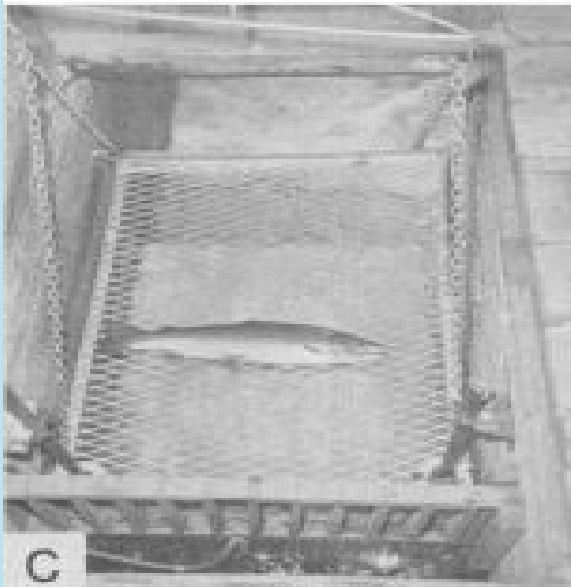
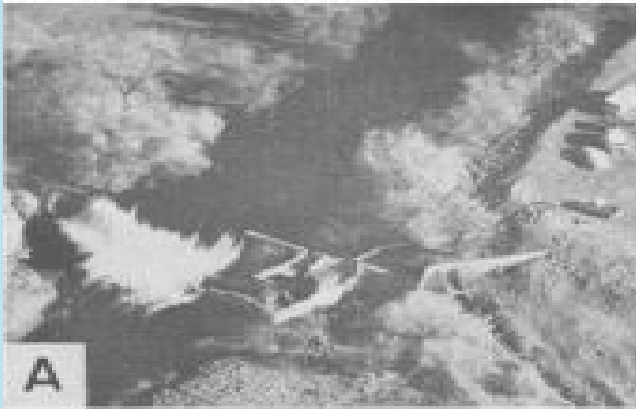


# **Wild Central Valley Steelhead Still Persist in Mill Creek: Results of Recent Adult Escapement and Run-Timing Information Obtained Using a Video Monitoring System**

