



Independent Scientific Review Panel

for the Northwest Power & Conservation Council
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Memorandum (ISRP 2009-9)

March 31, 2009

To: W. Bill Booth, Council Chair

From: Eric Loudenslager, ISRP Chair

Subject: Response review of the Columbia River Fish Accord proposal Yakama Nation Pacific Lamprey Program (200847000)

Background

At the Council's request, the ISRP reviewed a response received from the Yakama Nation regarding our March 6, 2009 review¹ of the Yakama Nation Pacific Lamprey Program (200847000). In our March 6 review, we found that the proposal met scientific review criteria (in part). We found that four of the objectives (1, 2, 4 and 5) were scientifically supported and provided the following recommendations for the remaining four objectives.

- For Objective 3 – document current status of larval Pacific lamprey with presence/absence surveys – the ISRP requests a response to the concerns raised about the survey design before implementation; this memo provides suggestions to be included in the final survey design.
- Objective 6 – identification of “all known and potential” limiting factors – is a very large undertaking and should be described in greater detail, particularly with regard to the specific life history requirements of Pacific lamprey in the Yakima subbasin. Taking a full life-cycle approach, the major limiting factor may be either adult or ammocoete passage at mainstem Columbia River dams, so this really needs to be recognized and discussed more in Objective 6. The ISRP concludes that enough published data exist on this species to scope a more strategic approach before beginning the extensive field work proposed.
- Objectives 7 and 8, which involve lamprey reintroductions and initiation of a supplementation program, can be phased in pending the outcome of the survey and limiting factor analysis.

The Yakama Nation quickly responded to these issues with a cover letter and a revised narrative.

¹ ISRP 2009-5: ISRP Review of two Columbia River Fish Accord Proposals: Lyons Ferry Adult Holding and Yakama Nation Lamprey; www.nwcouncil.org/library/isrp/isrp2009-5.htm

ISRP Recommendation

Meets Scientific Review Criteria (Qualified)

The Yakama Nation's response significantly improved their proposal, with an important exception. Under Objective 3, we recommend the qualification that the initial sampling effort should be used to inform a more geographically complete probabilistic sampling scheme, as described below.

The ISRP appreciates the sponsors' clarification concerning Objectives 7 and 8 concerning supplementation. The ISRP now realizes this component was preliminary, and unless future needs for supplementation are determined (possibly following further review) it would not be implemented.

The ISRP also appreciates the clarification that the 2009 lamprey work will focus on the Klickitat River Basin. This should provide a good learning experience before tackling the more complicated Yakima River system.

Under Larval abundance and distribution presence/absence surveys, it is stated that "All sample sites will be conducted from the mouth of the Columbia River to the headwaters of the Klickitat and Yakima rivers." We understand this to mean that lamprey sampling will be initiated at the confluence of the Klickitat and Yakima rivers with the Columbia River, not at the mouth of the Columbia River itself. The inclusion of Figure 4 indicates that there will be an attempt to distinguish Pacific lamprey, river lamprey, and western brook lampreys. This will be important, for example, in determining whether the ammocoetes in the irrigation ditches (mentioned in the cover letter) are in fact Pacific lamprey and not one of the other species.

Objective 3 includes documenting the distribution of adult and juvenile lamprey and the ISRP has some remaining concerns about this element. It is almost certain that the distribution of adult and juvenile lamprey will be underestimated with the proposed sampling strategy. The initial look at juvenile distribution involves sampling areas most likely to provide juvenile rearing habitat, i.e., "index areas." Adult distribution will initially be documented by redd surveys that focus sampling in sites likely to hold spawning substrates. These sampling strategies will inherently provide estimates of distributions that are biased low. Therefore, using these distribution estimates to inform prioritization of lamprey restoration actions under Objectives 4, 5, 6, 7, and 8 as stated in the proposal could result in serious inefficiencies if lamprey abundance is significantly underestimated. Instead the initial sampling effort should be used to inform a more geographically complete probabilistic sampling scheme (e.g., EMAP) to ensure representative coverage of the entire area of distribution before the most limiting factors can be identified and prioritization of restoration activities takes place.