

Yakima River Summer/Fall Chinook Program 2017-18

by Melinda Goudy
Yakima Klickitat Fisheries Project (YKFP)



YAKAMA NATION

22 8:31PM

Thank You

Yakama Nation Tribal Council

Prosser and Marion Drain Hatchery: Joe Blodgett, Michael Fiander and the Hatchery crews

Roza: Mark Johnston and Roza crew

YN: Mel Sampson, Dave Fast, Todd Newsome, Bill Bosch, Dave Lind, Doug Neeley,
Bill Fiander and Ida Sohappay-Ike

Douglas PUD Wells Hatchery

USFWS Fish Health.

BPA

Fall Chinook/Coho: Gene Sutterlict Jr., Brady Carl, DJ Spencer Jr,
Quincy Wallahee, Nate Pinkham, Denny Nagle and Conan Northwind for the daily field
activities.



Yakima River Fall Chinook Historical-Present

- Historically ~132,000 adults returned to spawn.
- Restoration *through acclimation* began in 1994.
- Supplementation releases began in 1999.
- 10-yr average returns about 4,465

The vision of the YN is to bring back all species previously present in the Yakima Basin.

- Summer Chinook *extirpated* early 1970s.
- Reintroduction effort began in 2008. Collected our first brood from the WDFW Wells Hatchery, continue annually.

Fall Chinook Releases

Release up to 500,000 inbasin fall chinook annually. Brood collected from YN Prosser H.

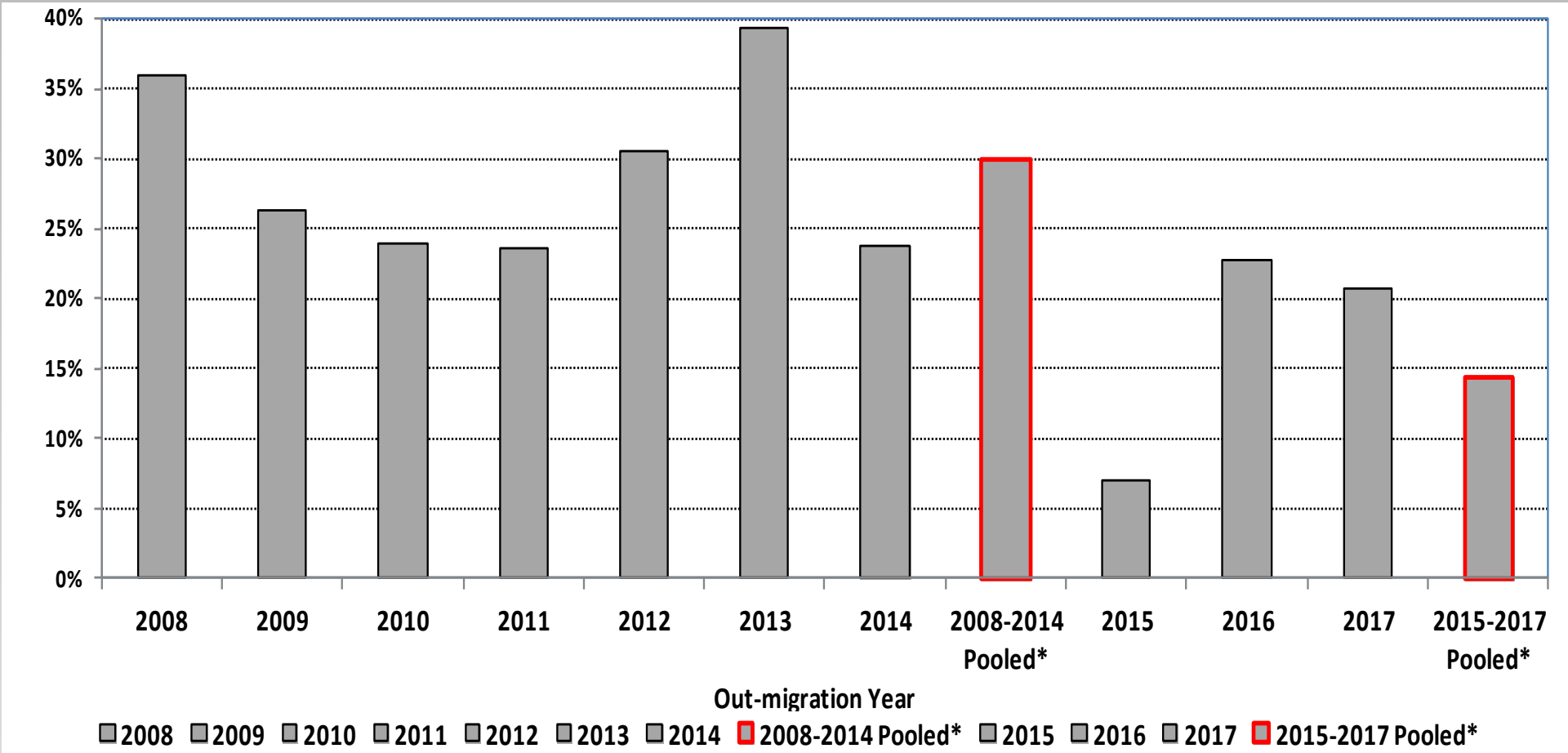
Additionally, release approximately 1.7 million fall chinook from Little White Salmon Hatchery (John Day Mitigation). These fish are reared at LWS, then transferred as parr to ProsserH for acclimation and direct release.

