



Independent Scientific Review Panel
for the Northwest Power & Conservation Council
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Memorandum (ISRP 2009-1)

January 15, 2009

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

From: Eric Loudenslager, ISRP Chair

Subject: ISRP Response Request — Review of Scope Expansion for the Project *Reestablish Connectivity and Restore Fish Habitat in the East Fork of the South Fork Salmon River Watershed* (project #200712700)

Background

At the Council's November 2008 request, the ISRP reviewed information proposing a change in scope for the project *Reestablish Connectivity and Restore Fish Habitat in the East Fork of the South Fork Salmon River Watershed* (#200712700). For the Fiscal Year 2007-09 review, the ISRP found that the originally proposed project met scientific review criteria,¹ the Council did not recommend funding the project, but BPA funded the project as part of its Implementation Planning Budget. Subsequently, the project was changed from what was originally proposed in FY 2007-09 and reaches us after iterations with the Budget Oversight Group, Council, and BPA.

This project originally intended to reestablish fish passage through a 30-foot tall cascade - the Glory Hole - and rehabilitate one mile of fish habitat through a degraded reach of the upper mainstem East Fork of the South Fork Salmon River. Since the time of the initial project development, the land-owner of the Glory Hole river reach entered into a lease-to-purchase option with a gold mining company; consequently, the reach is now inaccessible for habitat-enhancement activities. Therefore, early in 2008, the sponsors (Nez Perce Tribe) proposed a change in the area and scope of this project in relation to other high-priority needs of the South Fork Salmon River identified in collaboration with the U.S. Forest Service. The proposed change addresses fish passage (i.e., culverts), road decommissioning and relocation, and riparian habitat enhancements in the South Fork below the original project site. In May 2008, the Council and BPA approved the scope change, without ISRP review, but with the understanding that the approval was for only Fiscal Year 2008 and 2009 and that out-years are dependent on outcomes of future project reviews.

¹ www.cbfwa.org/solicitation/components/forms/Proposal.cfm?PropID=448#part2

In September 2008, the Nez Perce Tribe requested an additional scope modification to pursue a conservation easement on the Wapiti Meadows Ranch on Johnson Creek to take full advantage of current partnering and cost sharing opportunities. In November, the Council thought the project had changed enough in scope to warrant an ISRP review.

Our review follows below.

ISRP Recommendation: Response Requested, Currently Does Not Meet Scientific Review Criteria

The proposed projects may very well make a substantial contribution to the restoration of aquatic ecosystems in the South Fork Salmon River. Activities such as decommissioning roads, paving bridge approaches, removing barriers, revegetating old road and trail beds, and perhaps even placing large woody debris (LWD) and securing conservation easements may be required and might produce increased productivity or capacity. However, the proposed set of projects are not described fully enough to allow a scientific evaluation of whether they are technically justified and, thus, might provide benefit to fish and wildlife resources. Consequently, the current proposal Does Not Meet Scientific Criteria for proper evaluation.

There are four objectives. Two of those (Objective 1, administration, and Objective 4, to increase public awareness) fall outside an ISRP review. Objective 3, to reestablish connectivity, was apparently completed in 2008. Therefore, this review applies primarily to Objective 2, to reduce sediment delivery to anadromous fish streams.

We conclude that further meaningful biological justification is needed for the proposed effort, and that it must be tied to fish habitat and fish populations, other than just identifying the target species. There is inadequate discussion of sediment levels in the South Fork tributaries and the extent to which they are detrimental to fish. Sufficient information is not provided to show that the proposed actions would significantly reduce sedimentation. Adequate justification is not given for the proposed conservation easement for 0.75 miles of streamside habitat on Johnson Creek, from the Rocky Mountain Elk Foundation. The monitoring described is not sufficient to properly gauge project success; only a rather vague mention is made of compliance monitoring by the USFS in the general vicinity. These information gaps should be addressed in a response.

ISRP Comments

Some of our comments may pertain to actions that have already been done, as the proposal has work elements that were scheduled to be completed in FY 2008. But even if the work elements are completed, our comments may inform similar actions that might be pursued in the future.

