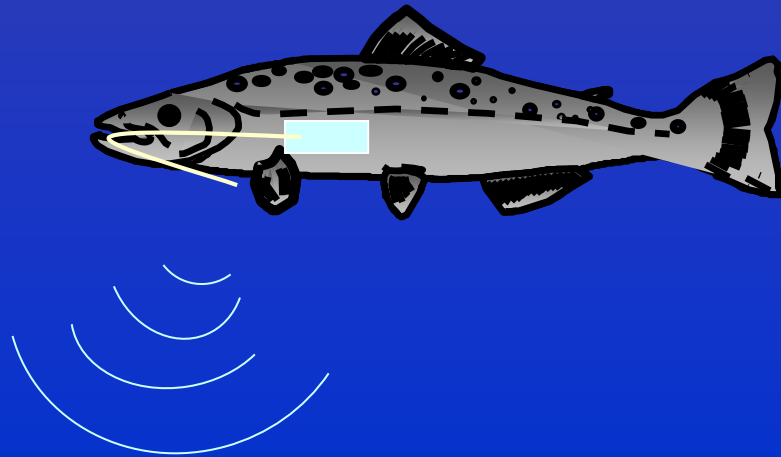


2007 Coho Juvenile Migration and Radio Tracking Distribution Phase II

Presented By:

Todd Newsome

Fisheries Biologist for the Yakama Nation



Acknowledgements



YN: Joe Jay Pinkham III
Conan Northwind
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Germaine Hart
Marlin Colfax
Nate Pinkham

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Biomark: Technical Team

Background



Program Goal - Re-establish self-sustaining naturally spawning population of coho salmon in Yakima River

