Selective Water Withdrawal Power Generation and Fish Capture Facility

Future of Our Salmon Technical Workshop:
Restoring Historical Fish Passage

Presenter: James Bartlett
March 18 – 20, 2014

PGE

Confederated Tribes of the Warm Springs Reservation of Oregon

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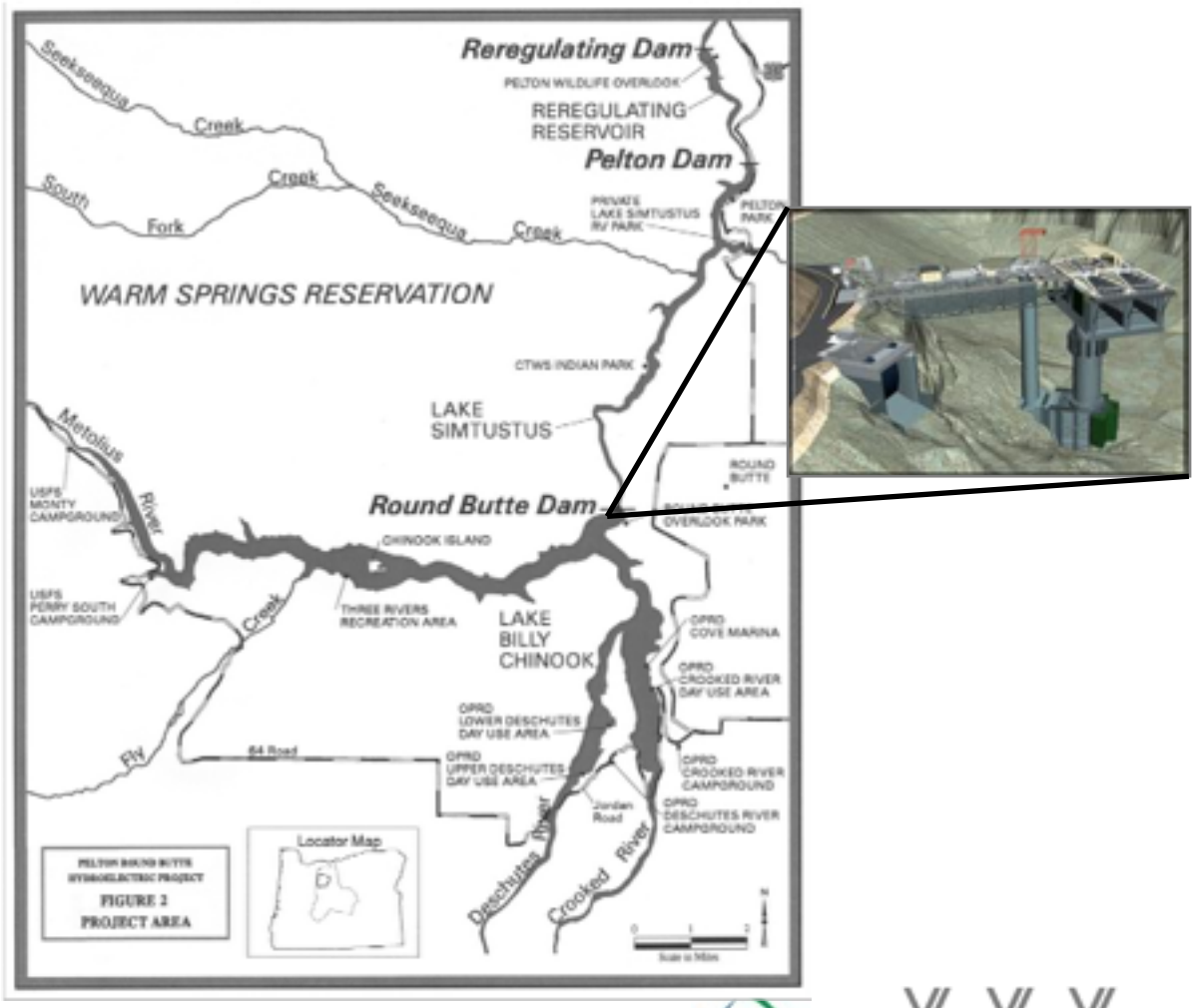
Pelton Round Butte Hydroelectric Project and the Selective Water Withdrawal