Pooled Prosser-to-McNary Survival for Yakima Stock Subyearling Fall

Chinook Releases made in 2008 -2017

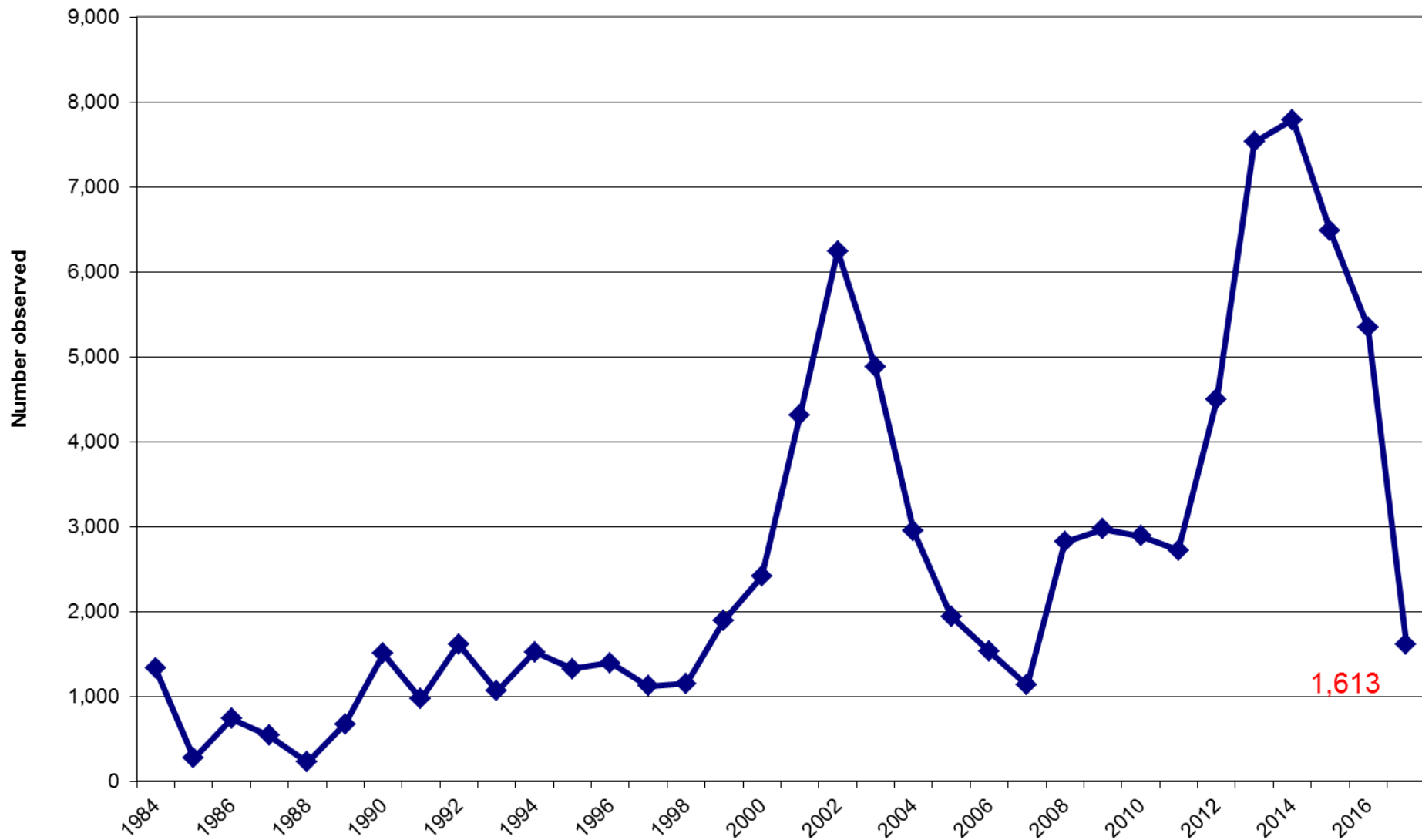
Doug Neeley, 2018

Age	Measure	Release Year											Minimum 2008-2013	Maximum 2014-2017	
		2008	2009	2010	2011	2012	2013	2014	2008-2014 Pooled	2015	2016	2017			2015-2017 Pooled
Subyearling	Survival	36.0%	26.3%	24.0%	23.6%	30.5%	39.3%	23.7%	30.0%	6.9%	22.8%	20.7%	14.4%	23.6%	22.8%
	Tagged	10,001	7,565	13,685	22,790	9,264	22,966	4,025	90,296	4,998	2,531	2,503	10,032		



Fall Chinook Adult Passage above Prosser Dam

(10-yr average: 1983-93=846 1993-2003=2,482 and 2003-13=3,258)



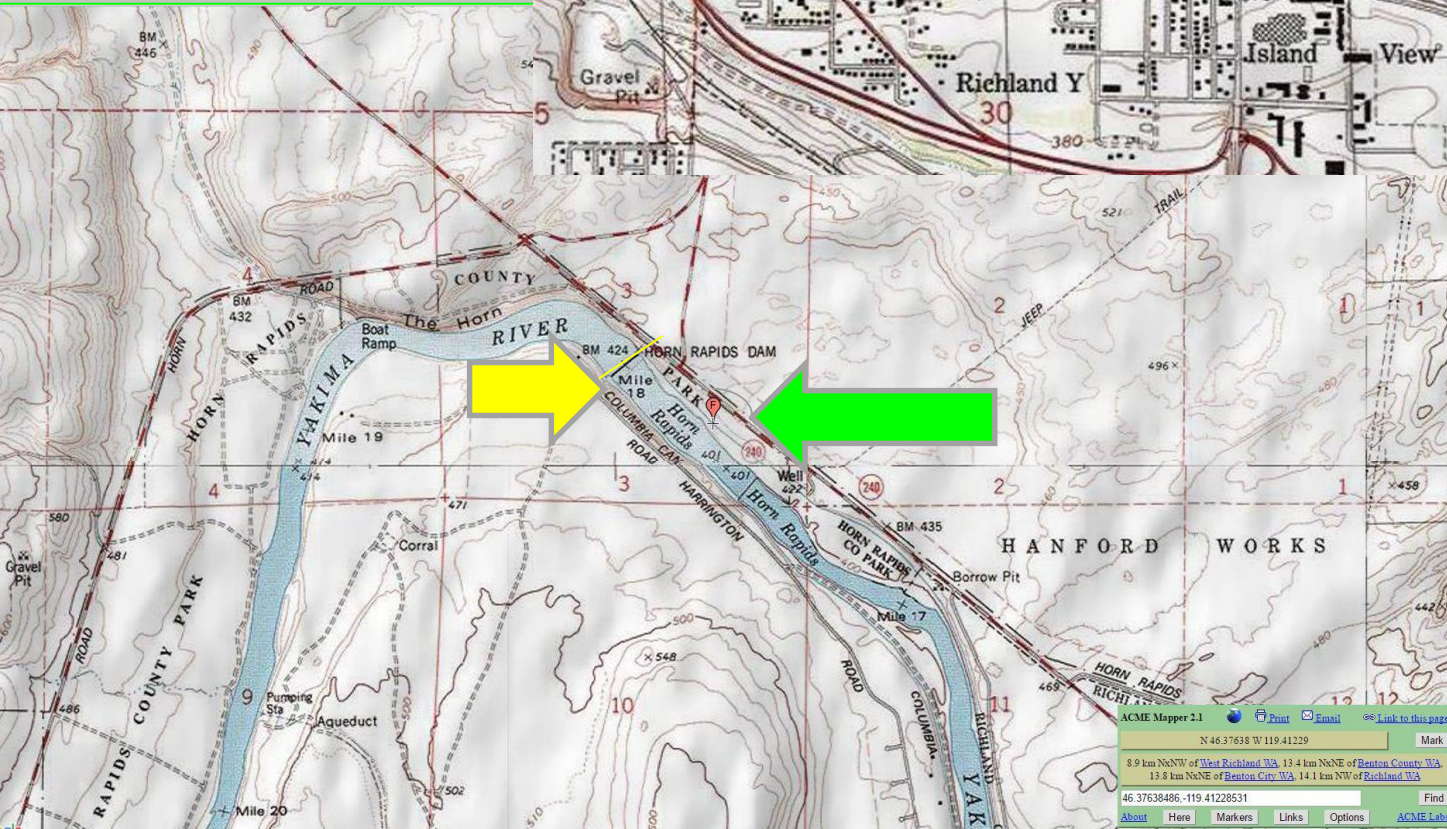
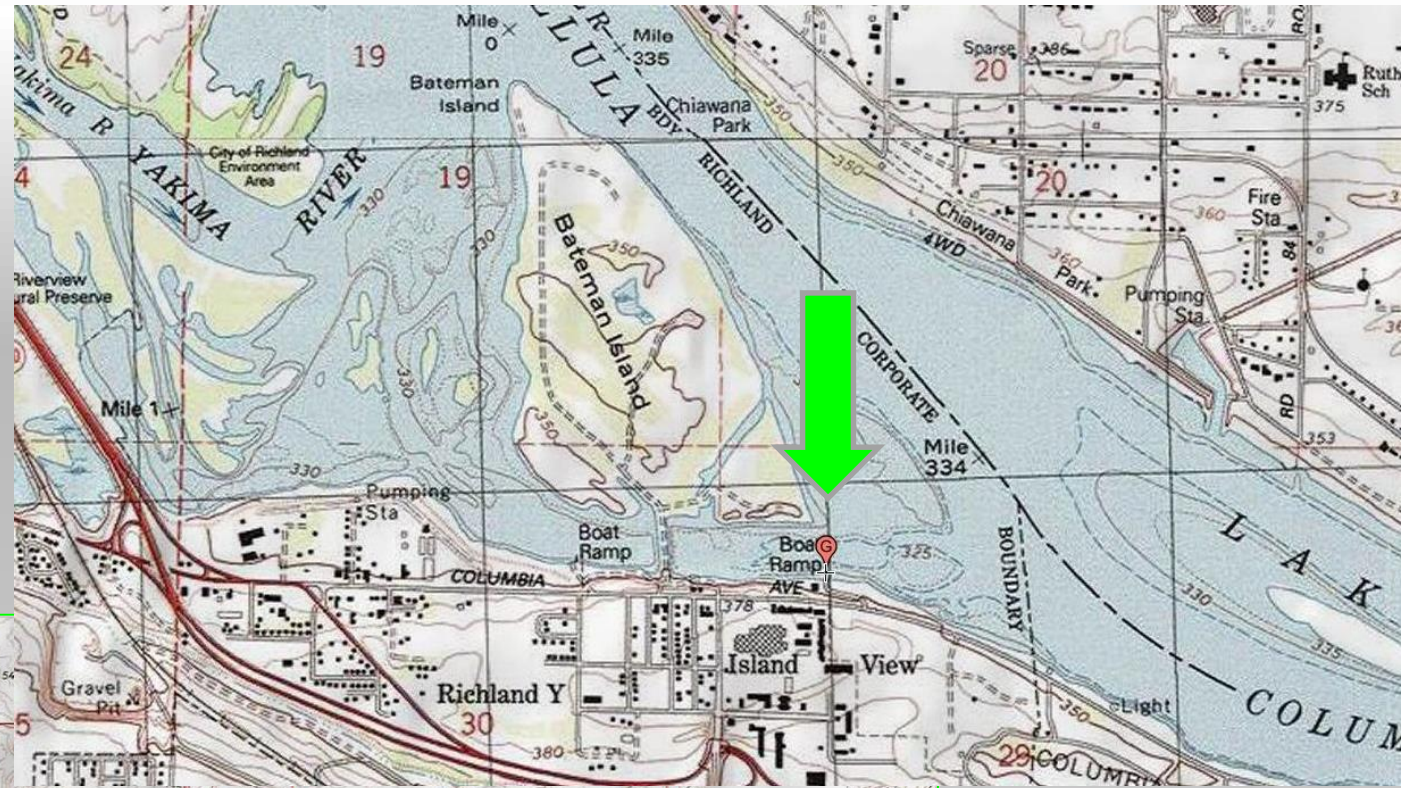
2015-present release comparisons