**Matt Johnson CDFW  
Red Bluff Fisheries**

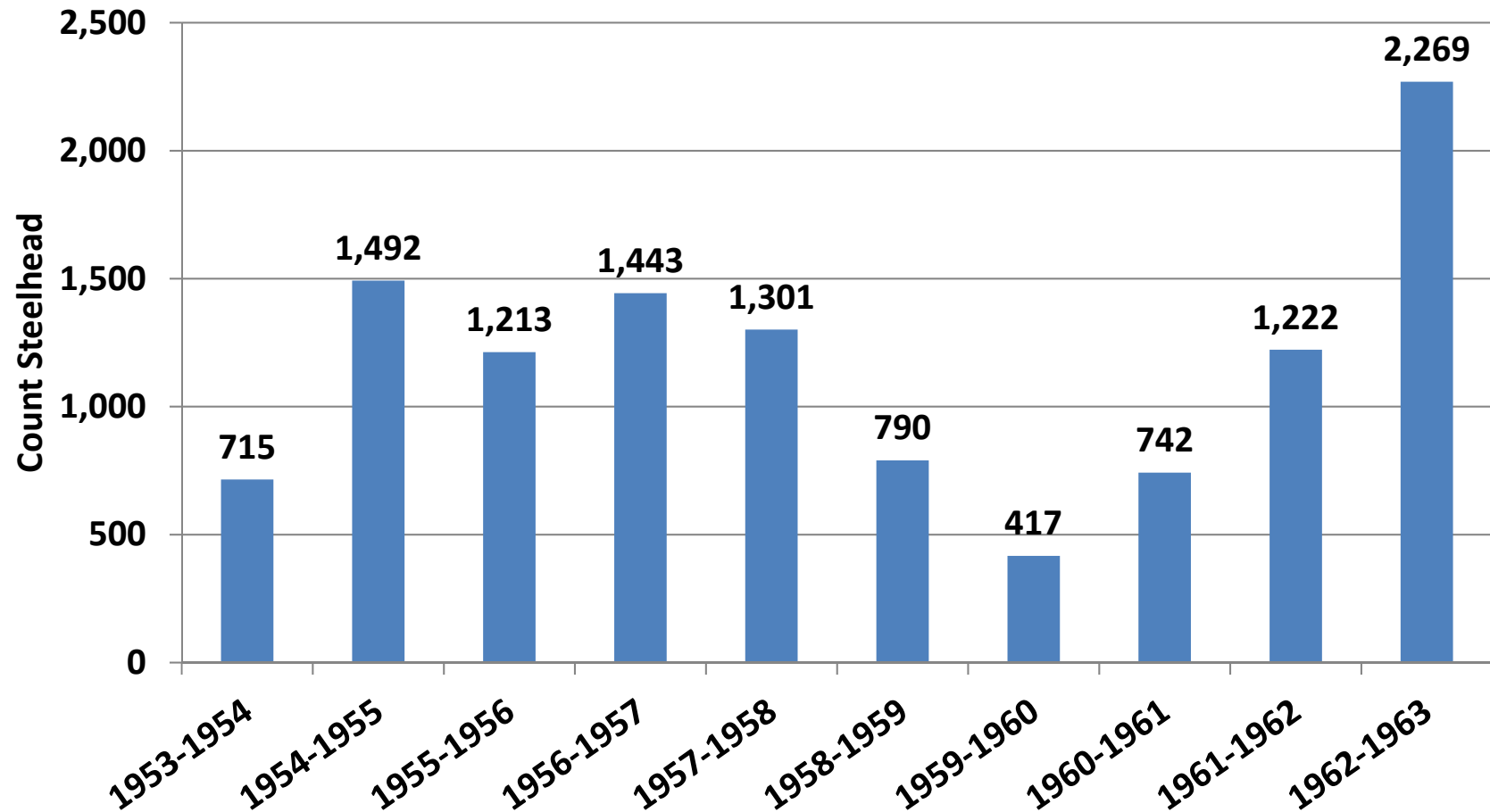


# What we knew about Mill Creek steelhead: Clough Dam



# Mill Creek steelhead counts

## 1953-1954 to 1963-1964



## Memorandum

To : Elden P. Hughes  
Supvr. Salmon/Steelhd. Program

Date : May 25, 1964

From : Department of Fish and Game  
Central Valleys Project

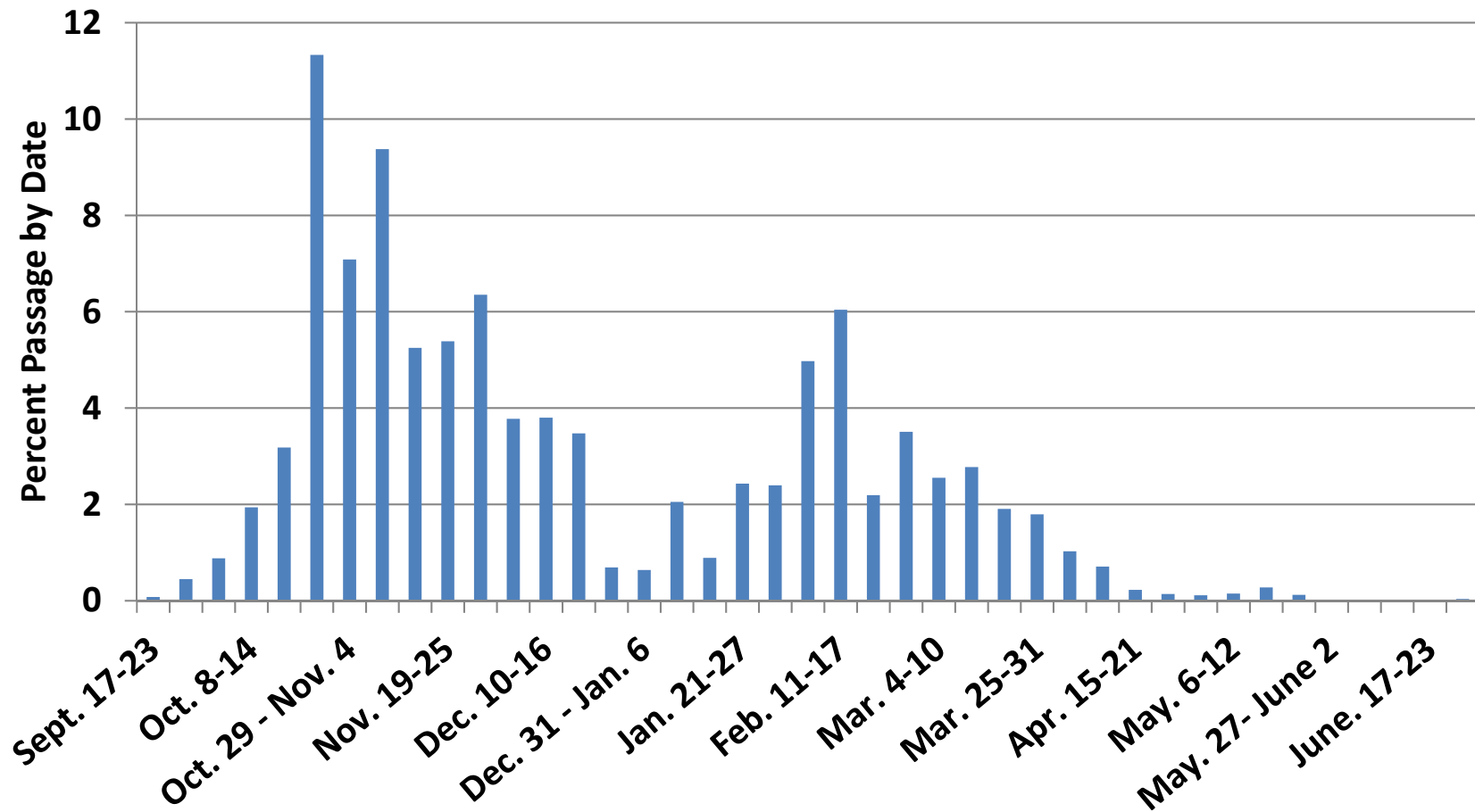
Subject: Mill Creek Counting Station

Annual upstream counts of adult salmon and steelhead have been made at Mill Creek Counting Station on Clough Dam since the fall, 1953. During the ten seasons 1953-54 through 