

Okanogan Basin Monitoring & Evaluation Program (OBMEP)



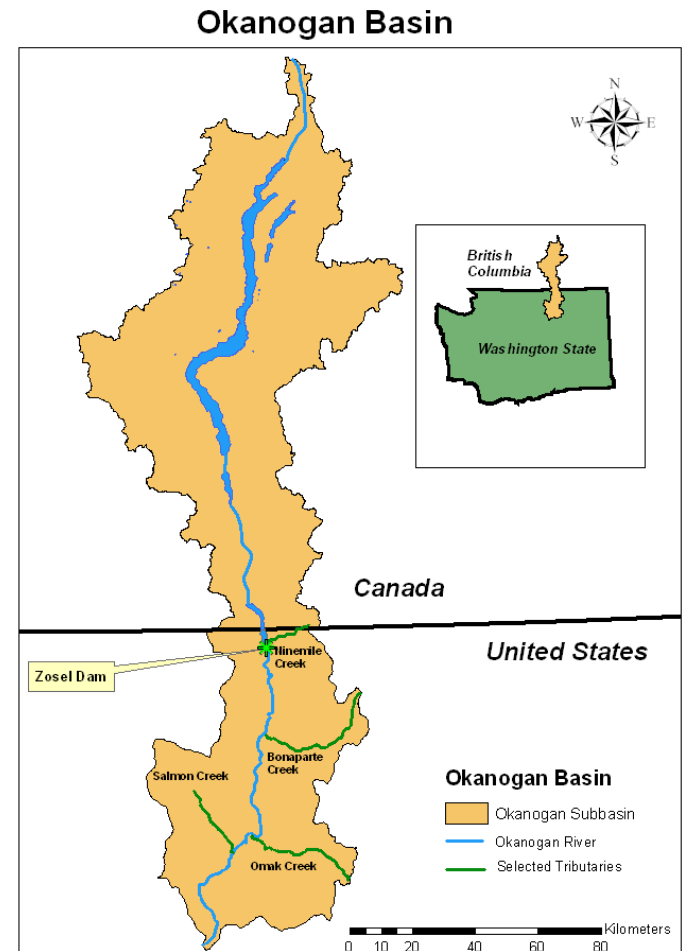
Presentation by:
Brian Miller, Mary Davisson, Dennis Papa
Colville Tribes F&W Department
Delivered on 2/24/2010



Introduction

- OBMEP is responsible for monitoring and evaluating changes in status and trends of populations and habitats for anadromous fish within the Okanogan Basin.
- Additional information and reports can be found at:

<http://nrd.colvilletribes.com/obmep>
(Google: OBMEP)



Presentation Overview



- ❑ 2009 Okanogan steelhead escapement estimate
 - Redd surveys
 - Adult trap/weir counts
 - Zosel Dam and tributary video