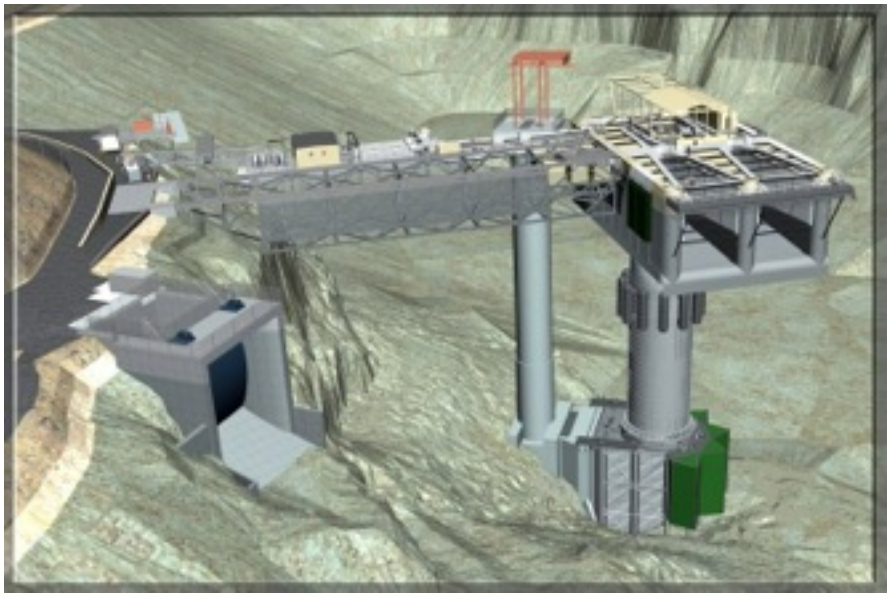


Round Butte Dam
Juvenile Fish Passage History

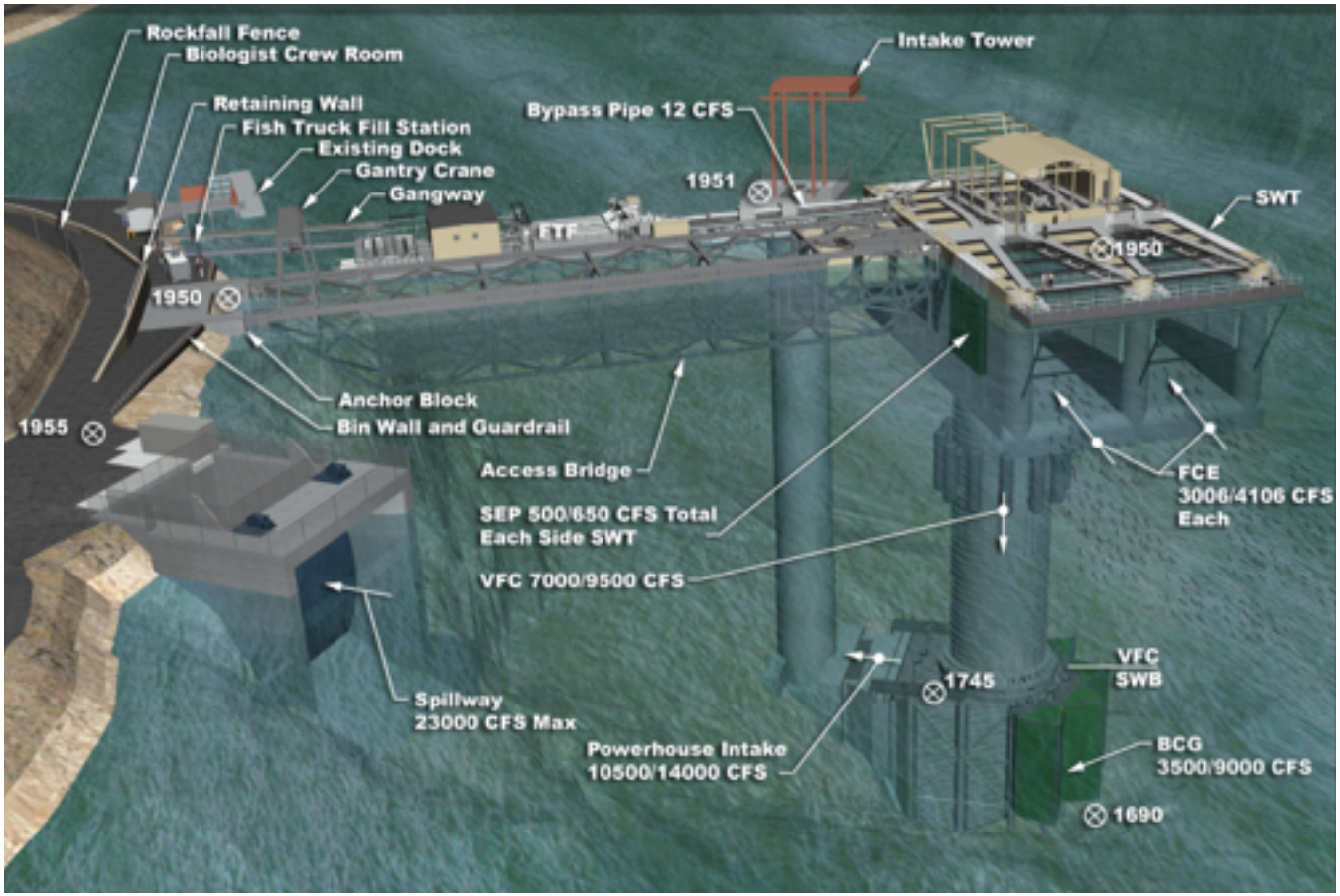
- 1968 - Juvenile fish passage discontinued.
- Round Butte Fish Hatchery built to mitigate loss of upper basin fish runs.

Selective Water Withdrawal
~Objectives~

- Reorient surface currents toward Round Butte Dam.
- Safely capture reintroduced spring Chinook, summer steelhead, and sockeye smolt/juveniles attempting to migrate downstream while excluding them from turbines.
- Provide safe and efficient Capture, sorting, enumeration, marking, tag detection, loading, and transport.
- Manage downstream water quality during the late summer and fall.
- Meet safe passage standard of 93% for the first 5 years of operation, 96% there after.

