

Yakima River Summer/Fall Chinook Program 2018-19

by Melinda Goudy
Yakima Klickitat Fisheries Project (YKFP)



Thank You

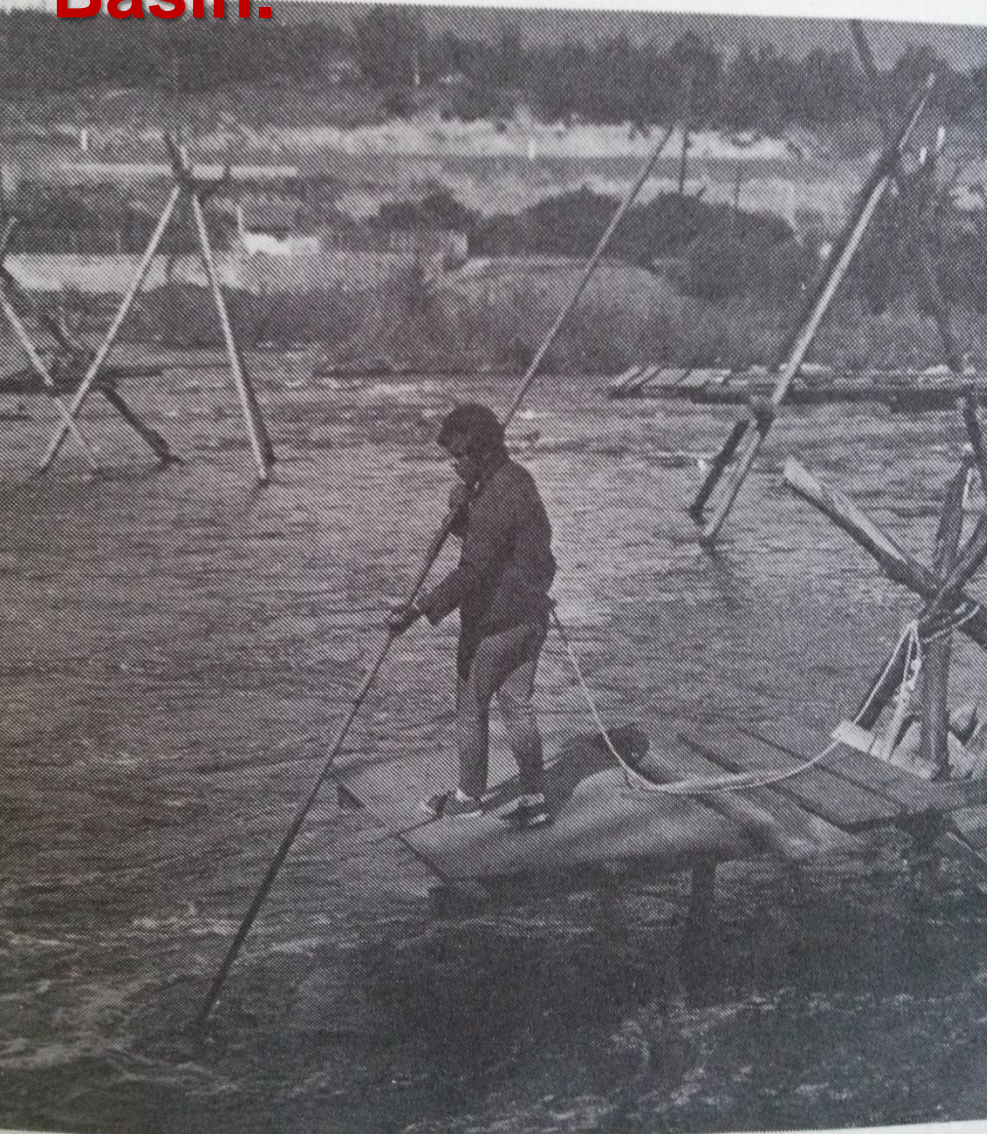
Fall Chinook/Coho crew: Gene Sutterliet Jr., Brady Carl, Quincy Wallahee, Nate Pinkham, Denny Nagle and Dirk Spencer Jr. for the daily field activities.

YKFP: Dave Lind, Doug Neeley, Bill Bosch, Chris Frederiksen, Daylen Isaac and Shubha Pandit

Prosser and Marion Drain Hatchery: Joe Blodgett and the crew
Roza: Mark Johnston and the crew



**The vision of the Yakama Nation is to bring back
all species previously present in the Yakama
Basin.**





Background

1994-we began restoration through acclimation with supplementation releases beginning in 1999-present using both in and out of basin broodstock.

- Current annual release goal is 500,000 in-basin; 1.7 million out-basin. 2018 released 434,096 in-basin
- 10-yr average returns about 4,237

From 2008-present, we added Summer Chinook releases to our program. Broodstock for this program is collected out of basin.

- Current annual release goal is 300,000, 2018 released 74k
- 5-yr average returns about 1,181