Phase I: 1999-2003



Feasibility **Interim Work: 2004-2006**

Phase II: 2007-2011



Maximize Potential for Success -

Smolts

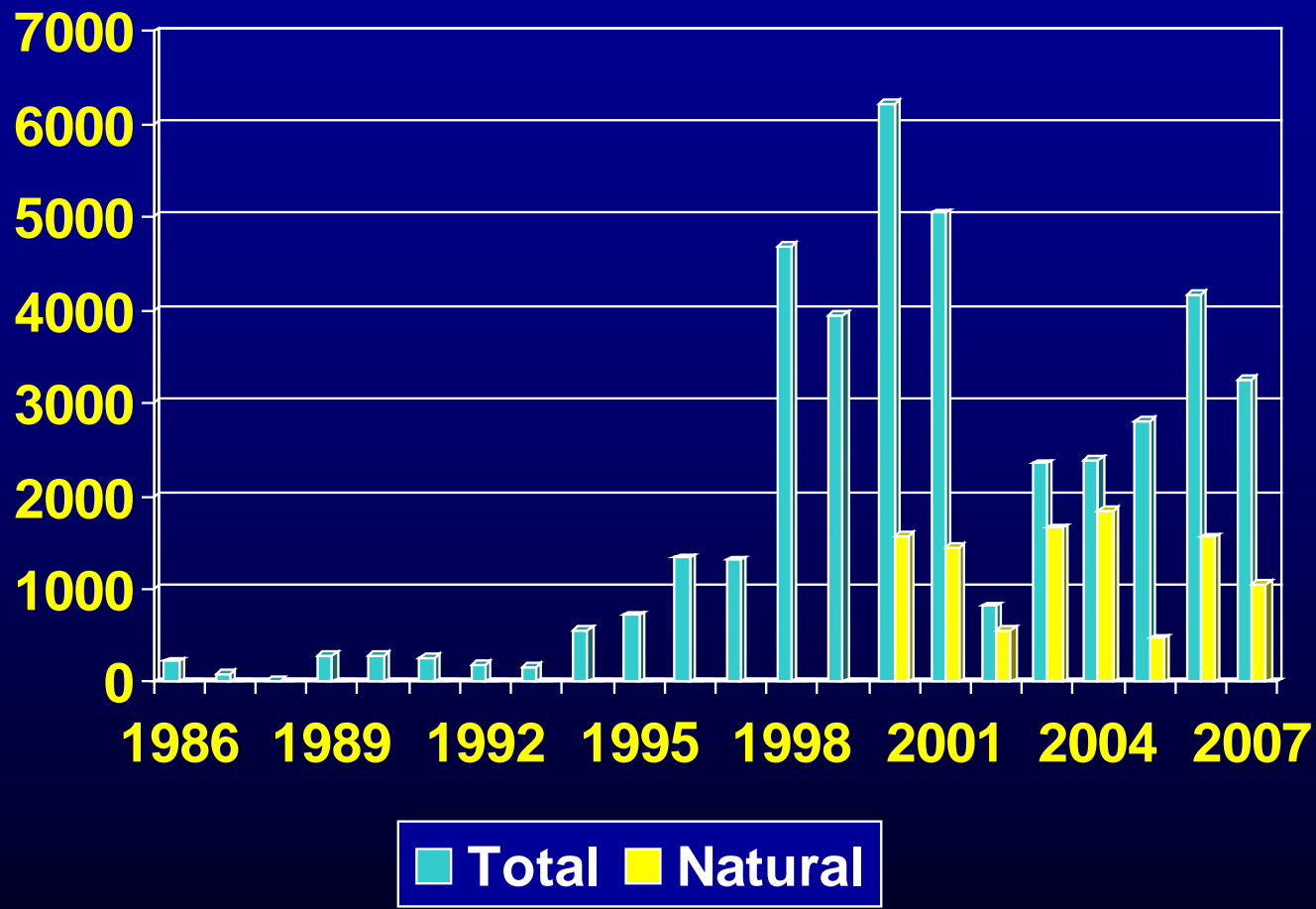


Adults

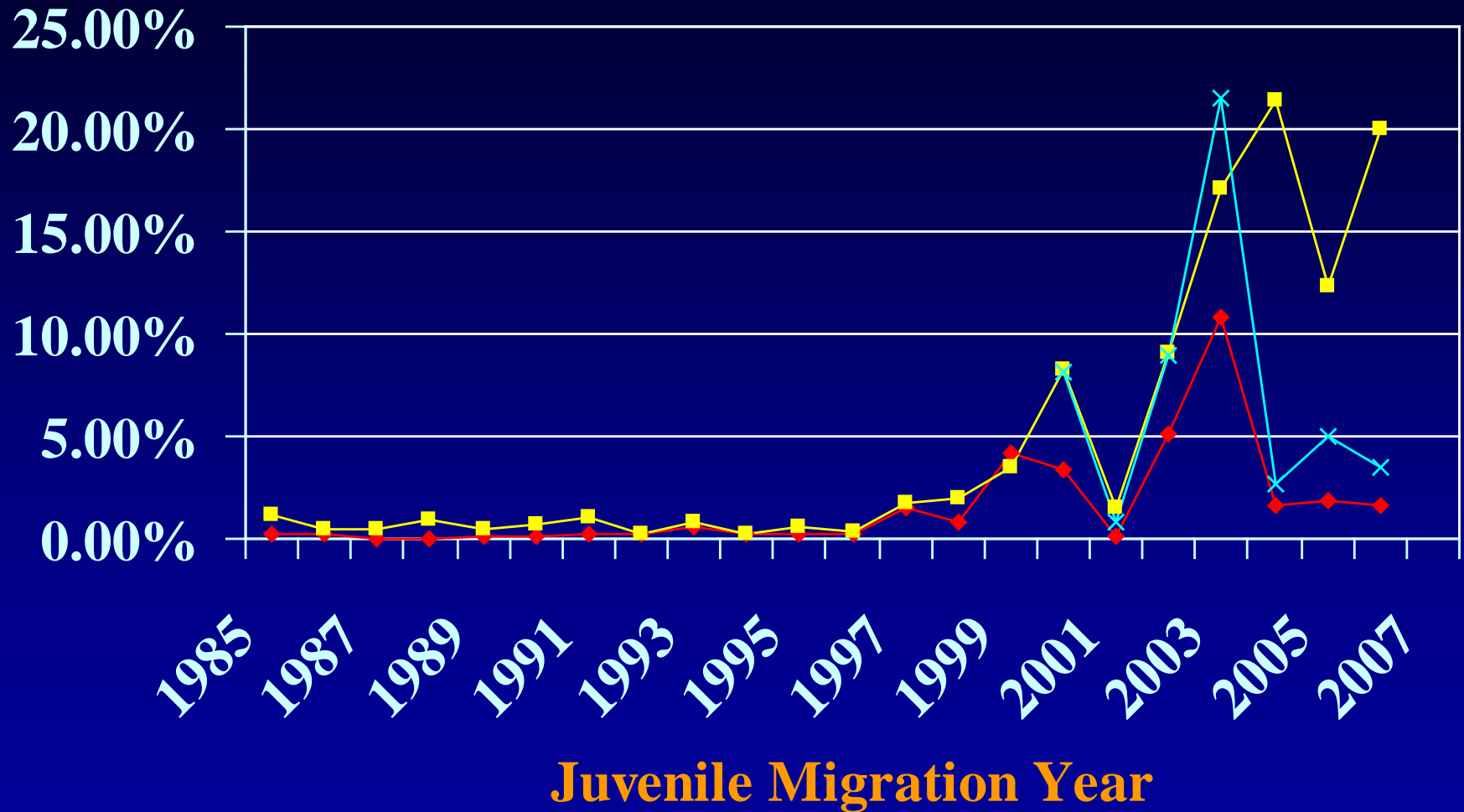


Isolating and reducing mortality through life stages

Upper Yakima Coho Returns, 1986 – 2007



Upriver Coho SAR Indices



—◆— Yak. Agg. —■— McN. Agg. —×— Yak. Nat.

