

Yakima River Fall Chinook Supplementation 2005-06

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Objectives

To supplement and enhance the two existing stocks of Yakima River fall chinook, while preserving the stock characteristics and fitness of targeted stocks and keeping ecological and genetic impacts to not-target species within specified limits.



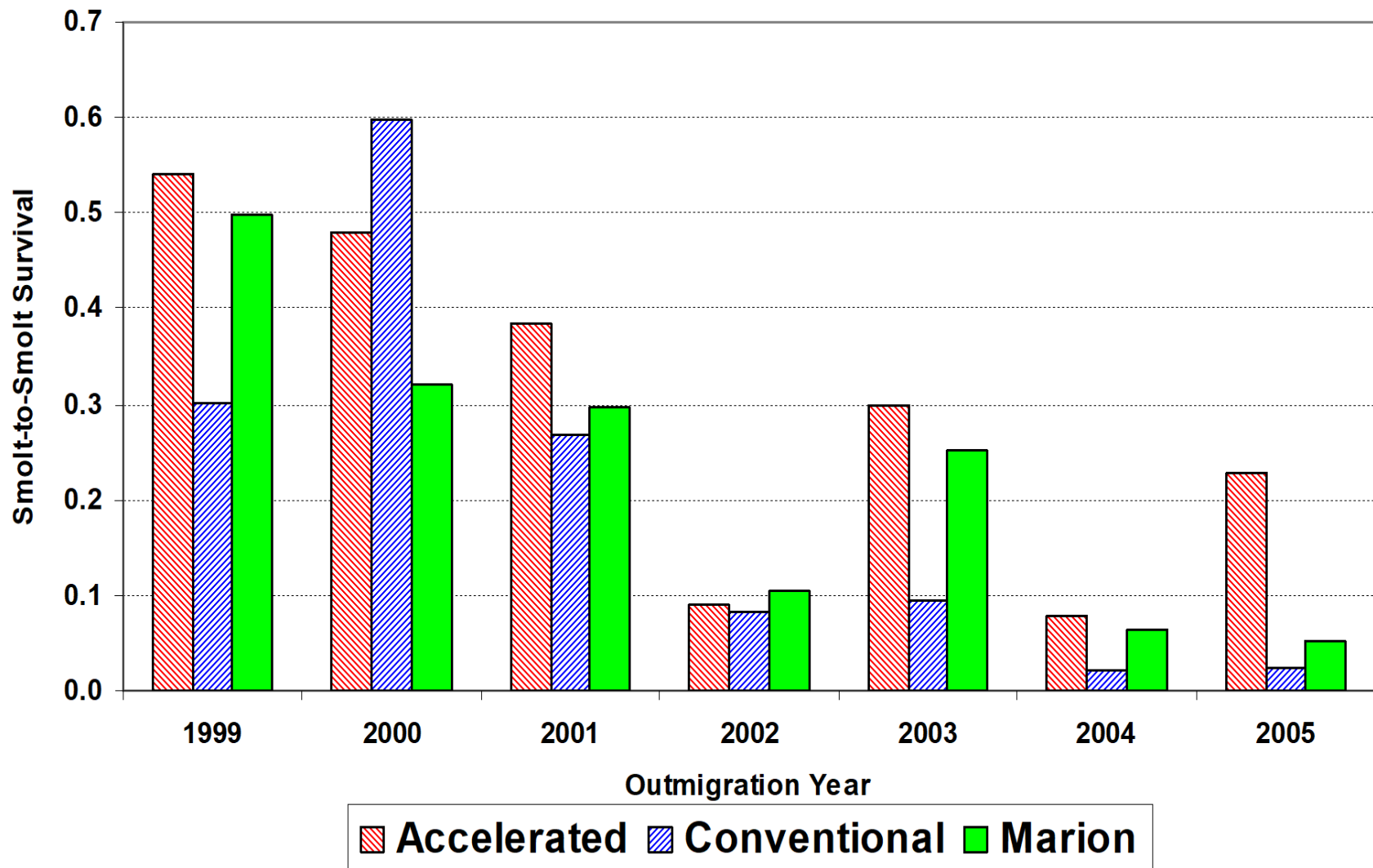
Monitoring and Evaluation

- Hatchery Supplementation to increase Production (1998)
Smolt-Survival via PIT tags
- Redd Surveys-
Yakima Mainstem
Marion Drain
- Radio Tracking (2005)
- Beach Seining Wild Fall Chinook

Smolt-to-Smolt Survival

- 1998 IN-BASIN broodstock@Prosser H
Rearing Treatment Comparison
Conventional vs Accelerated
BY 1998 thru 2004
- Marion Drain
- Monitor smolt out-migration survival at McN *via* PIT
Tags