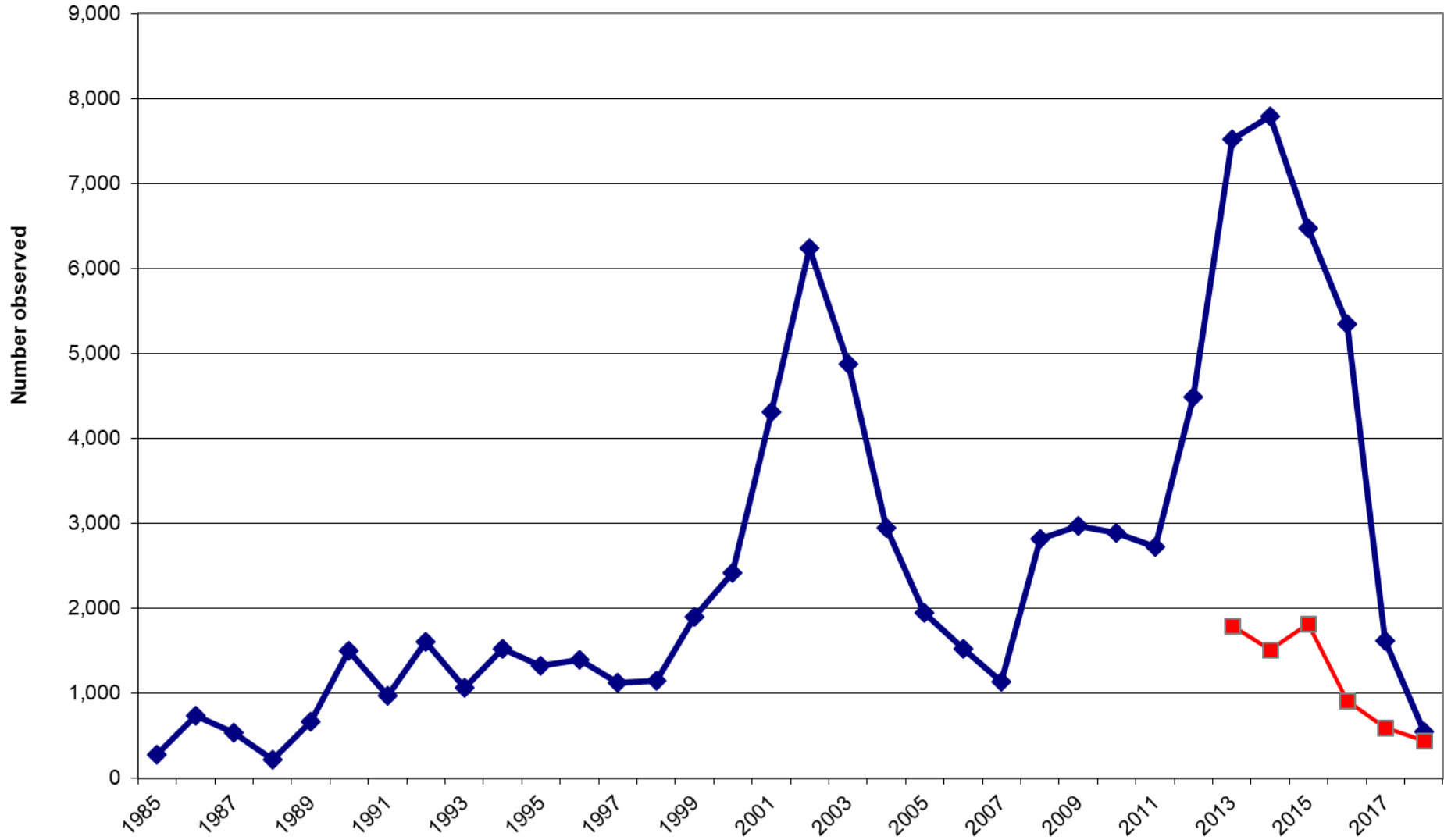
Summer Chinook

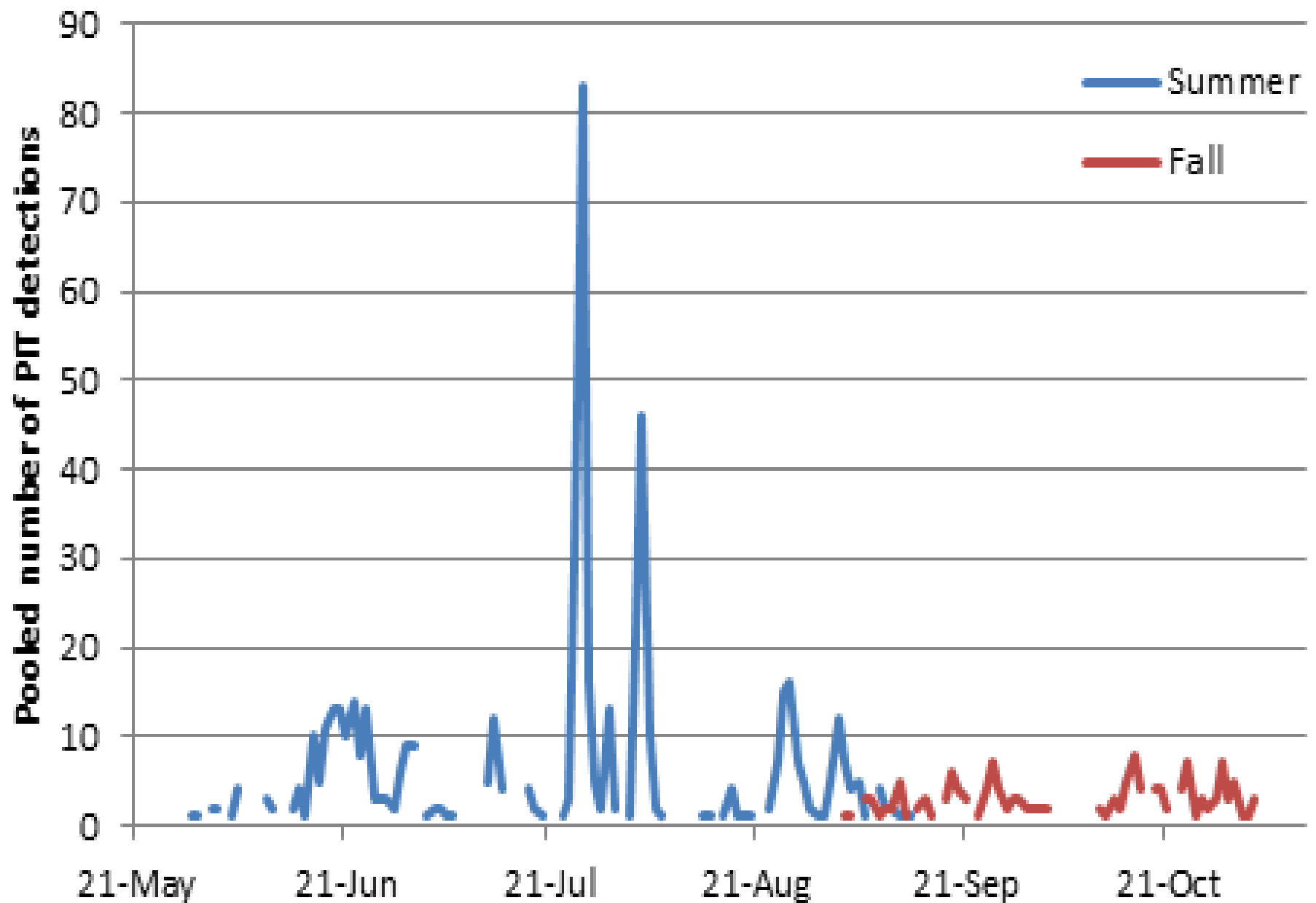
- **Objective:** To reestablish a locally adapted summer Chinook population in the Yakima River, with the goals being to:
 - Develop a naturally spawning adult population in the Yakima River between Sunnyside Dam and Roza Dam, and in the lower Naches River from the mouth to the Tieton River, and,
 - Increase the number of natural-origin returning summer-run adults in the lower Columbia, Zone 6, and the lower