



## Independent Scientific Review Panel

for the Northwest Power & Conservation Council  
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**Memorandum (ISRP 2010-43)**

**December 9, 2010**

**To:** Tony Grover, Fish and Wildlife Director, Northwest Power and Conservation Council

**From:** Eric Loudenslager, ISRP Chair

**Subject:** Response request for two BiOp projects from the Nez Perce Tribe, #2007-092-00 Protect and Restore Selway River Watershed and Project #2010-086-00 Protect and Restore the Crooked and American River Watersheds

### **Background**

At the Council's November 2, 2010 request, the ISRP reviewed two proposals from the Nez Perce Tribe. This request for review is being guided by the needs identified in the Biological Opinion for the 2008 Federal Columbia River Power System. The first project is *Protect and Restore Selway River Watershed*, [#2007-092-00](#). This is a new habitat project to restore habitat function and channel processes in the Selway River, although a proposal for similar actions was requested in the FY 2007-09 project solicitation. The second project is *Protect and Restore the Crooked and American River Watersheds*, [#2010-086-00](#). This is a new habitat project to restore habitat function and channel processes in the South Fork Clearwater.

The ISRP requests a response for each proposal.

### **1. Protect and Restore Selway River Watershed**

#### **Recommendation**

Response Requested.

The Selway could be a good candidate for habitat enhancement because most of the watershed is in wilderness, no invasive aquatic species have been found, and hatchery influence apparently is minimal. The ftp site that provided the proponent's response to a previous ISRP review of this project (2006 solicitation) was useful in providing detail missing from the current proposal and resolving some questions and concerns. The actions regarding the improvement

of passage of steelhead and bull trout (mouth of Boyd Creek, diversion on Johnson Creek, falls on Island Creek) seem well justified by the proposal and Meet Scientific Review Criteria. Other components require additional information for the ISRP to determine whether they meet the review criteria.

The proponents should address the following:

- 1) Clarify the proposed actions in the O'Hara Creek watershed regarding cattle grazing and water temperatures.
- 2) Provide an overview of the criteria and methods for assessing and prioritizing roads and stream crossings.
- 3) Provide additional information regarding the role of sediment in project streams.
- 4) Discuss how adaptive management will be implemented.
- 5) Explicitly define and differentiate the implementation, status and trends, and effectiveness monitoring components of this project with at least an overview of study design, metrics, and methods of measurement. How does the Habitat Status and Trend monitoring program proposed by the Nez Perce Tribe in collaboration with ISEMP and CHaMP relate specifically to this project?

## **Comments**

### *1. Purpose, Significance to Regional Programs, Technical Background, and Objectives*

Upon noting that a 1% improvement in habitat is anticipated for the proposed actions, reviewers' initial reaction was negative because such a small change would be impossible to detect and probably meaningless in terms of benefit to fish. However, reviewers appreciate that the 1% referred to in the proposal originates from the FCRPS BiOp directive under RPA 35 Table 5 for Snake River Steelhead in the Clearwater River, where a 1% Habitat Quality Improvement is "required" to be achieved by 2018 for the Selway River population. Also stated is that "in the FCRPS BA under Table 4-b funding needs were identified for the Selway (\$200,000 per year) to address primary limiting factors to include impaired channel complexity, elevated temperatures, passage barriers, and excessive sedimentation." Thus, it appears that impetus for the proposed actions stems from the BiOp. We recognize that even though small gains in habitat function may be achieved, increases in fish production could be substantive if the restored habitat is especially productive or is critical for certain life stages of depressed fish populations.

The objectives are very general, typical of project proposals under the current proposal format. As described, the project would replace three culverts in the Lower Selway that are known to impede steelhead passage to 24 miles of upstream spawning and rearing habitat, decommission/recontour/improve up to 5 miles of roads to reduce sedimentation into streams, and improve riparian vegetation in the O'Hara Creek watershed. Subsequent out year projects

would include additional work to address the outlined limiting factors including sedimentation, stream temperature, large woody debris recruitment, noxious weed infestation, and passage.