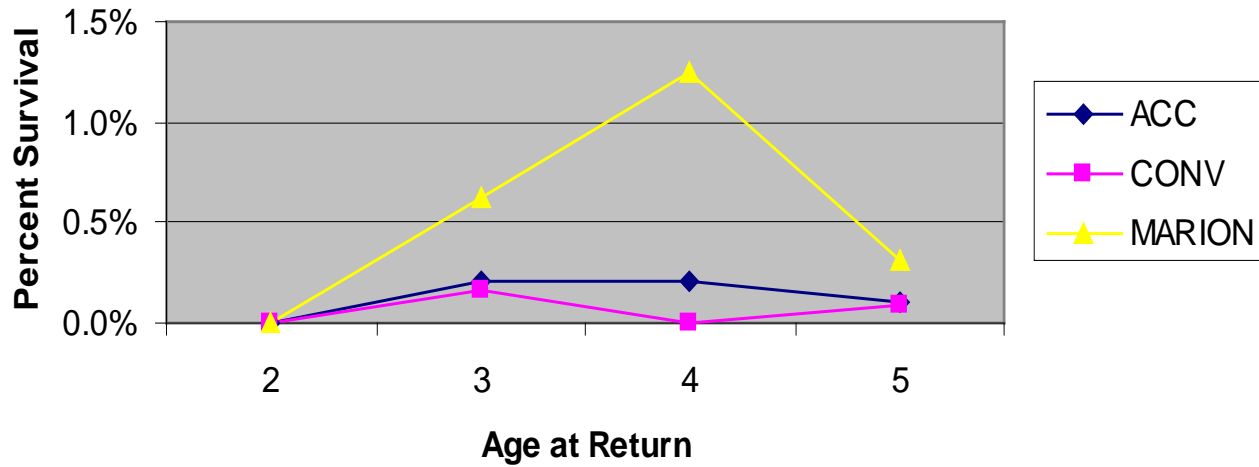
Fall Chinook Survival to McNary Dam



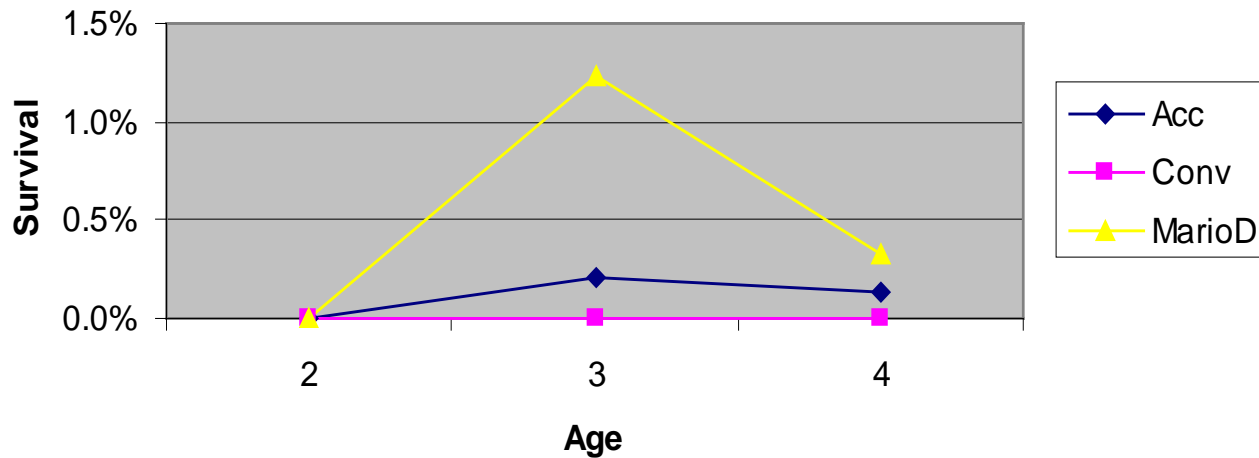
* Brood-years 1998-2004, respectively.

** Main-Stem-Yakima Stock under Accelerated Rearing, Main-Stem-Yakima Stock under Conventional Rearing, and Marion Drain Stock

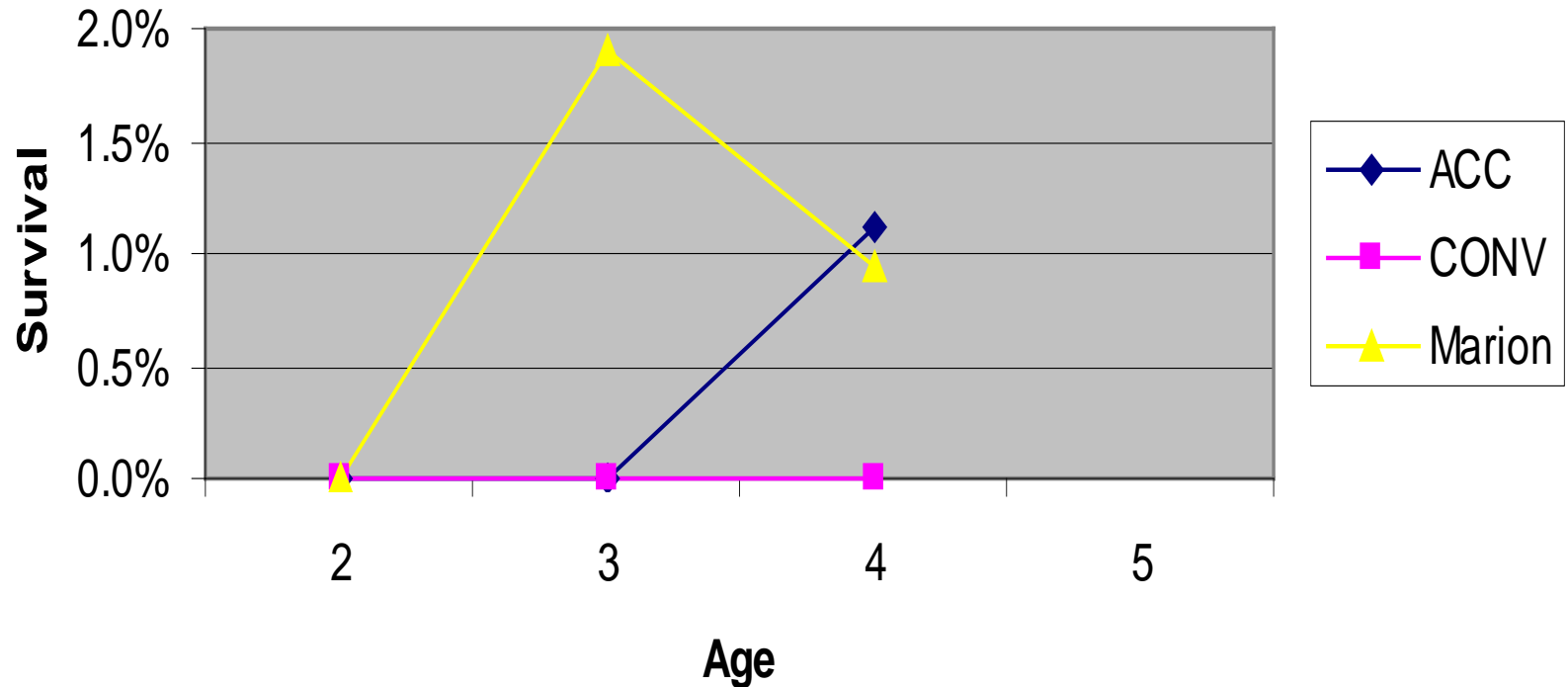
Fall Chinook Adult Returns BY 99 (PIT tags to McNary)