2007 Hatchery Coho Juvenile Acclimation Sites Yakima Basin

Volitional Release, April 3, 2007

Boone: 0

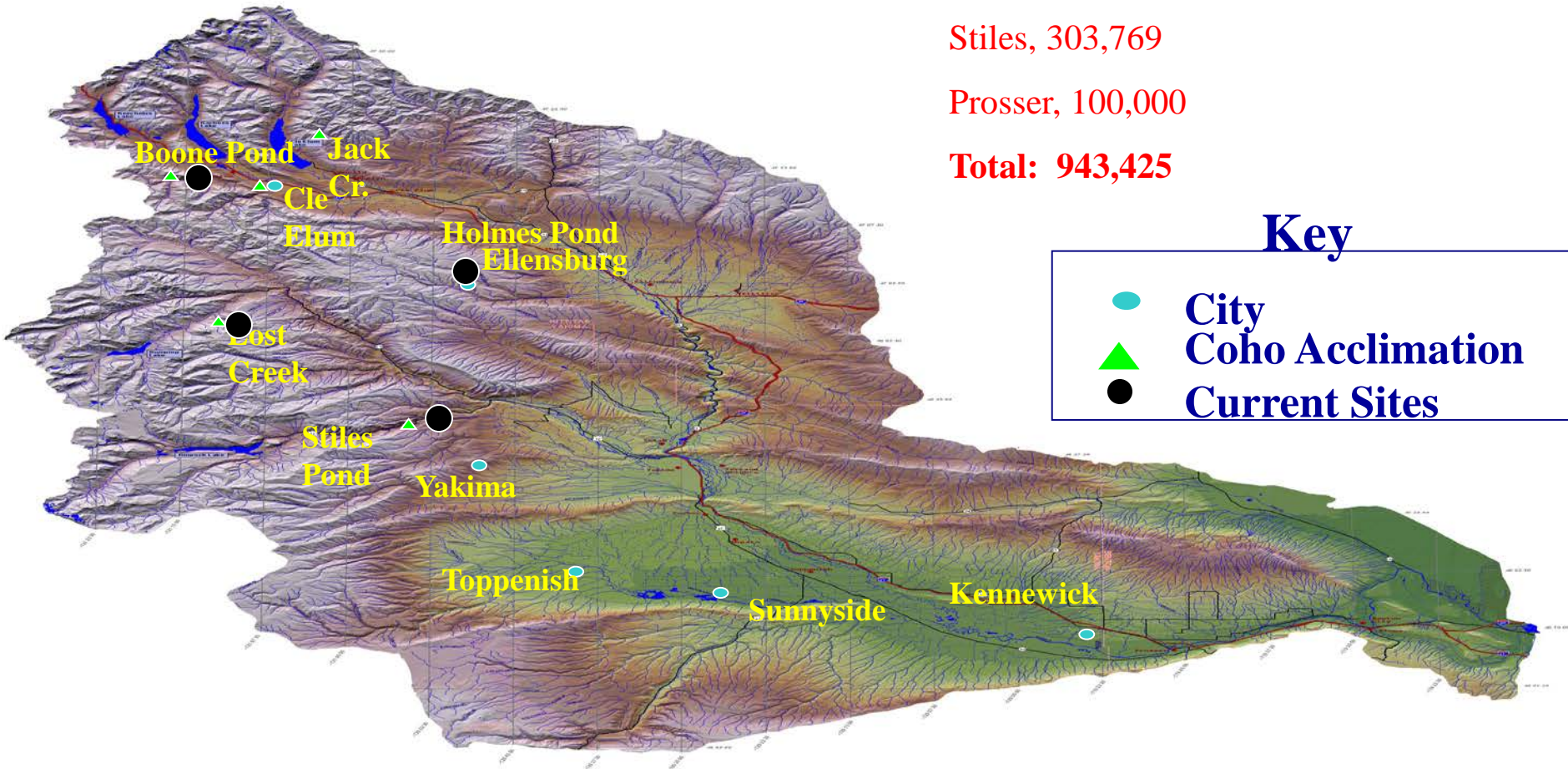
Holmes: 288,127

Lost Creek, 251,051

Stiles, 303,769

Prosser, 100,000

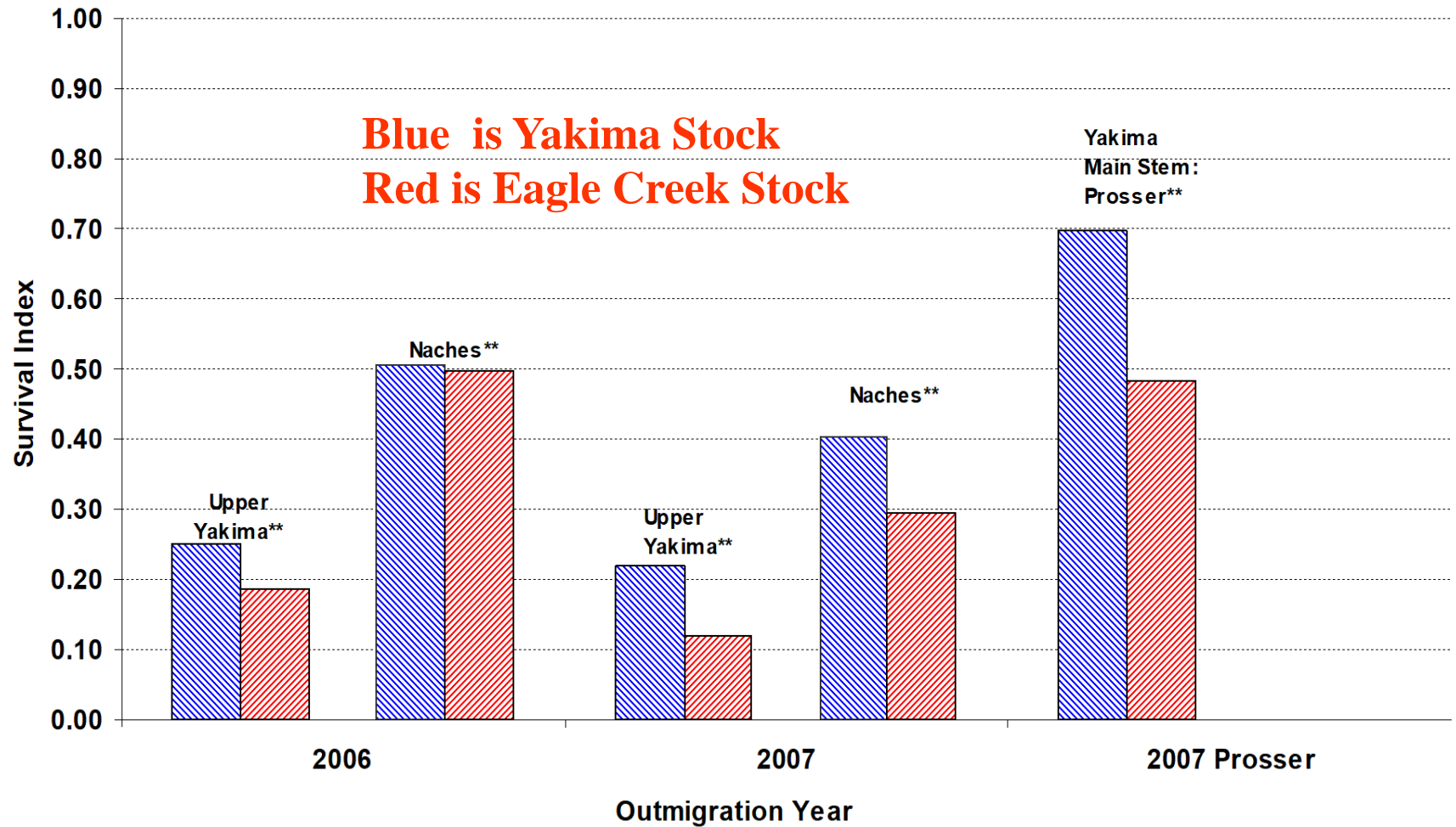
Total: 943,425



Key

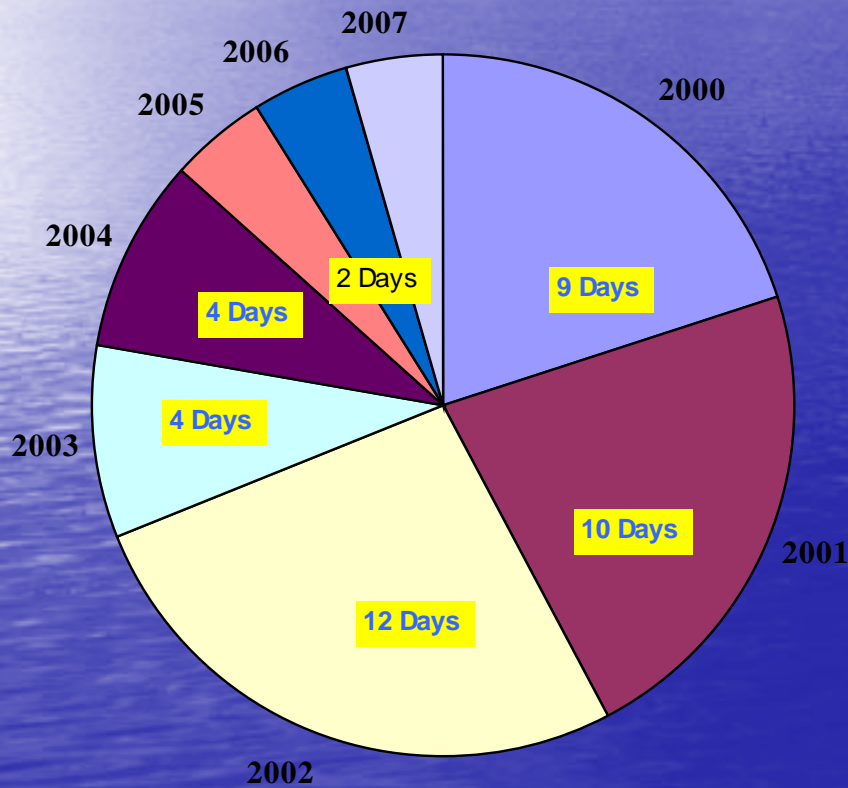
- City
- ▲ Coho Acclimation
- Current Sites