However, it also stated that impacts from cattle grazing occur on US Forest Service lands in the O'Hara Creek watershed. Rehabilitation work is not supportable if the cause of that damage has not been addressed and eliminated or significantly reduced. A response is requested to discuss if grazing is to continue and to detail how and why project actions would be effective. Further, it is stated that "loss of the riparian corridor within O'Hara Creek, a major tributary to the Selway River, has increased water temperatures." What is the basis for that statement? Please provide the data. Also, is the elevated temperature regime at or near a biological threshold of impact for steelhead and/or bull trout, and to what extent would project actions be expected to reduce temperatures?

The action regarding the improvement of passage of steelhead and bull trout (mouth of Boyd Creek, diversion on Johnson Creek, falls on Island Creek) seems well justified by the proposal. The queries and possible concerns previously raised by the ISRP seem to be adequately addressed.

Much verbiage is dedicated to discussing sedimentation, largely from roads in the project area. In order to be credible such a discussion needs to be bolstered with additional information, as discussed below.

## *2. History: Accomplishments, Results, and Adaptive Management*

This is a new project, but an earlier version was reviewed by the ISRP in conjunction with the 2006 solicitation. The ISRP deemed that the project "Does Not Meet Scientific Criteria." The proponents provided a belated response to ISRP questions (dated February 2010), presumably in anticipation of the current proposal. This response satisfactorily addressed several of the ISRP's prior concerns and was helpful in understanding the current proposal.

An adaptive management component of the project was not discussed. It would have been helpful if the proponents considered how and under what circumstances they would implement adaptive management.

## *3. Project Relationships and Emerging Limiting Factors*

Limiting factors in a very general sense are discussed for the Clearwater and Selway Basins. Less well-defined and quantified are factors limiting fish abundance, distribution, and recruitment in the specific locations where habitat enhancement actions are proposed. For example, in areas where road and trail decommissioning or improvement is proposed to reduce sediment input to streams, is there quantitative information on sediment transport and deposition and identifiable impacts to fish life stages?

In the material outlining Limiting Factors and Justification for Restoration Activities the claim is made that there are “excess sediments in gravel - In the Selway there are over 350 miles of system roads and over 975 miles of designated trails in the Selway watershed. Road densities in some watersheds are in excess of 2.0 miles/square mile. Reducing road densities to 1.0 miles/square mile, improving drainage features on riparian roads and improving trail crossings on the 975 mile trail system will work to minimize erosion and sediment transport to the creeks and rivers of the Selway.” What does the term “excess sediments” mean? Does the term apply only to spawning sites or to reaches of the streams where rearing occurs? If they are deleterious to fish, please provide the data (such as percentage of fine sediments, etc.) and discuss what fish species and life stages are involved. To what extent would project actions reduce instream sediment? To what extent would eliminating five miles of roads reduce the road density or sediment input to streams? This additional information is needed to adequately assess this component of the proposal.

This project is related to several ongoing BPA-funded and Non BPA-funded projects in the Clearwater basin. The proponents consider invasive species as an emerging limiting factor, emerging perhaps only in the sense that more attention now is being paid to their potential impacts than in the past. This project proposes to minimally address this issue for noxious weeds but promises to more rigorously address this problem in future years.

#### *4. Deliverables, Work Elements, Metrics, and Methods*

Most Deliverables that involve culvert removal and replacement and road decommissioning are relatively straight forward. Deliverables 1 and 7 pertain to assessment and prioritization of stream crossings and roads to determine how much of a threat they pose to habitat and upstream passage of fish. The proposal would be enhanced if the proponents would have provided some discussion of the criteria that will be used in these assessments, metrics and how they would be measured, and how prioritization would be done.