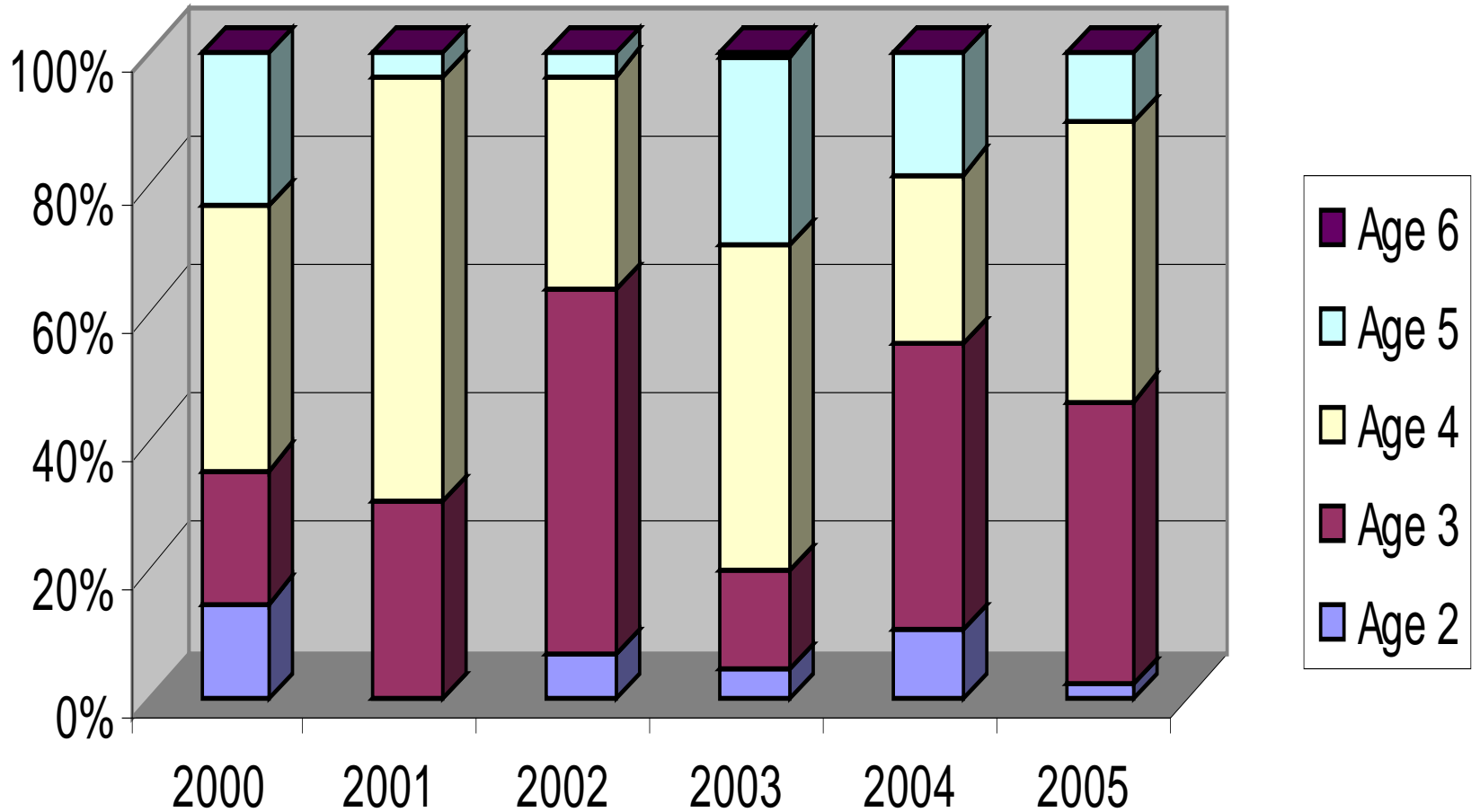
Fall Chinook Adult Returns BY 2000 (PIT tags to McNary)



Fall Chinook Adult Returns BY2001 (PitTags to McN)



Fall Chinook Age Composition 2000-05



Stiles Pond (lower Naches)

2006

~125,000 (19,900)

released 5/10/06

survival to McN: 3.3%

2005

38,890 (4,198)