Release points at:

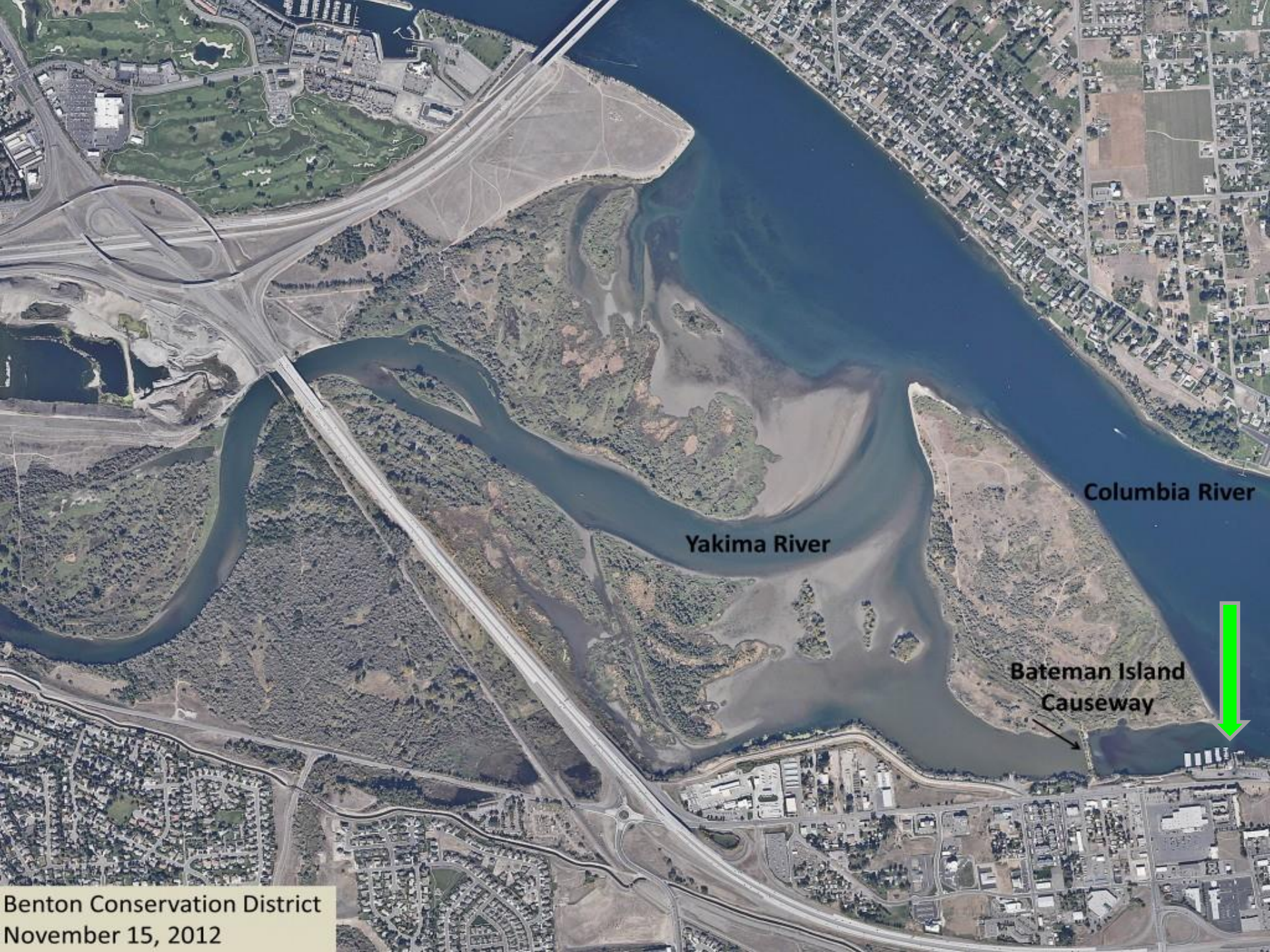
ProsserH

below Wanawish

and Mouth of Yakima R



ACME Mapper 2.1
 N 46.37638 W 119.41229
 8.9 km N^oW of West Richland, WA 13.4 km N^oNE of Renton County, WA
 13.8 km N^oNE of Renton City, WA 14.1 km N^oW of Richland, WA
 46.37638486, -119.41228531
 [About](#) [Here](#) [Markers](#) [Links](#) [Options](#) [ACME Labs](#)