1962-63; 12,009 fall-run king salmon, 18,572 spring-run king salmon, and 11,604 steelhead were counted (Table 1).

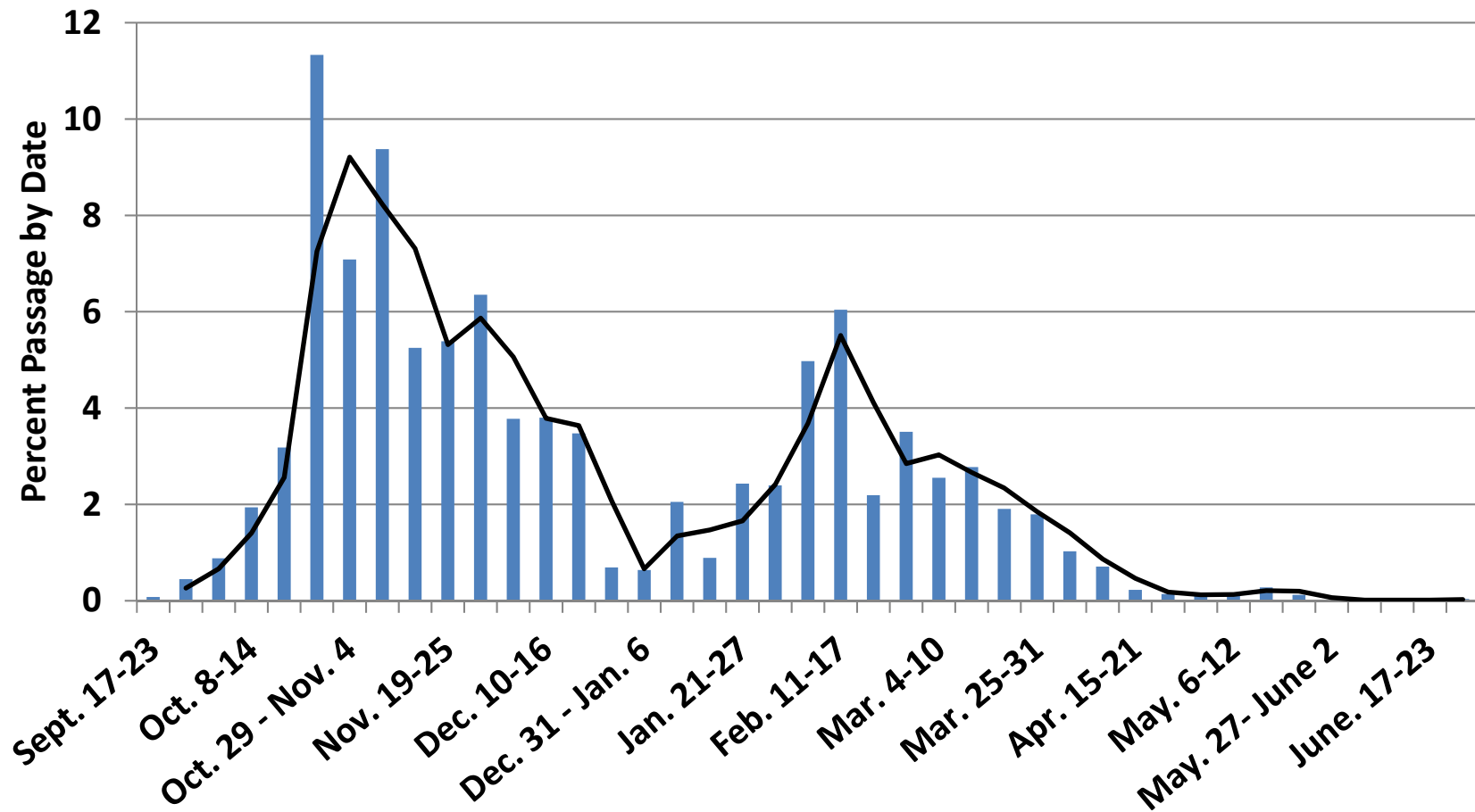
Each season, the counting station has been operated for approximately a nine-month period, beginning about the middle of October and usually continuing through late June or early July. In this report, seasonal counts for the ten-year period have been reviewed with the thought of reducing the amount of counting time required to operate this installation and still obtain reasonable accurate counts of steelhead, and fall- and spring-run king salmon.