1. Technical Justification, Program Significance and Consistency, and Project Relationships (sections B-D)

This proposal only provides a generic technical rationale for the planned restoration activities. Reduction in sediment delivery, improved access to floodplain areas, and replacing culverts that restrict fish passage are all very likely to be worthwhile activities. However, little technical information is provided on the selection criteria and process for locations where these activities will be implemented. It is not clear if the project locations or activities are the highest priority within the South Fork Salmon River watershed. Similarly, the purchase of the conservation easement for Wapiti Meadows Ranch may be a very significant conservation action, but only if the ranch possesses some unique or critically important ecological attributes that would benefit from the conservation easement, and be potentially lost without the easement. Insufficient information is provided to substantiate the conservation easement.

The Salmon River Subbasin Plan, on page 63, identified several issues of concern in general terms in the East Fork of the South Fork, including: reductions in riparian vegetation, bank instability, sediment sources due to grazing, water diversions for irrigation, and fine sediment. It did not specifically identify in technical detail any of the proposed actions in this scope expansion as priorities.

There was no experimental or empirical evidence presented or cited that sediment limits anadromous fish here, and at which life stage. Others have attempted modeling when empirical data was lacking, such as EDT. Assessments from the subbasin plan, BiOp, and possibly other watershed analysis are needed to 1) establish the potential smolt capacity and 2) indicate how the productivity and/or capacity might be improved by the actions proposed. Without this information it is not clear whether the limitation to production might primarily be out-of-basin and oceanic, on the smolt-to-adult stage. Thus, reduced escapement might be the cause for low yield of wild smolts, so low that it is possible that juvenile production is not limited by habitat quantity (much could be vacant), nor limited by habitat quality (unless the list of contaminants and heavy metals, or level of sedimentation is demonstrated as limiting, and the life stage is identified).

Sugar Creek is mentioned only once in the subbasin plan, and this in reference to contamination with heavy metals from mining activity along one of its tributaries. It is unclear if the level of contamination is a higher priority than, say, culvert replacement or sedimentation. Perhaps the contamination problem has been addressed, but no information on that point is provided.

There is no mention of Ruby Meadows, Vibika Creek, and Wapiti Meadows Ranch in the subbasin plan. If these watersheds are high priorities for the restoration of fish populations in the South Fork Salmon River watershed, it seems reasonable that they would have been identified as such in the subbasin plan. Since the project sites were not mentioned in the subbasin plan, a clear and complete explanation as to why these locations are now important should have been included in the proposal to more adequately justify the projects.

The ISRP seeks reference to an adequate watershed assessment and subsequent prescription plan, along with the rehabilitation priorities and actions, to be followed by a reasonable monitoring and evaluation plan. The sponsor mentions an assessment following the 2007 fire in the area, but we are provided no reference to documentation of that assessment. We must see at least the summary and reference to reports that detail methods and standard procedures from which the list of rehabilitations was developed. The Crosswalk document lists the removal of passage barriers and channel improvements in relation to needs in this subbasin, but the detailed information of instream habitat, riparian, gully, and hillslope assessments and their treatment, and linkage to fish yield, are lacking or not referenced.

2. Objectives, Work Elements, and Methods (section F)

General objectives of the proposed projects are provided in Table 2, but specific objectives for each project are not included. Very few details are provided regarding the work elements and methods. Each work element is described in a brief paragraph, but virtually no detail about the manner in which the work element will be accomplished is provided. Therefore, it is not possible to determine whether or not the proposed approach is likely to be successful. Some specific examples of the deficiencies follow.