released 4/19/05

McN: 2.8%

*2006 data preliminary

Out-of-Basin

- 1.7 Million URB's reared at LWH
and acclimated @Prosser H

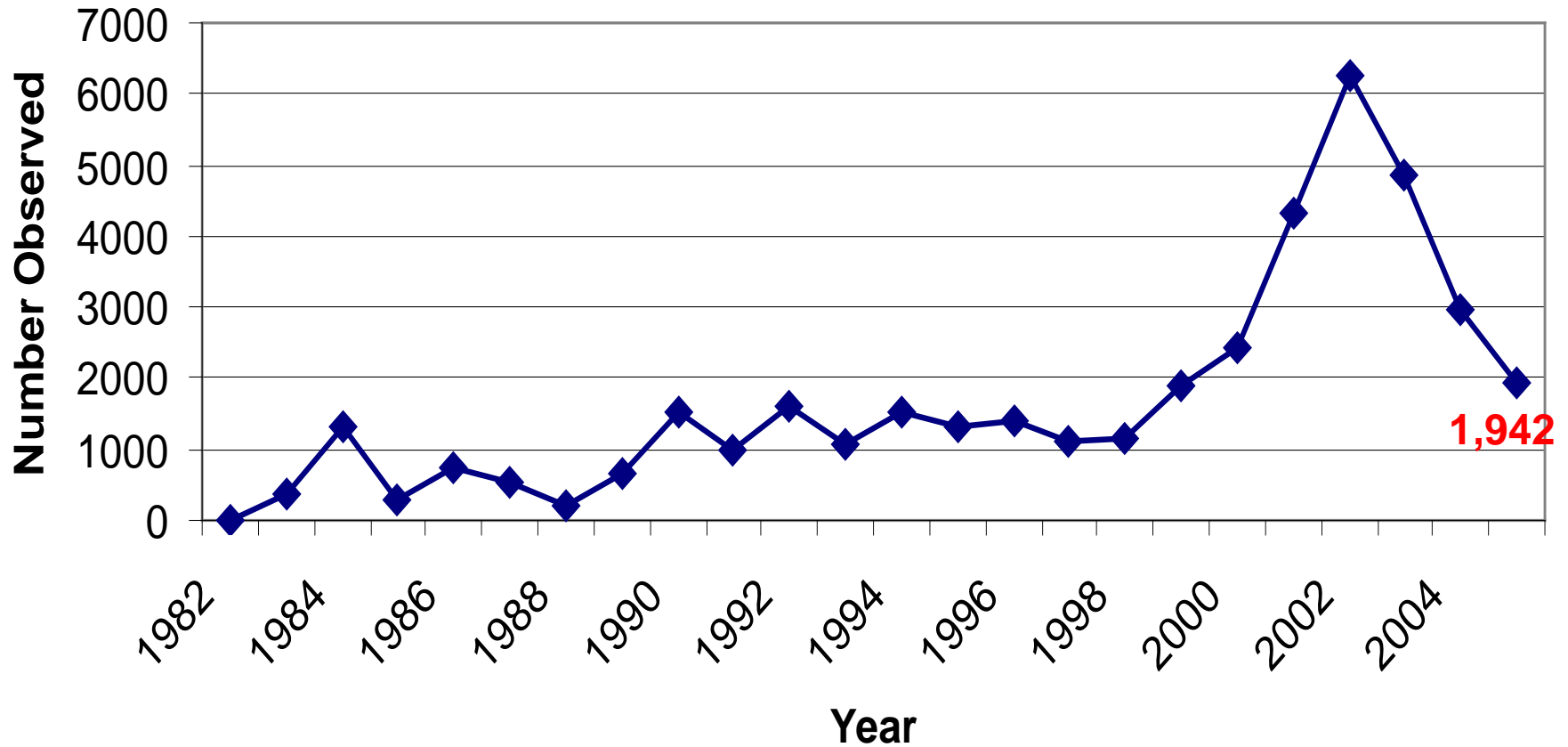
Mitchell Act Mitigation

2005 Adult Fall Chinook

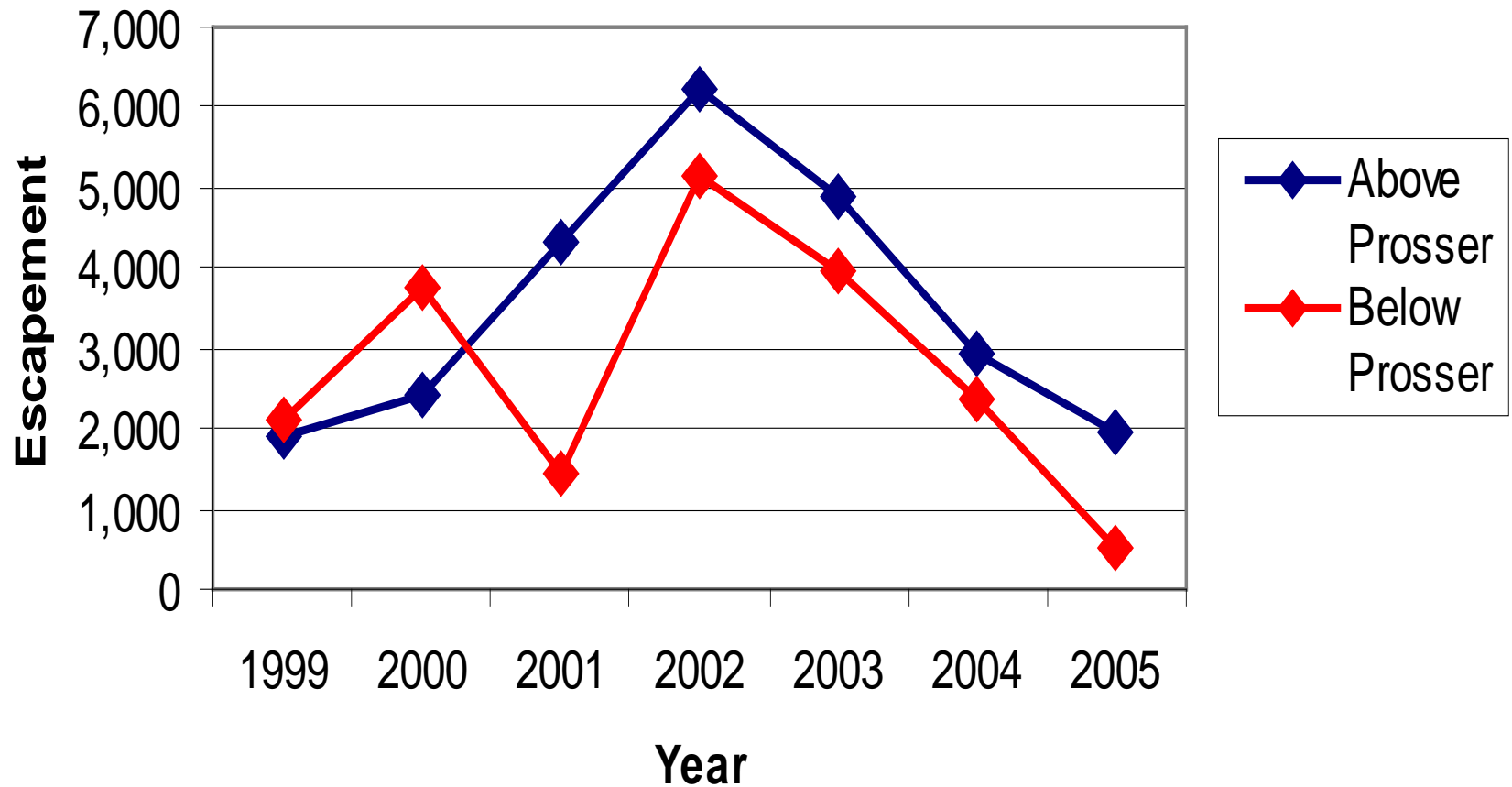


Yakima River Fall Chinook above Prosser Dam

(10-yr average: 1985-95=948 and 1995-2005=2,686)



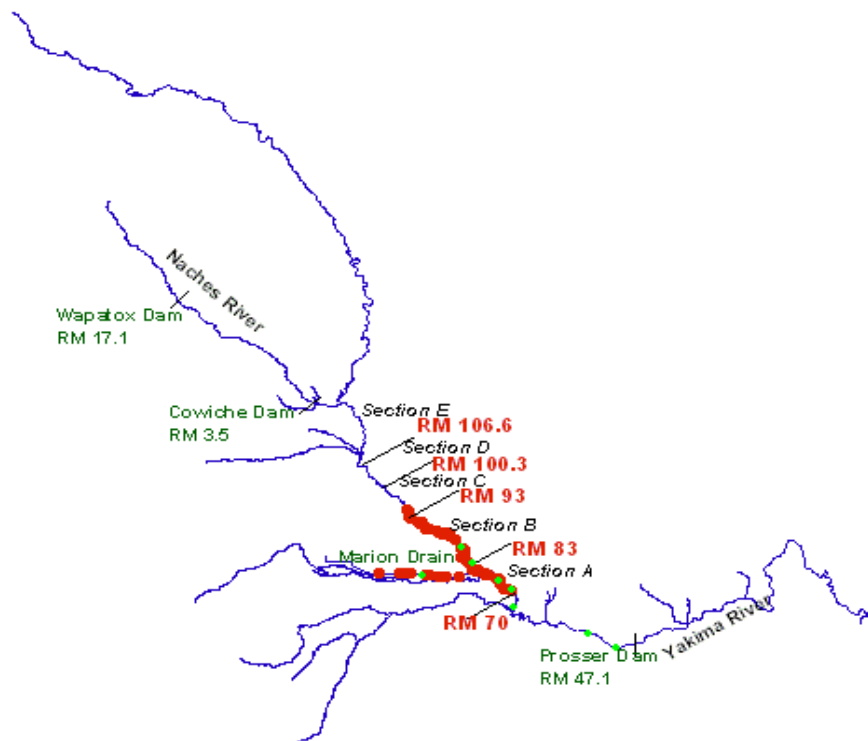
Yakima River 7-Year Fall Chinook Escapement