# Mill Creek steelhead run-timing (1953-54 through 1962-63)

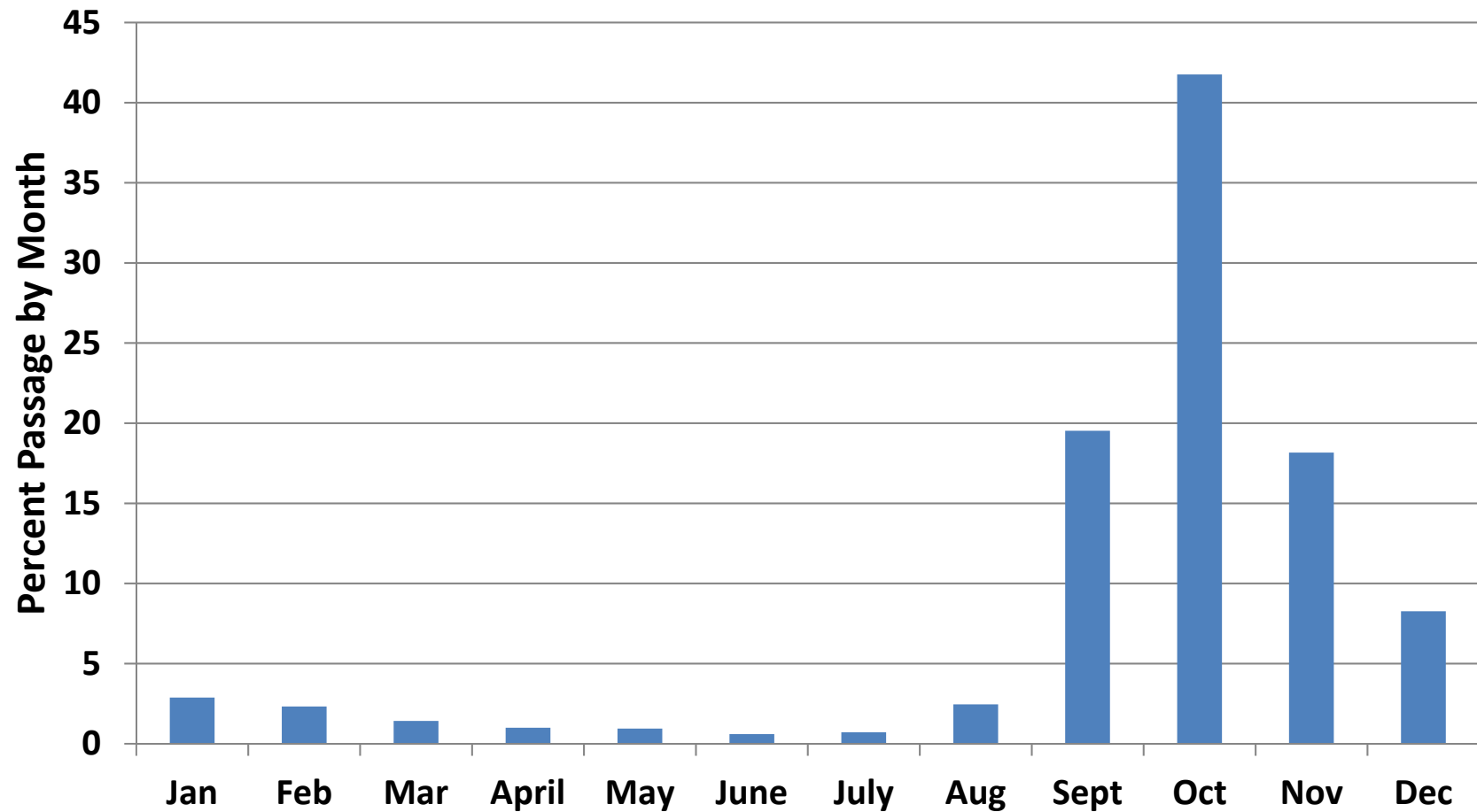


# Mill Creek steelhead run-timing (1953-54 through 1962-63)

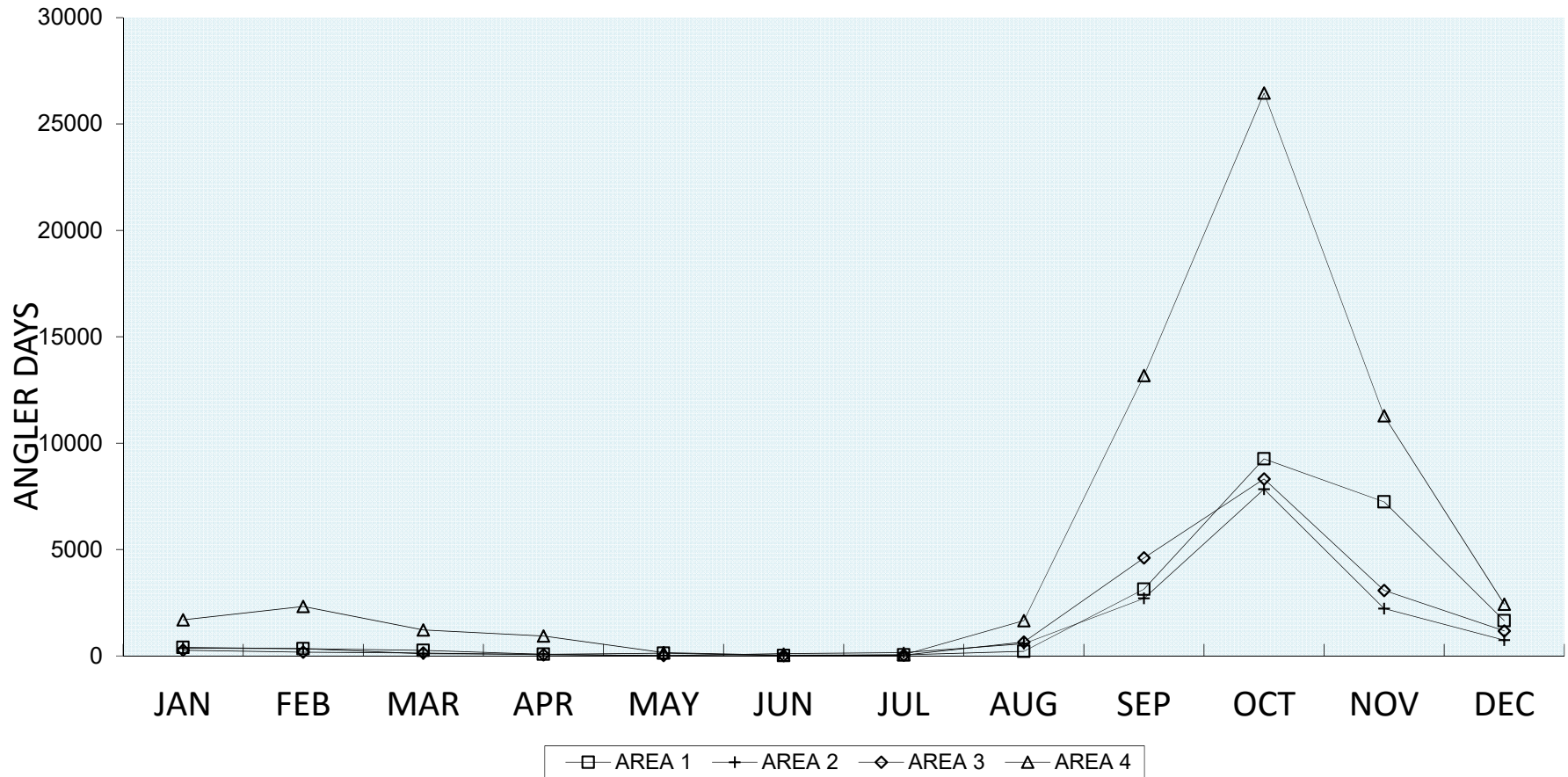


# **The historic Upper Sacramento steelhead fishery** [photos](#)

# RBDD steelhead passage by month (1970-1988)



# Sacramento River steelhead angler effort 1967-1975





# Once we were steelhead...



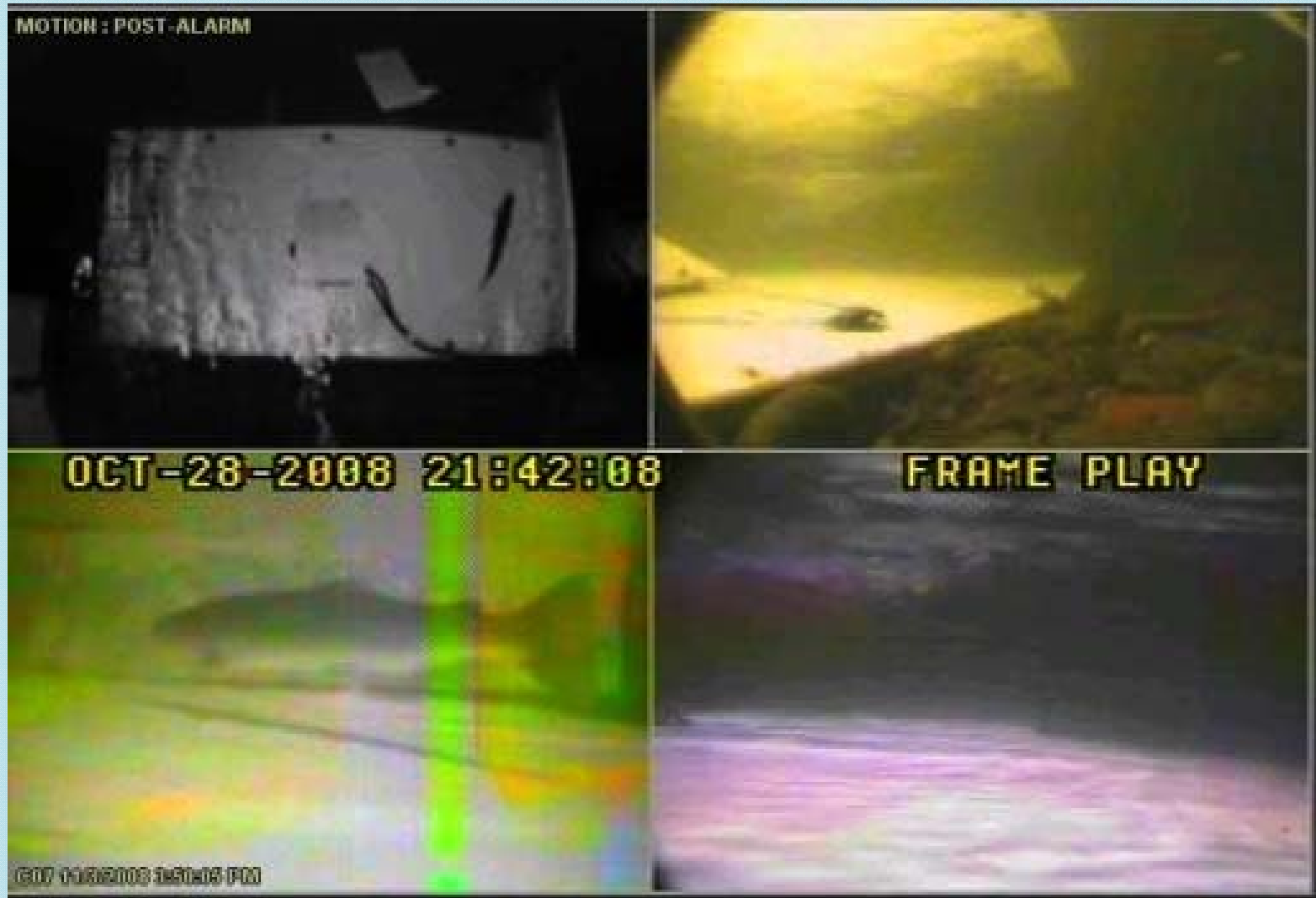
Photo: Kennedy  
Brothers Fly fishing



# Steelhead discovery in Los Molinos...



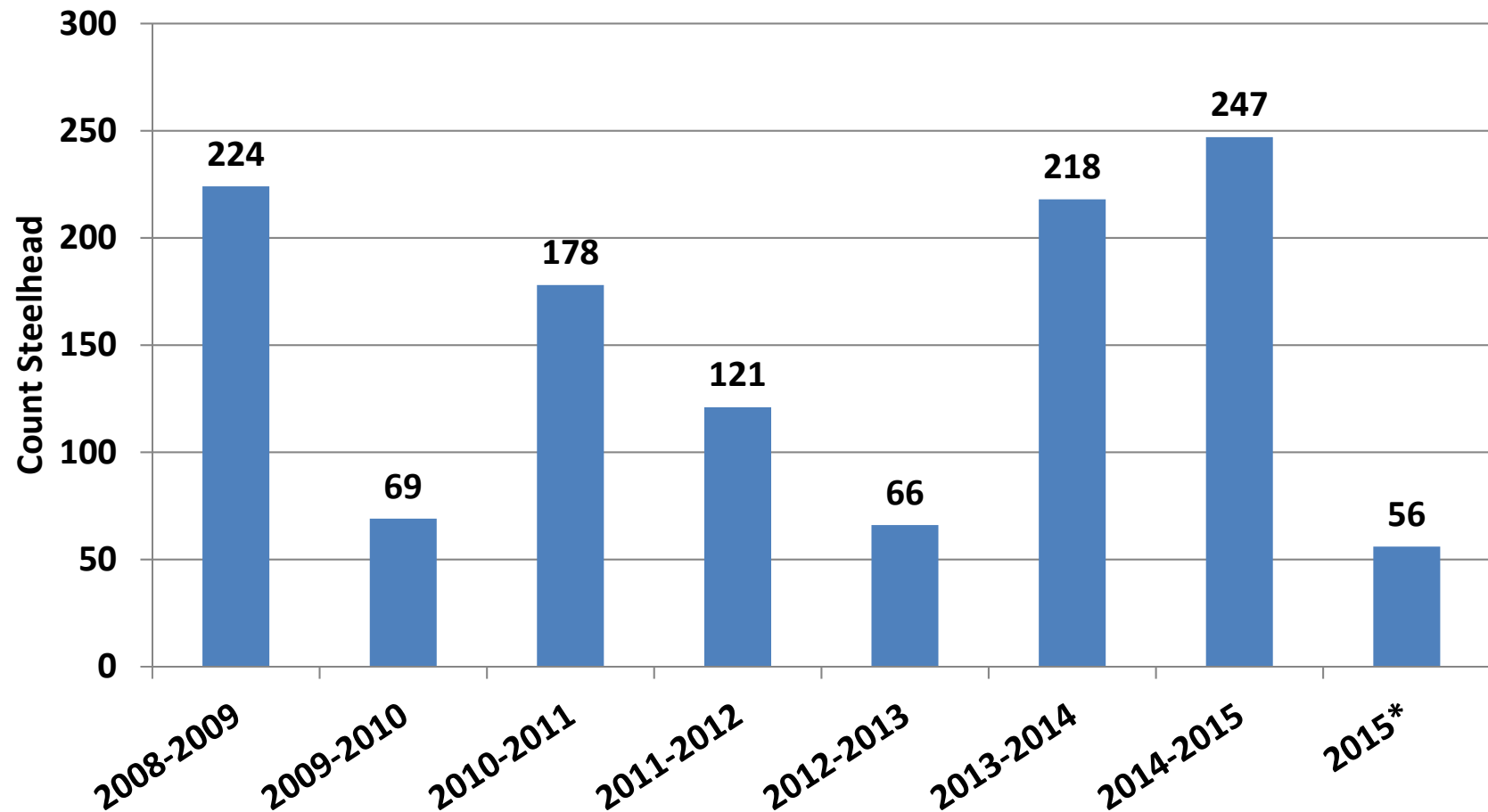
# The Mill Creek Video Station (MCVS)