- ❑ Video counts at Zosel Dam, 2009

- ❑ Relative smolt abundance estimates
 - 2009 RST results

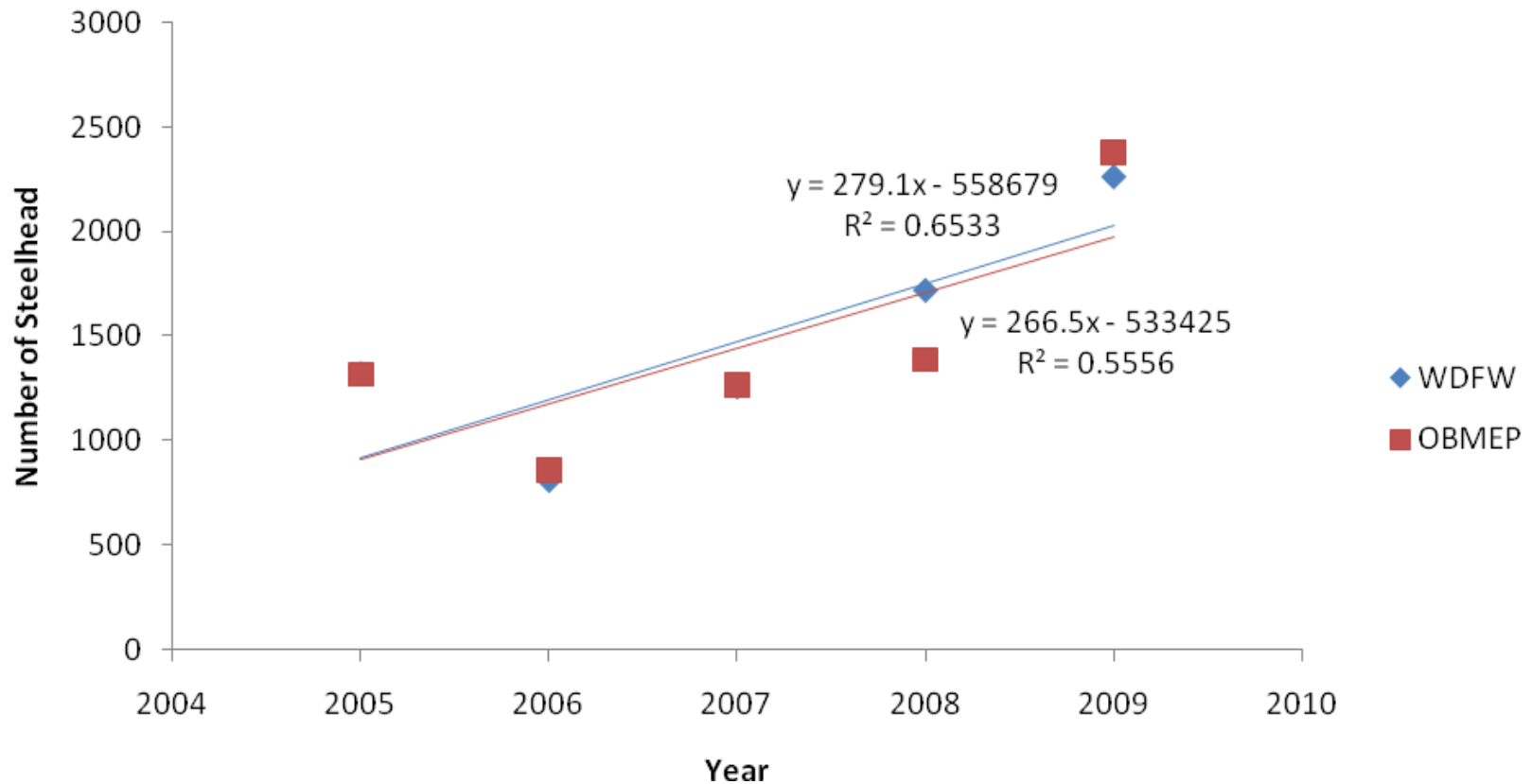
2009 Steelhead Estimate

Okanogan River summer steelhead spawner population trend data				
Year	WDFW escapement estimate	OBMEP spawner survey estimate		
		Low	Mean	High
2005	1,322	1,147	1,315	1,482
2006	811	779	855	930
2007	1,258	1,234	1266*	1,280
2008	1,720	1,341	1,386	1,436
2009	2,263	2,269	2,382	2,474

* Contains estimated mainstem reach data rather than empirical data as in other years.

Steelhead Escapements

Okanogon River Steelhead Spawner Trend



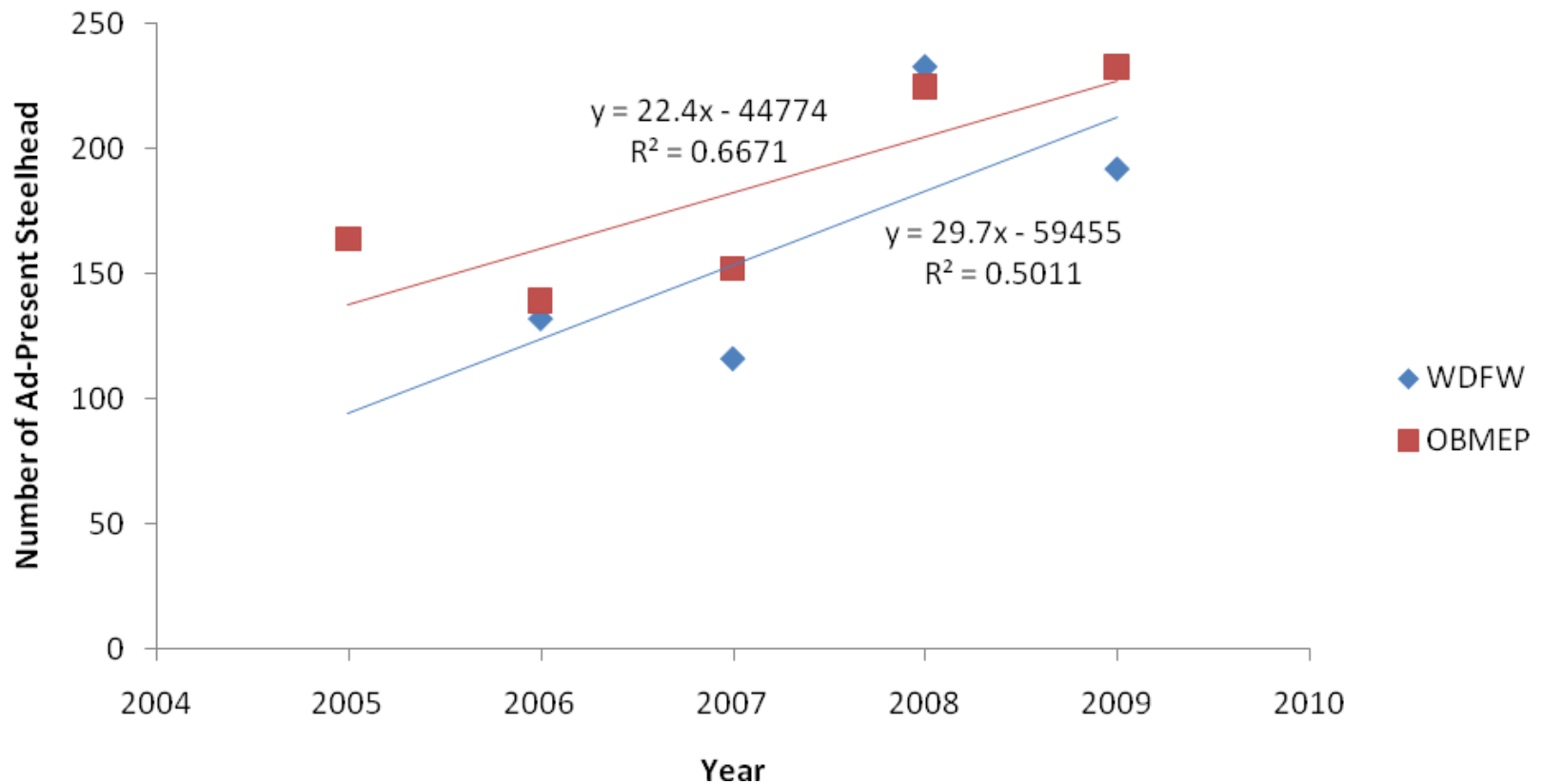
2009 Wild Steelhead Estimate

Okanogon River wild summer steelhead spawner population trend data				
Year	WDFW escapement estimate	OBMEP spawner survey estimate		
		Low	Mean	High
2005	N/A	143	164	185
2006	132	127	139	151
2007	116	148	152*	155
2008	233	213	225	266
2009	192	199	233	262

* Contains estimated mainstem reach data rather than empirical data as in other years.

