

PIT tag technology:

**A flexible tool for fish passage and
reintroduction projects**

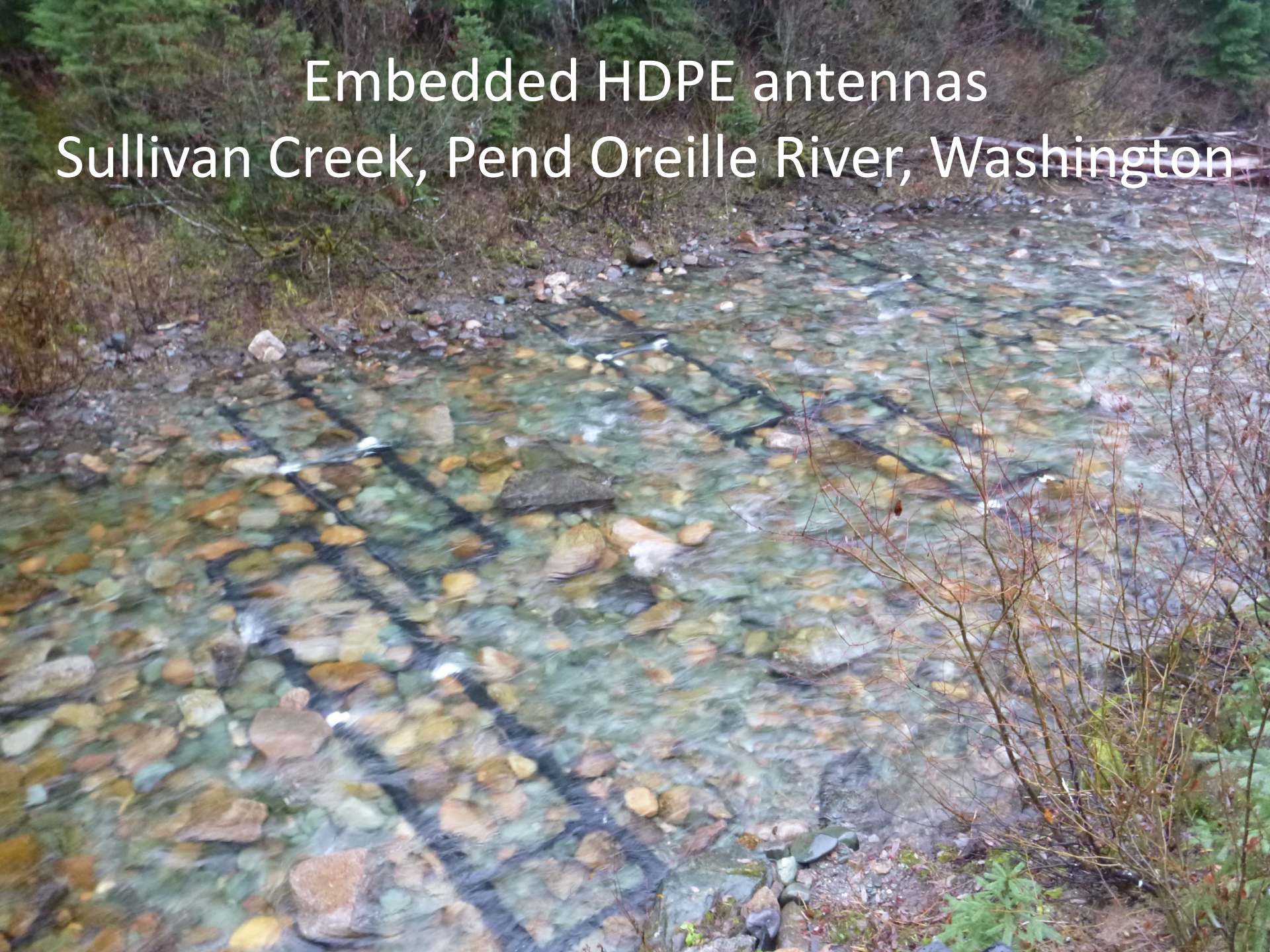
N. Phil Peterson and Erek Arnold

**WA BC American Fisheries Society
AGM 2018**

Kelowna, British Columbia

March 19-22, 2018

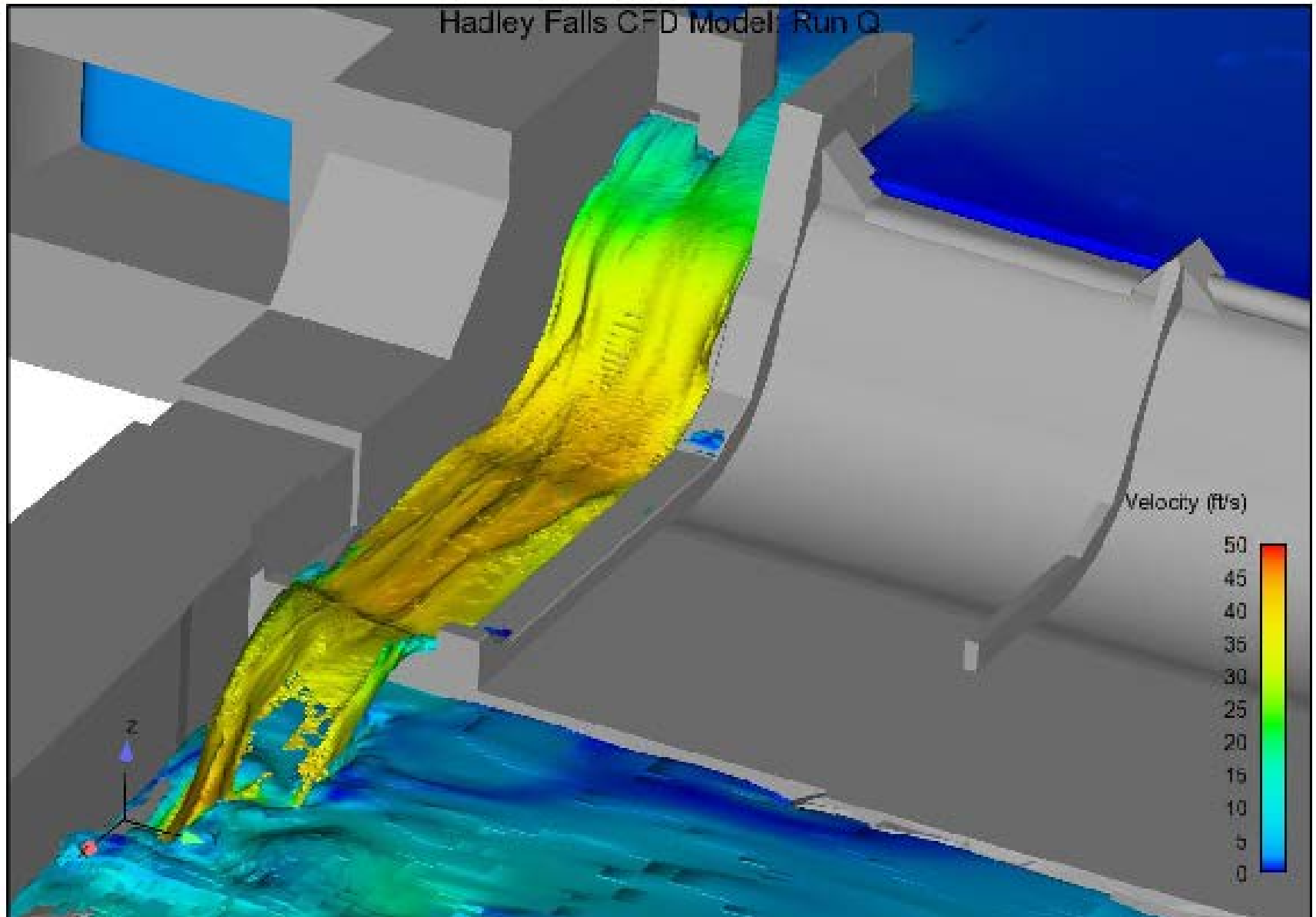
Embedded HDPE antennas Sullivan Creek, Pend Oreille River, Washington



