, are not frequented by motor vehicles or recreationists. Consequently, as noted in the Plan/EIS, the weed infestations that began in the valley bottoms and drainages (where cattle tend to spend most of their time) are now spreading to the hillslopes, and are a problem in all management segments of the corridor. Shouldn't the management of a wild and scenic area requiring the protection and restoration of outstandingly remarkable and significant resource values focus on eliminating or minimizing the causes of weed infestations, namely widespread ground disturbance? Complete rest from grazing would be needed to restore and maintain the microbiotic crusts that prevent weed establishment and provide nutrients to native flora.

Special status plants. The Plan/EIS indicates that BLM must manage the sensitive plant species and their habitats to conserve the species, and that grazing, recreation, and mining have the potential to impact special status plants (p.236). The Plan/EIS does not describe alternative measures for protecting and conserving the special status species (listed on p. 42). It is not possible to determine whether or not the ORV for botanical resources is being adequately protected and conserved due to the lack of information and alternatives in the Plan/EIS. We recommend that the Final Plan/EIS address this.

Fire. The various fire management plans and guidance (p.136, 190) do not seem to address the issue of fire risk management. Fire risk is affected by other land management decisions, such as logging, grazing, agriculture, and recreation in the planning area. Consequently, fire risk management alternatives should be discussed within the context of related actions and alternatives, and how the ORVs might best be protected with different management regimes.

For example, there is concern stated in the Plan/EIS that fires ignited, such as by recreationists, could ignite nearby hay fields. Could this result in extreme wildfire that kills wildlife and plants, sterilizes soil, and leads

to noxious weed infestation (p. 190)? If so, the Plan/EIS should address this management issue.

Affected environment. The nature and extent of resource damages resulting from land management and human uses in the planning area have been described in general terms for the planning area, but on a segment by segment basis, there is not enough information to make informed decisions with respect to land management alternatives. For example, the condition of rangelands and riparian areas within each segment of the planning area should be described. What percentage are in excellent, good, fair, or poor condition with respect to vegetation, soils, stream bank and stream channel integrity, provision of wildlife habitat, and so on? Has species richness changed from historic conditions? What shifts in wildlife populations have occurred due to historic and current human uses? Are these changes desirable or representative of the management classification for each respective river segment? What is the site potential for vegetation, including microbiotic crusts, and how does the present condition compare to that potential? What is the extent of noxious weed invasions? Considering the management classification for each segment, what should the user expect in terms of resource conditions and how does that compare to existing conditions?

Cumulative effects. There is apparently no analysis of cumulative effects in the Plan/EIS for past, present, and reasonably foreseeable management actions in the planning area. Again, it is not possible to make informed management decisions without an understanding of cumulative effects of human activities in the river corridor, particularly for activities such as mining, logging, recreation, motorized boating, and grazing.

Environmental Concerns

Ability to affect ecosystem health: water quality, water quantity, fish populations. On page 3 of the Plan/EIS the BLM states that this plan affects about 2% of land in the John Day River Basin and 10% of river and stream miles. The BLM also has a substantial water right to 5-7.5% of flows in the critical low flow months of August and

September (p. 193). Where these facts are stated in the Plan/EIS, they are often accompanied by a disclaimer stating that there is, consequently, an "extremely limited ability to affect measurable change in John Day resource conditions", such as water quality and quantity, vegetative composition, and fish populations.

We do not agree that BLM's influence on resource conditions is extremely limited. We encourage BLM and partners to think in terms of the outstanding opportunity presented by the federal and state wild and scenic river designations and the disproportionately significant contribution the area covered by this plan can make in terms of protecting and improving resource values. We urge you to adopt management prescriptions that make the most of this opportunity and set a positive and proactive example for other land owners and managers to follow.

The Wild and Scenic River (WSR) segments of the John Day River and South Fork John Day River are on the Clean Water Act 303(d) list for summer temperature exceedances. The segment descriptions for the full planning area list additional water quality problems and/or listings for severe stream bank erosion and sedimentation, turbidity, bacteria, low dissolved oxygen, flow modification, altered basin hydrology, as well as high temperatures.

Bull trout and mid-Columbia steelhead in the John Day River system are listed as threatened, and Westslope cutthroat trout have been petitioned for listing as threatened under the Endangered Species Act (ESA). Chinook and steelhead populations are currently not meeting production goals set by Oregon Department of Fish and Wildlife (ODFW) and Columbia River Intertribal Fish Commission (CRITFC).

The Clean Water Act directs ODEQ to develop TMDLs for water quality limited streams. Until the TMDL is developed for the John Day River, it must be demonstrated that there will be no net degradation of water quality for the water bodies and their parameters on the 303(d) list. On May 19, 1999, the Forest Service and BLM released the Forest Service and Bureau of Land Management Protocol for Addressing Clean

Water Act Section 303(d) Listed Waters. The Protocol calls on these two agencies to proactively develop Water Quality Restoration Plans (WQRPs). These plans may be required even if a TMDL has already been established. This is because TMDLs allocate loads and do not necessarily include specific actions collectively that will achieve the load allocations. Common elements of a WQRP include:

1. Condition assessment and problem description;
2. Goals and objectives;
3. Management actions to achieve objectives;
4. Implementation schedule;
5. Monitoring/evaluation plan; and
6. Public participation plan.

The WQRP would be an excellent way to address water quality issues in the John Day River planning area, and the Plan/EIS would be an excellent vehicle for public disclosure and comment. Nevertheless, the Plan/EIS should be more prescriptive in how BLM intends to address water quality limited streams. While the Plan/EIS indicates that Oregon Department of Environmental Quality (ODEQ) intends to develop a TMDL for the John Day River, it is BLM's land management plan that will specify the restoration requirements, and a basic premise of the 303(d) protocol was for BLM to proactively determine appropriate water quality restoration measures for its own lands.

Stating that implementing grazing practices that make progress towards achieving properly functioning condition is not prescriptive and does not help us to understand how BLM and partners will strive to meet or exceed water quality standards. In addition, a "properly functioning condition" is not necessarily one that is meeting water quality standards.

The Plan/EIS does not indicate that a WQRP has been developed, nor does it provide any assurance that water quality will not continue to be degraded by allowing continued grazing, logging, agriculture, and other activities that contribute to water quality degradation. The Plan/EIS does state a desired condition for riparian and aquatic habitat restoration, and indicates that this

restoration will include direct actions such as bioengineering, introduction of large woody material (LWD) or other structures, and grazing management (p. 120). The Plan/EIS also states that proposed restoration would be subject to public review and appropriate consultation with federal state, and tribal entities.

We agree with the statement of desired conditions for riparian areas and aquatic habitat, but are concerned with the general approach, techniques, and lack of information about how BLM will achieve the desired condition. What specific bioengineering techniques is BLM considering? When considering the application of large woody debris or other instream structures for engineering fish habitat restoration, it is important to establish an explicit set of criteria to guide the decision of whether or not to employ instream restoration techniques. Treat the cause and not just the symptoms by focusing not just on the in-channel setting, but also on the larger watershed, its processes, and how human alterations have affected those processes. If the decision is made to install in-stream structures, the project proponent should commit to evaluating the ability of the instream structures to achieve their desired effect and to report the results to the public.

As noted in *Ecosystem Approach to Salmonid Conservation* (1996), Beschta et al. (1991) concluded that instream structures applied in eastern Oregon had negative effects on aquatic habitats, were inappropriate for the ecological setting, or did not address the full suite of riparian functions that contribute to habitat quality. Their conclusion was that in most instances instream structures are unwarranted and should be eliminated as a restoration method. Instead, re-establishment of riparian vegetation through corridor fencing or rest from grazing was found to be far more effective in restoring habitats.

In the same document, it is noted that Reeves et al. (1991) concluded that "(1) habitat rehabilitation should not be viewed as a substitute for habitat protection; (2) prevention of initial habitat degradation is more economical of total resources than repairing that degradation; and (3) some damage to streams is simply irreversible."

Consequently, to protect and enhance ORVs for fish (and other ORVs) in the John Day WSR planning area, we advise (1) that BLM not establish any new riparian pastures for grazing, such as those in Segment 1 on allotments 2595 and 2597, and in Segment 2 on allotment 2591 (p. 139); and (2) that the BLM and partners should consider more aggressive and dedicated long term measures to restore riparian vegetation, particularly woody species, as well as upland vegetation, which affects hydrologic and sediment transport processes. This may require elimination or at least extended rest from grazing.

We ask that the Final Plan/EIS be more specific regarding the content, timing, and process for developing the proposed riparian and aquatic habitat restoration, and describe how this will meet the requirements of the Clean Water Act, the Endangered Species Act, and other applicable requirements. The proposed restoration plan should include all of the elements of a WQRP, and the results of formal and/or informal consultations for special status species should, where possible, also be included.

Preferred alternatives. In general we feel that several of the preferred alternatives should go further to achieve desired conditions and protect and enhance ORVs:

Grazing. Grazing is the most contentious issue in the Basin, and its management has a disproportionately large influence on the protection and restoration of ORVs, particularly water quality, water quantity, and anadromous fish. The Ecosystem Assessment for the Interior Columbia Basin (Vol. 2, p.768) states that livestock grazing has been disproportionately concentrated within riparian areas compared with uplands, resulting in excessive herbage removal and physical damage by trampling. Some effects of these damages include reduced dissipation of stream energy, increased extent of bare soil and accelerated erosion, stream channel degradation, which has resulted in reduced flood plain recharge, lowered water tables, and reduced areal extent of riparian plant communities. The resulting water quality impacts, which are documented in the planning area for the Clean Water Act 303(d) listed streams, include increased temperature, turbidity, sediment, bacteria, and

nutrients, low dissolved oxygen and flows. NMFS has designated riparian zones as critical habitat for ESA-listed anadromous fish because they form the basis of healthy watersheds and affect essential habitat features such as spawning sites, food resources, water quality and quantity, and riparian vegetation (Federal Register: 2/16/00, Vol.65, No. 32, p. 7764-7787).

The Plan/EIS indicates that grazing on BLM lands within the corridor "comprise approximately 1% of the total forage consumed by livestock. This represents a very marginal economic contribution to the region." (p. 31-32) The EIS indicates that in response to a "Salmon Summit" the BLM has revised grazing management on a portion of the allotments within the WSR areas, and that riparian vegetation has shown some recovery from heavily degraded conditions over the past few years. Several allotments are still in need of revised management. This Plan/EIS "reviews the previous decisions, and makes the balance of the needed decisions." (p. 12) Yet, the preferred alternatives for grazing adopt little or no change from present management.

As stated above, we feel this is an exceptional opportunity to protect ORVs. The preferred alternative is to continue present management with minor adjustments, rather than to explore removal of cattle from the planning area. Continued grazing during cool seasons will allow limited recovery of riparian vegetation, but does not provide the land the rest it needs to recover physical and biological integrity, such as for stream banks, channel morphology, hydrology, soils, and animal and plant communities, including microbiotic crusts. This is particularly true where inadequate enforcement of permittees' grazing leases results in failed protection of ORVs.

The presence of cattle and the evidence of cattle, the visual impacts of fencing and grazed vegetation, and impacts to wildlife also affect the users' experience of the corridor. In light of the existing and ongoing damage to the resource, the WSR designations, and the ORVs to be protected and enhanced, we urge BLM to consider complete rest for lands grazed within the corridor, at least until

significant recovery has been documented for all physical and biological parameters.

The grazing management that is proposed (preferred alternative B) allows for some improvement of riparian vegetation as compared to heavily degraded conditions, but may not be adequate to enable large woody species to regenerate to the point that they can eventually provide natural aquatic ecosystem structure and function. If this course of action is pursued, it will be essential that BLM establish specific standards to be achieved, a well-defined and funded monitoring program, and timelines for reporting progress and for achieving the desired conditions.

Agriculture. For the purposes of this plan, BLM has adopted the existing Diack flows set by Oregon Water Resources Commission as the minimum flows needed to protect and enhance ORVs of the WSR segments (p. 51). The BLM also manages 700 acres of irrigated agricultural land along the John Day River system, and has a water right as discussed above for irrigating those lands. Although BLM uses only about 50% of their water right for irrigation, the water is generally needed most during the low flow months of August and September.

We recommend that BLM consider the benefits in terms of protecting and enhancing ORVs that the Agency could contribute if the agriculture fields were converted to native vegetation and wildlife habitat. Water quantity, water quality, fish and wildlife, recreation, and scenic values could be enhanced, while water withdrawals would be lessened, and runoff containing sediment and chemicals from the application of pesticides and fertilizers would be prevented.

Recreation. As noted in the Plan/EIS, the BLM and other federal agencies have a responsibility to uphold tribal treaties by ensuring that both the natural and cultural resources important to the tribes are given special consideration and protection. The BLM should consider whether the alternatives selected in the Plan/EIS protect tribal treaty resources as well as protect and enhance ORVs.

With respect to cultural resources, the Plan/EIS indicates (p. 46) that "About half of the known cultural resource sites are in fair to poor condition. The greatest threat to these fragile sites is the continued illegal digging and surface collection of artifacts. Livestock trampling, recreational activities, farming, and erosion also have had an impact...Cultural resources, both historic and prehistoric, are identified as ORVs on the John Day mainstem WSR and potentially significant on the South Fork John Day WSR."

In light of this, we urge the BLM to consider more carefully the levels and type of recreation use allowed in the WSR corridor, particularly for motorized boating. While any visitor can create problems, the allowance for motorized boating may exacerbate the problems of trespass, vandalism, and looting of cultural as well as paleontological sites, which are of international significance. There are few locations in Oregon where motorized boating is prohibited, so there is no lack of locations for motorized boating recreation. In keeping with the tribal trust responsibilities and the protection and enhancement of ORVs in the planning area, it makes sense to consider eliminating this activity, at least for a trial period, to determine whether or not damage to archeological sites is diminished or eliminated as a result.

**U.S. Environmental Protection Agency Rating System for
Draft Environmental Impact Statements
Definitions and Follow-Up Action***

Environmental Impact of the Action

LO - - Lack of Objections

The Environmental Protection Agency (EPA) review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC - - Environmental Concerns

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce these impacts.

EO - - Environmental Objections

The EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no-action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU - - Environmentally Unsatisfactory

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

Adequacy of the Impact Statement

Category 1 - - Adequate

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis of data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2 - - Insufficient Information

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses or discussion should be included in the final EIS.

Category 3 - - Inadequate

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the National Environmental Policy Act and or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

* From EPA Manual 1640 Policy and Procedures for the Review of Federal Actions Impacting the Environment. February, 1987.

APPENDIX E

Monitoring Plan for John Day Wild and Scenic River

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Introduction

Purpose and Need

Regulations require the BLM to monitor land use plan decisions (43 CFR 1610.4-9) and to adopt a monitoring program for any mitigation incorporated into decisions based on environmental impact statements (40 CFR 1505.2[c]). In addition, a core tenet of the Wild and Scenic Rivers Act is protection and enhancement of river values. In order to verify the trend of river resource conditions and to guide future management decisions, it is necessary to systematically sample public land, file the data in an organized fashion, and provide for periodic evaluation of the information obtained. This plan will aid in the standardization, scheduling, budgeting, and reporting of such a process.

Monitoring Area

The area encompassed by this monitoring plan includes all public land administered by the BLM in the Mainstem and South Fork John Day Wild and Scenic River areas (see Map 1).

Objectives

The objectives of this monitoring plan are to:

- Provide for systematic study and evaluation of each grazing allotment to determine if the resource objectives are being met.
- Outline minimum standards of information needed to satisfy the Clean Water Act and Endangered Species Act.
- Provide for systematic study and evaluation of rate of change to ecological and social conditions occurring as a result of human factors.
- Provide a way to anticipate and plan for future funding needs.

Interdisciplinary Process

One important key to a successful monitoring and evaluation program is committed involvement of all affected resource programs. This includes involvement in determining resource objectives; conducting the studies needed to measure change toward or away from these objectives; and assisting in the evaluation process to review results of the studies, establish causes for trends, and chart a course of action for future management.

Monitoring Program

Priorities and Intensities of Monitoring

Public lands are located throughout the watershed and are interspersed with varying amounts of private land. Deciding where to monitor public land will depend in part on each of the following factors: proportion of public to private land, location of sensitive resources, and other logistical factors such as access.

Data Collection Methods

This monitoring plan provides the framework for tracking the course of action described in the landuse plan. The methods used need to be able to document whether actions were accomplished, had an effect, and if so, whether that effect met the objectives of moving the environment towards the desired future conditions.

Wild and Scenic River management objectives are based on protecting and enhancing fish and wildlife, scenery, recreation opportunities, and the quantity and quality of water. These objectives are generally associated with vegetation, such as wildlife habitat, river bank stability, shade, and watershed cover. Vegetation responds rapidly to changes in management and has been widely accepted as an indicator for values that do not change rapidly, such as water quality, and for values that are difficult or expensive to precisely quantify, such as wildlife populations. For these reasons, vegetation will be monitored intensively.

Three types of monitoring will be conducted: implementation, effectiveness, and validation. These are described below.

Implementation Monitoring

When determining whether a course of action is having the desired effects, the first step to take is implementation monitoring. This type of monitoring answers questions such as “Were the actions detailed in the Record of Decision accomplished?” The job of monitoring implementation primarily relies on documentation, proper filing of that documentation in case files or project files, and disclosure of accomplished actions in the form of achievement reports.

The National Marine Fisheries Service (NMFS) issued two Biological Opinions for PACFISH for listed salmon and steelhead in the Upper Columbia River (UCR) and Snake River (SR) basins, dated March 1995 and June 1998. The Terms and Conditions include development of implementation and effectiveness monitoring protocols, and an oversight team known as the Interagency Implementation Team (IIT). Several protocols are now in place and being implemented in the UCR and SR basins, and others are in development. Recent listings of UCR spring chinook and Mid-Columbia River (MCR) steelhead have resulted in a PACFISH consultation effort for those species. The MCR steelhead area includes parts of the Prineville BLM District. When consultation is concluded, the Terms and Conditions will result in IIT monitoring modules being implemented in the MCR steelhead area.

The Prineville BLM, Central Oregon Resource Area, has voluntarily applied the IIT monitoring modules to date. If there are any changes in the IIT monitoring framework when consultation is concluded for MCR steelhead, those changes will be applied to BLM-administered lands within the John Day Basin.

Effectiveness Monitoring

The second phase of monitoring is determining whether the actions documented in the implementation phase of monitoring are having any effect. This phase answers questions such as “By how much did the conversion of cultivated lands to prairie increase the proportion of native species on those lands?” The job of monitoring effectiveness is similar to implementation monitoring, except that field observations must be recorded in a way that meets approved protocol and the data must be analyzed.

Validation Monitoring

The validation phase of monitoring is the third phase of monitoring and seeks to resolve whether the course of action is having the desired effects. Validation answers questions such as “Has the conversion of agricultural fields to native prairie enhanced river values?” In the adaptive management scheme, the validation phase also forms the initial phase of the next round of decision making.

Data Storage and Filing

Access software will be used as a standard recording system. UTM (Universal Transverse Mercator) will be the standard for recording study location data. Data will be stored by specialists in a centrally accessible database.

Analysis Techniques

Data analysis will be done by techniques prescribed in study methodologies.

Validation of Decisions

The BLM specialists and any participating interest groups, planning partners, or regulatory agencies will follow the basic guidance identified in the references listed with the study types. There will be a strong emphasis on an interdisciplinary process. Data summaries will be presented in an allotment evaluation or similar document to provide the authorized officer needed information to determine attainment of standards and allotment objectives, progress toward such attainment, or non-attainment. In the event of non-attainment, a determination of cause will be made and appropriate action taken as soon as practicable. In the case of non-attainment due to non-compliance on the part of the grazing operator (for example, trespass, failure to maintain facilities, or other violations of the grazing regulations or permit conditions/stipulations, such as the allotment management plan), appropriate action will be taken in accordance with 43 CFR 4150 and 4160.

Program Revision

This plan will be reviewed, as needed, by staff of the Oregon/Washington BLM State Office and the Prineville Central Oregon Resource Area to ensure that the methodologies are still the most appropriate, schedules are realistic and have been met, and the plan's objectives are being met. Schedules may require updating, particularly where initial monitoring efforts indicate more or less time is needed at each study site and as shifts may occur in available funding and workforce. Plan revision will also be necessary as Bureau policy and regulations are revised. Approval of revisions by the Oregon/Washington BLM State Direction should be documented in monitoring reports.

Reporting

Report Contents

The overall purpose of annual monitoring reports will be to compile and document what was scheduled for completion the previous year, what was accomplished the previous year, what is scheduled for the forthcoming year, and the expected costs of completing what is scheduled. The report will provide accomplishments in implementation monitoring, answering questions such as:

- Did we document our accomplished actions?
- Did we appropriately file the documentation?
- Were our accomplishments disclosed or reported?

Effectiveness monitoring reporting will include answers to questions such as:

- How many studies were scheduled?
- How many studies were installed or remeasured?

Validation will be reported in terms of how many evaluations were scheduled and completed. The report may also include monitoring program revisions that have been approved by the Oregon/Washington BLM State Director.

External Coordination

Interest groups, planning partners, and regulatory agencies have been and will continue to be invited to participate in the monitoring process. Participation has included, and will continue to include, field data collection, evaluation and review.

Study Types

Monitoring of Grazing Management Actions

Study Type: Compliance with authorized use.

Objective: To detect unauthorized livestock use.

History: This will be an expansion of ongoing monitoring.

Site Selection: Active grazing allotments within the Wild and Scenic River corridor.

Frequency: Whenever trained personnel are within the Wild and Scenic River.

Methods: Will follow 43 CFR 4100 Regulations and EPA (1997) chapter 4.3.

Deviations from Standard Methodology: BLM, in cooperation with planning partners, will implement increased surveillance of grazing allotments within the Wild and Scenic River corridor. Training in identifying, documenting, and reporting of unauthorized livestock use will be provided to non-BLM personnel.

Study Type: Incidence of use on woody riparian species.

Objective: To determine if authorized livestock grazing is meeting the physiological needs of woody riparian component. To determine if livestock grazing will allow recruitment of shrubs into successive size classes.

History: New study.

Site Selection: The sites will be the same plots as the woody species regeneration plots used in the riparian recovery monitoring (see Winward 2000).

Frequency: Sites will be monitored every year following the grazing season unless the plots are inundated. Where wildlife use of woody riparian species is a concern, measurements may be taken prior to the grazing season in order to establish the percentage of use attributable to livestock.

Methods: Incidence of use is documented by counting the number of stems less than 4.5 feet off the ground (that is, accessible to livestock) and counting the number of stems that have been bit. No more than 50 plants within the plot will be sampled.

Deviations from Standard Methodology: There is no standard methodology. The methodology has been adapted from conversations with Steve Leonard, BLM National Riparian Service Team.

Study Type: Stubble height

Objective: To determine if authorized livestock use is allowing bank stabilizing riparian vegetation to be maintained and to provide protection during high flows.

History: New study.

Site Selection: Study sites will be selected along the greenline transects measured in the riparian recovery monitoring (see Winward 2000).

Frequency: Sites will be monitored at the end of the growing season or at the end of the grazing season, whichever is later. Winter-grazed sites will be monitored during the grazing season, prior to high flows. Sites may not be monitored, if it is determined that they are inaccessible to livestock during the grazing season.

Methods: The stubble height method presented in Interagency Technical Reference (Interagency Technical Team 1996b) will be used.

Deviations from Standard Methodology: On the Mainstem John Day only one side of the river will be measured.

Study Type: Riparian recovery.

Objectives: To determine if authorized livestock grazing is maintaining and/or allowing recovery of bank stabilizing vegetation within the capability of the site. To determine if authorized livestock grazing is maintaining and/or allowing recovery of structural diversity within the capability of the site. To determine if changes in riparian sites are similar between grazed and non-grazed riparian areas within the Wild and Scenic River.

History: This is a new study.

Site selection: By ecological site as defined in FEIS, Volume 2, Appendix M.

Frequency: Winter-grazed sites will be sampled in 2001, 2004, 2008, and 2011. Spring-grazed sites will be sampled in 2002, 2006-2007, and 2012-2016. Non-grazed sites will be sampled in 2001-2002, 2004, 2006-2008, and 2011-2016.

Methods: Winward (2000).

Deviations from Standard Methodology: The Winward monitoring design that requires an entire riparian complex to be monitored is not possible due to the width and volume of the river, geomorphology (some sections of river are bordered by high cliffs or cobbled areas without an accessible greenline), and the checkerboard land ownership patterns. In general, Winward's methods use a set of greenline transects that include one transect, at least 363 feet long, on each side of the river. In monitoring the mainstem John Day River, as a general rule, only one side of the river will be sampled. Greenline transect lengths will vary according to the size of ecological sites.

Data analysis requires determining vegetation stability classes for each riparian community type. Winward (2000, pages 35-39) lists these values for communities within forest lands of the intermountain west. Some community types within the John Day Wild and Scenic River corridor are represented there, others are not. In the course of implementing this monitoring, it will be necessary to use best available scientific information and the professional experience of the resource managers to determine vegetation stability classes for unlisted community types.

Study Type: Upland vascular vegetation and ground cover

Objectives: To determine if authorized livestock grazing is maintaining and/or allowing recovery of upland soils within the capability of the site. To determine if authorized livestock grazing is maintaining and/or allowing recovery of diverse plant communities within the capability of the site. To determine if changes in upland sites are similar between grazed and non-grazed areas within the Wild and Scenic River corridor.

History: This will be an expansion of existing monitoring.

Site Selection: By ecological site as defined in the existing inventories.

Frequency: Winter grazed sites will be sampled in 2001, 2004, 2008, and 2011. Spring grazed sites will be sampled in 2002, 2006-2007, and 2012-2016. Non-grazed sites will be sampled in 2001-2002, 2004, 2006-2008, and 2011-2016.

Methods: The Daubenmire methodology described in Interagency Technical Team (1996a) will be used for new sites, existing sites using other techniques will be incorporated where possible.

Deviations from Standard Methodology: The Daubenmire technique as used on the Prineville District also incorporates a point sampling technique for measuring soil cover using the legs on the corners of the plot frame.

Study Type: Biological soil crust recovery

Objective: To determine if authorized grazing is allowing the maintenance and/or recovery of biological soil crusts within the capability of the site. To determine if changes in the amount of cover of biological soil crusts is similar in grazed and non-grazed upland areas within the Wild and Scenic River corridor.

History: This is a new study.

Site Selection: By ecological site as defined in existing inventories.

Frequency: 2001-2002, 2011-2012.

Methods: Methods described by Belnap et al. (2001).

Deviations from Standard Methodology: All methods used will be within the guidelines provided by Belnap et al. (2001). The Daubenmire methodology will be adapted as described by Belnap et al. (2001) for the measurement of biological soil crusts. Total cover will be recorded. Species will also be classified by morphological class (such as cyanobacteria, crustose, fruticose, squamulose, and foliose lichen and moss) and cover and frequency will be recorded for each class.

Monitoring Recreation Management Actions

Study Type: Limits of Acceptable Change (physical component)

Objective: To determine how recreation use relates to resource conditions.

History: This study has been ongoing since 1999. Usable data from earlier studies will be correlated with current data and incorporated into the data base for comparison purposes.

Site Selection: This study will initially focus on Segments 2 and 3, but may be expanded to other segments as needed.

Frequency: Annually through 2002, then reduce frequency to every 1-5 years, based on the indicator being monitored.

Methods: Adapted from Wilderness Campsite Monitoring Methods: A Sourcebook, David N. Cole, USDA FS, Intermountain Research Station, General Technical Report INT-259, April 1989. See Appendix H (John Day LAC Study).

Deviations from Standard Methodology: After indicators have been selected for the LAC study, monitoring may be refined to meet the needs of the study.

Study Type: Limits of Acceptable Change (social component)

Objective: To determine social perceptions and preferences of river users.

History: This will be a new study.

Site Selection: This study will initially focus on Segments 2 and 3, but may be expanded to other segments as needed.

Frequency: Original study will be conducted in 2001/2002. Follow-up studies may be conducted at a later date.

Methods: A social survey, approved by Office of Management and Budget, will be distributed to river users to determine their perception of current social conditions and preferences within the river corridor.

Deviations from Standard Methodology: Follow-up studies may vary slightly in content (such as adding a new question), but will remain primarily constant for comparison purposes.

Study Type: Boating use data collection

Objective: To determine how the type and amount of boating use changes over time without management intervention, and to determine how the type and amount of boating use is affected by various management actions identified in the ROD.

History: This study was first piloted in 1997, with 1998 being the first full year of data collection.

Site Selection: This study will focus on Segments 1, 2, 3, and 4 on the mainstem, and Segment 7 on the North Fork.

Frequency: Every year.

Methods: Data is collected from users through self-registration at boater registration stations located at launch points along the river. Additional boater registration stations are installed where the BLM learns of additional popular launch points. River rangers check compliance and register unregistered parties they encounter. Completed boater registration forms are collected and entered into a data base stored in Prineville.
Deviation from standard methodology: None.

Monitoring Hydrology

Study Type: Watershed improvement projects

Objective: To determine the extent of participation and cooperation by private land owners in the improvement of watershed conditions within the basin.

History: This will be a new study.

Site Selection Criteria: This study will focus on cooperating landowners near the Wild and Scenic River Corridor.

Frequency: The data will be compiled every five years.

Methods: Cooperators who wish to contribute to the study will be asked to provide information on their watershed improvement projects.

Deviations from Standard Methodology: There is no standard methodology.

Study Type: Water temperature.

Objective: To determine if there are changes in the water temperature characteristics of the Wild and Scenic River.

History: The BLM will continue to cooperate with the State of Oregon in providing monitoring information on the affected parameter of water temperature.

Site Selection Criteria: The new monitoring sites will be delineated based on accessibility, ownership, topography, aspect, valley form, and the suspected sensitivity to changes in management.

Frequency: The data will be collected annually for years 1-15.

Methods: State Standards for accuracy. The monitoring will be accomplished with continuous recording temperature devices.

Deviations from Standard Methodology: None.

Study Type: Surveying monumented cross sections

Objective: To determine if anticipated changes in riparian vegetation on Segment 10 result in decreases in the width-to-depth ratio.

History: Permanent cross section sites are already established in at least one allotment. The other permanent cross section sites will be new studies.

Site Selection Criteria: Sites will be selected based on the criteria delineated in USDA Forest Service (1994), Chapters Two and Six

Frequency: The data will be collected every five or six years.

Methods: USDA Forest Service (1994), Chapter Six

Deviations from Standard Methodology: Photo points may not be established with all sites when riparian photos sites already exist. Data storage may vary from the methodology discussed in later chapters of USDA Forest Service (1994).

Monitoring Agricultural Actions

Study Type: Implementation of instream conversion

Objective: To determine the amount of water legally applied to BLM agricultural fields before the water is converted to instream beneficial use.

History: Oregon law requires the BLM to monitor and report its water use to the OWRD annually.

Site Selection: All points of diversions for the BLM agricultural fields.

Frequency: Annually until water rights are converted from irrigation to instream beneficial use.

Methods: OAR 690-84-015 and OAR 690-010 (3)

Deviations from Standard Methodology: None

Study Type: Seeding success (agriculture lands)

Objective: To determine the success of seeded species (density and diversity) in efforts to convert agricultural fields to native prairie.

History: This will be a new study.

Site Selection: All agricultural fields that receive treatment.

Frequency: Monitoring will occur 1, 2, 5 and 10 years following treatment.

Methods: Step point method (Interagency Technical Team 1996a).

Deviations from Standard Methodology: This methodology may incorporate the use of a hoop instead of a point. Number of samples should be sufficient to record 100 hits on seeded species.

Monitoring Fish and Aquatic Habitat

Study Type: Anadromous fish spawning

Objective: To determine population trends in basin tributaries.

History: This is an ongoing study in cooperation with ODFW.

Site Selection: Established reference reaches of known spawning tributaries.

Frequency: Every year.

Methods: ODFW methodology.

Deviations from Standard Methodology: None

Study Type: Spawning habitat inventory

Objectives: To identify suitable spawning habitat

History: New study.

Site Selection: Stream reaches within grazing allotments rated as "may affect, likely to adversely affect" by National Marine Fisheries Service.

Frequency: As required by NMFS.

Methods: As described by NMFS.

Deviations from Standard Methodology: None.

Other Monitoring

Study Type: Extent and density of noxious weed infestations.

Objective: To determine the extent and density of noxious weeds in the Wild and Scenic River corridor.

History: Several photo points and weed infestation photos have been established and taken in the past few years. These will be continued, with additional ones established in the future.

Site Selection: Selected from among treated areas.

Frequency: Every three years.

Methods: Noxious weed populations will be monitored as prescribed under the Integrated Weed Management Program (USDI-BLM 1994). In addition, digital images will be taken using a digital camera equipped with a GPS unit. Images will be downloaded into the District's GIS system.

Deviations from Standard Methodology: None

Study Type: Willow study

Objective: To quantify cumulative impacts of watershed restoration activities in the basin on willow communities of the lower John Day River.

History: This is an ongoing study.

Site Selection: Segments 2 and 3.

Frequency: 5-10 years.

Methods: As described in USDI-BLM 1996.

Deviations from Standard Methodology: None.

Costs of Monitoring

This monitoring plan will provide the foundation to request increased funding for monitoring actions taken to implement the John Day WSR Management Plan. Cooperative efforts will be used to implement monitoring. The BLM will seek to develop Cooperative Management Agreements to meet monitoring needs.

Estimated costs are identified below.

Riparian recovery

2 technicians
\$2,500 per mile

Upland plants, soil cover and soil crusts

2 technicians
\$600 per site

Recreation - LAC (physical)

\$33,000/year for two years (2001, 2002)
plus variable costs in following years
(depending on indicator used)

Recreation - LAC (social)

\$15,000/year for two years (2001, 2002)

Recreation - Boating use

\$5,000 each year

Water temperature

1 technician
\$500 per site labor
\$150 per site installation

Watershed improvement projects

1 hydrologist
5 days data collection
\$800 per year collected

Water quantity irrigation use to instream

1 biologic technicians's time
3 days
1 hydrologist's time
Installation cost =\$45/each

Monitoring Schedule

| Study Type | Year | | | | | | | | | | | | | | | |
|--|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | '01 | '02 | '03 | '04 | '05 | '06 | '07 | '08 | '09 | '10 | '11 | '12 | '13 | '14 | '15 | '16 |
| Grazing | | | | | | | | | | | | | | | | |
| <i>Compliance</i> | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| <i>Incidence of use</i> | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| <i>Stubble height</i> | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| <i>Riparian recovery</i> | | | | | | | | | | | | | | | | |
| spring grazing | | x | | | | x | x | | | | | x | x | x | x | x |
| winter grazing | x | | | x | | | | x | | | x | | | | | |
| non-grazed | x | x | | x | | x | x | x | | | x | x | x | x | x | x |
| <i>Uplands</i> | | | | | | | | | | | | | | | | |
| spring grazed | | x | | | | x | x | | | | | x | x | x | x | x |
| winter grazed | x | | | x | | | | x | | | x | | | | | |
| non-grazed | x | x | | x | | x | x | x | | | x | x | x | x | x | x |
| <i>Soil crusts</i> | x | x | | | | | | | | | x | x | | | | |
| Recreation | | | | | | | | | | | | | | | | |
| <i>Physical</i> | x | x | | | | | | | | | | | | | | |
| <i>Social</i> | x | x | | | | | | | | | | | | | | |
| <i>Boating Use</i> | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Hydrology | | | | | | | | | | | | | | | | |
| <i>Watershed improvements</i> | | | | | x | | | | | x | | | | | | x |
| <i>Water temperature</i> | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| <i>Cross sections</i> | | x | | | | x | | | | | x | | | | | x |
| Agriculture | | | | | | | | | | | | | | | | |
| <i>Instream conversion</i> | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| <i>Seeding success</i> | | | | | | | | | | | | | | | | |
| determined by year of seeding (1, 2, 5 and 10 years after treatment) | | | | | | | | | | | | | | | | |
| Fish and Aquatic Habitat | | | | | | | | | | | | | | | | |
| <i>Spawning</i> | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| <i>Habitat Inventory</i> | | | | | | | | | | | | | | | | |
| determined by National Marine Fisheries Service | | | | | | | | | | | | | | | | |
| Other | | | | | | | | | | | | | | | | |
| <i>Noxious weeds</i> | x | | | x | | | x | | | x | | | x | | | x |
| <i>Willow inventory</i> | | | x | | | | | | | | | | | x | | |

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APPENDIX F

Lands Potentially Suitable for Acquisition

Table 3-H. Lands Potentially Suitable for Acquisition

| Parcel # | Location | Est. Acres | Comment |
|----------|---|------------|--|
| 1 | T 9S R 23E Section 18, SE1/4 NE 1/4 | 5.83 | Acquire Service Creek launch site from ODOT as agreed. |
| 1a | T 9S R 22E Section 28, portions of E1/2 SW1/4 south of JDR Section 32, SW1/4 NE1/4 NW1/4 SE1/4 E1/2 NW1/4 NE1/4 SW1/4 | 248 | Consolidate public lands. |
| 1b | T 9S R 22E Section 23, SW1/4 NW1/4 | 40 | Consolidate public lands. |
| 1c | T 9S R 22E Section 32, SE1/4 SW1/4 | 40 | Consolidate public lands. |
| 1d | T 9S R 22E Section 13, portions of NE1/4 SW1/4 NW1/4 SE1/4 | 80 | Consolidate public lands, recreation site potential. |
| 1e | T9S R22E Section 23, NE1/4SW1/4 | 40 | Consolidate public lands, acquire for campsites. |
| 1f | T9S R22E Section 22, S1/2SW1/4 Section 27, NW1/4NW1/4 Section 28, N1/2NE1/4 | 200 | Consolidate public land, acquire for campsites. |
| 2 | T 10S R 22E Section 6, NW1/4 | 160 | Acquire for campsites. |

Table 3-H. Lands Potentially Suitable for Acquisition

| Parcel # | Location | Est. Acres | Character of Land and Acquisition Rationale |
|-----------------|---|-------------------|--|
| 2a | T10S R22E Section 5, NW¼NE¼ | 40 | Consolidate public land. |
| 3 | T 9S R21E Section 32, portions of N1/2 NW1/4, north of the river | 15 | Consolidate public lands, acquire campsites. |
| 3a | T9S R21E Section 32, N½NE¼ Section 33, NW¼NW¼ all north of the JDR | 31 | Consolidate public lands, acquire for campsites. |
| 3b | T9S R21E Section 28, SE1/4SW1/4 north of the JDR | 6 | Consolidate public land. |
| 4 | T 7S R 19E Section 32, SW1/4 NE1/4 | 1.86 | Acquire Clarno Launch/landing from OPRD as agreed. |
| 5 | T 1S R 19E Section 17, SE1/4 SW1/4 | 1 | Small sliver of private land between BLM and OPRD. |
| 5a | T 1S R 19E Section 17, SE1/4 SW1/4 | 7.12 | Acquire Cottonwood launch/landing from OPRD as agreed. |

Table 3-H. Lands Potentially Suitable for Acquisition

| Parcel # | Location | Est. Acres | Character of Land and Acquisition Rationale |
|----------|---|------------|---|
| 6 | T 1S R 19E Section 14, S½ SW1/4 NW1/4 SW1/4 Section 15, NW1/4 NE1/4 NE1/4 SE1/4 Section 22, S½ NE1/4 SE1/4 NW1/4 Section 23, W1/2 NW1/4 NE1/4 NW1/4 | 440 | Consolidate public lands. |
| 7 | T 1S R 19E Section 4, SW 1/4 Section 9, NW 1/4 N½ SW1/4 Section 16, NE1/4 NE1/4 | 440 | Acquire access. |
| 8 | T 1S R 20E Section 6, SW 1/4 SW1/4 SE1/4 Section 7, E½ NW1/4 W½ NE1/4 NE1/4 NE1/4 Section 8, N½ SE1/4 SW1/4 NE1/4 SE1/4 NW1/4 NW1/4 NW1/4 | 600 | Acquire access. |
| 9 | T 1N R 19E Section 3, S1/2S1/2 | 160 | Acquire Oregon Trail segment. |

Table 3-H. Lands Potentially Suitable for Acquisition

| Parcel # | Location | Est. Acres | Character of Land and Acquisition Rationale |
|-----------------|---|-------------------|--|
| 9a | T 1N R 19E Section 11, NW 1/4 | 20 | Provide additional parking and boat launch. |
| 10 | T 4S R 18E Section 11, W1/2 SW 1/4 SW1/4 NW1/4 Section 14, NW1/4 NW 1/4 | 160 | Consolidate public land in Wilderness Study Area |
| 11 | T 3S R 18E Section 35, S1/2 SW1/4 T 4S R 18E Section 2, NW1/4 NW1/4 | 160 | Consolidate public land in Wilderness Study Area. |
| 12 | T 4S R 18E Section 14, N1/2 SE1/4 NE1/4 SW1/4 SW1/4 NE1/4 | 160 | Consolidate public land in Wilderness Study Area. |
| 13 | T 2S R 18E Section 13, SW1/4 SW1/4 Section 24, W1/2 NW1/4 NW1/4 SW1/4 SE1/4 NW1/4 S1/2 NE1/4 NE1/4 SE1/4 | 320 | Consolidate public land in Wilderness Study Area. |
| 14 | T 8S R 19E Section 36, NW1/4 NW1/4 | 40 | Acquire poor condition land for rehabilitation and campsite potential. |
| 15 | T 5S R 19E Section 30, NE1/4 SE1/4 | 40 | Consolidate public land in Wilderness Study Area. |

Table 3-H. Lands Potentially Suitable for Acquisition

| Parcel # | Location | Est. Acres | Character of Land and Acquisition Rationale |
|----------------------------------|---|-----------------------|--|
| 16 | T 1S R 19E Section 19, LOT 7, 8 and 12 Section 30, NW1/4 NE1/4 SW1/4 NE1/4 NW1/4 SE1/4 LOT 1 and 7 | 320 | |
| 16a | T 1S R 19E Section 32, SW1/4 NW1/4 | 40 | |
| 16b | T 1S R 19E Section 32, SW1/4 NE1/4 SE1/4 NW1/4 E1/2 SW1/4 W1/2 SE1/4 | 240 | |
| 17 | Cherry Creek | | Preserve undeveloped character of the area. |
| Total Acres (approximate) | | 4,036 | |

APPENDIX G

Water Quality Managing Plan for Lower John Day River

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Tables

Note: Tables, maps and figures are numbered as in FEIS-June 2000, except for G-1 and G-2 which are new tables.

Introduction

This plan is a work in progress. A Water Quality Restoration Plan (WQRP) for the federally designated segments of the South Fork John Day Wild and Scenic River is being developed to accompany this WQRP.

The WQRP includes the following nine elements:

Condition Assessment and Problem Description of Lower John Day Basin

Resource Considerations

Limiting Factors

Goals, Objectives, Management Actions

Timeline for Implementation, Cost, Funding

Responsible Parties

Reasonable Assurance of Implementation

Monitoring and Evaluation

Public Involvement

Element #1 - Condition Assessment and Problem Description of Lower John Day Basin

Hydrologic Unit Code (HUC) 17070204

The John Day River Proposed Management Plan divides the John Day River system into 11 segments, based on divisions of the river system by land use, ownership, access, and other factors (Maps 1-A and 1-B). The Lower John Day Sub-basin (HUC 17070204) contains Segments 1, 2, and 3 of the Federally Designated Segments of Wild and Scenic River. These three segments are addressed in this WQRP.

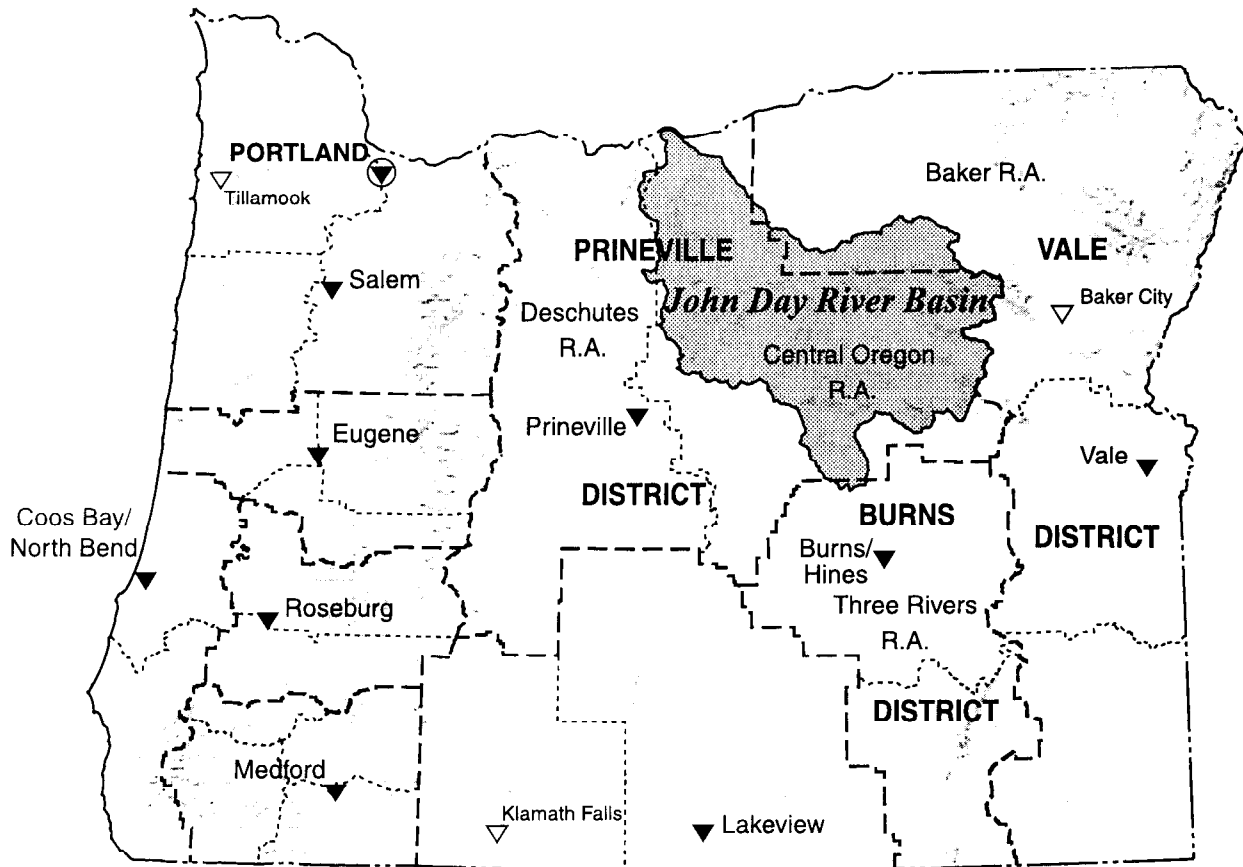
303(d) Parameters

All segments of the Wild and Scenic River are listed on the ODEQ 303(d) list of affected waters for temperature (Table 2-K below, reprinted from FEIS-June 2000). The Upper John Day from the North Fork confluence (RM 185) to Reynolds Creek (RM 274) is listed for bacteria, dissolved oxygen, flow modification, and temperature (ODEQ 1998). Low summer flows on the mainstem John Day River above Dayville contribute to problematic eutrophication and consequent elevation of pH and dissolved oxygen in the South Fork and mainstem John Day rivers (Cude 2000). Segments 1, 2 and 3 are only listed for temperature.