Yakima River contributing to harvest opportunity both temporally and spatially

- Collected first brood at the WDFW Wells Hatchery in 2008 and have continued annually. Also, collected from Entiat H in 2018.
- First PIT tagged adult came over PRO on 7/16/11
- 5yr avg has been 1,181 High 1,823 and Low 442

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

Fall/Summer Chinook Adult Passage above Prosser Dam





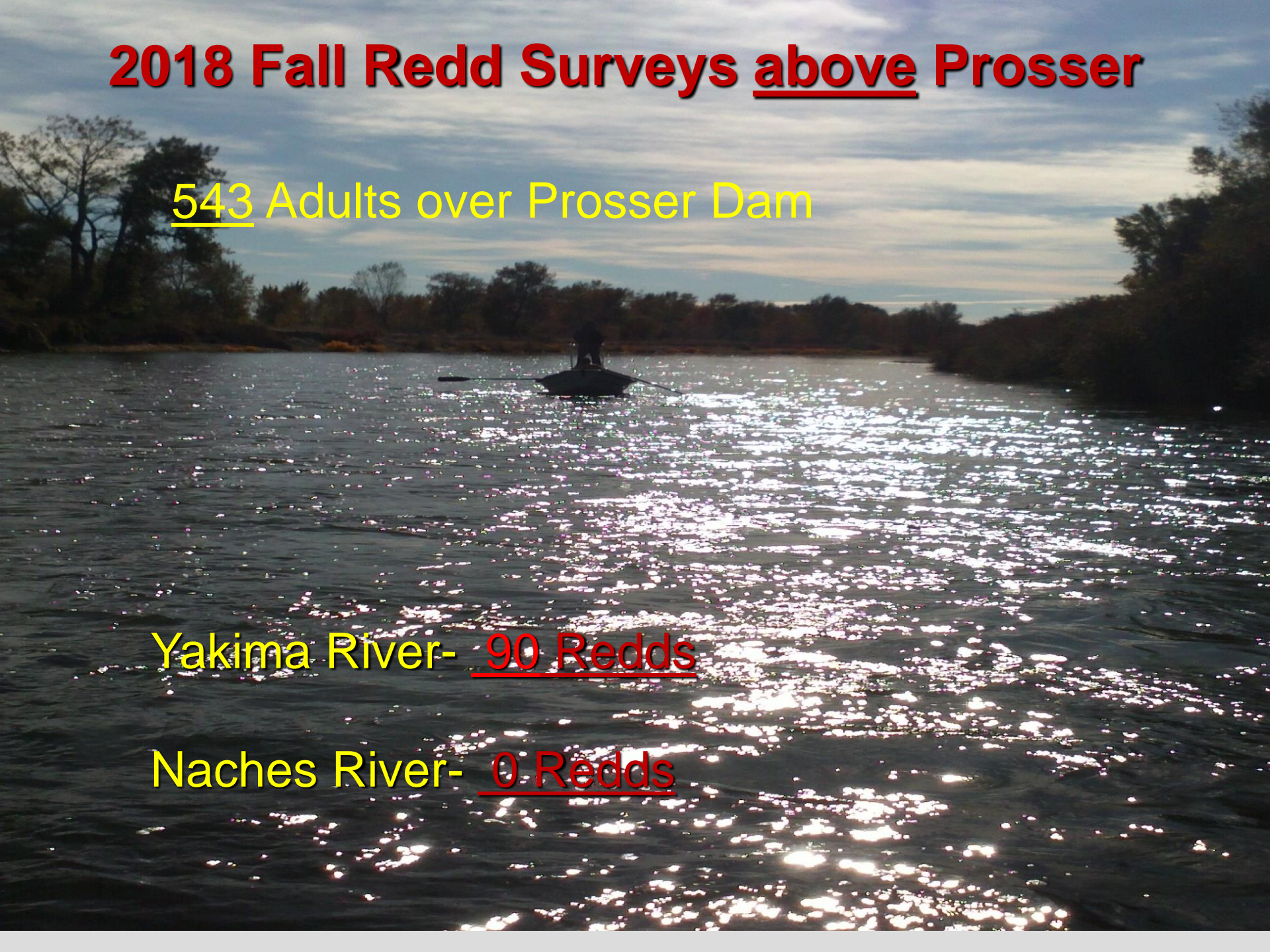
Pooled from return years 2009-2018, Bosch 2019