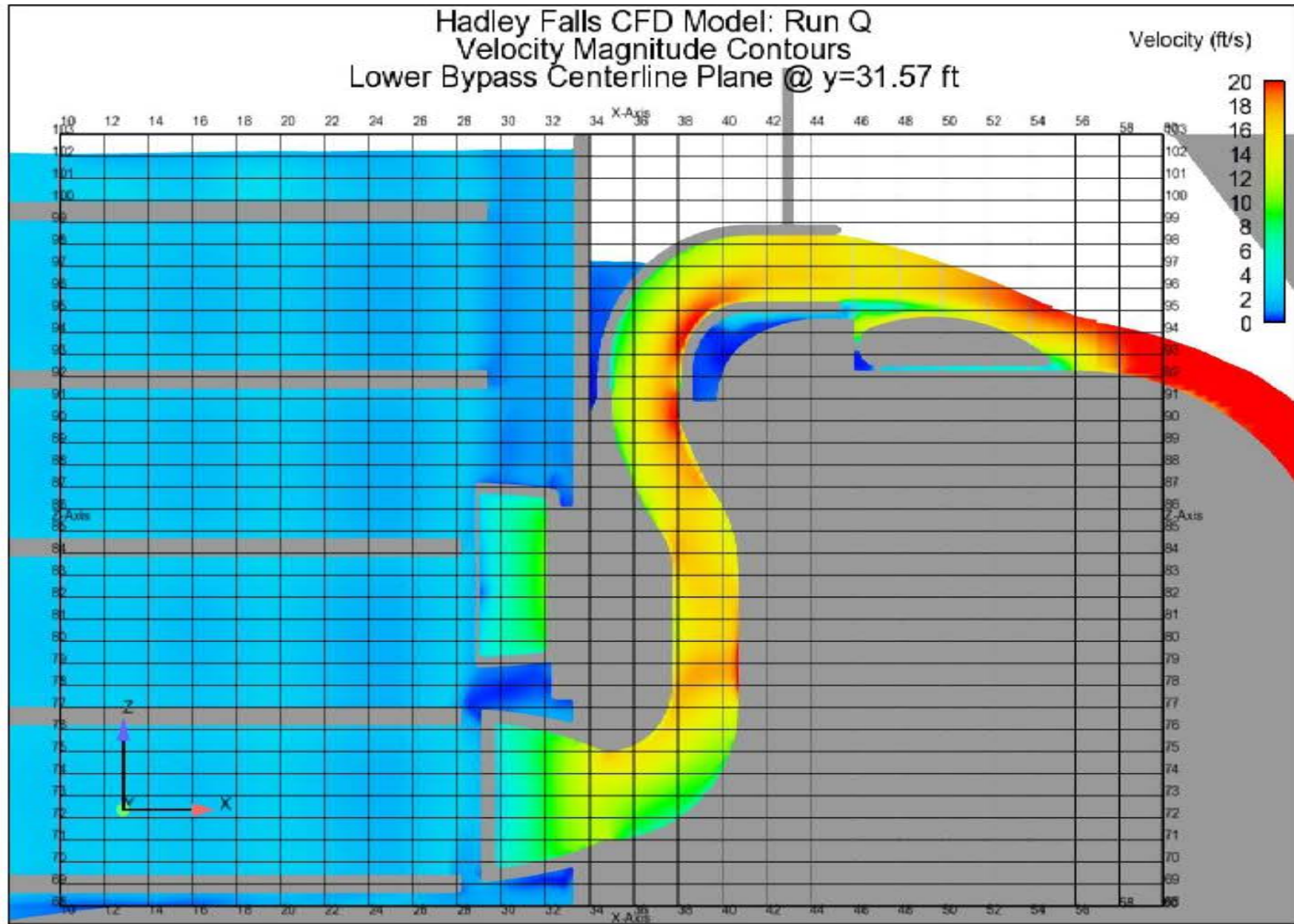
Hadley Falls Dam, Holyoke Massachusetts, Connecticut River



Flow Over the Spillway and Jet Flow into Plunge Pool



Velocity Distribution inside Bypass Plane 13 (x-z plane @ y=31.57 ft)