Work Element A-F (Collect/Generate/Validate Field and Lab Data) proposes a road inventory in South Fork/Lower Secesh, Ruby Meadows, Sugar Creek, Vibika Creek, and Antimony Ridge Mine to identify sites for decommissioning. No detail on how the survey will be conducted and what information will be collected is provided. We seek criteria and standard procedures that will be used to determine whether or not a road should be decommissioned. The surveys should also collect information that could identify sites where actions short of decommissioning (e.g., improved road drainage, better surfacing material) might contribute to reduced sediment delivery to streams, or other options, but these are not presented. Photo 1 provides a clear example of a road crossing that might require attention, but there is no information or evidence on the seriousness of sediment delivery from this source. Under Work Element E. Install Fish Passage Structure (184), no information is given at all. Work Elements A-F are basically to decommission up to 20 miles of road within South Fork/Lower Secesh by re-contouring roads back to natural topography and to decommission up to 15 miles of road network in Ruby Meadows by re-contouring roads back to natural topography, which is intended to reduce surface erosion and sediment delivery to streams. This seems like a reasonable effort for many reasons, but without additional information it is not possible to evaluate whether fish habitat would be significantly improved.

Work Element H would recontour the floodplain, but an explanation of why or how is lacking. Such an approach, involving replanting and large woody debris (LWD), is unjustified based on the information presented. More site-specific detail is required. What will the recontouring criteria be? For example, will it be based on a preferred width/depth ratio for the channel? How will the large wood be incorporated – singly or in groups? Will wood pieces be anchored to the bed or bank or installed adopting Dr. Tim Abbe's design approach? Will the riparian plantings use a soil bioengineering approach, and if so which one(s)?

Work Elements I-K: Approximately 5 miles of the Sugar Creek road would be converted to a trail to minimize sediment delivery to the stream. This might be a worthwhile endeavor, but more details are needed. Why is a trail needed here compared to decommissioning and revegetation, and what are the alternatives? The claim is made that this conversion will provide improved access to the floodplain. Improved access to floodplain habitat implies that the conversion from a road to a trail will either include frequent culverts or bridges that will enable aquatic species to move upslope of the trail or the trail will be relocated outside of the floodplain. Not enough detail is provided for this work element to determine what will be done on the trail to improve access. Photo 3 indicates that this road runs along the channel of Sugar Creek. If this is the case, a trail may still generate and deliver significant amounts of sediment to the stream. It also is unclear why this road was selected for treatment before the road inventory was completed (work element A). If the judgment was made that this section of road is so obviously problematic (as the photo indicates) that it can be identified as a priority without the benefit of the full road inventory, that is fine. But the rationale for making this judgment should be included in the proposal. Replacing Parks Creek, Salt and Profile culverts with *clear-span* pre-cast concrete bridges should be considered.

Work Element M: Conduct Pre-Acquisition Activities. Insufficient detail was provided on activities that must be done prior to acquisition of the conservation easement for Wapiti Meadows Ranch.

Work Elements N-O: TBL Work. This work element relates to activities that need to be completed prior to securing the conservation easement for Wapiti Meadows Ranch. It includes items such as appraisals, development of an MOA, real estate negotiations, survey/photogrammetry, and GIS work. These activities appear to not differ from those that would be included under Work Element M. Nonetheless, a clear connection to the subbasin plan and justification for the conservation easement as it relates to target species was not provided.

3. M&E (sections G and F)

A brief mention of Implementation Monitoring is included in section C. However, very little detail is provided. M&E is not adequately addressed in this proposal. The proposal indicates that pre- and post-construction habitat and biological monitoring will occur but no detail of what measures will be included or how they will be collected is provided. It is noted that Payette National Forest biologists will conduct monitoring that includes “snorkeling, water temperature data collection, and sediment delivery measurements.” However, it is not clear whether or not these USFS monitoring efforts will occur at the sites where the projects will be implemented. The only other mention of monitoring is in Objective 2-Work Element L Analyze / Interpret Data which states “Analyze biological and habitat data to determine project efficacy.” However, no information is provided about experimental design, what parameters will be measured, what methods will be used to collect these data or how it will be analyzed and interpreted.

An improved explanation of M&E is required that develops indicator sites or other reasonable evidence of success, and is preferably tied to the overall subbasin M&E for habitat projects – see the Metrics Review (ISRP 2008-7) and comments under effectiveness monitoring of habitat rehabilitation projects in the 2007 Retrospective Report (ISRP 2007-4). In addition, a review of comments on adaptive management in the retrospective report might assist with focusing M&E in this subbasin.