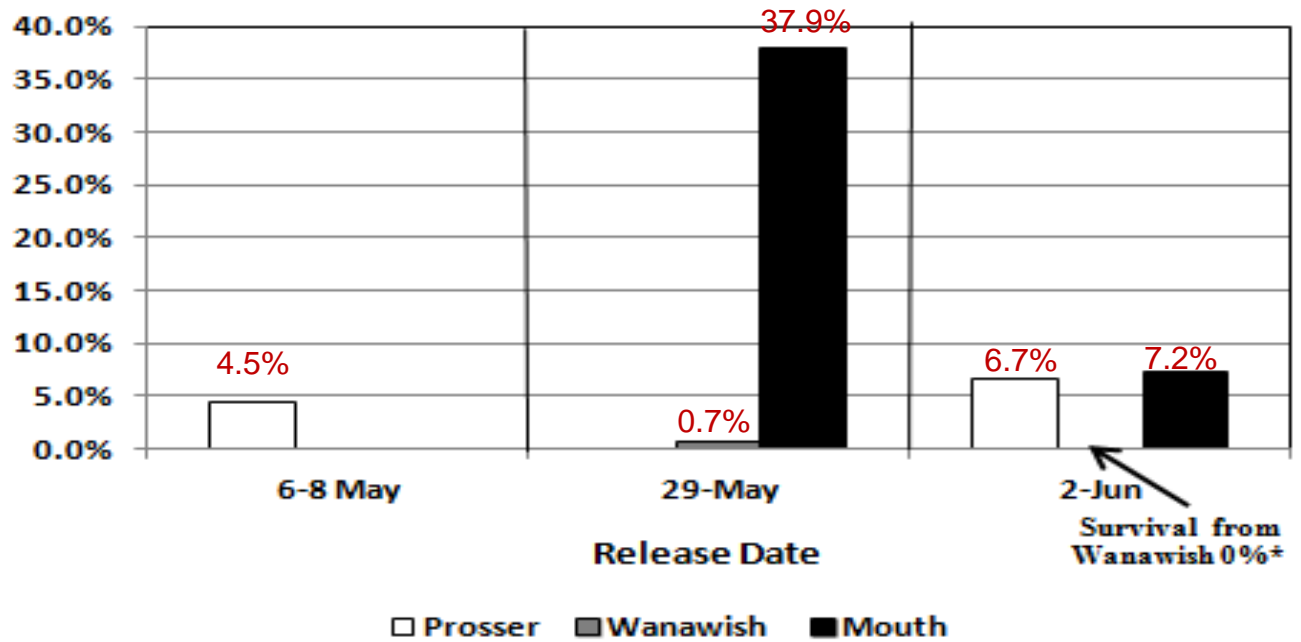
Columbia River

Yakima River

Bateman Island
Causeway

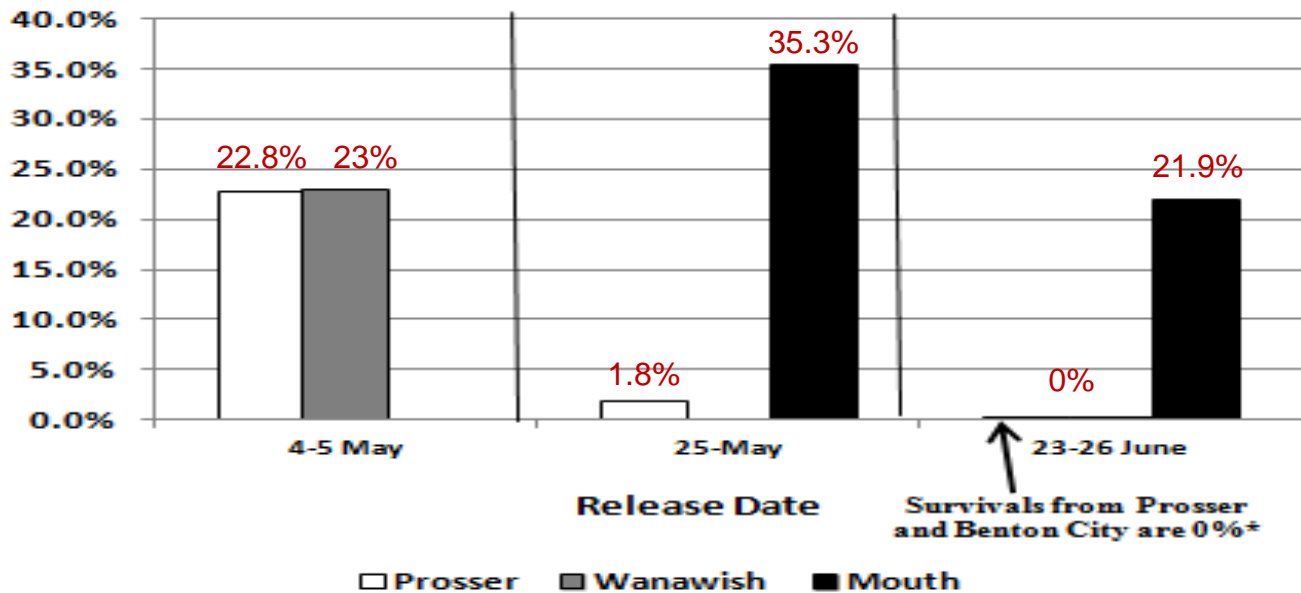
Benton Conservation District
November 15, 2012

2015



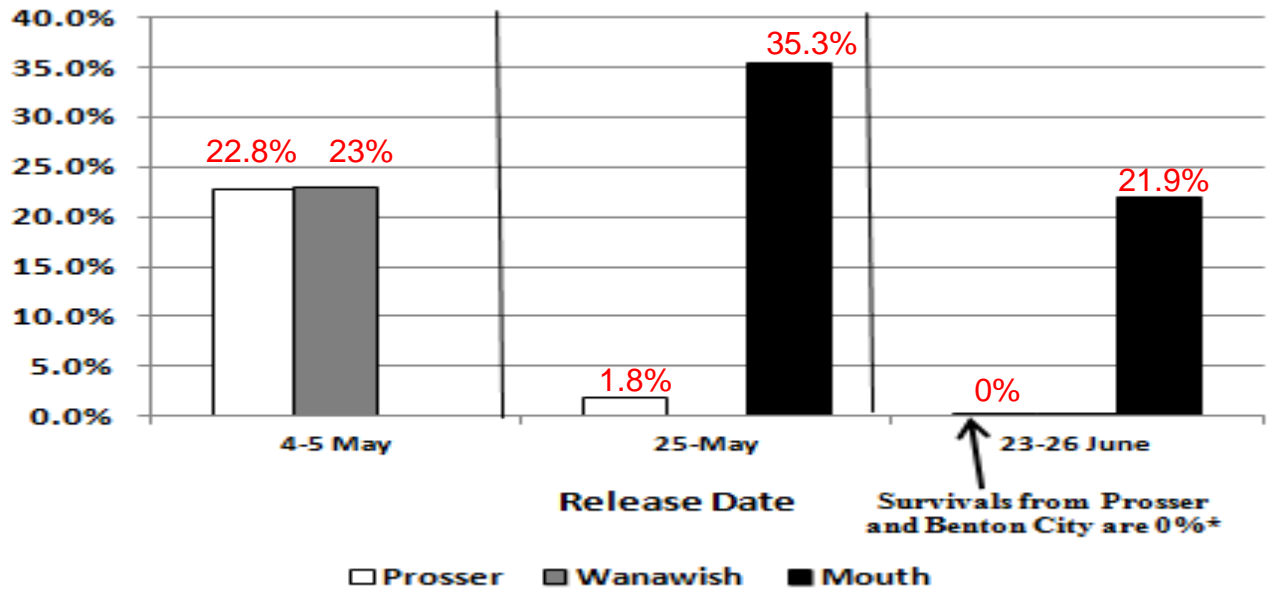
* In addition to no detections at McNary, there were no detections at Bonneville and John Day

2016



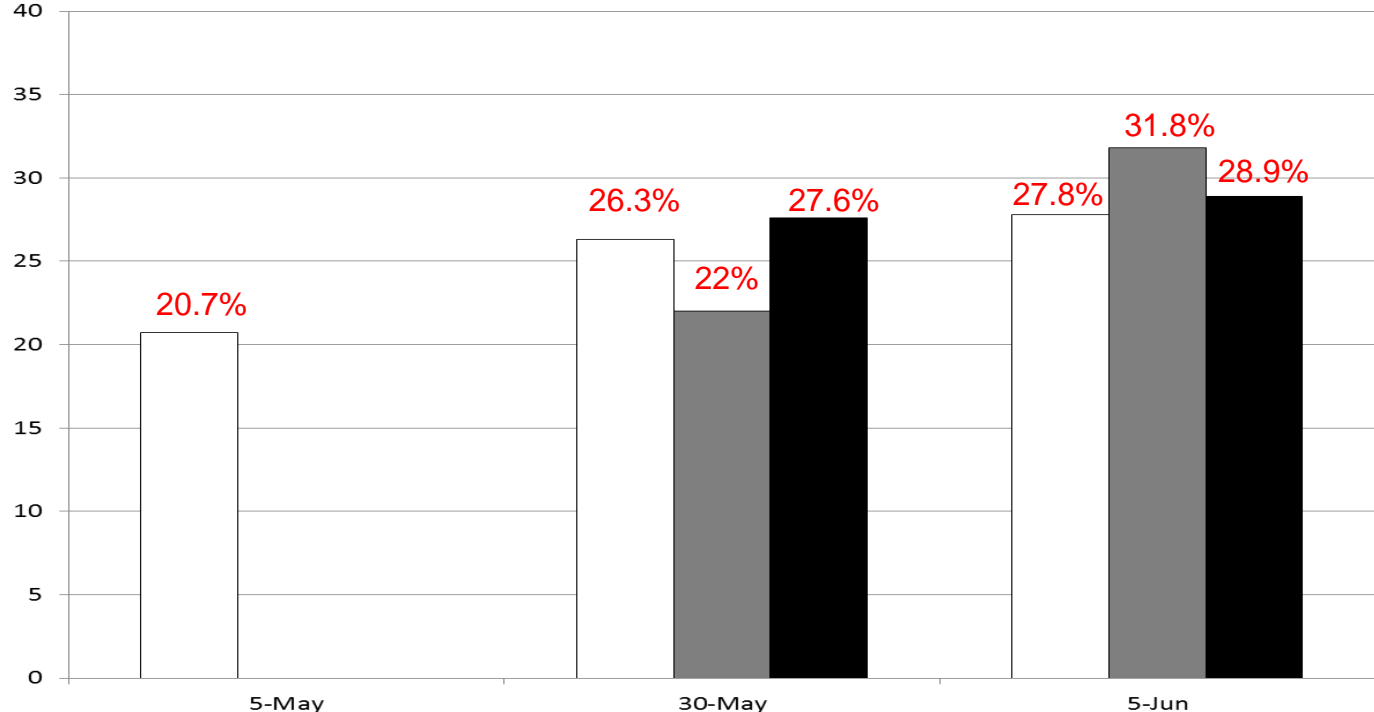
* In addition to no detections at McNary, there were no detections at Bonneville and John Day