Ad-present Steelhead Escapements

Okanogon River Wild Steelhead Spawner Trend



Zosel Dam Video Counts

□ Project Objectives

- Enumerate salmonids passing key Okanogan Basin locations in order to document local populations

□ Project Goals

- Obtain reliable counts of Okanogan River salmonids passing Zosel Dam and entering key tributaries
- Provide baseline census data useful for assessing natural production trends

Okanogan Basin Video Sites

- Mainstem Okanogan River

- Zosel Dam

- Okanogan Tributaries

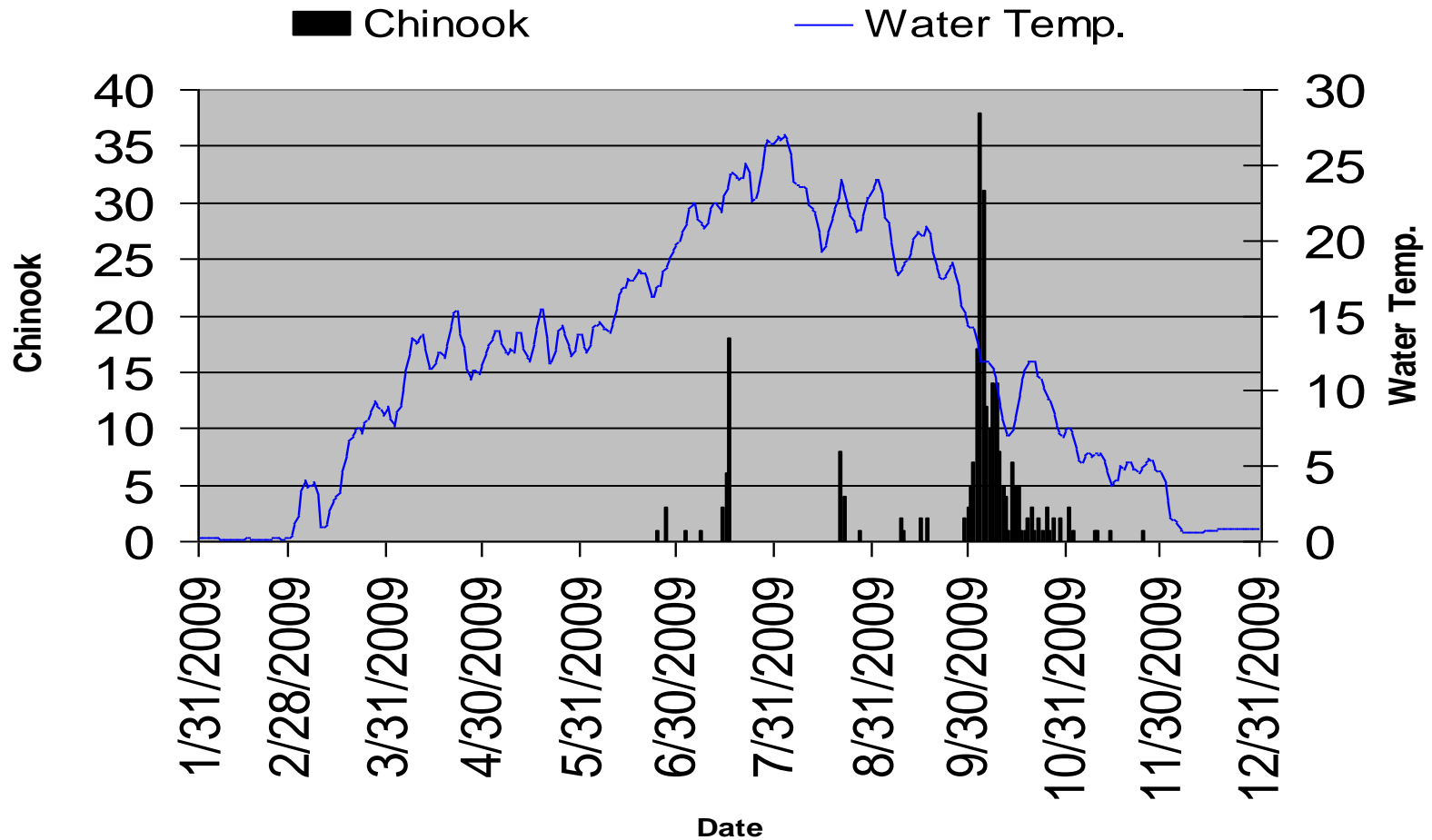
- Ninemile Creek
- Antoine Creek
- Salmon Creek



2009 Brood-Year Steelhead, Zosel

Year	Month	Ad-Clipped	Ad-Present	Total
2008	July	0	1	1
	August	2	0	2
	September	0	1	1
	October	0	2	2
	November	0	1	1
	December	5	1	6
2009	January	0	0	0
	February	0	0	0
	March	0	1	1
	April	345	52	397
	May	17	6	23
	June	2	1	3
	Total	371	66	437