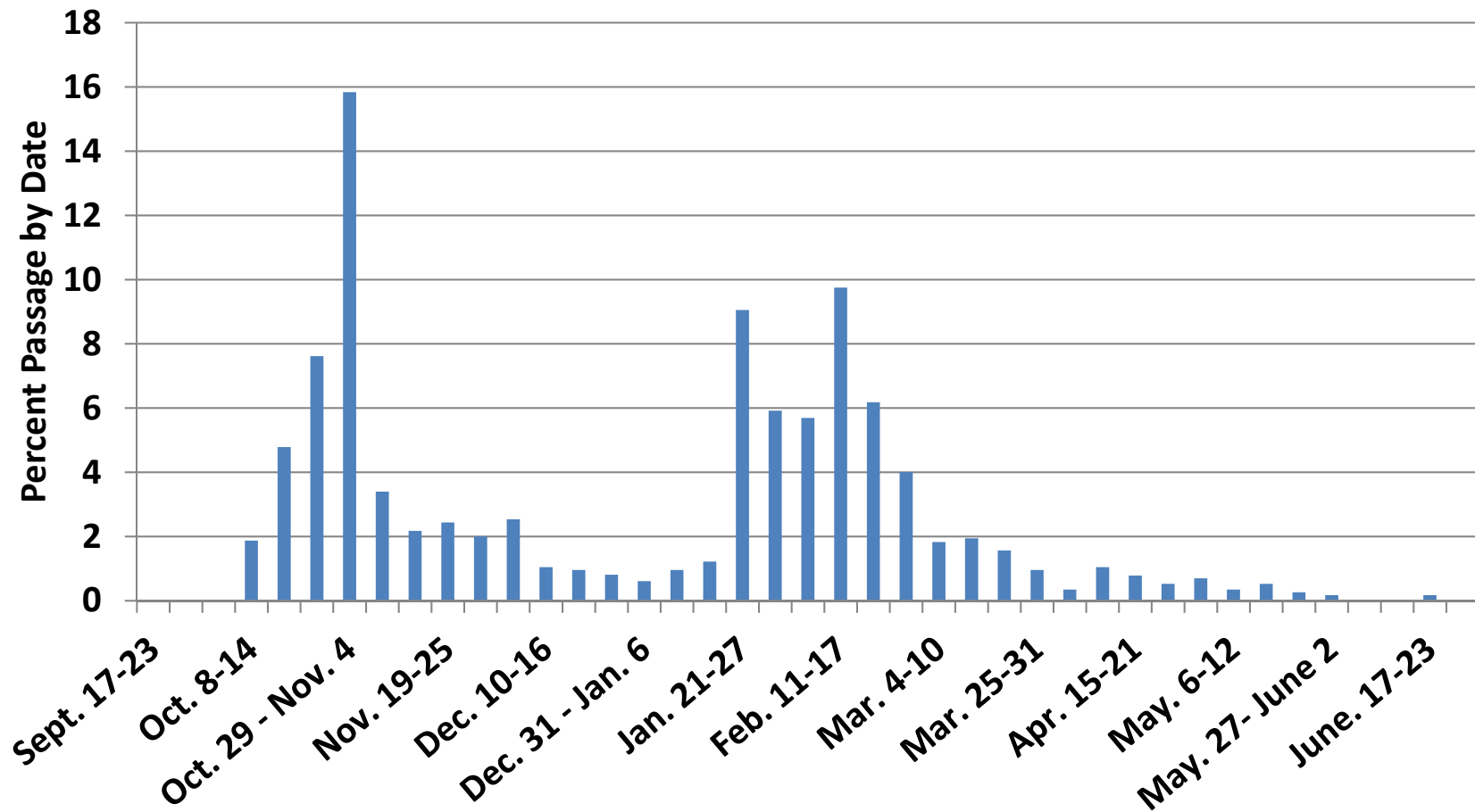


# Adult steelhead population estimates 2008-09 to 2014-15

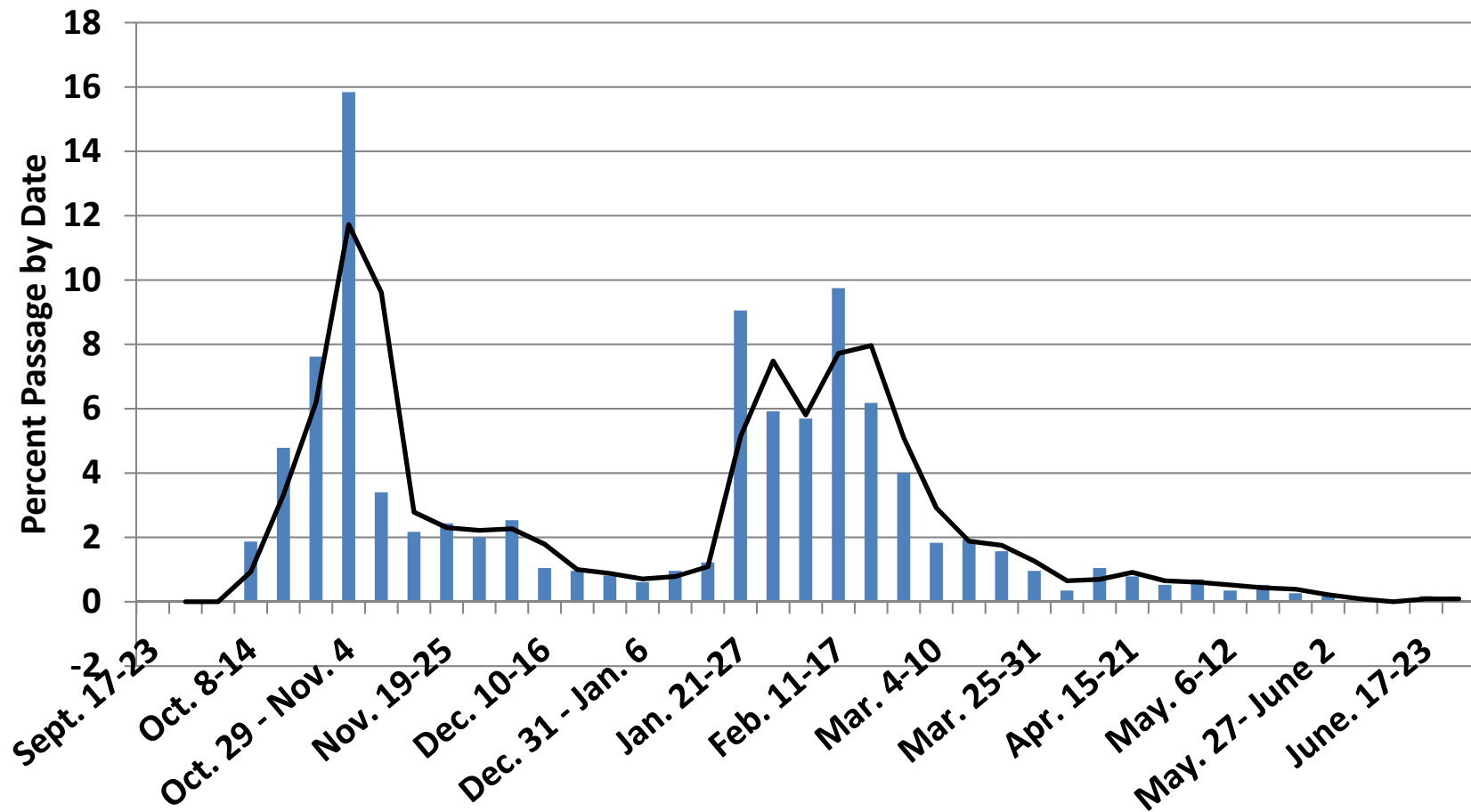




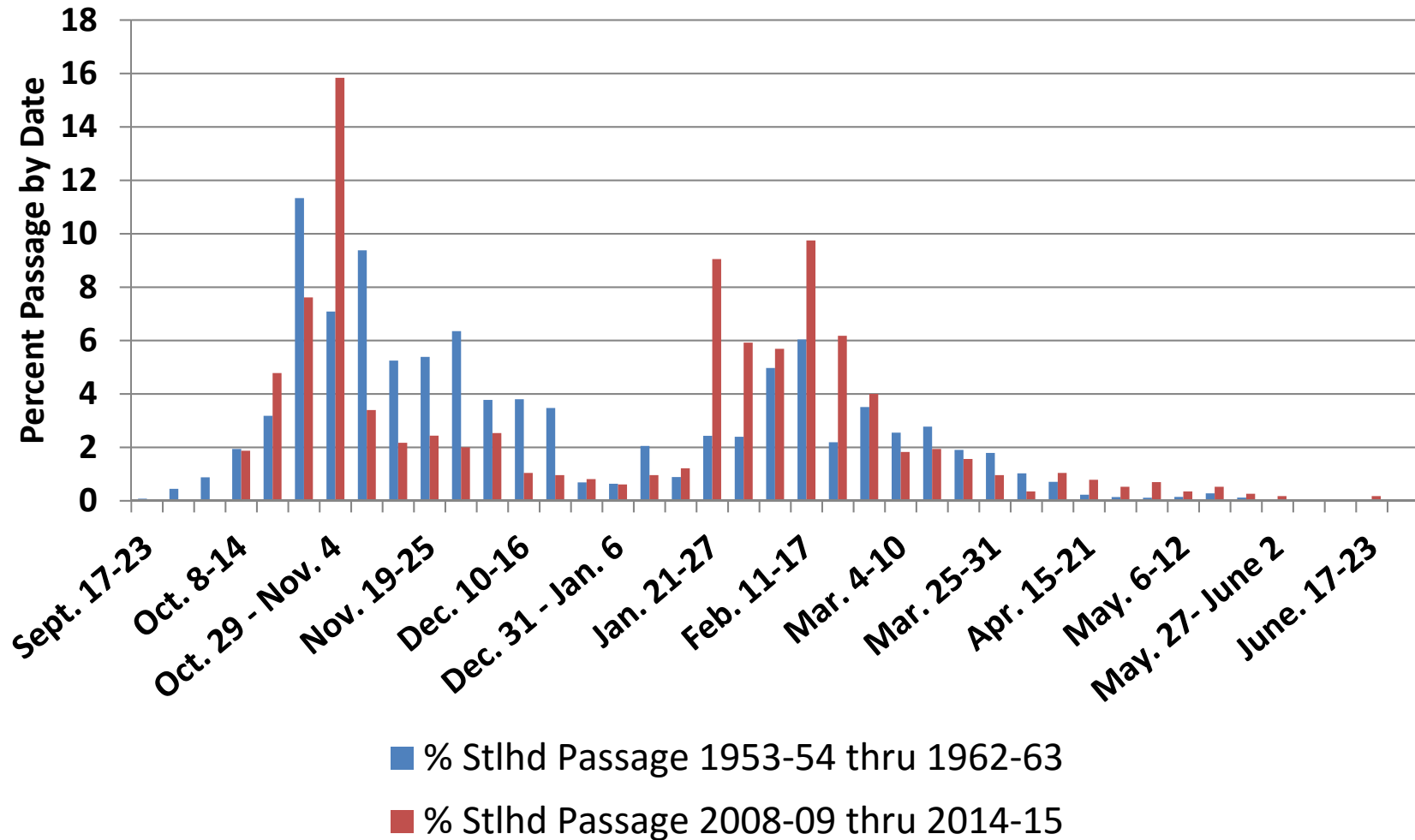
# Mill Creek steelhead run-timing (2008-2015)