Radio Tags

- 25 Fall Chinook at the Denil (RM 47.1)





2005 Redd Counts below Prosser

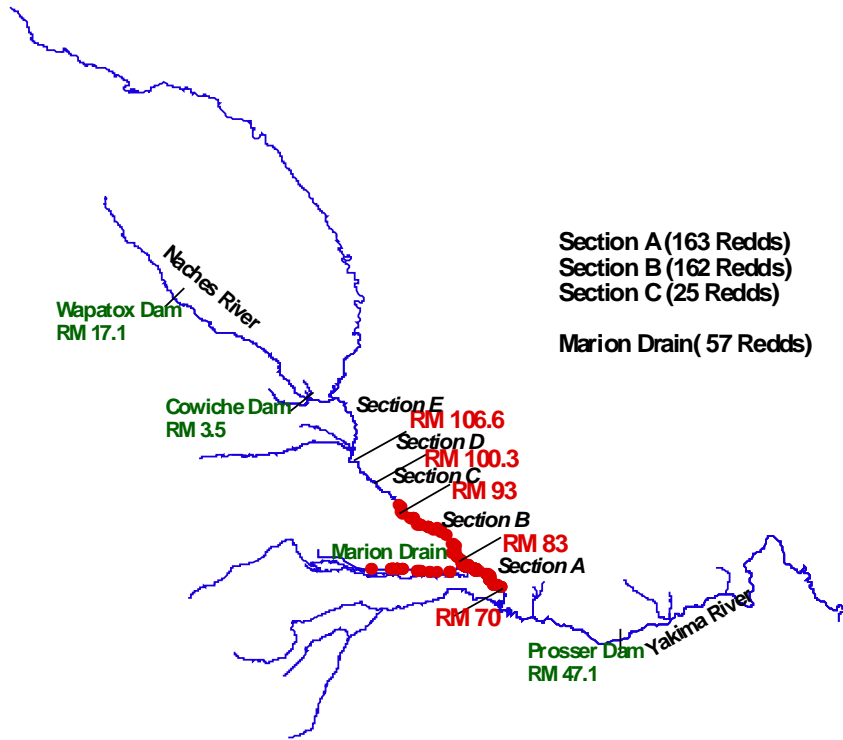
- 2,440 Escapement to Yakima R
87% Spawned above Prosser Dam
- Yakima R. below Prosser- 60 Redds
 - 93% (56) Prosser to Chandler
 - 3% (2) Chandler to Benton
 - (0) Benton to Horn Rapids
 - 3% (2) Horn Rapids to Mouth

(WDFW, Hoffarth 2006)

2005 Redd Surveys above Prosser

- 1,942 over Prosser Dam
- Yakima River- 350 Redds
 - 47% Emerald Rd to Granger (RM70-83)
 - 46% Granger to JoeJays (RM83-95)
 - 7% JoeJays to Donald (RM95-100)
 - 0% Union Gap
- Naches River- 0 reds
 - Wapatox Dam to Cowiche Dam