This Water Quality Restoration Plan focuses on human-caused disturbance in the lower John Day Basin Wild and Scenic River Corridor (Segments 1, 2, and 3) that is under the control of federal land management agencies. The water quality of these three downstream segments is highly dependent on the watershed health upstream. Therefore, a basic description of the entire basin has been incorporated into the condition assessment of Segments 1, 2, and 3.


Beneficial Uses

The ODEQ has identified much of the John Day Basin as water quality limited (see Table 2-K). This designation derives from the condition of waters that do not meet instream water quality standards for certain water quality parameters for all or a portion of the year. A stream, or portion thereof, is designated as water quality limited, as follows: if, after implementation of standard technology, the stream fails to meet water quality standards; if a stream utilizes higher than standard technology to protect designated



LEGEND

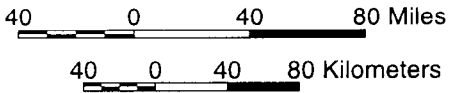
- BLM State Office
- BLM District Office
- BLM Resource Area Office
- BLM District Boundary
- BLM Resource Area Boundary




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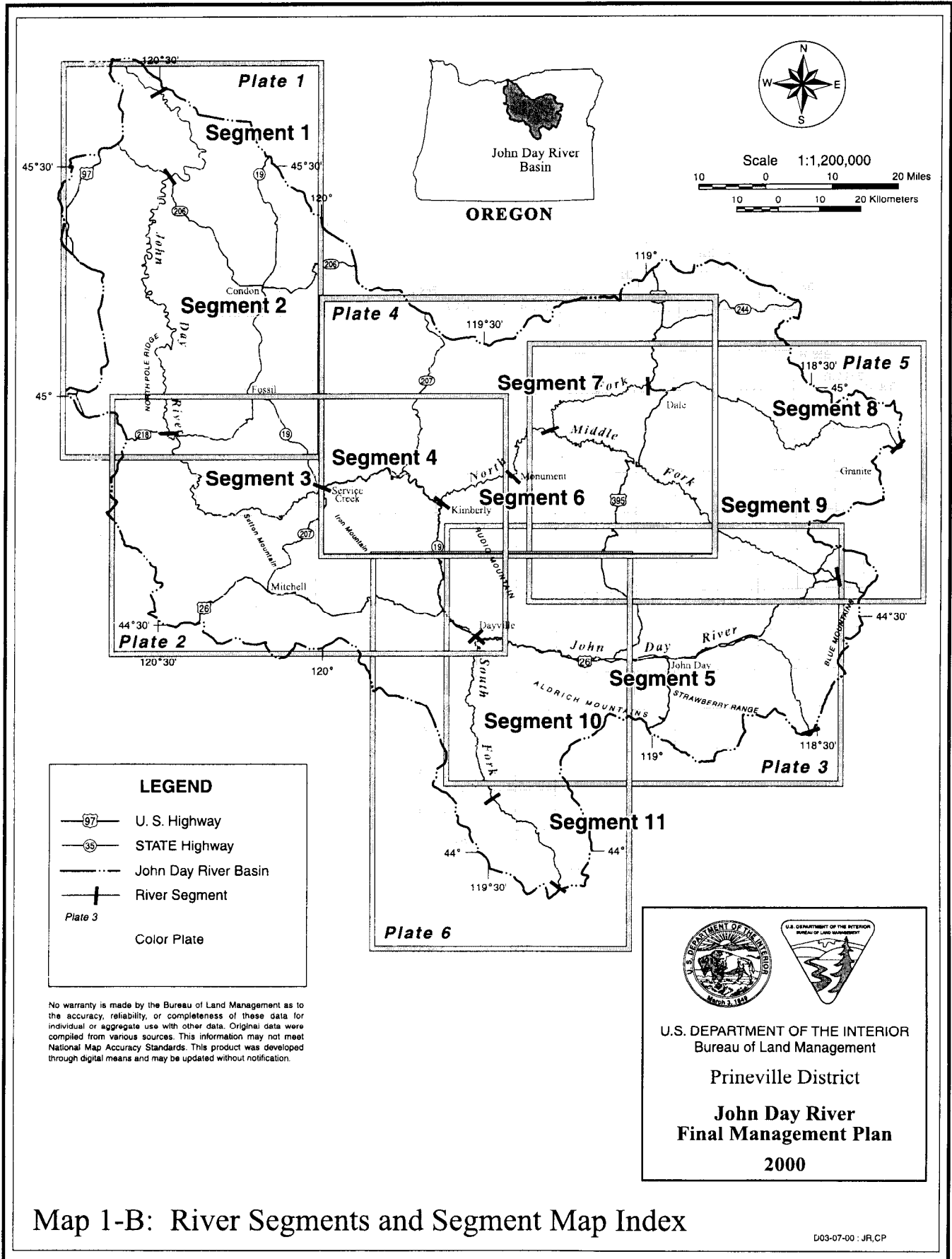
**John Day River
Final Management Plan
2000**



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Map 1-A: General Location


D03-07-00 : JR,CP



LEGEND

- U. S. Highway
- STATE Highway
- John Day River Basin
- River Segment
- Color Plate

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**John Day River
Final Management Plan
2000**

Map 1-B: River Segments and Segment Map Index

D03-07-00 : JR,CP

Table 2-K. John Day River Segments and 303(d) Listing Criteria

| River Segment | 303(d) Listing Criteria |
|----------------------|---|
| Segment 1 | Temperature |
| Segment 2 | Temperature |
| Segment 3 | Temperature |
| Segment 4 | Bacteria, Dissolved Oxygen, Flow Modification and Temperature |
| Segment 5 | Bacteria, Dissolved Oxygen, Flow Modification and Temperature |
| Segment 6 | Temperature |
| Segment 7 | Temperature |
| Segment 8 | Temperature and Habitat Modification |
| Segment 9 | Temperature |
| Segment 10 | Temperature |
| Segment 11 | Temperature |

beneficial uses to achieve instream water quality; if there is insufficient information to determine if water quality standards are being met; or if it is determined that a stream would not be expected to meet water quality without higher than standard technology (OAR 340-041-0006-30). Designated beneficial uses referenced above are the purposes or benefits to be derived from a water body, as determined by the Oregon Water Resources Department Commission (OAR 340-41-0006-34). Among the designated beneficial uses of the John Day Basin surface and ground waters are domestic, livestock, municipal, ground water recharge, irrigation, agriculture, power generation, commercial, industrial, mining, fire protection, recreation, pollution abatement, wildlife, and fish life uses (OAR 690-506-0040-2).

As a part of the agency's responsibility to comply with the Clean Water Act, the BLM will work with ODEQ, ODA, and private landowners to develop a TMDL and a companion WQMP for the portion of the John Day Basin where BLM land management could affect a change in water quality. The BLM protocol for addressing 303(d) affected waters will guide development of Water Quality Restoration Plans (WQRPs) that will be incorporated into the ODEQ WQMPs. The WQMPs will guide restoration actions to improve water quality in those areas where BLM land management actions have an effect.

Condition Assessment

John Day Basin

The John Day River system includes the mainstem John Day River and its North, Middle and South forks. This system has more than 500 river miles and is one of the longest free-flowing river systems in the continental United States. The system drains 8,000 square miles of northeast Oregon (Map 1-A).

The mainstem John Day River flows 284 miles from its source in the Strawberry Range to its mouth at River Mile (RM) 218 on the Columbia River. The largest tributary in the John Day basin is the North Fork John Day River, which originates in the Blue Mountains at elevations near 8,000 feet. It flows southwesterly for 117 miles and joins the John Day mainstem near Kimberly. The Middle Fork John Day River originates just south of the North Fork and flows in a similar direction for 75 miles until the two forks merge about 31 miles above Kimberly. The South Fork John Day River, tributary to the mainstem near Dayville (RM 212), extends 60 miles north from its headwaters in the southwest portion of Malheur National Forest (ODFW 1990).

The North Fork John Day is listed by ODEQ as water quality limited for habitat modification and temperature. In this condition, the North Fork does not meet PACFISH pool frequency management objectives. Because the North Fork contributes 60 percent of the flow to the mainstem John Day, the influence of the North Fork on temperature and, therefore, fisheries is significant. Converse to the North Fork, the basin drainage area between Service Creek and McDonald Ferry gaging stations contributes only 13, 9, and 1 percent of the flow during July, August, and September, respectively, to the mainstem John Day. This exemplifies the limited influence that flows in the lower basin have on water quality and quantity.

During the summer months from approximately July to September, groundwater provides much of the base flow to the Lower John Day River. Although ODEQ has listed the lower river as water quality limited for temperature, other water quality constituents such as total phosphates, biochemical oxygen demand, and fecal coliform could also become limited during late summer when flows are the lowest and water temperatures are the greatest (Cude 2000).

Temperature gains per river mile in the John Day vary widely between basins and are influenced by aspect, channel geometry, vegetation, river width, and latitude. The ODEQ will model the temperature load allocation throughout the John Day Basin during their TMDL process in 2003 (North Fork), 2004 (Upper John Day), and 2005 (Lower John Day) (see Map 2-D).

Segments 1, 2 and 3

The lower John Day subbasin drains an area of about 2,030 square miles. It is physiographically different from the upstream segments in that it generally lacks the mountainous terrain and high elevations that accumulate significant snow pack.

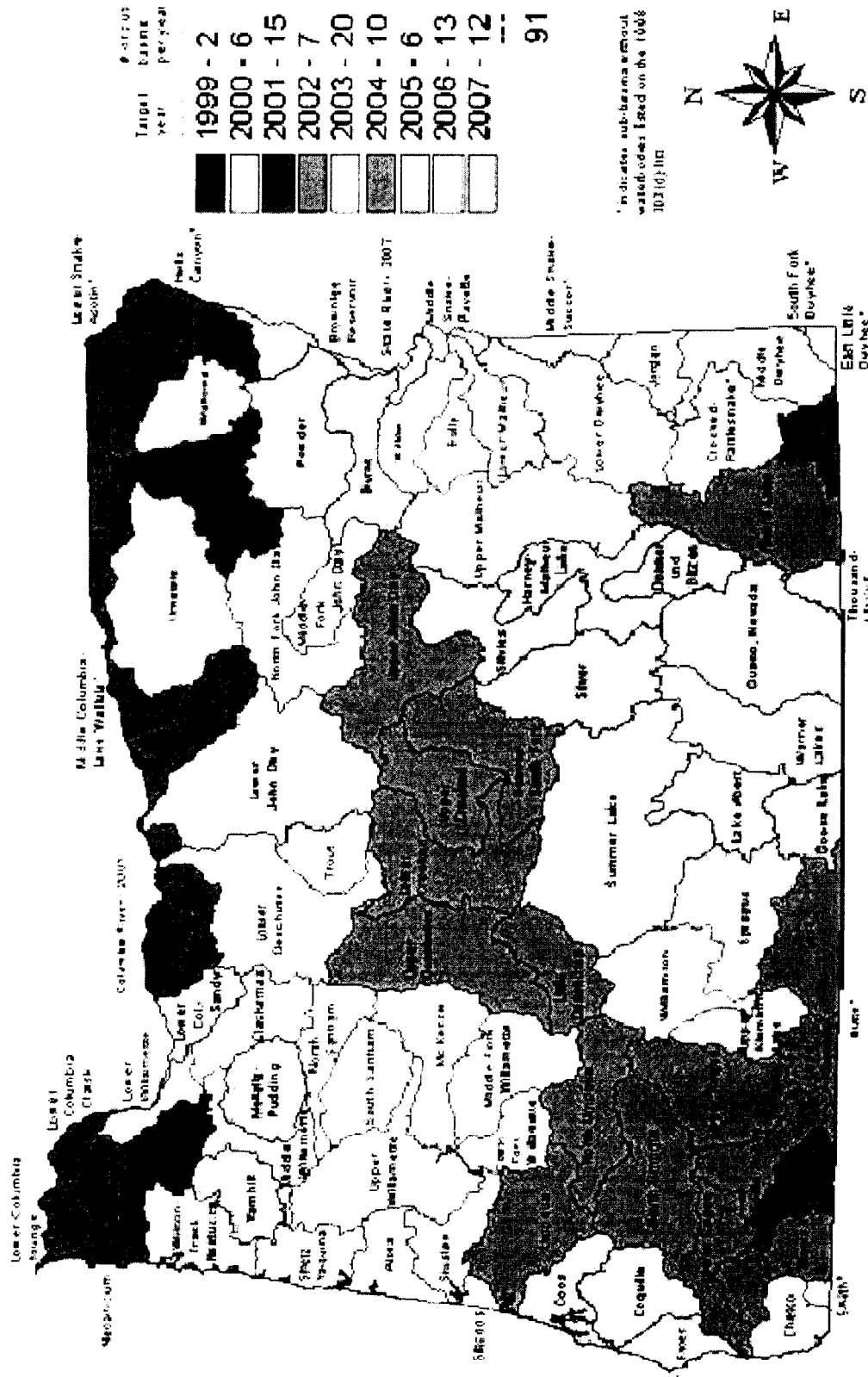
Segments 1, 2 and 3 are designated as a State Scenic Waterway and federal Wild and Scenic River. Segment 1 is the lowest in elevation of the John Day River. It lies between Tumwater Falls (RM 10) and Cottonwood Bridge (RM 40), where State Highway 206 crosses the John Day River.

Segment 2 winds 70 miles downstream from Clarno Bridge at State Highway 218 (RM 109) to Cottonwood Bridge on State Highway 206 (RM 40). This segment is well known for spectacular scenery and contains very high canyon walls. The river meanders more in this segment than in adjacent segments. This segment is also very remote and contains no public road access, except for two roads at each end of the segment.

Segment 3 is a 48-mile segment between Clarno and Service Creek. Segment 3 has wide valleys with high, colorful hills and rimrock in some areas. The segment contains agricultural lands, especially hay fields and pastures. This segment is in a remote setting, but roads and human-made structures are more numerous here than in Segment 2.

Map 2D

Sub-Basin Target Dates for Completion of TMDL's for Waters Listed in the 1998 303(d) List



Land Use and Ownership

Management

Livestock production and agriculture are the primary land uses and contribute significantly to the economy of the John Day basin. Cattle ranching and associated hay crops are major components of these activities. Grass and alfalfa hay, grown mostly along stream bottoms, are the predominant irrigated crops in the basin. The forest products industry is most important in the forested upper portions of the basin around Spray, John Day, and Prairie City. Although dryland production of grain crops remains the major economic activity, tourism and recreation are growing and contribute significantly to the basin's economy.

Human uses of public resources generate a significant portion of economic activity in the John Day Basin. Recreational visitors spend money locally at retail stores, service stations, and for lodging services. Many service businesses (such as guide services and shuttle operators) exist or operate in the basin. Much of the land administered by the BLM within the river corridor is leased for cattle grazing through a permit system (43 CFR 4100). Water from the river is diverted for agricultural uses on both private and public lands. Although water rights filed with the state govern the use of water resources. Depending on the commodity, mineral resources on public land are available for location, sale, or lease by private individuals or companies. Small amounts of BLM-managed timber within the basin are sold to private companies.

Historically, various tribal groups used the region for root collecting, hunting, fishing, and religious activities. There is little information available on specific current Native American use of the river segments. However, the Confederated Tribes of Warm Springs Reservation of Oregon and the Burns Paiute have indicated that some of their tribal members continue to use the region for hunting, fishing, gathering and religious activities. The Confederated Tribes of Umatilla Reservation of Oregon use lands on the Forth Fork of the John Day. Information regarding areas visited by individual families for root collecting, hunting, fishing or religious practices is not formally shared within or outside a tribe. For many segments, access for traditional activities is an issue due to land ownership and geography.

Ownership

Public and Private Ownership

The John Day River basin is sparsely populated. The 1998 population in the eight main counties in the John Day basin was 127,650. Wasco County boasts the largest population that is concentrated along the Columbia River at the mouth of the John Day. The 1998 population for incorporated communities on or near the river totaled 7,065 (Table 2-A, reprinted below from the FEIS-June 2000).

Three of the eight counties (Jefferson, Umatilla, and Wasco) have strong populations of Native American and Hispanic origin. Protection of cultural sites, hunting, fishing, mushroom gathering, and gathering of other special forest and range products are of importance to these populations.

The ratio of private to public land in the basin has changed little within the last decade, although several federal-private land exchanges have occurred over the last ten years. The Northwest Power Planning Council (1991) reported that 62 percent of the land in the basin is privately owned (5,027 square miles), 29.6 percent is under USFS management (2,396 square miles), 7 percent is under BLM management (587 square miles), and 1.4 percent is managed by the state of Oregon (83 square miles).

Table 2-A. Populations for John Day River Communities

| Community | Population |
|------------------|-------------------|
| Antelope | 65 |
| Canyon City | 725 |
| Condon | 830 |
| Dayville | 185 |
| Fossil | 530 |
| John Day | 2,015 |
| Mitchell | 200 |
| Monument | 165 |
| Moro | 340 |
| Mt. Vernon | 650 |
| Prairie City | 1,195 |
| Spray | 165 |

Source: Center for Population Research and Census (1998)

The BLM administers about 25 percent of the 30 miles of river frontage in Segment 1, and the remaining 75 percent is privately owned land. River-front ownership is mixed, so along many stretches, one side of the river is private, and the other side is BLM-administered land.

In Segment 2, the BLM manages approximately 50 of the 70 miles of river frontage. Several small tracts of private land are scattered throughout the length of this segment.

The BLM administers approximately 50 percent of the river frontage and most of the lands near the river in Segment 3. Lands administered by the BLM are scattered along the river, separated by private land tracts of various sizes. Private lands on the river in this segment are often cultivated and irrigated, especially near Twickenham and Clarno.

Land Use Patterns

County Land Use Zoning

The river serves as a boundary for Sherman, Gilliam, Wasco, Jefferson and Wheeler counties.

Sherman County has planned and zoned private lands adjoining the west bank of the river as 'Exclusive Farm Use.' The purpose of Exclusive Farm Use is to protect agricultural uses from encroachment by incompatible uses and to provide tax incentives to assure that agricultural land is retained in agricultural use. The minimum lot size for this zone is 40 acres. Subdivisions and major partitions are prohibited.

Gilliam County has also planned and zoned private lands along the east bank of the river as Exclusive Farm Use. A lot or parcel of 160 acres or more is considered a farm

unit. A lot or parcel of less than 160 acres, but not less than 100 acres, may be acceptable as a farm unit if approved through the conditional use process. The Gilliam County Comprehensive Plan recognizes the existence of the State Scenic Waterway designation along the John Day River, and county policy states they will cooperate with OPRD when development is proposed on private lands along the river.

Wasco County has planning and zoning jurisdiction for private lands on the west side of the river, between RM 95 upstream to Rhodes Creek at RM 122. These lands have been zoned for agricultural use. The purpose of this zone is to protect agricultural uses from encroachment by other, incompatible uses. The lot size minimum for this zone is 80 acres, and there is no administrative mechanism for allowing a variance to this standard.

The Wasco County Comprehensive Plan, Goal 5, acknowledges that the John Day River is a State Scenic Waterway. Because Wasco County has recognized the John Day Scenic Waterway as a Goal 5 resource, the county has adopted a special overlay zone entitled the 'Natural Areas Overlay.' This overlay zone is designed to protect identified natural values along the river by allowing 'only uses which will not permanently destroy the natural value.'

Wheeler County has planning and zoning jurisdiction for all lands east of the river, from RM 95 to RM 130 (Cherry Creek). Wheeler County has planning and zoning jurisdiction along both the north and south sides of the river between Service Creek and Cherry Creek.

Wheeler County has planning and zoning jurisdiction on private lands on the east side of the river, between RM 95 and RM 130. These lands have also been zoned for agricultural use. The purpose is to provide areas for the continued practice of agriculture and permit only new uses that are compatible with agricultural activities. Lands in this zone may be subdivided when lots or parcels created are 160 acres or more in size. The Wheeler County Comprehensive Plan includes a policy that recognizes the existence of the State Scenic Waterway designation. The policy also states that the County will notify OPRD prior to issuing any land use or building permits proposed within a State Scenic Waterway for compatibility review.

Jefferson County has planning and zoning jurisdiction on the west side of the river, from Rhodes Creek at RM 122 upriver to Cherry Creek. These lands have also been zoned for agricultural use. The purpose of this zone is to protect agricultural uses from encroachment by other incompatible uses. The lot size minimum for this zone is 80 acres, and there is no administrative mechanism for allowing a variance to this standard. The Jefferson County Comprehensive Plan acknowledges that the John Day River is a State Scenic Waterway. The county passed an ordinance in May of 1993, stating that it will develop a program to protect cultural and natural resources in the State Scenic Waterway corridor within six months of the completion of the plan. In the meantime, the county will rely on the State Scenic Waterway program and existing standards for stream and rim setbacks of the county's zoning ordinance, to protect resources along the John Day River. Presently, the Jefferson County Plan Policy states that the county will coordinate with OPRD staff when proposals for development are made along the John Day River.

Agriculture and Grazing

Agricultural sales in the eight counties that include portions of the John Day basin totaled over \$628 million in 1997 (Oregon State University Extension Service, Various Years). This represented 19 percent of all agricultural sales in Oregon. Umatilla and Morrow counties were the leading agriculture producers in the basin, with \$308 million and with \$110 million in sales, respectively. In Umatilla County, grain crops were the

most valuable (\$93 million), followed by field crops (\$57 million), and vegetable crops (\$54 million). Sales of cattle and calves in Umatilla County totaled \$33 million in 1997. Field crops were the most valuable in Morrow County (\$39 million), followed by grain crops (\$36 million). Sales of cattle and calves totaled \$16 million. Morrow and Umatilla counties benefit significantly from irrigation from the Columbia and Umatilla Rivers, and only small portions of these counties are drained by the North Fork John Day River.

Sherman, Gilliam, and Wasco counties abut the lower John Day River. Grain crops are the leading cash crop in Sherman (\$24 million) and Gilliam (\$19 million) counties. In Wasco County, sales from grain crops (\$14 million) are surpassed by tree fruit and nut crop production (\$33 million). This production is centered around The Dalles, and is somewhat distant from the John Day River. Sales of cattle and calves for these three counties account for \$1.6 million, \$3.6 million, and \$6.8 million in Sherman, Gilliam, and Wasco Counties, respectively. Jefferson County abuts the mainstem John Day River at its eastern border, but the majority of agricultural lands in the county are located in the Deschutes River basin. Total farm sales in 1997 for Jefferson County were \$50.9 million, with field crops (\$14 million) and cattle and calves (\$7.7 million) the leading producer. Wheeler County has limited agricultural activity with total 1997 agricultural sales of \$6.98 million. Sale of cattle and calves represent more than half of this, totaling \$4.3 million.

Grant County is located at the headwaters of the John Day River. Livestock is the primary agricultural activity with \$19.8 million in sales for 1997. A variety of other agricultural sales account for another \$27.3 million (1997 statistics).

Livestock grazing on BLM-administered lands contributes to agricultural activity in all the counties. Private livestock owners are authorized to graze a specified number of cattle for a specified period in exchange for fees. Access to this public forage resource increases productivity for ranchers. The U.S. Forest Service has a similar permitting process for National Forest lands.

There are 119 grazing allotments, 64 of which are within the designated WSR segments fully or partially within the entire corridor affecting a total of 22,781 Animal Unit Months (AUMs). An AUM is the amount of forage necessary to sustain one cow and calf for one month. Given the existing inventory of cattle (estimated at a total 328,370 head, including 95,300 calves and 233,00 adults and yearlings) within the eight-county region, AUMs attached to BLM-administered lands within the corridor comprise approximately 1 percent of the total forage consumed by livestock. This represents a very marginal economic contribution to the region.

Approximately 220 acres of BLM-managed land are leased for irrigated agricultural/cultivation. The majority of these lands were acquired through land acquisitions. Some were created to curb unintentional trespass that resulted due to the lack of an accurate survey. These lands are leased to private individuals for cultivation. Six individuals hold these leases. The lands are generally used grain, hay, alfalfa, dry bean, and speciality crop production (such as mint, onion seed, carrot seed and coriander). The BLM does not currently dictate the type of crops that can be grown of these lands.

Lumber and Wood Production

The upper elevations of the John Day River basin are important for timber production. There is no significant timber harvest in Sherman and Gilliam counties. A large percentage of timber harvest has historically been from National Forest lands, especially in Grant County. The forest industry and other private timber managers own a significant percentage of the basin.

Timber harvest also occurred on tribal lands in Wasco, Jefferson, and Umatilla counties. All of these lands are located in portions of the counties outside of the basin.

Historically, timber production from the National Forest lands was greatest in the counties located along the John Day River. However, since production peaked in 1989, harvest from public lands has decreased dramatically and now accounts for a relatively minor percentage of overall production. For example, in Grant County, in 1989 the National Forest harvest totaled 256.1 million board feet (MMBF), or 87 percent of total harvest. By 1996, harvest volume had dropped to 21.3 MMBF, or 30 percent of total harvest.

Total harvest from BLM-administered lands in the John Day basin between 1987 and 1997 was 20.5 MMBF, with 16.1 MMBF of production occurring in 1987 and 1988.

Rudio Mountain and Dixie Creeks are areas under BLM management that have produced the greatest yields. Dixie Creek, a tributary of the mainstem John Day River, is located north of Prairie City (RM 263). Rudio Mountain is located between Dayville and Kimberly east of the river. No recent BLM harvest activities have occurred within the Wild and Scenic River corridor. Smaller salvage and selective harvests have been the emphasis of BLM's timber management program since implementation of the John Day Resource Management Plan in August 1985.

Purchasers of sales since 1987 have included Malheur Lumber Company of John Day, Ochoco Lumber Company of Prineville, Ellingson Lumber Company of Baker City, Widows Creek Timber of Mt. Vernon, and D.R. Johnson Lumber of Prairie City. As of December 1998, estimated hourly earning in the lumber and wood products industry in Oregon was \$13.63 (Oregon Employment Department 1999)

Special Designation

Navigability

Navigability has not been established for the John Day River. Navigability has more than one meaning. Primarily, navigability has been used to resolve whether the states or the federal government own the beds under navigable water. The test for this is known as "navigability for title" and examines what the natural conditions of the water and whether the waters could have been used for commerce at the time the state entered the union.

Under Oregon law, the Division of State Lands is responsible for managing the beds and banks of navigable waterbodies. These assets are to be managed for the greatest benefit of the people of Oregon under sound techniques of land management. Protecting public trust values of navigation, fisheries and public recreation is also important.

Although the Division of State Lands has determined that there is sufficient evidence to support a claim of navigability of at least part of the John Day River system, no such legal claim on the navigability of the system has been filed.

If non-navigable, a federal patentee (private landowner) or the federal government would own the bed underlying the water.

If navigable, the state acquires the bed under these waters. The states hold title to land under all non-tidal navigable waters. However, the federal government owns title to the beds underlying navigable waters that are affected by the ebb and flow of the tide. Navigability, in fact, is the test to determine the federal government's ability to regulate

the use of waters. This is important to defining the jurisdiction of Federal Energy Regulatory Commission (FERC) and some actions of the Army Corps of Engineers.

Withdrawal

A 'withdrawal' is a land classification that removes lands from actions under various public land laws, including the mining laws. Withdrawn lands may be transferred from BLM to another federal agency's jurisdiction. Numerous 'withdrawals' along the John Day River were made to reserve areas for future hydroelectric power projects. However, these areas were never developed for hydroelectric power production nor are there plans for future development. The WSR Act of 1988 resulted in the remaining federal lands within the designated WSR segments being withdrawn from entry, sale, or other disposition.

State and Federal Designations

Segment 1 was designated as a federal Wild and Scenic River by Congress in 1988 and as a State Scenic Waterway in 1970 by the State of Oregon. The river corridor between Thirtymile Creek and the Columbia River is a State of Oregon Wildlife Refuge that prohibits waterfowl hunting. This segment contains no designated Wilderness and no Wilderness Study Areas. The Oregon Trail crosses the river near RM 21.

In Segment 2, land designations include three BLM Wilderness Study Areas and a State of Oregon wildlife refuge from Thirtymile Creek downstream to the Columbia River. Segment 2 is presently classified as a State Scenic Waterway 'Scenic River Area,' from Cottonwood Bridge to Ferry Canyon. State classifications in this segment include 'Scenic River Area' from Clarno to Thirtymile Creek, 'Natural River Area' from Thirtymile Creek to Ferry Canyon, and 'Scenic River' from Ferry Canyon to Cottonwood Bridge. State guidelines under the existing Oregon Administrative Rules (OAR 736-040- 0065) describe how lands should be managed under these classifications.

The three Wilderness Study Areas in Segment 2 include the North Pole Ridge WSA (7,609 acres), Thirtymile WSA (7,538 acres), and the Lower John Day WSA (19,587 acres). Wilderness values identified in the wilderness review process for these three WSAs are naturalness, opportunities for solitude and primitive and unconfined recreation, critical anadromous fish habitat, Columbia River Basalt Formations, outstanding scenic qualities, cultural sites, a potential natural community of bluebunch wheatgrass, and protected plants and wildlife. Detailed Wilderness inventory information on each of these WSAs is available from the BLM in Prineville.

Segment 3 is designated as a federal Wild and Scenic River. This segment also was designated as a State Scenic Waterway in 1970. The existing State Scenic Waterway classification for this segment is 'Scenic River Area.'

Segment 3 includes several WSAs. The Spring Basin WSA (5,982 acres) lies to the east of the river and southeast of Clarno in this segment. Although most of the WSA is outside the WSR boundary, a small portion lies within the boundary. The BLM recommended to Congress that this WSA is suitable for designation as Wilderness, but no further legislative action has occurred. Until the wilderness review process is complete, this area will be managed so as not to impair its suitability for designation as Wilderness.

The BLM completed the Sutton Mountain Land Exchange in 1992, which added 48,000 acres of land to public ownership. Most of these acquired lands, as well as 16,500 acres of adjacent public lands, were inventoried for wilderness characteristics. A wilderness inventory analysis concluded that 39,370 of the acres inventoried were found to possess wilderness characteristics and are worthy of further wilderness review. The

BLM identified these lands as WSAs through the Sutton Mountain Coordinated Resource Management Plan (CRMP) (USDI-BLM 1996d), a public planning process. A decision was made to identify 29,400 acres as the Sutton Mountain WSA, and 9,970 acres as Pats Cabin WSA, and the BLM began to manage these WSA lands under IMP guidance. Approximately 2,400 acres of the acquired lands adjacent to Pats Cabin WSA, but outside the planning boundary for the CRMP, have yet to be inventoried for wilderness characteristics.

Problem Description

John Day Basin

Historic land use practices have degraded the watershed and widened the river channel. Channel widening has removed vegetation along the riverbanks and continues to reduce reestablishment where the widening processes are still active. The widening of the river channel has contributed to temperature elevation through exposure to air and sunlight.

The majority of water in the John Day Basin originates in the upper watershed. As a result, water quantity and quality in the river below Kimberly at RM 185 are determined more by input from upper basin tributaries (such as the North Fork, South Fork and upper mainstem) than by inputs originating below Kimberly (OWRD 1986).

The flow regime of the John Day affects the shape of the river channel, the ability of riparian sites to support vegetation, and the extent of river uses and access. For example, river flow affects water temperature, which has consequent effects on dissolved oxygen and the suitability and productivity of habitat for fisheries production. Most water quality problems in the John Day Basin stem from historical mining and dredging, livestock grazing, cumulative effects of timber harvest and road building, and water withdrawals (OWRD 1986, ODEQ 1988). Soils and geomorphological processes that drive the system contribute to naturally elevated sediments in the basin.

Segment 1

The lower subbasin, including Segment 1, can be characterized as an area that receives water, as opposed to one that produces it. Most tributary streams in the subbasin are nearly ephemeral and many cease to flow in summer (approx. July through September). There are three main tributaries that flow into the lower mainstem: Rock Creek, Hay Creek, and Grass Valley Canyon. Rock Creek is the largest with a mean monthly flow ranging from 120 cfs in March to less than 1 cfs in September. Lone Rock Creek, a tributary to Rock Creek, stopped flowing at some time in at least 10 out of the 13 years between 1966 (first year of record) and 1978 (last year of published record). Generally, non-flow conditions last from August through September in these tributaries. In especially dry years, flows can stop as early as July and not resume until October.

The stream gauge at McDonald Ferry records discharge for over 95 percent of the John Day basin. It has been in operation since 1905 and provides an excellent record of stream flow variability. Discharge varies seasonally, from year to year, and from decade to decade (OWRD 1986). Peak discharge occurs between late March and early June, with 22 percent of runoff occurring in April and 21 percent in May. Low flows occur between July and November. The average monthly high flow is during April (5,710cfs). Minimum monthly low flow occurs during September (87 cfs); no flow occurred for part of September 2, 1966, August 15 to September 16, 1973, and August 13, 14 and 19 to 25, 1977.

Frequency of peak flows has changed. The number of flow events exceeding 6,900 cubic feet per second (cfs) (defined by the USGS as a peak flow for the gauge at

McDonald Ferry) was greater from 1980 to 1985 than any other five-year period since 1948. The flows during the 1964 and 1997 floods of 40,200 and 35,200 cfs respectively, exceeded any other flows on record by 35 percent. Changes in discharge may be caused by climatic variation or watershed alteration (OWRD 1986). The average annual discharge for the period of record is 1,524,000 acre feet. On some occasions, such as in 1966, 1973 and 1977, the river ceased to flow.

In 1996, the 29.5 miles of Segment 1 were included in the Oregon Department of Environmental Quality (ODEQ) 303(d) list of water quality limited streams as exceeding the state criteria of 64°F for summer water temperatures (ODEQ 1998). This river segment has a relatively high width-to-depth ratio, as would be expected with a river of this length, sediment load, and extreme flow variations. Low summer flows are spread into wide cross-sections, increasing the volume of water exposed to solar radiation. The percent of effective shade provided by vegetation decreases as channel width increases and is expected to be minimal for this segment. Temperature gains per mile vary widely between basins and depend on variables such as aspect, geology, vegetation, river width, and latitude. It is anticipated that the ODEQ will conduct temperature modeling to develop TMDLs for the Lower John Day as scheduled for 2005.

Instantaneous water temperature measurements at Cottonwood Bridge have been measured on a monthly basis by ODEQ for their Oregon Water Quality Index Reports. The 11 instantaneous measurements for June averaged 66° F. According to 18 afternoon measurements, the average daily afternoon water temperature is about 75° F in July and August.

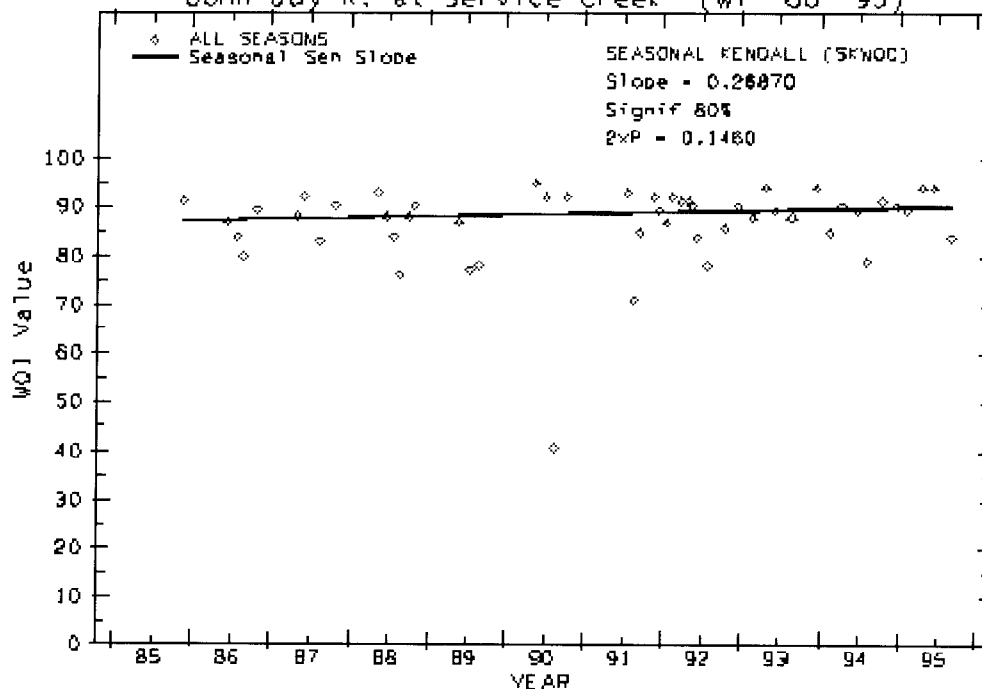
As presented in the general discussion above, water quality in the lower river and in this segment is the result of upstream and local conditions. During the summer when flows are low, water temperatures exceed the criteria for rearing anadromous fish (ODEQ 1998). During low flow periods, water samples collected from McDonald Ferry indicate high levels of total phosphates, total suspended solids, biochemical oxygen demand, and fecal coliform. High levels of these pollutants also occur during periods of high runoff as a result of erosion and field runoff (Cude 2000).

The ODEQ non-point source assessment maps (August 1988) identify severe stream bank erosion and sedimentation in some of the major tributaries to the mainstem John Day. The OWRD (1986) has reported that water quality for cold water and warm water fish '...is on a downward trend threatening continued use of the water by that use.' Since the time OWRD published these conclusions, however, ODEQ (1999) has noted, in reference to the entire lower John Day River, that water quality has 'significantly improved' and utilizes a graph (Figure 2-C, reprinted below from FEIS-June 2000) to illustrate the upward trend of water quality since 1985 (water quality parameters that make up the water quality index are temperature, dissolved oxygen, biochemical oxygen demand, pH, ammonia+nitrate nitrogen, total phosphates, total solids, and fecal coliform). The ODEQ data collected between 1985 and 1998 at Cottonwood Bridge, the upstream end of Segment 1, revealed no improvement or decline in water quality.

Segment 2

Segment 2 drains about 906 square miles of arid lands. Precipitation here is around 10 inches per year, and mean annual runoff is between 0.5 and 0.75 inches per year. This means that this segment contributes between 35 and 50 cfs per year, based on OWRD data (1986). Discharge patterns, peak flows, and duration of flow events are similar to those of Segments 1 and 3. Butte, Thirtymile, and Pine Hollow Creeks are the main tributaries to this segment. Butte Creek flows average 1 to 5 cfs during July through October.

Figure 2-C. Trend Analysis Results for John Day River Near Service Creek
 Seasonal-Kendall Trend Analysis on Oregon Water Quality Index
 John Day R. at Service Creek (WY '86-'95)



In 1996, the ODEQ included the 70 miles of Segment 2 in the 303(d) list of water quality limited streams for temperature. The temperature criteria of 64° F is the minimum standard necessary to maintain the beneficial use of the waters for fish rearing in Segment 2. Instantaneous water temperature measurements recorded at Cottonwood Bridge have been measured monthly by ODEQ for their Oregon Water Quality Index Reports. These measurements are recorded at the downstream end of Segment 2. Based on 11 instantaneous June water temperature measurements recorded between 1985 and 1998, June afternoon water temperature averaged 66° F. Based on 18 afternoon measurements, the average daily afternoon water temperature is about 75° F in July and August (Cude 2000).

Water quality impairment in this segment may be a consequence of stream bank erosion and sedimentation. In addition, Condon and Fossil municipal sewage treatment facilities historically discharged poor quality effluent into the segment two tributaries, Thirtymile and Butte Creeks (OWRD 1986.) The ODEQ is pursuing corrections at both facilities. However, this history of sewage discharge is of significance as current water quality conditions reflect some degree of pollution associated with eutrophication during low flow periods and result in an elevated release of effluents during periods of high flow. 'Water quality constituents such as total phosphates, biochemical oxygen demand, and fecal coliform are typically elevated during late summer when flow is lowest and water temperatures are the highest' (Cude 2000). Average Oregon Water Quality Index scores for this segment are poor in the summer and fair during the fall, winter and spring (Cude 2000).

Segment 3

This segment drains an area of approximately 1,431 square miles, including water from the upper basin. Peak discharge occurs from late-March to early-June, and low flows occur from July through November. Local ground water provides some base flow to this segment. Major tributaries are Bridge, Muddy, Service, Rowe, and Pine creeks.

Water entering this segment is recorded by a gage at Service Creek; 28 miles downstream from the confluence of the North Fork, and roughly at the midpoint of the

basin. The area above the gage produces an average of 1,415,000 acre-feet of water per year (USGS 1999). There is no gauge near Clarno, so the amount of water flowing out of this segment is unknown.

Basin discharge has changed over time, with higher peak flows, and more discharge occurring in the winter months. The maximum discharge, or flood flow, recorded at Service Creek was 40,200 cfs on December 23, 1964. The minimum recorded flow was 6 cfs on August 23 and 24, 1973.

Water quality here is similar to water quality in the North Fork. Since the North Fork contributes 60 percent of the flow to the John Day, its influence on the water quality parameter of temperature is substantial. Eutrophication during the summer months exacerbates conditions of elevated pH and dissolved oxygen supersaturation (Cude, 2000). Average OWQI scores for the John Day River at Service Creek are "fair" in the summer and "excellent" during the remainder of the year. This site exhibited a significant increase in water quality from 1985 to 1998 (see Figure 2-C)(Cude 2000).

Peak flows have great erosive power and have the capacity to change the stream profile of this fragile system. Surface runoff and erosion increase during periods of high flows and in relation to episodic weather events like thunderstorms. As a result, during these periods turbidity, fecal coliform, and sediment transport are elevated. During low flow periods elevated water temperatures reduce dissolved oxygen. This segment was placed on the ODEQ 303(d) list for exceeding state criteria for water temperature during the summer months (Table 2-W, reprinted below from FEIS-June 2000). Since the monitoring data used to determine site water quality is located at the upstream end of these segment, temperature conditions may reflect upstream land management activities or may vary in relation to natural background.

Thus, decreasing water temperatures could be achieved by: 1) radiative (heat) loss from water when the surrounding environment is cooler than the stream (this occurs mainly at night when air temperature is lower); or, 2) input from groundwater or surface flow (such as stream confluences) where the new water is at a lower temperature than the water already instream. At Service Creek, 13 instantaneous water temperature measurements for June averaged 17.8° C (64° F). At Service Creek during July and August, afternoon water temperature measurements averaged 23 °C (73.4° F), and water temperatures measured at Cottonwood Bridge about two hours later in the day averaged 24°C (75° F) for the same period (Cude 2000-20 data points 1981-1998). During the summer months, there is very little input of water into the system between Service Creek and McDonald Crossing, so decreases in temperature within stream are not likely below Service Creek.

Table 2-W. Percent of Time Water Temperature Exceeded State Water Quality Temperature Standard of 64° for 7-day Running Maximum Temperature at Service Creek

| Year | Beginning Date | Ending Date | Percent of Days Exceeded Standard |
|-------------|-----------------------|--------------------|--|
| 1993 | 34142 | 34220 | 73 |
| 1994 | 34465 | 34502 | 27 |
| 1995 | 34906 | 34967 | 98 |
| 1997 | 35582 | 35703 | 90 |
| 1998 | 35961 | 36044 | 100 |

Element #2 - Resource Considerations

OWRD Beneficial Uses

Water quality parameters that relate to designated beneficial uses of the John Day include: temperature, dissolved oxygen, and habitat modification, that relate to beneficial uses for fish life; flow modification that relates to the beneficial use for fish life; and bacteria that relates to the beneficial use for recreation (ODEQ1998). Of these, water temperature is the only parameter that has been monitored intensively throughout the basin.

Endangered Species Act

Salmonid Habitat

The John Day River provides habitat for a number of native and non-native fish populations, including five special status species (Tables 2-L and 2-M, reprinted below)

Table 2-L. Fish Species Occurring in the John Day System

| Common Name of Species | Scientific Name of Species | Origin |
|-----------------------------|-------------------------------------|------------|
| Chinook salmon | <i>Oncorhynchus tshawytscha</i> | Native |
| Rainbow trout (resident and | <i>Oncorhynchus mykiss</i> | Native |
| West slope cutthroat trout | <i>Oncorhynchus clarki lewisi</i> | Native |
| Yellowstone cutthroat trout | <i>Oncorhynchus clarki bouvieri</i> | Introduced |
| Lahontan cutthroat trout | <i>Oncorhynchus clarki henshawi</i> | Introduced |
| Mountain whitefish | <i>Prosopium williamsoni</i> | Native |
| Bull trout | <i>Salvelinus confluentus</i> | Native |
| Brook trout | <i>Salvelinus fontinalis</i> | Introduced |
| Paiute sculpin | <i>Cottus beldingi</i> | Native |
| Shorthead sculpin | <i>Cottus confusus</i> | Native |
| Bridgelip sucker | <i>Catostomus columbianus</i> | Native |
| Largescale sucker | <i>Catostomus macrocheilus</i> | Native |
| Mountain sucker | <i>Catostomus platyrhynchus</i> | Native |
| Carp | <i>Cyprinus carpio</i> | Introduced |
| Chiselmouth | <i>Acrocheilus alutaceus</i> | Native |
| Northern pikeminnow | <i>Ptychocheilus oregonensis</i> | Native |
| Longnose dace | <i>Rhinichthys cataractae</i> | Native |
| Speckled dace | <i>Rhinichthys osculus</i> | Native |
| Redside shiner | <i>Richardsonius balteatus</i> | Native |
| Peamouth | <i>Mylocheilus caurinus</i> | Native |
| Small mouth bass | <i>Micropterus dolomieu</i> | Introduced |
| Largemouth bass | <i>Micropterus salmoides</i> | Introduced |
| Bluegill | <i>Lepomis macrochirus</i> | Introduced |
| Black crappie | <i>Pomoxis nigromaculatus</i> | Introduced |
| Channel catfish | <i>Ictalurus punctatus</i> | Introduced |
| Brown bullhead | <i>Ictalurus nebulosus</i> | Introduced |
| Pacific lamprey | <i>Lampetra tridentata</i> | Native |
| Western brook lamprey | <i>Lampetra richardsoni</i> | Native |

Source: ODFW (1989)

from FEIS-June 2000). Special status fish species in the John Day River basin include Mid-Columbia steelhead (Federal Threatened), Bull trout (Federal Threatened), Interior redband trout, westslope cutthroat trout, and pacific lamprey (Federal Sensitive). Information on population trends and distribution has focused primarily on anadromous salmonids, and to a lesser extent on resident salmonids and warm water game species. Native, non-game species have received even less attention. It is presumed that activities designed to benefit anadromous and resident salmonids will be advantageous to these species which have evolved under similar environmental conditions.