# Mill Creek steelhead run-timing (2008-2015)



# Historical vs Current Run-Timing

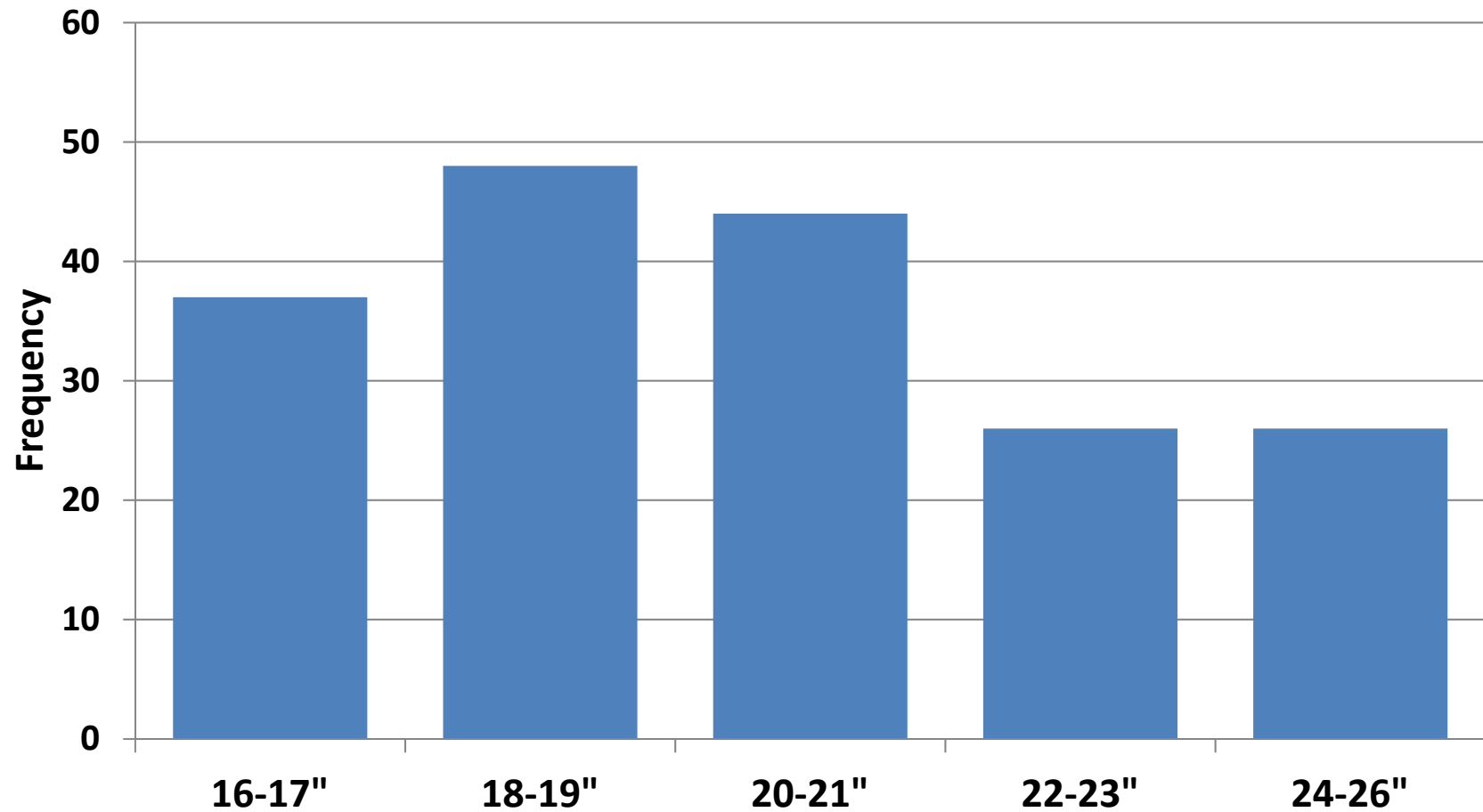


# How do you know it's a steelhead?

## Size Matters...



# Estimated adult steelhead lengths in inches (n = 181)





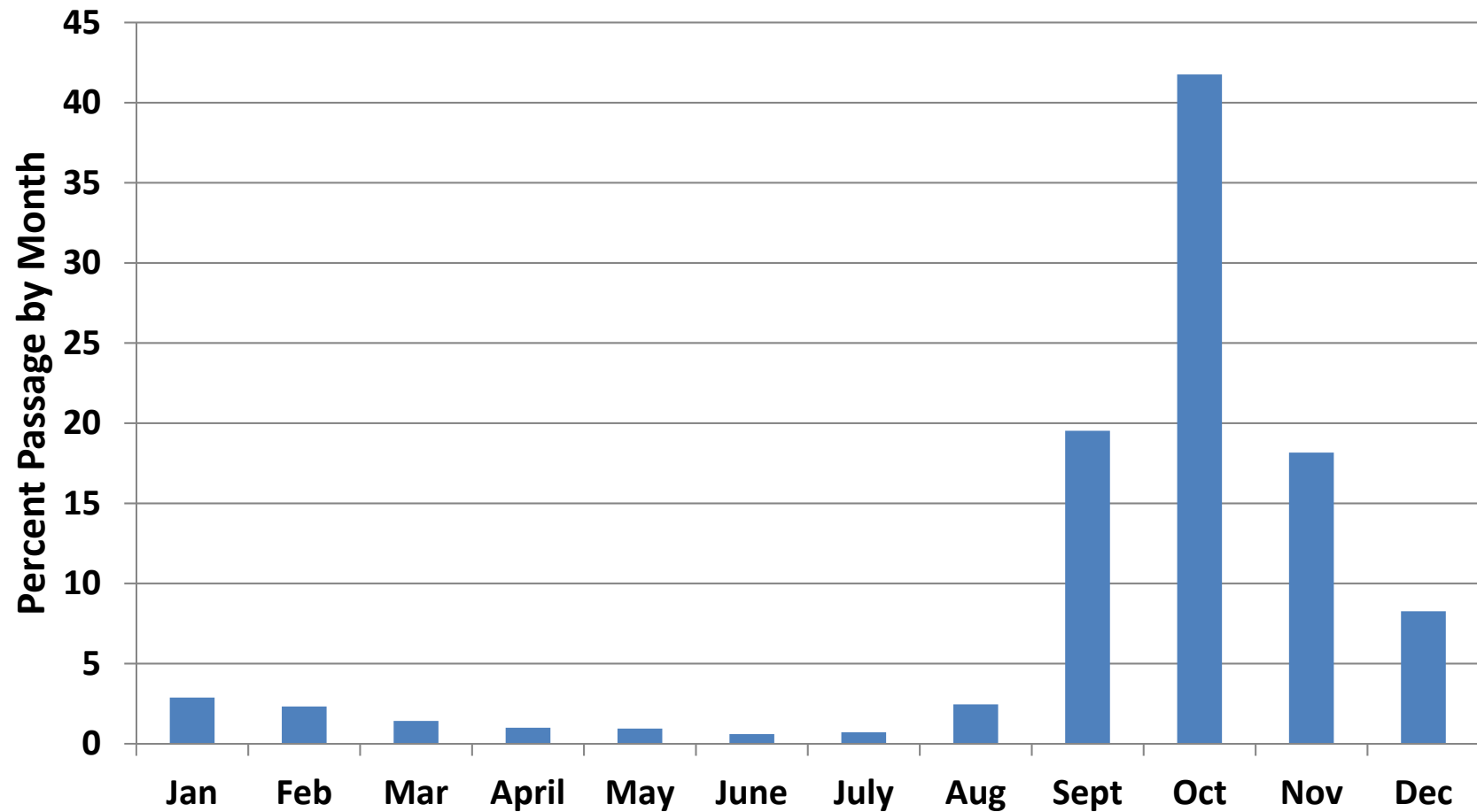
# Mill Creek steelhead reel



# Chasing unicorns in 2015...

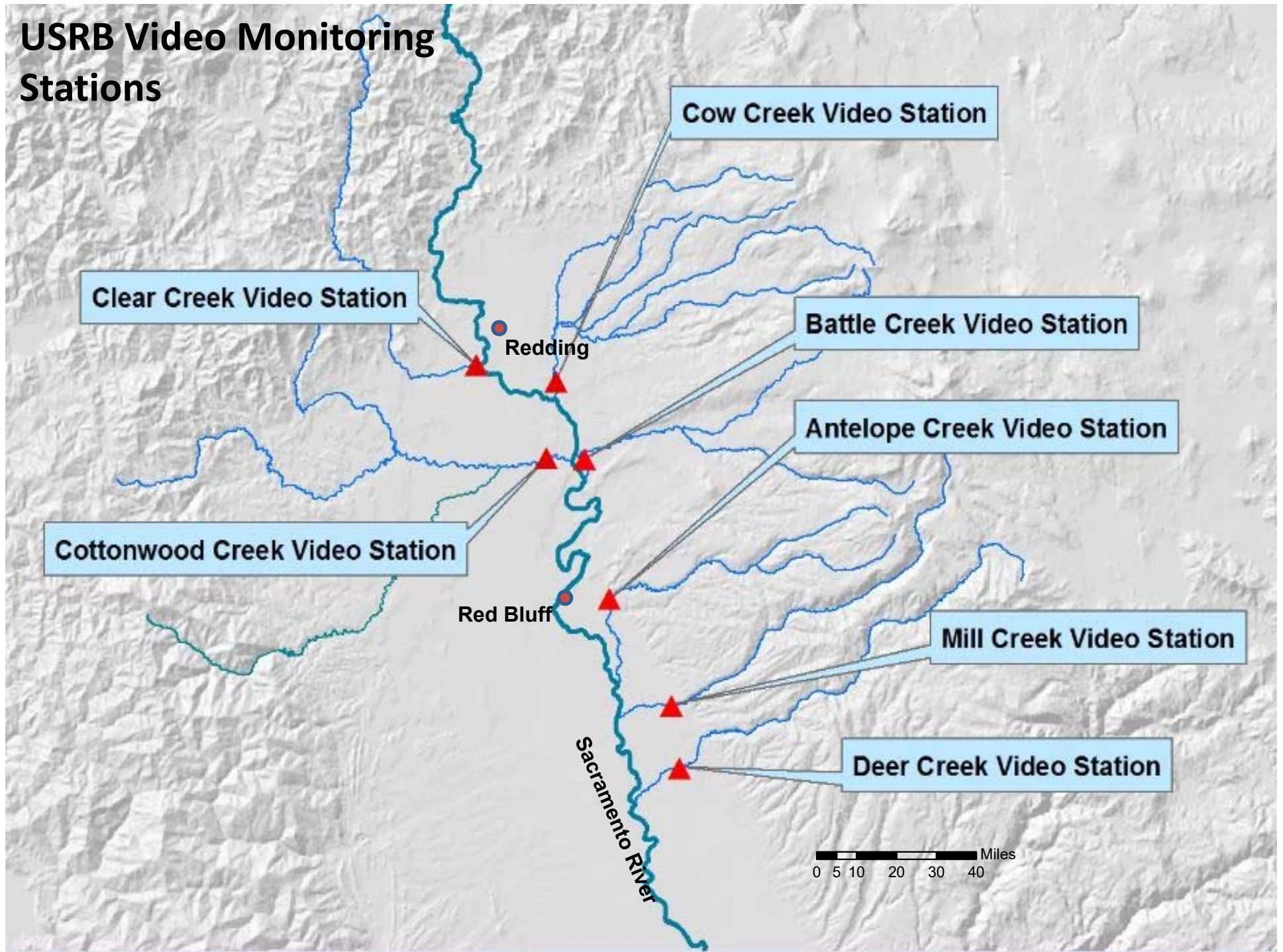