Coho Volitional Release to McNary Survival



50% Passage, Natural vs. Hatchery

2nd Step in Isolating and reducing possible mortality (Timing)



	Wild	Hatchery
2000	05/26/00	06/04/00
2001	05/31/01	06/09/01
2002	05/04/02	05/16/02
2003	05/18/03	05/21/03
2004	05/10/04	05/14/04
2005	4/28/05	4/30/2005
2006	5/11/06	5/13/06
2007	5/10/07	5/12/07

Phase II (2007-2011)

- Objectives
 - Identify Key Tributaries offering the highest potential for Coho Reestablishment
 - Evaluate interactions with resident and anadromous fish already residing in tributaries
 - Increase the resiliency, and robustness of the Coho population in the Yakima Basin

ACTION

- Monitor Tributary Parr Releases
- Monitor Tributary Adults Releases
- Continue In Basin Brood Stock Development
- New Smolt Acclimation Areas (spread out the risk and increase survival)

Tributaries

```
graph TD; A[Tributaries] --> B[Summer Parr Releases into Tributaries]; A --> C[Adult Coho out plants]; A --> D[Stream Seeding]; B --> E[Identify quality habitat for Reintroduction, & ID, Poor habitat for possible restoration]; C --> F[Monitor effects of reintroduction of adult coho into stream on Resident Fish Spp.]; D --> G[Test and perfect mobile Acclimation site];
```

Summer Parr Releases into Tributaries

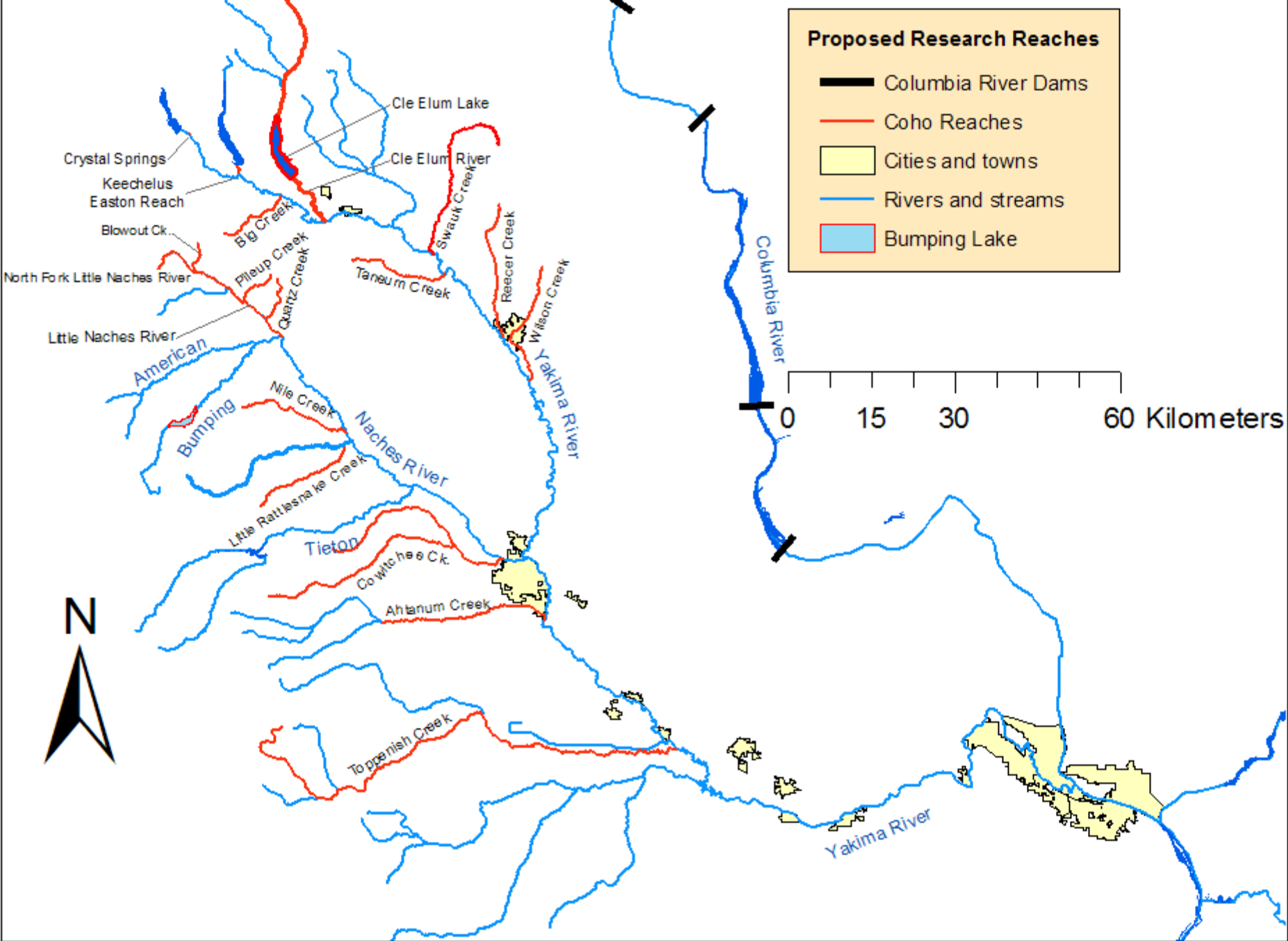
Identify quality habitat for Reintroduction, & ID, Poor habitat for possible restoration