2018 Fall Redd Surveys above Prosser

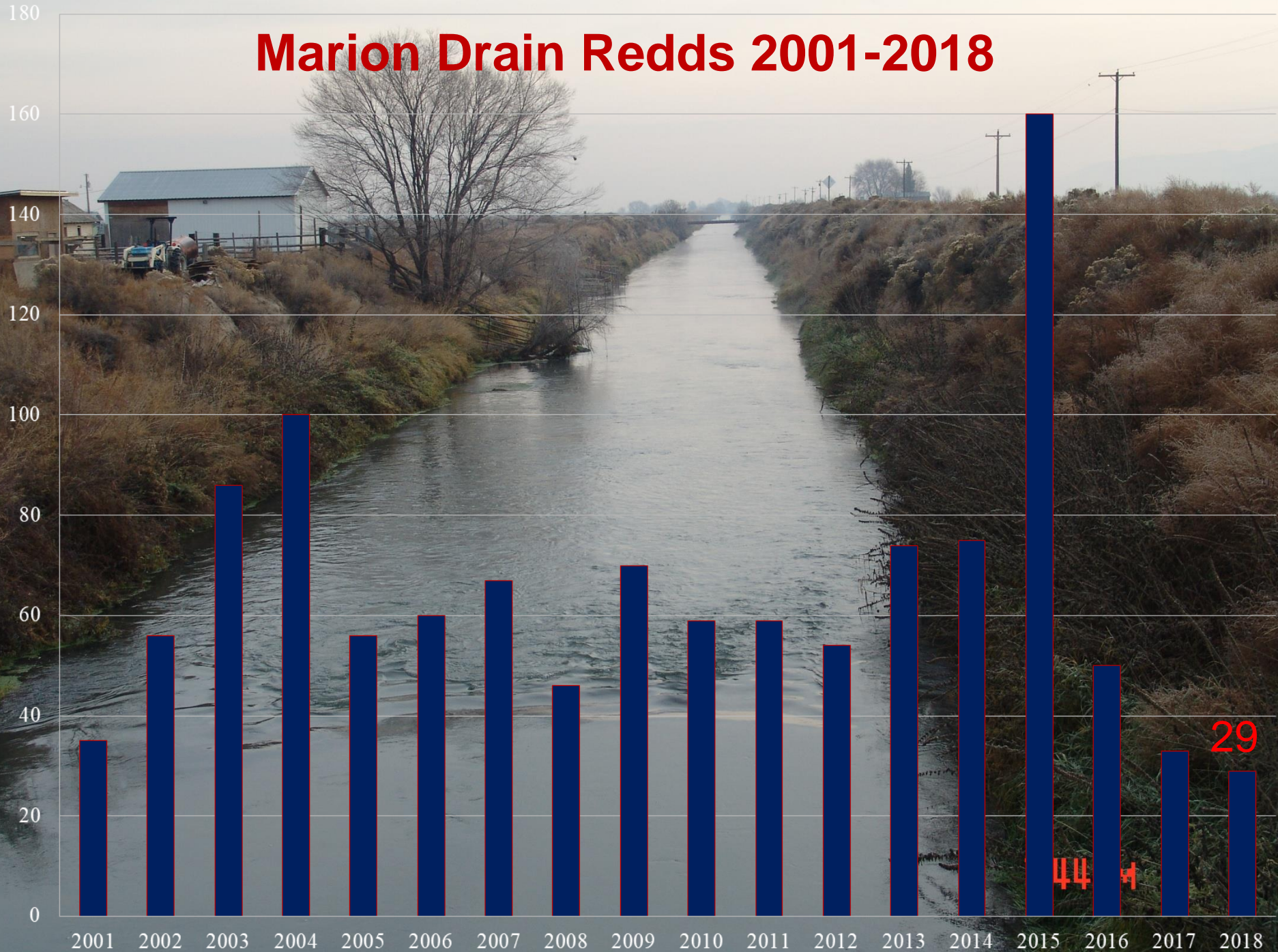
543 Adults over Prosser Dam

Yakima River- 90 Redds

Naches River- 0 Redds

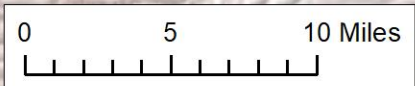
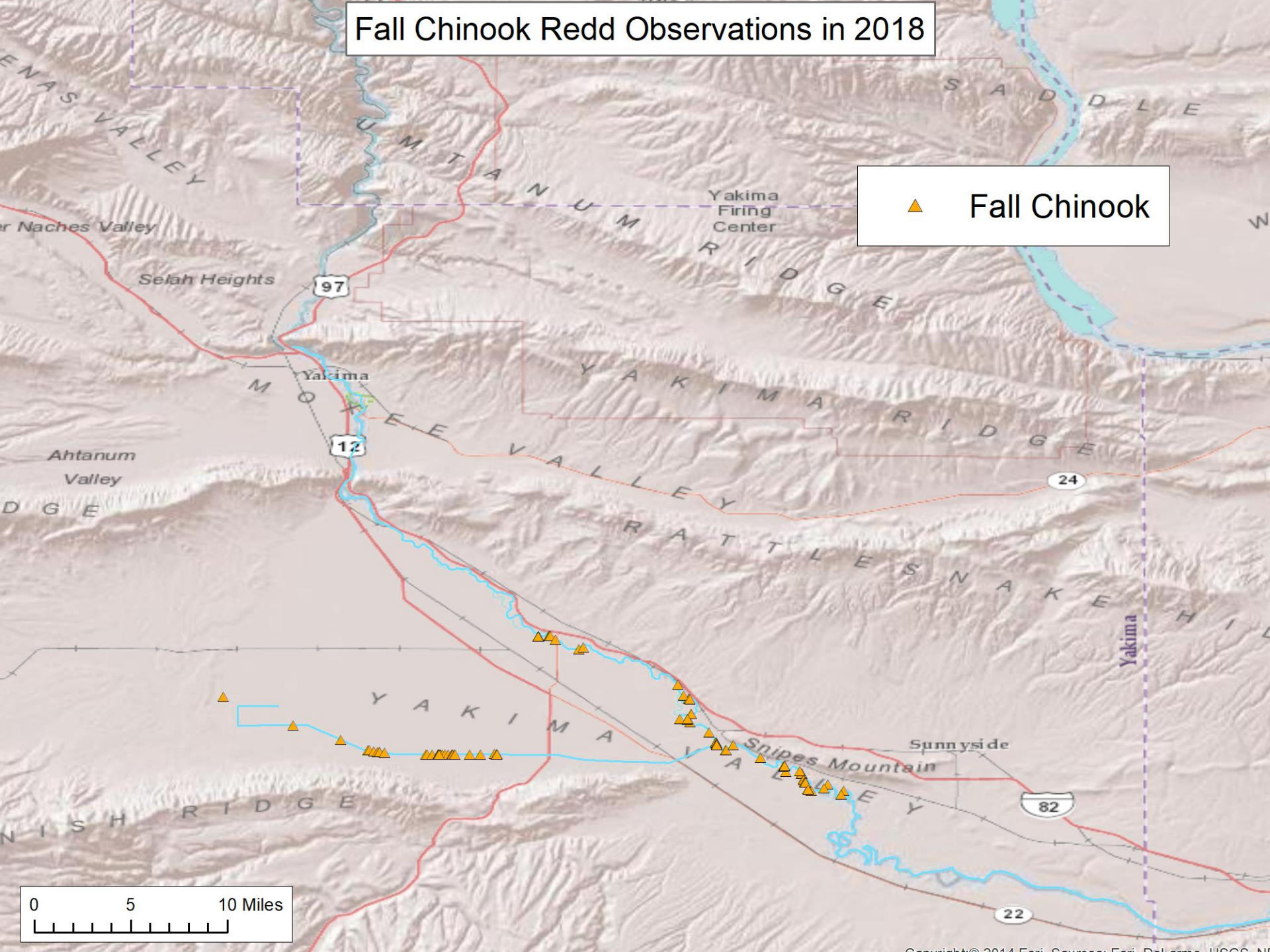