Efforts to correct fish habitat degradation and promote restoration have been pursued in the past several years in response to concerns about declining fish populations. Recent planning efforts directed through the Northwest Power Planning Council's Columbia River Basin Fish and Wildlife Program generated the Columbia Basin System Planning Salmon and Steelhead Production Plan-John Day River Sub-Basin (ODFW 1990). The John Day River Subbasin Plan and the Columbia River Anadromous Fish Restoration Plan (CRITFC 1996) established spring chinook salmon and summer steelhead production goals and objectives for the John Day subbasin (see Table 2-N, reprinted below from FEIS-June 2000). Under the Wild Fish Management Policy (OAR 635-07-525), spring chinook salmon and summer steelhead are managed exclusively for wild fish production (ODFW 1990). An amendment to the Columbia River Basin Fish and Wildlife Program, known as the Strategy for Salmon (Collette and Harrison 1992a,b), called on resource management entities to implement measures designed to rebuild Columbia Basin anadromous fish populations. Subsequent to the Strategy for Salmon, the BLM adopted PACFISH (USDA-FS and USDI-BLM 1995), which was designed to

Table 2-M. Periodicity of Steelhead and Chinook Salmon Life History in John Day River.

| Periodicity of steelhead and chinook salmon life history in the John Day River (ODFW 1983) | | | | | | | | | | | | | |
|--|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|
| SPECIES | LIFE HISTORY STAGE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEPT | OCT | NOV | DEC |
| SUMMER STEELHEAD | Adult Migration | █ | | | | | | | | | | | |
| | Adult Spawning | | | █ | | | | | | | | | |
| | Egg Incubation | | | █ | | | | | | | | | |
| | Juvenile Rearing | █ | | | | | | | | | | | |
| | Smolt Migration | | | | █ | | | | | | | | |
| SPRING CHINOOK SALMON | Adult Migration | | | | █ | | | | | | | | |
| | Adult Holding | | | | | | █ | | | | | | |
| | Adult Spawning | | | | | | | | █ | | | | |
| | Egg Incubation | █ | | | | | | | | █ | | | |
| | Juvenile Rearing | █ | | | | | | | | | | | |
| | Smolt Migration | | | | █ | | | | | | | | |
| FALL CHINOOK SALMON | Adult Migration | | | | | | | | | █ | | | |
| | Adult Spawning | | | | | | | | | | █ | | |
| | Egg Incubation | █ | | | | | | | | | | | |
| | Juvenile Rearing | | █ | | | | | | | | | | |
| | Smolt Migration | | | | █ | | | | | | | | |

halt the degradation and promote restoration of riparian areas. Additionally, efforts by private landowners in the John Day basin have also contributed to restoring watersheds and fish habitat. Pacific lamprey and a small run of fall chinook salmon also inhabit the John Day River. Although much less is known of these runs, restoration efforts designed to protect and restore habitat for spring chinook salmon and summer steelhead will benefit these species, as well as native resident species in the John Day River system.

Fish Distribution

The John Day River supports one of the few remaining wild runs of spring chinook salmon (*Oncorhynchus tshawytscha*) (Lindsey et al. 1986, OWRD 1986, Quigley and Arbelbide 1997) and summer steelhead (*Oncorhynchus mykiss*) (Quigley and Arbelbide 1997, OWRD 1986) in the Columbia Basin, providing approximately 1,800 miles of spawning habitat for summer steelhead and 117 miles for spring chinook (ODFW 1997). Table 2-M illustrates when and how salmon and steelhead use the river.

The lower (RM 0 to 109) and middle (RM 109 to 212) subbasins (Segments 1, 2, 3, and 4) function primarily as a migration corridor for anadromous salmonids. This portion of the basin accounts for an estimated 6 percent of the steelhead production in the John Day basin and a small run of fall chinook salmon (OWRD 1986). The upper mainstem (RM 212 to headwaters) produces an estimated 18 percent of the spring chinook salmon and 16 percent of the summer steelhead in the John Day basin (OWRD 1986). Increasing population trends for spring chinook salmon are reported for the upper mainstem John Day River. This increasing trend has been attributed to management and restoration implemented over the last few decades (ODFW 1997). The South Fork subbasin (Segments 10 and 11) produces approximately 7 percent of the summer steelhead in the John Day (OWRD 1986). The North Fork and Middle Fork subbasins (Segments 6, 7, 8, and 9) produce approximately 82 percent of the spring chinook salmon and 73 percent of the summer steelhead population in the John Day (OWRD 1986). There has been no sport fishing of spring chinook salmon since 1977, and steelhead have been limited to the catch-and-release of 'wild' fish from 1996 to the present. Steelhead production takes place in the tributaries and headwaters of the river, mostly outside the river corridor.

Several species of resident salmonids inhabit the John Day River. Redband trout occur throughout the John Day River. The primary habitat is found in the upper subbasins and tributaries. Hatchery supplementation with rainbow trout has occurred in the past, but the ODFW no longer releases hatchery fish in streams associated with the John Day River. Two subspecies of cutthroat trout, Yellowstone and Westslope, are found in tributary streams of the upper John Day River. Yellowstone cutthroat trout were introduced in the 1900s and have not been stocked since that time (ODFW 1989). The Westslope cutthroat trout is native to the North Fork and upper mainstem John Day. The

Table 2 -N. Average Annual Production Goals for Spring Chinook Salmon and Summer Steelhead in John Day Basin

| Species | Sport and Tribal Harvest Estimate | Natural Reproduction Escapement Estimate | Total Escapement Goal | Average Escapement 1989-1998 |
|-----------------------|-----------------------------------|--|-----------------------|------------------------------|
| Spring Chinook Salmon | 1,050 | 5,950 | 7,000 | 2,310 |
| Summer Steelhead | 11,250 | 33,750 | 45,000 | 8,370 |

Source: ODFW (1990)

current distribution of these species is confined to headwater tributaries in the upper mainstem and North Fork subbasins (Duff 1996). Bull trout occupy habitat in the upper mainstem John Day subbasin, North Fork subbasin, and Middle Fork subbasin. The primary habitat occurs upstream of Camas Creek in the North Fork subbasin, upstream of Big Creek in the Middle Fork subbasin, and upstream of Canyon Creek in the upper mainstem John Day River subbasin (ODFW 1996). Winter distribution in the North Fork includes Segments 6 and 7, downstream to Wall Creek, with one documented sighting as far downstream as Rudio Creek in 1999 (Unterwegner 1999).

Game Fish, Non-Native Habitat

The John Day River also supports an increasingly popular warm water sport fishery. A review of habitat requirements revealed the river exhibits good conditions for both smallmouth bass and channel catfish. Upon assurance that warm water predation on salmonids would be minimal, these species were introduced into the John Day River in the early 1970s (ODFW 1999). Today, smallmouth bass are distributed throughout the mainstem, from Tumwater Falls to Picture Gorge (Segments 1, 2, 3, and the lower portion of Segment 4) and in the North Fork from Kimberly to Wall Creek (RM 0 to RM 22, lower portion of Segment 6). Smallmouth bass have successfully filled a niche in the John Day River, which has developed into a nationally recognized sport fishery.

Botanical Special Status Species

The John Day River basin supports several special status plants normally associated with a specific, limited habitat. A Bureau Sensitive species, *Thelypodium eucosmum* (arrowleaf thelypody), is found within Segments 3, 4 and 6 and is suspected to occur in Segments 10 and 11. *Rorippa columbiae* (Columbia cress), another Bureau Sensitive species, has not been found on the John Day River, but is suspected to occur along the entire river since one of its known habitats is river gravels subjected to ephemeral flooding.

Mimulus jungermannioides (hepatic monkeyflower) is a Bureau Sensitive species found on moist rock walls in Segment 2 and is suspected to occur anywhere there are moist cliffs, particularly on the lower river. *Astragalus collinus* var. *laurentii* (Lawrence's milkvetch) is a Bureau Sensitive species found east of the Prineville District, but is suspected to occur within the basin. Another Assessment Species, *Juncus torreyi* (Torrey's rush), is found in Segments 2 and 3 and is suspected to occur along the entire river.

Wild and Scenic River Outstandingly Remarkable Values

Federal Wild and Scenic River

The National Wild and Scenic Rivers System was created by Congress in 1968 with the passage of the Wild and Scenic Rivers Act (PL 90-542). Its purpose is to preserve certain rivers with outstanding natural, cultural or recreational features in a free-flowing condition for the enjoyment of present and future generations. As of August 1996, the system included 151 rivers or sections of rivers in 35 states.

The Omnibus Oregon Wild and Scenic Rivers Act of 1988 (Public Law 100-558) designated several segments of Oregon rivers as Wild and Scenic, including three segments of the John Day River. Each of these segments has one of three sub-classifications assigned to it by Congress. These sub-classifications are:

Wild - Those rivers or sections of rivers that are free of impoundment and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and

waters unpolluted. These represent vestiges of primitive America.

Scenic - Those rivers or sections of rivers that are free of impoundment, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.

Recreational - Those rivers or sections of rivers that are readily accessible by road or railroad that may have some development along their shorelines and that may have undergone some impoundment or diversion in the past.

The Lower John Day River mainstem (Tumwater Falls upstream to Service Creek) is classified as Recreational..

Table 1-A (reprinted below from the FEIS-June 2000) shows designations on the Mainstem John Day River.

River Values

The Federal Wild and Scenic Rivers Act requires WSRs be managed to 'protect and enhance' the 'outstandingly remarkable and significant values' that Congress lists. Congress also encourages managing agencies to assess the designated river segment to identify any additional outstandingly remarkable and/or significant values the segment may contain.

| Table 1-A. Designations on Mainstem John Day River (Segments 1-5) | |
|--|--|
| Designation | Location |
| Segment 1 - Tumwater Falls (RM 10) to Cottonwood Bridge (RM 40) | |
| Federal Wild and Scenic | Tumwater Falls to Cottonwood Bridge |
| State Scenic Waterway | Tumwater Falls to Cottonwood Bridge |
| John Day River State Wildlife Refuge | Tumwater Falls to Cottonwood Bridge |
| Segment 2 - Cottonwood Bridge (RM 40) to Clarno (RM 109) | |
| Federal Wild and Scenic | Cottonwood Bridge to Clarno |
| State Scenic Waterway | Cottonwood Bridge to Clarno |
| Thirtymile/Lower John Day Wilderness Study | RM 46 to RM 83 |
| North Pole Ridge Wilderness Study Area | RM 85 to RM 95 |
| John Day River State Wildlife Refuge | Cottonwood Bridge to Thirtymile Creek (RM 84) |
| Segment 3 - Clarno (RM 109) to Service Creek (RM 157) | |
| Federal Wild and Scenic | Clarno to Service Creek |
| State Scenic Waterway | Clarno to Service Creek |
| Spring Basin Wilderness Study Area | RM 113 to RM 119 |
| Segment 4 - Service Creek (RM 157) to Dayville (RM 213) | |
| State Scenic Waterway | Service Creek to Parrish Creek (RM 170) |
| National Monument | John Day Fossil Beds National Monument (RM 195, 206) |
| Segment 5 - Dayville (RM 213) to Headwaters (RM 284) | |
| No Designations | |

Similarly, Oregon State law requires State Scenic Waterways to be managed to protect the 'Special Attributes' identified for those segments. However, since the John Day River was designated a State Scenic Waterway through the initiative process, the special attributes were never formally identified.

When designating the mainstem from Tumwater Falls to Service Creek a Wild and Scenic River, Congress noted in the Federal Register:
'The outstandingly remarkable qualities (values) include scenic, recreation, and fish.'

The majority of the land adjacent to the John Day River is primitive and undeveloped. The river flows through gentle farmland that is privately owned, as well as through rugged 1,000 foot deep basalt canyons that are predominantly public land. In the Dayville to Kimberly segment, it flows through the John Day Fossil Beds National Monument. In the area between Butte Creek and Cottonwood Bridge, the river flows through three Wilderness Study Areas that possess outstanding natural values. The river and the unconfined primitive recreation opportunities of the John Day Canyon in these areas are a major attraction for whitewater boaters and other recreationists. Besides the outstanding scenery, the area also offers outstanding bass and steelhead fishing, as well as excellent hunting, archaeological, paleontological, geological and historic values. The river offers whitewater boating opportunities, ranging from 1 to 5 days, during the spring months of April, May, and June.

In the resource assessment for the John Day Wild and Scenic River, the BLM found wildlife, geological, paleontological, and archaeological and historical values to be outstanding; and botanical and ecological values as significant (see Table 1-E, reprinted below from FEIS-June 2000)).

ICBMP Proposed Decision and FEIS

The ICBMP used broad-scale aquatic restoration priorities to identify the broad-scale restoration priorities of subbasin and to provide context for finer-scale restoration priorities and approaches. The Lower John Day Subbasin, which includes the river corridors for Segments 1, 2 and 3, received a High Priority for Broad-Scale Aquatic, Economic, and Biophysical Restoration. On a finer-scale, ICBMP identifies some A1 and A2 subwatersheds because of the urgency to secure habitats in the short term to support attainment of long-term broad-scale restoration objectives. One finer-scale watershed, an A2, was identified within the Wild and Scenic River corridor of Segments 1, 2, and 3. It is at the confluence of Bridge Creek and the John Day River at RM 135.

Table 1-E. Outstandingly Remarkable and Significant Values for Lower Mainstem John Day River

| River Value | Congressional Values | Additional or Upgraded Values Identified by BLM |
|----------------------------|--------------------------|---|
| Scenery | Outstandingly Remarkable | |
| Recreational Opportunities | Outstandingly Remarkable | |
| Fish | Outstandingly Remarkable | |
| Wildlife | | Outstandingly Remarkable |
| Geological | Significant | Outstandingly Remarkable |
| Paleontological | Significant | Outstandingly Remarkable |
| Archeological | Significant | Outstandingly Remarkable |
| Historical | Significant | Outstandingly Remarkable |
| Botanical | | Significant |
| Ecological | | Significant |

However, none of the BLM-administered land in this A2 subwatershed is within the Federal Wild and Scenic River corridor (ICBMP Proposed Decision, pp. 96, 113,126).

Element #3 - Limiting Factors Analysis

Watershed Characteristics at the Landscape Scale

Geological Provinces of the Entire Basin

The John Day Basin (HUC #170702) has a complicated geologic history that defines the complex and diverse geologic character of the basin. These rocks include masses of oceanic crust, marine sediments, a wide variety of volcanic materials, ancient river and lake deposits, and recent river and landslide deposits. Distribution of the basin's major geologic units has largely been controlled by the structural evolution of the basin.

Lava flows and volcanic ash, sandstone, and shale deposits more than 250 million years old comprise the earliest rock formations in the John Day basin. More than 65 million years ago, during pre-Tertiary time, sediments and volcanic rocks of the oceanic crust were contorted, uplifted, and eroded. Roughly 54 to 37 million years ago, a series of widespread volcanic eruptions produced the lava, mudflows, and tufts of the Clarno Formation. As this activity waned, new eruptions in the area of the present day Cascade Range began depositing thick layers of volcanic ash, which resulted in the John Day Formation. Extensive deposits of ancient mammals, leaves, and petrified woods have been preserved in volcanic ash within these formations. During a period approximately 19 to 12 million years ago, the region (along with much of northern Oregon, southern Washington and western Idaho) experienced volcanic eruptions that resulted in a series of flood basalts known collectively as the Columbia River Basalt Group. Much of the modern landscape of the basin is still highly influenced by these lava flows, which are more resistant to erosion than the older John Day and Clarno formations. Sometime after these basalt flows blanketed the region, fine-grained volcanic sediments of the Mascall Formation were deposited locally atop the basalts. At around 10 million years ago, the eruptions ceased and the processes of erosion and faulting continued to alter the landscape. The Rattlesnake Formation, a thick sequence of sand and gravel, was deposited in the ancestral John Day Valley. An east-west fault zone, which includes the John Day fault, probably controls the location of the John Day River upstream of Picture Gorge.

The John Day basin includes portions of two major physiographic provinces: the Deschutes-Columbia Plateau and the Blue Mountains. The Deschutes-Columbia Plateau Province is a broad upland plain formed by floods of molten basalt overlain with wind-deposited loess. In contrast, the Blue Mountains Province is a diverse assemblage of older sedimentary, volcanic, and metamorphic rock that was uplifted, tilted, and faulted to form rugged hills and mountains. These two physiographic provinces roughly divide the basin in half near Service Creek. The mountainous upper basin lies to the south and east, and the plateau-like lower basin is to the north and west. The Blue Mountain anticline, a broad up-arching of the earth's crust, forms part of the divide between the John Day basin and Columbia River tributaries to the north.

The Blue Mountains Province is one of Oregon's most physiographically diverse regions, containing mountains, rugged hills, plateaus cut by streams, alluvial basins, canyons, and valleys. The present day landscape and river morphology is highly influenced by landslides that develop when softer rock layers erode. The area downstream from Picture Gorge illustrates this characteristic. Many alluvial stream bottoms and adjacent bench-lands are suitable for irrigated agriculture. In contrast to the upper basin, the lower basin is a plateau of nearly level to rolling, loess-covered Columbia River basalt that is deeply dissected by the John Day River and its tributaries.

Basin Morphometric Variables

Drainage Pattern

Segments 1 and 2 exhibit a Trellis drainage pattern. This is common in geologic provinces with alternating bands of hard and soft strata, such as the lava flows and volcanic ash of the Deschutes-Columbia Plateau physiographic province. In Segment 3, where the forested headwaters exhibit more dendritic drainage patterns, the geologic composition of the area is more uniform. Deep layers of Clarno formation ashes extend toward the headwaters upstream near Service Creek where the Picture Gorge Basalts replace the ash. As a consequence, the drainage pattern of the watershed alternates between trellis and dendritic patterns.

Elevation and Slope

In Segment 1, the river elevation rises from 270 feet to 520 feet above sea level, and the canyon walls rise to 1,600 feet above sea level. In Segment 2, the river elevation rises from 520 feet to 1,380 feet above sea level, and the canyon walls rise to 2,600 feet above sea level. Canyon slopes in this segment are extreme, often exceeding 70 percent. In Segment 3, the river drops from 1,640 feet above sea level to 1,380 feet above sea level, and the canyon walls rise to around 3,500 feet above sea level. The canyon wall slopes are similar to Segment 1 (35 to 70%), except for one section between RM 119 and RM 126, where the slopes can vary from 50 to 90 percent.

Average slope (obtained from initial and final elevation) varies among the segments. Segment 1 has an average slope of 0.16 percent. Segment 2 has an average slope of 0.23percent. Segment 3 is the flatted reach with an average slope of 0.10 percent.

Hydrography

The Prineville District BLM is currently in the process of updating and completing the spatial and tabular hydrography information. This effort is part of a state-wide 'Hyd-Update' process. As accurate spatial information about watercourses is obtained, it is sent to the Pacific Northwest Regional Hydrography Framework Clearinghouse. The Clearinghouse spatial database project is an inter-agency effort to develop a common system, data model, and standards for referencing surface water bodies and watercourses. The Clearinghouse data model provides a common hydrographic foundation upon which individual agencies may build and maintain their own hydrologic and fisheries databases. When the 'Hyd-Update' process is complete, spatial morphometric variables such as drainage density, stream order, total stream miles, and flow duration and season will be available to supplement WQRP analysis.

Rainfall in Upper and Lower Elevation Areas

The climate in the John Day basin ranges from sub-humid in the upper basin to semi-arid in the lower basin. Mean annual temperature is 38°F in the upper basin, to 58°F in the lower basin. Throughout the basin, actual temperatures vary from sub-zero during winter months to over 100° F during the summer. Seventy percent of the precipitation falls between November and March. Only 5 percent of the annual precipitation occurs during July and August. The upper elevations receive up to 50 inches of precipitation annually, and 12 inches or less fall in the lower elevations. The average frost-free period is 50 days in the upper basin and 200 days in the lower basin.

According to the state climatologist, the Northwest experiences 20- to 25-year cycles between wetter than average years or mostly dry years. The dry years tend to be warm, and the wet years cool. The years from 1975 to 1994 were a very dry period; the entire state saw two significant droughts and 10 consecutive dry years.

Intensity, duration, and frequency of precipitation for Oregon are illustrated by isopluvials in NOAA Atlas 2 published in 1973. Segment 1 is the lowest segment of the river, and receives less rainfall than the upper two segments. For this lowest segment, a 24-hour storm that contributed 0.048 inches per hour or 1.15 total inches of rainfall would be considered a 2-year precipitation event. A 24-hour storm contributing 0.094 inches per hour for or 2.25 total inches of rainfall would be considered a 100-year precipitation event.

According to the Gilliam County Soil Survey, the average number of days with more than 0.1 inches of precipitation is 32 for Condon and 48 for Arlington. The heaviest 1-day rainfall on record was over 2 inches in Arlington on December 22, 1964.

The table below is based on visual estimates.

Dominant Land Vegetation Condition

Vegetation

Oosting (1956) discusses vegetation in terms of plant communities and how they are affected by landscape and climate, referring to classifiable plant communities as ecological sites. Ecological sites are grouped according to specific physical characteristics that differ from other kinds of land in the ability to produce a distinctive kind and amount of vegetation (such as potential vegetation). Potential vegetation is a function of soil, parent material, relief, climate, flow regime (for riparian communities), biota (animals), and time (time for the biotic community to approximate a dynamic equilibrium with soil and climate conditions) (USDA NRCS 1997). Ecological sites along the John Day River can be broadly categorized into four basic divisions according to the topographic position that they occupy: riparian, riverine terrace, upland, and forest-woodland.

Riparian Areas

The riparian zone is the area that normally receives some degree of inundation (or saturated soil conditions) during the growing season (for more information refer to U.S. Army Corps of Engineers 1987 and USDI-BLM 1993). In most of the John Day River, the majority of the riparian zone is flooded during part of the growing season and dry during mid to late summer. There are several riparian ecological sites that have distinct potential plant communities. Some of these sites have potential for dense riparian plant communities. In areas where the soils are not developed enough to moderate the annual wet-dry cycle, vegetation is either lacking completely or restricted above the normal high water line to plants such as service berry, hackberry, mock orange and

Table G-1. Total Inches Precipitation Received in 2-Year and 100-Year Events Over 6-Hour and 24-Hour Durations

| Duration | 2-year precipitation event (total inches) | 100-yr. event (total inches) |
|-----------------|--|-------------------------------------|
| 6-Hours | | |
| Segment 1 | 0.65 | 1.55 |
| Segment 2 | 0.70 | 1.60 |
| Segment 3 | 0.75 | 1.65 |
| 24-Hours | | |
| Segment 1 | 1.2 | 2.3 |
| Segment 2 | 1.25 | 2.65 |
| Segment 3 | 1.5 | 2.8 |

Source: maps in the NOAA Atlas 2 (1973).

various annual and perennial grasses and forbs. The areas where soils are developed and well-drained have more shrubs that are traditionally considered riparian, such as willow and alder. Where water flow is slow or where saturated soil conditions last longer into the growing season, sedges and rushes occupy more of the plant composition.

The BLM currently uses several techniques for monitoring riparian conditions on the John Day River. One technique is the Proper Functioning Condition (PFC) ratings, which have been done by a BLM interdisciplinary team for most river segments (see PFC ratings in individual river segment descriptions later in the chapter). An inventory of willow communities along the river in Segments 2 and 3 was completed in 1981 and 1995 (USDI-BLM 1996a). Willow communities expanded from unmeasurable in 1981, to 15.56 river bank miles (35.84 acres) in 1995 (results by allotment are presented in Appendix L in the Record of Decision). Photopoint monitoring occurs at 51 randomly selected sites along river Segments 1, 2, 3, 10 and 11. Photos are taken at 1 to 5 year intervals. Results of this monitoring show variations depending on site potential and water flow, but overall, where riparian-oriented management has been implemented, vegetative structure, density and diversity have increased (results by allotment are summarized in Appendix L in the Record of Decision; examples are shown in Appendix M of the FEIS). In 1990, prior to implementation of most riparian-oriented management, an additional 329 photopoints were established at 1/4 mile intervals along public land portions of the river.

Riverine Terrace

Riverine terraces are formed from abandoned floodplains. When the John Day River channel eroded, the water table dropped and the floodplain soils drained. Due to lack of subsurface water, vegetation on the abandoned floodplain changed to more xeric plants, such as sage brush and annual grasses. Leopold and Vita-Finzi (1998) documented riverine terraces of similar ages throughout broad geographic areas and correlated them with climate cycles. Depositional periods were wet, or were periods of small rainfall events. Erosional periods were either dry or periods of large, infrequent storms. Two and, in many cases, three such deposition and erosion cycles are represented by remnant terraces in stream and river valleys throughout the semi-arid western United States. The latest erosional event (since about 1860) could have been intensified by land use activities that increased the susceptibility of the basin to erosion, disrupting the hydrological function of the watershed. The period of adjustment that follows channel downcutting includes widening and development of a new floodplain within the confines of the eroded channel.

The riverine terrace includes the primary terrace immediately adjacent to the river, as well as any secondary or tertiary terraces above. Depending on the subsurface water regime, the zone is more or less a transition between riparian and upland vegetation. The vegetation on these (typically) deeper soils is sagebrush, annual grasses, Great Basin wild rye, a mix of perennial bunchgrass and forb species, and western juniper.

Upland

The upland zone is often characterized by steep slopes with shallow soils on ridges, south and west-facing slopes, and deeper well-drained soils on the north and east-facing slopes. The upper layer of soil is sometimes bound by a biological soil crust consisting of algae, fungi, mosses and lichens. Plant communities may include scattered junipers and low shrubs, such as sagebrush and snakeweed, with an herbaceous layer of cheatgrass and cold season grasses including bluebunch wheatgrass and Idaho fescue.

Formal inventories of the upland vegetation were completed in 1974 (range surveys) and 1982 (ecological site inventories). The range surveys determined the amount of

harvestable forage, and the ecological site inventories determined the condition class of vegetation (see discussion below). The results of both inventories are presented by allotment in Appendix L in the Record of Decision. Monitoring includes photopoints and species composition measurements using such sampling techniques as line intercept, Daubenmire and nested frequency. There are 117 monitoring sites in pastures that are partially within the WSR boundaries. Results show variations, depending on site potential and climate; overall, where management has been applied, conditions have improved (results are summarized by allotment in Appendix L in the Record of Decision).

Forests and Woodland

Higher elevation sites have greater effective precipitation and cooler temperatures. These factors, combined with parent material, slope, and time can produce deeper soils which, in turn, may allow for the growth of larger trees. Half of the basin's uplands are forested. On the southerly aspects, there are ponderosa pine-mountain mahogany/elk sedge-Idaho fescue communities. Steep north-facing slopes support Douglas fir/elk sedge communities. Western juniper occur throughout these communities (USDI-BLM 1991c).

Ecological Condition and Trend

The condition of vegetative communities of the John Day River has been improving due to the efforts of private landowners and local, tribal, state, and federal agencies. Vegetative condition refers to the similarity of a site with an 'undisturbed' ideal. Vegetation condition and trend is a concept created out of succession concepts pioneered by Clements near the turn of the century and elaborated on by others (Smith 1989). The model predicted that all effects of abusive grazing or drought (changes in the vegetative community away from the undisturbed ideal, stable state or climax) could be reversed by reduced grazing or increased precipitation (Westoby et al. 1989). In spite of these concepts being challenged at first by plant ecologists, range managers have, until recently, ignored the controversy (Smith 1989). A second concept on plant succession, called 'multiple stable states' or 'state and transition' model, has recently gained acceptance (Quigley and Arbelbide 1997). This model recognizes that a site may be capable of supporting numerous stable vegetative communities. This new model recognizes relatively stable groups of species that change after a threshold of tolerance has been exceeded (Laycock 1991, Friedel 1991). The results of this change persist, in spite of removal of the forces which caused the change. For example, in a stable sagebrush-bunchgrass community where heavy livestock grazing has occurred for many years, the bunchgrass component may have been removed, thereby allowing sagebrush to occupy the vacated site (Laycock 1991). This produces a new stable state dominated by sagebrush. Although livestock may be completely removed, the community will remain in this new stable state.

To date, the 'state and transition' model is assumed to be the most accurate model for arid and semi-arid ecosystems. Where water is less limiting, the Clementsian model is thought to be the more accurate representation (Quigley and Arbelbide 1997). Inventory, monitoring and research techniques vary depending on the model assumed to be operable (Westoby et al. 1989). Data interpretation also varies widely, depending on the model used as the underlying concept of ecosystem processes. For example, in the past, climax was thought to be the most productive state and early seral the least productive. Recent studies have shown little or no correlation between production and seral state (Tiedeman et al. 1991, Frost and Smith 1991). Climax was thought to provide the best wildlife habitat, but wildlife are more likely to respond to stand structure than to species composition (Smith 1989). The lower John Day basin range conditions and trends were inventoried in the late 1970s and early 1980s, at a time when the "state and transition" model was not a recognized model. The results of the inventory are presented in Appendix L of the Record of Decision by allotment. In interpreting the data,

it is important to remember that a “low seral” ecological status does not imply that there are necessarily opportunities for improvement to “mid seral” or “high seral” status through changes in grazing management alone (Friedel 1991).

Riparian areas are one example of where the Clementsian model is still thought to be operable (Quigley and Arbelbide 1997). The BLM technical reference 1737-7 (USDI-BLM 1992a) describes the procedure for inventorying riparian conditions. So far, in the John Day basin, seven different site types have been identified: basalt ledge/cliff, colluvium, cobble/gravel bar, terrace edge, non-riparian terrace, alluvial fan, and hill. Potential vegetation communities vary not only with each site type, but also with topographic position within a site type (that is, whether the plant community is covered by water at river flows of 15,000 cfs, 2000 cfs, or 200 cfs). For example, basalt cliffs do not produce the same vegetation communities as areas of alluvial fan. Similarly, sites with free water in August, but covered by 5 feet of water in April, support a different vegetative community than sites with free water in April and dry soils in August (see FEIS-June 2000, Appendix M, photos 11-14). The rates of successional change could vary within and between site types as well. With respect to river management, resource objectives and monitoring standards must take into account the differences in site potentials.

The increase in the amount of woody riparian vegetation along the river (see USDI-BLM 1996a, monitoring studies presented in Appendix L in the Record of Decision, and before and after photo sequences in Appendix M in the FEIS) indicate vegetation is increasing in density and diversity on sites with potential to support vegetative communities. The plant communities along the John Day River express a broad range of potentials, ranging from sagebrush flats to ponderosa pine forests, from basalt cliffs adorned with toe-holds of moss and monkey flowers, to riparian soils with willow and alder thickets. Some areas within the river floodplain have conditions that inhibit development of plant communities. Examples are gravel bars, which can wash away and reform several times a year, depending on flooding patterns; and ice flows that can shear off established woody plants at ground level. Where management has been implemented that meets the physiological needs of plants, vegetative communities are coming into balance with the potential of the site.

Noxious Weeds

‘Noxious’ is a legal classification rather than an ecological term. Plants that can exert substantial negative environmental or economic impact can be designated as noxious by various government agencies. The single greatest threat to the native rangeland biodiversity and recovery of less than healthy rangelands and watersheds is the rapidly expanding invasion of noxious weeds (Asher 1993). Both forestland and rangeland are being invaded by noxious weeds at an accelerated rate. Noxious weed encroachment reduces the potential of forest and rangeland to support grazing timber production, wildlife use, and viewing by displacing native plant species and reducing natural biological diversity; degrading soil integrity, nutrient cycling, and energy flow; and interfering with site-recovery that allow a site to recover following disturbance (Quigley and Arbelbide 1997).

The weeds of most concern in the John Day basin are diffuse, spotted and Russian knapweeds; Dalmatian toadflax; yellow starthistle; Scotch thistle; purple loosestrife; rush skeletonweed; leafy spurge; poison hemlock; and medusahead rye. Weeds of special concern are those beginning to occupy very small niches with just a few plants along the high water line, and small patches on islands (mainly diffuse knapweed and Dalmatian toadflax) that could spread very rapidly. Also, small infestations of Russian knapweed and dalmatian toadflax are becoming more prevalent on the upper, sheltered alluvial flats. This is especially noteworthy for riparian areas below the confluence of Thirtymile Canyon at RM 84. In the Clarno area, medusahead rye is prevalent in the burned areas

on the west side of the river, north and south of Highway 219. It is also prevalent in the Murderer's Creek drainage, a tributary of the South Fork of the John Day River. Diffuse knapweed is found along the road right-of-way, south of Clarno. Russian knapweed is prevalent in the Clarno and Bridge Creek areas, and has been found in numerous small patches on alluvial flats. Dalmatian toadflax has also been observed on these flats and up slope areas, particularly below Thirtymile Canyon. The thistles (Scotch, bull and Canada) and poison hemlock commonly occur at the small tributaries near and in riparian areas. Yellow starthistle has been found in several locations in the Clarno area and is especially prevalent in the upper Bridge Creek area near Mitchell. It is also prevalent around the Columbia River near Biggs and the Horn Butte ACEC, an area north and east of the John Day/Columbia River confluence. Leafy spurge is found in Grant County in the upper watersheds (Fox Valley and Cottonwood Creek) of the North Fork of the John Day. Four sites were found and treated in 1995, and 18 sites were found and treated between Monument and Spray in 1996. A very serious threat is noted in the recent increase of perennial pepperweed in the Bridge Creek drainage.

Federal and state laws require certain actions be directed at managing noxious weeds. In large part, the 'invasion of alien plants into natural areas' and the crowding 'out of native flora and fauna has been stealthy and silent, and thus, largely ignored' (Cheater 1992).

Fire

Modern fire suppression and recent fire management plans have greatly altered natural fire frequency and intensity. Fire has changed, and sometimes drastically, the species composition, vegetative diversity, and ecosystem structure of much of the Pacific Northwest (Norris 1990). Although varied across the landscape, the interval of natural fires ranged from 15 to 25 years in the John Day basin. For ponderosa pine forests east of the Cascade mountain range, the historic fire frequency has been documented to be as little as 5 years (Agee 1990, 1993). Many plants that occur in the John Day basin, such as ponderosa pine and numerous grasses, are adapted to fire and have thick bark, buds protected from heat-induced mortality, and fire-stimulated flowering or sprouting parts. Without periodic fire, these species will decline in number and condition. Species not adapted to a fire ecology, such as the western juniper and sagebrush, are also present in abundance, responding to the fire suppression management policy.

Flows

The John Day River basin drains nearly 8,100 square miles of an extensive interior plateau covering central and northeastern Oregon. Elevations range from about 265 feet at the confluence with the Columbia River to over 9,000 feet in the Strawberry Range. Land forms in the basin range from plateaus in the northwest to glaciated alpine peaks in the southeast. The basin includes portions of the Deschutes-Columbia Plateau and the Blue Mountains physiographic provinces.

Average annual discharge of the John Day River into the Columbia River is slightly more than 1.5 million acre-feet. Due to variations in yearly weather patterns, the total annual discharge has varied between 1 million and 2.25 million acre feet. As is typical of free flowing rivers in semi-arid environments, the annual range of flows for the John Day River is variable. At McDonald Ferry, the peak flow during the October through September water year typically is over 100 times greater than the lowest flow during the same water year. Peak flows can vary as much as 300-700 percent from year to year. The flow variations within the water year and from year to year can be illustrated by displaying flow levels over the most recent 10-year period for which data is available.

Large fluctuations in flow over the course of a year, and from year to year, are products of variable weather and the free-flowing condition of the John Day River. The bedload materials in the river channel now consist of large gravels, cobbles and boulders. During large flow events, the bedload is moved and deposited downstream, either as part of a new gravel bar or eventually as part of the sediments in the Columbia River. When the bedload is deposited in mid-channel, hydrologic forces are exerted against river banks, causing more lateral expansion, adding more sediment and gravel to the system, and decreasing water quality. Overall, the John Day River can be characterized as a system dominated by geologic and geomorphic processes that can, at times, introduce large amounts of sediment into the system. These sediments are typically deposited in downstream reaches of the basin or flow into the Columbia River system.

This process has some implications for many different aspects of the WSR outstandingly remarkable values. The widening of the channel has contributed to the heating of the water through exposure to air and sunlight and, therefore, resulted in elevated water temperatures. Channel widening has removed vegetation along the river banks and continues to reduce reestablishment where the widening processes are still active.

The North Fork John Day is listed by ODEQ as water quality limited for habitat modification and temperature. In this condition, the North Fork does not meet PACFISH pool frequency management objectives. Because the North Fork contributes 60 percent of the flow to the mainstem John Day, the influence of the North Fork on temperature and, therefore, fisheries is significant. Converse to the North Fork, the basin drainage area between Service Creek and McDonald Ferry gaging stations contributes only 13, 9, and 1 percent of the flow during July, August, and September, respectively, to the mainstem John Day. This exemplifies the limited influence that flows in the lower basin have on water quality and quantify.

Ground Water

During the summer months (approx. July to September), groundwater provides much of the base flow to the Lower John Day River. Although ODEQ has listed the lower river as water quality limited for temperature, other water quality constituents such as total phosphates, biochemical oxygen demand, and fecal coliform could also become limited during late summer when flows are the lowest and water temperatures are the greatest (Cude 2000).

Water Rights

Two types of water rights exist on the public lands: federal water rights, which consist of reserved water rights that originate under Federal law; and water rights, which are acquired pursuant to State water law.

All waters in Oregon are publicly owned, so users must obtain water rights from the Oregon Water Resources Department (OWRD) to use waters under ground, in a lake, or flowing in a stream. This principle of prior-appropriation is the foundation of water law in

Table G-2. Principal Aquifers in John Day River System

| Aquifer | Square Miles | Rock Type |
|---|---------------------|---|
| Columbia Plateau aquifer system | 1679 | Basalt and other volcanic-rock aquifers |
| No Principal Aquifer | 930 | N/A |
| Miocene basaltic-rock aquifers | 238 | Basalt and other volcanic-rock aquifers |
| Volcanic- and sedimentary-rock aquifers | 162 | Basalt and other volcanic-rock aquifers |
| Pacific Northwest basin-fill aquifers | 132 | Unconsolidated sand and gravel aquifers |

(Source: USGS Principal Aquifers of the 48 Contiguous United States 1998)EPA web site

Oregon. Water rights are attached to the land where they were established. Water may only be legally diverted if it is used for a beneficial purpose without waste. The OWRD is responsible for administering state water laws and ensuring the wise use and conservation of water. State waters must be used for beneficial purposes at least once every five years or a right is forfeited. Water rights in the John Day Basin are assigned for consumptive use, instream flow rights, and maintenance of Federal and State Scenic Waterways.

The Oregon Water Resources Commission is responsible for setting policy and making long-range plans for use and control of the state's water resources. Obtaining a water right requires application and permit issuance through the OWRD. Additional water right permits for consumptive uses are issued based upon the availability of water to satisfy the permit. In 1993, OWRD began determining water availability using a model called the Water Availability Resource System. This model is based on an 80 percent exceedence value for stream flows within segments by month (80 percent of the time flow meets or exceeds this level). Available water is equal to the 80 percent valueless current authorized use, less the state determined scenic flow requirements (Diack flows), less any instream water rights. This means new water right permits would only be issued in months where a surplus exists after all current uses, Diack flows, and instream water rights are satisfied. No surplus water is available during the irrigation season on the John Day River, so OWRD has ruled that no additional water rights will be issued within the basin for the period from May to October.

Consumptive Use

Consumptive use occurs when water is removed from the stream and used for purposes such as irrigation or mining. Water in the John Day Basin has been used for these purposes since the early 1860s (OWRD 1986). Competition for limited river water increased as population and acres under cultivation increased in the basin. Established water uses were adjudicated by four court decrees; Cochran Creek and its tributaries in the North Fork subbasin (1910), Cherry Creek and its tributaries (1922), Bridge Creek and its tributaries in (1937), and the remainder of the John Day Basin (1956). These adjudications resulted in the legal assignment of rights in these basins.

Since the 1860s, about 4,500 rights have been established for 6,200 cfs flow. Subsequent to that time approximately 800 rights that account for 3,600 cfs have been canceled. Sixty percent of historical water right appropriations were assigned between 1860 and 1920. A moderate increase in water rights allocation occurred from 1920 to 1970, with a larger increase occurring during the 1970s. Recently, the number of applications for water rights has been declining. Table 2-1 (reprinted below from FEIS-June 2000) summarizes current rights by cfs and use by subbasin.

The total water diversions permitted for the basin account for 76 percent of the basin's average annual discharge of 1,475,000 acre feet. Actual consumption is less than the permitted rights. The USGS Water Use Report of 1990, reported that 37.17 Mgal/day were being withdrawn from the Lower John Day Sub Basin. Of this 37.17Mgal/day, 5.47 Mgal/day were groundwater withdrawals. Basin discharge is adequate to satisfy all water rights on an average annual basis, even in critically low flow years. However, because of the wide variation in seasonal distribution of runoff, there is insufficient flow during the late summer to satisfy all the water rights when they are most needed (OWRD 1986).

As mentioned earlier, the counties have planned and zoned private lands adjoining the west bank of the river as Exclusive Farm Use to protect agricultural uses from encroachment by incompatible uses and to provide tax incentives to assure that

Table 2-I. Summary of Existing Water Rights for the John Day Basin by Cubic Feet Per Second and Beneficial Use

| Beneficial Use | Water Rights in Cubic Feet Per Second (CFS) | | | | | | Total |
|--------------------------|---|-----------------|----------------|--------------|--------------|--------------|----------------|
| | Lower John Day | Middle Mainstem | Upper Mainstem | North Fork | Middle Fork | South Fork | |
| Agriculture | | | 0 | | | | 0.0 |
| Commercial | | | | 3.7 | | | 3.7 |
| Domestic (lawn & garden) | 0.2 | 0.2 | 0.2 | 0.1 | | | 0.7 |
| Domestic | 0.1 | 1.3 | 1.6 | 1.2 | 1.8 | 0.1 | 6.1 |
| Fish Life | 0.1 | 0.7 | 12.8 | 2.0 | | | 15.6 |
| Fire Protection | | 0.0 | 0.2 | | 0.1 | 0.0 | 0.3 |
| Industrial/Manufacturing | 0.8 | | 7.3 | 2.1 | 2.1 | | 12.3 |
| Irrigation | 229.0 | 495.5 | 927.0 | 291.5 | 88.5 | 97.5 | 2,129.0 |
| Livestock | 4.0 | 0.6 | 0.9 | 1.7 | 0.8 | 0.3 | 8.3 |
| Mining | | 30.8 | 40.5 | 202.2 | 49.5 | | 323.0 |
| Municipal | 15.4 | 5.4 | 9.3 | 3.9 | 3.1 | 5.1 | 42.2 |
| Power | | | 13.9 | 25.0 | 0.8 | | 39.7 |
| Quasi-Municipal | 2.5 | 2.8 | | | | | 5.3 |
| Recreation | 0.2 | | 0.0 | 2.0 | 0.0 | | 2.2 |
| Temperature Control | 3.3 | | | | | | 3.3 |
| Wildlife | | 0.0 | 0.0 | | | | |
| Other | 9.6 | 6.8 | 4.3 | 0.7 | | | 21.4 |
| Total | 265.2 | 544.1 | 1,018.0 | 536.1 | 146.7 | 103.0 | 2,613.2 |

Source: OWRD 1986

agricultural land is retained in agricultural use. In the lower valley bottoms, this zoning means that irrigation withdrawal from the John Day will continue. On the other hand, water use associated with subdivisions and major partitions will minimal if any.

Incidental, short-duration water uses for recreation site maintenance or wildlife guzzler refills do not require water rights. These uses do not involve continuous water removal that would have a rate or duty, much like the rate or duty assigned to a consumptive or instream water right, associated with it. Irrigation accounts for over 69 percent (by volume) of all water used in the basin. While mining accounts for 12 percent of allocated water rights in the basin, USGS (1985, 1990, 1995) compilation reports on water availability found no reported data for water use related to mining activity.

Water rights associated with BLM-managed lands could result in the consumption of approximately 0.8 percent of the total John Day River Basin water for irrigation (OWRD 1986). Currently, about 50 percent of water allocated to BLM-managed lands is available for irrigation (0.4 percent of basin irrigation water). The other 50 percent is retained for instream uses.

Instream Leases

Instream flow rights are water rights reserved instream for the benefit of fish, wildlife, recreation, and water quality. Three state agencies are authorized to request instream water rights. The Oregon Department of Fish and Wildlife may request instream rights for public uses relating to the conservation, maintenance, and enhancement of aquatic and fish life, wildlife, and their habitat. The ODEQ may request instream rights to protect and maintain water quality standards established by the Environmental Quality Commission. The Oregon State Parks and Recreation Department may request instream rights for public uses related to recreation and scenic attraction. As of June 2000, there were 41 instream water rights and 17 pending applications for instream rights. These rights are regulated much like consumptive water rights and are assigned according to priority.

The federal government is not allowed to apply for or hold state instream water rights under State of Oregon water laws. Instead, they may lease or purchase an existing right for conversion to an instream right to be held by the OWRD for the people of Oregon. In order to improve instream flows and in order to protect and enhance river values associated with these rights, the BLM may: 1) consult and coordinate with state agencies that can apply for and hold an instream water right, or 2) acquire land with a consumptive water right and transfer that right to an instream right to be held in trust by the OWRD.

State and Federal Recommended Flows

The Oregon Supreme Court ruled in 1988, that before authorizing any new diversion of water from or above a State Scenic Waterway, or from a tributary to it, the OWRC must find that the needs of the State Scenic Waterways are met. The OWRD identified minimum flows necessary to maintain river values in the John Day River State Scenic Waterway (OWRD 1990) (Table 2-J, reprinted below from the FEIS-June 2000). For example, the OWRD found that a minimum of 1,000 cfs is needed for rafting and drift boating, and a minimum of 500 cfs is needed for canoes, kayaks, and other small water craft these. These minimum flows are referred to as the "Diack" flows. Table 2-J quantifies natural flow at 50 percent and 80 percent exceedence and total consumptive use and storage for the various designated State Scenic Waterway segments. Net flow at the exceedence levels quantifies resultant river flows after consumptive uses and storage are subtracted. The scenic flow represents the minimum waters level in the river for recreational uses, fish flows, optimum and minimum quantify flows needed for anadromous fish species in the river. Instream flow rights are also quantified and represents water for which there is a valid water right that has been designated for instream use. Table 2-J shows that in all segments recommended minimal and optimal instream flow for anadromous fish, as described by Lauman (1977), are not met during the critical summer time period; however, this is consistent with observations that in the lower river (below Service Creek) anadromous fish and resident salmonids are not highly concentrated in the summer season.

The right of the federal government to John Day River water was established in 1988 when segments of the river were designated Wild and Scenic by the U.S. Congress. In this case, the managing federal agencies were granted title to the water necessary to maintain the purposes for which the river segments were designated. The priority date of this right becomes the date of the particular WSR designation. The purpose of these federal water rights is similar to the state Diack flows, in that they are necessary to protect the outstanding, remarkable or significant values identified in the legislation designating a WSR.