2016



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2017



2017 Redd Surveys above Prosser

1,613 Adults over Prosser Dam

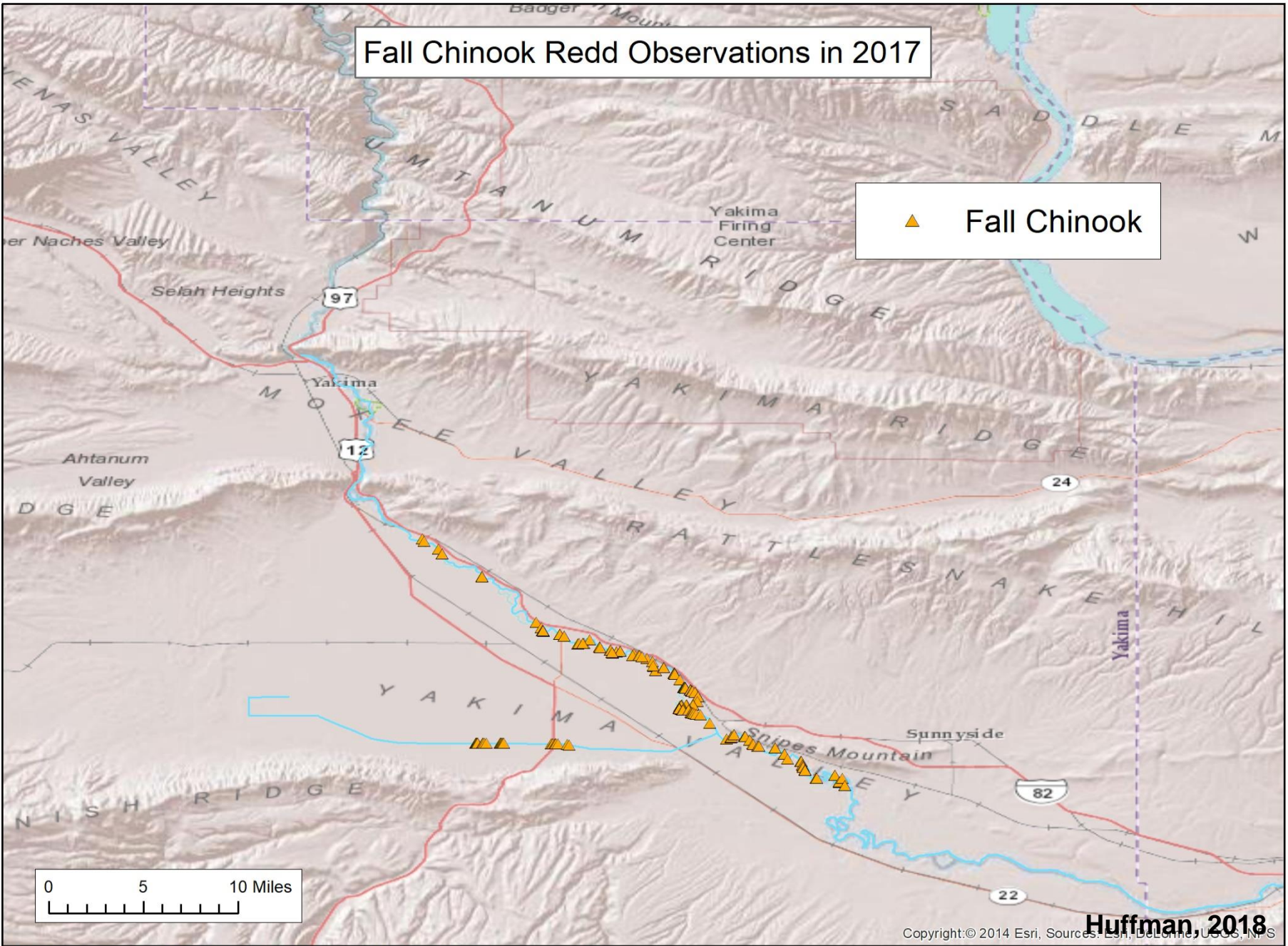
Yakima River- 212 Redds

Naches River- 0 Redds

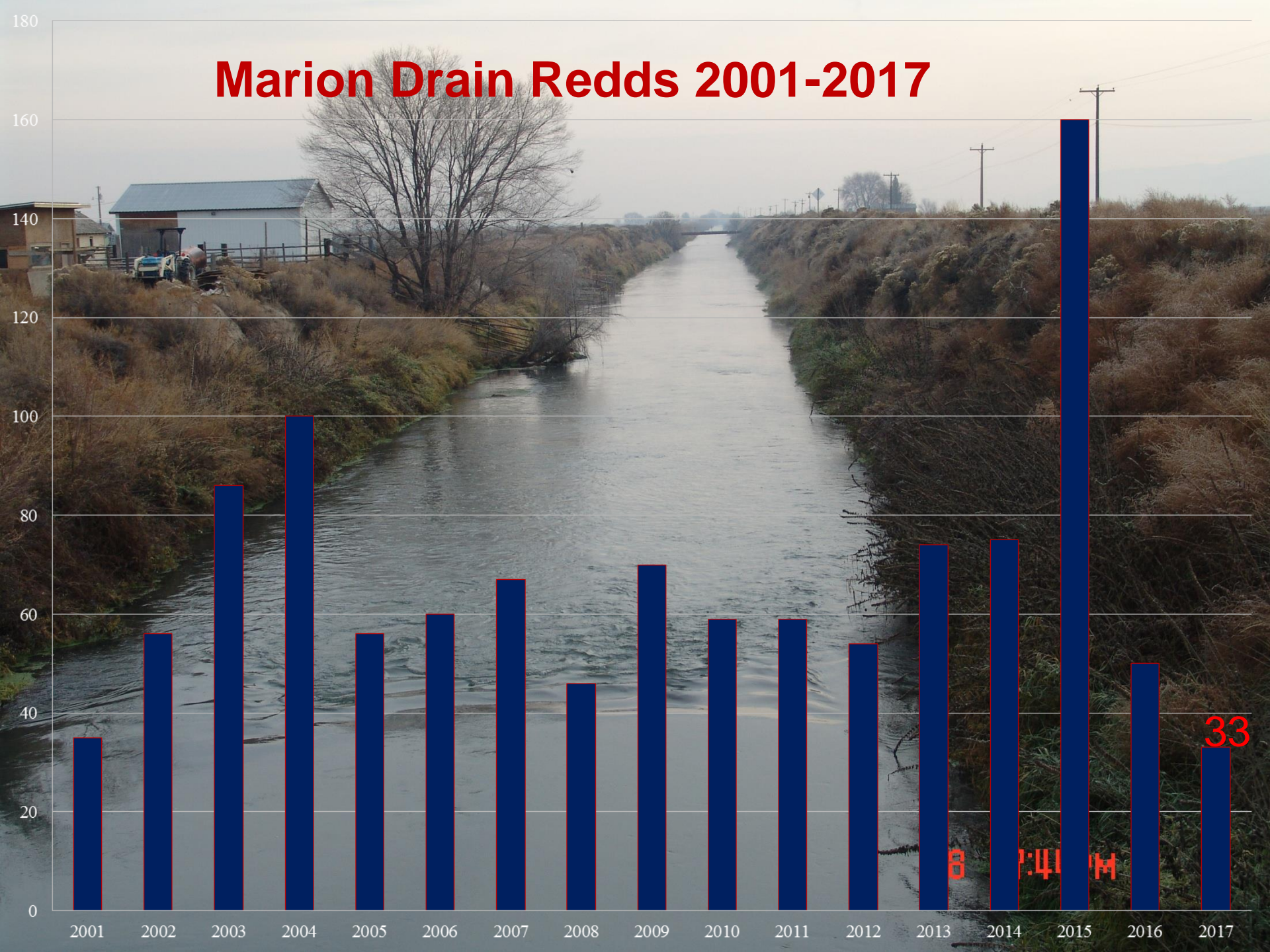


Fall Chinook Redd Observations in 2017

▲ Fall Chinook



Marion Drain Redds 2001-2017



Summer Chinook Extirpated in the 1970s



2006 YN began feasibility conversation to bring them back

Re-Establishing Summer Chinook in the Yakima River

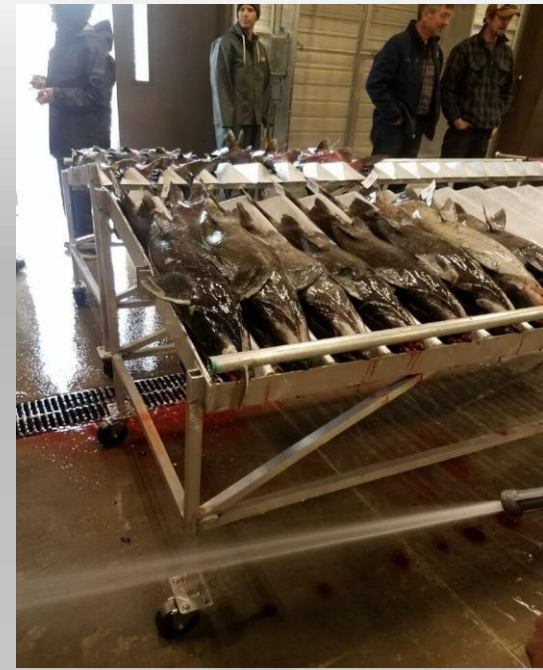
- **Objective:** To initiate investigation of the feasibility of establishing an early-run fall Chinook population in the Yakima River, with the goals being to:
 - Develop a naturally spawning adult population in the Yakima River between Sunnyside Dam and Roza Dam, and in the lower Naches River from the mouth to the Tieton River, and,
 - Increase the number of natural-origin returning summer-run adults in the lower Columbia, Zone 6, and the lower Yakima River contributing to harvest augmentation for both the tribal and sports fishery.