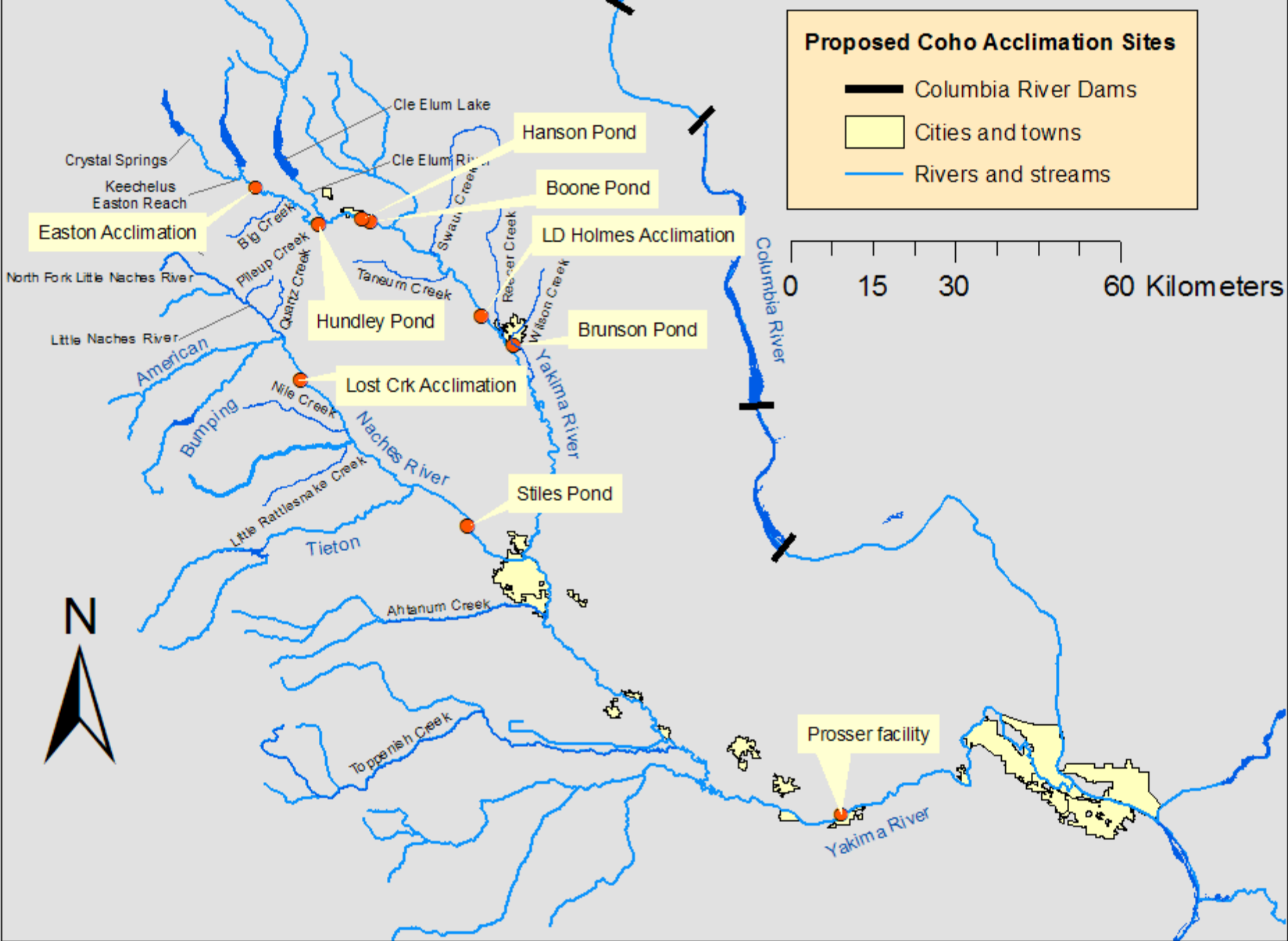
Adult Coho out plants

Monitor effects of reintroduction of adult coho into stream on Resident Fish Spp.

Stream Seeding

Test and perfect mobile Acclimation site





2007 Phase II Work accomplished

- **Parr Releases** (Releases conducted last week of July 07)
 - Nile Creek (Preliminary 2008 survival 8.3%)
 - North Fork Little Naches (Preliminary 2008 survival 4.6%)
 - Cowiche Creek (Preliminary 2008 survival 13%)
 - Reecer Creek (Preliminary 2008 survival 13.5%)
 - Wilson Creek (Preliminary 2008 survival 7%)
 - Big Creek (Preliminary 2008 survival 6%)
- **Adult Releases** (Releases conducted last week of October into the week of November 07)
 - Nile Creek (Redds 4)
 - Cowiche Creek (Redds 2)
 - Holmes Cottonwood Gallery (Redds 10)
 - Tanuem Creek (Redds 75)
- **Interactions monitoring**
- **Monitoring and Assessment of Adult Coho Escapement and Redd Distribution**

Parr Releases 3,000 Pit tagged Coho per Tributary (70-85mm)



Adult Out Planting



FISHERIES
YAKAMA NATION

**Study
In
Progress**

Please Do Not Disturb!

This is a research site designed to evaluate the spawning success of coho salmon and the future interactions of their offspring with other resident fish species. This research is being conducted by the Yakama Nation Fisheries (YN) and the Washington Department of Fish and Wildlife (WDFW).

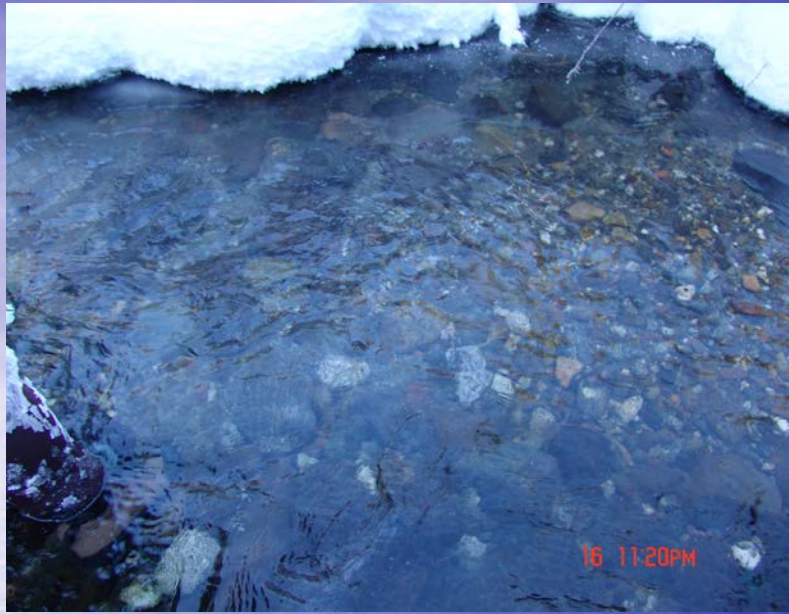
Please do not disturb racks, site, or fish.

NOTE: FISH HAVE BEEN TREATED WITH CHEMICALS AND ARE NOT EDIBLE!