About 50 percent of BLM's existing water rights is maintained instream through non-use or instream lease agreements with OWRD. According to current management practices

Table 2-2 Monthly natural stream flow estimates, consumptive use estimates, net stream flow estimates, and State Scenic Watersway Flow values (QWRD); recommended minimal an optimal instream flow for anadromous fish; and instream water rights at or near the John Day River (RM21 and RM 156.5), (all figures represent cfs)
 (Note: This table is a modification of Table 2-2 in FES-June 2000; it includes only data between McDonald Ferry and Service Creek, which is the area addressed by this WQRP.)

| Stream | Category | Jan | Feb | Mar | Apr | May | June | July | Aug | Sept | Oct | Nov | Dec | |
|--|---|------------------|------|------|-------|-------|-------------|-------|-------|-------|------|------|------|-----|
| John Day River Mile 21 McDonald Ferry | Natural (50%) | 1250 | 2440 | 3250 | 4860 | 5056 | 2700 | 218 | 340 | 271 | 380 | 542 | 940 | |
| | Natural (80%) | 626 | 1050 | 1680 | 2920 | 3026 | 1440 | 470 | 246 | 194 | 283 | 393 | 513 | |
| | C.U. & Storage | 16.7 | 23.9 | 32.8 | 157.6 | 324.4 | 292.8 | 265.6 | 192.6 | 128.5 | 51.4 | 12.1 | 14.7 | |
| | Net Flow (50%) | 1233 | 2416 | 3217 | 4702 | 4729 | 2407 | 449 | 147 | 142 | 328 | 530 | 925 | |
| | Net Flow (80%) | 609 | 1026 | 1647 | 2762 | 2699 | 1147 | 204 | 53 | 65 | 231 | 381 | 498 | |
| | Scenic Flow | 500 | 1000 | 2000 | 2000 | 2000 | 2000 | 500 | 500 | 500 | 500 | 500 | 500 | 500 |
| | Fish Flow (opt.) | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 |
| | Fish Flow (min.) | 390 | 390 | 390 | 390 | 390 | 390 | 390 | 390 | 390 | 390 | 390 | 390 | 390 |
| | Instream Right | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| | John Day River Mile 156.5 Service Creek | Natural (50%) | 1130 | 2060 | 2860 | 4610 | 4770 | 2410 | 652 | 312 | 260 | 385 | 508 | 859 |
| Natural (80%) | | 556 | 953 | 1506 | 2710 | 2860 | 1270 | 420 | 242 | 203 | 280 | 384 | 473 | |
| C.U. & Storage | | 12.5 | 16.5 | 25.8 | 100.5 | 192.2 | 189.6 | 230.3 | 176.6 | 119.3 | 50.1 | 9.6 | 11.3 | |
| Net Flow (50%) | | 1118 | 2043 | 2834 | 4510 | 4578 | 2220 | 422 | 136 | 141 | 335 | 498 | 848 | |
| Net Flow (80%) | | 544 | 936 | 1480 | 2610 | 2668 | 1080 | 190 | 66 | 84 | 230 | 374 | 462 | |
| Scenic Flow | | 500 | 1000 | 2000 | 2000 | 2000 | 2000 - 1000 | 500 | 500 | 500 | 500 | 500 | 500 | 500 |
| Fish Flow (opt.) | | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 |
| Fish Flow (min.) | | 390 | 390 | 390 | 390 | 390 | 390 | 390 | 390 | 390 | 390 | 390 | 390 | 390 |
| Instream Right | | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 |

Source: Laumen (1977)

a BLM water right maintained instream through non-use or an instream lease agreement would manage the full rate as an instream flow from the original BLM point of diversion downstream to the next water right point of diversion, without guarantee of any instream flow below the next point of diversion. If, however, the BLM water right was transferred to OWRD to hold in trust, the OWRD would manage a portion for a specific allocation, to be determined by OWRD, as an instream flow right from the original BLM point of diversion downstream to the mouth of the John Day River.

Rangeland Health and Productivity

The Secretary of the Interior approved and began implementation of the Oregon/Washington Standards for Rangeland Health and Guidelines for Livestock Grazing Management (USDI-BLM 1997a) in August 1997. These standards and guidelines are intended to form the basis for all livestock grazing management occurring on all BLM-administered lands. They provide specific goals to be addressed in grazing permits and leases, and Final John Day River Plan and EIS identify an array of indicators to consider in designing monitoring plans used to track progress in achieving standards.

Currently, there are 52 grazing allotments partially within the mainstem John Day WSR corridor, and 12 grazing allotments partially within the South Fork John Day WSR corridor. Few pastures and no allotments lie completely within the corridor. The following occurred in the John Day River basin by June 1999:

- Allotment evaluations were conducted on 92 allotments within the basin, encompassing 91 percent of the public land river bank miles within the designated WSR segments.
- Grazing management adjustments occurred in cooperation with private landowners on 31 of the 64 grazing allotments in the WSR segments (Segments 1, 2, 3, 10 and 11).
- Grazing management was in place for protecting and enhancing ORVs for 184.9 public land river bank miles (94%) in the WSR corridor.
- Planning processes were underway for protecting an additional 5.4 public land river bank miles (3%).
- Significant vegetative improvement is occurring on allotments where riparian-oriented grazing management was implemented. An inventory of willow communities was conducted on Segments 2 and 3 of the river in 1980 and 1995. The willow communities on those segments were not measurable in 1980. By 1995, there were 15.56 river bank miles of willow communities (USDI-BLM 1996a). Although much of the John Day River is not suitable for willow growth, further expansion of willow and other riparian plant communities is expected to occur with continued upland and riparian restoration throughout the basin. (See Appendix L in the Record of Decision for a summary for those studies near the river and Appendix M of the FEIS for photographic examples.)

Roads

Roads can alter the amount of impermeable area, altering infiltration and the flow of surface and subsurface water. The relative impervious nature of roads causes surface runoff to bypass longer, slower subsurface flow routes. In effect, roads expand the stream network, serving to intercept runoff and provide a surface flow route to streams at road crossings. Sediment generated from road surfaces is then hydrologically connected to the stream network. Changes in the hydrologic regime caused by roads

are usually the most pronounced where road densities are the greatest and where road segments are immediately adjacent to or cross streams. Roads segments that constrict floodplains also contribute to potential increases in peak flows. Changes in hydrologic processes resulting from roads are as long lived as the road systems themselves. (USDA 2000).

High road densities are often associated with timber harvest. The upper elevations of the John Day River basin are important for timber-production. There is no significant timber harvest in Sherman and Gilliam counties. (See discussion in Land Use Patterns, Lumber and Wood Production. See also discussion in Dominant Land Vegetation, Forests and Woodland)

The BLM road densities in Segments 1, 2 and 3 are minimal, and do not significantly contribute to increased sedimentation or expansion of the drainage network. However, examining road densities at a landscape scale identifies sources of sedimentation and locations where roads are contributing to expansion of the drainage network. Analysis of the Summit Fire on the North and Middle Fork John Day River Subbasins and Watershed Analysis of Deer and Murderer's Creek on the South Fork John Day River quantify road density problems.

Road densities exceed Forest Plan goals in some of the forested headwaters of the John Day basin. Road densities in the Summit Fire on the Middle and North Fork John Day drainages are 4.8 miles per square mile in the summer range, and 3.9 miles per square mile in the winter range. (USDA 1997)

Equivalent Roaded Area (ERA) is an indexed dimensionless measure of watershed risk based on current watershed disturbance. It is a disturbance model that incorporates some impacts of logging, roading, grazing, and wildfire on watershed function. Post fire ERA as a percent of subwatersheds exceed the threshold of risk in six out of seven subwatersheds. Cumulative watershed risk includes risk of increased sedimentation, increased peakflow, decreased channel stability, and other factors that adversely affect proper functioning condition. (USDA 1997)

In general, a road-density-to-drainage-density ratio of >0.5 indicates a high potential for drainage network expansion to occur via the road system. On the South Fork John Day tributary of Deer Creek, road-density-to-drainage-density ratios increase with elevation, and exceed 0.5 for the majority of the watershed. In the South Fork John Day tributary Murderer's Creek, road-density-to-drainage-density ratios also increase with elevation. The upper watershed exceeds the 0.5 threshold. Road densities in the forested upper sixth field HUCs throughout the upper basin exhibit road densities, which have prompted restoration activities such as closing and rehabilitating roads. Although, road densities have not been identified as a problem in the lower subbasin, the affects of the elevated road densities in the headwaters indicate that road densities may be a limiting factor for the restoration of the lower segments. (USDA 2000)

Water Quality Parameters Driving Analysis—Temperature

Beneficial Uses Affected by Temperature Parameter

For stream temperature, the affected beneficial use is resident fish and salmonid fish spawning and rearing. Salmonid fish species require specific water temperatures at various stages of their fresh water life.

Applicable Oregon Water Quality Standard

The Oregon water quality standard [OAR 340-41-(basin) (6)] that applies to the John Day River from Tumwater Falls to the North Fork (this includes Segments 1, 2, and 3).

Standards applicable to all basins (adopted as of 1/11/96, effective 7/1/96) is: seven (7) day moving average of daily maximums shall not exceed the following values unless specifically allowed under a Department-approved basin surface water temperature management plan: 64 F (17.8 C); Rearing.

Basis for Listing

A stream is listed as water quality limited if there is documentation that the moving seven-day average of the daily maximums exceeds the appropriate standard. This represents the warmest seven-day period (commonly occurring in July or August) and is calculated by a moving average of the daily maximums. The time period of interest for rearing steelhead is April through June.

Section 303 (d)(1) requires that Total Maximum Daily Load (TMDLs) “be established at a level necessary to implement the applicable water quality standards with seasonal variations.” Stream temperatures vary seasonally and from year to year in the John Day. Stream temperature in the Lower John Day is dependent on flow levels, which also vary seasonally and from year to year. Water temperatures are cool during the winter months, and exceed the standard during the summer months when flow is lowest and solar radiation is the highest.

Segments 1, 2 and 3 were listed based on two ODEQ sites at RM 39.5 where 20 of 25 and 20 of 27 summer values exceeded the standard each year between water years 86 and 95 with a maximum of 83. Two BLM sites near Service Creek and Spray also reported seven day maximums of 71.1 F and 78.3 F in 1993.

Data Available to Address Temperature Standard

All forks of the John Day River are listed as water quality limited for the parameter of temperature. Along the Mainstem, ODEQ records instantaneous water temperatures for the Oregon Water Quality Index at Service Creek and Cottonwood Bridge. However, no sites monitor the seven-day moving average water temperature between Clarno and the lower downstream reach. In addition, only one two-month record has been established at Clarno. Accurate monitoring of restoration activities will require more water temperature monitoring on Segments 1, 2, and 3. More monitoring could also explicate the natural variations in water temperature.

Current trends in the seven-day maximum reading of water temperature indicate that annual seven-day maximum occurs between the last week in July and the first week in August. The graph below indicates the range of the annual seven-day maximum readings from BLM water temperature data.

Conditions Affecting Parameters (such as shade, etc.)

Stream temperature is driven by the interaction of many variables. Energy exchange may involve solar radiation, long wave radiation, evaporative heat transfer, connective heat transfer, conduction, and advection. While interaction of these variables is complex, some are much more important than others. The principal source of heat energy for streams is solar energy striking the stream surface. Exposure to direct solar radiation will often cause a dramatic increase in stream temperatures. Highly shaded streams often experience cooler stream temperatures due to reduced input of solar energy. Surface stream shade is dependent on riparian vegetation type and condition. The ability of riparian vegetation to shade the stream throughout the day depends on vegetation height and the vegetation position relative to the stream. For a stream with a given surface area and stream flow, and increase in the amount of heat entering a stream from solar radiation will have a proportional increase in stream temperature. (BLM Little River Water Quality Restoration Plan, Draft 2000)

Shade

Riparian vegetation, stream morphology, hydrology, climate and geographic location influence stream temperature. While climate and geographic location are outside of human control, the condition of the riparian area, channel morphology and hydrology can be altered by land use activities.

Geographic Location

Geographic characteristics of streams such as elevation and aspect influence water temperature. Elevation affects stream temperature in several manners. Air temperatures are cooler at higher elevations. The cooler air results in less convection of heat from the air to the water. Higher elevations receive more snowfall. This snow pack is a source of cool water elevations through out the spring and early summer. (see Fig. 1 Range of Seven-Day Maximum Water Temperatures and Elevation by River Mile for the Mainstem John Day River at the end of this Appendix)

Stream aspect determines the duration of solar energy input daily and throughout the year. Stream segments extending east and west are directly exposed to sunlight longer than stream segments extending north and south, because the topography interrupts the path of the sun for more of the daylight hours. One major change in the aspect of the John Day occurs near Clarno. Upstream of Clarno, the river flows to the west. Downstream of Clarno, the river flows to the north. There is no site-specific analysis of how this change in aspect affects water temperatures. However, riparian vegetation generally has a higher influence on water temperatures than aspect.

Vegetation, Climate and Topography

Removal of riparian vegetation, and the shade it provides, contributes to elevated stream temperatures. Climatic factors dictate the vegetative potential as well as the risk associated with restoration practices such as seeding. Topography influences vegetative site potential because it regulates the sunlight regime and soil development. Topography also affects the shape of the channel, substrate of the valley, and water regime of riparian areas.

John Day Riparian Vegetation

A properly functioning riparian area performs various functions:

Dissipation of Stream Flow Energy: Riparian vegetation functions to reduce the velocity of water at high flow\ periods by increasing the hydraulic resistance to flow and therefore reduces the energy and erosive capacity of the water (Schumm and Meyer 1979). Riparian areas also function to dissipate energy associated with surface runoff by dispersing and slowing the surface runoff from agricultural land areas and other up slope areas thereby decreasing the water's erosive potential. The ability of a site to dissipate stream flow energy is unique to each site.

In most of the John Day River the majority of the riparian zone is flooded during part of the growing season and dry during the mid to late summer. There are several riparian ecological sites that have distinct potential plant communities. Some of these sites have potential for dense riparian plant communities, others do not. In areas where the soils are not developed enough to moderate the annual wet - dry cycle, vegetation is either lacking completely or restricted, above the normal high water line, to plants like service berry, hackberry, mock orange and various annual and perennial grasses and forbs. These plants have only a limited ability to dissipate stream flow energy, filter sediment and nutrient, or store and recharge groundwater.

Where management has been implemented which meets the physiological needs of plants, vegetative communities are coming into balance with the potential of the site. In areas where soils are developed and well-drained, more shrubs occur which are traditionally considered 'riparian', such as willow and alder, and some sites historically supported Cottonwoods. Willow communities along the river have been increasing (see BLM, 1996a, monitoring studies presented in Appendix L) Where water flow is slow or where saturated soil conditions last longer into the growing season, sedges and rushes define more of the plant composition.

The riverine terrace includes the primary terrace immediately adjacent to the river, as well as any secondary or tertiary terraces above. Depending on the subsurface water regime, the zone is more or less a transition between riparian and upland vegetation. The vegetation on these (typically) deeper soils is sagebrush, annual grasses, Great Basin wild rye, a mix of perennial bunchgrass and forb species, and western juniper.

Riverine terraces are formed from abandoned flood plains. When the John Day River channel eroded, the water table dropped and the flood plain soils drained. Vegetation on the abandoned flood plain changed because of lack of subsurface water to more xeric plants, such as sagebrush and annual grasses. These terraces are no longer available to the River during bankfull stage to dissipate stream energy or filter sediment and nutrients. The latest erosional event which developed these terraces could have been exacerbated by land management activities which increased the susceptibility of the basin to erosion and disrupted the hydrological function of the watershed. The period of adjustment which follows down cutting of a channel includes a widening of the channel and the construction of a new flood plain within the confines of the eroded channel.

Sediment and Nutrient Filtration: During high flow periods, much of the sediment load within the stream is the result of bank erosion from unstable streambanks. Riparian vegetation reduces the transport rate of sediment and nutrients by holding streambank soil intact via roots and also increases the hydraulic resistance to water at high flows. This, in turn, decreases water velocities while increasing sediment deposition within riparian areas. Sediment deposition is part of the process that builds and stabilizes streambanks. Nutrient filtering performed in riparian areas can help control agricultural non-point source pollution (Lowrance et al. 1985).

Store Water and Recharge the Groundwater Aquifer: Infiltration of surface runoff is high in properly functioning riparian areas due to the dissipation and slowing of overland flow which allows more water to seep into the riparian soils and subsequent groundwater aquifer. This allows for some storage of water during periods of high runoff that is discharged during later, drier periods and serves to maintain stream flow. Shade-Producing Capability - Riparian vegetation produces shade according to size and extent of vegetation, and proximity to the stream. Black cottonwood, when mature, will produce more streamside shade than the mature, low growing willow now present within the John Day River corridor. Shade presence along stream banks reduces the input of heat energy from solar radiation into the stream. Reduced input will decrease the amount of stream temperature fluctuation experienced during the summer. This leads to reduced summer maximum water temperatures. Elevated stream temperatures affect fish, salmonids in particular, in two important ways: 1) body metabolism in cold-blooded species is controlled by environmental temperatures, the warmer the environment (i.e. the water) the higher the metabolic rate. Salmonids such as trout, salmon and steelhead function optimally at lower environmental temperatures than warm water species, such as smallmouth bass, located within the John Day River. When water temperatures rise and the metabolic rate of salmonids increases, energy needs, even when at rest, increase. To compensate for this condition, the salmonid must consume more food or convert stored body reserves to energy. Either response increases the need for food and the expenditure of more energy in the search for more food. If high temperatures occur over a sufficient time mortality can be the result. Conversely, warm water species, such

as smallmouth bass, can be stressed when water temperatures drop below their optimum range, decreasing metabolism and thereby decreasing the amount of energy the fish has for evading predators, foraging, and reproducing. This condition can also lead to mortality if the condition persists for a sufficient period of time. 2) Oxygen-carrying capacity of water is lowered as temperature increases; therefore, the warmer the water, the less 'breathable' oxygen is available for fish to use. Higher water temperatures create higher environmental stress levels in fish and low oxygen levels over a sufficient period can lead to fish mortality. The specific level that is detrimental depends on species. For example, cold water fish species (such as trout and salmon) require more dissolved oxygen for survival than do warm water species (such as smallmouth bass). Therefore, an increase in stream temperature could be detrimental to salmon and trout while actually improving habitat for smallmouth bass.

Food Production Capability: Riparian areas are important nutrient cycling areas with respect to instream ecosystems. Riparian vegetation produces most of the detritus (such as dead leaves, plants, twigs, and insects) that supplies as much as 90 percent of the organic matter necessary to support aquatic communities (Campbell and Franklin 1979), or 54 percent of the organic matter ingested by fish in a large river (Kennedy 1977).

Net changes in aquatic conditions resulting from improved functionality of riparian sites would not be immediately detectable. Riparian influence in the river corridor is inversely proportional to the width of the river, i.e. the wider the river the less influence the riparian vegetation exerts on the river. As management continues, increases in riparian functionality will be observed as more riparian areas are treated with cottonwood outplantings and the trees planted previously grow and mature.

Segment 1 Riparian Vegetation

The vegetation types in Segment 1 are among the driest within the basin. The average yearly precipitation is 9 to 12 inches. The river elevation rises from 270 feet to 520 feet above sea level, and the canyon walls rise to 1,600 feet above sea level. Most upland soils are stony and well drained, and hill slopes tend to be steep (35% to 70%).

Segment 1 lies entirely within the Columbia Basin ecoregion (Oregon Biodiversity Project 1998). Upland plant communities have been described as "dry grass" and "dry shrub" in ICBMP (Quigley and Arbelbide 1997). The plant communities are generally dominated by bluebunch wheatgrass on south-facing slopes and Idaho fescue on north-facing slopes. Where sagebrush grows, it is usually low sagebrush or Wyoming big sagebrush. Some of the historic bunchgrass communities are now occupied by cheatgrass, Russian thistle, fiddleneck, snakeweed, and shrubs such as gray rabbitbrush. The most common noxious weed species in this segment are knapweeds and salt cedar.

Riparian soils tend to be highly stratified river alluvium that deposits material from upriver or side canyons (USDA-SCS 1964, 1977). The alluvial sources from further up the river tend to be silty and clayey, whereas material from side canyons is more silty and sandy soils mixed with gravel, cobble and boulders. Riverwash mainly consists of sand, well-rounded gravel, stones, and boulders, although varying amounts of silt and clay material may be present due to redeposition from cutbanks.

Riparian plant communities vary in Segment 1, due in large part to the variable ecological sites. The establishment and health of willows, sedges, and rushes depends greatly on the ecological site potential of any given location in a river segment (Appendix M of FEIS). Some areas that have received riparian-oriented management have developed dense stands of coyote willow, although natural forces (such as flooding, a mobile substrate, and ice flows) can have a retarding effect. Other locations have responded to riparian-oriented management with increased vigor and reestablishment of

sedge and rush communities. On other sites, however, no response has been detected. Future correlation is needed between the ecological site potential of any particular spot on the river and results of a monitoring study of that location. Photos 13 and 14 in Appendix M in the FEIS, taken at the mouth of Hay Creek in this river segment, illustrate variations in river flow between May and September.

The functionality of the riparian area in this segment was rated in 1997, using the Proper Functioning Condition Assessment method (USDI-BLM 1993, 1998c). The functional rating for Segment 1 was 'functional-at risk,' meaning the riparian zone is in a functional condition, but susceptible to degradation from significant natural events or excessive human-caused influences. The trend rating was 'upward,' which means the riparian area is improving in its overall condition.

The assessment found the riparian vegetation lacked in diverse age-class distribution and composition of vegetation. Plant species that indicate good riparian, soil-moisture-holding characteristics were well represented, but lacked continuity along the river to make this characteristic fully functional. In addition, this same lack of continuity existed with species that produce root masses capable of withstanding high flows. Also, there was a lack of vegetation cover present to protect banks and to dissipate flow energy during high water events. The riparian vegetation that is present exhibits high plant vigor. The PFC assessment is not designed to identify past causes of functional deficiencies in riparian areas, but to ascertain present functionality of the interaction among geology, soil, water, and vegetation. A particular rating is a product of human-caused influences (such as grazing and mining) and natural forces. In addition, the extent of future recovery hinges on management practices and ecological site potentials (Appendix M in FEIS).

Segment 2 Riparian Vegetation

Segment 2 annually receives an average of 11 to 15 inches of precipitation. The river elevation rises from 520 feet to 1,380 feet above sea level, and the canyon walls rise to 2,600 feet above sea level. Canyon slopes in this segment are extreme, often exceeding 70%.

Segment 2 lies within both the Columbia Basin and the Lava Plains ecoregions, with the break being near Butte Creek (Oregon Biodiversity Project 1998). The upland plant communities have been described by ICBMP as 'dry grass' and 'dry shrub,' with the 'cool shrub' type beginning at Butte Creek and progressing upstream (Quigley and Arbelbide 1997). Stiff sage communities become common on ridges. Sagebrush stands become denser on the hill slopes, and junipers form occasional, sparse stands in draws and on low terraces. An example of an increase in bunchgrass, on a riverine terrace site, is shown in Appendix M of the FEIS, Photos 23 and 24.

Riparian vegetation and soils are the same as those in Segment 1 (USDA-SCS 1964, 1970, and 1977). Two extensive willow surveys were completed on public land in this segment and Segment 3 in 1980 and 1995 (USDI-BLM 1996a). In Segment 2, *Salix exigua* (Coyote willow) increased from zero linear miles in 1980, to 9.50 miles in 1995, and the number of acres covered increased from zero to 22.69. Refer to Appendix L in the Record of Decision for a description of the willow increases on individual allotments in this segment. Examples of existing riparian sites are shown in Appendix M of the FEIS, Photos 1 through 12.

Functionality of the riparian area in Segment 2 was rated in 1997 using the Proper Functioning Condition Assessment (USDI-BLM 1993, 1998c). The functional and vegetation ratings were the same as Segment 1 (functional-at risk)(see Segment 1, Vegetation).

In 1992, due to a Farm Home Administration foreclosure, approximately 512 acres of land and 3 miles of west side river bank (RM 106 to RM 109), immediately downstream from the Clarno Bridge, were converted to public ownership. Grazing has not been authorized on the area since 1989. Unauthorized grazing was addressed with a fence on the east side of the river in 1996. The riverine terrace contains 232 acres of arable land with active water rights, of which 70 acres are currently in agricultural production.

Historical farming and grazing practices of the land adjacent to the river resulted in removal of the riparian vegetation. Bedload deposition has also occurred in the same general stretch of the river, causing lateral river channel movement. These situations have combined to create overall river bank conditions that have rapidly deteriorated in the last 15 years. Cut banks are extremely steep and high (up to 25 feet) in some areas. The areas most impacted have annual erosion approaching 20 feet per year. There has been limited natural recruitment and establishment of riparian vegetation (USDI-BLM 1996c). The meandering of the river could eventually remove the entire acreage of arable lands. It is unlikely that the eroding river banks would make any appreciable recovery without intervention. Resource concerns associated with the area include recreation, access, scenery, soils, fisheries and wildlife.

Segment 3 Riparian Vegetation

Segment 3 averages 11 to 15 inches of precipitation annually. The river drops from 1,640 feet above sea level to 1,380 feet above sea level, and the canyon walls rise to around 3,500 feet above sea level. Soils are generally a clay-loam type with interspersed areas of clay, gravel, and random basalt outcrops. The canyon wall slopes are similar to Segment 1 (35 to 70%), except for one section between RM 119 and RM 126, where the slopes can vary from 50 to 90 percent.

Segment 3 is entirely within the Lava Plains ecoregion (Oregon Biodiversity Project 1998). Upland plant communities have been described in ICBMP as “dry shrub” and “cool shrub” (Quigley and Arbelbide 1997). The vegetation communities are similar to Segment 1. Western juniper is scattered throughout the segment with dense stands occurring in some of the tributary drainages to the John Day River. The most common noxious weed species are diffuse, Russian and spotted knapweeds, yellow starthistle, and dense isolated stands of bull and Canada thistle.

The riparian vegetation and soils (USDA-SCS 1970) are also similar to Segment 1, with one exception; there appears to be an increasing amount of reed canary grass. This introduced species tends to outcompete native species, resulting in a monoculture and reduced habitat diversity. In addition, two extensive willow surveys were completed on public land in this segment and Segment 2 in 1980 and 1995 (USDI-BLM 1996a). In Segment 3, *Salix exigua* (Coyote willow) increased from zero linear miles in 1980, to 6.06 miles in 1995, and the number of acres covered increased from zero to 13.15. For a description of the willow increases on individual allotments in this segment, refer to Appendix L in the Record of Decision. An example of existing riparian vegetation on one of the main tributaries to the John Day River in this segment is shown in Appendix M, Photos 15 and 16.

The functionality of Segment 3 was rated in 1997 using the Proper Functioning Condition Assessment (USDI-BLM 1993, 1998c). The functional rating was “functional-at risk,” meaning the riparian zone is in a functional condition, but susceptible to degradation from significant natural events or excessive human-caused influences. The trend rating was “upward,” which means the riparian area is improving in its overall condition.

The assessment found that the riparian vegetation lacked in diverse age-class distribution and composition of vegetation. Plant species that indicate good riparian, soil-

moisture-holding characteristics were well represented, but lacked continuity throughout the segment to rate this characteristic fully functional. In addition, this same lack of continuity existed with species that produce root masses capable of withstanding high flows. Also, there was a lack of vegetation cover present to protect banks and to dissipate flow energy during high water events. The riparian vegetation that is present exhibits high plant vigor. (Appendix M of the FEIS)

Flow

Instream, Baseflows, Ground Water

The majority of water in the John Day Basin is derived from the upper watershed. As a result, water quantity and quality in the river below Kimberly at RM 185 are determined more by input from upper basin tributaries (such as the North Fork, South Fork and upper mainstem) than by inputs originating below Kimberly (OWRD 1986). Therefore, water quantity and quality has little opportunity to be influenced after entering the lower basin.

The flow regime affects the shape of the river channel, the ability of riparian sites to support vegetation, and the extent that recreationists can enjoy the river. For example, river flow affects water temperature, which has consequent effects on dissolved oxygen and the suitability and productivity of habitat for fisheries production.

Mean annual daily discharge is 2,103 cfs (Moffatt et al. 1990). During the summer months (approx. July to September) groundwater provides much of the base flow to the Lower John Day River. Natural flows in the summer months drop below 1000 cfs in July, and September base flows often drop below 250 cfs.

Flow levels are affected by weather, snowpack, rainfall, and water withdrawal.

Peak Flows

The annual water yield has shown multi-year cycles that generally follows state climatic wet-dry cycles. The 10-year moving average for annual discharge measured at McDonald Ferry peaked in the early 1920s at nearly 1.8 million acre-feet. It hit a low around 1940 at about 1 million acre-feet, and peaked again in the late 1950s at 1.8 million acre-feet. In the 1960s, it again hit a low near 1.2 million acre-feet.

Except for a few outliers, there seems to be a well defined linear relationship between peak flows at the McDonald Ferry (RM 21) and Service Creek (RM156) gaging stations. Linear regression of peak flows provided a best-fit line with a slope of approximately 0.95. This indicates that annual peak discharges at the Service Creek gaging station are, on average, approximately 95 percent of the peak discharge at McDonald Ferry gaging station. (Orth, 1998)

Incidence and Effect of Devastating Events

Several major flooding events have occurred within the John Day Basin within the century. The earliest historic flood listed in the stream-gage records for the John Day River occurred in 1894. The peak discharge for this flood was estimated to be 39,100 cfs at the McDonald Ferry gaging station (RM 21).

The 1964-65 storm consisted of three separate intervals of unusually high rainfall in Oregon, which took place in late December, early January, and late January. Only the first and last rainfall periods had a major affect on eastern Oregon. On the John Day River, discharge at the Service Creek gaging station (RM 156) was estimated to be 40,200 cfs on December 23, 1964. This December 1964 discharge is the largest

recorded historic flood on the John Day River. On January 30, 1965 the Service Creek station experienced another large peak of 38,600 cfs. In other areas of the basin, such as at the Monument gaging station on the North Fork of the John Day River, the late January peak exceeded the December peak.

A large flood also occurred on January 1, 1997, which discharged 35,400 cfs at the Service Creek gaging station. The cause of the 1997 flood was warm temperatures combined with a severe rain on snow event. (Orth 1998)

Water Velocities

Large flood events are part of the natural hydrologic processes, which form channels and mold landscapes. Shear stress on banks and submerged vegetation increase as water velocities increase. When the fluid mechanics create critical shear stress, substrate particles are dislodged. Substrate from the inside of a meander curve gets deposited on a downstream cobble bar. In the John Day, the large cobbles can rip up riparian vegetation and send tiny transplants down stream for regeneration.

Hydrologic Recovery

Flood events can scour deep pools, provide riparian areas with new genetic material, and recharge floodplains with nutrients and water. As time passes, the pools fill with sediment, the riparian areas diversify, and floodplains become reconnected with channel processes. Changes in channel morphology on the John Day River are in terms of geologic time.

Channel Morphology (Sediment)

Channel Geometry

There are no studies to reference the channel geometry of Segments 1, 2, and 3. Observations of BLM personnel have resulted in general conclusions about the channel geometry of the John Day River. Overall, the channel exhibits high width to depth ratios. High width to depth ratios contribute to elevated water temperature by reducing the depth of the water column and increasing the surface area exposed to solar radiation.

Bedload

There are no studies to reference the specific channel substrate parameters. Observations of BLM personnel have resulted in general conclusions about the channel substrate of the John Day River. The Lower John Day River substrate is primarily comprised of large cobble. Fine sediments supplied from upper watersheds are flushed out of the lower reaches of the John Day River. Lack of trapped fine sediments limits recovery of certain riparian species on some sites.

Improved erosion control measures on the dryland wheat fields across much of the lower watershed has reduced fine sediment delivery to the system. After the 1997 flood, area newspapers reported - 'most diversion ditches and level terraces in the Condon area held, but some broke under the pressure of accumulated water. A drive through the countryside will show water standing behind the many terraces and check dams constructed in and around field over the years to slow damaging run off of water and soil.'

Anthropogenic Influence on Parameters

Most water quality problems in the John Day Basin stem from historical mining and dredging, livestock grazing, cumulative effects of timber harvest and road building, and

water withdrawals (OWRD 1986, ODEQ 1988).

Existing cooperative and coordinated efforts will continue to contribute to increased water quantity and reduced introduction of sediment and other pollutants, and lower water temperature during warmer periods of the year.

Beyond cooperation and coordination, the BLM management can reduce water temperatures by affecting the limiting factors of flow and riparian vegetation.

Grazing

Grazing in Segment 1

Segment 1 contains 14 grazing allotments (see Map Plate 1 and Table 3-E). One allotment (#2597) continues into Segment 2. Public land acreage in allotments in this segment varies from 40 to 4,743 acres, and public land forage varies from 3 to 155 AUMs. There are approximately 29.6 river miles (59.2 river bank miles) in Segment 1, and about one-third of the river frontage is public land. For details regarding management of the allotments, refer to Appendix L in the Record of Decision.

Allotment evaluations have been completed for 11 of the 14 grazing allotments in Segment 1, and changes in grazing management have occurred on 8 allotments. The changes include moving grazing use from primarily grazing during the warm season (late spring and summer) to cool season grazing (winter or early spring) or exclusion of grazing in some cases. In addition, by limiting grazing to seasons where the river flow is high, the river serves as an effective barrier to the movement of cattle, promoting the growth of grazed vegetation. Previously, some riparian enclosure fences were rendered ineffective, because cattle from allotments on the other side of the river would simply wade across the river during the summer to graze on riparian vegetation supposedly protected by fences. (Photos 11-14 in Appendix M illustrate the differences in high and low flows in the lower John Day.) Riparian areas now fenced from uplands are not being grazed, whereas previously they were grazed by a neighbor's livestock.

Current grazing management practices were judged by a BLM interdisciplinary team to be appropriate for protecting and enhancing river values and water quality on 66 percent (12.7 miles) of the public river bank miles in segment 1.

Grazing in Segment 2

Segment 2 contains 16 grazing allotments. A portion of one allotment (#2597) continues into Segment 1. Public land acreage in allotments in this segment varies from 343 to 14,683 acres; public land forage varies from 6 to 789 AUMs. There are approximately 69.6 river miles (139.2 river bank miles) in this segment, almost 4/5 of which are on public land. For details regarding management of the allotments refer to Appendix L in the Record of Decision.

Allotment evaluations have been completed on all but four allotments in Segment 2, one of which has no active grazing. Grazing decisions have been awaiting implementation on three allotments (#2538, 2591 and 2619). Grazing management changes have occurred on 13 of the 16 allotments, emphasizing cool season grazing (winter or early spring) over warm season grazing (late spring and summer). As in Segment 1, limiting grazing to seasons when river flow is high promotes growth of grazed vegetation and enhances the river's ability to serve as an effective barrier to cattle movement.

Current grazing management practices were judged by an interdisciplinary team to be appropriate for protecting and enhancing river values on 98 percent (106.7 miles) of the

Table 3-E. Grazing Alternative Comparison, Segment 1 (Tumwater Falls to Cottonwood Bridge, 30 river miles)

Note: The Proposed Decision is underlined on this table.

| Allotment Number & Name | Current Management | | Alternative B Restricted Grazing | | Alternative C No Riparian Grazing | | | Alternative D No Grazing | | | | |
|-------------------------|---------------------|--------|----------------------------------|-------------------|-----------------------------------|----------|------------------|--------------------------|------------------|-----------|----------------|------|
| | Miles of River Bank | | Riparian Grazing | Required Actions | Required Actions | | Required Actions | | Required Actions | | | |
| | private | public | Mgt. | Miles of | Miles of | Miles of | Miles of | Fence | Fence | Fence | Acres Included | |
| | | | | Pvt/Pub | Pvt/Pub | Pvt/Pub | Pvt/Pub | Pvt/Pub | Pvt/Pub | Cancelled | Pvt | Pub |
| 2617 Emigrant Cn | 2.8 | 0.6 | 7 | <u>9.2, 5</u> | <u>a, 0.7 miles fence</u> | 2.8/0.6 | 34/7 | 0.6/0.1 | 10 | | 300 | 200 |
| 2604 Philippi | 1.0 | 0.0 | 2, 5 | <u>2, 5</u> | <u>a</u> | n/a | | 0.0/0.7 | 1 | | 0 | 40 |
| 2648 Hartung | 2.9 | 0.7 | 9 | <u>2, 5</u> | <u>a</u> | 2.9/0.7 | 35/8 | 0.0/3.7 | 13 | | 40 | 560 |
| 2594 Morehouse | 0.4 | 1.0 | 9 | <u>2, 5</u> | <u>a</u> | 0.4/1.0 | 5/12 | 0.5/0.3 | 3 | | 200 | 65 |
| 2555 Hoag | 0.3 | 1.0 | 9 | <u>2, 5</u> | <u>a</u> | n/a | | n/a | | | | |
| 2562 J Bar S | 0.0 | 0.9 | 1, 2, 5 | <u>2, 5</u> | <u>a</u> | 0.0/0.4 | 0/11 | 0.0/1.0 | 4 | | 0 | 120 |
| 2513 Big Sky | 5.4 | 1.2 | 1, 2, 5 | <u>2, 5</u> | <u>a</u> | 2.1/0.7 | 12/3 | 0.0/3.3 | 30 | | 580 | 680 |
| 2637 VO West | 1.4 | 0.3 | 1, 5 | <u>1, 2, 5</u> | <u>a</u> | 0.4/0.3 | 2/2 | 0.0/0.5 | 12 | | 30 | 160 |
| 2595 Morris | 3.0 | 1.5 | 1, 2 | <u>1, 2, 5</u> | <u>a, 0.7 miles fence</u> | 1.4/1.3 | 8/8 | 0.5/0.7 | 14 | | 100 | 440 |
| 2540 Persimmon | 1.1 | 0.0 | <u>8, 9</u> | same as existing | | n/a | | n/a | | | | |
| 2560 Baseline | 3.0 | 1.6 | 1, 2, 3 | <u>1</u> | <u>1.1 miles fence</u> | 0.4/0.7 | 3/9 | 0.0/0.5 | 5 | | 20 | 160 |
| 2598 Hay Crk | 3.1 | 1.7 | 1, 2, 3 | same as existing | <u>pursue exchange</u> | 1.6/1.2 | 10/7 | 0.0/2.5 | 8 | | 80 | 320 |
| 2520 Smith Point | 1.5 | 4.0 | 1, 2 | same as existing | <u>1.8 miles fence</u> | n/a | | 0.0/0.0 | 93 | | 200 | 2596 |
| 2597 Murtha | 7.0 | 4.2 | 1, 6 | <u>1, 2, 5, 6</u> | <u>a, 4.5 miles fence</u> | 6.3/2.8 | 80/36 | 1.8/1.0 | 99 | | 1680 | 3560 |
| unleased | 5.9 | 1.9 | n/a | | | | | | | | | |
| Totals | 38.8 | 20.6 | =59.4 | | 8.8 miles fence | 18.3/9.7 | 189/103 | 3.4/14.3 | 292 | | 3230 | 8901 |

1: exclusion
 2: spring
 3: summer
 4: autumn
 5: winter
 6: rotation
 7: season long
 8: no public land riparian area
 9: voluntary non use
 a: adjust the leases to confine grazing period, see Appendix L for greater detail.

public river bank miles in this segment. Implementation of grazing decisions resulting from this plan will enhance ORVs on the remaining 2 percent of the public river bank miles.

Grazing in Segment 3

Segment 3 contains 22 grazing allotments. Public land acreage in these allotments vary from 80 to 20,410 acres; public land forage varies from 3 to 1,020 AUMs. Approximately one-third of the 96 river bank miles are public land.

Allotment evaluations have been completed on all but two allotments (#2641 and #2649, neither of which include John Day River riparian areas). Allotment #2649 has public land within the WSR corridor, and #2641 has some private land and no public land in the corridor. Grazing management changes have occurred on 16 of the 22 allotments. The changes have reflected a move away from primarily warm season grazing (late spring and summer), to cool season grazing (winter or early spring) or exclusion in some cases. As in Segments 1 and 2, limiting grazing to seasons when the river flow is high promotes growth of grazed vegetation and enhances the river's ability to serve as an effective barrier to cattle.

Current grazing management practices were judged by an interdisciplinary BLM team to be appropriate for protecting and enhancing river values on 94 percent (30 miles) of public river bank miles in this segment. Implementation of grazing decisions resulting from this plan will enhance ORVs and improve water quality on the remaining 6 percent of the public river bank miles.

Effects of Grazing Systems

Some general information is available regarding impacts of different grazing strategies on riparian areas. However, after investigating grazing management strategies and techniques practiced on healthy riparian streams in Montana, Ehrhart and Hansen (1997) found that operator involvement was the magic bullet. 'We concluded ... that riparian grazing might be incorporated into each of the traditional grazing systems – except season-long - as long as the condition of the riparian zone itself remains of primary concern' (emphasis original). Management, not the system, is the key.

In reviewing impacts of various grazing strategies it has been noted that the most important aspect of an strategy, operator involvement and commitment to riparian recovery, is likely to vary amongst operators. As a consequence the level of riparian recovery has varied. Duff's study (1977) supports this by noting that "Positive habitat response achieved from 4 years of rest had been negated by six weeks intense livestock grazing" after a riparian exclosure fence was cut. Implementation of an 'appropriate' strategy without constant attention is bound to fail, whether the strategy is exclusion, total rest, or maximized use.

General information is presented below explaining probable results of grazing strategies or techniques commonly used within the John Day Basin. The information presented below (except where otherwise noted) is paraphrased from several documents which summarize experiments, observations and opinions regarding grazing in riparian areas, including Ehrhart and Hansen (1997), Elmore and Kauffman (1994), and Platts (1991).

Season of Use. One of the first steps to developing a riparian-oriented grazing system is determination of appropriate grazing seasons. Primary considerations include livestock behavior, response of plant communities and the degree of soil moisture on the site. Seasons are defined by growth stages in the annual growth cycle of native bunchgrasses. Early season runs from the beginning of growth in the spring to flowering. This corresponds to the period of highest river flow levels (see photos 11-14 in Appendix

M). Hot season runs from development of seeds to seed set and drying of vegetation. This corresponds to the period of quickly dropping river flow levels, during which the river ceases to act as an effective barrier to livestock movement. Late season runs from completion of annual life cycle, through the on set of fall rains, the development of next year's tillers and re-initiated photosynthesis. This corresponds with the lowest river flow levels and the gradual increase in flow associated with autumn. Dormant season runs from the drop in soil temperatures, which slows and eventually stops plant growth, to the increase in soil temperatures which allows plants to begin active growth. This corresponds to the period of rising river levels and ice flows.

Early Season (Spring) Use. Livestock are attracted to uplands by succulent upland vegetation while cool temperatures discourage cattle from loitering in the riparian zones. Much of the John Day River riparian zone is covered by water (see Appendix M, photos 11-14), so many of the riparian plants are ungrazed with early season use. Those plants that are available to livestock usually have sufficient soil moisture for regrowth following defoliation. Reduced grazing pressure on trees and shrubs is a typical result of early season use. Impacts on soil and banks depend on soil texture and soil moisture content. Much of the John Day River has riparian soils that are cobbly or sandy and are well drained. The opportunity for compaction and bank damage is limited on these soils.

Hot Season (Summer) Use. Livestock tend to remain in the riparian area due to high temperatures and low relative palatability of vegetation in the uplands. As waters recede, barriers to livestock movement (such as deep, flowing water, steep slopes or cliffs) can be circumvented, neutralizing the effect of pasture or allotment boundaries. Following defoliation there is less moisture available for regrowth and replenishment of carbohydrate reserves. Browse species (for example, willow and cottonwood) tend to become more preferred as herbaceous vegetation dries out or loses nutritional value. Hot season use, following the critical growing season of upland vegetation, may meet plant growth requirements if the intensity of management can be increased, such as regular herding, short grazing periods, or close monitoring of utilization levels. Soils are typically more stable at this time of year, so compaction and trampling is less of a problem if long periods of use are avoided.

Late Season (Fall) Use. Due to the palatability differences between dried upland vegetation and riparian shrubs and forbs, cattle will not be attracted to uplands unless cooler weather is accompanied by precipitation which stimulates cool season grass growth. As long as palatable herbaceous forage and offstream water is available and cool air pockets discourage livestock from loitering in lowlands, willow use should remain low. In the absence of precipitation, the relatively high protein content of shrubs and trees makes them attractive to livestock. For this reason, regular late season use on the John Day should be accompanied with close surveillance. While, young willow are particularly vulnerable to damage during late season grazing, mature stands of willow should not be affected. Herbaceous vegetation have completed their growth cycles and grazing should not affect plant development. If heavily grazed, the silt trapping properties of vegetation may be compromised (though the importance of this is under dispute, see Skinner 1998). Soils are usually dry and the probability of compaction and bank trampling is low.

Dormant Season (Winter) Use. When bottoms are colder than surrounding uplands, especially where south facing slopes are present, winter grazing can be an effective way to limit the time spent by livestock in riparian zones. Supplemental feeding well away from streams and offstream water developments will increase the effectiveness of winter grazing. Harsh winter storms, however, could encourage livestock to seek cover in riparian zones, allowing for rubbing and trampling damage. Herbaceous vegetation have no exposed growing points, so defoliation does little or no damage. Plants that are used have the entire growing season to recuperate. Grazing when soils are frozen is an

advantage on finely textured soils, however, in the John Day basin, few soils are finely textured and the majority of the winter is spent above the freezing level.

Season Long Use. Grazing throughout the growing season, livestock tend to congregate and loiter in riparian zones. Riparian zones provide convenient forage, water and cover for livestock. Overuse of riparian zones is possible even with low stocking rates. The availability of water allows for continuous regrowth throughout the grazing season and plants often are grazed numerous times in one year. If grazed heavily enough, carbohydrate reserves needed for dormant season respiration can become depleted and plants can lose vigor or die. Trampling damage, soil compaction and accelerated streambank erosion are likely.

Rotation Grazing. Rotation grazing systems were designed to meet the growth requirements of upland vegetation while allowing grazing to occur during periods when plants were sensitive to defoliation (Hormay, 1970). As long as the physiological needs of riparian species are known and taken into account, rotation grazing systems can be used to restore degraded riparian areas. Effects of grazing under a rotation system will mirror the effects described above for various seasons. The difference is that the effects will change from year to year depending on whether livestock are present in the spring, summer, fall or winter. Also, rotation systems often include periods of non-use for more than one calendar year. Rotation schedules vary in the number of pastures which are included in the rotation as well as the seasons which are included. Because of the variety of combinations available, effects on the riparian zone cannot be predicted without more information on the rotation system.

Livestock Distribution. Discouraging livestock from loitering in riparian zones is accomplished with a variety of techniques in addition to season of use. Offstream water has been shown to reduce the time cattle spend in riparian zones by as much as 90%. Other strategies include placing salt or mineral blocks over 1/4 mile from the target riparian zone; improving upland vegetation through proper management, burning or seeding; regular herding; selective culling of animals which linger in riparian zones; turning animals into a pasture at a gate far removed from the target riparian area; drift fences which prevent livestock from using the river as a travel corridor; and corridor fencing.