- Collected our first brood at the WDFW Wells Hatchery in 2008, continue annually
- Have a release goal of 300,000
- First PIT tagged adult came over PRO on 7/16/11
- Between 2013-16 averaged 1,516 adults over PRO

*BY2008 Stiles release observed
at Prosser 7/16/11*

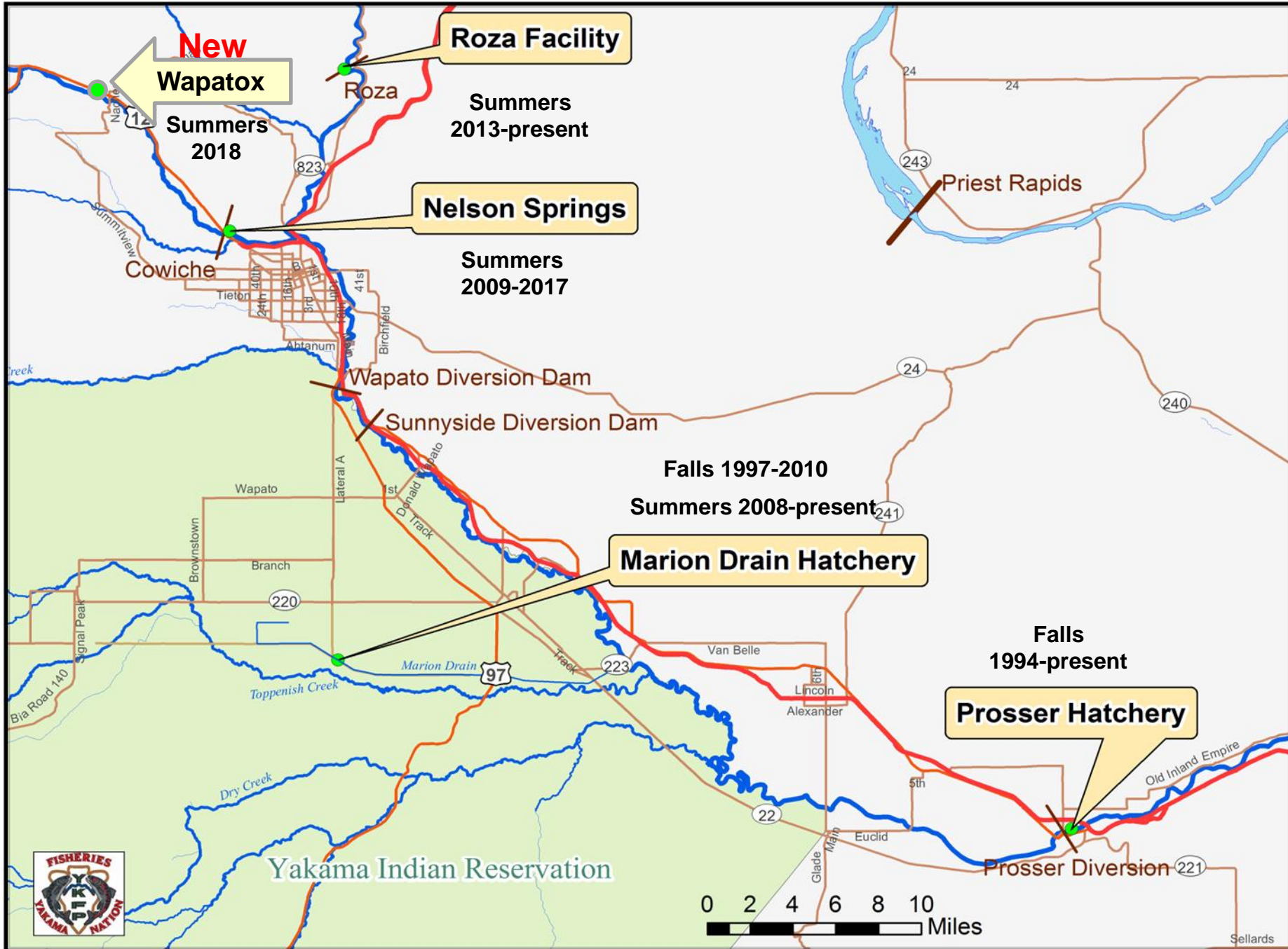
Douglass PUD Wells Hatchery





YN Marion Drain Hatchery







Release Site		Stiles		Prosser		Buckskin		Marion Drain	Below Roza			Yakima Mouth	
Release Period		Mid**	Late***	Early*	Mid**	Early*	Mid**	Late***	Mid**	Early*	Mid**	Late***	Mid**
2009	Survival		1.5%										
	Released		30,037										
2010	Survival	19.7%											
	Released	5,669											
2011	Survival	39.7%				43.7%							
	Released	20,000				29,894							
2012	Survival				20.8%		37.2%		35.8%				
	Released				9,999		9,999		9,998				
2013	Survival						20.7%					29.8%	
	Released						15,084					15,065	
2014	Survival						18.3%	3.2%				4.8%	
	Released						10,086	10,102				10,043	
2015	Survival			2.6%			0.00%			0.07%	0.00%		
	Released			4,031			10,266			10,034	10,027		
2016	Survival												31.2%
	Released												35,619
2017	Survival				19.6%						19.4%		
	Released				2,513						15,026		

Yellow highlighted under 5% survival

* through May 10.

** After May 10 through May 25

*** After May 25

Prosser Adult Returns				
ReleaseY	#PITS	#Released	*SAR	
2009	30,045	200,747	0.023	
2010	29,997	180,911	0.280	
2011	29,893	39,406	1.034	
2012	29,996	269,359	0.203	
2013	40,203	136,565	0.174	
2014	30,278	254,881	**0.043	
2015	30,427	222,448		
2016	37,000	37,000		
2017	17,530	244,499		
			0.343	mean

*preliminary

**Incomplete brood return

Table 11. Average combined hatchery- and natural-origin smolt counts at Prosser for fish returning at age-3, -4, and -5, combined adult returns to Prosser Dam of all age classes, and estimated Prosser smolt-to-adult return indices for Yakima River fall-run Chinook for adult return years 1988-2016.

Adult Return Year	Prosser Average Smolts ¹	Prosser Total Adults	Prosser Smolt-to-Adult Return Index (SAR)
1988	1,029,429	224	0.02%
1989	1,469,019	670	0.05%
1990	1,664,378	1,504	0.09%
1991	1,579,989	971	0.06%
1992	1,811,088	1,612	0.09%
1993	2,034,865	1,065	0.05%
1994	1,976,301	1,520	0.08%
1995	1,329,664	1,322	0.10%
1996	1,023,053	1,392	0.14%
1997	1,097,032	1,120	0.10%
1998	1,533,093	1,148	0.07%
1999	1,786,511	1,896	0.11%
2000	1,716,156	2,293	0.13%
2001	1,867,966	4,311	0.23%
2002	1,946,676	6,241	0.32%
2003	2,108,238	4,875	0.23%
2004	2,653,056	2,947	0.11%
2005	2,707,132	1,942	0.07%
2006	2,724,824	1,528	0.06%
2007	2,312,562	1,132	0.05%
2008	2,450,308	2,863	0.12%
2009	2,353,675	2,972	0.13%
2010	2,118,702	2,888	0.14%
2011	1,780,670	2,718	0.15%
2012	1,806,572	4,477	0.25%
2013	1,939,754	7,706	0.40%
2014	2,411,076	7,792	0.32%
2015	2,476,483	7,380	0.30%
2016	2,436,111	5,355	0.22%
2017			
Mean	1,936,013	2,892	0.14%

Average combined hatchery- and natural-origin smolt counts for the years which would comprise the age-3, -4, and -5 adult return components for each adult return year. For example, the “Prosser Average Smolts” for adult return year 1988 is the average of hatchery- and natural-origin Prosser smolt estimates for juvenile migration years 1983-1985.

