

**Response to ISRP Comments**  
**Project 35009**  
**Evaluate status of Pacific Lamprey in the Willamette River Subbasin**

*In sampling nearshore habitats in the lower Willamette, what is the justification for transects 10m in length? Has a backpack electroshocker been tested for effectiveness in sampling lamprey in these habitats?*

There is no specific justification for transects 10m in length. Limited funding and personnel required a choice between longer transects at fewer sites, or relatively short transects at many sites. Because almost nothing is known about use of the lower Willamette River by juvenile and larval lamprey, and because apparently suitable or marginal habitat is distributed throughout the lower river, the choice was made to go with short transects at a relatively large number of widely dispersed sites. Ten meters was considered a reasonable, relatively short length. If transects prove to be too short to detect fish in representative numbers, additional or longer transects can be added to the sampling scheme.

Sampling shorelines in the lower Willamette River in 2002 will be conducted primarily with funding from the City of Portland. Part of the effort includes sampling to determine the efficiency of electroshocking. Immediately after shocking selected transects we will visually inspect the entire area sampled to detect lamprey that were not collected (Task 1b). This will involve using shovels to expose the substrate just shocked, and a sieve to separate lamprey from the substrate. Results from this sampling will assist us in determining sampling efficiency, and planning future sampling above Willamette Falls.

Ongoing sampling in urban tributaries of the lower Willamette River has demonstrated the ability to detect presence of ammocoetes in substrates and depths (0.5 m) similar to Willamette River near shore habitats. In addition, USFWS personnel on the lamprey project in Cedar Creek routinely use backpack shockers to collect juvenile lamprey.

*The sponsors propose to radio tag 40 adult lamprey below Willamette Falls in summer 2002 and monitor movement during the subsequent year. Based on tag detections the previous year, the ISRP is concerned that 40 tagged fish will be an insufficient number to provide reliable information on movement and to meet the proposed objectives. The sponsors should decide how many tags are necessary to provide reliable information on movement and revise the proposal and budget appropriately.*

Portland General Electric has purchased and provided the 40 tags to be implanted in summer 2002. Monitoring movements of these fish is funded primarily by the City of Portland. Although detailed data from fish tagged in 2001 has not yet been made available for review, our plan is to use information from fish tagged in both 2001 and 2002 to decide how many tags are necessary to meet objectives in future years (2003-05). Information from fish tagged in 2002 will not be complete until spring 2003. At that time we will be able to determine the number of tags needed to meet objectives. Projected budgets include funds for 60 radio tags annually. Logistics will likely preclude using more than 80 tags each year. If we determine that 80 tags are needed, budgets will increase less than \$5,000 each year, well within parameters for budget changes. Conducting telemetry over a number of years will increase the likelihood of meeting objectives.

In a previous study, Vella et al. (1999) released 85 radio tagged lamprey downstream of Bonneville Dam to evaluate upstream passage.

### **Reference**

Vella, J., L. Steuhrenberg, and T. C. Bjornn. 1999. Migration patterns of Pacific lamprey (*Lampetra tridentata*) in the lower Columbia River, 1997. Annual Report of Research to the U.S. Army Corps of Engineers, Portland District, Portland, Oregon.