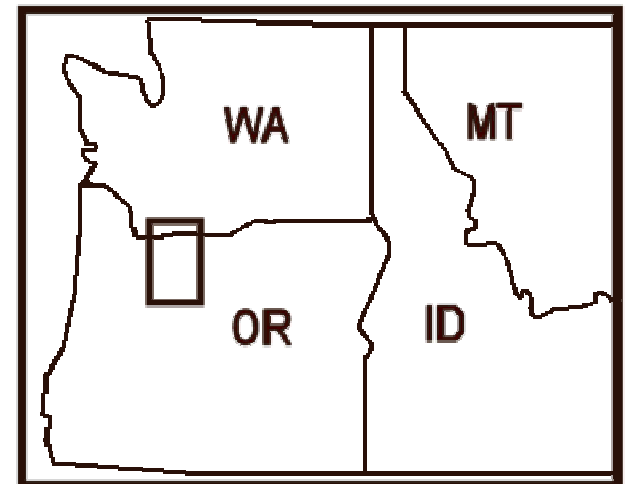
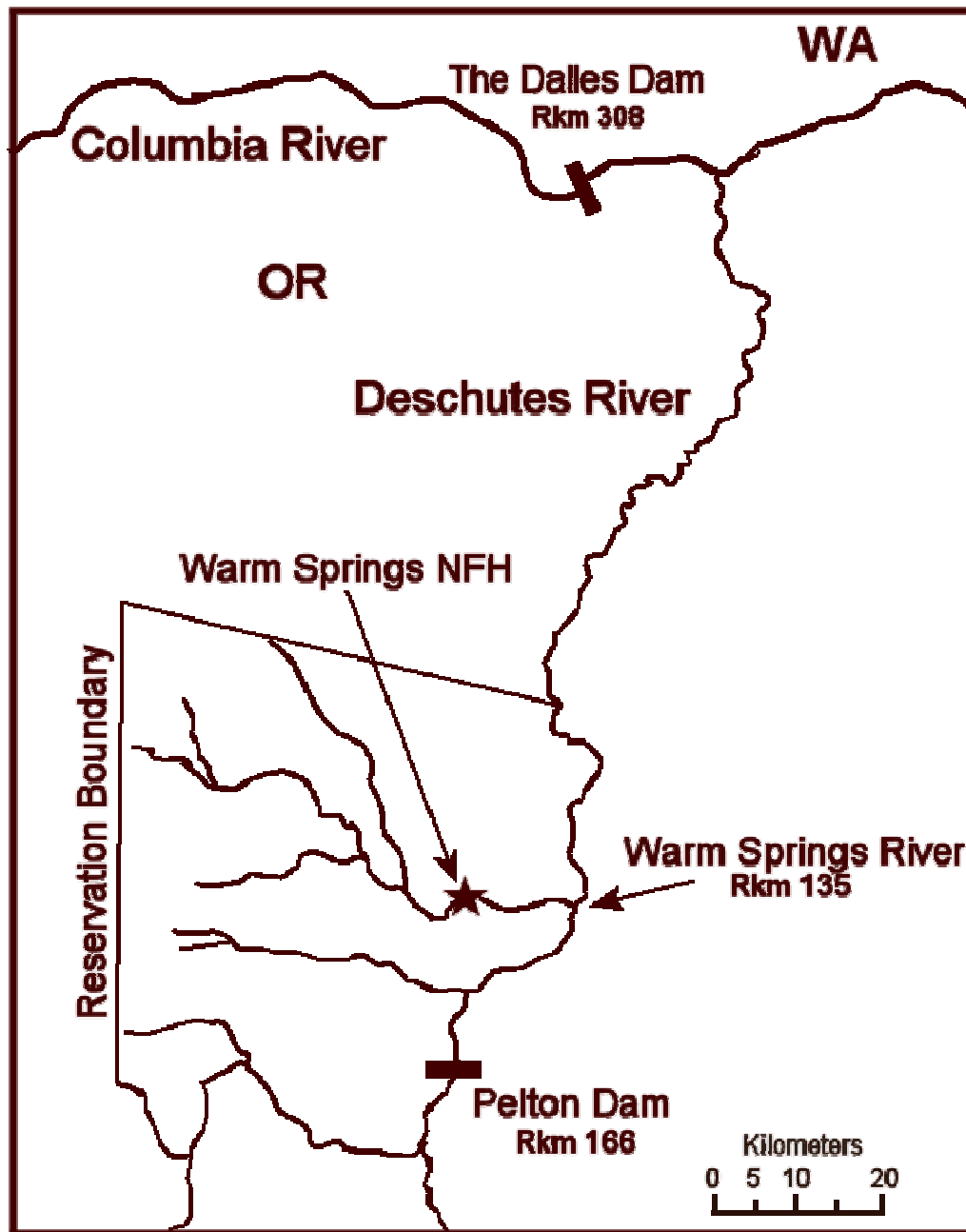