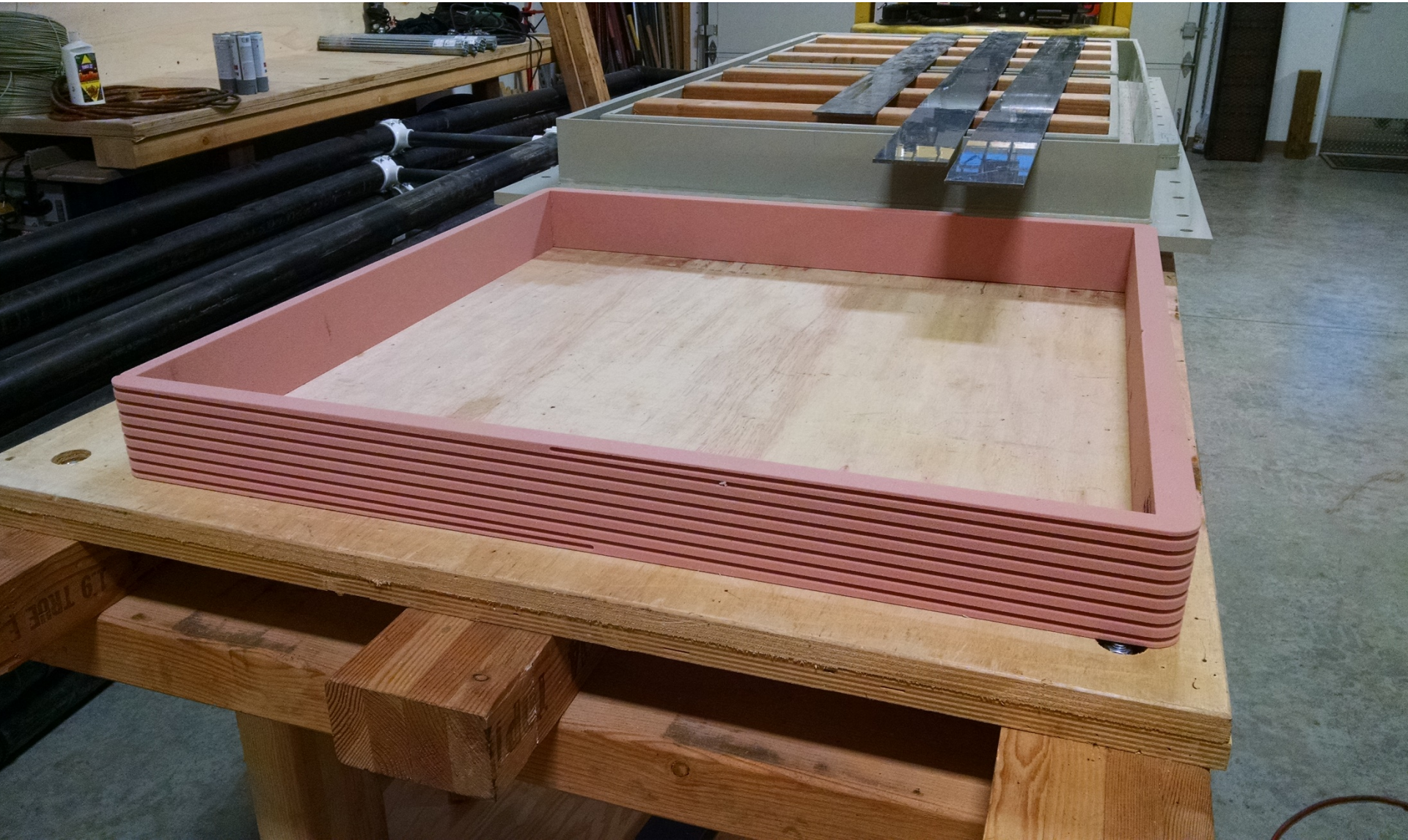
High density welded polypropylene
antenna housing



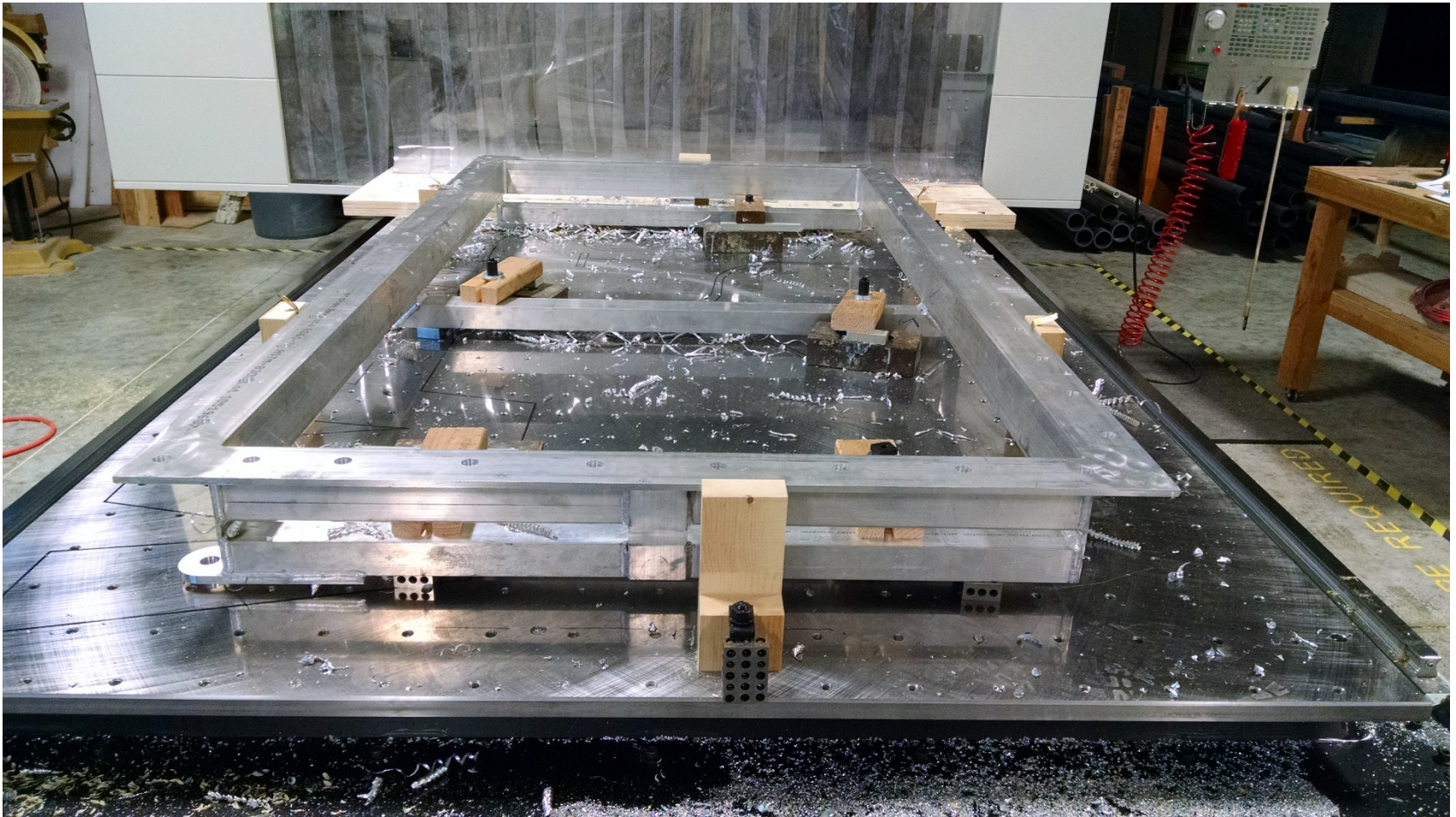
Interior coil gallery and core: 30 lb.
urethane foam cut on Haas CNC router