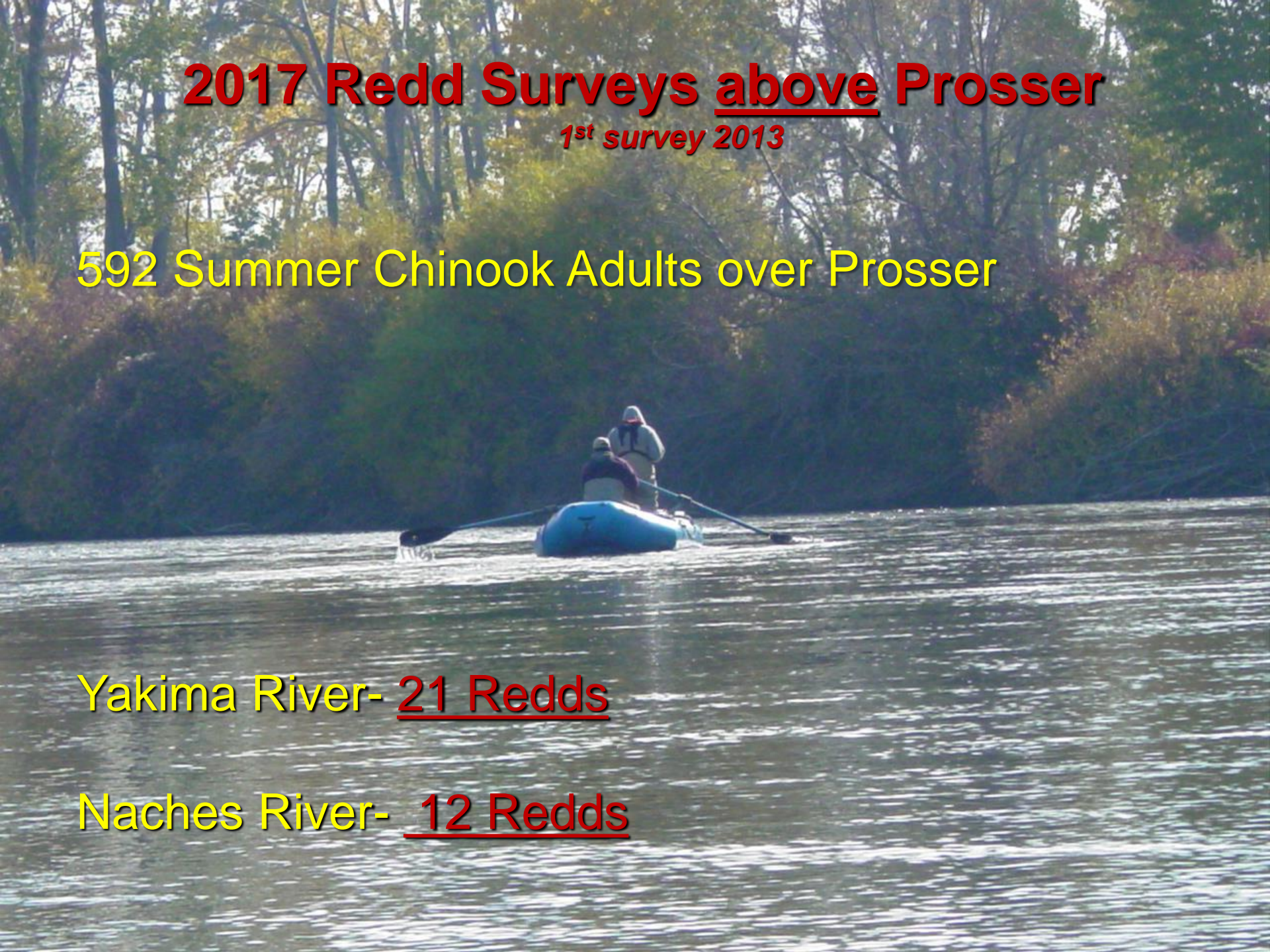
2017 Redd Surveys above Prosser

1st survey 2013

592 Summer Chinook Adults over Prosser

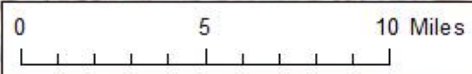
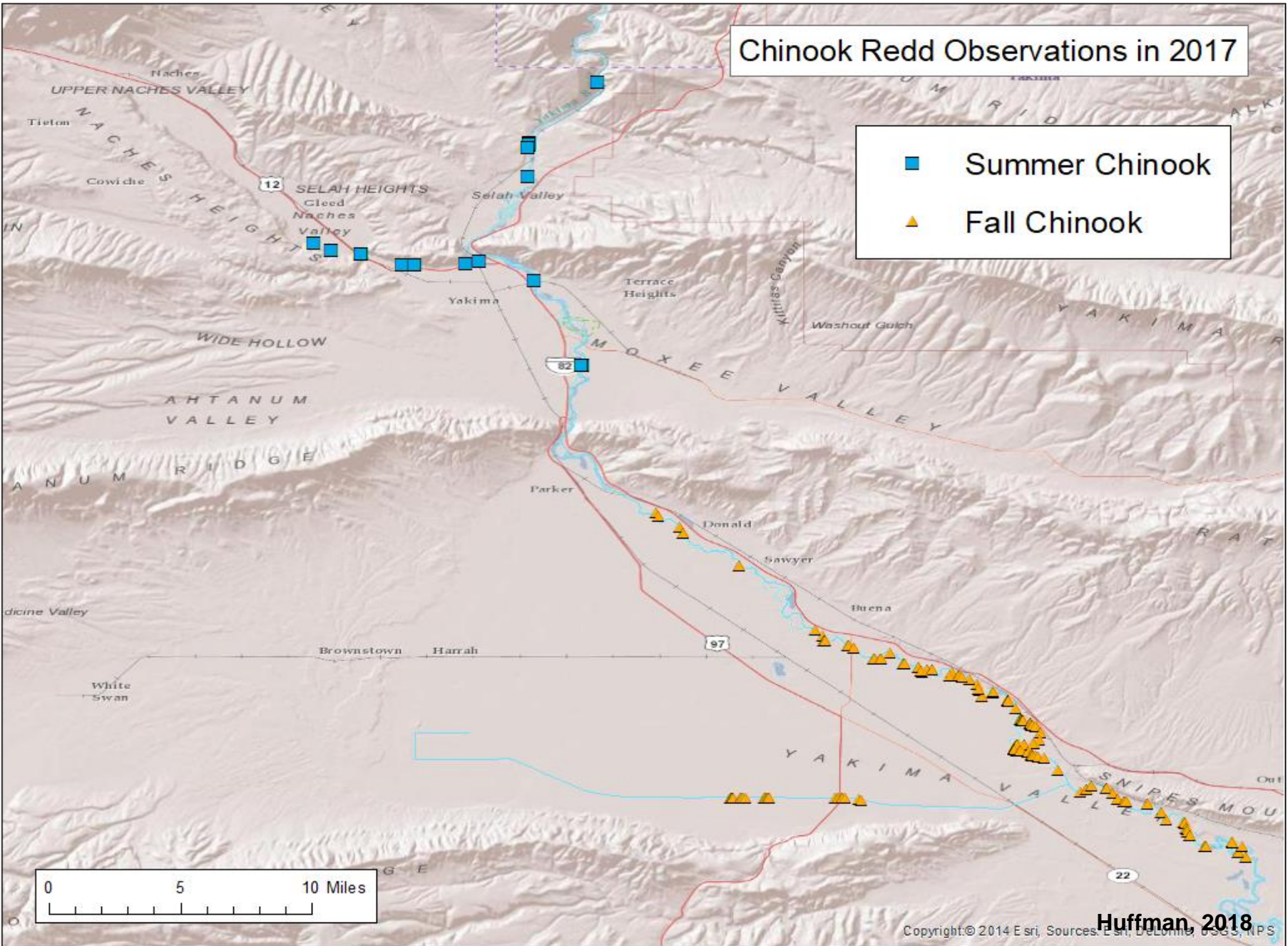
Yakima River- 21 Redds