Chinook Passage, Zosel Dam



Chinook Passage, Zosel Dam

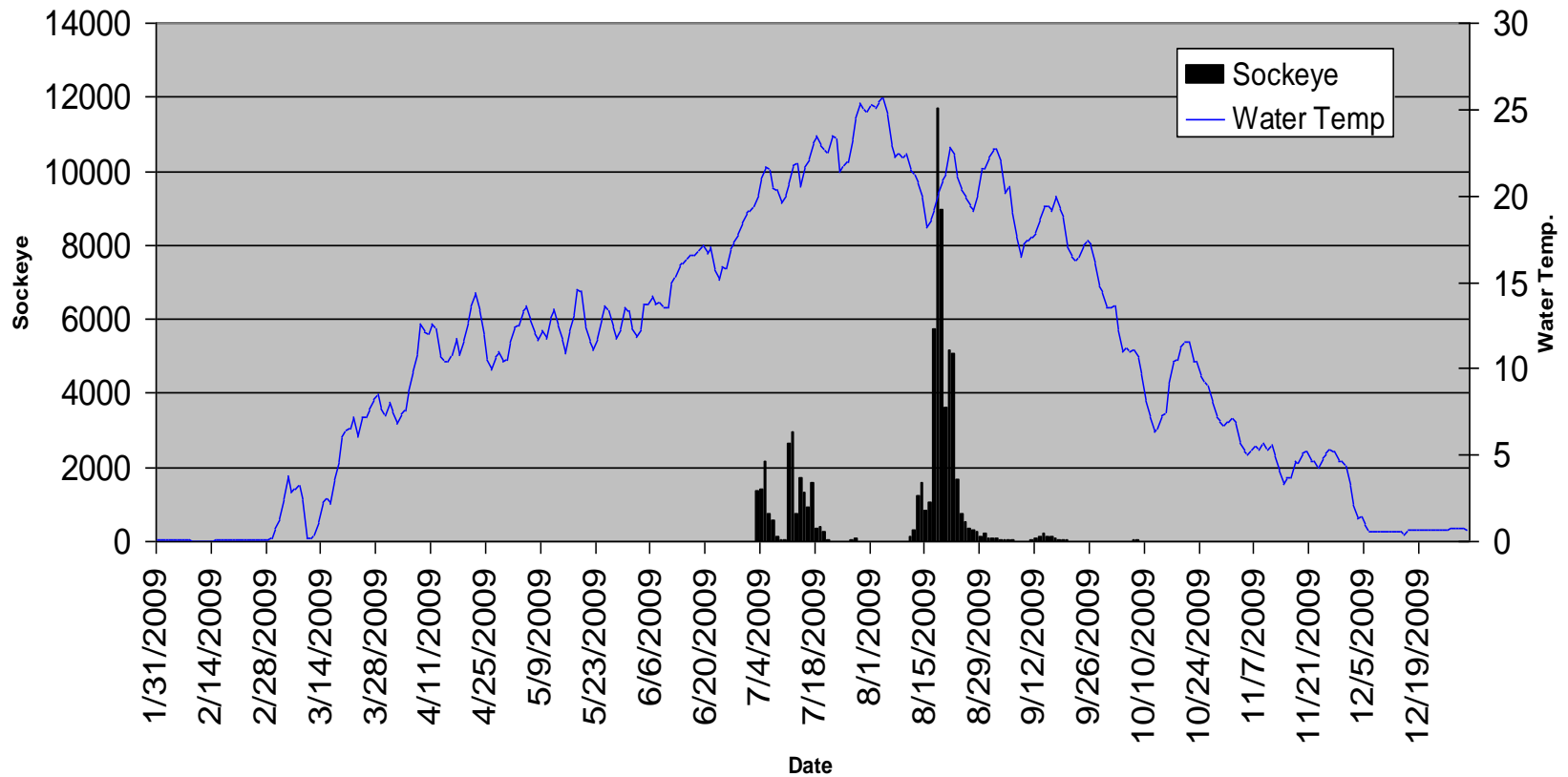
Zosel Chinook Count

2006 Total	481
2007 Total	454
2008 Total	328
2009 total	256



Sockeye Passage, Zosel Dam

2009 Sockeye Zosel Passage



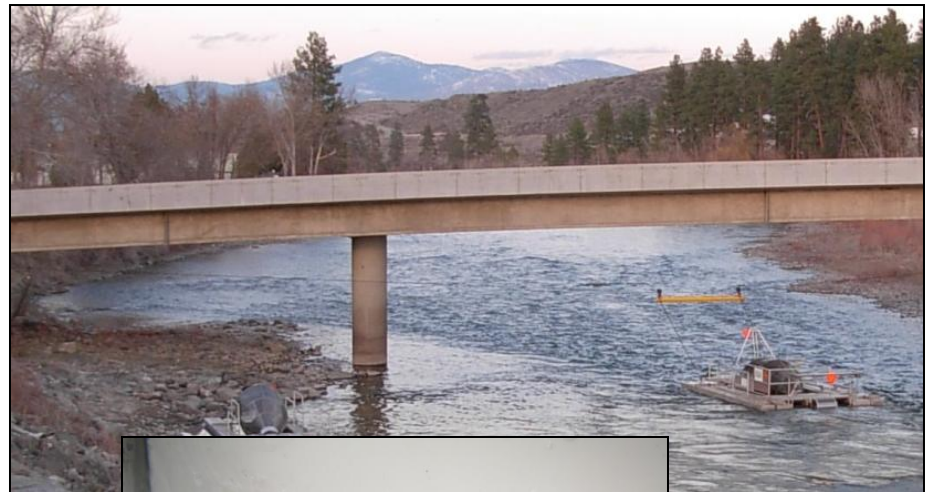
Sockeye Passage, Zosel Dam

	Zosel Sockeye Count	Wells Sockeye Count
2006 Total	19,245	22,075
2007 Total	17,708	22,273
2008 Total	77,533	165,334
2009 Total	61,400	134,937