Foam core assembled ready for coil



Exterior aluminum carrier and EMI shield: final finish and drilling Hass CNC router



Upper by-pass gantry system



Installing face antenna



Menominee River, Marinette Wisconsin

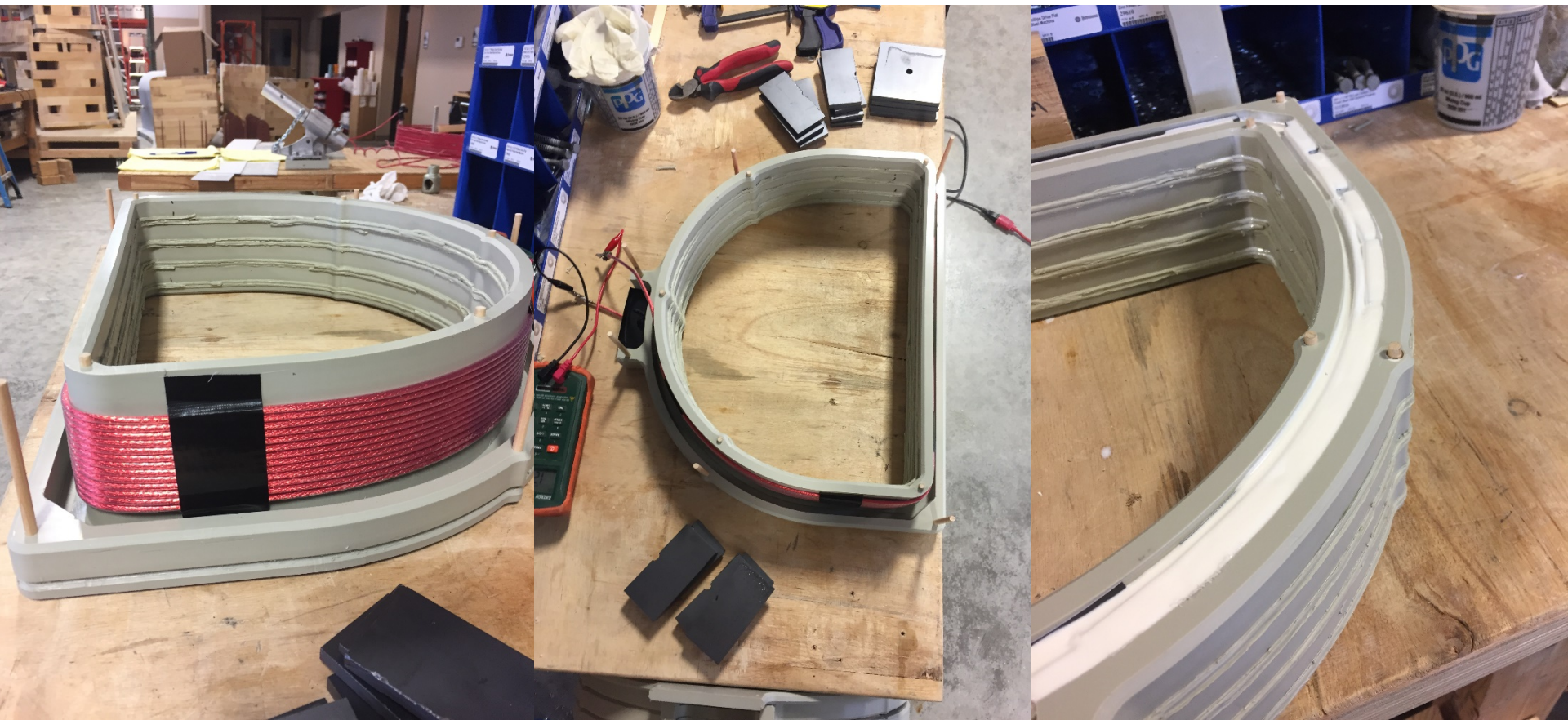




Fish working tank



Design and fabrication of the “Lazy D” antenna





“Lazy D” antenna for high noise environment manual sturgeon work-up

Foster Dam South Fork Santiam River, Oregon



Foster Dam fish weir removal/install