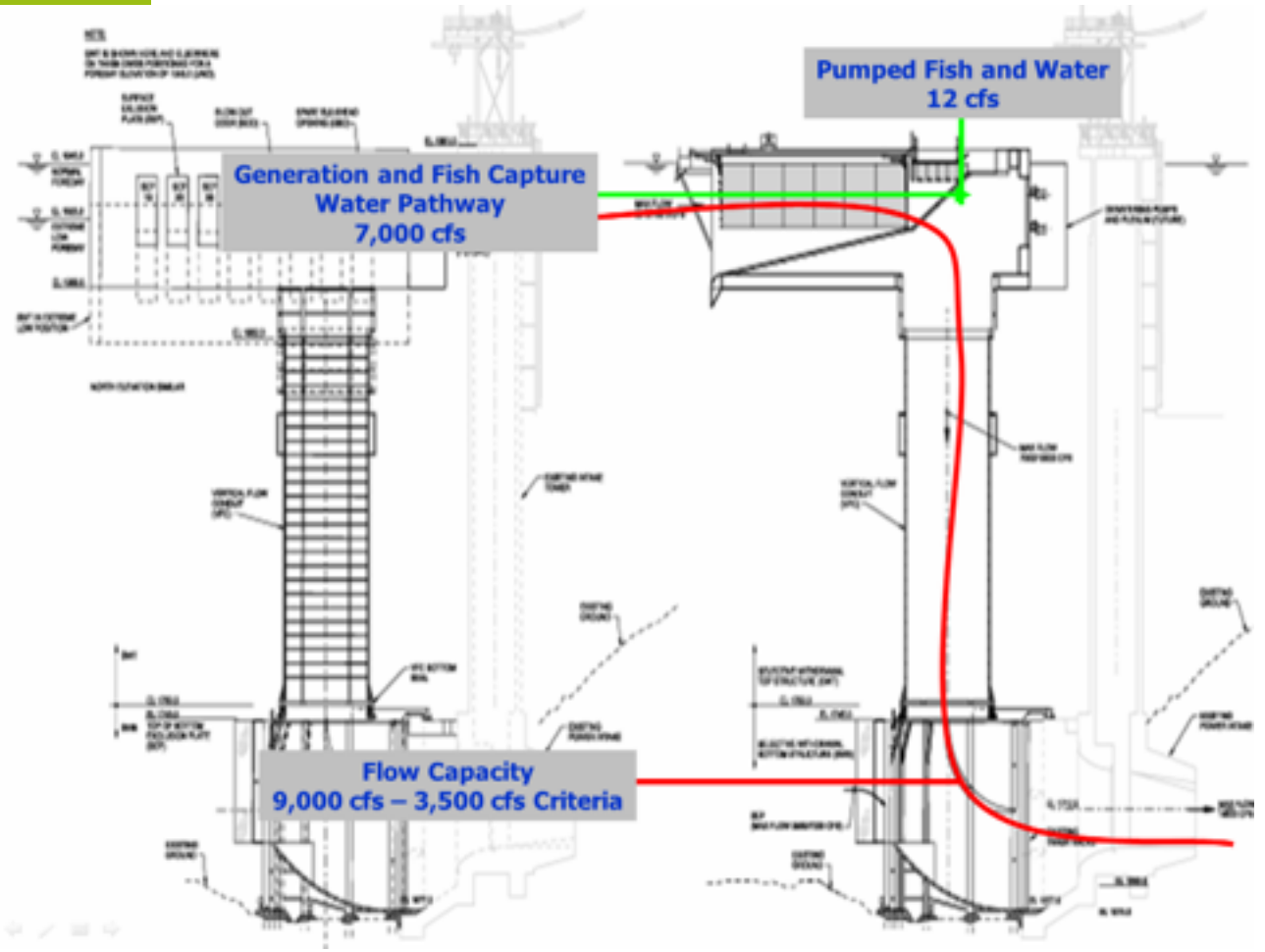


Facility Segments and Operations