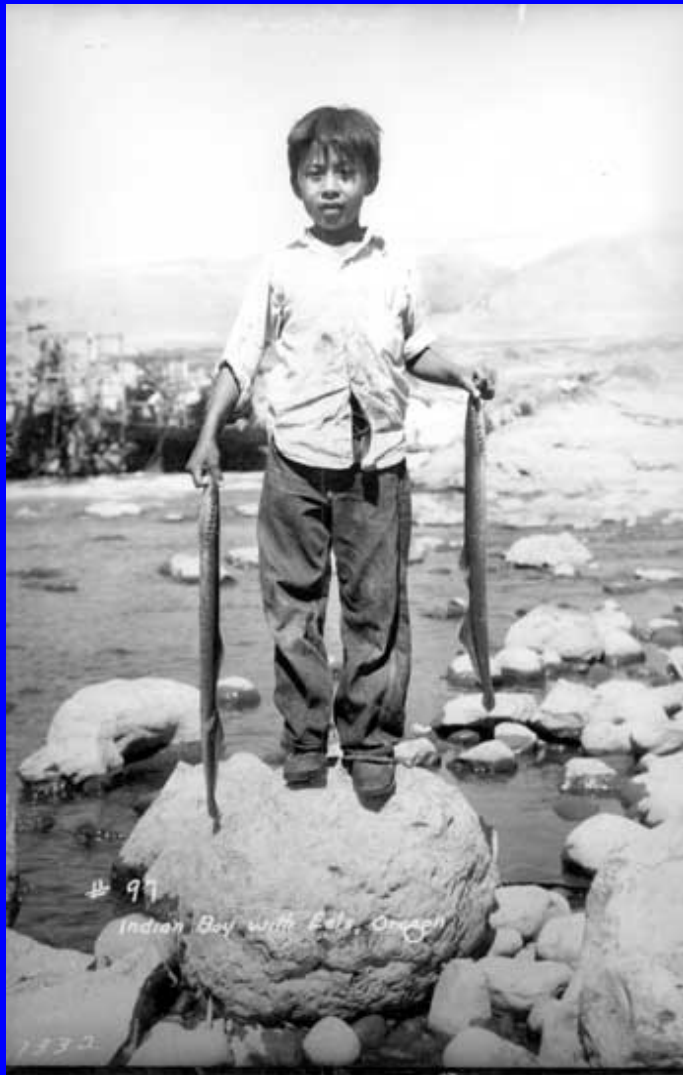
DESCHUTES RIVER FALL CHINOOK SALMON STOCK ASSESEMENT AND RESTORATION





Area of Detail





CTWSRO Deschutes Fall Chinook Salmon Program Objectives:



- **Improve adult escapement estimates.**
- **Provide information on ocean distribution and Columbia River exploitation rates.**
- **Restore juvenile rearing habitat.**

Adult Fall Chinook Salmon Mark-Recapture Escapement Estimate

- Deschutes River Fall Chinook Salmon are one of three naturally spawning runs of Columbia River upriver bright stock group.
- They are a PSC “escapement indicator stock”
- USCTC data standards for indicator stocks include evaluating factors used to expand the escapement from index areas.

Existing Agency Escapement Estimate



Above Sherar's Falls: Mark-Recapture Estimate

+

Below Sherar's Falls: (Redds Below / Above Falls)*Above Falls Est.