Livestock Exclusion. Livestock exclusion from a target riparian area can be achieved through construction of a fence which parallels the banks of the river, called a corridor. This strategy eliminates flexibility in the decision of whether to develop offstream water. With the riparian zone no longer accessible to livestock, alternative water sources must be developed. However, this strategy eliminates the impacts of livestock on soils and vegetation in and nearby the target riparian zone and allows the operator more flexibility when deciding how to graze the upland vegetation. With corridor fencing the uplands could, if grazed improperly, contribute to increased overland flow resulting in sediment loading of the water and riparian zone. Livestock impacts could be further reduced by elimination of grazing from an entire watershed.

The effectiveness of corridor fences determines the degree to which livestock continue to affect riparian resources once the project is implemented. Fences must be constructed so damage by floods is minimized and so the general public doesn't neutralize the effort through cutting fences or leaving open gates. Coordination with other land owners is also essential in determining corridor fence effectiveness. At low water, a neighbor's livestock can cross the river and graze a riparian zone otherwise excluded. Even on the same side of the river, if one neighbor's riparian zone is fenced and the other is not, fences leading down into the water on the land ownership boundary must be put up and taken down with variations in river flow levels. Otherwise, fences will be washed out by high water and a hole will allow livestock to penetrate at low water.

Constructing corridor fences over large sections of the river would require coordination among several landowners. Means for achieving cooperation could include interagency incentive programs and purchase of easements.

Agricultural Lands

Agricultural Use in Segment 1

In Segment 1, non-irrigated wheat production is the dominant agricultural use of this area, occurring on the plateaus outside of the river canyon. There are some privately owned irrigated fields, primarily used for pasture and hay production, along the river in this segment.

At approximately river mile (RM) 23, irrigated agriculture occurs on 8.7 acres of BLM-administered lands. This land is managed as part of an adjacent privately owned field. This field is located on the adjacent terrace, parallels approximately 1,650 feet of the John Day River, and is separated from the active flood plain by an access road. There are 0.22 cfs of water rights associated with this land.

Agriculture Use in Segment 2

In Segment 2, non-irrigated wheat production, the dominant agricultural use of this area, occurs on the plateaus outside of the canyon. Irrigated agriculture occurs along the terraces of the John Day River, primarily in the vicinity of Cottonwood Bridge, Butte Creek, and Clarno. Alfalfa hay is the most common irrigated crop grown along the river.

Segment 2 contains about 278.5 acres of public lands with water rights parallel to approximately 2.5 miles of the John Day River. These lands are associated with or adjacent to private agricultural lands. Activities include leased commodity production, riparian tree and shrub propagation and restoration, wildlife food and cover weed control, and non-use (Table 2-U reprinted below from FEIS-June 2000). About half of the leased area is used for alfalfa hay, and the other for specialty seed crops such as carrot, onion, coriander, or beans.

Water rights associated with these lands are limited to 1/40 cfs per acre or less, and total use is not to exceed 5 acre-feet per acre during the irrigation season. However, actual use generally falls below the limits, depending upon actual precipitation and crop type. Table 2-U shows estimated use for 1998.

Table 2-U. Estimated Public Agricultural Land Water Use in Segment 2 (1998)

| Location River Mile (RM) | Non-use/Instream (acre/cfs)¹ | Restoration/Enhancemen t (acres/cfs) | Lease (acres/cfs) | Total (acres) |
|---|--|---|------------------------------|--------------------------|
| RM 106.5 - 109.5 | 107.1/2.7 | 65/1.6 | 60/1.5 ² | 232.1 |
| RM 101.5 | 0 | 0 | 43/1.0 | 43 |
| RM 98.75 | 0 | 0 | 3.4/0.8 ³ | 3.4 |
| Total | 107.1/2.7 | 65/1.6 | 106.4/2.6 | 278.5 |

¹Approximate maximum potential water withdrawal based on 1/40 cfs per acre.

²Ten acres of a 70-acre lease retained for wildlife food and cover in coordination with ODFW.

³Recently discovered incidental agricultural use associated to private land agriculture production.

Agriculture Use in Segment 3

Agriculture is an important economic use of Segment 3. Hay is the primary crop grown in the cultivated fields along the river, which are irrigated with water drawn from the river.

Segment 3 contains approximately 97 acres of public lands with water rights (see Table 2-X, reprinted below from FEIS-June 2000)). These lands are adjacent to approximately 0.75 miles of the John Day River. Ninety five acres are leased for production, generally alfalfa and oat hay. Two acres are utilized for production of cottonwood trees for restoration purposes. Twenty-six acres are scattered parcels incorporated into private agriculture lands and are separated from the river by private property. Approximately 71.5 acres are subject to BLM imposed irrigation restrictions that require terminating irrigation when John Day River flows drop below 390 cfs at the Service Creek Gauging Station (USDI-BLM 1996d).

Using Ecological Sites to Assess Condition

Data Gaps

A complete and accurate condition assessment is an excellent way to assess condition and progress towards water quality standards. Several water temperature models were examined for use in this plan, such as BasinTempã, GIS Automated Shade Model from Siuslaw, the shadow model by Park, and others. Every model requires a GIS coverage that is currently unavailable. The most important layer for the condition of shade is a vegetation layer. Although eastern Oregon is currently examining the feasibility of creating a detailed vegetation layer, no data is currently available. Hoping to use an existing model to at least characterize topographic shading, the possibility of using Digital Elevation Models (DEMs) was discussed. Unfortunately, the Prineville hydrography layer and the Prineville DEMs do not line up. This results in the river channel occasionally being displayed on canyon walls. Although alignment is better for wider portions of the river, this would not provide for a complete and accurate analysis of topographic shading.

A technical memo from the Umatilla TMDL Technical committee discusses the use of available data and best professional judgement to predict site potential stream cross sections and riparian vegetation characteristics. The group primarily characterized site potential potential (which they defined as being the highest ecological status attainable

Table 2-X. Estimated Public Agriculture Land and Water Use for Segment 3 (Clarno to Service Creek) - 1998

| Location River Mile (RM) | Acres per cubic feet per second (cfs) | | | Total Acres |
|-------------------------------------|--|---|----------------|------------------------|
| | Non-use and/or Instream | Restoration and/or Enhancement | Lease | |
| RM 112 | 0 | 0 | 15.3/0.38 | 15.3 |
| RM 119 | 0 | 0 | 10.3/0.25 | 10.3 |
| RM 136 | 0 | 0 | 23.4/0.58 | 23.4 |
| RM 137 | 0 | 2/0.05 | 46/1.15 | 48.0 |
| Total | 0 | 2/0.05 | 95/2.36 | 97 |

Approximate maximum potential water withdrawal based on 1/40 cfs per acre.

without social constraints) to evaluate channel cross section and riparian vegetation. Potential vegetation was either expected to occur or historically occurred in the basin. They encouraged further monitoring to refine this estimate of site potential vegetation height, width and density. They also envisioned that future iterations of the Umatilla TMDL will be based on more informed estimations of site potential and that the current approximation serves as an appropriate working target, given the project scale, the necessity to tie goals to water quality endpoints and the limited available vegetation data.

A similar approach of using available data to assess condition based on ecological sites has been used in the John Day Plan.

Riparian Ecological Site Description

Ecological Site descriptions are a particular or unique kind of land with specific physical characteristics that differs from other kinds of land in its ability to produce a distinctive kind and amount of vegetation. Ecological site (potential vegetation) is a function of soil, parent material, relief, climate, biota (animals), and time for the biotic community to approximate a dynamic equilibrium with soil and climate conditions.

Along the John Day River, there are several ecological sites that have distinct potential plant communities. Some of these sites have potential for certain riparian plant communities and others do not. On the John Day River system, seven riparian ecological sites have been described which support distinct potential plant communities. The sites vary greatly in their ability to support riparian vegetation. The site types are Basalt Cliff, Colluvium, Cobble Bar, Terrace, Non-Riparian Terrace, Alluvial Fans, and Hillslope.

Analysis

Draft plant lists have been developed for the riparian ecological site types. Riparian monitoring proposed in this plan will enhance the knowledge of riparian species in the various ecological sites.

A letter report for the USFS/BLM Riparian cottonwood/Willow Restoration Program discusses restoration for Cottonwoods and Willows in the Lower John Day River Canyon. This report used geomorphic descriptions similar to the Riparian Ecological site Descriptions to discuss potential for recruitment and growth of cottonwoods and willow. The report suggested that cottonwoods could be established on alluvial fans along the corridor.

Maximum Potential

Desired Future Conditions for Riparian Restoration will be attained when:

Riparian areas and stream habitat conditions have improved as a result of protection and management. Watersheds are stable and provide for capture, storage, and safe releases of water appropriate to soil type, climate, and landform. Most riparian/wetland areas are stable and include natural streamflow and sediment regimes related to contributing watersheds. Soil supports native riparian/wetland vegetation to allow water movement, filtration, and storage. Riparian/wetland vegetation structure and diversity are significantly progressing toward controlling erosion, stabilizing streambanks, healing incised channels, shading water areas, filtering sediment, aiding in floodplain development, dissipating water energy, delaying floodwater, and increasing recharge of ground water appropriate to climate, geology, and landform. Stream channels are narrower, water depth and channel meanders are increasing, and floodplains are developing. Stream

channels and floodplains are making significant progress in dissipating energy at high-water flows and transporting and depositing sediment as appropriate for geology, climate and landform. Riparian/wetland vegetation is increasing in canopy volume (height and width) and in healthy uneven-aged stands of key woody plants, increasing in herbaceous ground cover, and shifting toward late succession. Surface disturbances inconsistent with the physical and biological processes described above have been reduced. Disturbances from roads, dispersed campsites, and inappropriate livestock use are decreasing as vegetation and soils recover naturally. There is no downward trend in riparian condition and function.

Desired Future Conditions for Water Quality:

Instream flows meet interim minimum flow goals or a level (determined through further analysis) sufficient to support outstandingly remarkable values and accommodate beneficial uses. Water quality meets state standards or is determined to be in balance with basin capabilities, satisfies obligations of the Clean Water Act, and is adequate to protect and enhance ORVs, especially the beneficial use of anadromous salmonids.

Element #4 - Goals, Objectives, and Management Actions

ESA, CWA, ICBMP, Land Management Plans, ODA WQMPs, 4180 Plan

Endangered Species Act, Clean Water Act (CWA), and the Two Rivers Resource Management Plan (RMP)

The Endangered Species Act (ESA) and the Clean Water Act (CWA) are two federal laws that guide public land management. These laws are meant to provide for the recovery and preservation of endangered and threatened species and the quality of the nation's waters. The BLM and USFS are required to assist in implementing these two laws. They provide the overall frame of reference for federal land management policies and plans pertaining to water quality and endangered species

The Two Rivers RMP provides guidelines for the management of public lands is a mechanism for the BLM to implement CWA and ESA. The RMP encompasses segments 1 , 2 and 3 in its planning area. The John Day Wild and Scenic River Plan amends the Two Rivers Resource management plan.

Interior Columbia Basin Management Plan (ICBMP)

The Federally administered lands in the Lower John Day Basin are designated as Broad Scale High Restoration Priority lands. Appendix 14 of Volume 2 of the ICBMP Draft EIS describes the types of activities that could be most effective in areas with different emphases or priorities. For the Lower John Day Subbasin, this means that "management activities would focus on restoration of (1) old forest and/or rangeland source habitats, (2) aquatic and riparian habitats, and (3) water quality and hydrological processes; and on providing economic benefits to isolated, economically specialized communities. A coordinated emphasis on all types of restoration activities (timber harvest and silvicultural treatments, altered livestock grazing management strategies, noxious weed control, reducing adverse road effects, prescribed fire, and aquatic-riparian condition/hydrologic processes) probably would be required in these subbasins."

The Interior Columbia Basin Final Environmental Impact Statement Proposed Decision calls for development and implementation of water quality restoration plans, such as this one, for impaired water bodies on lands administered by the Forest Service and BLM.

The scales and time frames for completing these processes should complement state processes and schedules for total maximum daily load development and implementation (R-O32 ICBMP Proposed Decision, p. 101).

WQRP Goals/Objectives

Goals: Guided by the relevant laws, policies, and plans as described above, there are two goals for this WQRP:

- Protect existing areas where water quality meets standards and avoid future impairments.
- Restore existing areas that do not currently meet water quality standards.

Objectives: The following WQRP objectives result from the laws, policies, and plans described above, as well as the analysis of the individual water quality limited parameters as described at the beginning of this document. Following is a summary of these objectives:

Protective Objectives:

- Minimize management actions in corridor upland areas that negatively impact water quality
- Minimize management actions in riparian areas and streams that negatively impact water quality

Restorative Objectives:

- Reduce water temperature

Management Actions - River Plan Actions

Cooperation and Education

Implementation of additional coordination between John Day River watershed stakeholders will increase the likelihood that additional water could be made available for instream beneficial uses while still meeting the off stream needs of agricultural users. This will encourage watershed stakeholders to better identify pollutant sources and pool resources to implement land management practices that protect and enhance instream water quantity and quality. Such combined efforts will ultimately contribute to increased water quantity and reduced introduction of sediment and other pollutants, and lower water temperature during warmer periods of the year.

In the future, specific attention to water quality and quantity issues at user sites along river could lead to behavior modifications that lead to an increase in water quality and water quantity. Continued work with all user groups to educate and become more involved with water quality and water quantity management will increase water quality and water quantity in proportion to the amount of education and application of water quality and water quantity enhancing management actions.

Implementation of the restoration actions for Grazing and for Agricultural Lands require that the BLM continue to actively manage much of the BLM land adjacent to the river. By protecting and enhancing river values while employing specific management techniques appropriate for specific sites, the BLM will continue to influence private land management by both example and by participation in watershed councils and other cooperative management opportunities. When coupled with management of BLM lands, the likelihood of significant improvement in instream condition will be increased compared to relying simply on management of BLM lands to improve water quantity and quality within the designated Wild and Scenic River.

If the BLM were to eliminate grazing, it would no longer 'share' the same set of issues with other landowners who continue to graze cattle within the river corridor. In addition, the BLM would lose the opportunity to demonstrate within the river corridor how riparian-oriented grazing can protect and enhance ORVs and water quality, but still provide economic benefits equal to or better than other land management techniques. A special study type in the Monitoring Plan has been formulated to monitor the results of cooperation in the watershed.

Grazing

The goal of grazing management is to protect and enhance river values and improve water quality. This goal will be achieved by further restricting grazing practices and by applying a series of immediate, mid-term and long-term standards for verifying the protection and enhancement of river values.

The restoration activities include the following measures:

1. A special seasonal limitation to grazing will be established. To protect public land riparian areas, grazing in pastures where livestock have access to river bank will be limited to periods when river flows at the USGS Service Creek gauging station are at least 2,000 cubic feet per second (cfs). This strategy relies on several factors including cool air drainage, higher relative palatability of upland vegetation and inundated riparian areas. At 2,000 cfs and higher, water covers much of the riparian vegetation, particularly herbaceous vegetation, thereby protecting it from livestock grazing. The cool air and palatability factors further discourage livestock from lingering near the river, and they promote grazing of upland vegetation. In combination, these factors provide effective protection from livestock grazing without the use of riparian fences.
 - a. This special seasonal limitation to grazing is intended to restrict rather than lengthen the existing grazing season. For example, if grazing is currently restricted to March and April, this limitation will not extend authorized use into May. Pastures authorized for grazing during lower flows will shift to high flow seasons. Season of use changes from winter to spring will not be authorized in Wilderness Study Areas until an analysis of impacts is completed.
 - b. For pastures with authorized winter grazing, the flow level restriction will be an interim measure until recovery monitoring established that recovery was occurring at acceptable rates (for further detail see the monitoring section at the end of this chapter).
 - c. Special seasonal limitation to grazing will not apply to scattered tracts of public land (all of Allotment 2656, the Rayburn Pasture of Allotment 2584 and the Sherman Pasture of Allotment 2598, a total of approximately 5 river bank miles).
2. Monitoring of compliance with authorized grazing schedules will be increased over normal frequencies.
3. Levels of grazing or browsing use on important vegetative components of the riparian ecosystem will be monitored.
4. Increased vegetation and river channel monitoring will be established on grazed and non-grazed areas in order to verify that recovery rates are equal. In the event the above measure is not met, appropriate action will be taken as described in the monitoring section.

Changes in management from the current situation and some direct impacts of those changes are detailed in Appendix L in the Record of Decision.

The grazing season in pastures where livestock have access to river banks will be restricted by the special seasonal limitation to grazing, described above. In some cases, this is a restriction or a shift in the grazing period, typically away from hot season or season long grazing. In many cases, the current authorized grazing season is winter and/or spring. The associated action will be limited to modifying the terms and conditions of the lease to establish the new grazing season. These actions will establish a relatively standard grazing period for the public lands along the river. A uniform season, during which river flow levels are sufficient to permit the river to be used as a barrier to livestock movement, reduces the incidence of trespass from livestock which, during low flows, are able to travel up and down the river banks and freely cross the river (See Appendix M of the FEIS, photos 11-14).

In Segment 1, pasture division fences will create riparian pastures on Allotments 2595 and 2597. Grazing on the new riparian pastures will be limited to winter and/or spring, with grazing occurring most often in March and April. On Allotment 2597, a large pasture will be divided into four smaller pastures, restricting access to the river from three of the pastures and allowing a rotation grazing system to be implemented. Fence construction on Allotment 2617 will create a riparian pasture with a higher percentage of public land than exists in the current pasture. That new pasture will be rested for three years. Fence construction on Allotments 2520 and 2560 will exclude grazing from public land river bank. In Allotment 2598, two corners of public land extend across the river and occupy 0.7 river bank miles in a pasture which is dominated by private land. This land will be difficult to manage efficiently and is recommended for exchange for other lands within the Wild and Scenic River corridor.

In Segment 2, approximately 4.9 miles of fence will be built to exclude livestock from popular campsites in Allotments 2597, 2619, 2538 and 2623. In Allotments 2629 and 2619, pastures (River B and Hoot Owl) containing popular campsites will be closed to grazing. A pasture division fence will create a riparian pasture on Allotment 2591. Following three years of rest, grazing on the new riparian pasture will be limited to winter and/or spring, with grazing occurring most often in March and April. One mile of fence will be built in Little Ferry Canyon, on Allotment 2509, the Gooseneck and the mouth of Little Ferry will be rested for three years. On Allotments 2538 and 2619, small gap fences will bridge steep cliffs to restrict livestock access from 1.3 and 3.5 public land river bank miles respectively. In Allotments 2518 and 2609, the Pine Hollow and Big Gulch pastures, will be rested for three years and subsequently grazed only during the winter. In Allotment 2584, scattered tracts lie on or near river bank in a pasture dominated by private land. This land will be difficult to manage efficiently and is recommended for exchange for other lands within the Wild and Scenic River boundaries.

In Segment 3, approximately 4.3 miles of fence will be built to exclude livestock from popular campsites in Allotments 2633, 2512, and 2533. An additional 1.9 miles of fence will be constructed in Allotment 2512, creating a new pasture with a high proportion of public land and 3.4 miles of river bank. The new pasture will be rested for three years. In Allotments 2512 and 2588, about 0.8 miles of fence and 0.3 miles, respectively, will be placed to prevent livestock from entering an isolated terrace along the river where they tend to remain. The 0.6 miles of fence on Allotment 2630 will create a riparian exclusion fence for the entire length of the allotment. The riparian pasture in Allotment 2624 will be rested for three years, after which it will return to the present early spring grazing for two weeks every other year.

The changes in grazing management is an improvement over the existing management, because some allotments under existing management do not have managed grazing

consistent with protecting and enhancing outstanding recreational values. Because of the mixture of managed grazing and physical exclusion from riparian areas managed grazing under the previously described restoration activities, we are able to restore riparian vegetation as well would occur with riparian exclusion through fences and natural barricades on BLM-managed lands or corridor exclusion. However, this same benefit will occur at lower cost to taxpayers because fewer fences and fewer water developments will be constructed and maintained than would be needed under riparian exclusion or corridor fencing. Where riparian-oriented grazing has been implemented on the John Day River, the BLM has documented improvement in vegetative conditions. As this continues to occur and riparian oriented-grazing is implemented on additional allotments, we expect that monitoring associated with our Water Quality Restoration Plan will find that inputs into the John Day River off BLM-managed lands will improve. We are mindful, however, that our management decisions in this plan cover about 2 percent of the land in the John Day Basin. It is for this reason that cooperative planning and management is emphasized to protect and enhance water quantity and quality. We must encourage and cooperate with the land managers of the 93 percent of the John Day Basin not managed by the BLM to manage their lands in a manner that promotes good instream habitat and, consequently, will continue to support river values and improve water quality.

The BLM has also concluded that, at least in one sense, riparian areas will have a greater level of protection under the proposed decision. Alternative approaches are much more likely to involve grazing on uplands and private lands adjacent to riparian areas. The dependence of alternative approaches on fencing would also make them more subject to breaks in fences and cattle circumventing fences by entering the river during low water periods. The restoration actions for grazing emphasize riparian oriented grazing that will greatly reduce the possibility of inadvertent trespass throughout the year.

Agriculture

The BLM restoration of agricultural field will influence two conditions, which influence water temperature: flow and shade. Eliminating all public land commodity production will provide more water for instream use since less will be needed for commodity production. Less water will be removed from the stream during low flow periods; this is projected to increase water quantity and quality during low flow periods. This restoration activity will also eliminate the pesticide and fertilizer inputs to the watershed that are associated with commodity production.

The BLM will dispose of public parcels and associated water rights that constitute a portion of a larger agricultural field owned by a private party and which do not have reasonable access by public road or river. Such parcels will be disposed of through the land exchange process for lands of equal or greater value within the designated WSR boundary. Implementation of the exchange will be pursued as soon as possible. A conservation easement in exchange for these parcels can also be pursued if the opportunity arises. Currently, known parcels are in Segment 3 and include RM 112; T8S, R19E, Section 4, SE/14 (15.3 acres) and RM 119; T8S, R19E, Section 25, NW1/4 (10.3 acres). Pending any exchange, these lands will continue to be leased.

Stipulations that will be applied to agriculture permits in the Wild and Scenic River corridor will include, but not be limited to:

1. Water Rights

Irrigation of all commercial agriculture fields that are entirely publicly owned and managed by the BLM will be terminated on August 15 to protect adult steelhead immigration. On non-commercial fields where the BLM is in the process of establishing perennial vegetation (which includes tree and shrub propagation,

cottonwood galleries, and upland grasses and forbs), the August 15 termination date will not be implemented to aid in the establishment perennial vegetation. Where perennial vegetation is being established this extension of irrigation will be short lived and only occur until perennial vegetation is established successfully. Cottonwood galleries used for outplanting may require small amounts of annual irrigation (typically less than 1 cfs) after the termination date. Wildlife food and cover plots will fall under this stipulation.

Entirely publicly owned agriculture fields affected by the August 15 termination date include the following: 1) 182.4 acres of agriculture land currently leased for commodity production. This total does not include the 25.6 acres described above that are identified for disposal or the 8.7 acres in Segment 1 and the 3.4 acres in Segment 2 that will be excluded with the selected alternative. The 37.7 acres listed above are excluded because they are identified for disposal and/or constitute a portion of a larger agriculture field that is privately owned and operated and irrigation system design make it infeasible to implement irrigation stipulations, and 2) 164.1 acres of BLM agriculture land that is currently not in commodity production and where perennial vegetation is not being established.

2. Herbicides

The permittee shall comply with all applicable State and Federal laws and regulations concerning the use of pesticides (including insecticides, herbicides, fungicides, rodenticides and other similar substances) in all activities and operations under the permit. The permittee is prohibited from using any herbicides, except as approved by the Authorized Officer and within the provisions of the BLM Prineville District's Integrated Weed Management Program.

3. Buffer Strips

Where leased agricultural lands along the river terrace are immediately adjacent to the active floodplain, a buffer or filter strip between the agriculture field and the active floodplain will be maintained by the permittee. The buffer or filter strip may be planted along the edge of the field adjacent to the active floodplain, or may occur as perennial vegetation that naturally occurs between the field and the active floodplain. The minimum strip width shall be 20 feet and will be determined by multiplying the appropriate LS factor (LS=Length-Slope value) from the Revised Universal Soil Loss Equation (RUSLE) by 10 (USDA-NRCS, 1998).

4. Rehabilitation

The Authorized Officer, prior to cancellation or abandonment of the permit must, approve a rehabilitation plan.

Public land commodity production will be phased out. Emphasis will be placed on wildlife habitat enhancement. Activities will include tree and shrub propagation (such as cottonwood, willow, aspen), establishment of perennial vegetation (native and/or desirable non-native grasses, forbs, shrubs and trees) that does not require irrigation after establishment, and establishment of wildlife food and cover plots. Species selection will be made to benefit wildlife habitat and will require species able to compete with noxious weeds. When establishing perennial vegetation, native species are preferred over non-native species. However, situations may occur where desirable non-native species may be used.

Removing the existing 195 (221 acres minus 26 acres identified for disposal) from commercial agriculture production will be accomplished within 10 years according to the following phased process:

Segment 1 - RM23 - One tract of 8.7 acres within 5 years.

Segment 2 - RM98.75- One tract of 3.4 acres within 8 years.
RM101.5 - One tract of 43 acres within 8 years.
RM 107 - One tract of 70 acres within 5 years.

Segment 3 - RM136 - One tract of 23.4 acres within 10 years.
RM 137 - One tract of 46 acres within 10 years.
(Two tracts totaling 26 acres in Segment 3 are identified for disposal.)

A phased process is required because of expected funding levels for implementation and to continue weed control during the process. This schedule is considered a realistic and cost-efficient strategy; however, it may be adjusted by availability of additional funds, contributions, cooperative agreements or termination and/or abandonment of leases by lessees ahead of the BLM schedule.

The opportunity to convert a small portion of the 43-acre field in Segment 2 and 46-acre field in Segment 3 to perennial vegetation will be pursued before the scheduled phase-out period to provide dispersed camp sites. Approximately 60 acres (in Segments 2 and 3) of the total agricultural lands will be kept in wildlife food and cover crops in the long term. Food and cover crops are cultivated annual crops that are specifically designed to provide food for terrestrial wildlife, especially upland and non-game birds. Plant species (such as wheat, sunflower, sorghum, milo, and millet) are commonly used for food and cover crops. These crops require conventional cultivation practices and irrigation to be successful. The cultivation practices associated with growing these crops are also used in part to control noxious weeds. In the long term, the 60 acres of food and cover crops that will be maintained would be irrigated starting at the time of seeding in April or May of each year and stopped by August 15. Total maximum allowable use for all 60 acres will be 1.5 cfs. In some years with higher than average spring rainfall, no irrigation will be needed.

Any BLM-managed land on which unauthorized agriculture is discovered in the future will be managed in a manner consistent with this description.

As tracts are converted to perennial vegetation, and irrigation is no longer required for establishment, their irrigation will cease. Beneficial use will be maintained and associated water rights will be leased or transferred instream in cooperation with the OWRD.

This restoration provides the opportunity to provide much of the water now diverted for irrigation on public lands for instream uses. The decision to dispose of 26 acres of land that are intrinsic parts of private agricultural fields will eliminate an inconsistent use of BLM-managed lands and provide a partial basis for the acquisition of lands that will serve to protect and enhance river values and water quality.

Riparian and Aquatic Restoration

To move towards restoration of water quality in the John Day River, the BLM will continue existing management for riparian and aquatic habitat restoration. Riparian and aquatic habitat restoration includes direct actions such as bioengineering, the introduction of large woody material or other structural materials to improve riparian or instream habitat, and the outplanting of riparian shrub and tree species into compatible locations.

The current program of riparian outplanting will continue. The BLM maintains a cottonwood stock nursery in the Clarno area where seed stock from throughout the basin have been planted and cataloged. Each year, cuttings from this stock are taken for planting in suitable areas throughout the basin to enhance riparian productivity, diversity and structure, and to eventually provide a seed source for natural propagation

of cottonwood throughout the basin. In addition, other species of riparian shrubs and trees are planted throughout the basin with the same goals and objectives.

This decision, when combined with the other management decisions and applied on all lands throughout the watershed, will achieve our desired future conditions for riparian and aquatic habitat. Desired future conditions for aquatic habitat will ensure that water temperature does not exceed 17.8° C in segments where salmonid fish-rearing is a designated beneficial use.

Effect of River Plan Actions on Water Temperature

Any activities involving ground disturbance require further consultation with the ODFW, Oregon Division of State Lands, and OPRD, State Scenic Waterways Division. There are no specific projects of this type planned or described in this plan.

Vegetation

Management of vegetation through management of grazing, cultivated agriculture, and restoration activity has the potential to impact water quantity and water quality by altering the ability of the land to, as described by Bedell and Borman (1997), capture and store water and as a result to delay and spread, over time, the release of water. These functions are achieved by increasing infiltration of moisture, reducing overland flow in response to precipitation, and increasing the time and amount of water temporarily stored in the ground. Lowrance (1985) has demonstrated that the greater the percentage of ground covered by native grasses the more infiltration into the ground occurs and the less overland flow occurs. As a result the contribution of groundwater to stream flow increases but is delayed when compared to overland flows, thus increasing the amount and duration of flow during natural low flow periods (summer and fall) when compared to flows occurring when lower levels of native perennial grasses are present.

Most desirable non-native species have roots systems similar to native species. When both native and non-native species are planted on sites that are dominated by noxious weeds, annual vegetation and/or reduced perennial vegetation, and other disturbed sites, an increase in watershed functions as described above will be observed.

Management actions such as excluding grazing from riparian areas, limiting duration and season of use in riparian areas, rangeland seeding of perennial vegetation, and creating riparian buffers between cultivated lands and the river increased upland and riparian vegetation retain more sediment than lesser amounts of vegetation. Retaining sediment consequently builds up streambanks, thereby creating narrower and deeper stream channels. Because retained sediments are not available for suspension in the river turbidity levels are reduced and the amount of sediment available to precipitate to the bottom of the channel also decreases. Thus not only does retention of sediment build up streambanks but it also reduces the tendency of streams that would otherwise have a high sediment load to build up layers of sediment on the bottom of the channel and thus decrease depth and spread out water over a wider area. Because of a smaller capacity to absorb energy narrower, deeper rivers are cooler than wider, shallower rivers (all conditions otherwise being equal).

The effects of producing and outplanting cottonwoods and other riparian tree or shrub species were covered in the Native Hardwood Supplementation Project Environmental Assessment (#OR-054-95-004). The activities are expected to increase the long-term sustainability of riparian species through the re-introduction of native genetic stock onto suitable habitats throughout the John Day River basin. This is expected to decrease the isolation of existing populations and increase the likelihood of successful sexual reproduction. Breadth, density and diversity of riparian plant communities is expected to

increase. Changes resulting from the activities would include a long-term stabilization of river and stream banks due to increased root mass, an increase in the amount of shade, and an increase in the recruitment of large woody debris into the river and tributaries. However outplantings are small in scope and extent and make up a very minor percentage of actual public riparian corridor miles. Measurable differences in riparian conditions would be limited to specific sites with the potential to support such vegetation.

The effects of construction and maintenance of minor structures for the protection, conservation, rehabilitation and enhancement of fish and wildlife habitat would be subject to site specific analysis. Generally, actions taken to stabilize river banks or to add aquatic structure to the river may result in short-term reductions in or disturbances to riparian or aquatic vegetation. Longer term, the activities would likely increase the available habitat for riparian and aquatic species.

In summary, any action that will promote appropriate upland and riparian vegetation will be likely to delay runoff, increase summer and late season flow, and decrease water temperature during the summer and turbidity during high flow periods.

Flow

Management actions such as excluding grazing from riparian areas (by fencing and creating water developments away from the river), limiting duration and season of use in riparian areas, rangeland seeding of perennial vegetation, and creating riparian buffers between cultivated lands and the river) (USDI-BLM 1993, 1998) have been demonstrated to increase water tables and subsequently increase late summer instream flow (Barber 1988; Elmore 1998; Elmore and Beschta 1987; Jensen et al. 1989).

Groundwater contributed to the stream channel in summer stream is generally cooler than surface water. Therefore, increasing groundwater flow can increase vegetation, which can reduce the temperature of instream flows. Improving watershed health and improving the riparian vegetation will increase the contribution of flow from the hyporeic zone into instream flow later in the year when flow is a limiting factor for water temperatures.

Eliminating all public land commodity production, as described in the agricultural restoration, will provide more water for instream use since less will be needed for commodity production. Less water will be removed from the stream during low flow periods, this will increase water quantity and quality during low flow periods. This will also eliminate the pesticide and fertilizer inputs to the watershed that are associated with commodity production.

Milestones

Improvements in grazing management have been assigned milestones. If the ODEQ develops a model to explain the affects of changing flow levels on water temperature, the BLM may be able to use that model to quantify the benefits of converting agricultural fields.

Long-Term Conditions: If grazing is determined to be the cause of non-riparian recovery, the grazing schedule will be altered. Such alteration may include long-term rest for riparian recovery.

Compliance Standard for Authorized Grazing

The objectives of the compliance standards will be to identify cooperation problems that are likely to lead to an inadequate recovery determination (see below) and to resolve the

problems before degradation occurs. Livestock operator compliance with the authorized grazing use will be monitored throughout the year, every year. All cooperating state, federal and tribal personnel on the river in an official capacity will be trained to identify and document livestock trespass. All incidence of trespass will be documented and recorded in an evaluation file. Agency procedures for resolving unauthorized grazing are detailed in 43 CFR 4150 and 4160.

Riparian Use Standards for Authorized Grazing

The objective of the use standards will be to permit unimpeded succession of riparian plant communities and unimpeded functioning of riparian areas. Use will be monitored in a pasture every year until the recovery determination is completed (see below) and a determination is made that no further adjustments in grazing system are needed. Incidence of use on woody riparian species will be less than 25 percent. Monitoring procedures will include visits prior to and immediately following authorized use to establish the amount of use that is attributable to livestock. Stubble height prior to high river flows (pastures grazed during winter) will be at least four inches for wet colonizer and bank stabilizer herbaceous species. Stubble height will be at least six inches at the end of the grazing season for pastures grazed during the growing season. An evaluation of the cause of use standard exceedence (for example, drought, grazing season, animal number, trespass) will determine the appropriate management remedy (such as rest and change in authorized use season or number of livestock).

Recovery Standard for Authorized Grazing

The objective of the recovery standard will be to verify that grazing authorized within the Wild and Scenic River boundaries is having no detectable impact on rates of vegetative community succession and channel development. Areas of use will be compared to areas of non-use. Only areas of similar ecological potential (riparian ecological sites) will be compared. Monitoring techniques will be quantitative, where possible. Where quantitative techniques are inappropriate or unavailable, qualitative techniques will be used. Monitoring techniques will be appropriate to land form. For example, techniques will differ between upland and riparian vegetation, between South Fork and mainstem channel form. Monitoring studies are described later. Monitoring studies will be installed within one year of the Record of Decision on winter-grazed pastures, and within two years of the Record of Decision on spring-grazed pastures. Scattered tracts of public lands will be exempt from this standard.

A final determination of the similarity of the changes between use and non-use areas will be made after a period of time sufficient to allow ecological processes to become expressed (10 years for winter pastures; and 11 to 15 years for spring grazed pastures, with the 4-year period allowing for the volume of work that is anticipated). In use areas demonstrating change that is not different from change found in non-use areas, the evaluation will find that the standard has been met and no adjustment in authorized grazing will be necessary. In use areas demonstrating change that is different (less desirable) from change in non-use areas, the evaluation will find that the standard has not been met. The evaluation will determine the probable cause of non-attainment. If non-attainment is due to livestock, use will be canceled in that portion of the pasture that did not meet the standard. For example, if riparian areas did not meet the standard and upland areas did meet the standard, a remedy similar to that described in Grazing Alternative C will be implemented. In some cases, this will mean construction of water developments and fences; in other cases, this will mean canceling use in a pasture. If both riparian and upland areas did not meet the standard, a remedy similar to that described in Grazing Alternative D of the FEIS will be implemented. This will require elimination of grazing within that portion of the pasture within the boundaries of the Wild and Scenic River.

Interim Targets

The restoration actions for grazing management are based on analysis of numerous published scientific experiments, extensive experience in western arid ecosystems and results of current monitoring studies in the John Day River basin. Cool season grazing has been assessed in scientific publications, in extensive experience throughout western arid ecosystems and within the John Day. Furthermore, it has been demonstrated that John Day River riparian areas respond dramatically to cool season grazing. The Wild and Scenic River Plan describes the grazing adjustments which have been made since the river was designated. In 1986, less than 8 percent of the public land riverbank miles were in exclusion or riparian oriented grazing management. With the implementation of this the Wild and Scenic River Plan, over 98 percent of the public land riverbank miles will have had the needed adjustments for rapid riparian recovery (figures are for entire river).

However, given the political sensitivity of grazing within Wild and Scenic Rivers, it is necessary to verify, on a site-specific basis, that the fastest rates of recovery possible (assumed by many to occur under no grazing) are in fact occurring. Therefore, the results of implementation and effectiveness monitoring (see section on Monitoring) will be reviewed at interim validation. Interim validation will occur on the riparian pastures within 15 years. Summaries of data will be presented in an allotment evaluation or similar document. These summaries will provide the Authorized Officer information needed to determine attainment of equal rates of restoration. In the event that the riparian pasture is not progressing at a rate equal to a non-grazed pasture, a determination of cause will be made and appropriate action taken as soon as practicable. If the riparian pasture is not recovering at equal rates because of non-compliance on the part of the grazing operator (for example, trespass, failure to maintain facilities, or other violations of the grazing regulations or permit conditions/stipulations, such as the allotment management plan), appropriate action will be taken in accordance with 43 CFR 4150 and 4160.

Mid-term determinations of the similarity of the changes between use and non-use areas will be made at Years 3 and 7 for winter pastures, and during Years 5 and 6 for spring-grazed pastures. If the standard is being met for winter-grazed pastures during Year 3, the 2,000 cfs restriction will be lifted for those pastures. If the standard is not being met in Year 3, the 2,000 cfs restriction will remain until the Year 7 determination and a solution will be pursued. The fallback solution will be to implement a spring rotation grazing system, one year on the riparian pasture, and one year off the riparian pasture. If the standard is being met in Year 7, the 2,000 cfs restriction will be lifted and the grazing system could be readjusted. If the standard is not being met in Year 7, the 2,000 cfs restriction will remain until year 10 and a solution will be pursued. The fallback solution will be the same as described above. For spring-grazed pastures, the 2,000 cfs restriction will remain in place indefinitely. Mid-term determinations for spring-grazed pastures will proceed as described for winter grazed pastures.

Element #5 - Timeline for Implementation, Cost, Funding

Priorities for Correct Cause of Problems

Effective Restoration treatment does not merely add structures or otherwise attempt to salvage the worst degraded or most visibly damaged areas. Instead, it changes the underlying processes that cause habitat deterioration. (Williams 1997)

The Lower John Day Basin is not scheduled for TMDL development until 2005. By proceeding with restoration actions prior to TMDL implementation, BLM may be able to

restore impaired waters of the John Day River sooner than the restoration actions in a comprehensive 2005 Water Quality Management Plan.

Cost/Funding Identify Sources of Funding

DEQ 319: The 319 program provides formula grants to the states and tribes to implement non-point source projects and programs in accordance with section 319 of the Clean Water Act (CWA). Non-point source pollution reduction projects can be used to protect source water areas and the general quality of water resources in a watershed. Examples of previously funded projects include installation of best management practices (BMPs) for animal waste; design and implementation of BMP systems for stream, lake, and estuary watersheds; basin wide landowner education programs; and lake projects previously funded under the CWA section 314 Clean Lakes Program.

Challenge Cost Share: Challenge Cost Share Projects (CCS) are partnerships with other government agencies, private organizations, institutions, Share corporations, etc., working together to accomplish common objectives. To qualify as a CCS project, BLM must be using CCS base funding for the project and one or more partners must be providing in-kind support or funds. Under the provisions of P.L. 104-208, the Federal share of funding for a CCS project does not necessarily have to be on public lands, but must directly benefit public land resources or public land management.

Wyden Amendment: In 1995, the National Fish and Wildlife Foundation approached Senator Ron Wyden with a suggestion to develop legislation that Amendment would permit the Bureau of Land Management (BLM) to fund restoration work on private lands. The 1997 Omnibus Consolidated Appropriations Act, Public Law 104-208, Watershed Restoration and Enhancement Agreements, dated September 30, 1996, was placed into law. The legislation allowed the BLM to enter into cooperative agreements with willing private landowners for restoration of fish, wildlife or other biotic resources on public and/or private land that benefits these resources on public lands within the watershed.

Restoration Planning Opportunities

ODA WQMPs: Senate Bill 1010 directs the Oregon Department of Agriculture (ODA) to deal with agricultural water quality problems in Oregon. Through a Water Quality Management Plan, ODA will propose new rules to deal with the prevention and control of water pollution from agricultural activities and soil erosion in Lower John Day River management areas. The plans will be developed by a local advisory. ODA will hold public hearings for public comment on the adoption of rules for implementation of the Agricultural Water Quality Management Area Plan.

The BLM will look to these AgWQMPs for new information or technology, which would further enhance ORVs and water quality. New opportunities for accomplishing implementation may arise from this process.

TMDL Development: When the ODEQ creates a TMDL for the Lower John Day Subbasin in 2005, there may be more information available for analysis. Any new data collected to supplement TMDL development may enable the BLM to create a model of water temperature or more accurately assess the affects of the restoration activities on water temperature.

Implementation Timeline

This decision may be implemented no sooner than 30 business days after the date of publication of the Notice of Decision in the Federal Register. The BLM hopes to implement the changes in grazing management in three to five years. While many

changes will be effective this year, all changes in agricultural management will be complete in 10 years.

Element #6 - Responsible Parties

Land Included in WQRP

The scope of the WQRP is the scope of the John Day Wild and Scenic River Plan (JD River Plan) for Segments 1, 2, and 3. It is developed to provide management direction to public lands on the federally designated Wild and Scenic River segments, specifically Segments 1, 2, and 3.

Parties Responsible for Plan Implementation

Regarding BLM's lead role in the John Day River management planning and actions, the use of "BLM" in discussion of the proposed decision reflects the fact that Congress, the courts, the public, and the planning partners ultimately hold the BLM responsible for planning and implementation. For example, the courts held the BLM responsible for meeting planning deadlines. The tribes, the state and the counties, though essential participants in the planning process, were not mandated to meet court ordered timetables in the John Day Wild and Scenic River Planning Process. Given the importance of the tribes to the process, the BLM has and will continue to encourage their participation in the planning process as well as other federal agencies, the state, and local government. It is likely that agreements with the Tribes, State, and local governments will be employed to implement some proposed decisions.

For these reasons, the use of the term 'BLM' instead of planning partners reflects the ultimate legal responsibility of the 'BLM' to implement the plan rather than the exclusion of planning partners. Implementation of any of the proposed decisions would not usurp the statutorily defined responsibilities of any other federal, tribal, state, or local government.

Section 105(a)(2) of Public Law 100-557 refers to required consultation and entering into cooperative management agreements (CMAs). CMAs are vehicles that allow the BLM and other partners to direct resources, including monetary obligations, towards specific on-the-ground activities for which the partners share common goals or objectives. In achieving a shared vision, partners in collaboration can influence, and be influenced by, each other while retaining their respective decision making authorities. The BLM has the ultimate legal responsibility to develop and implement the Wild and Scenic River Plan, which include the restoration activities discussed in this WQRP.

Element #7 - Reasonable Assurance of Implementation

Funding

This WQRP provided the foundation for requesting the increased funding for the management and monitoring of this special area in 2001. Cooperative efforts can be used for implementation of monitoring. The BLM will encourage our cooperators to participate in implementation and monitoring. One means of achieving this is through the development of Cooperative Management Agreements.

The BLM is aware of concerns about future funding levels. This is one reason that these restoration actions were selected during the John Day River Wild and Scenic River Plan planning process. Implementation, monitoring, and maintenance of the

hundreds of miles of fence and hundreds of water developments demanded in other alternative restoration actions considered would have taken funding levels that are considerably higher than current levels.

Responsible Federal Officials

The proposed action, when considered separately from all other management activities in the John Day Basin, is expected to have a beneficial, but not measurable, effect on water quality in the John Day River. Therefore, the FEIS does not state that the proposed action will result in meeting all Oregon state water quality standards. The BLM lands within the planning area constitute less than 2 percent of the land within the basin. Because of its limited scope compared to the total area of the John Day Basin the proposed restoration are not expected to have a measurable effect on water quality in the main stem of the John Day River. However, if the restoration activities of the BLM are combined with similar restoration activities on other lands within the basin, there would be a measurable improvement of water quality.

The proposed restoration complements other agency efforts that have the potential to measurably improve water quality in the river. In addition to the proposed action, the BLM and Forest Service will be applying the *Protocol for Addressing Clean Water Act Section 303(d) Listed Waters* (Protocol, May 1999) to review listed waters and determine if agency action is necessary to restore upland and riparian conditions in order to meet Oregon Department of Environmental Quality (ODEQ) water quality standards. If action is necessary these agencies will develop Water Quality Restoration Plans (WQRPs) that must be submitted to ODEQ. WQRPs will develop a monitoring strategy, including time lines and spatial guides, sufficient to address affects of permitted uses on water quality. The FEIS will provide a framework for developing a WQRP and the WQRP will be an appendix to the *Record of Decision* for the *John Day River Management Plan*.

This WQRP and others developed by the BLM and Forest Service, as well as Agricultural Water Quality Management Plans being developed for private lands by the Oregon Department of Agriculture (ODA) as required by State Senate Bill 1010, will be forwarded to ODEQ. ODEQ will use this information to create a comprehensive Water Quality Management Plan for the various sub-basins of the John Day River. The Oregon Department of Environmental Quality is required to complete Total Maximum Daily Loads (TMDL) and companion Water Quality Management Plans (WQMP) for the John Day sub-basins in 2003 (North and Middle Fork), 2004 (Upper John Day), and 2005 (Lower John Day).

Problems with Implementation

We recognize that many uncertainties involving natural and human-caused changes in the coming decades could affect how well we realize the long-term promise of the John Day River. Yet unless we act now, we will lose an important opportunity to achieve many of our goals for the Wild and Scenic and other reaches of the John Day River.

Element #8 - Monitoring and Evaluation

Current Monitoring

Water quality and quantity monitoring has been incorporated into the BLM's current monitoring program. Within the John Day River basin the BLM currently operates a gaging station, 27 peak crest gages, and 66 temperature monitoring sites. Results of

monitoring show that water quality is impaired before it reaches Wild and Scenic designated portions of the river.

Monitoring for Restoration

Purpose and Need: Regulations require the BLM to monitor land use plan decisions (43 CFR 1610.4-9) and to adopt a monitoring program for any mitigation incorporated into decisions based on environmental impact statements (40 CFR 1505.2(c)). In addition, a core tenet of the Wild and Scenic Rivers Act is protection and enhancement of river values. In order to verify the trend of river resource conditions and to guide future management decisions, it is necessary to systematically sample public land, file the data in an organized fashion and provide for periodic evaluation of the information obtained. This plan will aid in the standardization, scheduling, budgeting and reporting of such a process.