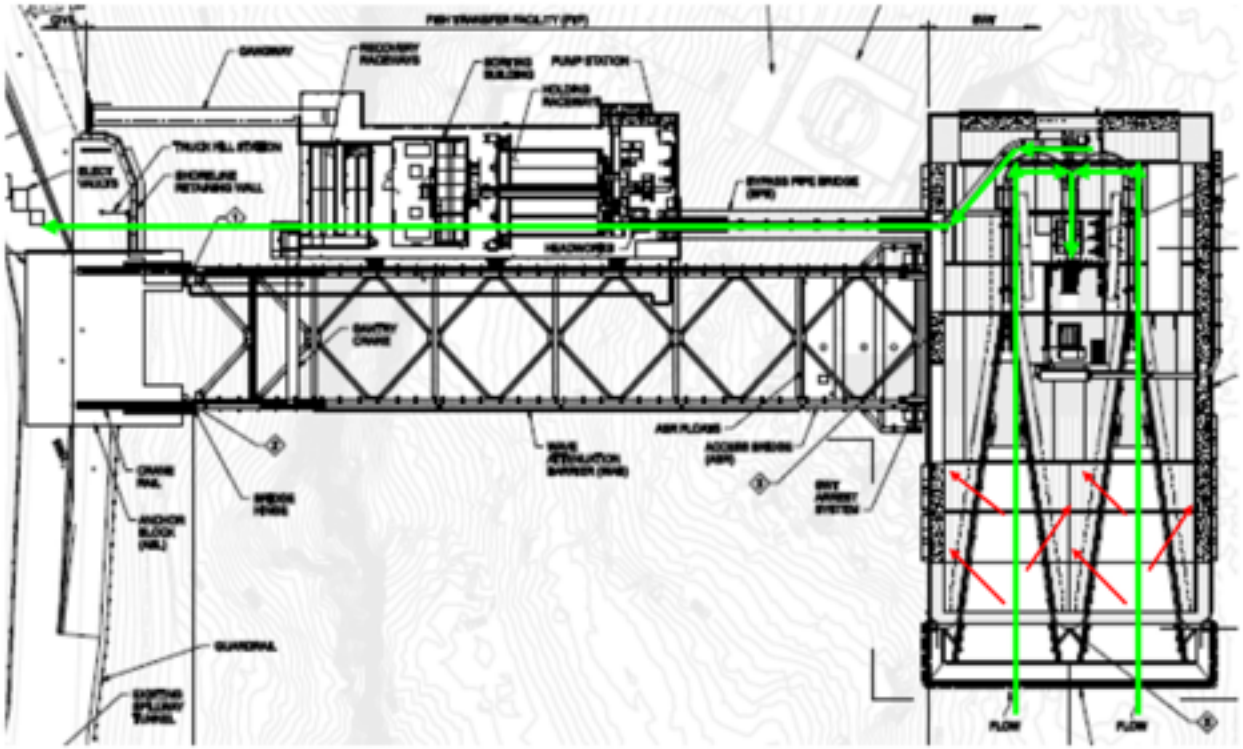


Hydraulic Flow

(Generation Water used for Fish Attraction and Capture)