2005 Fall Chinook Redd Locations



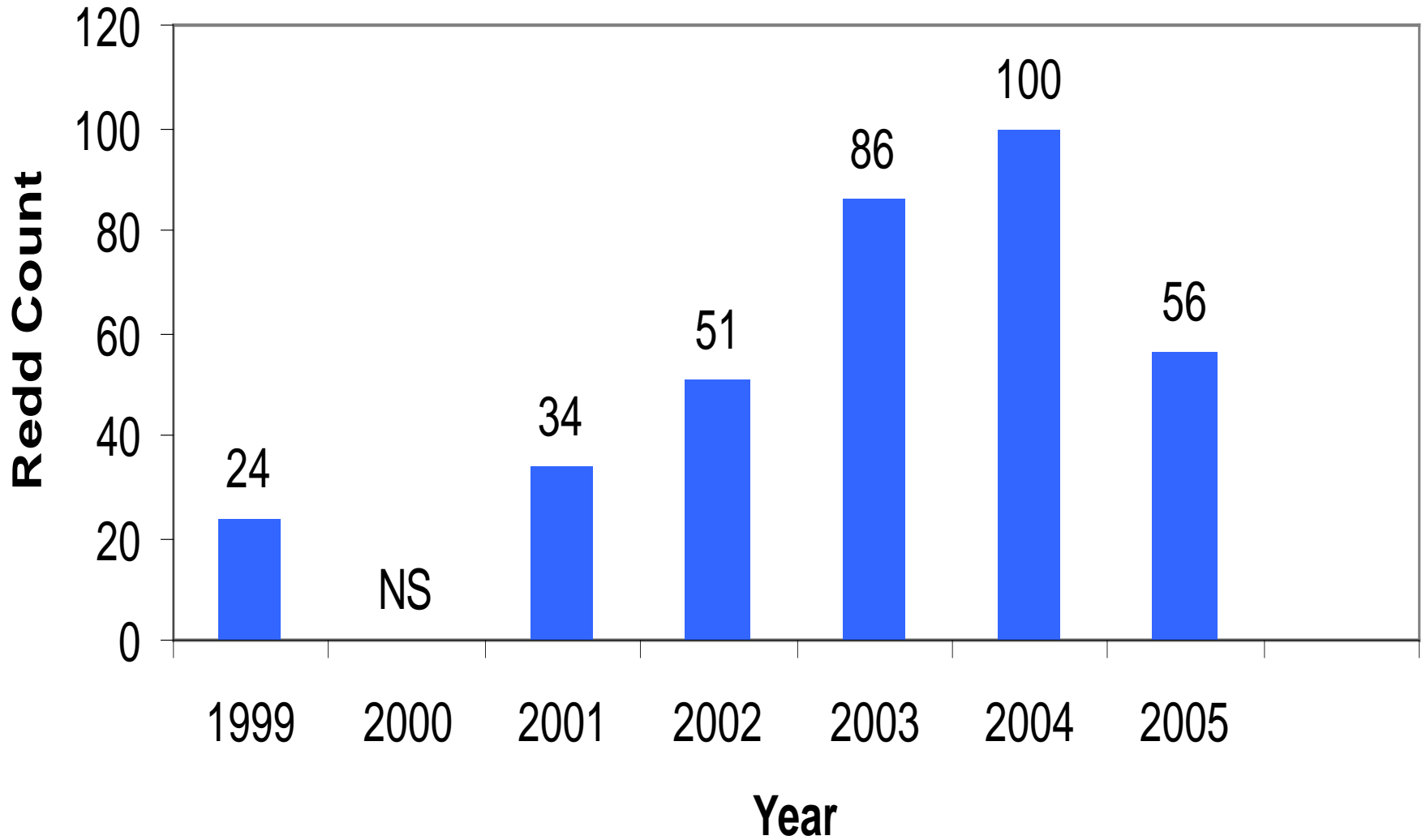


➤ **Marion Drain- 56 redds**

39% below Hwy 97

61% above Hwy 97

Marion Drain Fall Chinook

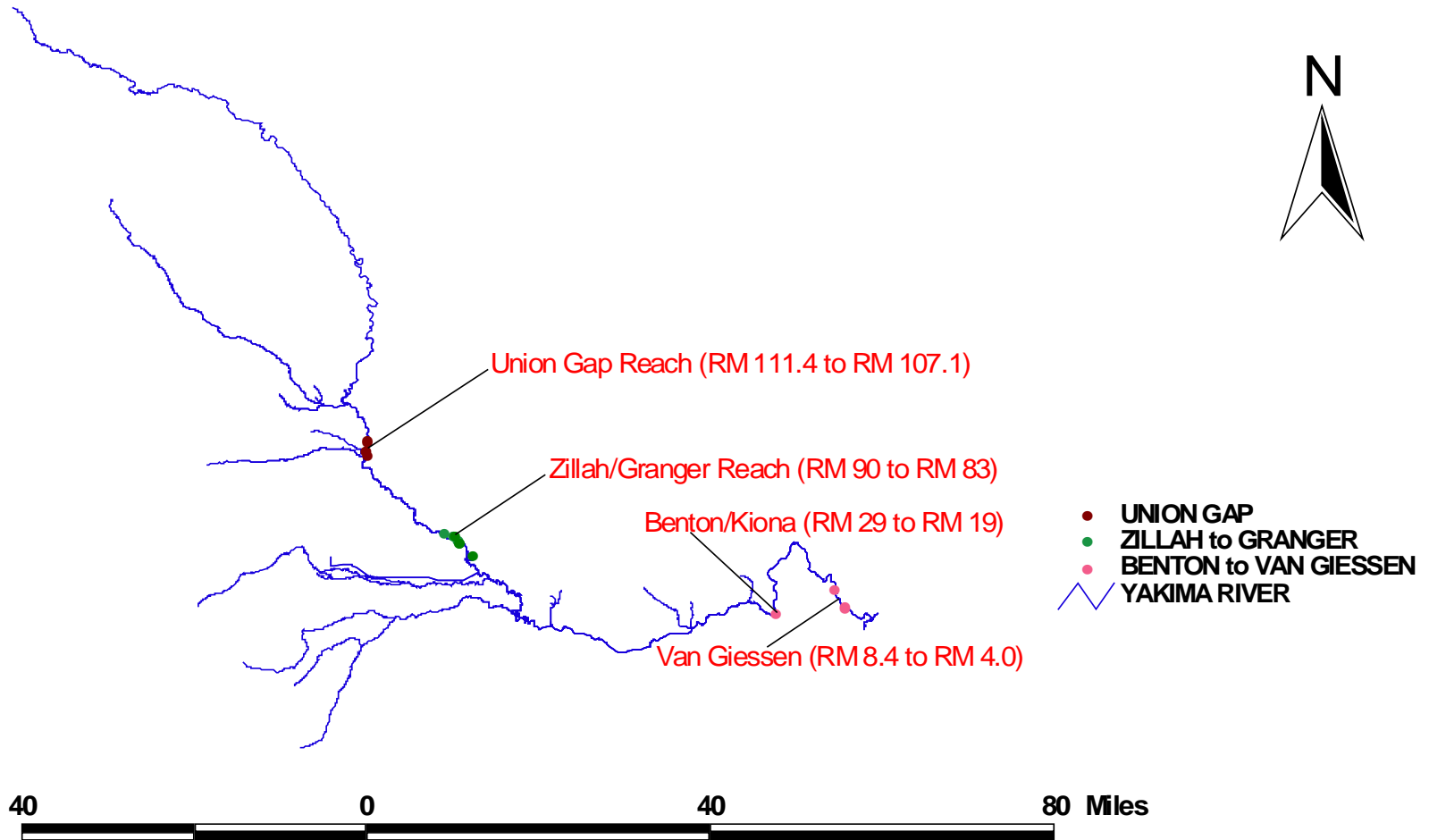


BeachSeine April/May

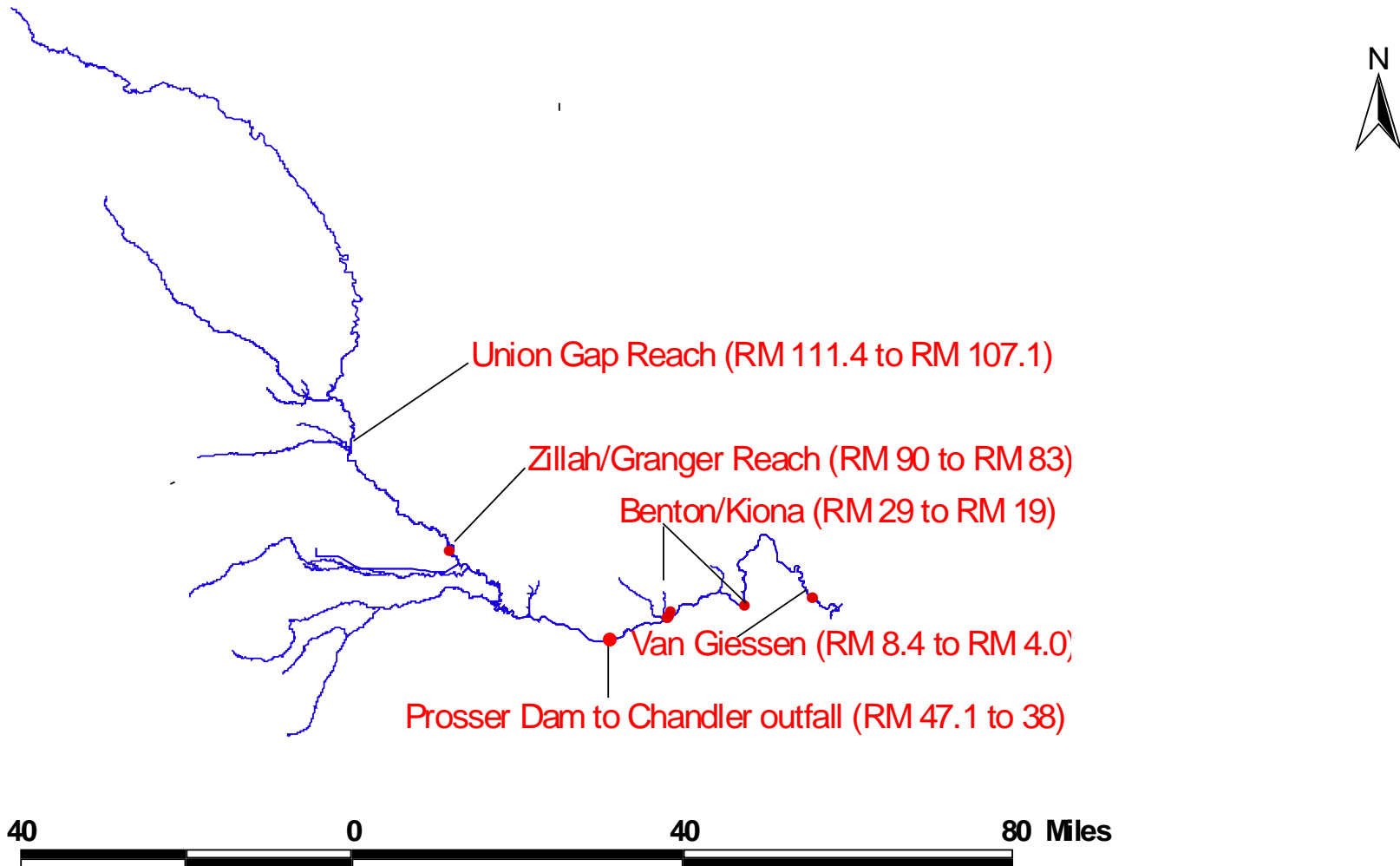
- 1) Observe timing and survival rates of wild fall chinook smolts emigrating *above* Prosser Dam (Union Gap and Granger) and below Prosser Dam (Benton/Kiona and VanG)