Marion Drain Redds 2001-2018



Fall Chinook Redd Observations in 2018

▲ Fall Chinook



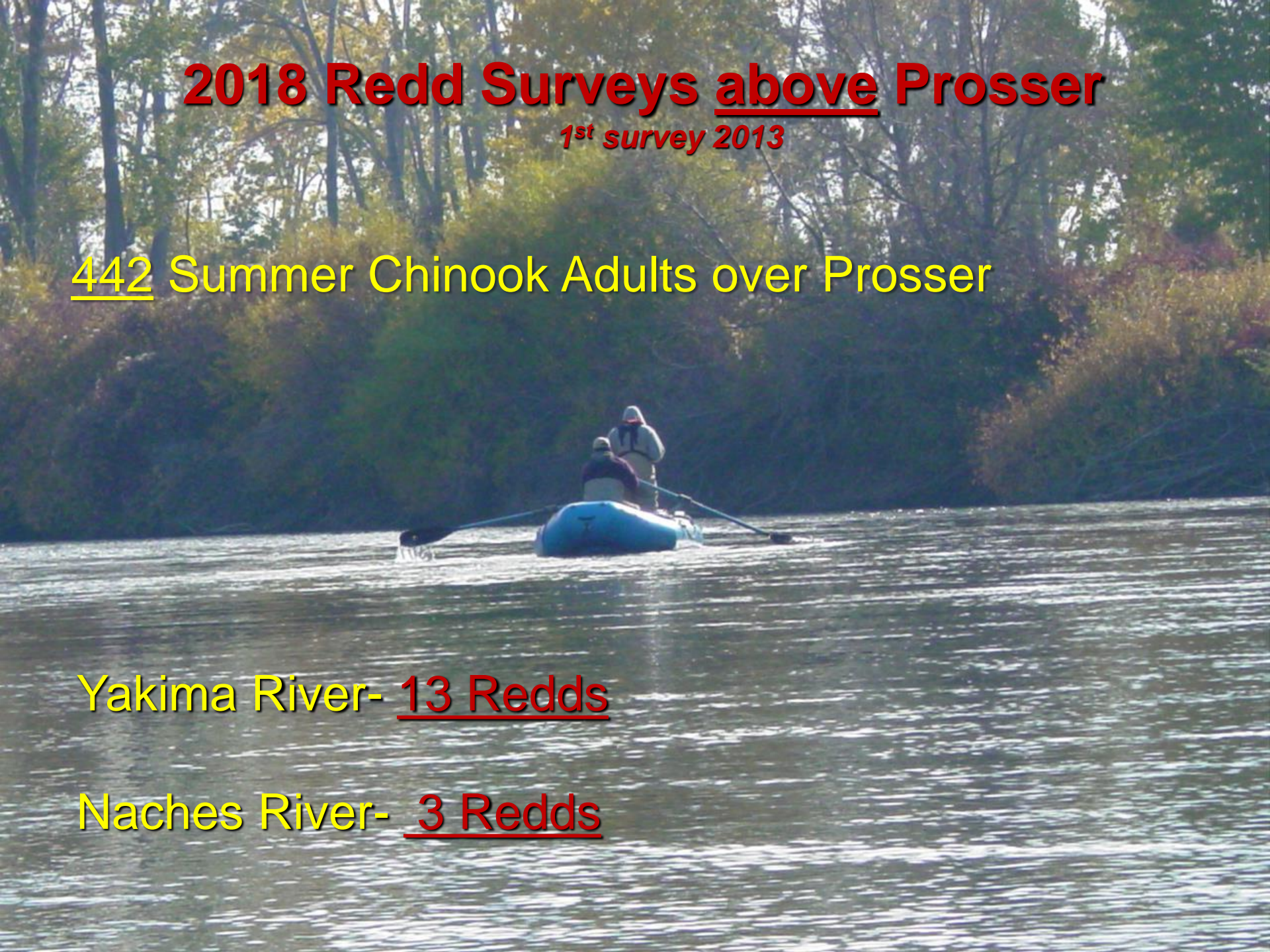
2018 Redd Surveys above Prosser

1st survey 2013

442 Summer Chinook Adults over Prosser

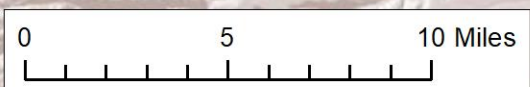
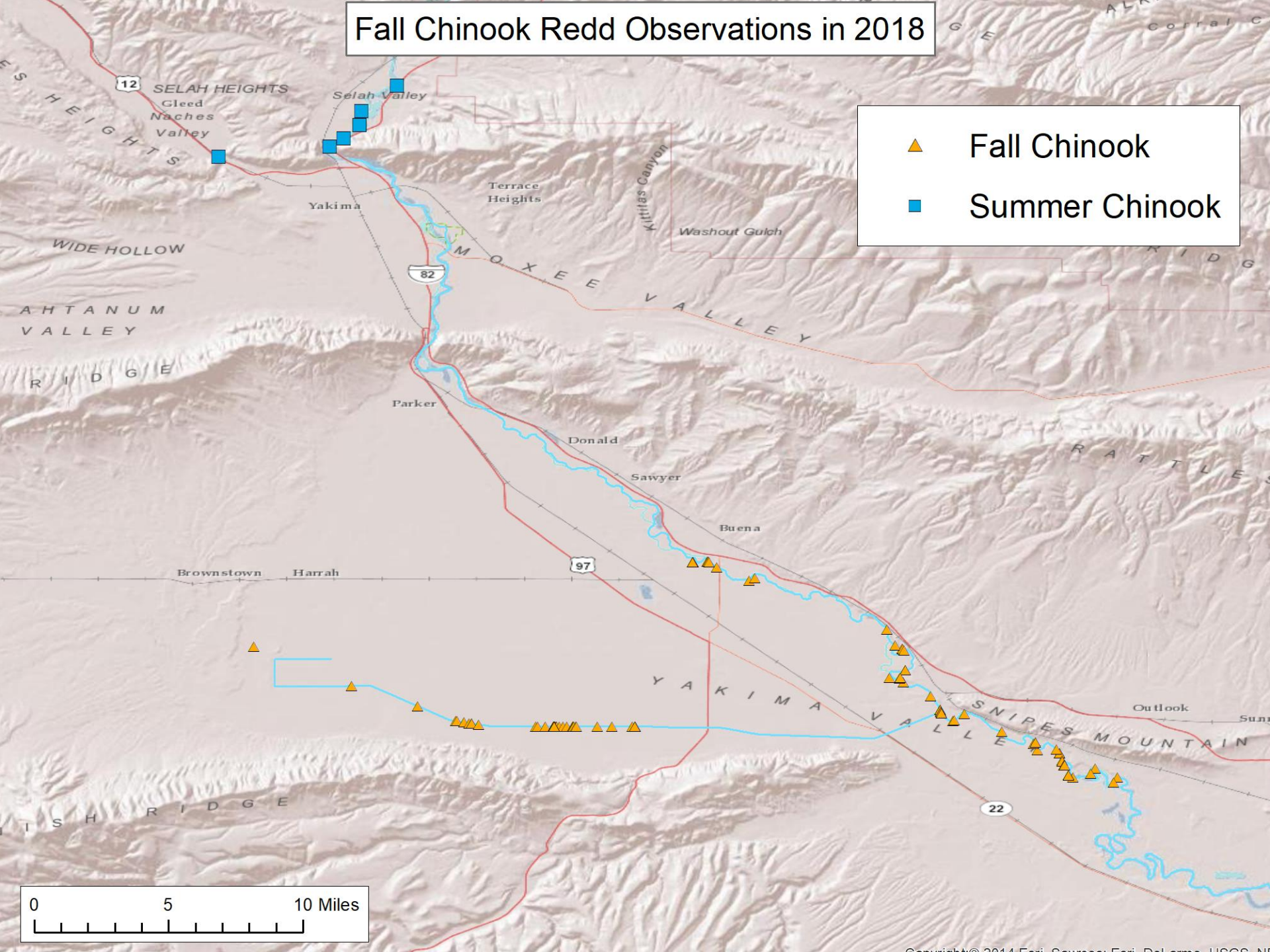
Yakima River- 13 Redds