Monitoring Area

The area encompassed by this Water Quality Restoration Plan includes all land in Segments 1, 2, and 3.

Objectives of Monitoring Plan

The objectives of this monitoring plan are to:

- Outline minimum standards of information needed to satisfy the Clean Water Act and Endangered Species Act.
- Provide for systematic study and evaluation of each grazing allotment to determine if the resource objectives are being met.
- Provide a way to anticipate and plan for future funding needs.
- Provide for systematic study and evaluation of rate of change to ecological and social conditions due to human factors.

Interdisciplinary Process

One important key to a successful monitoring and evaluation program is committed involvement of all affected resource programs. This includes involvement in determining resource objectives, the studies needed to measure change toward or away from these objectives, and involvement in the evaluation process whereby study results are reviewed, causes for trends are established, and a course of action for future management is charted.

Priorities and Intensities of Monitoring

Public lands are located throughout the watershed and are interspersed with varying amounts of private land. Deciding where to monitor public land will depend in part on the proportion of public to private land, in part on the location of sensitive resources, and in part on other logistical factors such as access.

Data Collection Methods

This monitoring plan provides the framework for tracking the course of action put forth in the WQRP and FEIS. The methods used need to be able to document if restoration actions were accomplished, if restoration actions had effects and if those effects met the objectives of moving the environment towards the desired conditions.

The goals of this WQRP include 1) protecting existing areas where water quality meets standards and avoiding future impairments, and 2) restoring existing areas that do not currently meet water quality standards. The objectives of this WQRP include 1) minimizing management actions in corridor upland areas that negatively impact water quality, 2) minimizing management actions in riparian areas and streams that negatively impact water quality and 3) reducing water temperature.

The goals and objectives are generally associated with vegetation, riverbank stability, shade, and watershed cover. Vegetation responds rapidly to changes in management and has been widely accepted as an indicator for values that do not change rapidly, such as water quality, and for values that are difficult or expensive to precisely quantify, such as wildlife populations. For these reasons, vegetation will be monitored intensively.

Implementation Monitoring

When determining whether a course of action is having the desired affects, the first step to take is implementation monitoring. This type of monitoring answers questions such as “Were the actions detailed in the Record of Decision accomplished?” The job of monitoring implementation primarily relies on documentation, proper filing of that documentation in case files or project files, and disclosure of accomplished actions in the form of achievement reports.

The NMFS issued two Biological Opinions for PACFISH for listed salmon and steelhead in the Upper Columbia River (UCR) and Snake River (SR) basins, dated March 1995 and June 1998. The Terms and Conditions include development of implementation and effectiveness monitoring protocols, and an oversight team known as the Interagency Implementation Team (IIT). Several protocols are now in place and being implemented in the UCR and SR basins and others are in development. Recent listings of UCR spring chinook and Mid-Columbia River (MCR) steelhead have resulted in a PACFISH consultation effort for those species. The MCR steelhead area includes parts of the Prineville BLM District. When consultation is concluded, the Terms and Conditions will result in IIT monitoring modules being implemented in the MCR steelhead area.

The Prineville BLM, Central Oregon Resource Area, has voluntarily applied the IIT monitoring modules to date. Should there be changes in the IIT monitoring framework when consultation is concluded for MCR steelhead, those changes will be applied to BLM lands within the John Day Basin.

Effectiveness Monitoring

The second phase of monitoring is determining whether the actions documented in the implementation phase of monitoring are having any effect. This phase answers questions such as “By how much did the conversion of cultivated lands to prairie increase the proportion of native species on those lands?” The job of monitoring effectiveness is similar to implementation monitoring, except that field observations must be recorded in a way that meets approved protocol and the data must be analyzed.

Validation Monitoring

The validation phase of monitoring is the third phase of monitoring and seeks to resolve whether the course of action is having the desired effects. Validation answers questions such as “Has the conversion of agricultural fields to native prairie enhanced watershed health?” In the adaptive management scheme, the validation phase also forms the initial phase of the next round of decision making.

Data Storage and Filing

'Access' software will be used as a standard recording system. UTM (Universal Transverse Mercator) will be the standard for recording study location data. Data will be stored by specialists in a centrally accessible database.

Analysis

Follow techniques prescribed in study methodologies.

Validation of Decisions

The BLM specialists and any participating interest groups, planning partners, or regulatory agencies will follow the basic guidance identified in the references listed with the study types. There will be a strong emphasis on an interdisciplinary process. Data summaries will be presented in an allotment evaluation or similar document to provide the Authorized Officer needed information to determine attainment of standards and allotment objectives, progress toward such attainment, or non-attainment. In the event of non-attainment, a determination of cause will be made and appropriate action taken as soon as practicable. In the case of non-attainment due to non-compliance on the part of the grazing operator (for example, trespass, failure to maintain facilities, or other violations of the grazing regulations or permit conditions/stipulations, such as the allotment management plan), appropriate action will be taken in accordance with 43 CFR 4150 and 4160 to ensure water quality restoration

Program Revision

The monitoring component of this plan will be reviewed as needed by staff of the Oregon/Washington BLM State Office and the Prineville Central Resource Area because it is part of the Record of Decision on the John Day Wild and Scenic River Plan. This will ensure that methodologies are still the most appropriate, schedules are realistic and are being met, and the plan's objectives are also being met. Schedules may require updating, particularly where initial monitoring efforts indicate more or less time must be spent at each study site and as shifts in the available funding and workforce may occur. Plan revision will also be necessary as BLM policy and regulations are revised. State Director approval of revisions should be documented within monitoring reports.

Monitoring Schedule

| Study Type | Year | | | | | | | | | | | | | | | | |
|---------------------------------|------|-----|-----|-----|-----|-----|-----|--|-----|-----|-----|-----|-----|-----|-----|-----|---|
| | '01 | '02 | '03 | '04 | '05 | '06 | '07 | '08 | '09 | '10 | '11 | '12 | '13 | '14 | '15 | '16 | |
| Grazing | | | | | | | | | | | | | | | | | |
| <i>Compliance</i> | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | |
| <i>Incidence of use</i> | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | |
| <i>Stubble height</i> | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | |
| <i>Riparian recovery</i> | | | | | | | | | | | | | | | | | |
| spring grazing | | x | | | | x | x | | | | | x | x | x | x | x | |
| winter grazing | x | | | x | | | | x | | | x | | | | | | |
| non-grazed | x | x | | x | | x | x | x | | | x | x | x | x | x | x | |
| <i>Uplands</i> | | | | | | | | | | | | | | | | | |
| spring grazed | | x | | | | x | x | | | | | x | x | x | x | x | |
| winter grazed | x | | | x | | | | x | | | x | | | | | | |
| non-grazed | x | x | | x | | x | x | x | | | x | x | x | x | x | x | |
| <i>Soil crusts</i> | x | x | | | | | | | | | x | x | | | | | |
| Recreation | | | | | | | | | | | | | | | | | |
| <i>Physical</i> | x | x | | | | | | (1-5 years, based on indicator used) | | | | | | | | | |
| <i>Social</i> | x | x | | | | | | (possible follow-up at later date) | | | | | | | | | |
| <i>Boating Use</i> | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Hydrology | | | | | | | | | | | | | | | | | |
| <i>Watershed improvements</i> | | | | | x | | | | | x | | | | | | x | |
| <i>Water temperature</i> | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | |
| <i>Cross sections</i> | | x | | | | x | | | | | x | | | | | x | |
| Agriculture | | | | | | | | | | | | | | | | | |
| <i>Instream conversion</i> | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| <i>Seeding success</i> | | | | | | | | determined by year of seeding (1, 2, 5 and 10 years after treatment) | | | | | | | | | |
| Fish and Aquatic Habitat | | | | | | | | | | | | | | | | | |
| <i>Spawning</i> | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| <i>Habitat Inventory</i> | | | | | | | | determined by National Marine Fisheries Service | | | | | | | | | |
| Other | | | | | | | | | | | | | | | | | |
| <i>Noxious weeds</i> | x | | | x | | | x | | | x | | | x | | | | x |
| <i>Willow inventory</i> | | | x | | | | | | | | | | | x | | | |

Costs of Monitoring

This monitoring plan will provide the foundation for requesting increased funding for monitoring actions taken to implement the John Day WSR Management Plan. Cooperative efforts will be used for implementation of monitoring. The BLM will seek to develop Cooperative Management Agreements to meet monitoring needs.

Estimated costs are identified below.

Riparian recovery

2 technicians
\$2,500 per mile

Upland plants, soil cover and soil crusts

2 technicians
\$600 per site

Water temperature

1 technician
\$500 per site labor
\$150 per site installation

Watershed improvement projects

1 hydrologist
5 days data collection
\$800 per year collected

Water quantity irrigation use to instream

1 biologic technicians's time
3 days
1 hydrologist's time
installation cost =\$45/each

Reporting - Report Contents

The overall purpose of annual monitoring reports is to compile and document actions scheduled for completion the previous year, accomplishments during the previous year, scheduled actions for the forthcoming year, and the expected costs of completing scheduled actions. The report will provide accomplishments in implementation monitoring answering questions, such as: 'Did we document our accomplished actions?' 'Did we appropriately file the documentation?' 'Were our accomplishments disclosed or reported?' Effectiveness monitoring reports will answer questions, such as: 'How many studies were scheduled?' and 'How many studies were installed or remeasured?' Validation will be reported in terms of how many evaluations were scheduled and completed. The report may also include monitoring program revisions that have been approved by the State Director.

Reporting – External Coordination

Monitoring Area Objectives, Priorities, and Intensities of Monitoring

Implementation Monitoring - Report Contents

Interest groups, planning partners and regulatory agencies have been and will continue to be invited to participate in the monitoring process. Participation has included and will continue to include field data collection, evaluation and review.

Study Types -- Monitoring Grazing Management Actions

Study type: Compliance with authorized use

Objective: To detect unauthorized livestock use.

History: This will be an expansion of ongoing monitoring.

Site Selection: Active grazing allotments within the Wild and Scenic River corridor.

Frequency: Whenever trained personnel are within the Wild and Scenic River.

Methods: Will follow 43 CFR 4100 Regulations and EPA (1997) chapter 4.3.

Deviations from the standard methodology: BLM, in cooperation with planning partners, will implement increased surveillance of grazing allotments within the Wild and Scenic River corridor. Training in the identification, documentation and reporting of unauthorized livestock use will be provided to non BLM personnel.

Study type: Incidence of use on woody riparian species.

Objective: To determine if authorized livestock grazing is meeting the physiological needs of woody riparian component. To determine if livestock grazing will allow recruitment of shrubs into successive size classes.

History: New study.

Site Selection: The sites will be the same plots as the woody species regeneration plots used in the riparian recovery monitoring (see Winward 2000).

Frequency: Sites will be monitored every year following the grazing season unless the plots are inundated. Where wildlife use of woody riparian species is a concern, measurements may be taken prior to the grazing season in order to establish the percentage of use attributable to livestock.

Methods: Incidence of use is documented by counting the number of stems less than 4.5 feet off the ground (that is, accessible to livestock) and counting the number of stems that have been bit. No more than 50 plants within the plot will be sampled.

Deviations from the standard methodology: There is no standard methodology. The methodology has been adapted from conversations with Steve Leonard, BLM National Service Riparian Team.

Study type: Stubble height

Objective: To determine if authorized livestock use is allowing bank stabilizing riparian vegetation to be maintained and to provide protection during high flows.

History: New study.

Site Selection: Study sites will be selected along the greenline transects measured in the riparian recovery monitoring (see Winward, 2000).

Frequency: Sites will be monitored at the end of the growing season or at the end of the grazing season, whichever is later. Winter-grazed sites will be monitored during the grazing season, prior to high flows. Sites may not be monitored if it is determined that they are inaccessible to livestock during the grazing season.

Methods: The stubble height method presented in Interagency Technical Reference (1996b) will be used.

Deviations from the standard methodology: On the Mainstem John Day only one side of the river will be measured.

Study type: Riparian recovery.

Objectives: To determine if authorized livestock grazing is maintaining and/or allowing recovery of bank stabilizing vegetation within the capability of the site. To determine if authorized livestock grazing is maintaining and/or allowing recovery of structural diversity within the capability of the site. To determine if changes in riparian sites are similar between grazed and non-grazed riparian areas within the Wild and Scenic Rivers.

History: This is a new study.

Site selection: By ecological site as defined in FEIS, Volume 2, Appendix M.

Frequency: Winter-grazed sites will be sampled in 2001, 2004, 2008, and 2011. Spring-grazed sites will be sampled in 2002, 2006-2007, and 2012-2016. Non-grazed sites will

be sampled in 2001-2002, 2004, 2006-2008, and 2011-2016.

Methods: The methods of Winward (2000) will be used.

Deviations from the standard methodology: Due to the width and volume of the river, geomorphology (some sections of river are bordered by high cliffs or cobbled areas without an accessible greenline) and the checkerboard land ownership patterns, the Winward monitoring design that requires an entire riparian complex to be monitored is not possible. In general, Winward's methods use a set of greenline transects which include one transect, at least 363 feet long, on each side of the river. In monitoring the mainstem John Day river, as a general rule, only one side of the river will be sampled. Greenline transect lengths will vary according to the size of ecological sites.

Data analysis requires the determination of vegetation stability classes for each riparian community type. Winward (2000, pages 35-39) lists these values for the communities within forest lands of the intermountain west. Some of the community types found within the John Day Wild and Scenic River corridor are represented there, others are not. In the course of implementing this monitoring, it will be necessary to use best available scientific information and the professional experience of the resource managers to determine vegetation stability classes for unlisted community types.

Study type: Upland vascular vegetation and ground cover

Objectives: To determine if authorized livestock grazing is maintaining and/or allowing recovery of upland soils within the capability of the site. To determine if authorized livestock grazing is maintaining and/or allowing recovery of diverse plant communities within the capability of the site. To determine if changes in upland sites are similar between grazed and non-grazed areas within the Wild and Scenic River corridor.

History: This will be an expansion of existing monitoring.

Site Selection: By ecological site as defined in the existing inventories.

Frequency: Winter-grazed sites will be sampled in 2001, 2004, 2008, and 2011. Spring-grazed sites will be sampled in 2002, 2006-2007, and 2012-2016. Non-grazed sites will be sampled in 2001-2002, 2004, 2006-2008, and 2011-2016.

Methods: The Daubenmire methodology described in Interagency Technical Team (1996a) will be used for new sites, existing sites using other techniques would be incorporated where possible.

Deviations from the standard methodology: The Daubenmire technique as used on the Prineville District also incorporates a point sampling technique for measuring soil cover using the legs on the corners of the plot frame.

Study type: Biological soil crust recovery

Objective: To determine if authorized grazing is allowing the maintenance and/or recovery of biological soil crusts within the capability of the site. To determine if changes in the amount of cover of biological soil crusts is similar in grazed and non-grazed upland areas within the Wild and Scenic River corridor.

History: This is a new study.

Site Selection: By ecological site as defined in the existing inventories.

Frequency: 2001-2002, 2011-2012.

Methods: Methods described by Belnap et al. (2001) will be used.

Deviations from the standard methodology: All methods used will be within the guidelines provided by Belnap et al. (2001). The Daubenmire methodology will be adapted as described by Belnap et al. (2001) for the measurement of biological soil crusts. Total cover will be recorded. Species will also be classified by morphological class (such as cyanobacteria, crustose, fruticose, squamulose, and foliose lichen and moss) and cover and frequency will be recorded for each class.

Study Types – Monitoring Hydrology

Study Type: Watershed improvement projects

Objective: To determine the extent of participation and cooperation by private landowners in the improvement of watershed conditions within the basin.

History: This will be a new study.

Site Selection Criteria: This study will focus on cooperating landowners near the Wild and Scenic River Corridor.

Frequency: The data will be compiled every five years.

Methods: Cooperators who wish to contribute to the study will be asked to provide information on their watershed improvement projects.

Deviations from the standard methodology: There is no standard methodology.

Study Type: Water temperature.

Objective: To determine if there are changes in the water temperature characteristics of the Wild and Scenic River.

History: The BLM will continue to cooperate with the State of Oregon in providing monitoring information on the affected parameter of water temperature.

Site Selection Criteria: The new monitoring sites will be delineated based on accessibility, ownership, topography, aspect, valley form, and the suspected sensitivity to changes in management.

Frequency: The data will be collected annually for years 1-15.

Methods: State Standards for accuracy. The monitoring would be accomplished with continuous recording temperature devices.

Deviations from the standard methodology: None.

Study Types – Monitoring Agricultural

Actions External Coordination

Study Type: Implementation of instream conversion

Objective: To determine the amount of water legally applied to BLM agricultural fields before the water is converted to instream beneficial use.

History: Oregon law requires the BLM to monitor and report its water use to the OWRD annually.

Site Selection Criteria: All points of diversions for the BLM agricultural fields.

Frequency: Annually until the water rights are converted from irrigation to instream beneficial use.

Methods: OAR 690-84-015 and OAR 690-010 (3)

Deviations from the standard methodology: None

Study type: Seeding success (Agricultural lands)

Objective: To determine the success of seeded species (density and diversity) in efforts to convert agricultural fields to native prairie.

History: This will be a new study.

Site Selection: All agricultural fields that receive treatment.

Frequency: Monitoring will occur 1, 2, 5 and 10 years following treatment.

Methods: Step point method (Interagency Technical Team 1996a).

Deviations from the standard methodology: This methodology may incorporate the use of a hoop instead of a point. Number of samples should be sufficient to record 100 hits on seeded species.

Study Types – Monitoring Fish and Aquatic Habitat

Study type: Anadromous fish spawning

Objective: To determine population trends in basin tributaries.

History: This is an ongoing study done in cooperation with ODFW.

Site Selection: Established reference reaches of known spawning tributaries.

Frequency: Every year.

Methods: ODFW methodology.

Deviations from the standard methodology:

Study Type: Spawning habitat inventory

Objectives: Identify suitable spawning habitat

History: New study.

Site Selection: Stream reaches within grazing allotments rated as 'may affect, likely to adversely affect' by National Marine Fisheries Service.

Frequency: As required by NMFS.

Methods: As described by NMFS.

Deviations from the standard methodology: none.

Study Types – Other Monitoring

Study Type: Extent and density of noxious weed infestations.

Objective: To determine the extent and density of noxious weeds in the Wild and Scenic River corridor.

History: Several photo points and weed infestation photos have been established and taken in the past few years. These will be continued, with additional ones established in the future.

Site Selection Criteria: Selected from among treated areas.

Frequency: Every three years.

Methods: Noxious weed populations will be monitored as prescribed under the Integrated Weed Management Program (USDI - BLM 1994). In addition, digital images will be taken using a digital camera equipped with a GPS unit. Images will be downloaded into the District's GIS system.

Deviations from the standard methodology:

Study Type: Willow study

Objective: To quantify cumulative impacts of watershed restoration activities in the basin on willow communities of the lower John Day River.

History: This is an ongoing study.

Site Selection Criteria: Segments 2 and 3.

Frequency: 5 - 10 years.

Methods: As described in BLM 1996.

Deviations from the standard methodology: None.

Element #9 - Public Involvement

Process for Public Involvement

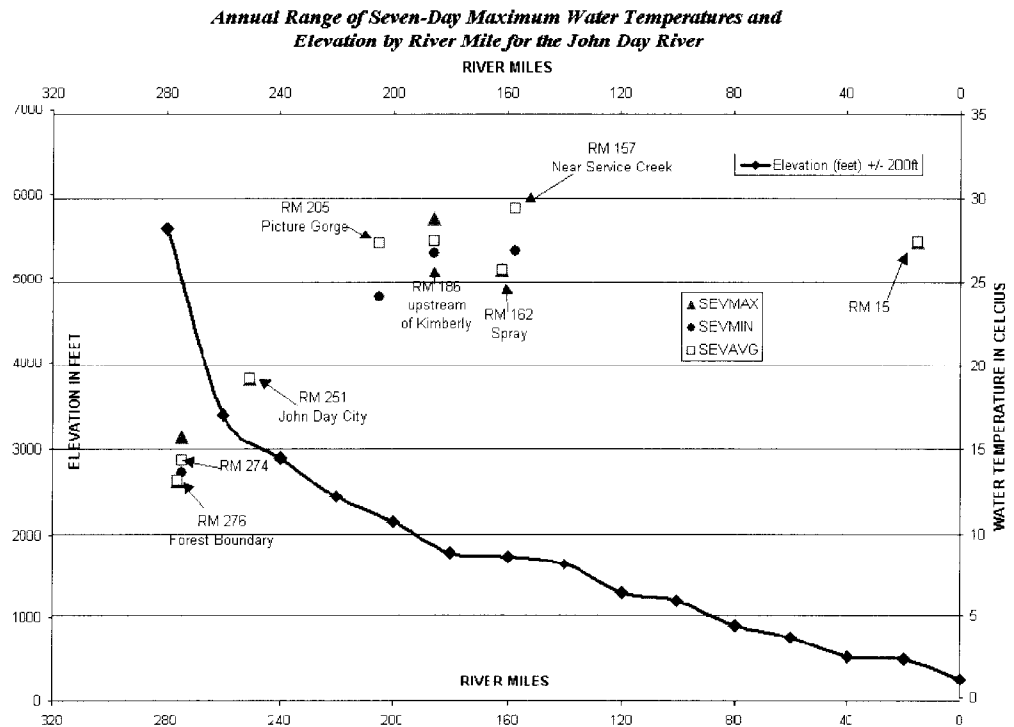
The *John Day River Proposed Management Plan, Two Rivers and John Day Resource Management Plan Amendments and Final Environmental Impact Statement* describe processes for public involvement.

Many governmental agencies, Native American tribes, and numerous private landowners manage various aspects of the John Day River system. These agencies, tribes and landowners have long recognized the need to coordinate river management activities. This coordination has occurred in the past, and they have also expressed a desire to continuously strive to improve coordination of management actions for the river. The principal partners in the John Day Wild and Scenic River Management Plan were:

- USDI Bureau of Land Management, Prineville District
- Confederated Tribes of the Warm Springs Reservation of Oregon (CTWSRO)
- State of Oregon, by and through Oregon Parks and Recreation Department (OPRD),
- Oregon Department of Fish and Wildlife (ODFW)
- Oregon State Marine Board (OSMB)
- John Day River Coalition of Counties (including the counties of Gilliam, Grant, Jefferson, Sherman, Wasco, and Wheeler)
- USDI Bureau of Indian Affairs, Warm Springs Agency

WQMP Involvement Process for Public Involvement

The Lower John Day Basin is not scheduled for TMDL development until 2005. In advance of completing the TMDL and the companion WQMP, the BLM has developed this WQRP as a living document that accommodates monitoring and an adaptive strategy for improving, restoring, and maintaining water quality conditions in the John Day Basin. The BLM will participate with ODEQ in the completion of the WQMP for the Lower John Day when that process is initiated. The WQRP is being submitted to ODEQ for incorporation into the more comprehensive WQMP. The BLM will participate in ODEQ's public involvement process for the TMDL. By proceeding with restoration and monitoring in advance of the completion of the TMDL and companion WQMP, the BLM hopes to contribute to improved water quality conditions on the landscape as well as to contribute monitoring data necessary to better understand resource conditions in the John Day Basin.



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Appendix H

Limits of Acceptable Change

Limits of Acceptable Change (LAC) is a process for establishing acceptable and appropriate resource and social conditions in recreation settings. LAC is based on the premise that change to the ecological and social conditions of an area will occur as a result of natural and human factors. The goal of management is to keep the character and the rate of change due to human factors within acceptable levels and consistent with desired future conditions. The primary emphasis of the LAC system is on the conditions desired rather than on how much use an area can tolerate. The management challenge is not one of how to prevent any human-induced change, but rather one of deciding what change should occur, how much change will be allowed, what management actions are needed to guide and control it, and how the managing agencies will know when the established limits are being or have been reached.

In managing the John Day River, the LAC process is designed to be the foundation for the long-term protection and enhancement of the desired future conditions for recreation that have been identified in this plan. For the most part, the desired future condition for John Day River segments identified by this plan strives to maintain the existing character of the river canyon, to preserve the existing condition of campsites and recreation sites where found to be acceptable, and to rest or close areas where conditions are found to be unacceptable.

As used on the John Day River, the LAC process involves two parts completed concurrently, which have already begun and would be continued under any alternative. The first part, involves extensive data collection on current resource and social conditions, and determining what change is acceptable while maintaining desired future conditions. Key indicators would be selected which allow future tracking of the physical or social conditions (i.e. vegetation loss within campsites, number of encounters per day with other groups). For each indicator a standard or threshold level would be set, which determines the amount of change that will be accepted. The standards then serve as “triggers” which alert managing agencies to unacceptable change.

The second part of the process involves developing a set of strategies and a range of management actions which may be implemented if and when continued monitoring of conditions indicate that one or more of the “triggers” has been or is about to be reached, resulting in a level of change that is unacceptable. A list of potential management actions designed to reverse or prevent unacceptable trends would be determined in advance, so as to be ready for implementation if and when continued monitoring efforts indicate they are needed. When needed, managers may then select the management action or combination of actions likely to bring that indicator back within acceptable levels. Management actions previously implemented to protect resource and social conditions such as group size limits and porta-potty and firepan requirements, would be continued unless modified as a result of the LAC process.

In spring of 1999, extensive data collection was begun on the current physical condition of campsites in Segments 2 and 3. For the next two years, the condition of these sites will continue to be monitored before and after each boating season, and social surveys will be conducted to collect social preference data. Simultaneous with review of the data collected, strategies for dealing with potential unacceptable conditions would be developed. Examples of potential management actions which may be considered for use

on the John Day if and when LAC determines they are needed include but are not limited to staggered launch times, temporary campsite closure, a campsite reservation system, reduction in allowable party size, limitations on the number of watercraft per group, and boating use limits. If resource and social conditions do not meet the “trigger” point and management actions are not necessary at this time, a list of management actions will be ready for potential implementation in the future. The LAC process may be initiated on other river segments if future resource and social conditions become a concern, and the monitoring data collected through LAC may be used in the management of other resources.

APPENDIX I

Campsites with Grazing Exclusion

River Left 43.6 - 45.5
River Right 59.0 - 60.1 (Owl Rock) w/in WSA
River Left 76.0 - 77.2 (Chisholm Canyon) w/in WSA
River Right 77.7 - 78.2 (Cordwood Canyon) w/in WSA
River Left 81.3 - 82.9 w/in WSA
River Right 99.4 - 100.0 (Juniper Island)
River Left 119.1 - 119.7
River Right 122.0 - 123.6
River Left 135.7 - 136.4
River Left 137.3 - 139.2

APPENDIX J

Recreation Sites to be Withdrawn from Mineral Entry

Note: Legal descriptions may be refined after review of land and mineral records and confirmation of areas to be withdrawn.

Rock Creek (RM 23): T 1 N, R 19 E, Sec. 14, E 1/2

Cottonwood Bridge (RM 40): T 1 S, R 19 E, Sec. 17, S SW 1/4, SW 1/4 SE 1/4

Butte Creek (RM 97): T 6 S, R 19 E, Sec. 8, SW 1/4 SW 1/4, Sec. 17, NW 1/4 NW 1/4

Clarno (RM 106-109): T 7 S, R 19 E:
Sec. 18, S 1/2 SW 1/4, SW 1/4 SE 1/4
Sec. 19,
Sec. 20, W 1/2
Sec. 29, W 1/2, SW 1/4 SE 1/4
Sec. 30, E 1/2
Sec. 32, N 1/2, N 1/2 SW 1/4

Clarno East (RM 112): T 8 S, R 19 E, Sec. 3, NE 1/4 SW 1/4

Burnt Ranch (RM 132-133): T 9 S, R 20 E, Sec. 32, SW 1/4 NW 1/4, S 1/2

Priest Hole (RM 137): T 9 S, R 20 E, Sec. 36, S 1/2

Service Creek (RM 157): T 9 S, R 23 E, Sec. 17, NW 1/4, Sec. 18, E 1/2 NE 1/4

Muleshoe (RM 159): T 9 S, R 23 E, Sec. 9, SW 1/4 NE 1/4

Wooden Bridge (RM 162): T 9 S, R 23 E, Sec. 12, N 1/2 NW 1/4

Shady Grove (RM 178): T 9 S, R 25 E, Sec. 9, N 1/2 NE 1/4

Lone Pine (North Fork RM 2): T 9 S, R 26 E, Sec. 20, W 1/2 NE 1/4, NW 1/4

Big Bend (North Fork RM 3): T 9 S, R 26 E, Sec. 21, W 1/2 NW 1/4

Monument (North Fork RM 16): T 9 S, R 27 E, Sec. 1, SW 1/4, NW 1/4 SE 1/4

Ellingson Mill (South Fork RM 32): T 16 S, R 27 E, Sec. 29, W 1/2

Appendix L

Allotment Summaries

The Central Oregon Resource Area of the Prineville District administers 122 allotments that contain public lands within either the Wild and Scenic River boundaries or within 1/4 mile of the river of the non-designated segments. This appendix summarizes the river-related management of each allotment, as well as what actions will be required to implement the grazing decisions on each allotment. The allotment summaries are grouped by river Segments 1 through Segment 11. Within river segments, the allotment summaries are generally listed in order of downstream to upstream location.

The allotment category is the result of a prioritization process that occurred during the Resource Management Planning process and was reviewed during the allotment evaluation process. The three categories are improve (I) category allotments that are managed to improve current unsatisfactory resource conditions and will receive the highest priority for funding and management actions, maintain (M) category allotments that are managed to maintain current satisfactory resource conditions and will be actively managed to ensure that resource values do not decline, and custodial (C) category allotments that include a high percentage of private land and are managed custodially while protecting existing resource values.

Miles of river bank, acres within the Wild and Scenic River boundaries, and total acreage within the allotment are presented for use in determining the highest priority allotments.

Riparian management in 1988 shows an approximation of the grazing management in place at the time of designation.

NEPA documents refer to those documents prepared specifically to alter the grazing management on the allotment following designation of portions of the river.

Riparian management in 1999 shows the grazing regime that occurred in 1999 on a river bank mile basis.

Special Seasonal Limitations To Grazing. The majority of the material presented in Appendix L has not changed since the Draft Environmental Impact Statement. However, the grazing prescriptions for the grazing decisions have been further refined. To protect public land riparian areas, grazing in pastures with livestock access to riverbank will be limited to periods when river flows at the USGS Service Creek gauging station exceed 2,000 cubic feet per second (cfs). As noted in the description of the decision, for pastures grazed in winter, the flow limitation is intended to be an interim management constraint. Exceptions will be made for scattered tracts of public land. An available option for areas outside of Wilderness Study Areas is the use of a temporary electric fence that restricts livestock access to riparian areas. Further constraints, standards, and remedies are described in FEIS, Volume 1, Chapter 3, Monitoring and description of Preferred Alternative.

Special Limitations on Authorization of Sheep or Goat Use. To protect California Bighorn Sheep, no sheep or goat permits (domestic or non-native) will be allowed in the future on BLM allotments within and adjacent to Segments 1, 2, 3, and 10. Also, conversion of permits from cattle or horses, to sheep or goats, will not be allowed in the future in Segments 1, 2, 3, and 10 (see FEIS, Volume 2, Appendix P). Any use of domestic sheep or goats for weed control will be closely monitored and done in accordance with the Bighorn Sheep Management Guidelines. No reduction in present livestock permit levels are proposed to accommodate bighorn sheep, just a restriction on livestock class. Currently, there are no active domestic sheep or goat permits in Segments 1, 2, 3, and 10.

Allotment # 2617 - Emigrant Canyon

| | | | |
|-----------------------------|---|-------------|------------|
| Location: | Segment 1 | River Miles | 5.6 - 13.4 |
| Category: | M | | |
| AUMs within lease: | 26 | | |
| Miles of river bank | private 7.2 | public | 0.6 |
| Acres within WSR boundaries | private 323 | public | 215 |
| Acres within allotment | private 5130 | public | 661 |
| Riparian management in 1988 | Season long, 3.0 rm private (below WSR designated segment) excluded | | |
| NEPA documents | none | | |
| Riparian management in 1999 | same as above. | | |

- Restricted grazing, necessary actions:
- a. Construct approximately 0.7 miles of fence in southwest quarter of section 18, northwest quarter of section 19 and northeast quarter of section 24, running up from the river to the existing fence separating wheat field from range in section 24. This will create a new pasture with a large percent of public land, the 'Upriver Pasture' with 3 AUMs, which will be rested for the first 3 years following completion of the fence.
 - b. Adjust the lease to confine grazing period within the dates of November 1 to June 1 on pastures with access to riverbank. Dates of authorized use will be determined by plant phenology, herd size and available forage, but will be restricted normally to 60 days during the December 15 to May 1 period.
 - c. Allotment will be subject to the special seasonal flow restrictions in the Upriver Pasture.
 - d. The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #2604 - Philippi

| | | | |
|-----------------------------|--|-------------|------------|
| Location: | Segment 1 | River Miles | 9.5 - 11.0 |
| Category: | M | | |
| AUMs within lease: | 64 | | |
| Miles of river bank | private 1.5 | public | 0.0 |
| Acres within WSR boundaries | private 155 | public | 42 |
| Acres within allotment | private 2677 | public | 942 |
| Riparian management in 1988 | winter and spring, area subject to trespass grazing during low flows | | |
| NEPA documents | none | | |
| Riparian management in 1999 | same as above | | |

- Restricted grazing, necessary actions:
- a. Adjust the lease to confine grazing period within the dates of November 1 to June 1 on pastures with access to riverbank. Dates of authorized use will be determined by plant phenology, herd size and available forage, but will be restricted normally to 60 days during the December 15 to May 1 period.
 - b. Allotment will not be subject to the special seasonal flow restrictions since there is no public land riparian habitat associated with the Wild and Scenic River.
 - c. The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #2648 - Hartung

Location: Segment 1 River Miles 13.4 - 15.8 and 17.2 - 18.4
 Category: I
 AUMs within lease: 16
 Miles of river bank private 2.9 public 0.7
 Acres within WSR boundaries private 308 public 243
 Acres within allotment private 1201 public 700
 Riparian management in 1988 spring and summer
 NEPA documents 96-009
 Riparian management in 1999 voluntary non-use by permittee. NEPA analysis has been completed for river fencing and rotation grazing, decision has not been issued.

- Restricted grazing, necessary actions:
- a. Adjust the lease to confine grazing period within the dates of November 1 to June 1 on pastures with access to riverbank. Dates of authorized use will be determined by plant phenology, herd size and available forage, but will be restricted normally to 60 days during the December 15 to May 1 period.
 - b. Allotment will be subject to the special seasonal flow restrictions.
 - c. The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #2594 - Morehouse and Elliot

Location: Segment 1 River Miles 15.8 - 17.2
 Category: M
 AUMs within lease: 3
 Miles of river bank private 0.4 public 1.0
 Acres within WSR boundaries private 109 public 62
 Acres within allotment private 169 public 65
 Riparian management in 1988 spring and summer.
 NEPA documents 96-009
 Riparian management in 1999 voluntary non-use by permittee. NEPA analysis has been completed for exclusion of allotment, decision has not been issued.

- Restricted grazing, necessary actions:
- a. Adjust the lease to confine grazing period within the dates of November 1 to June 1 on pastures with access to riverbank. Dates of authorized use will be determined by plant phenology, herd size and available forage, but will be restricted normally to 60 days during the December 15 to May 1 period.
 - b. Allotment will be subject to the special seasonal flow restrictions.
 - c. The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #2555 - Hoag

| | | | |
|-----------------------------|---|-------------|-------------|
| Location: | Segment 1 | River Miles | 16.0 - 17.3 |
| Category: | not available | | |
| AUMs within lease: | not available | | |
| Miles of river bank | private 0.3 | public | 1.0 |
| Acres within WSR boundaries | private 118 | public | 213 |
| Acres within allotment | private 786 | public | 364 |
| Riparian management in 1988 | unleased, grazed during low flows by trespass livestock | | |
| NEPA documents | none | | |
| Riparian management in 1999 | unleased, trespass resolved | | |

- Restricted grazing, necessary actions:
- Adjust the lease to confine grazing period within the dates of November 1 to June 1 on pastures with access to riverbank. Dates of authorized use will be determined by plant phenology, herd size and available forage, but will be restricted normally to 60 days during the December 15 to May 1 period.
 - Allotment will be subject to the special seasonal flow restrictions.
 - The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #2562 - J Bar S

| | | | | |
|-----------------------------|--|------------------|--------------------|-------------|
| Location: | Segment 1 | River Miles Left | 18.4 - 18.9; Right | 18.5 - 18.9 |
| Category: | I | | | |
| AUMs within lease: | 4 | | | |
| Miles of river bank | private 0.0 | public | 0.9 | |
| Acres within WSR boundaries | private 0 | public | 115 | |
| Acres within allotment | private 1311 | public | 115 | |
| Riparian management in 1988 | 0.5 miles exclusion, season long on 0.4 miles. | | | |
| NEPA documents | 96-009 | | | |
| Riparian management in 1999 | 0.5 miles exclusion, voluntary winter or spring use by permittee. NEPA analysis has been completed for rotation grazing of uplands and spring grazing on riparian area not excluded with fence, decision not issued. | | | |

- Restricted grazing, necessary actions:
- Adjust the lease to confine grazing period within the dates of November 1 to June 1 on pastures with access to riverbank. Dates of authorized use will be determined by plant phenology, herd size and available forage, but will be restricted normally to 60 days during the December 15 to May 1 period.
 - Adjust lease to prohibit grazing on public lands within riparian enclosure.
 - Allotment will be subject to the special seasonal flow restrictions.
 - The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #2513- Big Sky

| | | | |
|-----------------------------|--|-------------|-----------------------------------|
| Location: | Segment 1 | River Miles | Right 17.3 - 18.5 and 18.9 - 20.4 |
| Category: | M | | Left 18.9 - 22.8 |
| AUMs within lease: | 60 | | |
| Miles of river bank | private 5.4 | public | 1.2 |
| Acres within WSR boundaries | private 953 | public | 454 |
| Acres within allotment | private 8425 | public | 1215 |
| Riparian management in 1988 | season long | | |
| NEPA documents | 93-067, 96-009 | | |
| Riparian management in 1999 | exclusion of 0.5 miles of river bank of public and 3.3 river bank miles of private, voluntary winter or spring use by permittee on 0.7 river bank miles of public and 2.1 river bank miles of private. | | |

- Restricted grazing, necessary actions:
- Adjust the lease to confine grazing period within the dates of November 1 to June 1 on pastures with access to riverbank. Dates of authorized use will be determined by plant phenology, herd size and available forage, but will be restricted normally to 60 days during the December 15 to May 1 period.
 - Adjust lease to prohibit grazing on public lands within riparian enclosure.
 - Allotment will be subject to the special seasonal flow restrictions.
 - The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #2540 - Persimmon Woods

| | | | |
|-----------------------------|---|-------------|-------------|
| Location: | Segment 1 | River Miles | 22.8 - 23.9 |
| Category: | C | | |
| AUMs within lease: | 5 | | |
| Miles of river bank | private 1.1 | public | 0.0 |
| Acres within WSR boundaries | private 295 | public | 0 |
| Acres within allotment | private 2209 | public | 40 |
| Riparian management in 1988 | unleased, grazed during low flows by trespass livestock | | |
| NEPA documents | none | | |
| Riparian management in 1999 | unleased, trespass resolved | | |

- Restricted grazing, necessary actions:
- No management changes necessary.
 - Allotment will not be subject to the special seasonal flow restrictions since there is no public land riparian habitat associated with the Wild and Scenic River.
 - The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #2637 - V.O. West

Location: Segment 1 River Miles 20.4 - 22.1
Category: M
AUMs within lease: 15
Miles of river bank private 1.4 public 0.3
Acres within WSR boundaries private 183 public 193
Acres within allotment private 3150 public 223
Riparian management in 1988 winter grazing occurred on the allotment with riparian areas subject to grazing by trespass livestock during low flows.
NEPA documents none
Riparian management in 1999 exclusion on 1.0 miles of private, winter grazing on 0.3 miles of public and 0.4 miles of private.

- Restricted grazing, necessary actions:
- a. Adjust the lease to confine grazing period within the dates of November 1 to June 1 on pastures with access to riverbank. Dates of authorized use will be determined by plant phenology, herd size and available forage, but will be restricted normally to 60 days during the December 15 to May 1 period.
 - b. Adjust lease to prohibit grazing on public lands within riparian enclosure.
 - c. Allotment will be subject to the special seasonal flow restrictions.
 - d. The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #2595 - Morris

Location: Segment 1 River Miles 22.1 - 26.6
Category: I
AUMs within lease: 53
Miles of river bank private 3.0 public 1.5
Acres within WSR boundaries private 82 public 396
Acres within allotment private 996 public 833
Riparian management in 1988 spring use with some trespass grazing during low river flows.
NEPA documents none
Riparian management in 1999 exclusion on 0.2 miles public and 1.6 miles of private, spring use on 1.3 miles of public and 1.4 miles of private, grazing ends before the critical growing season.