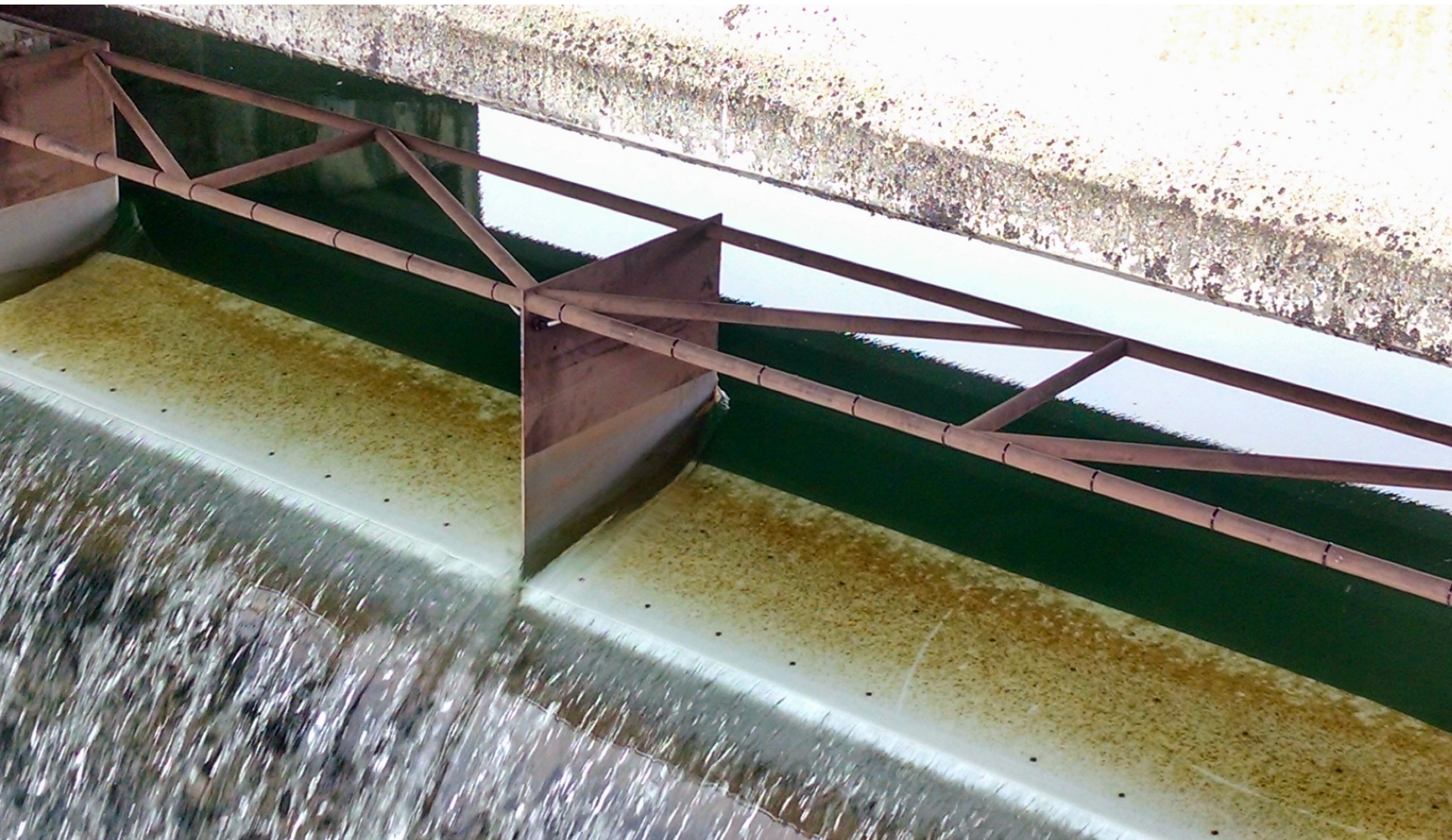




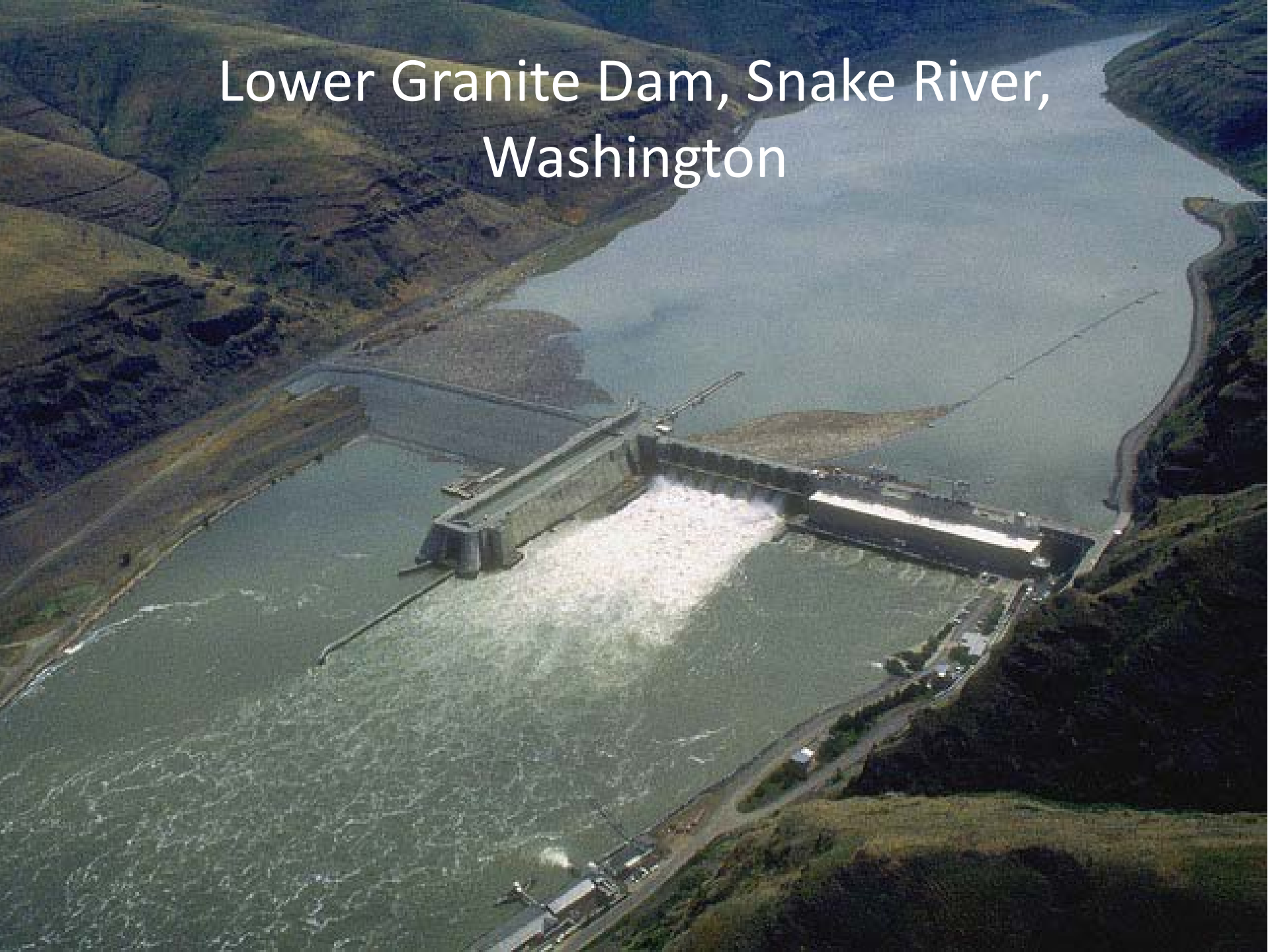
UHMW-PE cap ready for welding



Antennas installed



Lower Granite Dam, Snake River, Washington



Adult dewatered fish ladder LGR