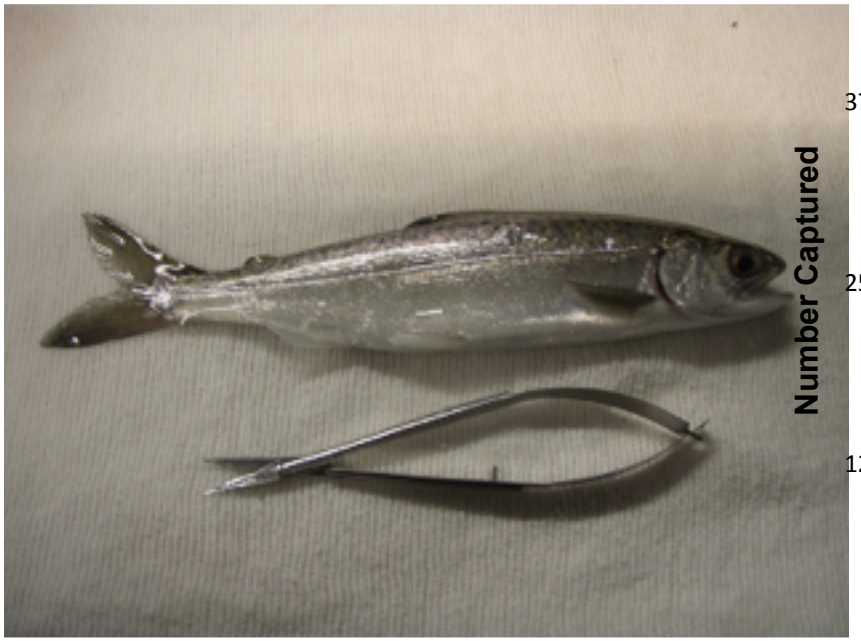


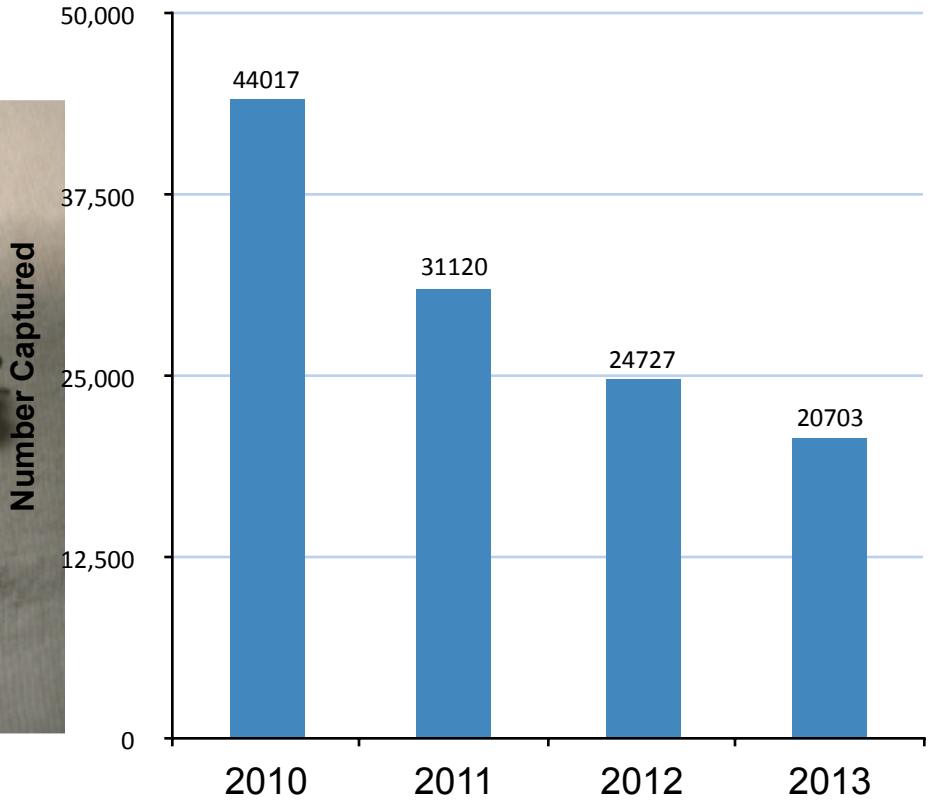
Fish Capture Pathway



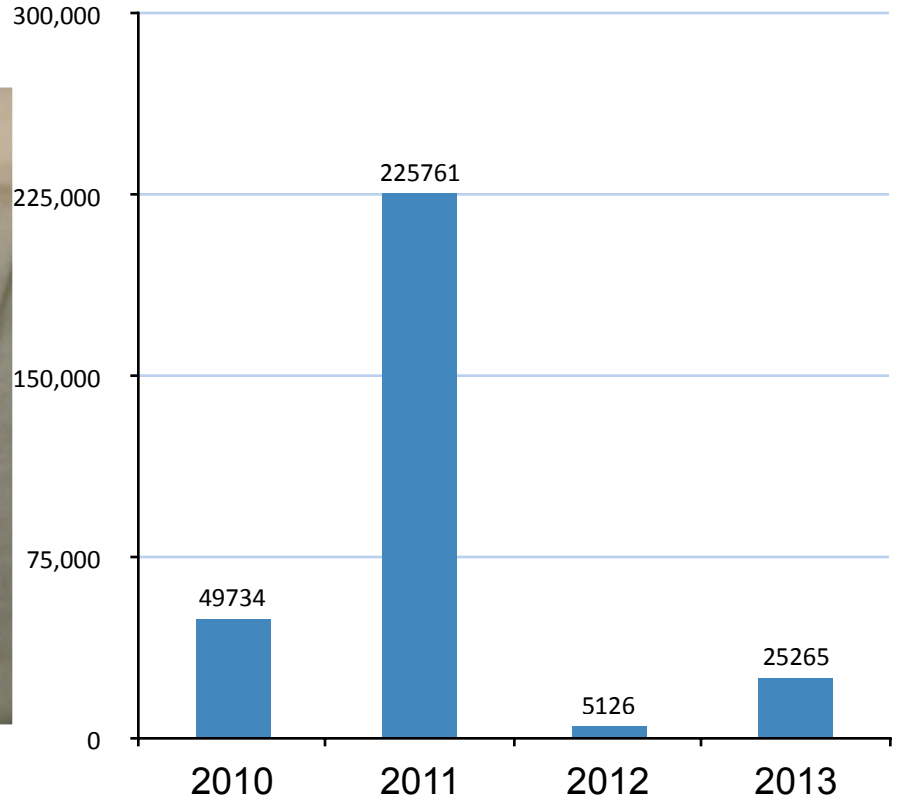
Transport and Release

Total Number of Spring Chinook Smolt Captured per Year

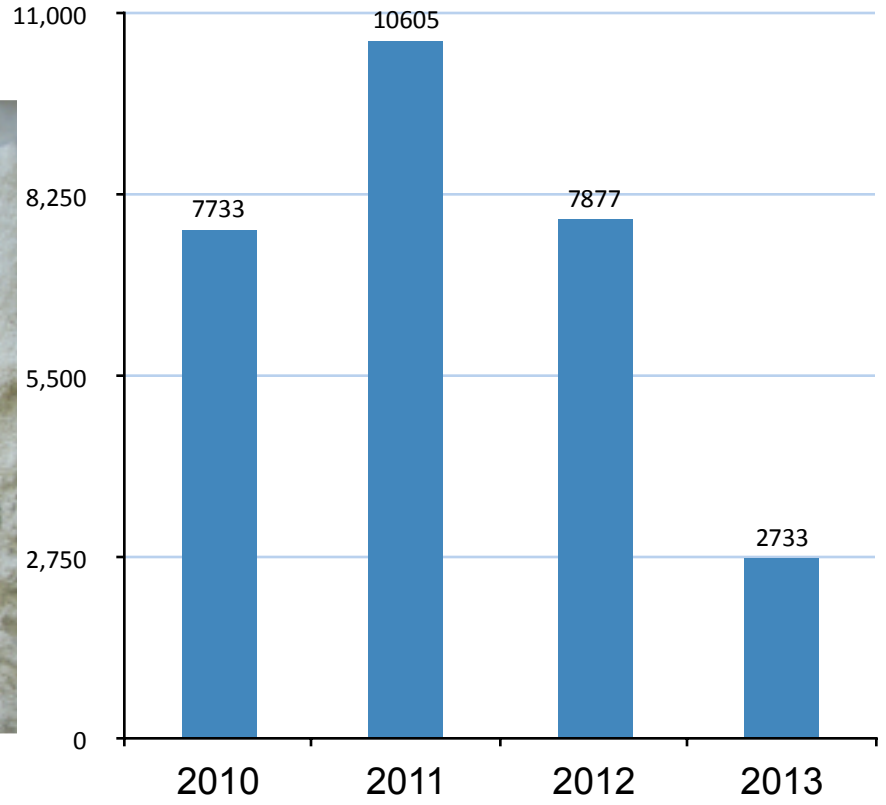




Total Number of Juvenile *Onerka* (Sockeye) Smolt Captured per Year



Total Number of Summer Steelhead Smolt Captured per Year



Average Percent Injury and Descaling per Species

100% of all fish captured are handled

Species	N	Average % Descaling	Average % Injury
Chinook	2,181	0.07	2.4
Steelhead	1,341	0.12	2.0
Sockeye	2,100	0.57	1.3
Age 2+ kokanee	2,328	3.04	4.6

Percent Survival per Species per Year

Species	2010	2011	2012	2013
Chinook	98.1	98.4	98.1	98.4
Sockeye	97.5	97.7	96.7	97.8
Steelhead	98.4	98.6	99.1	99.0

The End