- Restricted grazing, necessary actions:
- a. Construct 0.7 miles of fence on public land on the section line between sections 13 and 14, from the fence on the south section lines of sections 13 and 14 to the plateau in section 14. Follow the contour around the plateau in section 14, separating the steep slopes from the flat. This will create a River Pasture (with 0 AUMs) and an Up Canyon Pasture, with 9 AUMs.
 - b. Adjust the lease to confine grazing period within the dates of November 1 to June 1 on pastures with access to riverbank. Dates of authorized use will be determined by plant phenology, herd size and available forage, but will be restricted normally to 60 days during the December 15 to May 1 period.
 - c. Adjust lease to prohibit grazing on public lands within riparian enclosure.
 - d. Allotment will be subject to the special seasonal flow restrictions.
 - e. The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #2560 - Baseline

| | | | |
|-----------------------------|--|-------------|-------------|
| Location: | Segment 1 | River Miles | 23.9 - 28.5 |
| Category: | M | | |
| AUMs within lease: | 30 | | |
| Miles of river bank | private 3.0 | public | 1.6 |
| Acres within WSR boundaries | private 520 | public | 220 |
| Acres within allotment | private 3255 | public | 598 |
| Riparian management in 1988 | spring and early summer | | |
| NEPA documents | none | | |
| Riparian management in 1999 | exclusion of 1.2 miles of private land, spring and early summer grazing on 1.2 miles of public and 0.4 miles of private and non-use on 0.4 miles of public and 1.4 miles of private. | | |

- Restricted grazing, necessary actions:
- Exclude river riparian in Baseline Pasture by constructing 0.7 miles of fence on public land, 0.4 miles of fence on private land in sections 25, 30 and 31.
 - Adjust lease to prohibit grazing on public lands within riparian enclosure.
 - Allotment will be subject to the special seasonal flow restrictions.
 - The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #2598 - Hay Creek

| | | | |
|-----------------------------|---|-------------|-----------------------------------|
| Location: | Segment 1 | River Miles | Right 29.0 - 30.8 and 31.1 - 31.5 |
| Category: | I | Left | 28.9 - 31.5 |
| AUMs within lease: | 126 | | |
| Miles of river bank | private 3.1 | public | 1.7 |
| Acres within WSR boundaries | private 354 | public | 295 |
| Acres within allotment | private 2418 | public | 1518 |
| Riparian management in 1988 | season long | | |
| NEPA documents | 95-080 | | |
| Riparian management in 1999 | exclusion of 0.2 miles of public land and 1.0 miles of private land, winter and early spring grazing on 0.8 river bank miles of public and 0.2 miles of private, summer grazing on 0.7 miles of public and 1.9 miles of private river bank. | | |

- Restricted grazing, necessary actions:
- Pursue opportunities to exchange lands on Sherman county riparian areas for lands elsewhere in the WSR boundary.
 - Allotment (with the exception of the Sherman Pasture) will be subject to the special seasonal flow restrictions.
 - The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #2520- Smith Point

| | | | |
|-----------------------------|--|-------------|--------------------------|
| Location: | Segment 1 | River Miles | 30.8 - 31.1, 31.5 - 34.1 |
| Category: | I | | |
| AUMs within lease: | 93 | | |
| Miles of river bank | private 1.5 | public | 4.0 |
| Acres within WSR boundaries | private 200 | public | 1481 |
| Acres within allotment | private 200 | public | 2596 |
| Riparian management in 1988 | season long | | |
| NEPA documents | 89-058, 90-005, 98-100 | | |
| Riparian management in 1999 | exclusion on 1.0 miles of private river bank, 2.7 miles of public river bank, spring grazing on 0.5 miles of private and 1.3 miles of public. Decision to exclude the remainder has been issued but not implemented. | | |

- Restricted grazing, necessary actions:
- Exclusion of the remainder of the river riparian by construction of 1.8 miles of fence (0.5 miles on private, 1.3 miles on public) was accomplished in 2000.
 - Adjust lease to prohibit grazing on public lands within riparian enclosure.
 - Allotment will be subject to the special seasonal flow restrictions.
 - The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #2597 - J.T. Murtha

| | | | |
|-----------------------------|---|-------------|-------------|
| Location: | Segment 1 | River Miles | 34.1 - 39.7 |
| Category: | I | | |
| AUMs within lease: | 269 | | |
| Miles of river bank | private 7.0 | public | 4.2 |
| Acres within WSR boundaries | private 800 | public | 1228 |
| Acres within allotment | private 5333 | public | 4510 |
| Riparian management in 1988 | season long | | |
| NEPA documents | 99-117 | | |
| Riparian management in 1999 | exclusion of 0.6 miles of private land, rotation grazing (alternating rest and season long) | | |

- Restricted grazing, necessary actions:
- Split Esau Canyon pasture into four pastures by constructing approximately 4.5 miles of fence.
 The Dry Fork pasture (56 AUMs on public, 55 AUMs on private) will be formed by fencing from the wheat field fence in northeast corner of section 34, down the ridge in the east half of section 26 and 23 to connect with the corral in NE 1/4, NW 1/4 of Section 23. The Dry Fork pasture will be separated from the river by construction of whatever gap fences are necessary to constrain livestock access to the river.
 The Cabin pasture (30 AUMs on public, 23 AUMs on private) will be formed by connecting the existing cross fence in the middle of Section 26 to the Dry Fork pasture fence and the allotment boundary in the northwest quarter of Section 25.
 The East Fork pasture (12 AUMs on public, 80 AUMs on private) will be formed by fencing from the wheat field in the northwest quarter of Section 1, down the ridge in the east half of Sections 35 and 26 to the cross fence in Section 26.
 The Esau Canyon pasture will have 36 AUMs on public and 46 AUMs on private.
 - Implement a rotation grazing system in which Devils pasture (56 AUMs on public, 52 AUMs on private), Billiard pasture (22 AUMs on public, 7 AUMs on private) and Home South pasture (18 AUMs on public, 8 AUMs on private) are grazed from within the dates of December 15 and May 1 in year 1 and not grazed in year 2. Saddle pasture (20 AUMs on public, 0 AUMs on private) will be grazed May 2 to May 20 in year 1 and not grazed in year 2. Home North pasture (13 AUMs on public, 10 AUMs on private), Cabin pasture (30 AUMs on public, 23 AUMs on private) and Dry Fork pasture will be grazed December 15 to May 1 in year 2 and not grazed in year 1. East Fork pasture, Esau Canyon pasture and Corridor pasture (6 AUMs on public, 45 AUMs on private) will be grazed every year.
 - Allotment will be subject to the special seasonal flow restrictions.
 - The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #2597 - J.T. Murtha

| | | | |
|-----------------------------|---|-------------|---------------------------------------|
| Location: | Segment 2 | River Miles | Right 39.7 - 50.1, Left 39.7 - 40.9, |
| Category: | I | | 41.0 - 45.9, 46.1 - 48.6, 48.7 - 50.1 |
| AUMs within lease: | same as above | | |
| Miles of river bank | private 3.5 | public | 16.9 |
| Acres within WSR boundaries | private 938 | public | 2748 |
| Acres within allotment | private 1913 | public | 3596 |
| Riparian management in 1988 | season long | | |
| NEPA documents | 99-117 | | |
| Riparian management in 1999 | rotation (alternating rest with spring - winter grazing) on public land, season long on irrigated private | | |

- Restricted grazing, necessary actions:
- a. Exclude from livestock the camp sites on river left RM 43.6 - 45.5 with 2 miles of fence. The exclusion will contain 1 AUM on public land, 0 AUMs on private.
 - b. Implement rotation grazing system described for JT Murtha allotment in Segment 1.
 - c. The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #2636 - George Weedman

| | | | |
|-----------------------------|---|-------------|------------|
| Location: | Segment 2 | River Miles | 40.9 -41.0 |
| Category: | C | | |
| AUMs within lease: | 6 | | |
| Miles of river bank | private 0.0 | public | 0.1 |
| Acres within WSR boundaries | private 0 | public | 51 |
| Acres within allotment | private 2910 | public | 343 |
| Riparian management in 1988 | non-use by permittee, fenced in with 2597 | | |
| NEPA documents | none | | |
| Riparian management in 1999 | same as above. | | |

- Restricted grazing, necessary actions:
- a. Adjust the lease to confine grazing period within the dates of November 1 to June 1 on pastures with access to riverbank. Dates of authorized use will be determined by plant phenology, herd size and available forage, but will be restricted normally to the March 1 to May 1 period.
 - b. Allotment will be subject to the special seasonal flow restrictions.
 - c. The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #2553 - Willow Spring

| | | | |
|-----------------------------|---|-------------|-------------------------|
| Location: | Segment 2 | River Miles | 45.9 -46.1, 48.6 - 48.7 |
| Category: | I | | |
| AUMs within lease: | 20 | | |
| Miles of river bank | private 0.0 | public | 0.3 |
| Acres within WSR boundaries | private 0 | public | 227 |
| Acres within allotment | private 560 | public | 1127 |
| Riparian management in 1988 | non-use by permittee, fenced in with 2597 | | |
| NEPA documents | none | | |
| Riparian management in 1999 | same as above | | |

- Restricted grazing, necessary actions:
- Adjust the lease to confine grazing period within the dates of November 1 to June 1 on pastures with access to riverbank. Dates of authorized use will be determined by plant phenology, herd size and available forage, but will be restricted normally to the March 1 to May 1 period.
 - Allotment will be subject to the special seasonal flow restrictions.
 - The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #2591 - Miller

| | | | |
|-----------------------------|--|-------------|-------------|
| Location: | Segment 2 | River Miles | 50.1 - 54.8 |
| Category: | I | | |
| AUMs within lease: | 47 | | |
| Miles of river bank | private 0.7 | public | 4.0 |
| Acres within WSR boundaries | private 42 | public | 812 |
| Acres within allotment | private 1964 | public | 1896 |
| Riparian management in 1988 | season long | | |
| NEPA documents | 99-080 | | |
| Riparian management in 1999 | voluntary spring use changing to permanent spring use with implementation of latest decision. Decision requires construction of 1.3 miles of fence to create a riparian pasture. | | |

- Restricted grazing, necessary actions:
- Create the Lower Deep Canyon pasture (25 AUMs on public, 0 AUMs on private) by construction of 1.3 miles of fence on the western boundary of sections 14 and 23 between the ridge tops which form Deep Canyon.
 - Authorize no grazing in the Gooseneck pasture for three years.
 - Adjust the lease to confine grazing period within the dates of November 1 to June 1 on pastures with access to riverbank. Dates of authorized use will be determined by plant phenology, herd size and available forage, but will be restricted normally to the March 1 to May 1 period.
 - Allotment will be subject to the special seasonal flow restrictions.
 - The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #2509 - Belshe

| | | | |
|-----------------------------|--|-------------|-------------|
| Location: | Segment 2 | River Miles | 54.8 - 56.3 |
| Category: | I | | |
| AUMs within lease: | 62 | | |
| Miles of river bank | private 0.0 | public | 1.5 |
| Acres within WSR boundaries | private 0 | public | 411 |
| Acres within allotment | private 1080 | public | 1840 |
| Riparian management in 1988 | spring and early summer, riparian zone subject to trespass during low flows. | | |
| NEPA documents | 97-137 | | |
| Riparian management in 1999 | spring | | |

- Restricted grazing, necessary actions:
- a. Create a pasture which includes the mouth of Little Ferry Canyon and the Gooseneck (5 AUMs on public, 1 AUM on private) by constructing approximately 1.0 miles of fence in section 23 and 26.
 - b. Authorize no grazing in the new pasture for three years.
 - c. Adjust the lease to confine grazing period within the dates of November 1 to June 1 on pastures with access to riverbank. Dates of authorized use will be determined by plant phenology, herd size and available forage, but will be restricted normally to the March 1 to May 1 period.
 - d. Allotment will be subject to the special seasonal flow restrictions. The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #2572 - Laffoon and Carlson

| | | | |
|-----------------------------|--|-------------|-------------|
| Location: | Segment 2 | River Miles | 56.3 - 64.7 |
| Category: | I | | |
| AUMs within lease: | 85 | | |
| Miles of river bank | private 0.0 | public | 8.4 |
| Acres within WSR boundaries | private 45 | public | 1446 |
| Acres within allotment | private 1652 | public | 3655 |
| Riparian management in 1988 | season long | | |
| NEPA documents | 94-078, 96-024, 96-058 | | |
| Riparian management in 1999 | voluntary non-use taken by permittee on 5.4 miles, exclusion of 0.7 miles and spring use on 2.3 miles. | | |

- Restricted grazing, necessary actions:
- a. Adjust the lease to confine grazing period within the dates of November 1 to June 1 on pastures with access to riverbank. Dates of authorized use will be determined by plant phenology, herd size and available forage, but will be restricted normally to 60 days during the December 15 to May 1 period.
 - b. Adjust lease to prohibit grazing on public lands within riparian enclosure.
 - c. Allotment will be subject to the special seasonal flow restrictions.
 - d. The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #2522 - James Brown

| | | | |
|-----------------------------|---|-------------|-------------|
| Location: | Segment 2 | River Miles | 64.7 - 71.8 |
| Category: | I | | |
| AUMs within lease: | 66 | | |
| Miles of river bank | private 1.4 | public | 5.7 |
| Acres within WSR boundaries | private 152 | public | 1202 |
| Acres within allotment | private 1968 | public | 2527 |
| Riparian management in 1988 | season long | | |
| NEPA documents | 96-058 | | |
| Riparian management in 1999 | exclusion of 2.1 river miles public, spring grazing on remainder. | | |

- Restricted grazing, necessary actions:
- Adjust the lease to confine grazing period within the dates of November 1 to June 1 on pastures with access to riverbank. Dates of authorized use will be determined by plant phenology, herd size and available forage, but will be restricted normally the March 1 to May 1 period.
 - Adjust lease to prohibit grazing on public lands within riparian enclosure.
 - Allotment will be subject to the special seasonal flow restrictions.
 - The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment # 2521- Horseshoe Bend

| | | | |
|-----------------------------|---|-------------|-------------|
| Location: | Segment 2 | River Miles | 73.0 - 76.0 |
| Category: | I | | |
| AUMs within lease: | 43 | | |
| Miles of river bank | private 1.2 | public | 1.8 |
| Acres within WSR boundaries | private 145 | public | 260 |
| Acres within allotment | private 1471 | public | 737 |
| Riparian management in 1988 | rest with some spring and early summer use beginning in 1990, riparian zone subject to trespass during low flows. | | |
| NEPA documents | 97-062 | | |
| Riparian management in 1999 | spring | | |

- Restricted grazing, necessary actions:
- Adjust the lease to confine grazing period within the dates of November 1 to June 1 on pastures with access to riverbank. Dates of authorized use will be determined by plant phenology, herd size and available forage, but will be restricted normally to the March 1 to May 1 period.
 - Allotment will be subject to the special seasonal flow restrictions.
 - The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #2538- Decker

| | | | |
|-----------------------------|---|-------------|--------------------------|
| Location: | Segment 2 | River Miles | 71.8 - 73.0, 76.0 - 80.8 |
| Category: | I | | |
| AUMs within lease: | 206 | | |
| Miles of river bank | private 0.4 | public | 5.6 |
| Acres within WSR boundaries | private 9 | public | 1063 |
| Acres within allotment | private 1823 | public | 2999 |
| Riparian management in 1988 | spring and early summer, riparian area subject to trespass during low flows. | | |
| NEPA documents | 97-038 | | |
| Riparian management in 1999 | spring, planning and decision for 0.2 miles of fence (excluding of 1.1 river bank miles) has been issued but not implemented. | | |

- Restricted grazing, necessary actions:
- a. Exclude livestock from approximately 1.25 miles of river bank by constructing a 0.2 mile gap fence in a side canyon in SE 1/4, NE 1/4 of Section 25. The enclosure will contain 2 AUMs on public land, 0 AUMs on private.
 - b. Exclude livestock from campsites at the mouth of Chisholm Canyon with 0.5 miles of fence in the northwest quarter of Section 23. The enclosure will contain 3 AUMs on public land, 0 AUMs private.
 - c. Adjust the lease to confine grazing period within the dates of November 1 to June 1 on pastures with access to riverbank. Dates of authorized use will be determined by plant phenology, herd size and available forage, but will be restricted normally the March 1 to May 1 period.
 - d. Adjust lease to prohibit grazing on public lands within riparian enclosures.
 - e. Allotment will be subject to the special seasonal flow restrictions.
 - f. The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #2619 - Sid Seale

| | | |
|-----------------------------|---|-------------------------|
| Location: | Segment 2 | River Miles 50.1 - 83.7 |
| Category: | I | |
| AUMs within lease: | 733 | |
| Miles of river bank | private 2.5 | public 31.1 |
| Acres within WSR boundaries | private 157 | public 5980 |
| Acres within allotment | private 25,303 | public 13,676 |
| Riparian management in 1988 | fences stopped grazing by permittee on 18.8 miles of river bank, but many of those riparian areas were subject to trespass during low flows. Season long grazing of 15.1 miles of river bank by permittee. | |
| NEPA documents | 95-008 | |
| Riparian management in 1999 | rest or exclusion of 20.3 miles of river bank, spring or winter grazing of 13.3 miles of river bank. Decision for a 0.2 mile fence, excluding another 3.2 river bank miles, was issued but not implemented. | |

- Restricted grazing, necessary actions:
- a. Exclude livestock from the mouth of Grass Canyon by constructing a 0.2 mile gap fence in the northeast quarter of Section 11. The enclosure will contain 0 AUMs.
 - b. Exclude livestock from the camp sites at Cordwood Canyon by constructing 0.7 miles fence on river right from RM 77.7 to 78.2. Enclosure will contain 2 AUMs on public land, 0 AUMs on private. Prohibit grazing in Hoot Owl camp. The enclosure will contain 0 AUMs.
 - c. Adjust the lease to confine grazing period within the dates of November 1 to June 1 on pastures with access to riverbank. Dates of authorized use will be determined by plant phenology, herd size and available forage, but will be restricted normally to 60 days during the December 15 to May 1 period.
 - d. Adjust lease to prohibit grazing on public lands within riparian enclosures.
 - e. Allotment will be subject to the special seasonal flow restrictions.
 - f. The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #2608 - Rattray

| | | | |
|-----------------------------|--|-------------|-------------------|
| Location: | Segment 2 | River Miles | Right 83.7 - 93.5 |
| Category: | I | | Left 83.7 - 91.9 |
| AUMs within lease: | 534 | | |
| Miles of river bank | private 2.3 | public 15.7 | |
| Acres within WSR boundaries | private 208 | public 2496 | |
| Acres within allotment | private 16,716 | public 7982 | |
| Riparian management in 1988 | season long | | |
| NEPA documents | 93-037, 96-110 | | |
| Riparian management in 1999 | exclusion on 1.2 miles of private and 4.5 miles of public, winter use on 0.8 miles of private and 7.7 miles of public, rotation (spring and non-use) on 3.8 miles of public. | | |

- Restricted grazing, necessary actions:
- a. Implement 3 years rest in Pine Hollow Pasture.
 - b. Adjust the lease to confine grazing period within the dates of November 1 to June 1 on pastures with access to riverbank. Dates of authorized use will be determined by plant phenology, herd size and available forage, but will be restricted normally to 60 days during the December 15 to May 1 period.
 - c. Adjust lease to prohibit grazing on public lands within riparian enclosure.
 - d. Allotment will be subject to the special seasonal flow restrictions.
 - e. The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #2629 - Tatum

| | | | |
|-----------------------------|--|-------------|-------------|
| Location: | Segment 2 | River Miles | 80.8 - 82.9 |
| Category: | I | | |
| AUMs within lease: | 113 | | |
| Miles of river bank | private 0.0 | public 2.1 | |
| Acres within WSR boundaries | private 0 | public 422 | |
| Acres within allotment | private 3242 | public 2889 | |
| Riparian management in 1988 | non-use by permittee, riparian areas subject to trespass grazing during low river flows. | | |
| NEPA documents | none | | |
| Riparian management in 1999 | spring | | |

- Restricted grazing, necessary actions:
- a. Exclude livestock from campsites on river left RM 81.2 to 82.6 by cancelling grazing in River 'B' pasture.
 - b. Adjust the lease to confine grazing period within the dates of November 1 to June 1 on pastures with access to riverbank. Dates of authorized use will be determined by plant phenology, herd size and available forage, but will be restricted normally to the March 1 to May 1 period.
 - c. Allotment will be subject to the special seasonal flow restrictions.
 - d. The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #2518 - Pine Creek

Location: Segment 2 River Miles 82.9 - 83.6 and 91.9 - 92.9
 Category: I
 AUMs within lease: 346
 Miles of river bank private 1. public 0.7
 Acres within WSR boundaries private 171 public 454
 Acres within allotment private 10,960 public 5418
 Riparian management in 1988 season long
 NEPA documents 93-037
 Riparian management in 1999 spring, no access of Red Wall area during high flows.

- Restricted grazing, necessary actions:
- Rest Big Gulch pasture for three years.
 - Adjust the lease to confine grazing period within the dates of November 1 to June 1 on pastures with access to riverbank. Dates of authorized use will be determined by plant phenology, herd size and available forage, but will be restricted normally to the December 6 to February 15 period.
 - Allotment will be subject to the special seasonal flow restrictions.
 - The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #2623 - Steiwer

Location: Segment 2 River Miles 93.5 - 103.4
 Category: I
 AUMs within lease: 230
 Miles of river bank private 4.9 public 5.0
 Acres within WSR boundaries private 535 public 1385
 Acres within allotment private 38,810 public 4376
 Riparian management in 1988 spring on 4.0 miles of public, non-use by permittee on 1.0 miles of public and 2.7 miles of private though the area was subject to trespass grazing during low river flows, season long on 2.2 miles of private.
 NEPA documents 87-033
 Riparian management in 1999 same as above, trespass has been resolved.

- Restricted grazing, necessary actions:
- Exclude livestock from Juniper Island campsite with 0.7 miles of fence on river right RM 99.6 to 99.9. The enclosure will contain 1 AUM on public land, 0 AUMs on private.
 - Adjust the lease to confine grazing period within the dates of November 1 to June 1 on pastures with access to riverbank. Dates of authorized use will be determined by plant phenology, herd size and available forage, but will be restricted normally to 60 days during the December 15 to May 1 period.
 - Adjust lease to prohibit grazing on public lands within riparian enclosure.
 - Pursue opportunities to exchange lands north of Butte Creek for other lands within the WSR boundary.
 - Allotment will be subject to the special seasonal flow restrictions.
 - The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #2584 - Catherine Maurer

| | | | | |
|-----------------------------|--|------------------|---------------------|---------------|
| Location: | Segment 2 | River Miles Left | 92.9 - 106.1, Right | 103.4 - 107.0 |
| Category: | I | | | |
| AUMs within lease: | 789 | | | |
| Miles of river bank | private 10.3 | public | 6.5 | |
| Acres within WSR boundaries | private 1427 | public | 1815 | |
| Acres within allotment | private 26,168 | public | 14,683 | |
| Riparian management in 1988 | season long | | | |
| NEPA documents | 91-038, 95-009, 97-014 | | | |
| Riparian management in 1999 | exclusion on 0.5 miles of public and 2.6 miles of private, spring use on 1.5 miles private and 3.3 miles public, season long on 6.2 miles of private and 2.7 miles public. | | | |

- Restricted grazing, necessary actions:
- a. For the Clarno Rapids area, adjust the lease to confine grazing period within the dates of November 1 to June 1 on pastures with access to riverbank. Dates of authorized use will be determined by plant phenology, herd size and available forage, but will be restricted normally to the April 1 to June 1 period.
 - b. For the Rayburn pasture, develop an allotment management plan or pursue exchange opportunities for other lands within WSR boundaries.
 - c. Allotment (with the exception of the Rayburn pasture) will be subject to the special seasonal flow restrictions.
 - d. The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #2614 - Clarno Homestead

| | | | |
|-----------------------------|----------------|-------------|---------------------------------|
| Location: | Segment 2 | River Miles | 106.1 - 108.3 and 108.7 - 109.3 |
| Category: | I | | |
| AUMs within lease: | 63 | | |
| Miles of river bank | private 0.4 | public | 2.8 |
| Acres within WSR boundaries | private 25 | public | 396 |
| Acres within allotment | private 32 | public | 1693 |
| Riparian management in 1988 | season long | | |
| NEPA documents | 95-009, 96-060 | | |
| Riparian management in 1999 | unleased | | |

- Restricted grazing, necessary actions:
- a. Adjust lease to retire grazing on public lands within the WSR boundaries.
 - b. Allotment will be subject to the special seasonal flow restrictions.
 - c. The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #2588 - Spud

| | | |
|-----------------------------|---|---------------------------|
| Location: | Segment 3 | River Miles 110.7 - 114.5 |
| Category: | M | |
| AUMs within lease: | 40 | |
| Miles of river bank | private 3.2 | public 0.6 |
| Acres within WSR boundaries | private 494 | public 148 |
| Acres within allotment | private 650 | public 608 |
| Riparian management in 1988 | exclusion of 0.1 miles of public river bank and 2.2 miles of private river bank, these riparian areas subject to limited trespass during low river flows, spring grazing on 0.5 miles of public river bank. | |
| NEPA documents | 90-035 | |
| Riparian management in 1999 | same as above, except trespass is largely resolved. | |

- Restricted grazing, necessary actions:
- .A gap fence of approximately 0.3 miles will be constructed across the canyon in the southeastern part of section 8 to prevent livestock from the neighboring allotment accessing the river and Spud allotment.
 - Adjust the lease to confine the grazing period within the dates of November 1 to June 1 on pastures with access to riverbank. Dates of authorized use will be determined by plant phenology, herd size and available forage, but will be restricted normally to the March 15 to May 15 period.
 - The allotment will be subject to the special seasonal flow restrictions.
 - The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #2587 - Corral Canyon

| | | |
|-----------------------------|--|---------------------------|
| Location: | Segment 3 | River Miles 109.6 - 111.4 |
| Category: | I | |
| AUMs within lease: | 88 | |
| Miles of river bank | private 1.7 | public 0.1 |
| Acres within WSR boundaries | private 66 | public 4 |
| Acres within allotment | private 1200 | public 2101 |
| Riparian management in 1988 | spring, early summer. | |
| NEPA documents | 97-007 | |
| Riparian management in 1999 | spring use with livestock removed by May 15th. | |

- Restricted grazing, necessary actions:
- Adjust the lease to confine the grazing period within the dates of November 1 to June 1 on the Corral Canyon pasture with access to the riverbank. Dates of authorized use will be determined by plant phenology, herd size and available forage, but will be restricted normally to 60 days during the March 15 to May 15 period.
 - The allotment will be subject to the special seasonal flow restrictions.
 - The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #2512 - Big Muddy

| | | |
|-----------------------------|---|---------------------------|
| Location: | Segment 3 | River Miles 114.5 - 128.1 |
| Category: | I | |
| AUMs within lease: | 605 | |
| Miles of river bank | private 8.0 | public 5.6 |
| Acres within WSR boundaries | private 1069 | public 1142 |
| Acres within allotment | private 64,483 | public 14,890 |
| Riparian management in 1988 | winter and spring use by permittees, riparian areas subject to trespass grazing during low river flows. | |
| NEPA documents | none | |
| Riparian management in 1999 | spring | |

- Restricted grazing, necessary actions:
- Adjust lease to confine grazing period within dates of November 1 to June 1 on pastures with access to riverbank. Determine dates of authorized use by plant phenology, herd size and available forage, but restrict normally to 60 days during March 15 to May 15 period.
 - Construct approximately 2.4 miles of fence to rest 3.4 miles of riverbank for 10 years on river left. The fence will follow a route from a high point above some rocky rims in T.9S., R.20E., section 6, the northwest portion, go west for about 0.75 miles, then southwest along a ridge to the top of a rim in T.9S., R.19E., section 1, the southwestern portion. Also, construct approximately 0.8 miles of fence to exclude grazing from 0.6 miles of riverbank that contains two high-use campsites. On river left, fence will connect a rocky rim just above RM 119.1 to a rocky rim near RM 119.7.
 - Allotment pastures containing public land will be subject to the special seasonal flow restrictions. The private agricultural lands located at the mouth of Muddy Creek will not be subject to the special seasonal flow restrictions.
 - The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #2545- Cherry Creek

| | | |
|-----------------------------|---|---------------------------|
| Location: | Segment 3 | River Miles 128.1 - 131.6 |
| Category: | I | |
| AUMs within lease: | 438 | |
| Miles of river bank | private 2.6 | public 0.9 |
| Acres within WSR boundaries | private 427 | public 164 |
| Acres within allotment | private 49,960 | public 11,095 |
| Riparian management in 1988 | winter and spring use by permittees, riparian areas subject to grazing trespass during low river flows. | |
| NEPA documents | none | |
| Riparian management in 1999 | winter and spring, trespass largely resolved. | |

- Restricted grazing, necessary actions:
- Adjust lease to confine grazing period within dates of November 1 to June 1 on pastures with access to riverbank. Determine dates of authorized use by plant phenology, herd size and available forage, but restricted normally to use period between March 15 to May 15.
 - Adjust lease to reflect addition of 17 acres of public land and one AUM on river left in the southeastern quarter of section 24.
 - The public land pasture along the river in the southwest quarter of section 30 will be subject to the special seasonal flow restrictions.
 - The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #2624 - Burnt Ranch

| | | |
|-----------------------------|--|---------------------------|
| Location: | Segment 3 | River Miles 131.6 - 133.0 |
| Category: | C | |
| AUMs within lease: | 7 | |
| Miles of river bank | private 0.0 | public 1.4 |
| Acres within WSR boundaries | private 0 | public 113 |
| Acres within allotment | private 2080 | public 328 |
| Riparian management in 1988 | spring and early summer | |
| NEPA documents | none | |
| Riparian management in 1999 | early spring (between March 15 and April 15) for two weeks every other year. | |

- Restricted grazing, necessary actions:
- Provide three years of nonuse (2001, 2002 and 2003) for the River Pasture, followed by authorized grazing as stated above for riparian management in 1999.
 - The River Pasture will be subject to the special seasonal flow restrictions.
 - The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #2641 - North 80

| | | |
|-----------------------------|-------------|---------------------------|
| Location: | Segment 3 | River Miles 133.0 - 133.2 |
| Category: | C | |
| AUMs within lease: | 3 | |
| Miles of river bank | private 0.2 | public 0.0 |
| Acres within WSR boundaries | private 9 | public 0 |
| Acres within allotment | private 25 | public 78 |
| Riparian management in 1988 | season long | |
| NEPA documents | none | |
| Riparian management in 1999 | rotation | |

- Restricted grazing, necessary actions:
- Same as existing.
 - The allotment will not be subject to the special seasonal flow restrictions since there is no public land riparian habitat associated with the Wild and Scenic River.
 - The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #2533- Sutton Mountain

| | | |
|-----------------------------|---|---------------------------|
| Location: | Segment 3 | River Miles 135.7 - 140.0 |
| Category: | I | |
| AUMs within lease: | 1020 | |
| Miles of river bank | private 0.2 | public 6.7 |
| Acres within WSR boundaries | private 30 | public 1163 |
| Acres within allotment | private 640 | public 25,315 |
| Riparian management in 1988 | winter and spring by permittee, riparian areas received trespass grazing during low river flows. | |
| NEPA documents | 92-021, 92-044 | |
| Riparian management in 1999 | exclusion, non-use and spring. Spring grazing occurs on 2.6 miles of the river. The Agate Point Wetland Pasture is in non-use pending improved riparian conditions and encompasses 2.6 miles of the river. The Priest Hole Field excludes livestock grazing and occupies 0.9 miles of the river. The Liberty Bottom Field also excludes grazing and consists of 0.8 miles of the river. | |

- Restricted grazing, necessary actions:
- a. Exclude livestock from campsites on river left by constructing approximately 2.3 miles of fence to exclude 2.6 miles. The fence will connect with the Liberty Bottom enclosure fence and go southwest for about 1.5 miles, then west across the Priest Hole access road and uphill to rock outcrops in the northeast quarter of section 1. About 0.4 miles will be constructed from the Unsworth Field fence east across a road up to a rocky point. A portion of the exclusion is created by natural steep, rocky bluffs in sections 1 and 2.
 - b. Prior to completion of the exclusion fence, the lease will be adjusted to confine the grazing period from April 1 to May 1. Dates of authorized use will be determined by plant phenology, herd size and available forage.
 - c. Upon completion of the fence, the appropriate number of AUMs contained within the enclosure will be subtracted from active use.
 - d. The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #2592 - Mary Misener

| | | |
|-----------------------------|-------------|---------------------------|
| Location: | Segment 3 | River Miles 141.4 - 142.8 |
| Category: | I | |
| AUMs within lease: | 52 | |
| Miles of river bank | private 1.4 | public 0.0 |
| Acres within WSR boundaries | private 269 | public 0 |
| Acres within allotment | private 640 | public 595 |
| Riparian management in 1988 | season long | |
| NEPA documents | 92-044 | |
| Riparian management in 1999 | exclusion | |

- Restricted grazing, necessary actions:
- a. Same as existing.
 - b. The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #2532 - T. Cole

| | | |
|-----------------------------|--|---------------------------|
| Location: | Segment 3 | River Miles 139.0 - 140.8 |
| Category: | C | |
| AUMs within lease: | 117 | |
| Miles of river bank | private 1.1 | public 0.7 |
| Acres within WSR boundaries | private 157 | public 374 |
| Acres within allotment | private 25,280 | public 2116 |
| Riparian management in 1988 | autumn through spring by permittee, trespass grazing during low river flows. | |
| NEPA documents | none | |
| Riparian management in 1999 | winter, trespass resolved. | |

Restricted grazing, necessary actions:

- Adjust the lease to confine grazing period within the dates of November 1 to June 1 on the Red Rock pasture. Dates of authorized use will be determined by plant phenology, herd size and available forage, but will be restricted normally to the March 15 to May 15 period.
- The Red Rock pasture will be subject to the special seasonal flow restrictions.
- The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #2659 - Packsaddle

| | | |
|-----------------------------|--|---------------------------|
| Location: | Segment 3 | River Miles 143.2 - 144.2 |
| Category: | C | |
| AUMs within lease: | 20 | |
| Miles of river bank | private 1.0 | public 0.0 |
| Acres within WSR boundaries | private 70 | public 0 |
| Acres within allotment | private 481 | public 330 |
| Riparian management in 1988 | winter and spring by permittee, riparian areas subject to grazing trespass during low river flows. | |
| NEPA documents | 92-044 | |
| Riparian management in 1999 | exclusion | |

Restricted grazing, necessary actions:

- Same as existing.
- The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #2577 - Byrd's Point

Location: Segment 3 River Miles 131.6 - 134.2
River Miles 135.3 - 136.4

Category: I

AUMs within lease: 94

Miles of river bank private 1.6 public 2.0

Acres within WSR boundaries private 305 public 285

Acres within allotment private 4612 public 1455

Riparian management in 1988 season long

NEPA documents 87-003, 98-058

Riparian management in 1999 exclusion

- Restricted grazing, necessary actions:
- a. Complete exclusion of the right riverbank by construction of fences was not fully obtained in 1999. Until completion of the riparian fences and exclusion is obtained, the dates of authorized use will be determined by plant phenology, herd size and available forage, but will be restricted normally to the March 15 to May 15 period.
 - b. The allotment will be subject to the special seasonal flow restrictions.
 - c. The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #2633 - Amine Peak

Location: Segment 3 River Miles 122.0 - 131.6

Category: I

AUMs within lease: 294

Miles of river bank private 5.7 public 3.9

Acres within WSR boundaries private 839 public 883

Acres within allotment private 11,062 public 4349

Riparian management in 1988 winter and spring by permittee, riparian areas received grazing trespass during low river flows.

NEPA documents 87-003

Riparian management in 1999 spring

- Restricted grazing, necessary actions:
- a. Exclude livestock from campsites by constructing approximately 1.5 miles of fence to create 1.6 miles of riverbank exclusion. The fence will connect to existing fence in section 6, at the mouth of Amine Canyon, and travel south along a ridge, which gradually turns to the southwest, then west to a rocky bluff overlooking the river near RM 123.6.
 - b. Adjust the lease to confine the grazing period within the dates of November 1 to June 1 on the pasture with access to the riverbank. Dates of authorized use will be determined by plant phenology, herd size and available forage, but will be restricted normally to the March 15 to May 15 period.
 - c. The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #2535 - Hayfield

| | | |
|-----------------------------|----------------|---------------------------|
| Location: | Segment 3 | River Miles 118.0 - 119.6 |
| Category: | C | |
| AUMs within lease: | 11 | |
| Miles of river bank | private 0.9 | public 0.7 |
| Acres within WSR boundaries | private 141 | public 86 |
| Acres within allotment | private 2360 | public 345 |
| Riparian management in 1988 | season long | |
| NEPA documents | 87-010, 90-089 | |
| Riparian management in 1999 | spring | |

- Restricted grazing, necessary actions:
- Adjust the lease to confine grazing period within the dates of November 1 to June 1 on pastures with access to riverbank. Dates of authorized use will be determined by plant phenology, herd size and available forage, but will be restricted normally to 14 days during the March 15 to May 15 period.
 - The River and Rip Rap Fields will be subject to the special seasonal flow restrictions.
 - The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #2656 - Dry Knob

| | | |
|-----------------------------|---|---------------------------|
| Location: | Segment 3 | River Miles 112.9 - 116.9 |
| Category: | C | |
| AUMs within lease: | 7 | |
| Miles of river bank | private 3.2 | public 0.8 |
| Acres within WSR boundaries | private 731 | public 30 |
| Acres within allotment | private 900 | public 275 |
| Riparian management in 1988 | winter and spring, riparian areas subjected to grazing trespass during low river flows. | |
| NEPA documents | none | |
| Riparian management in 1999 | autumn through spring | |

- Restricted grazing, necessary actions:
- Adjust the lease to confine the grazing period within the dates of November 1 to June 1 on pastures with access to the riverbank. Dates of authorized use will be determined by plant phenology, herd size and available forage, but will be restricted normally to the March 15 to May 15 period.
 - Adjust the lease to reflect the addition of public lands located within this allotment on river right in the southwest quarter of section 9 and the northeast quarter of section 21. The acres and AUMs will be determined since a vegetation inventory has not been completed on these parcels.
 - The allotment will be subject to the special seasonal flow restrictions.
 - The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #2649- Rim

Location: Segment 3 River Miles allotment contains no river bank, but
Category: C lies within WSR boundaries.
AUMs within lease: 3
Miles of river bank private 0.0 public 0.0
Acres within WSR boundaries private 40 public 300
Acres within allotment private 1606 public 301
Riparian management in 1988 n/a, allotment within the WSR corridor, but not on the river.
NEPA documents none
Riparian management in 1999 allotment within the WSR corridor, but it does not contain public land riparian habitat on the river.

- Restricted grazing, necessary actions:
- a. The allotment will not be subject to the special seasonal flow restrictions since grazing does not occur on the river.
 - b. The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #2536- Spring Basin

Location: Segment 3 River Miles no riverbank on allotment, but portions
Category: I lie within the WSR boundaries.
AUMs within lease: 146
Miles of river bank private 0.0 public 0.0
Acres within WSR boundaries private 3 public 90
Acres within allotment private 24,280 public 5363
Riparian management in 1988 no riverbank
NEPA documents
Riparian management in 1999 A portion of the allotment is within the WSR corridor, but grazing does not occur on riparian habitat on the river.

- Restricted grazing, necessary actions:
- a. The allotment will not be subject to the special seasonal flow restrictions since grazing does not occur on the river.
 - b. The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #2630 - Tripp

| | | |
|-----------------------------|-------------|---------------------------|
| Location: | Segment 3 | River Miles 111.9 - 112.5 |
| Category: | I | |
| AUMs within lease: | 7 | |
| Miles of river bank | private 0.4 | public 0.2 |
| Acres within WSR boundaries | private 18 | public 80 |
| Acres within allotment | private 18 | public 80 |
| Riparian management in 1988 | season long | |
| NEPA documents | none | |
| Riparian management in 1999 | season long | |

- Restricted grazing, necessary actions:
- Construct approximately 0.6 miles of fence on river right to establish riparian exclusion in section 3. Adjust use authorizations to prohibit grazing on public lands within riparian enclosure upon completion of the fence.
 - The allotment will be subject to the special seasonal flow restrictions until the riparian fence is completed.
 - The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #2544 - Circle S

| | | |
|-----------------------------|---|---------------------------|
| Location: | Segment 3 | River Miles 153.7 - 156.0 |
| Category: | I | |
| AUMs within lease: | 16 | |
| Miles of river bank | private 1.5 | public 0.8 |
| Acres within WSR boundaries | private 120 | public 161 |
| Acres within allotment | private 1596 | public 598 |
| Riparian management in 1988 | non-use by lessee, but trespass use occurring | season long. |
| NEPA documents | 98-058 | |
| Riparian management in 1999 | spring | |

- Restricted grazing, necessary actions:
- Adjust lease to confine grazing period within dates of November 1 to June 1 on John Day pasture with access to riverbank. Dates of authorized use will be determined by plant phenology, herd size and available forage, but will be restricted normally to the March 15 to May 15 period and rested every other year.
 - Allotment will be subject to the special seasonal flow restrictions.
 - The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #2537 - Dead Dog Canyon

| | | |
|-----------------------------|---|---------------------------|
| Location: | Segment 3 | River Miles 147.6 - 150.2 |
| Category: | I | |
| AUMs within lease: | 243 | |
| Miles of river bank | private 1.2 | public 1.4 |
| Acres within WSR boundaries | private 111 | public 90 |
| Acres within allotment | private 400 | public 3906 |
| Riparian management in 1988 | spring, with trespass use occurring season long | |
| NEPA documents | 92-044, 98-058 | |
| Riparian management in 1999 | exclusion | |

- Restricted grazing, necessary actions:
- a. Exclusion fences exist that prevent livestock from accessing the riverbank. The fences are a maintenance responsibility of the lessee. The special seasonal flow limitation applies only if the fences become nonfunctional.
 - b. The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #2556 - Murray Howard

| | | |
|-----------------------------|------------------------|---------------------------|
| Location: | Segment 3 | River Miles 150.2 - 156.0 |
| Category: | I | |
| AUMs within lease: | 33 | |
| Miles of river bank | private 3.2 | public 2.6 |
| Acres within WSR boundaries | private 652 | public 475 |
| Acres within allotment | private 7840 | public 846 |
| Riparian management in 1988 | winter, spring, summer | |
| NEPA documents | 98-058 | |
| Riparian management in 1999 | exclusion | |

- Restricted grazing, necessary actions:
- a. Exclusion fences prevent livestock from accessing the left riverbank. The fences are a maintenance responsibility of the lessee. The special seasonal flow limitation applies only if the fences become nonfunctional.
 - b. The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #2570 - Zack Keys

Location: Segment 3 River Miles 148.8 - 149.6
 Category: I
 AUMs within lease: 58
 Miles of river bank private 0.6 public 0.2
 Acres within WSR boundaries private 204 public 98
 Acres within allotment private 1680 public 1607
 Riparian management in 1988 season long
 NEPA documents 98-058
 Riparian management in 1999 exclusion

- Restricted grazing, necessary actions:
- a. Exclusion fences exist which prevent livestock from accessing the riverbank. The fences are a maintenance responsibility of the lessee. The special seasonal flow limitation applies only if the fences become nonfunctional.
 - b. The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #2569 - Zack Keys

Location: Segment 3 River Miles 145.6 - 148.8
 River Miles 150.9 - 153.7
 Category: I
 AUMs within lease: 71
 Miles of river bank private 3.8 public 2.2
 Acres within WSR boundaries private 427 public 449
 Acres within allotment private 7885 public 2001
 Riparian management in 1988 season long
 NEPA documents 98-058
 Riparian management in 1999 exclusion on 2.0 miles of public land and 0.8 miles of private

- Restricted grazing, necessary actions:
- a. Exclusion fences exist which prevent livestock from accessing the riverbank. The Goose Point Pasture contains no public land and is not subject to exclusion or the special seasonal flow restrictions. The fences are a maintenance responsibility of the lessee.
 - b. The special seasonal flow limitation applies only if the fences become nonfunctional.
 - c. The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #2589 - McQuinn

Location: Segment 4 River Miles allotment contains no river bank, but
Category: C lies within 1/4 mile of the river.
AUMs within lease: 1
Miles of river bank private 0.0 public 0.0
Acres within WSR boundaries private 0 public 0
Acres within allotment private 322 public 40
Riparian management in 1988 no river bank
NEPA documents none
Riparian management in 1999 same as above

Restricted grazing, necessary actions: a. No management changes necessary.

Allotment #2578 - Logan

Location: Segment 4 River Miles allotment contains no river bank, but
Category: C lies within 1/4 mile of the river.
AUMs within lease: 166
Miles of river bank private 0.0 public 0.0
Acres within WSR boundaries private 0 public 0
Acres within allotment private 13,570 public 2194
Riparian management in 1988 No river bank within the allotment
NEPA documents none
Riparian management in 1999 same as above

Restricted grazing, necessary actions: a. No management changes necessary.

Allotment #2517 - Borschawa

Location: Segment 4 River Miles allotment contains no river bank, but
Category: C lies within 1/4 mile of river
AUMs within lease: 6
Miles of river bank private 0.0 public 0.0
Acres within WSR boundaries private 0 public 0
Acres within allotment private 2040 public 120
Riparian management in 1988 No river bank within the allotment
NEPA documents none
Riparian management in 1999 same as above

Restricted grazing, necessary actions: a. No management changes necessary.

Allotment #2563 - Horseshoe Creek

Location: Segment 4 River Miles: 158.2 - 170.0
 Category: M
 AUMs's within lease: 100
 Miles of riverbank: private 8.8 public 3.0
 Acres within WSR boundaries: private 0 public 0
 Acres within allotment: private 26,740 public: 1,667
 Riparian management in 1988: Exclusion of 0.5 miles, spring grazing (5/1 to 6/15) on 1.5 miles, and season long on 1.0 mile of public riverbank, season long on 8.8 miles of private river bank.
 NEPA documents: None
 Riparian management in 1999: Exclusion of 0.5 mile of public river bank, grazing from 10/1 until 2/10 on 2.5 miles of public and 8.8 miles of private river bank.

- Restricted grazing, necessary actions:
- a. Adjust the lease to confine grazing period within the dates of October 1 to May 1 on pastures with access to riverbank. Dates of authorized use will be determined by plant phenology, herd size and available forage, but will be restricted normally to 60 days during the December 15 to May 1 period.
 - b. Adjust lease to prohibit grazing on public lands within riparian enclosure.

Allotment #2625- David Stirewalt

Location Segment 4 River Miles: 160.3 - 163.0
 Category: I
 AUMs with lease: 65
 Miles of river bank: private 0.0 public 2.7
 Acres with WSR boundaries: private 0 public 0
 Acres within allotment private 4280 public 1340
 Riparian management in 1988: exclusion of 2.7 miles of river bank.
 NEPA documents none
 Riparian management in 1999 same as above.

- Restricted grazing, necessary actions:
- a. Adjust use authorizations to prohibit grazing on public lands within riparian enclosure. Reactivation of use will be dependant upon recovery as evaluated by an interdisciplinary team and subject to management prescription to sustain functioning condition.

Allotment #2626 - Harper Mountain

Location: Segment 4 River Miles: 163 - 167.2
Category: I
AUMS within lease: 33
Miles of riverbank: private: 2.2 public 2.0
Acres within WSR boundaries: private: 0 public 0
Acres within the allotment private 8180 public: 920
Riparian management in 1988: Season long
NEPA documents: 97-121
Riparian management in 1999: Exclusion.

Restricted grazing, necessary actions: a. Adjust use authorizations to prohibit grazing on public lands within riparian enclosure. Reactivation of use will depend on recovery as evaluated by an interdisciplinary team and subject to management prescription to sustain functioning condition.

Allotment #2613 - Frank R. Robinson

Location: Segment 4 River Miles 164.0 - 164.3
Category: C
AUMS within lease: 4
Miles of river bank private 0.0 public 0.3
Acres within WSR boundaries private 0 public 0
Acres within allotment private 1230 public 240
Riparian management in 1988 spring, summer (5/1 - 8/31)
NEPA documents none
Riparian management in 1999 same as above.

Restricted grazing, necessary actions: a. Adjust the lease to confine grazing period within the dates of November 1 to June 1 on pastures with access to riverbank. Dates of authorized use will be determined by plant phenology, herd size and available forage, but will be restricted normally to 60 days during the December 15 to May 1 period.

Allotment #2585 - Seek Peak

Location: Segment 4 River Miles 176.4 - 177.8
Category: C
AUMS within lease: 11
Miles of river bank private 1.4 public 0.0
Acres within WSR boundaries private 0 public 0
Acres within allotment private 1320 public 320
Riparian management in 1988 Exclusion of 1.4 miles of private land river bank.
NEPA documents none
Riparian management in 1999 same as above.

Restricted grazing, necessary actions: a. No management changes are necessary.

Allotment #2627- Robert W. Straub

Location: Segment 4 River Miles 178.0 - 179.4
 Category: C
 AUMS within lease: 69
 Miles of river bank private 0.0 public 1.4
 Acres within WSR boundaries private 0 public 0
 Acres within allotment private 5000 public 678
 Riparian management in 1988 Spring and summer
 NEPA documents none
 Riparian management in 1999 exclusion

Restricted grazing, necessary actions: a. Adjust use authorizations to prohibit grazing on public lands within riparian enclosure. Reactivation of use will depend on recovery as evaluated by an interdisciplinary team and subject to management prescription to sustain functioning condition.

Allotment #2575 - Andrew Leckie

Location: Segment 4 River Miles: 181.0 - 181.3
 Category: I
 AUMS within lease: 1
 Miles of river bank: private 0 public: 0.5
 Acres within WSA boundaries: private 0 public 0
 Acres within allotment: private 2,000 public 40
 Riparian management in 1988: exclusion of 0.5 miles of river bank.
 NEPA documents: none
 Riparian management in 1999: Exclusion of 0.5 miles of river bank

Restricted grazing, necessary actions: a. Adjust use authorizations to prohibit grazing on public lands within riparian enclosure. Reactivation of use will depend on recovery as evaluated by an interdisciplinary team and subject to management prescription to sustain functioning condition.

Allotment #2554 - Charles Hill

Location: Segment 4 River Miles 178.5 - 181.0, 181.3 - 182.8
 Category: I
 AUMS within lease: 86
 Miles of river bank: private 7.3 public 0.8
 Acres within WSR boundaries private 0 public 0
 Acres within allotment: private 1,520 public 1,835
 Riparian management in 1988: Spring grazing on 0.8 miles of public and 2.0 miles of private river bank and summer grazing on 5.3 miles of private river bank.
 NEPA documents: none
 Riparian management in 1999: same as above.

Restricted grazing, necessary actions: a. Adjust the lease to confine grazing period within the dates of April 15 to June 30 on pastures with access to riverbank. Dates of authorized use will be determined by plant phenology, herd size and available forage, but will be restricted normally to 14 days during the grazing period.

Allotment #2528 - Sentinel Peak

Location: Segment 4 River Miles: 170.5 - 172.5
Category: C
AUMS's within lease 44
Miles of river bank: private: 3.0 public: 1.0
Acres within WSA boundaries: private 0 public 0
Acres within the allotment private 1,335 public 1,240
Riparian management in 1988: Spring grazing, April 15 to May 31, of 0.5 miles of public and 1.5 miles of private river bank and no livestock grazing on 0.5 miles of public and 1.5 miles of private river bank.
NEPA documents: 91-018, 88-088, 88-062
Riparian management in 1999: same as above

Restricted grazing, necessary actions: a. Adjust the lease to confine grazing period within the dates of April 15 to May 31 on pastures with access to riverbank.

Allotment #4145 - Two County

Location: Segment 4 River miles 184.5 - 190.5
Category: I
AUMS within the lease: 1,105
Miles of riverbank: private 10.6 public 1.4
Acres within WSR boundaries: private 0 public 0
Acres within allotment: private 12,750 public 13,796
Riparian management in 1988: Season long
NEPA documentation: 91-060, 88-030
Riparian management in 1999: Exclusion

Restricted grazing, necessary actions: a. Adjust use authorizations to prohibit grazing on public lands within riparian enclosure. Reactivation of use will depend on recovery as evaluated by an interdisciplinary team and subject to management prescription to sustain functioning condition.

Allotment #2662 - Johnson Creek

Location: Segment 4 River Miles: 182.0 183.5
Category: I
AUMS's Within Lease: 436
Miles of riverbank: private 2.5 public 0.5
Acres within WSA boundaries: private 0 public 0
Acres within the allotment private 11,140 public 7,698
Riparian management in 1988: Grazing from 5/1 to 9/30
NEPA documentation: none
Riparian management in 1999: Exclusion

Restricted grazing, necessary actions: a. Adjust use authorizations to prohibit grazing on public lands within riparian enclosure. Reactivation of use will depend on recovery as evaluated by an interdisciplinary team and subject to management prescription to sustain functioning condition.