Please direct questions to:
YN: 509-865-6262 Todd Newsome
WDFW: 509-925-4467 ext#4

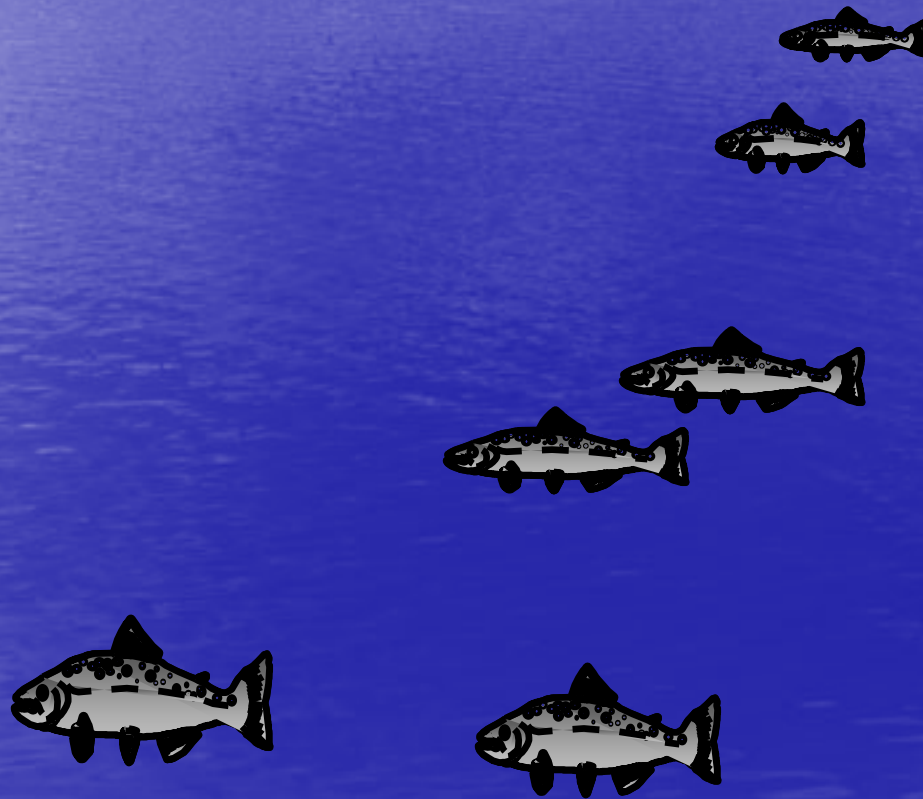
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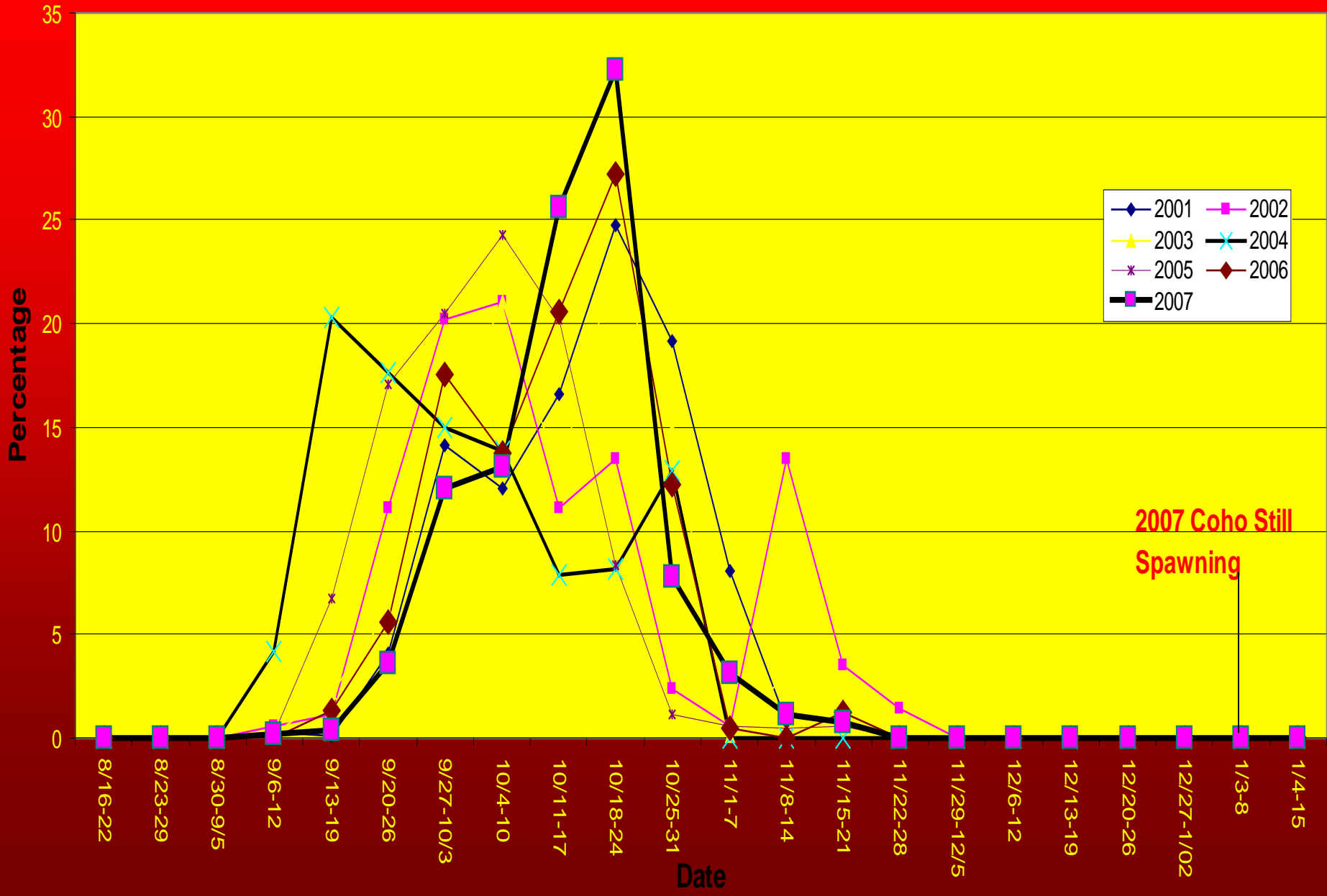