Design starts here





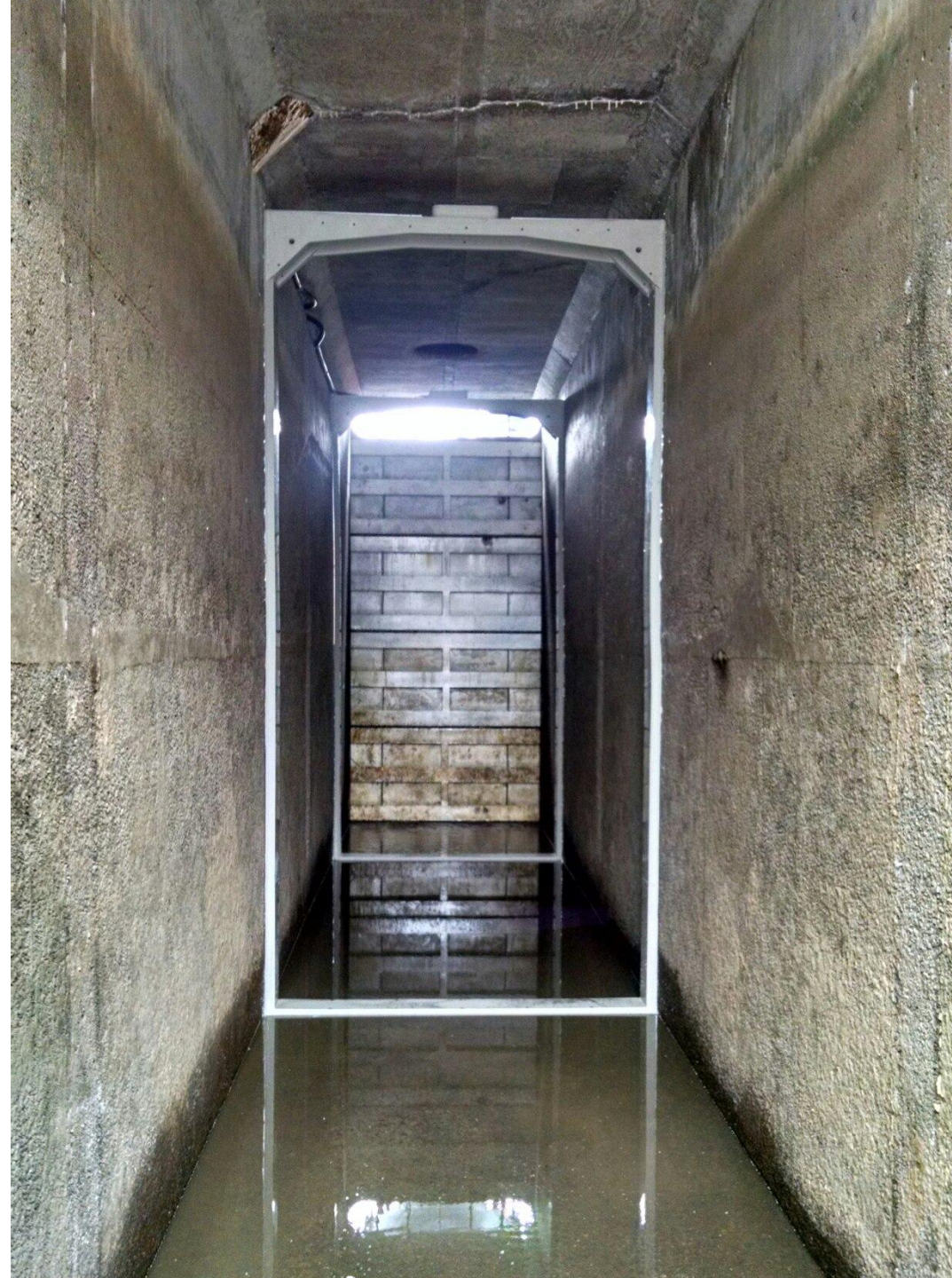
WEST FORK
ENVIRONMENTAL



WELCOME TO LOWER
GRANITE LOCK & DAM

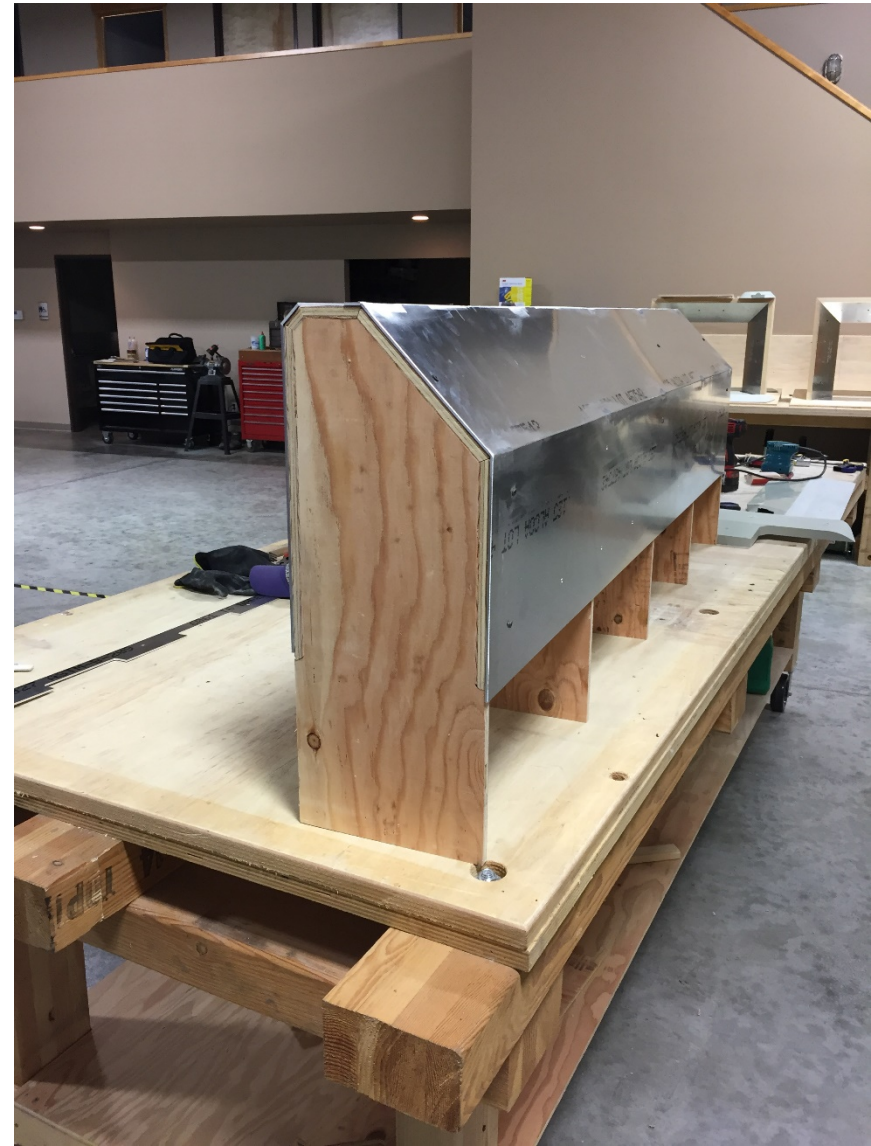
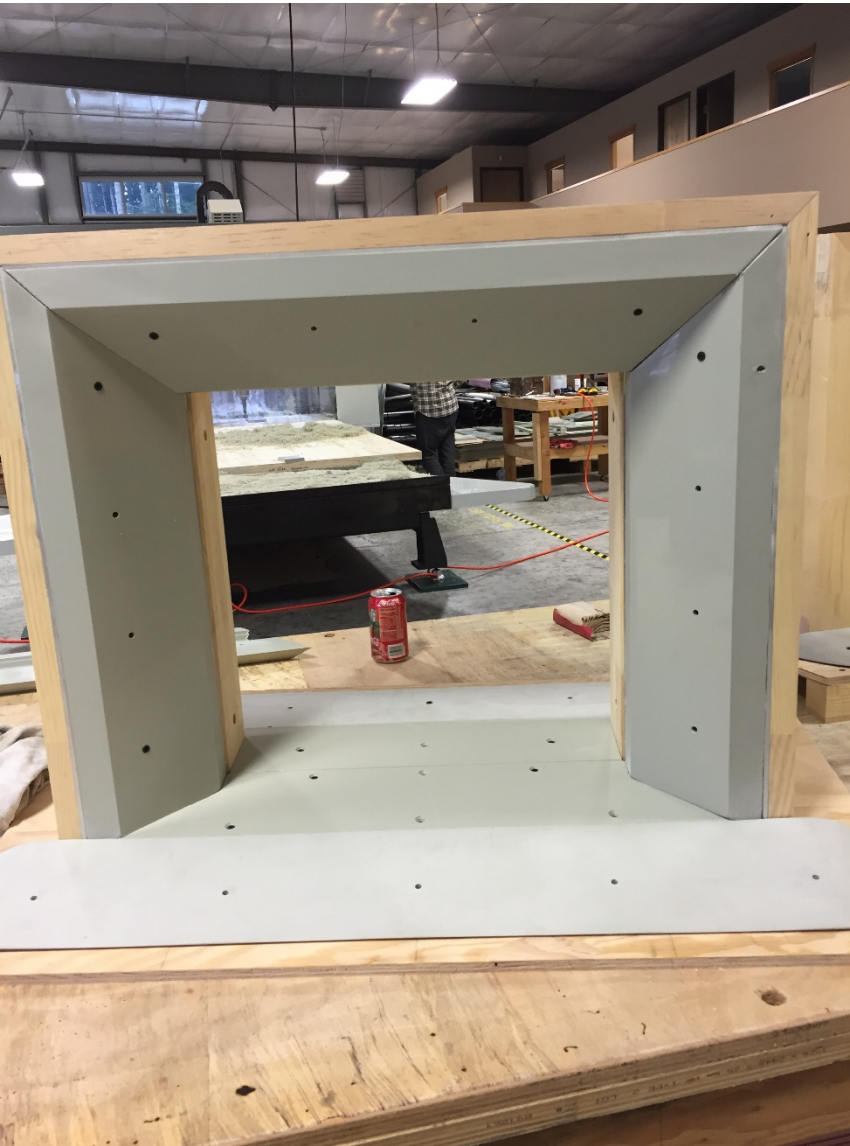
Officer's Landing
Public Access