The monitoring aspects of this project need clarification. There is confusion as to the extent to which implementation, status and trend, and effectiveness monitoring will take place. The proponents state that project monitoring will largely be implementation and compliance monitoring of restoration actions, and, they state, only limited effectiveness monitoring will occur. Yet they propose to perform pre- and post-implementation monitoring at project sites to assess whether the desired outcomes of the projects have been achieved. Furthermore, they propose to monitor the “parameters that are considered limiting factors in the watershed, specifically sediment and temperature,” although they do not state the purpose or methods for this monitoring. Thus, there appears to be a significant, but not well defined, effectiveness monitoring component to this work. The proponents do not provide study designs and metrics for monitoring but instead state that they will follow protocols from the Aquatic and Riparian Effectiveness Monitoring Program (Regional Interagency Monitoring for the Northwest Forest Plan) and those on file at the Nez Perce Tribal office.

The proponents need to explicitly define and differentiate the implementation, status and trend, and effectiveness monitoring components of this project with at least an overview of study design, specific metrics, and methods. The proponents state that the South Fork Clearwater River Snake River Steelhead population is currently being proposed for Habitat Status and Trend monitoring by the Nez Perce Tribe in collaboration with ISEMP and the Columbia Habitat Monitoring Program (CHaMP). How will this monitoring effort relate specifically to this proposed project? Is work under the auspices of CHaMP being planned for the Selway? It seems that at least the upper basin could be a useful reference area.

## **2. Protect and Restore the Crooked and American River Watersheds**

### **Recommendation**

Response Requested.

The component to complete the proposed Ecosystem Analysis at the Watershed Scale (EAWS) for the American River watershed Meets Scientific Review Criteria. All other proposed work is not supportable at this time unless it is more fully detailed and justified.

This proposal differed from the companion Selway River proposal [# 2007-092-00](#) that provided access to the NPT ftp site (<ftp://ftp.nezperce.org/Public/NPTribe/ISRP/>) giving the response of the proponents of the Selway proposal to the previous ISRP review. That material was useful in providing detail missing from the Selway proposal and resolving some ISRP questions and concerns. In the Crooked and American River watersheds, actions also were previously proposed and not supported by the ISRP, but no discussion of those prior concerns is presented. In the Project Documents and Reports section an “American and Crooked River ISRP comment/response” link is given but would not open.

The proponents should address the following questions and concerns:

- 1) Provide an overview of the criteria and methods for assessing and prioritizing roads and stream crossings.
- 2) Provide details relating to the Maines Estate.
- 3) Discuss how adaptive management will be implemented.
- 4) Explicitly define and differentiate the implementation, status and trends, and effectiveness monitoring components of this project with at least an overview of study design, metrics, and methods of measurement. How does the Habitat Status and Trend monitoring program proposed by the Nez Perce Tribe in collaboration with ISEMP and CHaMP relate specifically to this project?

## Comments

### *1. Purpose, Significance to Regional Programs, Technical Background, and Objectives*

This proposal seeks funding for projects that address limiting factors for South Fork Clearwater threatened steelhead and for bull trout. A 14% improvement in habitat is anticipated for the proposed actions. This metric referred to in the proposal originates from the FCRPS BiOp directive under RPA 35 Table 5 for Snake River Steelhead in the Clearwater River, where a 14% Habitat Quality Improvement is “required” to be achieved by 2018 for the South Fork Clearwater River population.

As proposed, “Initial restoration efforts in the first 3-year funding cycle would focus on restoring the following; mainstem (Crooked River) and tributary stream restoration, reducing sedimentation from the existing road/trail system through decommissioning/ improving roads, replacing or removing failed and/or barrier stream crossings, and an acquisition of 149 acres of prime meadow habitat in American River would also be pursued to protect the intact spawning and over-wintering habitat. In addition to the above implementation, several watershed specific assessments will be conducted to further define and understand priority restoration work (road, stream crossing assessments, and a watershed assessment for American River).” While the overall goals seem reasonable, inadequate details were presented to enable reviewers to support them as providing fish and wildlife benefits.