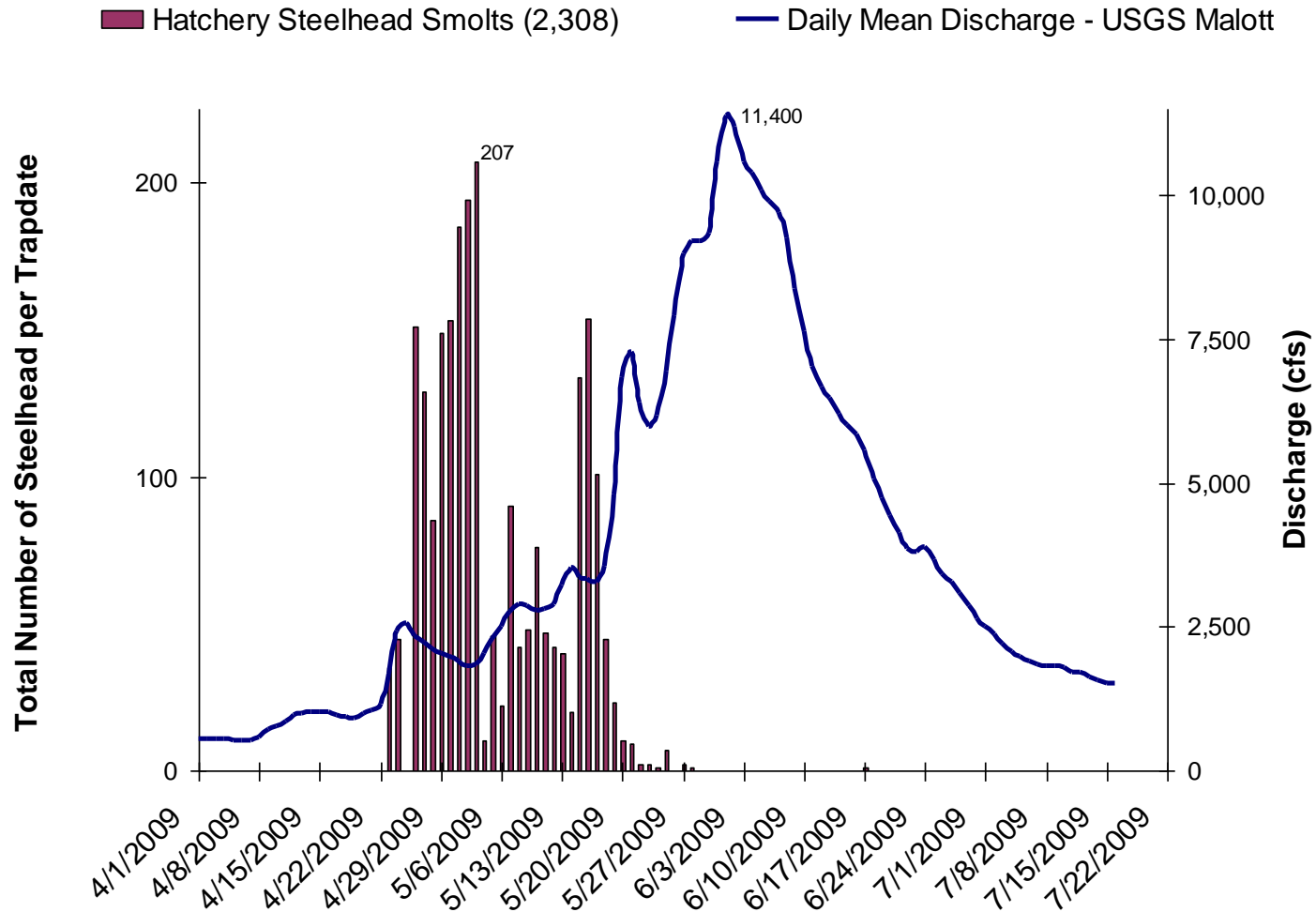
2009 Okanogan Smolt Trapping

- Okanogan River
 - Hwy 20 Bridge
Okanogan, WA
- Dates of operation
 - Mar 28 – July 3