- 2) Observe how Hatchery releases compare to Wild releases.



2005 Beach Seine Sites



2005 Beach Seine Sites

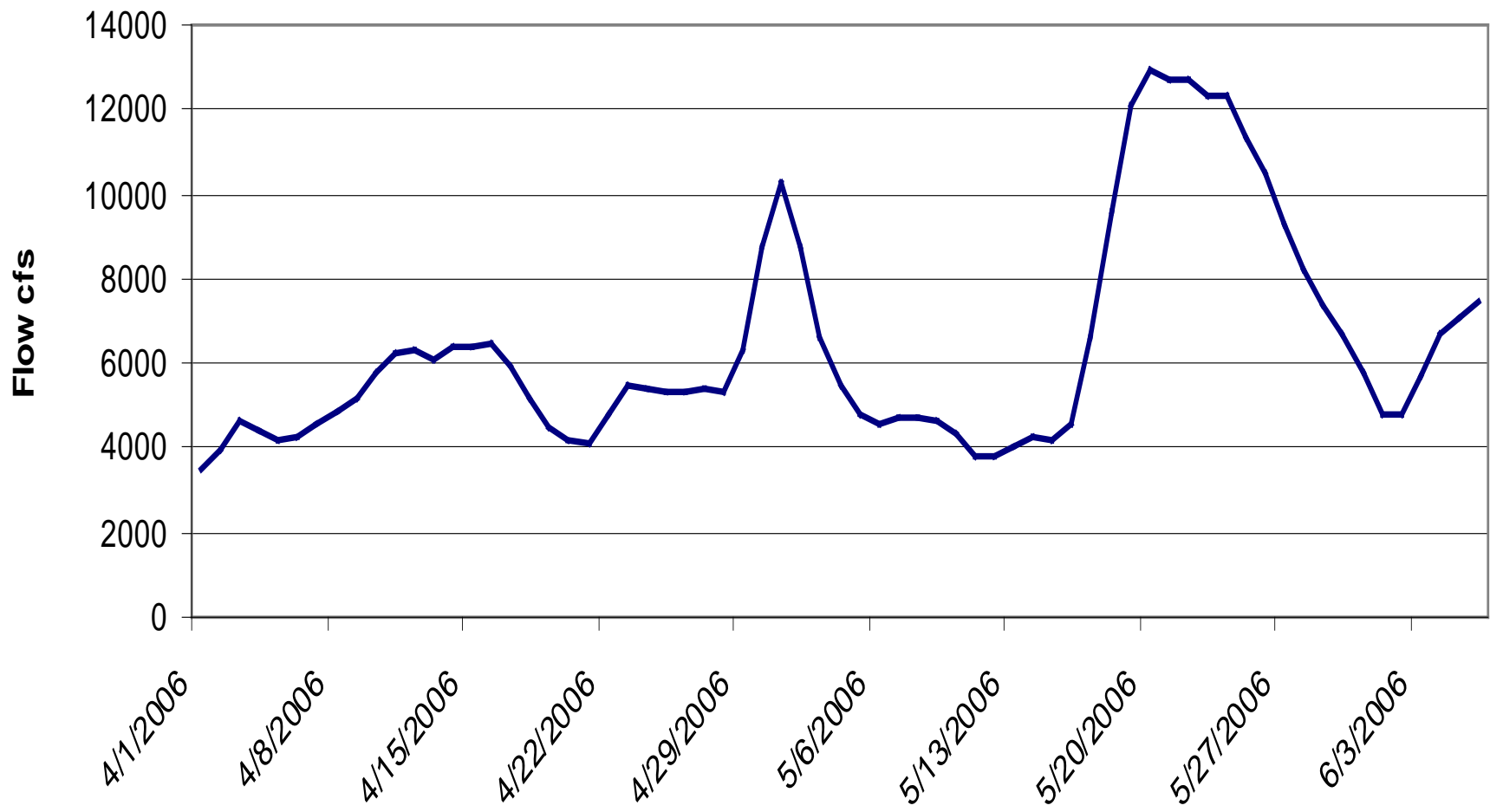


2005 Wild Fall Chinook



<u>REACH</u>	2006		2005		2004	
	N	#PIT	N	#PIT	N	#PIT
Benton/VanG	211	80	3,182	108	1,517	181
Zillah/Granger	401	19	2,389	293	3,567	125
Union Gap	----	----	262	33	160	0

