

Okanagan Lake (Penticton Dam) PIT Array Installation

TIME FRAME/SCHEDULE: August 8-11, 2023



KEY MESSAGE: The Okanagan Nation Alliance (ONA) is installing a Passive Integrated Technology (PIT) antenna array, contributing to the network of four current mainstem Okanagan River arrays and four tributary arrays within the Canadian portion of the Okanagan Valley. These arrays provide invaluable data to fisheries and resource managers regarding the migrations of anadromous salmonids (Sockeye, Chinook, Steelhead, etc). This expansion ONA's Pit Detection Network will monitor the reintroduction of Sockeye to Okanagan Lake. The installation consists of two fishway antennas and one instream array.

- PIT arrays are submerged antennas fastened to the river bottom, which span the width of river
- Fish swim over the antennas as they migrate; fish containing PIT tags are scanned by the antennas
- Several thousand fish are tagged annually, within the Okanagan and throughout the northwest USA
- Release and detection data is uploaded to online PTAGIS database, enabling the migration and life history of individual fish to be tracked
- ONA tags approximately 10,000 Sockeye smolts annually, in addition to 500+ Steelhead/Rainbow trout, and occasionally ONA hatchery raised Chinook salmon
- Tagging and the PIT array network potentially enables fish to be tracked from their stream/lake of origin to the Pacific Ocean and back, and can help answer questions on run timing, life history, and population
- A Qualified Environmental Professional will always be on-site during the project and every effort is taken to ensure there is little disturbance to the habitat, environment and water quality.



WORKS: The installation consists of two fishway antennas and one instream array. Works will consist of the installation of a pit array across the 30m width of Okanagan River, 70m downstream from Okanagan Lake/Penticton Dam in Penticton, BC. The design will consist of four (4) - 1m x 6m x 15cm diameter and two (2) - 1m x 6m x 15cm diameter HDPE antennas. Each antenna will be anchored with duckbill anchors attached to cam straps. Installation will require minor displacement of local streambed materials to install the antennas flush with the existing riverbed. A trench will be dug next to the walking trail for electrical conduit.

PROJECT TEAM: All work will be conducted by ONA fisheries biologists and technicians, along with Biomark, who manufactured the technology, provides technical support and will be on-site to oversee installation.

Project Manager/Field Lead: Carley Simpson, ONA Fisheries Biologist
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Field Staff: ONA: Seth Kruger, Dave Tom, Isaac Jack; Biomark Staff: Gaelan Flaherty, Peter Mackinnon

PROJECT PARTNERS/FUNDERS:

Columbia River Inter-Tribal Fisheries Commission, Department of Fisheries and Oceans, Grant Public Utility District, and Chelan Public Utility District