The Problem Boils Down to Redd Counts



Poor water visibility may result in an undercount of redds during some years.

First Event Sampling



Genetic samples collected from all marked fish in 2006.

Second Event



Brood Year	# Adults Tagged	# Adults Inspected	# Tags Recovered	Population Size	Variance	SE	RP
2001	183	3,215	59	9,861	1,054,533	1,027	20.4%
2002	182	5,035	75	12,125	1,099,726	1,049	17.0%
2003	188	5,276	64	15,343	2,311,556	1,520	19.4%
2004	143	4,758	59	11,421	1,231,773	1,110	19.0%
2005	123	3,031	35	10,443	2,067,134	1,438	27.0%

Assumption: Preliminary 22% “Dip-in” rate applied to “M”

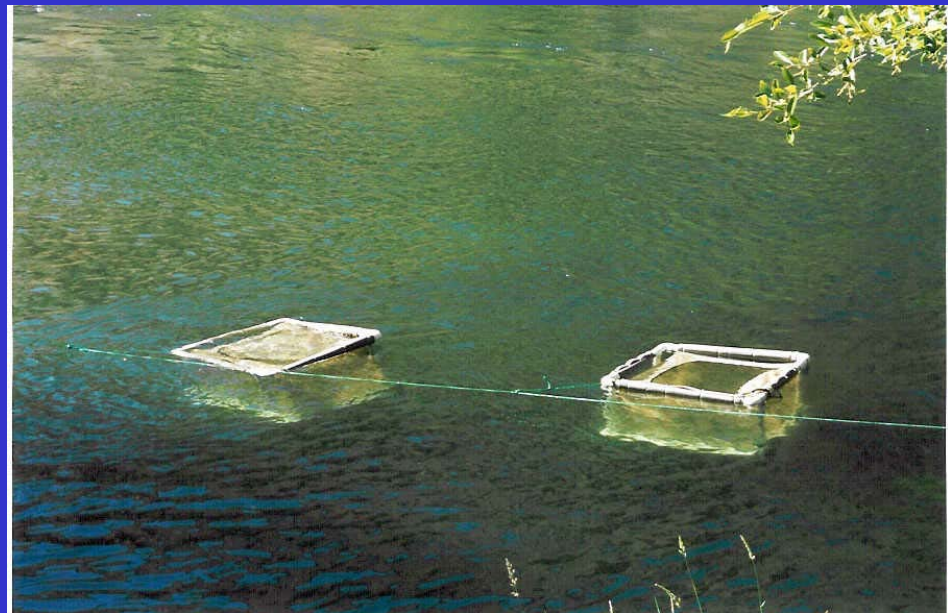
2001-2005 Estimate Comparison

	2001	2002	2003	2004	2005
Whole River M-C:	9,861	12,125	15,343	11,421	10,443
Agency Estimate:	11,177	12,211	12,590	11,879	13,550
Difference between Estimates:	1,316	86	2,753	458	3,107
S.D.:	931	61	1947	324	2197
C.V.:	.09	.005	.14	.03	.18

CODED WIRE TAGGING OF JUVENILE FALL CHINOOK SALMON IN THE DESCHUTES RIVER, OREGON

Project Goals:

- Determine if Lyon's Ferry hatchery fish can be used as a surrogate for Deschutes fish for determining ocean distribution and exploitation.
- Determine if the above Sherar's Falls run component is unique by spawning fidelity.





A total of 145,935 Deschutes River juvenile fall Chinook salmon have been CWT'ed from the 2001-2005 brood years.

Brood Year	Tag Year	Above Shf.	Below Shf.	Total Released
2001	2002	4,115	7,161	11,276
2002	2003	8,048	33,354	41,402
2003	2004	16,141	28,695	44,836
2004	2005	5,840	34,321	40,161
2005	2006	5,404	3,268	8,260

Average Tag Retention: 96.8%

Habitat Restoration



Goal: Restore fall Chinook salmon production upstream of Sherar's Falls.

Methods:

- Road removal / hardening.
- Riparian Fencing
- Riparian planting.