Adult Returns



Adult Coho Prosser Denil Passage 2001-2007



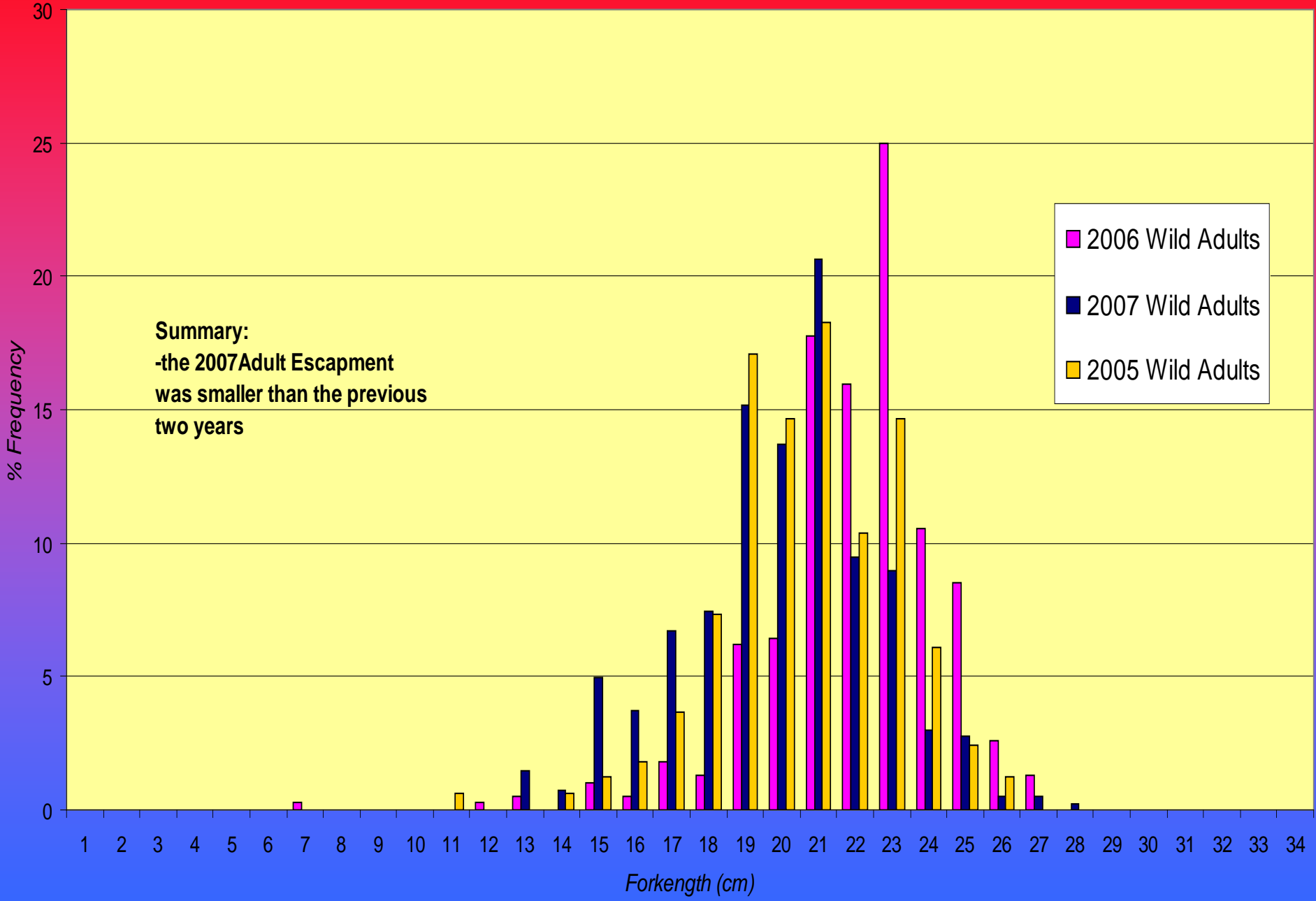
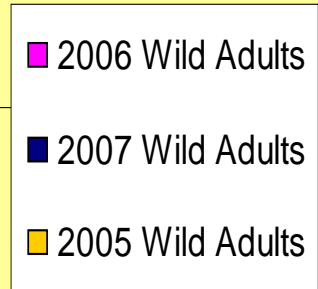
2007 Coho Still Spawning

Local In Basin Brood Development

- 149 Females Spawned 100% Wild
- 120 Hatchery Females
- 122 Wild Males crossed with all females
- Estimated egg take of ~800,000
- Estimated 550,000 In Basin Coho for 2009 release.

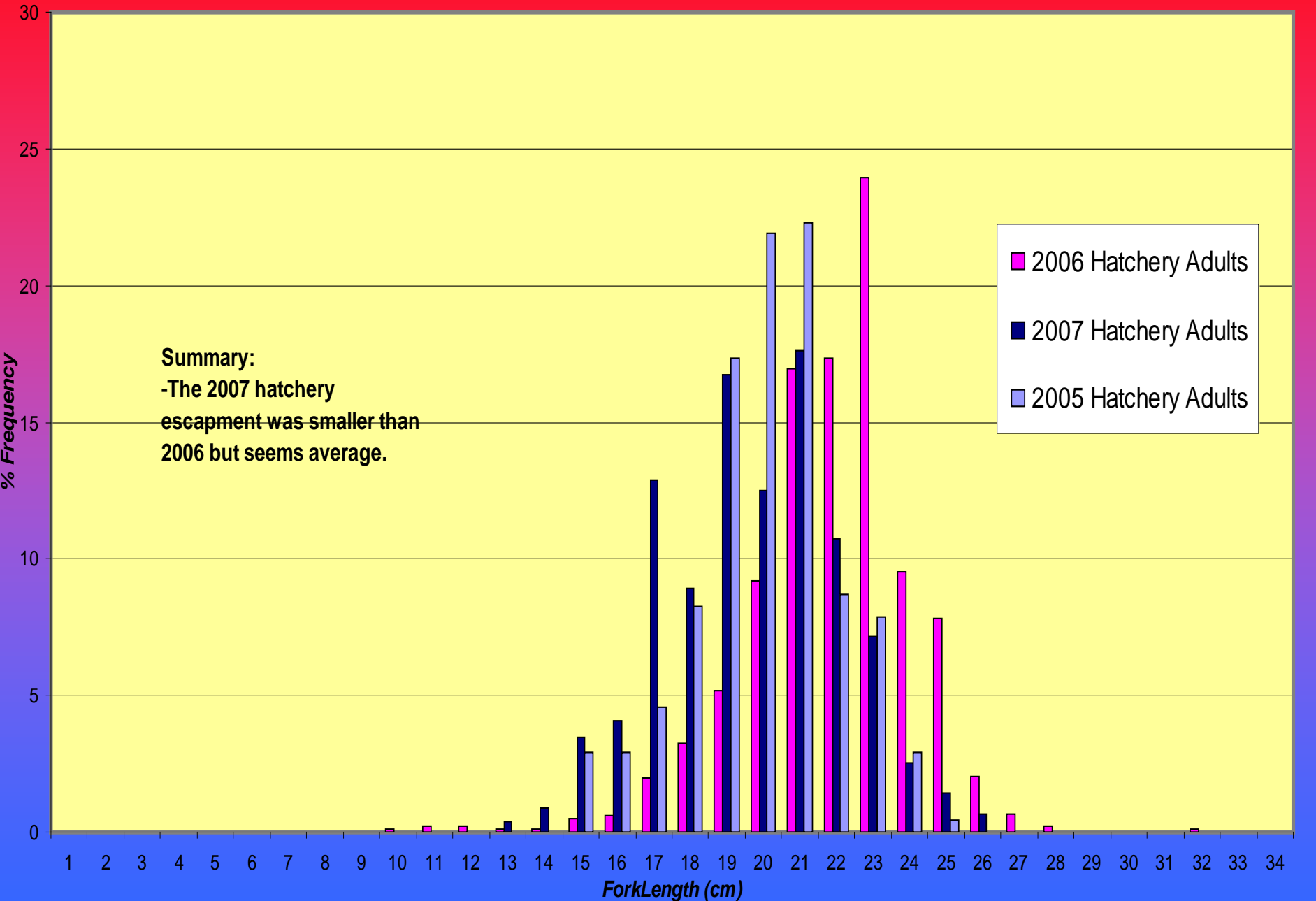
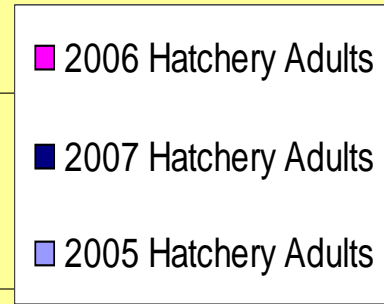
Comparisons of 2006 - 2007 Wild Adult Demographics