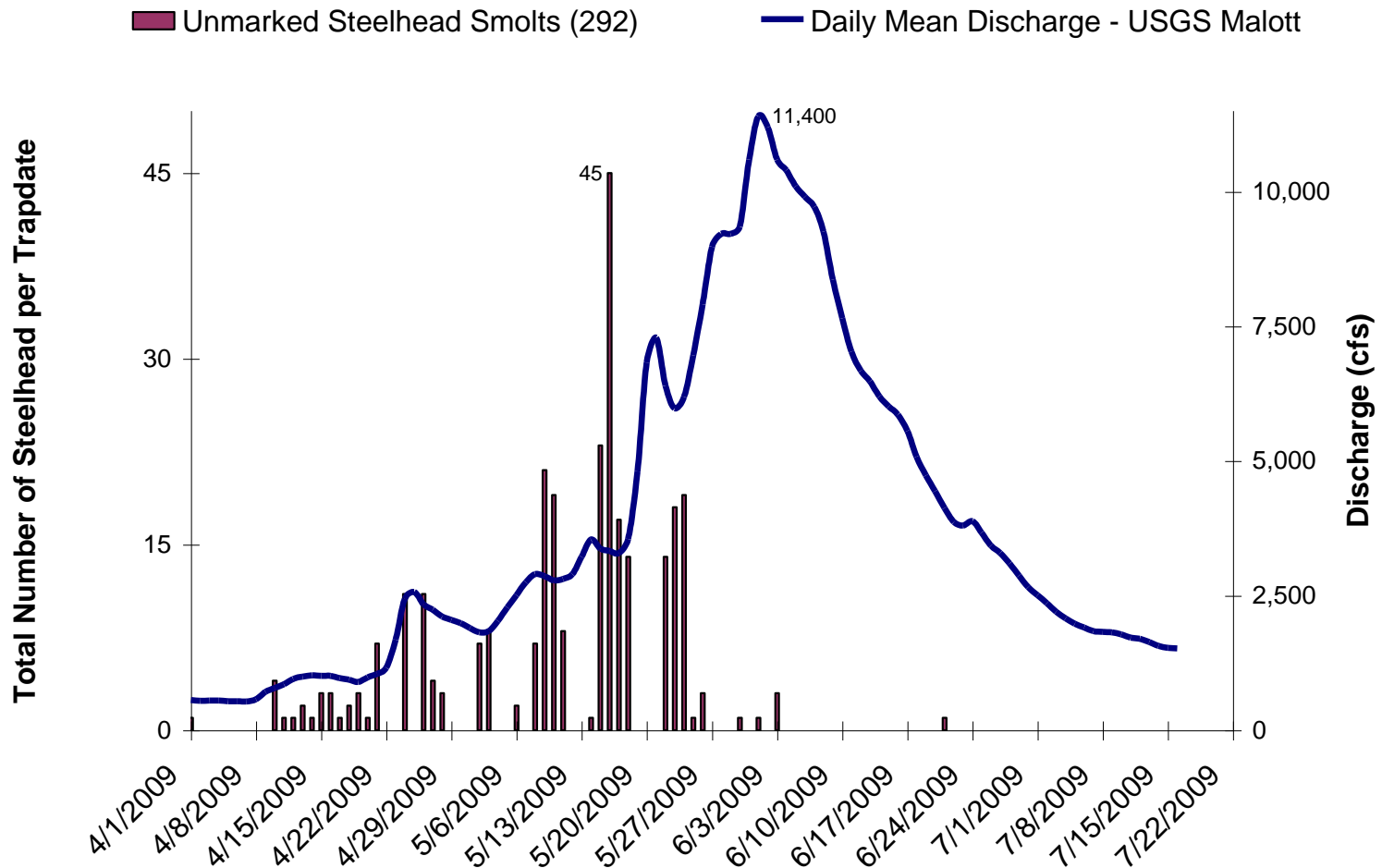
Hatchery Steelhead

CCT 2009 Okanogan River RST Hatchery Steelhead



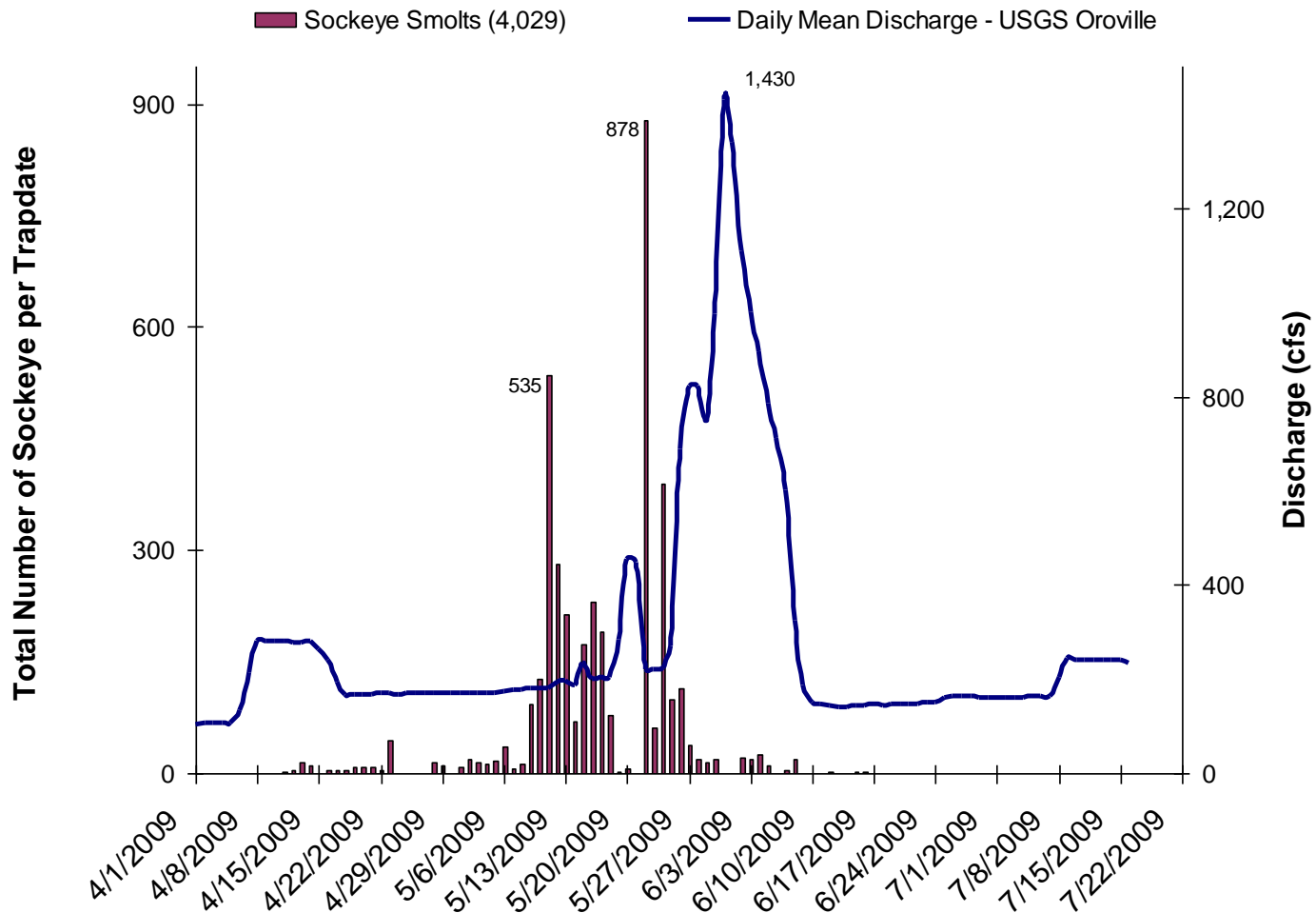
Unmarked Steelhead

CCT 2009 Okanogan River RST Unmarked Steelhead



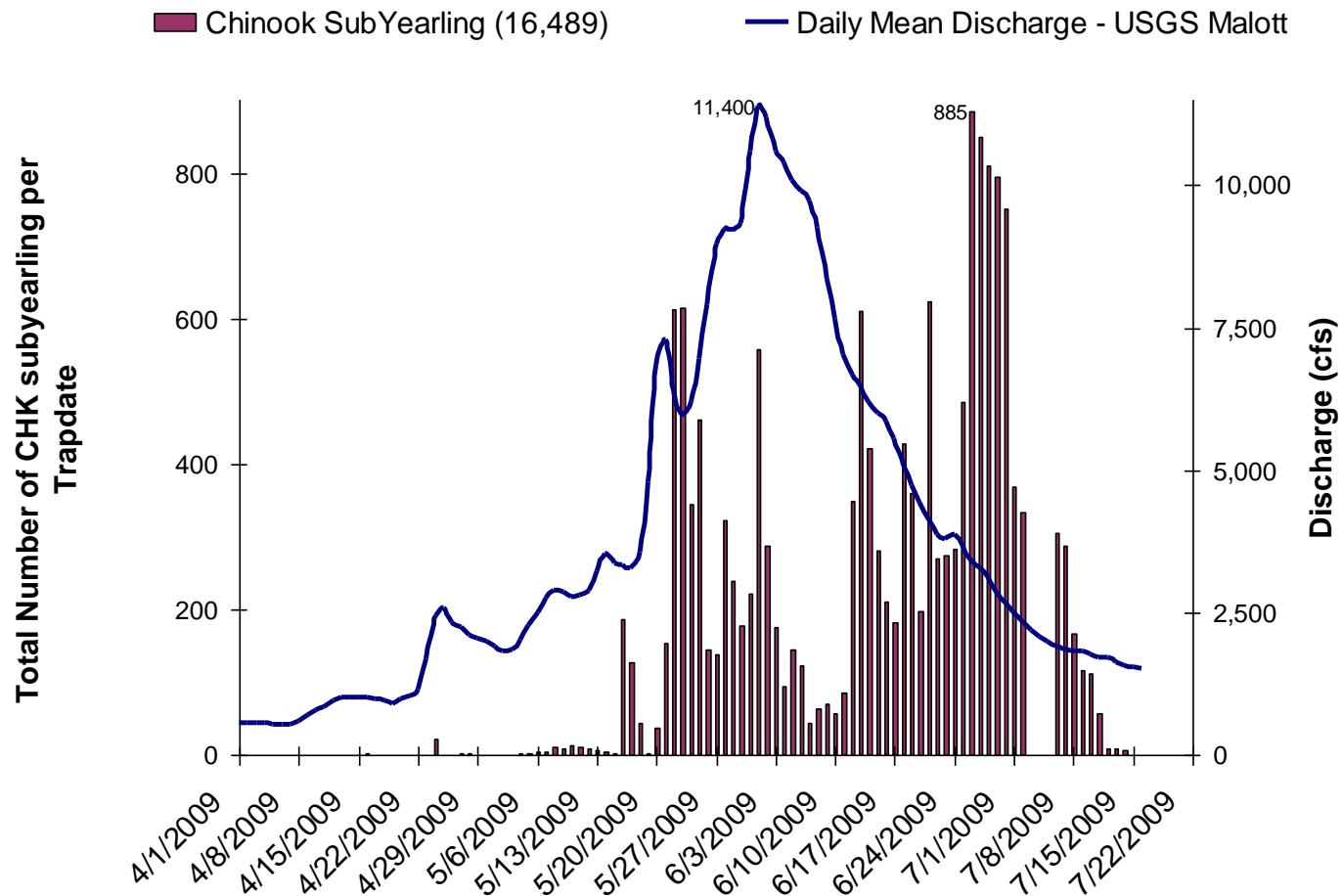
Sockeye Smolts

CCT 2009 Okanogan River RST Sockeye Smolt Count



