

Summary of Initial Efforts to Research Vertical PIT-Tag Scanners for Deep Rivers

We began investigating the feasibility of detecting downstream migrating juvenile Chinook salmon smolts using full-duplex PIT tag technology. Full and half-duplex PIT tag telemetry is widely used in many river basins to estimate fish survival and passage. However, in-river antenna detection systems for upper water column oriented outmigrating juvenile sized fish in large, deep, flashy rivers don't exist. We conducted a literature search on existing PIT tag technology, met with experts, began testing a new type of antenna system (Figures 1, 2), selected a study site for field testing (Figures 3, 4), and completed the Biological Assessment for field testing.



Figure 1. Top view of the antenna.



Figure 2. Side view of the new antenna in an hydraulic flume.

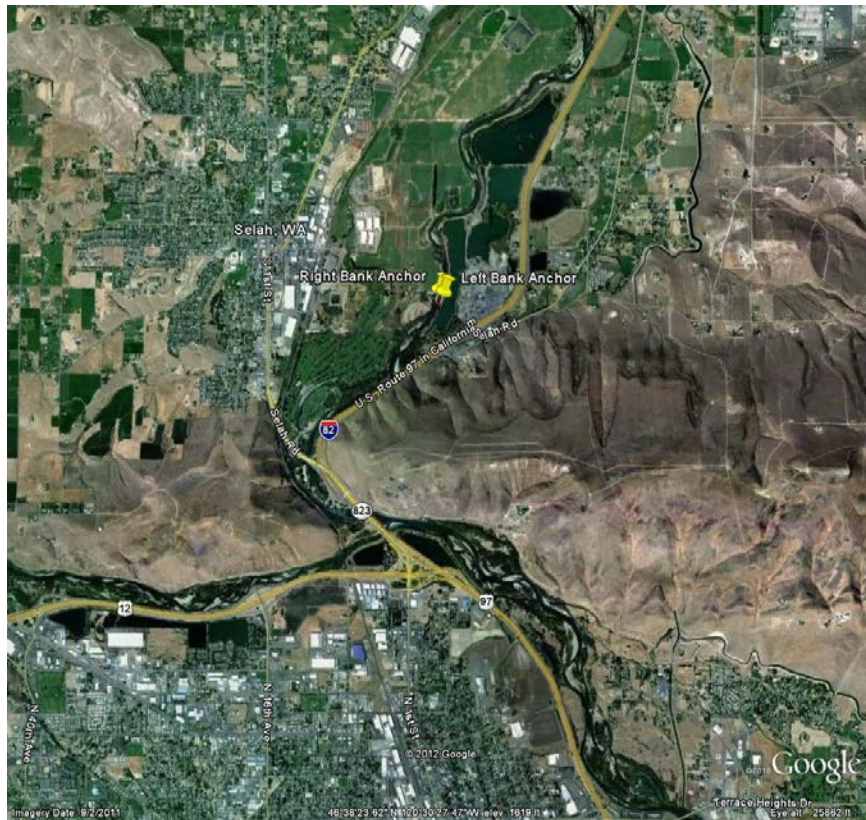


Figure 1. Location map, Yakima WA



Figure 2 Google Earth image of study site (note concrete blocks on left bank). River is approximately 200' wide at this point (note left and right bank anchor markers).

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