Allotment #2501 - Herbert Asher

| | | | |
|-----------------------------|------------------------------|-------------|---------------|
| Location: | Segment 4 | River Miles | 194.5 - 196.8 |
| Category: | I | | |
| AUMS within lease: | 101 | | |
| Miles of river bank | private 4.0 | public | 0.3 |
| Acres within WSR boundaries | private 0 | public | 0 |
| Acres within allotment | private 2039 | public | 1999 |
| Riparian management in 1988 | Exclusion of all river bank. | | |
| NEPA documents | | | |
| Riparian management in 1999 | same as above. | | |

Restricted grazing, necessary actions: a. Adjust use authorizations to prohibit grazing on public lands within riparian enclosure. Reactivation of use will depend on recovery as evaluated by an interdisciplinary team and subject to management prescription to sustain functioning condition.

Allotment #4001 - Johnny Creek

| | | | |
|-----------------------------|--------------|-------------|---------------|
| Location: | Segment 4 | River Miles | 196.2 - 198.2 |
| Category: | C | | |
| AUMS within lease: | 196 | | |
| Miles of river bank | private 1.5 | public | 0.5 |
| Acres within WSR boundaries | private 0 | public | 0 |
| Acres within allotment | private 1918 | public | 1160 |
| Riparian management in 1988 | spring | | |
| NEPA documents | none | | |
| Riparian management in 1999 | exclusion | | |

Restricted grazing, necessary actions: a. Adjust use authorizations to prohibit grazing on public lands within riparian enclosure. Reactivation of use will depend on recovery as evaluated by an interdisciplinary team and subject to management prescription to sustain functioning condition.

Allotment #2558 - Squaw Creek

| | | | |
|-----------------------------|---------------|-------------|---------------|
| Location: | Segment 4 | River Miles | 200.0 - 200.8 |
| Category: | I | | |
| AUMS within lease: | 301 | | |
| Miles of river bank | private 1.6 | public | 0.0 |
| Acres within WSR boundaries | private 0 | public | 0 |
| Acres within allotment | private 7800 | public | 5741 |
| Riparian management in 1988 | Exclusion | | |
| NEPA documents | none | | |
| Riparian management in 1999 | same as above | | |

Restricted grazing, necessary actions: a. No management changes are necessary.

Allotment #4076 - Cottonwood Creek

| | | | |
|-----------------------------|----------------|-------------|---------------|
| Location: | Segment 4 | River Miles | 205.8 - 207.8 |
| Category: | I | | |
| AUMS within lease: | 204 | | |
| Miles of river bank | private 4.0 | public | 0.0 |
| Acres within WSR boundaries | private 0 | public | 0 |
| Acres within allotment | private 4440 | public | 3113 |
| Riparian management in 1988 | Season long | | |
| NEPA documents | none | | |
| Riparian management in 1999 | same as above. | | |

Restricted grazing, necessary actions: a. No management changes are necessary.

Allotment #4007 - Windy Point

| | | | |
|-----------------------------|--------------|-------------|---------------|
| Location: | Segment 4 | River Miles | 207.8 - 209.0 |
| Category: | I | | |
| AUMS within lease: | 407 | | |
| Miles of river bank | private 1.2 | public | 0.0 |
| Acres within WSR boundaries | private 0 | public | 0 |
| Acres within allotment | private 3330 | public | 2514 |
| Riparian management in 1988 | spring | | |
| NEPA documents | none | | |
| Riparian management in 1999 | spring | | |

Restricted grazing, necessary actions: a. No management changes are necessary.

Allotment #4068 - Sheep Gulch

| | | | |
|-----------------------------|--------------|-------------|---------------|
| Location: | Segment 4 | River Miles | 208.5 - 209.8 |
| Category: | I | | |
| AUMS within lease: | 292 | | |
| Miles of river bank | private 2.6 | public | 0.0 |
| Acres within WSR boundaries | private 0 | public | 0 |
| Acres within allotment | private 2090 | public | 3499 |
| Riparian management in 1988 | season long | | |
| NEPA documents | | | |
| Riparian management in 1999 | spring | | |

Restricted grazing, necessary actions: a. No management changes are necessary.

Allotment #4041 - Franks Creek

Location: Segment 4 River Miles 212.0 - 212.3
 Category: C
 AUMS within lease: 225
 Miles of river bank private 0.3 public 0.0
 Acres within WSR boundaries private 0 public 0
 Acres within allotment private 1255 public 2617
 Riparian management in 1988 Exclusion of 0.3 miles of private river bank.
 NEPA documents
 Riparian management in 1999 same as above.

Restricted grazing, necessary actions: a. No management changes are necessary.

Allotment #4023 - Triple Fork

Location: Segment 5 River Miles 226.2 - 226.3
 Category: C
 AUMS within lease: 20
 Miles of river bank private 0.1 public 0.0
 Acres within WSR boundaries private 0 public 0
 Acres within allotment private 33 public 320
 Riparian management in 1988 Exclusion of 0.1 miles of private river bank.
 NEPA documents
 Riparian management in 1999 same as above.

Restricted grazing, necessary actions: a. No management changes are necessary.

Note: The Oregon Land Exchange Act of 2000 has affected, or will affect, the public-private land ownership pattern in this grazing allotment.

Allotment #4084 - Lower Damond

Location: Segment 5 River Miles 235.0 - 235.4
 Category: C
 AUMS within lease: 36
 Miles of river bank private 0.8 public 0.0
 Acres within WSR boundaries private 0 public 0
 Acres within allotment private 220 public 240
 Riparian management in 1988 spring
 NEPA documents none.
 Riparian management in 1999 same as above.

Restricted grazing, necessary actions: a. No management changes are necessary.

Note: The Oregon Land Exchange Act of 2000 has affected, or will affect, the public-private land ownership pattern in this grazing allotment.

Allotment #4168 - Grub Creek

| | | | |
|-----------------------------|--------------|-------------|---------------|
| Location: | Segment 5 | River Miles | 249.5 - 251.7 |
| Category: | C | | |
| AUMS within lease: | 14 | | |
| Miles of river bank | private 4.4 | public | 0.0 |
| Acres within WSR boundaries | private 0 | public | 0 |
| Acres within allotment | private 7860 | public | 80 |
| Riparian management in 1988 | unknown | | |
| NEPA documents | none | | |
| Riparian management in 1999 | exclusion | | |

Restricted grazing, necessary actions: a. No management changes are necessary.

Note: The Oregon Land Exchange Act of 2000 has affected, or will affect, the public-private land ownership pattern in this grazing allotment.

Allotment #4101 - Lower Copper

| | | | |
|-----------------------------|----------------------------------|-------------|---------------------------------------|
| Location: | Segment 6 | River Miles | allotment contains no river bank, but |
| Category: | C | | lies within 1/4 mile of the river. |
| AUMS within lease: | 39 | | |
| Miles of river bank | private 0.0 | public | 0.0 |
| Acres within WSR boundaries | private 0 | public | 0 |
| Acres within allotment | private 1600 | public | 240 |
| Riparian management in 1988 | allotment contains no river bank | | |
| NEPA documents | none | | |
| Riparian management in 1999 | same as above. | | |

Restricted grazing, necessary actions: a. No management changes are necessary.

Note: The Oregon Land Exchange Act of 2000 has affected, or will affect, the public-private land ownership pattern in this grazing allotment. Management of newly acquired public lands will be addressed in a future land use plan.

Allotment #4094 - Dry Creek

| | | | |
|-----------------------------|----------------|-------------|---------------------------------------|
| Location: | Segment 6 | River Miles | allotment contains no river bank, but |
| Category: | C | | lies within 1/4 mile of river. |
| AUMS within lease: | 25 | | |
| Miles of river bank | private 0.0 | public | 0.0 |
| Acres within WSR boundaries | private 0 | public | 0 |
| Acres within allotment | private 200 | public | 120 |
| Riparian management in 1988 | No river bank | | |
| NEPA documents | none | | |
| Riparian management in 1999 | same as above. | | |

Restricted grazing, necessary actions: a. No management changes are necessary.

Note: The Oregon Land Exchange Act of 2000 has affected, or will affect, the public-private land ownership pattern in this grazing allotment. Management of newly acquired public lands will be addressed in a future land use plan.

Allotment #4080 - South Stonehill

| | | |
|-----------------------------|----------------|-----------------------|
| Location: | Segment 6 | River Miles 4.5 - 5.5 |
| Category: | C | |
| AUMS within lease: | | |
| Miles of river bank | private 1.0 | public 0.0 |
| Acres within WSR boundaries | private 0 | public 0 |
| Acres within allotment | private 560 | public 400 |
| Riparian management in 1988 | Unknown | |
| NEPA documents | none | |
| Riparian management in 1999 | same as above. | |

Restricted grazing, necessary actions: a. No management changes are necessary.

Allotment #4127 - Kimberly

| | | |
|-----------------------------|---------------|-----------------------|
| Location: | Segment 6 | River Miles 1.0 - 1.5 |
| Category: | C | |
| AUMS within lease: | 40 | |
| Miles of river bank | private 0.2 | public 0.3 |
| Acres within WSR boundaries | private 0 | public 0 |
| Acres within allotment | private 40 | public 240 |
| Riparian management in 1988 | exclusion | |
| NEPA documents | none | |
| Riparian management in 1999 | same as above | |

Restricted grazing, necessary actions: a. Adjust use authorizations to prohibit grazing on public lands within riparian enclosure. Reactivation of use will depend on recovery as evaluated by an interdisciplinary team and subject to management prescription to sustain functioning condition.

Allotment #4037 - Juniper

| | | |
|-----------------------------|----------------|-----------------------|
| Location: | Segment 6 | River Miles 4.8 - 5.4 |
| Category: | C | |
| AUMS within lease: | 40 | |
| Miles of river bank | private 0.6 | public 0.0 |
| Acres within WSR boundaries | private 0 | public 0 |
| Acres within allotment | private 620 | public 400 |
| Riparian management in 1988 | exclusion | |
| NEPA documents | none | |
| Riparian management in 1999 | same as above. | |

Restricted grazing, necessary actions: a. No management changes are necessary.

Note: The Oregon Land Exchange Act of 2000 has affected, or will affect, the public-private land ownership pattern in this grazing allotment. Management of newly acquired public lands will be addressed in a future land use plan.

Allotment #4031 - Coyote Fields

| | | |
|-----------------------------|---------------|-----------------------|
| Location: | Segment 6 | River Miles 8.0 - 9.2 |
| Category: | C | |
| AUMS within lease: | 20 | |
| Miles of river bank | private 1.2 | public 0.0 |
| Acres within WSR boundaries | private 0 | public 0 |
| Acres within allotment | private 1956 | public 160 |
| Riparian management in 1988 | unknown | |
| NEPA documents | none | |
| Riparian management in 1999 | same as above | |

Restricted grazing, necessary actions: a. No management changes are necessary.

Note: The Oregon Land Exchange Act of 2000 has affected, or will affect, the public-private land ownership pattern in this grazing allotment. Management of newly acquired public lands will be addressed in a future land use plan.

Allotment #4030 - Powersite

| | | |
|-----------------------------|---------------|-----------------------|
| Location: | Segment 6 | River Miles 5.0 - 6.2 |
| Category: | C | |
| AUMS within lease: | 20 | |
| Miles of river bank | private 1.2 | public 0.0 |
| Acres within WSR boundaries | private 0 | public 0 |
| Acres within allotment | private 130 | public 120 |
| Riparian management in 1988 | unknown | |
| NEPA documents | none | |
| Riparian management in 1999 | same as above | |

Restricted grazing, necessary actions: a. No management changes are necessary.

Note: The Oregon Land Exchange Act of 2000 has affected, or will affect, the public-private land ownership pattern in this grazing allotment. Management of newly acquired public lands will be addressed in a future land use plan.

Allotment #4025 - Portuguese

| | | |
|-----------------------------|----------------------------|---|
| Location: | Segment 6 | River Miles allotment contains no river bank, but |
| Category: | C | lies within 1/4 mile of the river. |
| AUMS within lease: | 27 | |
| Miles of river bank | private 0.0 | public 0.0 |
| Acres within WSR boundaries | private 0 | public 0 |
| Acres within allotment | private 453 | public 160 |
| Riparian management in 1988 | no river bank in allotment | |
| NEPA documents | none | |
| Riparian management in 1999 | same as above. | |

Restricted grazing, necessary actions: a. No management changes are necessary.

Note: The Oregon Land Exchange Act of 2000 has affected, or will affect, the public-private land ownership pattern in this grazing allotment. Management of newly acquired public lands will be addressed in a future land use plan.

Allotment #4011- CG

| | | |
|-----------------------------|----------------|-------------------------|
| Location: | Segment 6 | River Miles 12.0 - 12.8 |
| Category: | C | |
| AUMS within lease: | 31 | |
| Miles of river bank | private 1.5 | public 0.0 |
| Acres within WSR boundaries | private 0 | public 0 |
| Acres within allotment | private 1560 | public 240 |
| Riparian management in 1988 | unknown | |
| NEPA documents | none | |
| Riparian management in 1999 | same as above. | |

Restricted grazing, necessary actions: a. No management changes are necessary.

Note: The Oregon Land Exchange Act of 2000 has affected, or will affect, the public-private land ownership pattern in this grazing allotment. Management of newly acquired public lands will be addressed in a future land use plan.

Allotment #4009 - Birch Creek

| | | |
|-----------------------------|----------------|-----------------------|
| Location: | Segment 6 | River Miles 3.0 - 9.0 |
| Category: | C | |
| AUMS within lease: | 368 | |
| Miles of river bank | private 4.8 | public 1.2 |
| Acres within WSR boundaries | private 0 | public 0 |
| Acres within allotment | private 4840 | public 3169 |
| Riparian management in 1988 | season long | |
| NEPA documents | none | |
| Riparian management in 1999 | same as above. | |

Restricted grazing, necessary actions: a. Adjust the lease to confine grazing period within the dates of November 1 to June 1 on pastures with access to riverbank. Dates of authorized use will be determined by plant phenology, herd size and available forage, but will be restricted normally to 60 days during the December 15 to May 1 period.

Note: The Oregon Land Exchange Act of 2000 has affected, or will affect, the public-private land ownership pattern in this grazing allotment. Management of newly acquired public lands will be addressed in a future land use plan.

Allotment #4035 - Rim

| | | |
|-----------------------------|---------------|---|
| Location: | Segment 6 | River Miles allotment contains no river bank, but |
| Category: | C | lies within 1/4 mile of the river. |
| AUMS within lease: | 41 | |
| Miles of river bank | private 0.0 | public 0.0 |
| Acres within WSR boundaries | private 0 | public 0 |
| Acres within allotment | private 90 | public 80 |
| Riparian management in 1988 | no river bank | |
| NEPA documents | none | |
| Riparian management in 1999 | same as above | |

Restricted grazing, necessary actions: a. No management changes are necessary.

Allotment #4178 - Cheatgrass

| | | |
|-----------------------------|----------------------------|---|
| Location: | Segment 6 | River Miles allotment contains no river bank, but |
| Category: | C | lies within 1/4 mile of the river. |
| AUMS within lease: | 4 | |
| Miles of river bank | private 0.0 | public 0.0 |
| Acres within WSR boundaries | private 0 | public 0 |
| Acres within allotment | private 165 | public 40 |
| Riparian management in 1988 | no river bank in allotment | |
| NEPA documents | none | |
| Riparian management in 1999 | same as above. | |

Restricted grazing, necessary actions: a. No management changes are necessary.

Note: The Oregon Land Exchange Act of 2000 has affected, or will affect, the public-private land ownership pattern in this grazing allotment. Management of newly acquired public lands will be addressed in a future land use plan.

Allotment #4069 - Big Spring

| | | |
|-----------------------------|----------------------------|---|
| Location: | Segment 6 | River Miles allotment contains on river bank, but |
| Category: | C | lies within 1/4 mile of the river. |
| AUMS within lease: | 17 | |
| Miles of river bank | private 0.0 | public 0.0 |
| Acres within WSR boundaries | private 0 | public 0 |
| Acres within allotment | private 1420 | public 80 |
| Riparian management in 1988 | no river bank in allotment | |
| NEPA documents | none | |
| Riparian management in 1999 | same as above. | |

Restricted grazing, necessary actions: a. No management changes are necessary.

Note: The Oregon Land Exchange Act of 2000 has affected, or will affect, the public-private land ownership pattern in this grazing allotment. Management of newly acquired public lands will be addressed in a future land use plan.

Allotment #4185 - Cockran Creek

| | | |
|-----------------------------|---------------|------------------------|
| Location: | Segment 6 | River Miles 9.2 - 10.6 |
| Category: | C | |
| AUMS within lease: | 16 | |
| Miles of river bank | private 1.4 | public 0.0 |
| Acres within WSR boundaries | private 0 | public 0 |
| Acres within allotment | private 1241 | public 160 |
| Riparian management in 1988 | unknown | |
| NEPA documents | none | |
| Riparian management in 1999 | same as above | |

Restricted grazing, necessary actions: a. No management changes are necessary.

Note: The Oregon Land Exchange Act of 2000 has affected, or will affect, the public-private land ownership pattern in this grazing allotment. Management of newly acquired public lands will be addressed in a future land use plan.

Allotment #4012 - River

| | | |
|-----------------------------|---|-------------------------|
| Location: | Segment 6 | River Miles 16.8 - 18.0 |
| Category: | C | |
| AUMS within lease: | 13 | |
| Miles of river bank | private 1.0 | public 0.8 |
| Acres within WSR boundaries | private 0 | public 0 |
| Acres within allotment | private 140 | public 135 |
| Riparian management in 1988 | Exclusion on 0.8 miles of river bank due to topographic barriers and fencing on adjacent lands. | |
| NEPA documents | none | |
| Riparian management in 1999 | same as above. | |

Restricted grazing, necessary actions: a. Adjust use authorizations to prohibit grazing on public lands within riparian enclosure. Reactivation of use will depend on recovery as evaluated by an interdisciplinary team and subject to management prescription to sustain functioning condition.

Allotment #4082 - Jack-of-Clubs

| | | |
|-----------------------------|----------------|-------------------------|
| Location: | Segment 6 | River Miles 16.3 - 18.6 |
| Category: | C | |
| AUMS within lease: | 25 | |
| Miles of river bank | private 1.5 | public 0.9 |
| Acres within WSR boundaries | private 0 | public 0 |
| Acres within allotment | private 1350 | public 200 |
| Riparian management in 1988 | Exclusion. | |
| NEPA documents | none. | |
| Riparian management in 1999 | same as above. | |

Restricted grazing, necessary actions: a. Adjust use authorizations to prohibit grazing on public lands within riparian enclosure. Reactivation of use will depend on recovery as evaluated by an interdisciplinary team and subject to management prescription to sustain functioning condition.

Note: The Oregon Land Exchange Act of 2000 has affected, or will affect, the public-private land ownership pattern in this grazing allotment. Management of newly acquired public lands will be addressed in a future land use plan.

Allotment #4003 - Slickear Mountain

Location: Segment 7 River Miles 21.5 - 25.0, 25.2 - 31.8
Category: M
AUMS within lease: 537
Miles of river bank: private 3.0 public 7.1
Acres within WSR boundaries: private 0 public 0
Acres within allotment: private 28,300 public 3,274
Riparian management in 1988: season long
NEPA documents: none
Riparian management in 1999: Since 1993 the riparian pastures have been grazed from March 15 to May 15. In 1999 a fall treatment, Oct. 1 until Nov. 30, will be applied. In the following years the March 15 to May 15 treatment will be followed.

Restricted grazing, necessary actions: a. Adjust the lease to confine grazing period within the dates of November 1 to June 1 on pastures with access to riverbank. Dates of authorized use will be determined by plant phenology, herd size and available forage, but will be restricted normally to the March 15 to May 15 period.

Note: The Oregon Land Exchange Act of 2000 has affected, or will affect, the public-private land ownership pattern in this grazing allotment. Management of newly acquired public lands will be addressed in a future land use plan.

Allotment #4028 - Neale Butte

Location: Segment 7 River Miles 20.9-27.7
Category: C
AUMS within lease: 119
Miles of river bank: private 6.0 public 4.0
Acres within WSR boundaries: private 0 public 0
Acres within allotment: private 1,810 public 712
Riparian management in 1988: season long
NEPA documentation: 95-016
Riparian management in 1999: Spring grazing on 2.4 miles of public and 1.4 miles of private river bank and season long grazing on 1.6 miles of public and 4.6 miles of private river bank.

Restricted grazing, necessary actions: a. Adjust the lease to confine grazing period within the dates of November 1 to June 1 on pastures with access to riverbank. Dates of authorized use will be determined by plant phenology, herd size and available forage, but will be restricted normally to the April 1 to June 1 period.
b. Develop allotment management plan.

Note: The Oregon Land Exchange Act of 2000 has affected, or will affect, the public-private land ownership pattern in this grazing allotment. Management of newly acquired public lands will be addressed in a future land use plan.

Allotment #4029 - North Fork

| | | | |
|------------------------------|--------------------|-------------|-----------|
| Location: | Segment 7 | River Miles | 30.1-40.3 |
| Category: | M | | |
| AUMS within lease: | 316 | | |
| Miles of river bank: | private 11.3 | public | 9.1 |
| Acres within WSR boundaries: | private 0 | public | 0 |
| Acres within allotment: | private 5,505 | public | 1,894 |
| Riparian management in 1988: | Season long | | |
| NEPA documents: | None | | |
| Riparian management in 1999: | April 1 to May 31. | | |

Restricted grazing, necessary actions: a. No management changes are necessary.

Note: The Oregon Land Exchange Act of 2000 has affected, or will affect, the public-private land ownership pattern in this grazing allotment. Management of newly acquired public lands will be addressed in a future land use plan.

Allotment #6532 - Doherty

| | | | |
|------------------------------|----------------|-------------|-----------|
| Location: | Segment 7 | River Miles | 49.5-55.2 |
| Category: | C | | |
| AUMs within lease: | 196 | | |
| Miles of river bank: | private 7.9 | public | 3.5 |
| Acres within WSR boundaries: | private 280 | public | 200 |
| Acres within allotment: | private 4120 | public | 2015 |
| Riparian management in 1988: | Season long | | |
| NEPA documents: | none | | |
| Riparian management in 1999: | same as above. | | |

Restricted grazing, necessary actions: a. Adjust lease to confine authorized use within dates of November 1 to June 1 on pastures with access to river riparian zones. Determine dates of actual use by herd size and available forage, but normally for less than 90 days within November 1 to June 1 period.

Note: The Oregon Land Exchange Act of 2000 has affected, or will affect, the public-private land ownership pattern in this grazing allotment. Management of newly acquired public lands will be addressed in a future land use plan.

Allotment #6549 - Healy

| | | | |
|-----------------------------|----------------|-------------|-----------|
| Location: | Segment 7 | River Miles | 40.5-48.0 |
| Category: | C | | |
| AUMs within lease: | 107 | | |
| Miles of river bank | private 6.5 | public | .5 |
| Acres within WSR boundaries | private 820 | public | 140 |
| Acres within allotment | private 4,000 | public | 1,007 |
| Riparian management in 1988 | Season long | | |
| NEPA documents | none | | |
| Riparian management in 1999 | same as above. | | |

Restricted grazing, necessary actions: a. Adjust lease to confine authorized use within dates of November 1 to June 1 on pastures with access to river riparian zones. Determine dates of actual use by herd size and available forage, but normally for less than 90 days within the November 1 to June 1 period.

Note: The Oregon Land Exchange Act of 2000 has affected, or will affect, the public-private land ownership pattern in this grazing allotment. Management of newly acquired public lands will be addressed in a future land use plan.

Allotment #4189- Morris

| | | | | |
|-----------------------------|----------------|--------|-------------|-----------|
| Location: | Segment | 7 | River Miles | 40.0-43.7 |
| Category: | C | | | |
| AUMs within lease: | 5 | | | |
| Miles of river bank | private 3.7 | public | 0.0 | |
| Acres within WSR boundaries | private 440 | public | 20 | |
| Acres within allotment | private 1,160 | public | 40 | |
| Riparian management in 1988 | Season long | | | |
| NEPA documents | none | | | |
| Riparian management in 1999 | same as above. | | | |

Restricted grazing, necessary actions: a. Adjust lease to confine authorized use within dates of November 1 to June 1 on pastures with access to river riparian zones. Determine dates of actual use by herd size and available forage, but normally for less than 90 days within the November 1 to June 1 period.

Note: The Oregon Land Exchange Act of 2000 has affected, or will affect, the public-private land ownership pattern in this grazing allotment. Management of newly acquired public lands will be addressed in a future land use plan.

Allotment #4125 - Umatilla

Location: Segment 7 River Miles 45.0 to 50.1
 Category: C
 AUMS Within Lease: 113
 Miles of river bank: private 4.1 public 1.0
 Acres within WSR boundaries: private 0 public 0
 Acres within allotment: private 2,020 public 679
 Riparian management in 1988: Season long
 NEPA Documents: None
 Riparian management in 1999: same as above.

Restricted grazing, necessary actions: a. Adjust lease to confine grazing period within dates of November 1 to June 1 on pastures with access to riverbank. Determine dates of authorized use by plant phenology, herd size and available forage, but restrict normally to the April 1 to May 31 period.

Note: The Oregon Land Exchange Act of 2000 has affected, or will affect, the public-private land ownership pattern in this grazing allotment. Management of newly acquired public lands will be addressed in a future land use plan.

Allotment #4042 - Johnny Cake Mountain

Location: Segment 7 River Miles 27.7-30.2
 Category: C
 AUMS within lease: 30
 Miles of river bank: private 1.5 public 1.0
 Acres within WSR boundaries: private 0 public 0
 Acres within allotment: private 1,040 public 280
 Riparian management in 1988: Spring
 NEPA documents: none
 Riparian management in 1999: same as above

Restricted grazing, necessary actions: a. Adjust lease to confine grazing period within dates of November 1 to June 1 on pastures with access to riverbank. Determine dates of authorized use by plant phenology, herd size and available forage, but restrict normally to the April 1 to May 31 period.

Allotment # 4083 - 19-20

| | | | |
|------------------------------|-------------|-------------|-----------|
| Location: | Segment 7 | River Miles | 19.8-20.9 |
| Category: | I | | |
| AUMS within lease: | 26 | | |
| Miles of river bank: | private 0.8 | public | 0.6 |
| Acres within WSR boundaries: | private 0 | public | 0 |
| Acres within allotment: | private 688 | public | 160 |
| Riparian management in 1988: | Season long | | |
| NEPA documents: | None | | |
| Riparian management in 1999: | Spring | | |

Restricted grazing, necessary actions: a. Adjust lease to confine grazing period within dates of November 1 to June 1 on pastures with access to riverbank. Dates of authorized use will be determined by plant phenology, herd size and available forage, but will be restricted normally to the April 1 to May 31 period.

Note: The Oregon Land Exchange Act of 2000 has affected, or will affect, the public-private land ownership pattern in this grazing allotment. Management of newly acquired public lands will be addressed in a future land use plan.

Allotment #4139 - Bone Yard

| | | | |
|------------------------------|-------------------------------------|-------------|---------------------------------------|
| Location: | Segment 7 | River Miles | allotment contains no river bank, but |
| Category: | C | | lies within 1/4 mile of river. |
| AUMS within lease: | 148 | | |
| Miles of river bank: | private 0.0 | public | 0.0 |
| Acres within WSR boundaries: | private 0 | public | 0 |
| Acres within allotment: | private 19,300 | public | 1400 |
| Riparian management in 1988: | no miles of river bank in allotment | | |
| NEPA documents: | none | | |
| Riparian management in 1999: | same as above | | |

Restricted grazing, necessary actions: a. No management changes are necessary.

Note: The Oregon Land Exchange Act of 2000 has affected, or will affect, the public-private land ownership pattern in this grazing allotment. Management of newly acquired public lands will be addressed in a future land use plan.

Allotment #4122 - Big Bend

| | | | |
|------------------------------|-------------|-------------|-------------|
| Location: | Segment 7 | River Miles | 24.7 - 25.7 |
| Category: | C | | |
| AUMS within lease: | 25 | | |
| Miles of river bank: | private 0.2 | public | 0.8 |
| Acres within WSR boundaries: | private 0 | public | 0 |
| Acres within allotment: | private 360 | public | 280 |
| Riparian management in 1988: | season long | | |
| NEPA documents: | none | | |
| Riparian management in 1999: | exclusion | | |

Restricted grazing, necessary actions: a. Adjust use authorizations to prohibit grazing on public lands within riparian enclosure. Reactivation of use will depend on recovery as evaluated by an interdisciplinary team and subject to management prescription to sustain functioning condition.

Allotment #4089 - East Monument

| | | |
|-----------------------------|--------------------------------|---|
| Location: | Segment 7 | River Miles allotment contains no river bank, but |
| Category: | C | lies within 1/4 mile of the river. |
| AUMS within lease: | 52 | |
| Miles of river bank | private 0.0 | public 0.0 |
| Acres within WSR boundaries | private 0 | public 0 |
| Acres within allotment | private 620 | public 360 |
| Riparian management in 1988 | no river bank within allotment | |
| NEPA documents | none | |
| Riparian management in 1999 | same as above | |

Restricted grazing, necessary actions: a. No management changes are necessary.

Note: The Oregon Land Exchange Act of 2000 has affected, or will affect, the public-private land ownership pattern in this grazing allotment. Management of newly acquired public lands will be addressed in a future land use plan.

Allotment #4027 - Top Road

| | | |
|-----------------------------|----------------------------|---|
| Location: | Segment 7 | River Miles allotment contains no river bank, but |
| Category: | C | lies within 1/4 mile of the river. |
| AUMS within lease: | 9 | |
| Miles of river bank | private 0.0 | public 0.0 |
| Acres within WSR boundaries | private 0 | public 0 |
| Acres within allotment | private - | public 50 |
| Riparian management in 1988 | no river bank on allotment | |
| NEPA documents | none | |
| Riparian management in 1999 | same as above | |

Restricted grazing, necessary actions: a. No management changes are necessary.

Note: The Oregon Land Exchange Act of 2000 has affected, or will affect, the public-private land ownership pattern in this grazing allotment. Management of newly acquired public lands will be addressed in a future land use plan.

Allotment #4015 - Mud Springs

| | | |
|-----------------------------|---------------|---|
| Location: | Segment 7 | River Miles allotment contains no river bank, but |
| Category: | C | lies within 1/4 mile of the river. |
| AUMS within lease: | 30 | |
| Miles of river bank | private 0.0 | public 0.0 |
| Acres within WSR boundaries | private 0 | public 0 |
| Acres within allotment | private - | public 240 |
| Riparian management in 1988 | no river bank | |
| NEPA documents | none | |
| Riparian management in 1999 | same as above | |

Restricted grazing, necessary actions: a. No management changes are necessary.

Note: The Oregon Land Exchange Act of 2000 has affected, or will affect, the public-private land ownership pattern in this grazing allotment. Management of newly acquired public lands will be addressed in a future land use plan.

Allotment #4169 - Sheepshed Canyon

| | | |
|-----------------------------|----------------|---|
| Location: | Segment 7 | River Miles allotment contains no river bank, but |
| Category: | C | lies within 1/4 mile of the river. |
| AUMS within lease: | 13 | |
| Miles of river bank | private 0.0 | public 0.0 |
| Acres within WSR boundaries | private 0 | public 0 |
| Acres within allotment | private 4800 | public 80 |
| Riparian management in 1988 | no river bank | |
| NEPA documents | none | |
| Riparian management in 1999 | same as above. | |

Restricted grazing, necessary actions: a. No management changes are necessary.

Note: The Oregon Land Exchange Act of 2000 has affected, or will affect, the public-private land ownership pattern in this grazing allotment. Management of newly acquired public lands will be addressed in a future land use plan.

Allotment #4135 - Gibson Creek

| | | |
|-----------------------------|----------------|-------------------------|
| Location: | Segment 9 | River Miles 15.0 - 15.2 |
| Category: | C | |
| AUMS within lease: | 20 | |
| Miles of river bank | private 0.0 | public 0.2 |
| Acres within WSR boundaries | private 0 | public 0 |
| Acres within allotment | private 1480 | public 120 |
| Riparian management in 1988 | season long | |
| NEPA documents | none | |
| Riparian management in 1999 | same as above. | |

Restricted grazing, necessary actions: a. Adjust the lease to confine grazing period within the dates of November 1 to June 1 on pastures with access to riverbank. Dates of authorized use will be determined by plant phenology, herd size and available forage, but will be restricted normally to the April 1 to May 31 period.

b. Pursue opportunities to exchange lands adjacent to river for other lands within the WSR.

Note: The Oregon Land Exchange Act of 2000 has affected, or will affect, the public-private land ownership pattern in this grazing allotment. Management of newly acquired public lands will be addressed in a future land use plan.

Allotment #4046 - Three Mile

Location: Segment 9 River Mile 4.9 - 7.0
 Category: C
 AUMS within the lease: 8
 Miles of river bank: private 3.4 public 0.8
 Acres within WSR boundaries: private 0 public 0
 Acres within the allotment: private 2,174 public 80
 Riparian management in 1988: season long
 NEPA documents: None
 Riparian management in 1999: Same as above

- Restricted grazing, necessary actions:
- Adjust the lease to confine grazing period within the dates of November 1 to June 1 on pastures with access to riverbank. Dates of authorized use will be determined by plant phenology, herd size and available forage, but will be restricted normally to April 1 to May 31 period.
 - Pursue opportunities to develop an allotment management plan or to exchange lands adjacent to river for other lands within the WSR.

Note: The Oregon Land Exchange Act of 2000 has affected, or will affect, the public-private land ownership pattern in this grazing allotment. Management of newly acquired public lands will be addressed in a future land use plan.

Allotment #4014 - Middle Fork

Location: Segment 9 River Miles 33.0 - 36.0, 36.8 - 37.0
 Category: C
 AUMS's Within Lease: 77
 Miles of river bank: private 5.8 public 0.7
 Acres Within WSR boundaries: private 0 public 0
 Acres Within allotment: private 15,952 public 562
 Riparian management in 1988: season long
 NEPA documents: none
 Riparian management in 1999: same as above.

- Restricted grazing, necessary actions:
- Adjust the lease to confine grazing period within the dates of November 1 to June 1 on pastures with access to riverbank. Dates of authorized use will be determined by plant phenology, herd size and available forage, but will be restricted normally to the April 1 to May 31 period.
 - Pursue opportunities to develop an allotment management plan or to exchange lands adjacent to river for other lands within the WSR.

Note: The Oregon Land Exchange Act of 2000 has affected, or will affect, the public-private land ownership pattern in this grazing allotment. Management of newly acquired public lands will be addressed in a future land use plan.

Allotment #4038 - Dayville

Location: Segment 10 River Miles allotment contains no river bank, but
Category: C lies within 1/4 mile of the river.
AUMS within lease: 141
Miles of river bank private 0.0 public 0.0
Acres within WSR boundaries private 0 public 0
Acres within allotment private 2960 public 1640
Riparian management in 1988 No river bank in allotment.
NEPA documents none
Riparian management in 1999 same as above.

Restricted grazing, necessary actions: a. No management changes are necessary.
The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #4020 - Murderers Creek

Location: Segment 10 River Miles 6.3 - 12.2 and 24.5 - 25.2
Category: M
AUMS within lease: 860
Miles of river bank private 0.0 public 5.2 state 8.0
Acres within WSR boundaries private 479 public 1998 state 390
Acres within allotment private 2250 public 16,004 state 15,989
Riparian management in 1988 exclusion of 5.0 river bank miles and spring grazing on 7.8 miles
NEPA documents 89-054, 93-100, 94-083, 96-075
Riparian management in 1999 exclusion of 5.0 river bank miles and rotation (spring and non-use) on 7.8 miles.

Restricted grazing, necessary actions: a. No management changes are necessary.
Allotment will be subject to the special seasonal flow restrictions.
The allotment will be subject to limitations on authorization of sheep and goat use.

Note: The Oregon Land Exchange Act of 2000 has affected the public-private land ownership pattern in this grazing allotment. This Record of Decision constitutes the land use plan decision under which grazing on the newly acquired public lands in this allotment will be managed.

Allotment #4186 - Big Flats

| | | | |
|-----------------------------|--|-------------|-----------|
| Location: | Segment 10 | River Miles | 34.4-36.1 |
| Category: | I | | |
| AUMS within lease: | 71 | | |
| Miles of river bank | private 1.2 | public | 2.0 |
| Acres within WSR boundaries | private | public | |
| Acres within allotment | private 720 | public | 900 |
| Riparian management in 1988 | season long on 1.6 miles of public riverbank and spring grazing on 0.4 miles of public and 2.0 miles of private riverbank. | | |
| NEPA documents | None | | |
| Riparian management in 1999 | Exclusion on 1.8 miles of public riverbank and 0.2 miles of private riverbank. The pasture with 0.4 miles of public riverbank facilitates livestock movement between Big Baldy and the rest of the Big Flats allotments and is grazed June 1 to June 15. | | |

Restricted grazing, necessary actions: a. Adjust the lease to confine grazing period within the dates of June 1 to June 15 on pastures with public land access to riverbank. Allotment will be subject to the special seasonal flow restrictions. The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #4119 - Black Canyon

| | | | |
|-----------------------------|------------------------------|-------------|-----------|
| Location: | Segment 10 | River Miles | 12.3-13.5 |
| Category: | C | | |
| AUMS within lease: | 188 | | |
| Miles of river bank | private 2.4 | public | 0.0 |
| Acres within WSR boundaries | private 370 | public | 20 |
| Acres within allotment | private 2,880 | public | 944 |
| Riparian management in 1988 | No riverbank on public land. | | |
| NEPA documents | None | | |
| Riparian management in 1999 | Exclusion. | | |

Restricted grazing, necessary actions: a. No management changes are necessary. The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #4124 - Smokey Creek

Location: Segment 10 River Miles 2.9 -3.9, 5.2 - 5.8
Category: I
AUMS within lease: 307
Miles of river bank private 3.0 public 0.2
Acres within WSR boundaries private public
Acres within allotment private 2,160 public 2,213
Riparian management in 1988 Topography and fencing on the adjacent private lands limits the grazing on the 0.2 miles of riverbank. Grazing has been spring grazing if the livestock drift into the area.
NEPA documents None
Riparian management in 1999 Exclusion of 0.2 miles of public riverbank and 1.8 miles of private riverbank. Rest on 1.2 miles of private riverbank.

- Restricted grazing, necessary actions:
- a. Adjust the lease to confine grazing period within the dates of November 1 to June 1 on pastures with access to riverbank. Dates of authorized use will be determined by plant phenology, herd size and available forage, but will be restricted normally to the April 15 to May 31 period.
 - b. Allotment will be subject to the special seasonal flow restrictions. The allotment will be subject to limitations on authorization of sheep and goat use.

Allotment #4052 - Big Baldy

Location: Segment 10 River Miles 26.0-34.5
Category: I
AUMS within lease: 600
Miles of river bank private 9.6 public 7.4
Acres within WSR boundaries private 960 public 3411
Acres within allotment private 3,090 public 11,132
Riparian management in 1988 Season-long
NEPA documents 88-011, 89-027, 92-032
Riparian management in 1999 There are two pastures within the allotment boundary. One pasture is rested, and one pasture is grazed from April 15 until May 31. The next year the rotation is reversed.

- Restricted grazing, necessary actions:
- a. No management changes are necessary. Allotment will be subject to the special seasonal flow restrictions. The allotment will be subject to limitations on authorization of sheep and goat use.

Note: The Oregon Land Exchange Act of 2000 has affected the public-private land ownership pattern in this grazing allotment. This Record of Decision constitutes the land use plan decision under which grazing on the newly acquired public lands in this allotment will be managed.

Allotment #4103 - Rockpile

| | | |
|-----------------------------|--|-----------------------|
| Location: | Segment 10 | River Miles 15.2-26.0 |
| Category: | I | |
| AUMS within lease: | 928 | |
| Miles of river bank | private 9.8 | public 11.8 |
| Acres within WSR boundaries | private 1067 | public 2470 |
| Acres within allotment | private 4199 | public 5618 |
| Riparian management in 1988 | Season long | |
| NEPA documents | 88-011, 90-069, 91-004, 92-050, 97-040 | |
| Riparian management in 1999 | Exclusion of 0.6 miles of public riverbank and 0.6 miles of private riverbank. Spring grazing (April 15-May 31) or rest on 8.2 miles of public and 7.2 miles of private riverbank, season long on 2.0 miles of private riverbank and 8 days during the summer on 3.0 miles of public river bank. | |

Restricted grazing, necessary actions: a. No management changes are necessary. Allotment will be subject to the special seasonal flow restrictions. The allotment will be subject to limitations on authorization of sheep and goat use.

Note: The Oregon Land Exchange Act of 2000 has affected the public-private land ownership pattern in this grazing allotment. This Record of Decision constitutes the land use plan decision under which grazing on the newly acquired public lands in this allotment will be managed.

Allotment #4104 - South Fork

| | | |
|------------------------------|---------------|-------------------------|
| Location: | Segment 11 | River Miles 48.8 - 52.8 |
| Category: | C | |
| AUMS Within Lease: | 215 | |
| Miles of River bank: | private 7.9 | public 0.1 |
| Acres Within WSR boundaries: | private 592 | public 80 |
| Acres within allotment: | private 5,640 | public 1,075 |
| Riparian Management in 1988: | season long | |
| NEPA documents: | none | |
| Riparian management in 1999: | winter | |

Restricted grazing, necessary actions: a. Adjust the lease to confine grazing period within the dates of November 1 to June 1 on pastures with access to riverbank. Dates of authorized use will be determined by plant phenology, herd size and available forage, but will be restricted normally to 60 days during the November 15 to April 15 period.
b. Allotment will be subject to the special seasonal flow restrictions.

Note: The Oregon Land Exchange Act of 2000 has affected, or will affect, the public-private land ownership pattern in this grazing allotment.

Allotment #4044 - Soda Creek

| | | | |
|------------------------------|---------------|-------------|-------------|
| Location: | Segment 11 | River Miles | 42.8 - 45.0 |
| Category: | I | | |
| AUMS within lease: | 309 | | |
| Miles of river bank: | private 4.4 | public | 0.0 |
| Acres within WSR boundaries: | private 451 | public | 0 |
| Acres within allotment: | private 2,080 | public | 2,023 |
| Riparian management in 1988: | season long | | |
| NEPA Documents: | 90-008 | | |
| Riparian management in 1999: | exclusion | | |

Restricted grazing, necessary actions: a. No management changes are necessary.

Note: The Oregon Land Exchange Act of 2000 has affected, or will affect, the public-private land ownership pattern in this grazing allotment.

Allotment #4155 - Blackhorse Draw

| | | | |
|------------------------------|---------------|-------------|------------|
| Location: | Segment 11 | River Miles | 47.0 -47.8 |
| Category: | I | | |
| AUMS within lease: | 159 | | |
| Miles of river bank: | private 1.5 | public | 0.0 |
| Acres within WSR boundaries: | private 93 | public | 55 |
| Acres within allotment: | private 3,480 | public | 760 |
| Riparian management in 1988: | season long | | |
| NEPA documents: | 89-022 | | |
| Riparian management in 1999: | summer | | |

Restricted grazing, necessary actions: a. Adjust the lease to confine grazing period within the dates of November 1 to June 1 on pastures with access to riverbank. Dates of authorized use will be determined by plant phenology, herd size and available forage, but will be restricted normally to the April 15 to May 15 period.

Note: The Oregon Land Exchange Act of 2000 has affected, or will affect, the public-private land ownership pattern in this grazing allotment.

Allotment #4067 - Sheep Creek Butte

| | | | |
|-----------------------------|----------------|-------------|---------------------------------------|
| Location: | Segment 11 | River Miles | 40.2 - 42.8, 45.0 - 47.0, 47.8 - 48.8 |
| Category: | C | | |
| AUMS within lease: | 957 | | |
| Miles of river bank | private 10.6 | public | 0.6 |
| Acres within WSR boundaries | private 814 | public | 310 |
| Acres within allotment | private 16,360 | public | 4733 |
| Riparian management in 1988 | Summer | | |
| NEPA documents | 93-028 | | |
| Riparian management in 1999 | same as above. | | |

- Restricted grazing, necessary actions:
- Adjust the lease to confine grazing period within the dates of November 1 to June 1 on pastures with access to riverbank. Dates of authorized use will be determined by plant phenology, herd size and available forage, but will be restricted normally to the April 15 to May 31 period.
 - Allotment will be subject to the special seasonal flow restrictions.

Note: The Oregon Land Exchange Act of 2000 has affected, or will affect, the public-private land ownership pattern in this grazing allotment.

Allotment #4106 - Izee

| | | | |
|-----------------------------|----------------|-------------|-------------|
| Location: | Segment 11 | River Miles | 39.2 - 40.2 |
| Category: | C | | |
| AUMS within lease: | 240 | | |
| Miles of river bank | private 1.7 | public | 0.3 |
| Acres within WSR boundaries | private 131 | public | 197 |
| Acres within allotment | private 1,320 | public | 1,200 |
| Riparian management in 1988 | exclusion | | |
| NEPA documents | None | | |
| Riparian management in 1999 | same as above. | | |

- Restricted grazing, necessary actions:
- Adjust use authorizations to prohibit grazing on public lands within riparian enclosure. Reactivation of use will depend on recovery as evaluated by an interdisciplinary team and subject to management prescription to sustain functioning condition.
 - Allotment will be subject to the special seasonal flow restrictions.

Note: The Oregon Land Exchange Act of 2000 has affected, or will affect, the public-private land ownership pattern in this grazing allotment.

Allotment #4186- Big Flats

| | | | |
|-----------------------------|---------------|-------------|-------------|
| Location: | Segment 11 | River Miles | 36.1 - 39.2 |
| Category: | I | | |
| AUMS within lease: | 129 | | |
| Miles of river bank | private 5.4 | public | 0.8 |
| Acres within WSR boundaries | private 201 | public | 148 |
| Acres within allotment | private 5,443 | public | 1,648 |
| Riparian management in 1988 | Late fall | | |
| NEPA documents | None | | |
| Riparian management in 1999 | same as above | | |

Restricted grazing, necessary actions: a. Adjust the lease to confine grazing period within the dates of September 15 to November 30 on pastures with access to riverbank. Allotment will be subject to the special seasonal flow restrictions.

Note: The Oregon Land Exchange Act of 2000 has affected, or will affect, the public-private land ownership pattern in this grazing allotment.

Allotment #4154 - Morgan Creek

| | | | |
|-----------------------------|----------------------------|-------------|---------------------------------------|
| Location: | Segment 11 | River Miles | allotment contains no river bank, but |
| Category: | C | | lies within 1/4 mile of the river. |
| AUMS within lease: | 370 | | |
| Miles of river bank | private 0.0 | public | 0.0 |
| Acres within WSR boundaries | private 140 | public | 0 |
| Acres within allotment | private 2360 | public | 1847 |
| Riparian management in 1988 | no river bank on allotment | | |
| NEPA documents | none | | |
| Riparian management in 1999 | same as above | | |

Restricted grazing, necessary actions: a. No management changes are necessary.

Note: The Oregon Land Exchange Act of 2000 has affected, or will affect, the public-private land ownership pattern in this grazing allotment.

**UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**
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