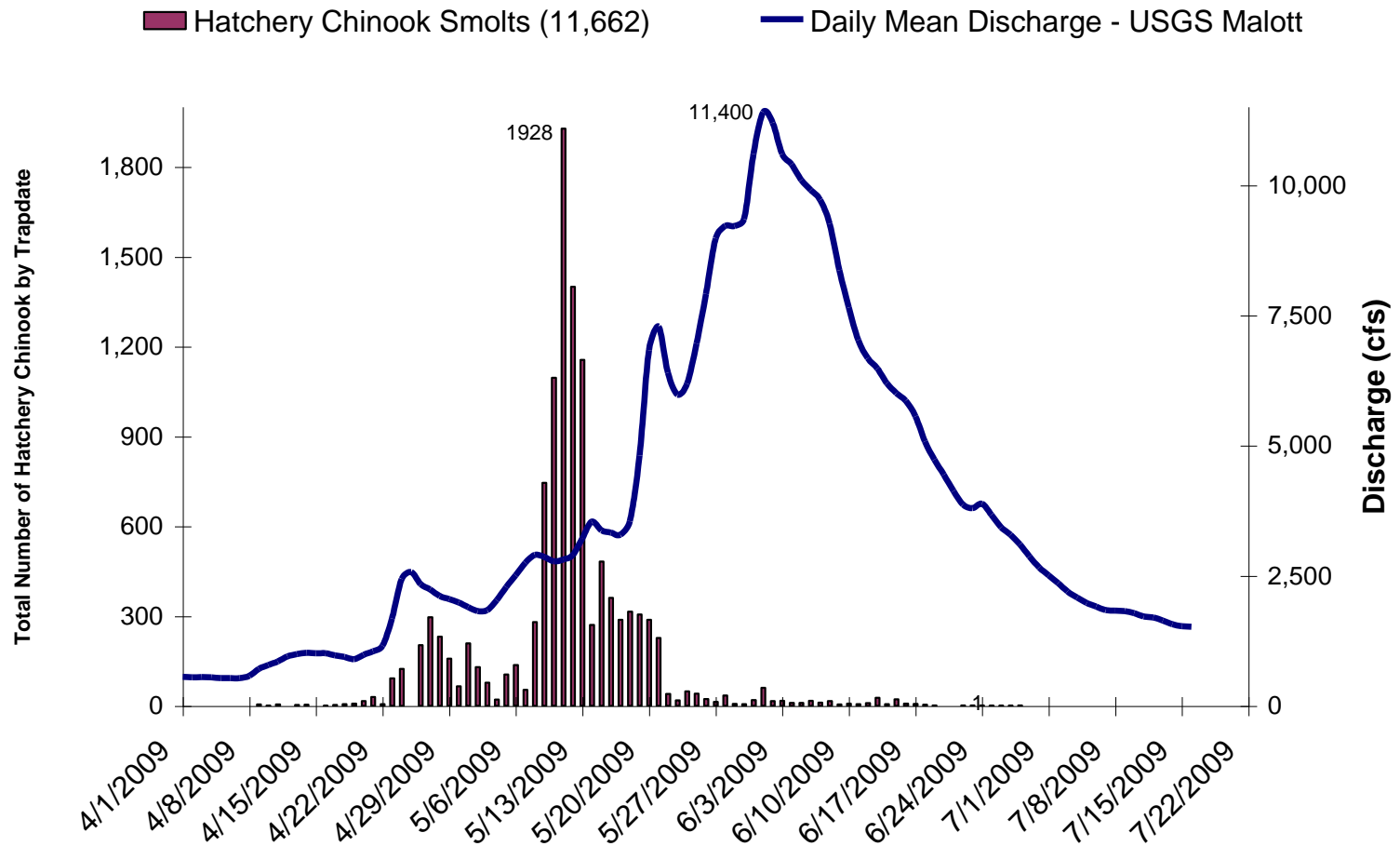
Chinook Sub-Yearlings

CCT 2009 Okanogan River RST Chinook SubYearling



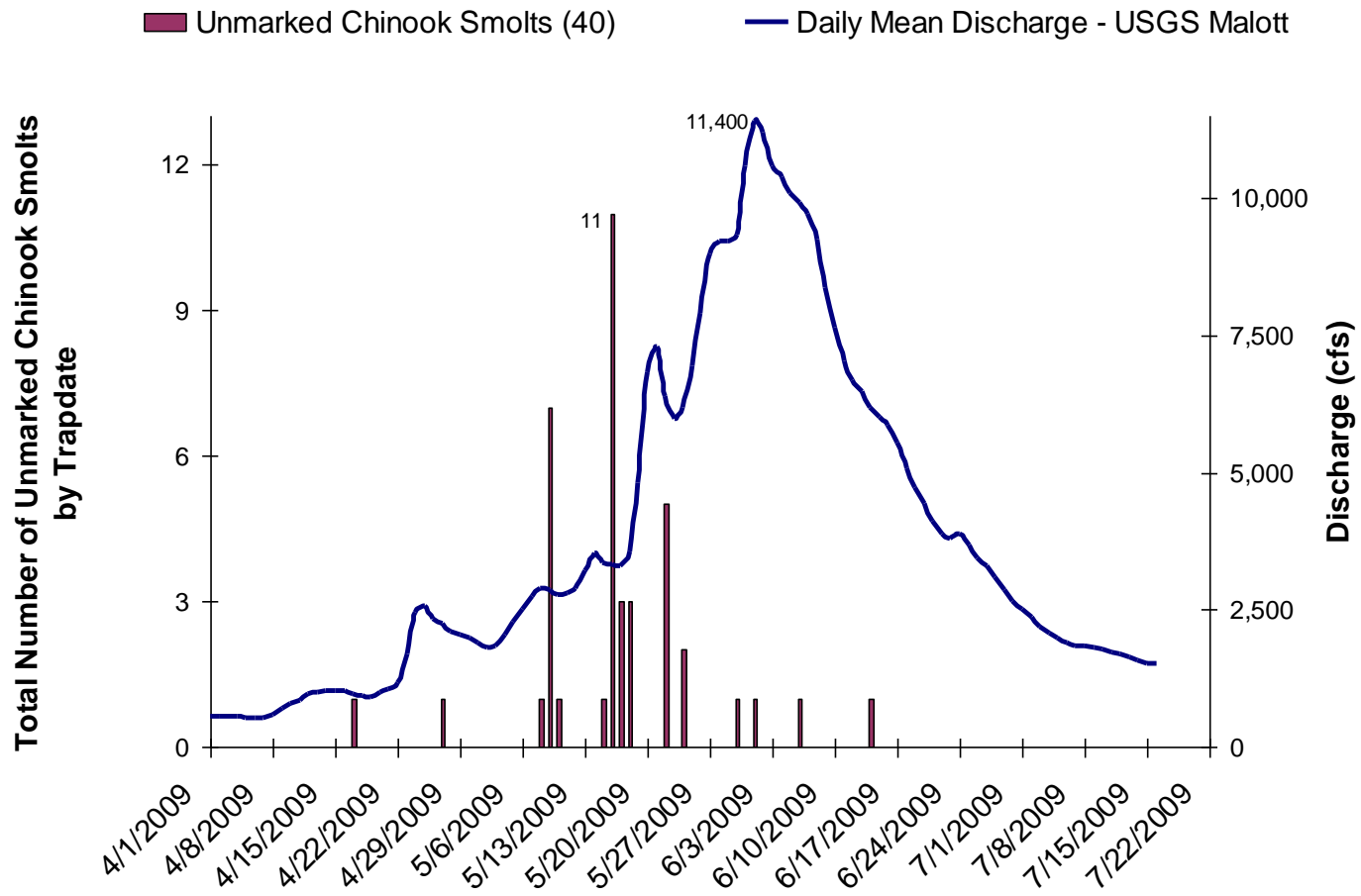
Hatchery Chinook Smolts

CCT 2009 Okanogan River RST Hatchery Chinook Smolts



Unmarked Chinook Smolts

CCT 2009 Okanogon River RST Unmarked Chinook Smolts



2009 RST – Population Estimates



2009 Okanogan River 8' RST Population Estimates

Species	Emigrating estimate	<95%	>95%	# Caught	Standard Error	Trap Efficiency
Sockeye	105787	102257	109316	4029	1800.93	2.90%
Chinook H.	366290	362317	370264	11662	2027.31	3.10%
Chinook W.	1288	1280	1293	40	3.26	3.10%
Steelhead H.	146000	146000	146000	2308	n/a	1.60%
Steelhead W.	16446	n/a	n/a	292	n/a	1.60%