2006 Flow at Prosser Dam

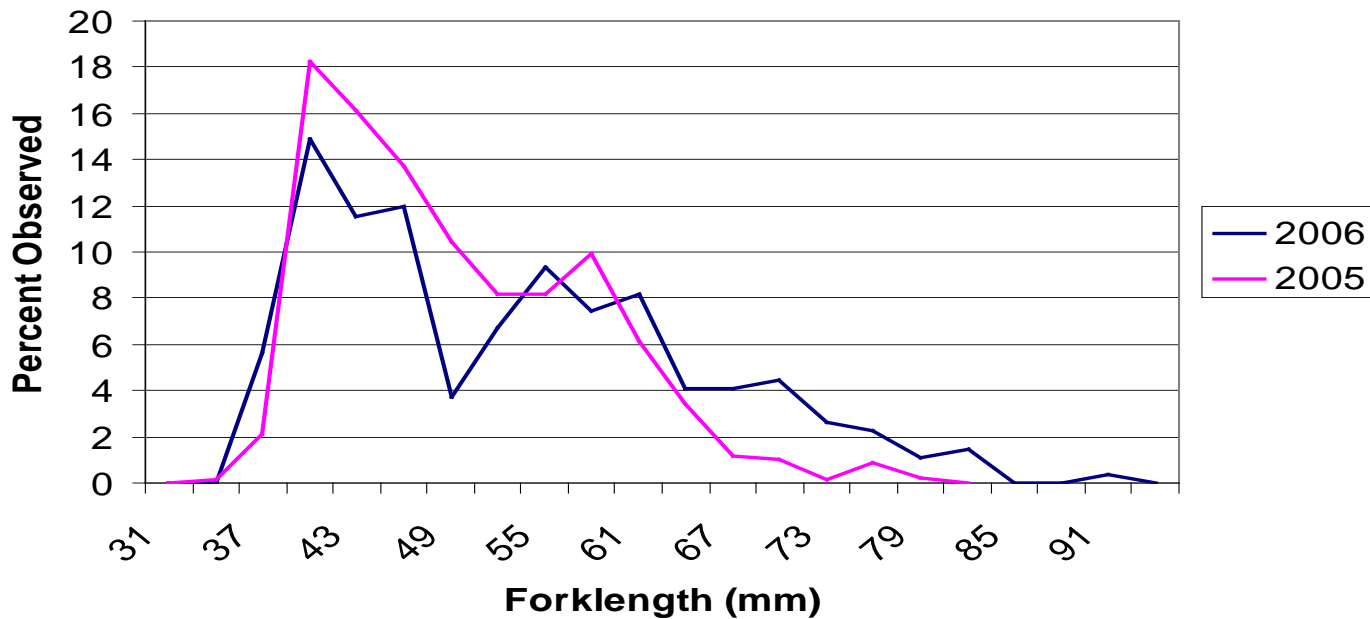


Survival to McNary

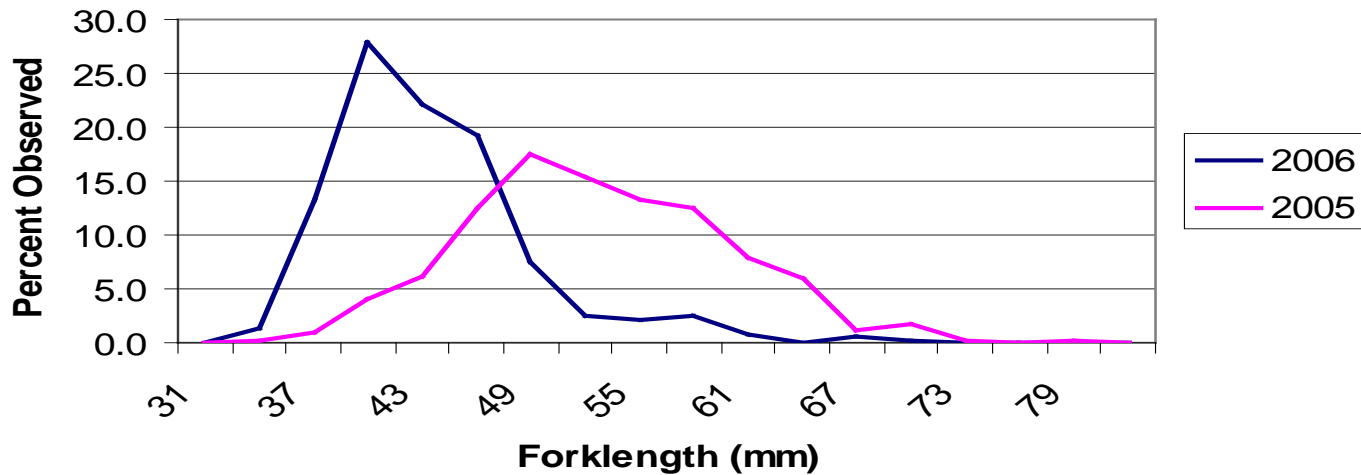
<u>REACH</u>	<u>2006</u>	<u>2005</u>	<u>2004</u>
VAN	35%	22%	53%
GRA	ND	ND	ND
GAP	----	ND	ND

*2006 data is preliminary

Wild Fall Chinook April 2005-06



Wild Fall Chinook May 2005-06 (granger reach)



2006-07 Plans

- Continue to Acclimate Fall Chinook at the Prosser and Marion Drain Hatcheries.
- Acclimate at Stiles Pond in 2006.
- Continue to Beach Seine Wild Fall Chinook.
- Redd Surveys.
- Continue to Radio Tag Returning Adults at the Prosser Denil.

Acknowledgements

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