Summary:
-the 2007 Adult Escapment
was smaller than the previous
two years



Comparison of 2006 -2007 Hatchery Adult Demographics

Summary:
-The 2007 hatchery escapement was smaller than 2006 but seems average.



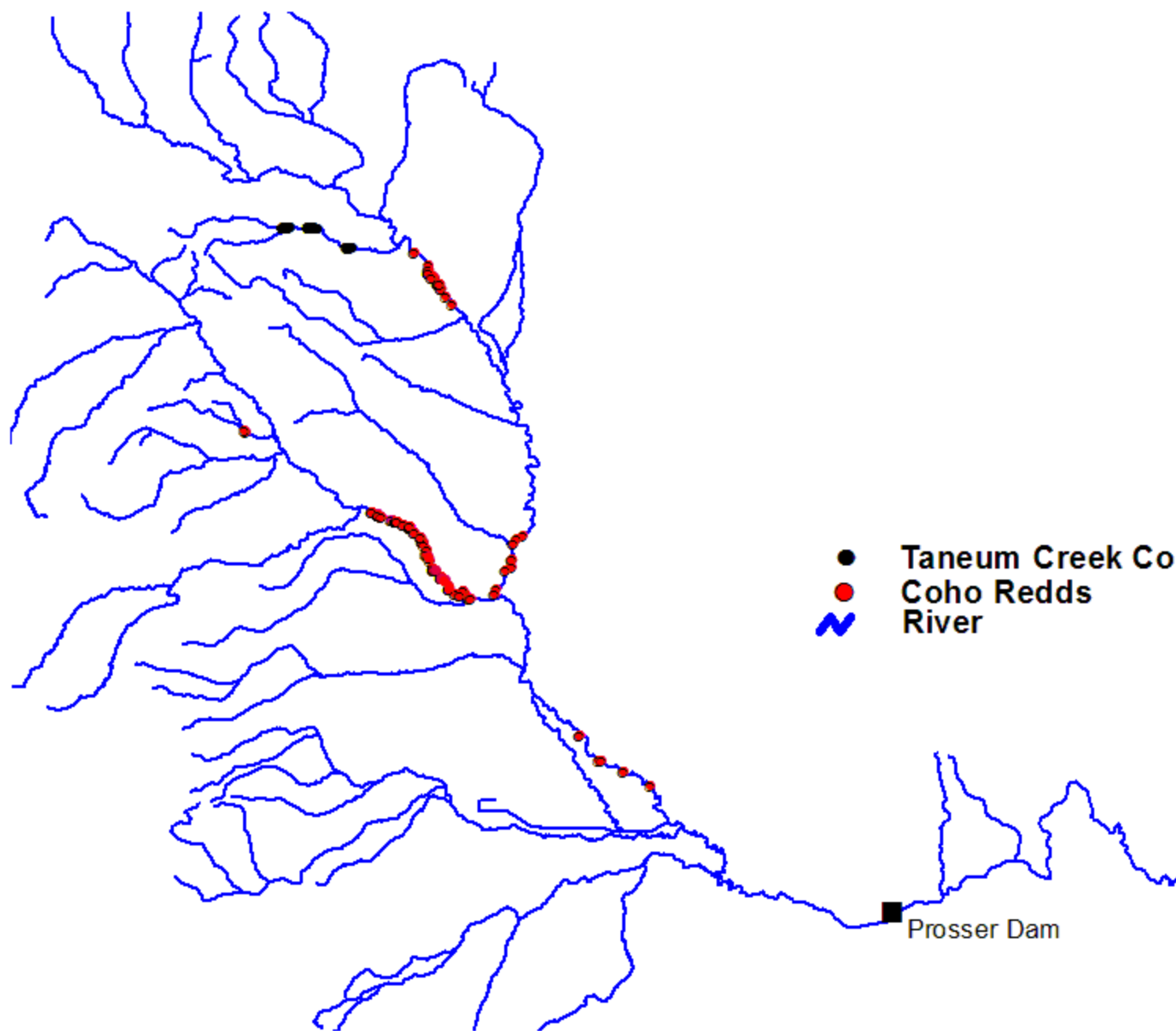
2007 Weight Comparisons

In Pounds

- The average weights for Hatchery and Wild coho were down considerably from 2006. Wild coho were the smallest since 2000 and Hatchery Coho were the second lowest since 2000.

	Wild	Hatchery
2000	7.4	7.1
2001	7.3	6.2
2002	8.6	7.74
2003	7.21	6.03
2004	8.0	6.81
2005	8.0	7.9
2006	9.61	9.6
2007	7.04	6.71

2007 Coho Spawning Distribution



- Taneum Creek Coho Redds
- Coho Redds
- ~ River

Prosser Dam

Redd Count Trends