An Ecosystem Analysis at the Watershed Scale (EAWS) is proposed for the American River watershed. Completion of the EWAS and completion of a prioritization process for possible American River restoration actions are both in principle supported by reviewers.

Also proposed for American River is road decommissioning (5 miles already identified) and future culvert replacements. Unless a prioritization process has been completed and the road decommissioning and culvert projects have been highly ranked, these less-than-minimally described proposed actions cannot be supported. Detail is requested concerning assessment and prioritization procedures including the criteria that will be used in the assessments, metrics and how they will be quantified, and how prioritization will be done.

Land acquisition for the Maines Estate (149 acres) is also being proposed. The Maines Estate is not adequately described, and its priority and possible benefits to fish and wildlife are not documented. This acquisition could be of benefit but more information is needed including the current status of the habitat, the life stages of fish species using the area, and the relative contribution to basinwide fish productivity that can be expected from the acquisition. Those details are requested. The indication that stream channel bioengineering might be used in an acquired Maines Estate is particularly unsupported at this time.

A description of basinwide limiting factors is given. Less well-defined and quantified are factors limiting fish abundance and distribution in the specific locations where habitat enhancement actions are proposed. For example, in areas where road and trail decommissioning or

improvement is proposed to reduce sediment input to streams, is there quantitative information on sediment transport and deposition and identifiable impacts to fish life stages? This issue was raised by the ISRP in its past review of a version of this project. In addition, where barrier removal is proposed, the proponents could have discussed how much *suitable* habitat, not simply miles of habitat, is available above the barriers and what species and life stages of fish will benefit. This issue also was raised by the ISRP in its previous review.

## *2. History: Accomplishments, Results, and Adaptive Management*

This is a new project, but an earlier version was reviewed by the ISRP in conjunction with the 2006 solicitation. The ISRP deemed that the project “Does Not Meet Scientific Criteria” and the project was not funded. Several of the concerns raised by the ISRP in the past review remain unaddressed by the current project proposal.

An adaptive management component of the project was not discussed. It would have been helpful if the proponents considered how and under what circumstances they would implement adaptive management.

## *3. Project Relationships and Emerging Limiting Factors*

The proponents state that they will coordinate and consult with federal agencies and landowners, and procure and protect land. It is unclear how these efforts directly address emerging limiting factors

## *4. Deliverables, Work Elements, Metrics, and Methods*

The monitoring aspects of this project need clarification. There is confusion as to the extent to which implementation, status and trend, and effectiveness monitoring will take place. The proponents state that project monitoring will largely be implementation and compliance monitoring of restoration actions, and, they state, only limited effectiveness monitoring will occur. Yet there appears to be a significant, but not well defined, effectiveness monitoring component to the project. The proponents propose to perform pre-and post implementation monitoring at project sites to assess whether the desired outcomes of the projects have been achieved. They propose to monitor the “parameters that are considered limiting factors in the watershed, specifically sediment and temperature,” although they do not state the purpose or methods for this monitoring. They also assert that the desired outcomes of habitat enhancement in Crooked River include “increased pool volume and pool depth, increased role of LWD in the channel, increased complexity and diversity of habitat types.” The implication is that these habitat factors will be monitored to determine the effectiveness of the actions in achieving the desired outcomes. The proponents do not provide study designs and metrics for monitoring but instead state that they will follow protocols from the Aquatic and Riparian

Effectiveness Monitoring Program (Regional Interagency Monitoring for the Northwest Forest Plan) and those on file at the Nez Perce Tribal office.

The proponents need to explicitly define and differentiate the implementation, status and trends, and effectiveness monitoring components of this project with at least an overview of study design, specific metrics, and methods. The proponents state that the South Fork Clearwater River Snake River Steelhead population is currently being proposed for Habitat Status and Trend monitoring by the Nez Perce Tribe in collaboration with ISEMP and the Columbia Habitat Monitoring Program (CHaMP). How will this monitoring effort specifically relate to their proposed project?

The proponents need to provide Deliverables for Objective 6.