Naches River- 3 Redds



Fall Chinook Redd Observations in 2018

- ▲ Fall Chinook
- Summer Chinook

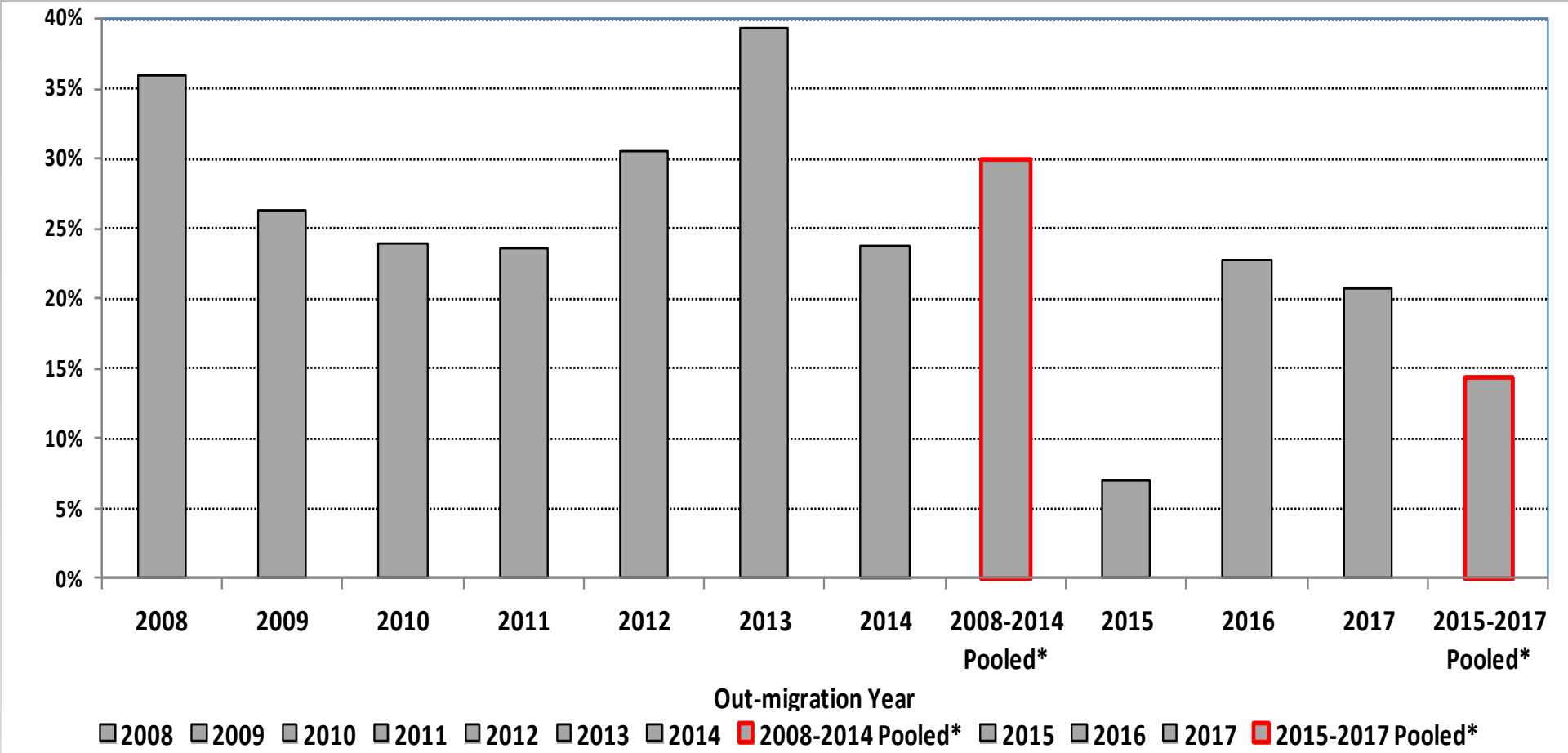


Pooled Prosser-to-McNary Survival for Yakima Stock Subyearling Fall

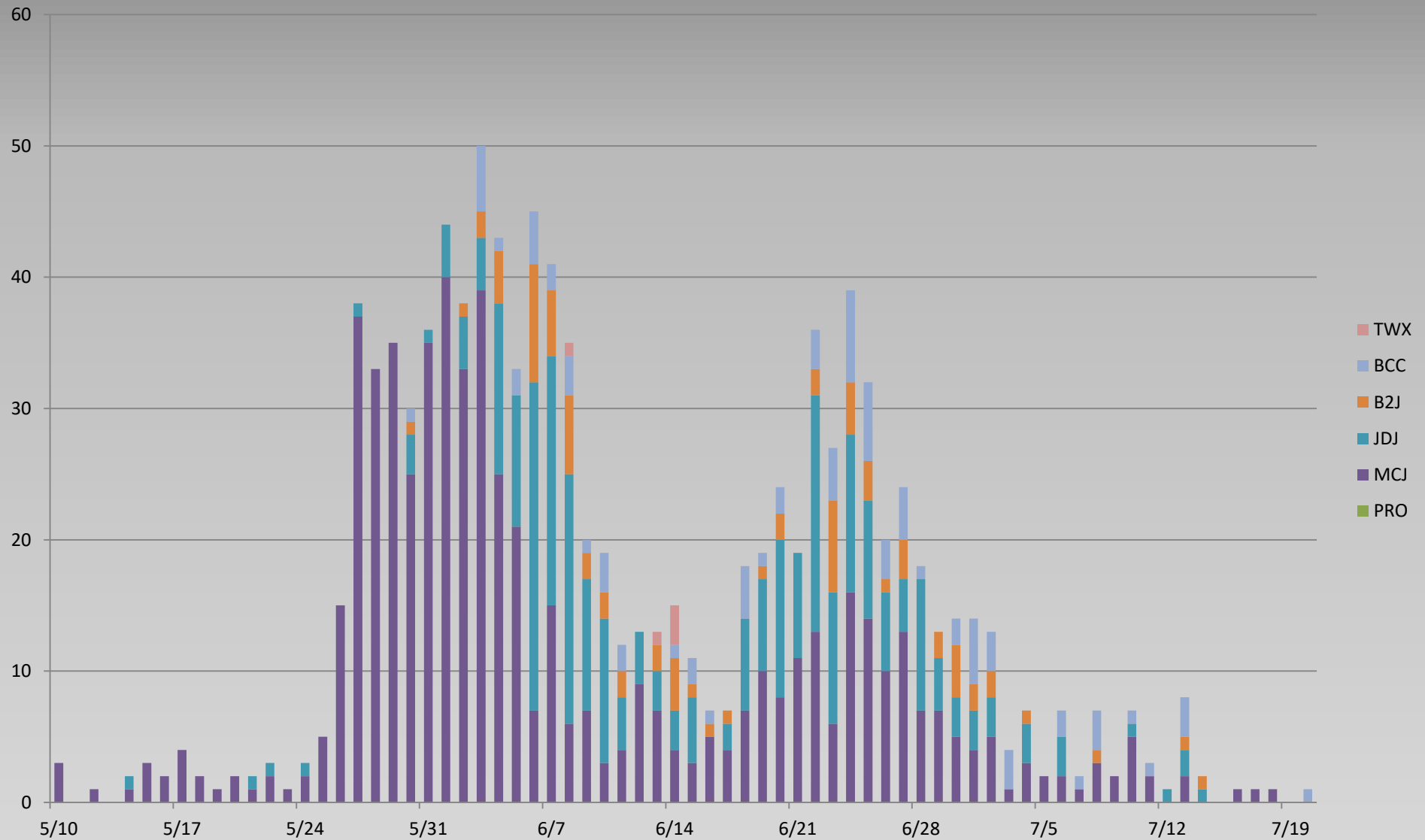
Chinook Releases made in 2008 -2017

Doug Neeley, 2018

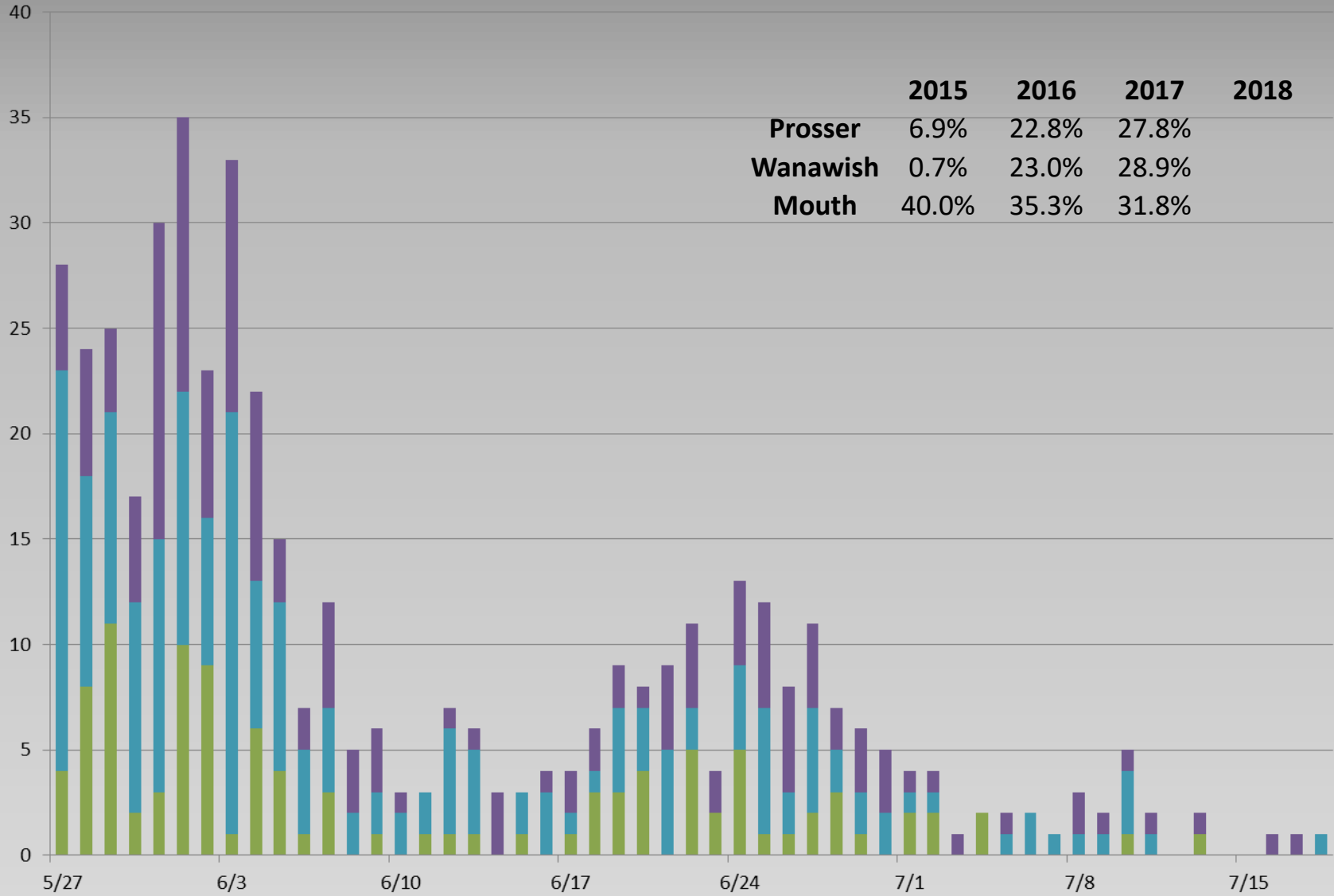
		Release Year													
Age	Measure								2008-2014				2015-2017	Minimum	Maximum
		2008	2009	2010	2011	2012	2013	2014	Pooled	2015	2016	2017	Pooled	2008-2013	2014-2017
Subyearling	Survival	36.0%	26.3%	24.0%	23.6%	30.5%	39.3%	23.7%	30.0%	6.9%	22.8%	20.7%	14.4%	23.6%	22.8%
	Tagged	10,001	7,565	13,685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



