

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 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 base 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 microbotic 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>																
<i>spring grazing</i>		x				x	x					x	x	x	x	x
<i>winter grazing</i>	x			x				x			x					
<i>non-grazed</i>	x	x		x		x	x	x			x	x	x	x	x	x
<i>Uplands</i>																
<i>spring grazed</i>		x				x	x					x	x	x	x	x
<i>winter grazed</i>	x			x				x			x					
<i>non-grazed</i>	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
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, NW $\frac{1}{4}$ NE $\frac{1}{4}$	40	Consolidate public land.
3	T 9S R21E Section 32, portions of N $\frac{1}{2}$ NW $\frac{1}{4}$, north of the river	15	Consolidate public lands, acquire campsites.
3a	T9S R21E Section 32, N $\frac{1}{2}$ NE $\frac{1}{4}$ Section 33, NW $\frac{1}{4}$ NW $\frac{1}{4}$ all north of the JDR	31	Consolidate public lands, acquire for campsites.
3b	T9S R21E Section 28, SE $\frac{1}{4}$ SW $\frac{1}{4}$ north of the JDR	6	Consolidate public land.
4	T 7S R 19E Section 32, SW $\frac{1}{4}$ NE $\frac{1}{4}$	1.86	Acquire Clarno Launch/landing from OPRD as agreed.
5	T 1S R 19E Section 17, SE $\frac{1}{4}$ SW $\frac{1}{4}$	1	Small sliver of private land between BLM and OPRD.
5a	T 1S R 19E Section 17, SE $\frac{1}{4}$ SW $\frac{1}{4}$	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.