LGR adult exit
tunnel antenna
installed





Orifice and overflow weir antenna forms



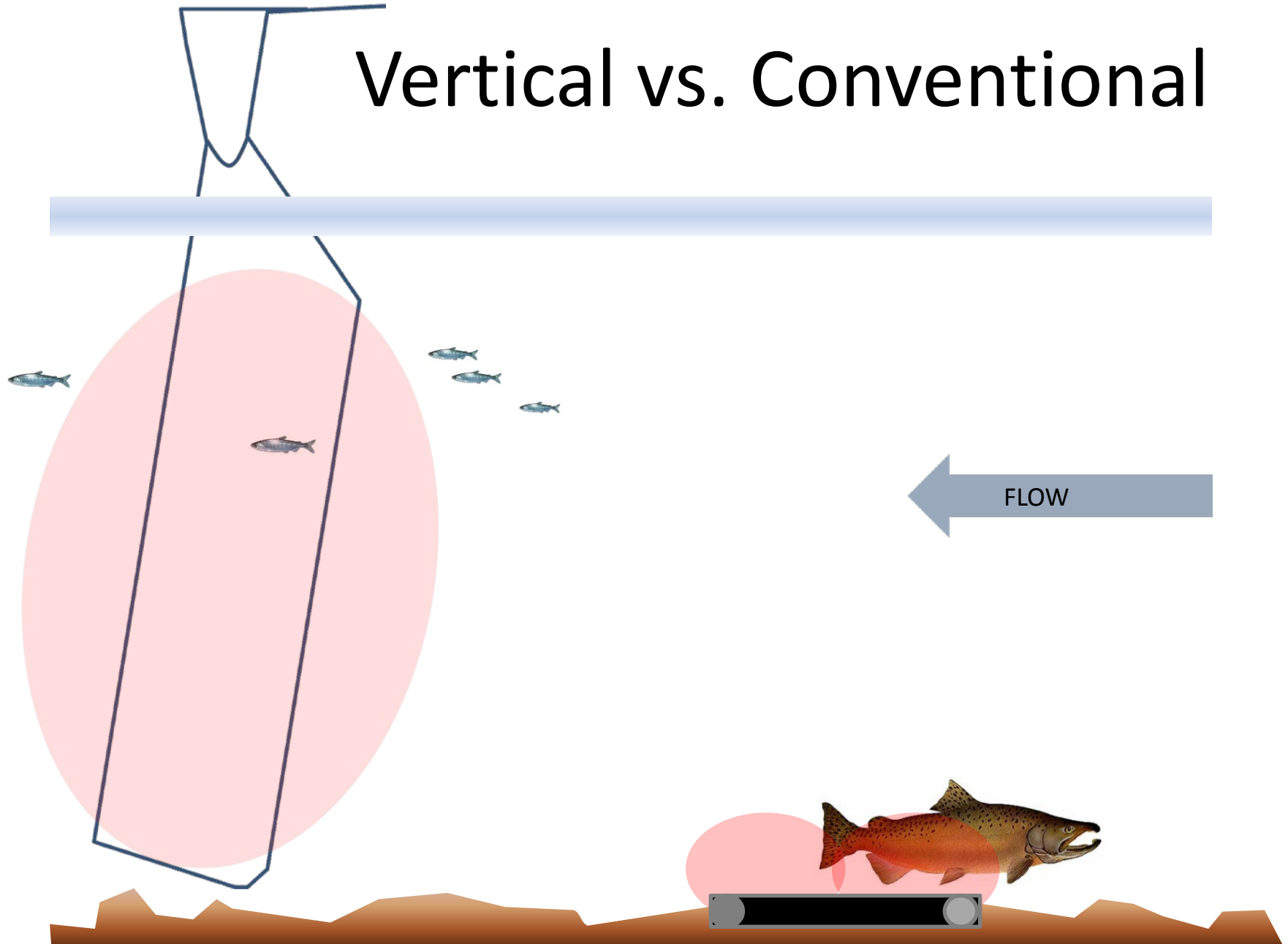
Adult fish ladder Lower Granite Dam, Snake River, Washington



Big River PIT detections



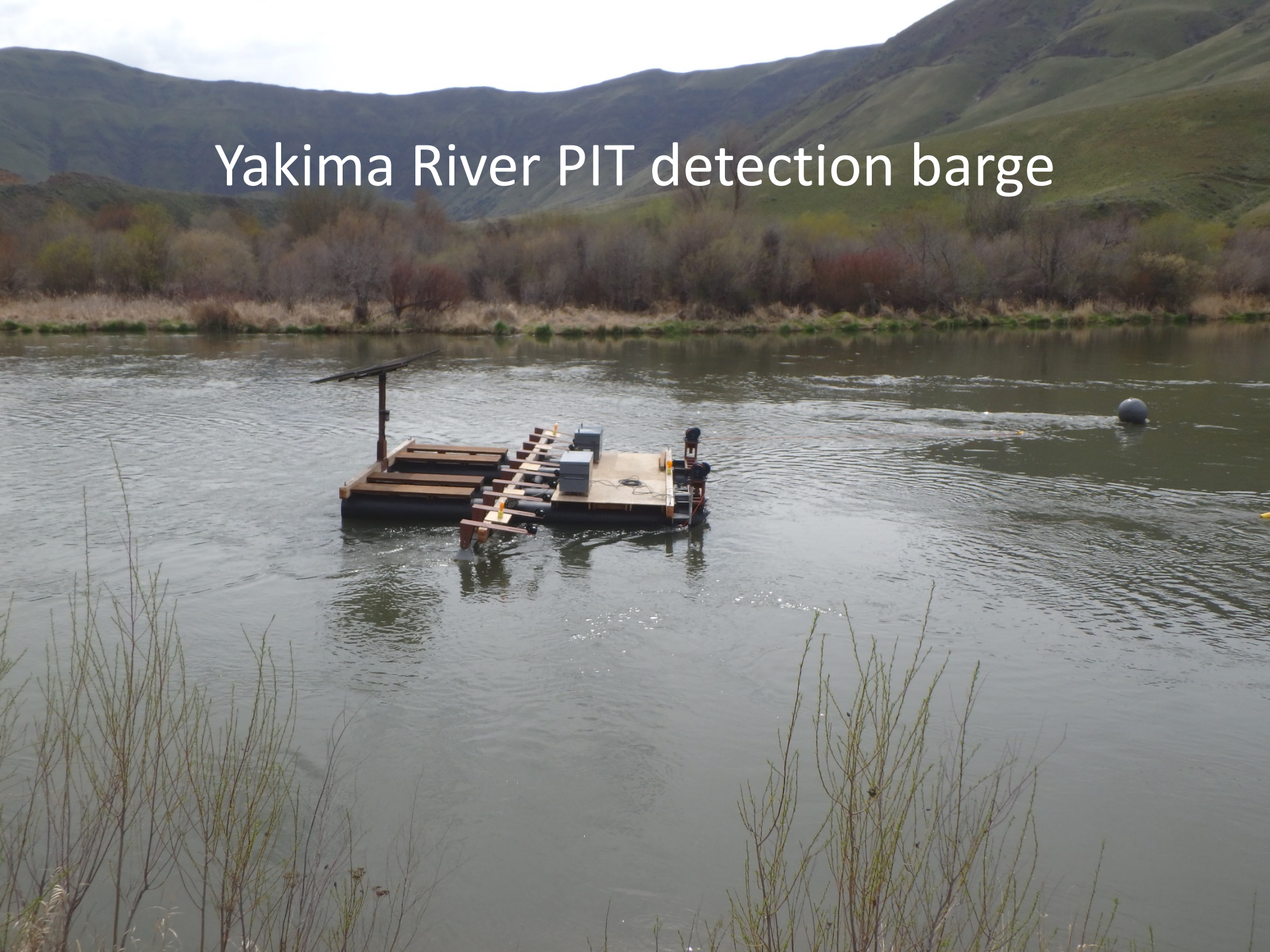
Vertical vs. Conventional



Component assembly Yakima Class barge



Yakima River PIT detection barge



Barge detections with flow