2018 Detections of Fall Chinook Subyearling Releases



2018 Detections of Experimental Fall Chinook at McNary by Release Site



Lind, 2018

MOTION: POST-ALARM

Summer Brood Collection

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

C03 2011/07/16-04:17:18

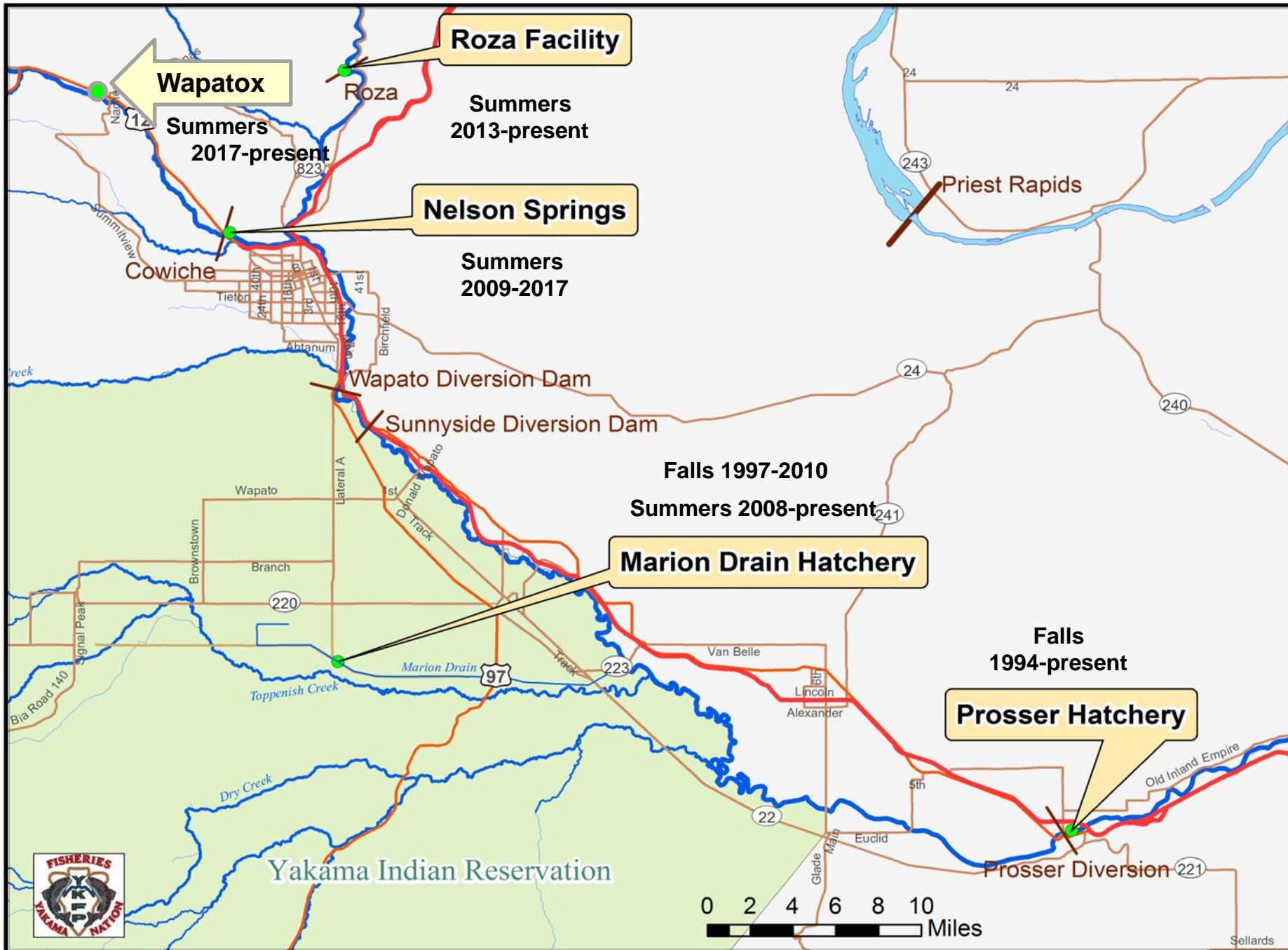
Douglass PUD Wells Hatchery





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

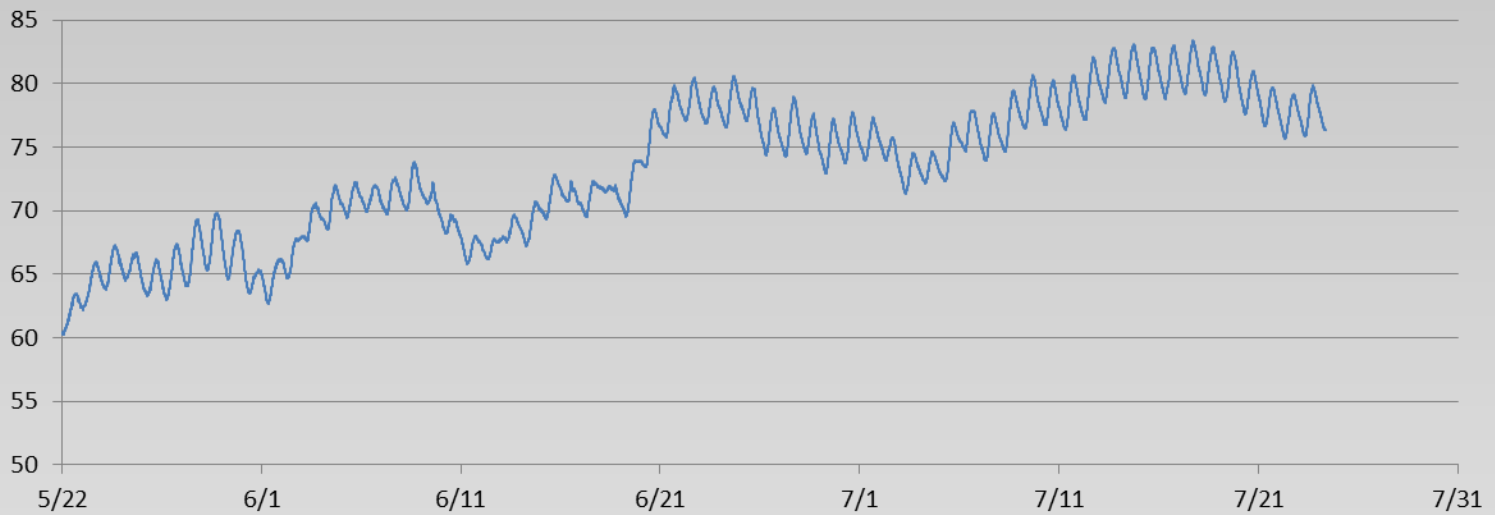
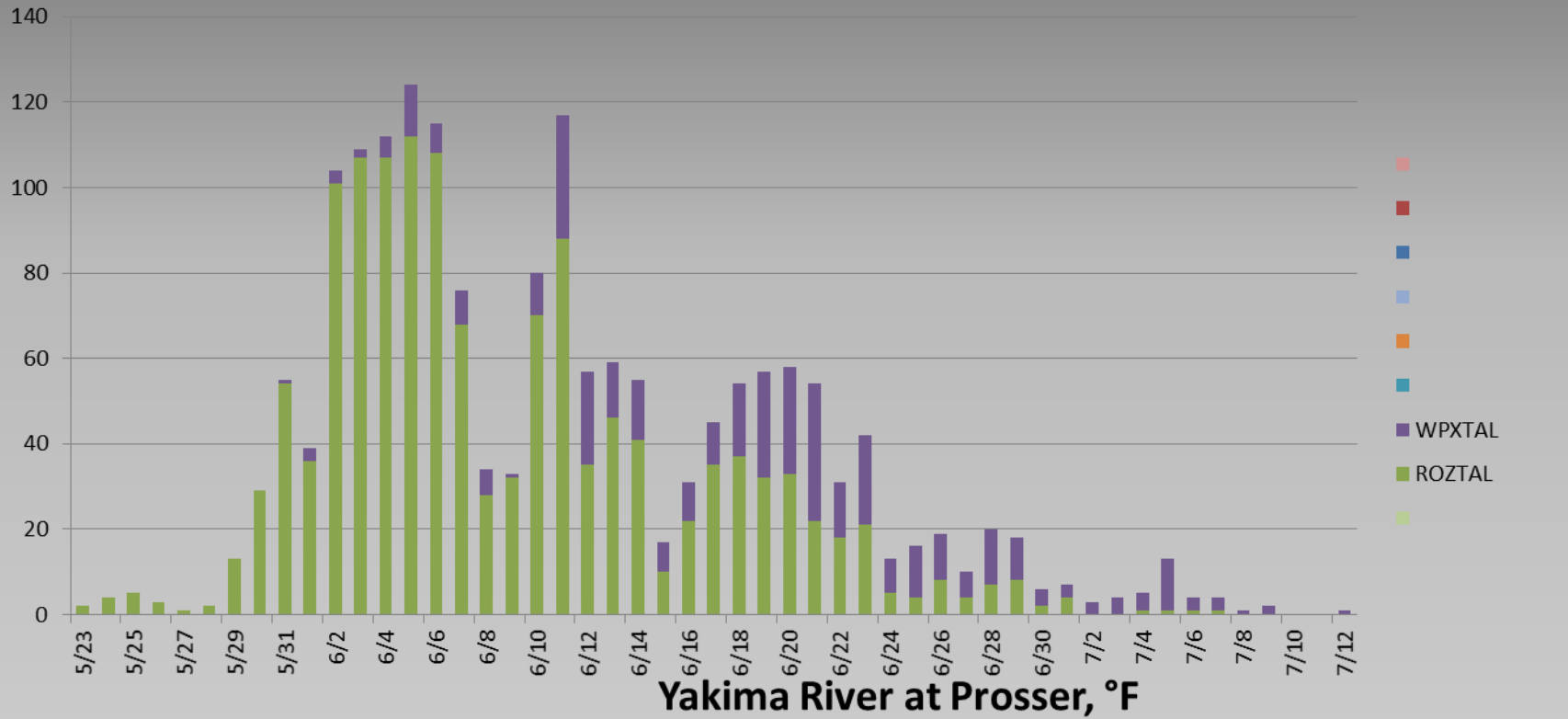
* through May 10.