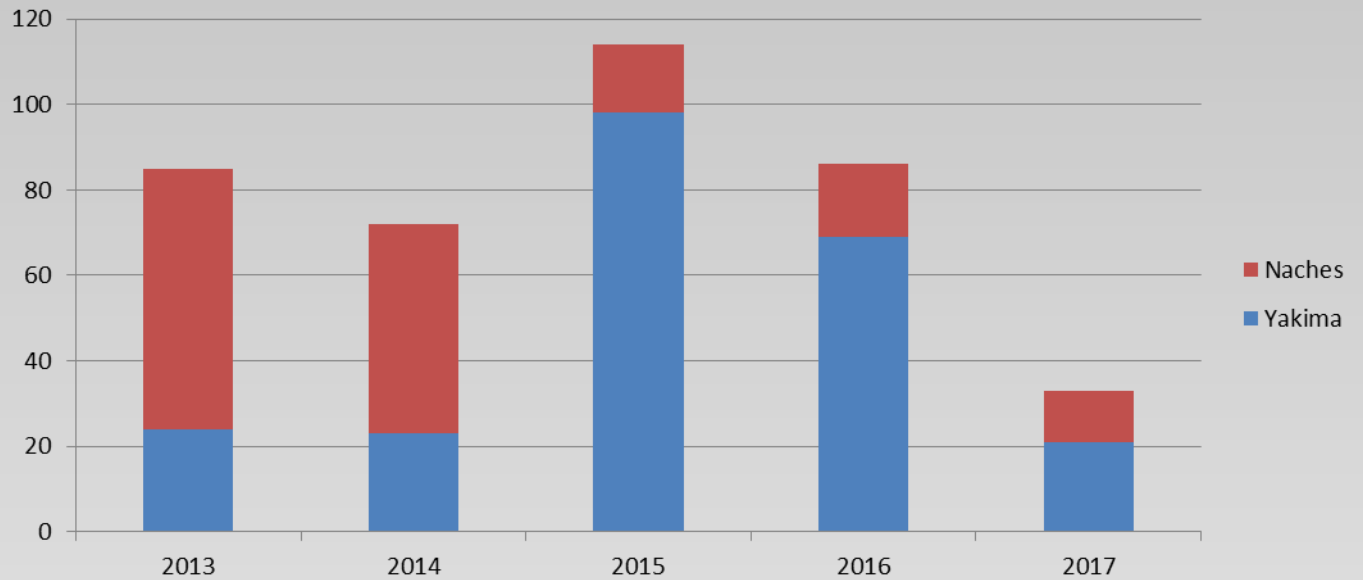
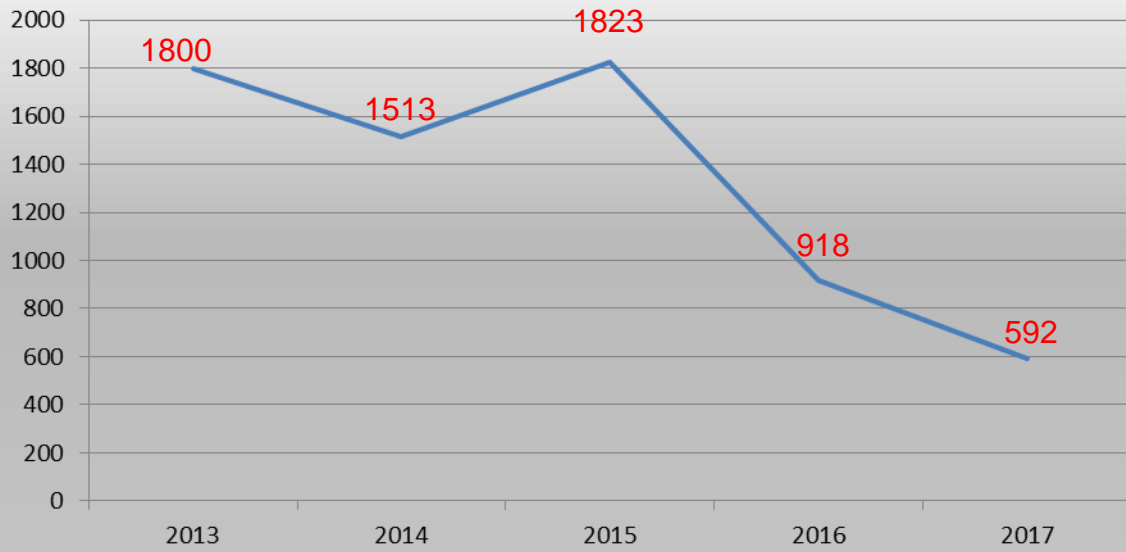
Naches River- 12 Redds



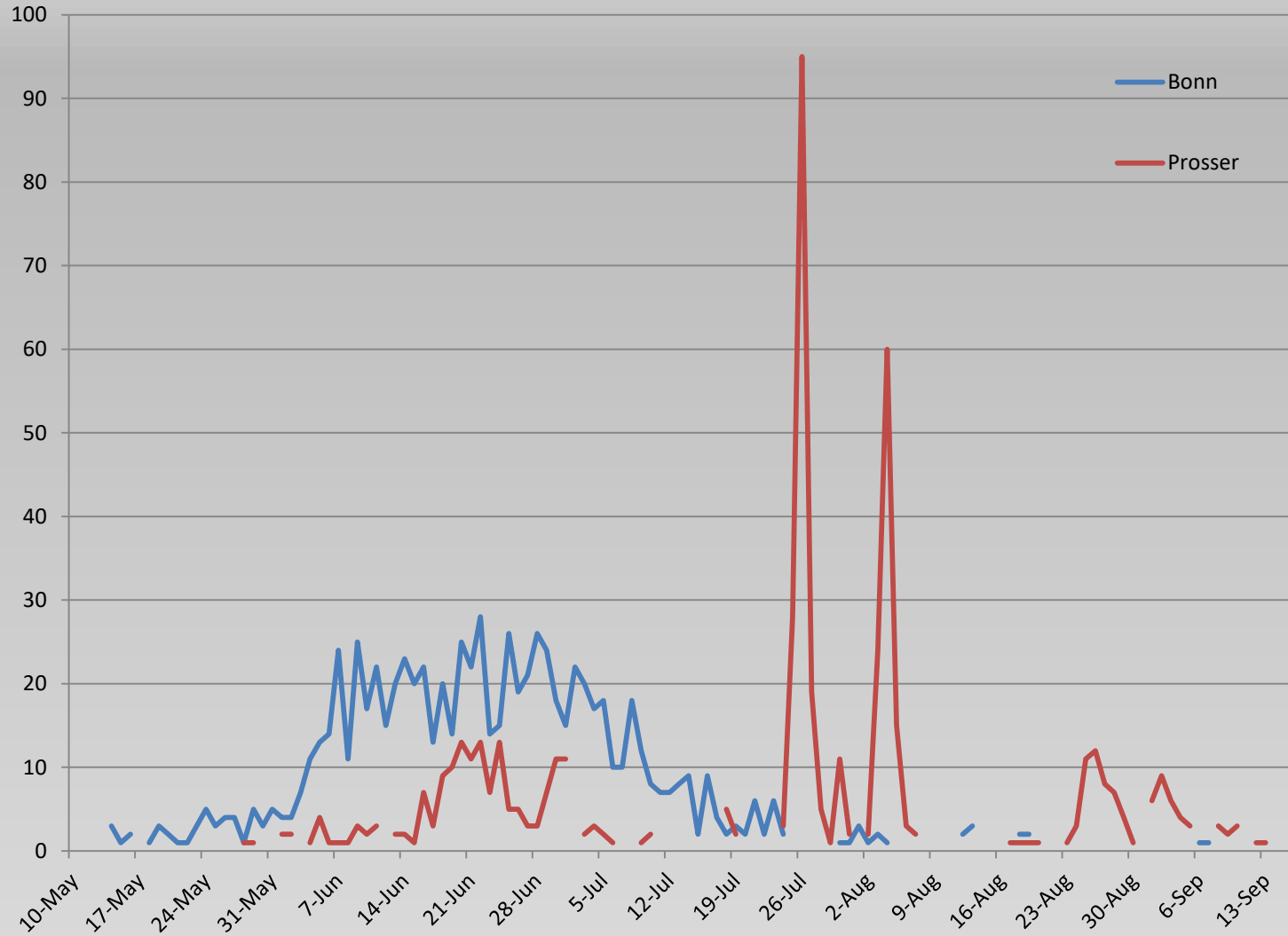
Chinook Redd Observations in 2017

- Summer Chinook
- ▲ Fall Chinook





Summer Chinook PIT-Based Run Timing at Bonneville and Prosser Dams



2017-18 Plans

Su 6/1/13 1:15pm

- Bring in green eggs/milt from Wells Hatchery (MarionD); Final acclimation and release at Nelson and Roza sites.

- Continue In-basin Subyearling releases at Prosser

Repeat releases below Wannawish and at the Mouth

SU 5/28/14 1:56:27pm
Eastbank Stiles 5/16/11 BY09

Sp 6/1/13 1:24pm

- Redd Surveys on the Yakima River between Prosser and Roza Dams and lower Naches River.

- Continue acclimation at both Roza and Wapatox sites.

Sp 5/28/14 1:56:13 pm
Easton 3/15/12 BY11

Questions?