** After May 10 through May 25

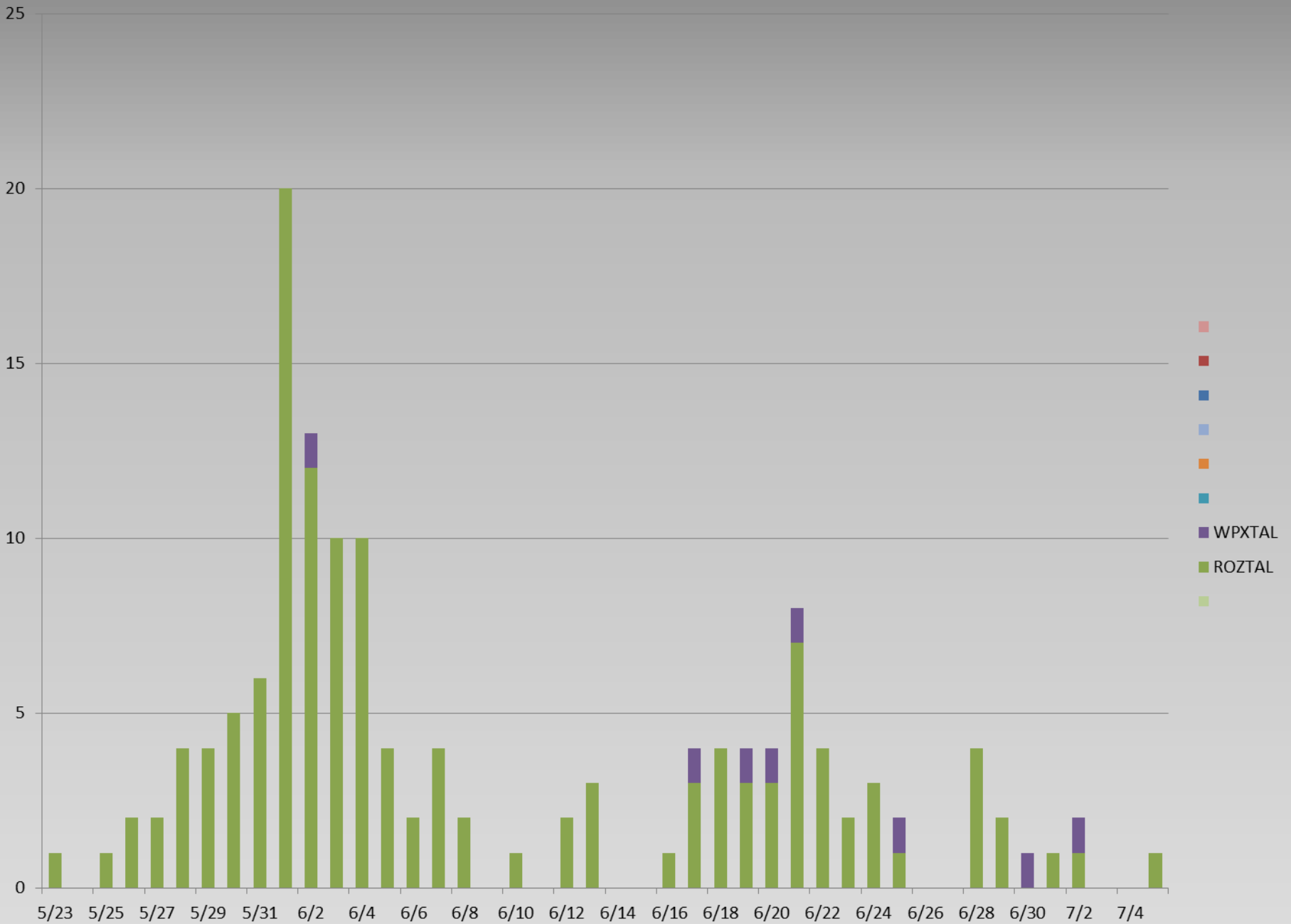
*** After May 25

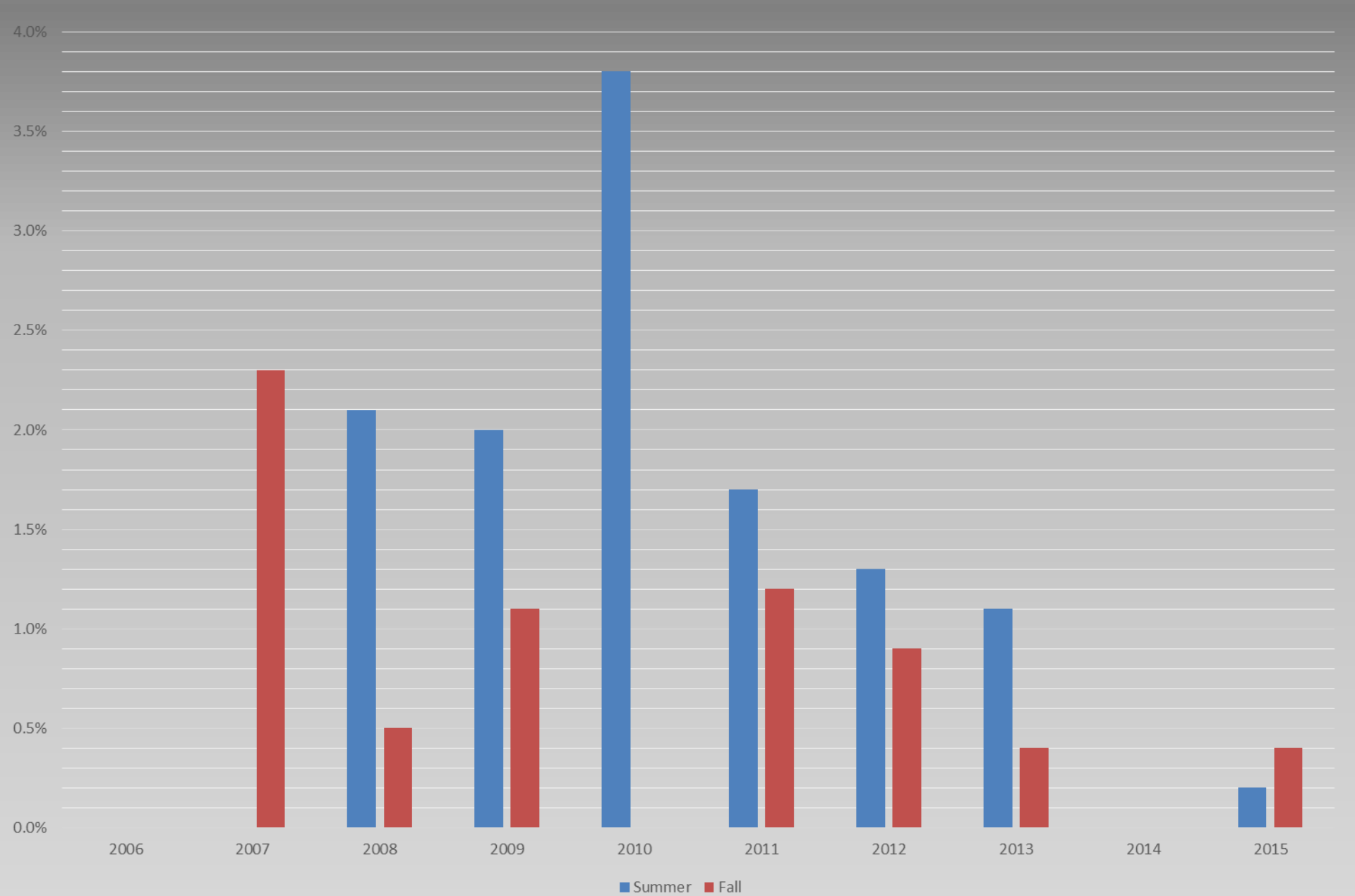
2018 Roza 0.9% and Wapatox 0.1%

2018 Detections of Summer Chinook at Prosser by Release Site



2018 Detections of Summer Chinook at McNary by Release Site





Preliminary McNary Dam smolt to Bonneville Dam adult SAR indices for PIT-tagged summer- and fall-run Chinook released in the Yakima River Basin by brood year and life stage at release, 2006-2015 (PTAGIS query run May 6, 2019) Bosch, 2019

Age composition of returning hatchery-origin PIT-tagged summer and fall-run chinook released in the Yakima subbasin as subyearling or yearling fish (data from PTAGIS query run May 1, 2019).

Brood Year	Age at Return					
	1	2	3	4	5	6
Summer Chinook Subyearlings						
2008	0.0%	12.5%	12.5%	50.0%	25.0%	0.0%
20	0.0%	5.4%	16.3%	63.6%	14.7%	0.0%
2010	1.3%	0.2%	27.2%	60.6%	10.5%	0.2%
2011	0.6%	0.0%	12.0%	67.1%	20.3%	0.0%
2012	3.0%	1.0%	48.5%	39.6%	7.9%	0.0%
2013	0.0%	5.6%	11.1%	77.8%	5.6%	0.0%
Mean	0.8%	4.1%	21.3%	59.8%	14.0%	0.0%

Fall Chinook Subyearlings

2007	2.4%	9.5%	46.8%	34.9%	6.4%
2008	16.7%	11.1%	44.4%	27.8%	0.0%
2009	7.5%	17.5%	37.5%	30.0%	7.5%
2010	75.0%	0.0%	16.7%	4.2%	4.2%
2011	1.1%	11.5%	34.5%	49.4%	3.4%
2012	2.7%	9.5%	59.5%	25.7%	2.7%
Mean	17.6%	9.8%	39.9%	28.7%	4.0%

2019-20 Plans

Su 6/1/13 1:15pm

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

Continue In-basin Subyearling releases at Prosser

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

- Repeat releases at Prosser, below Wannawish and at the Mouth

Sp 6/1/13 1:24pm

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

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

Questions?