# RBDD steelhead passage by month (1970-1988)





# USRB Video Monitoring Stations



# USRB tributary fall-entry steelhead counts 2013 - 2015

Tributary	2013	2014	2015
Cow Creek	0	0	1
Cottonwood Creek	2	2	0
Antelope Creek	1	17	3
Deer Creek	n/a	88	8
Mill Creek	116	203	56
Clear Creek	34*	95*	148*



# Why aren't there more steelhead in Mill Creek today?





# The Mill Creek Watershed [map](#)











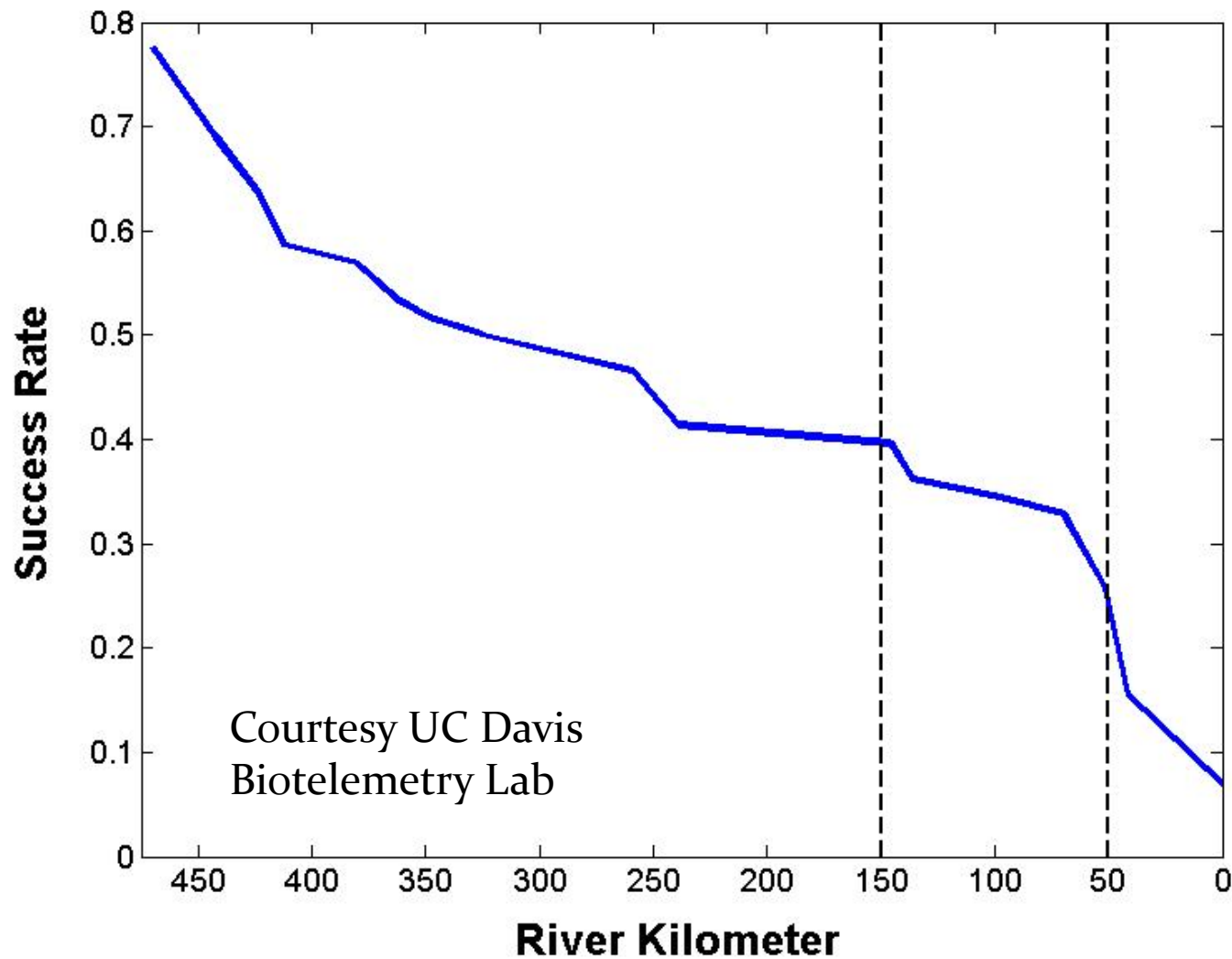


# To smolt or not to smolt?



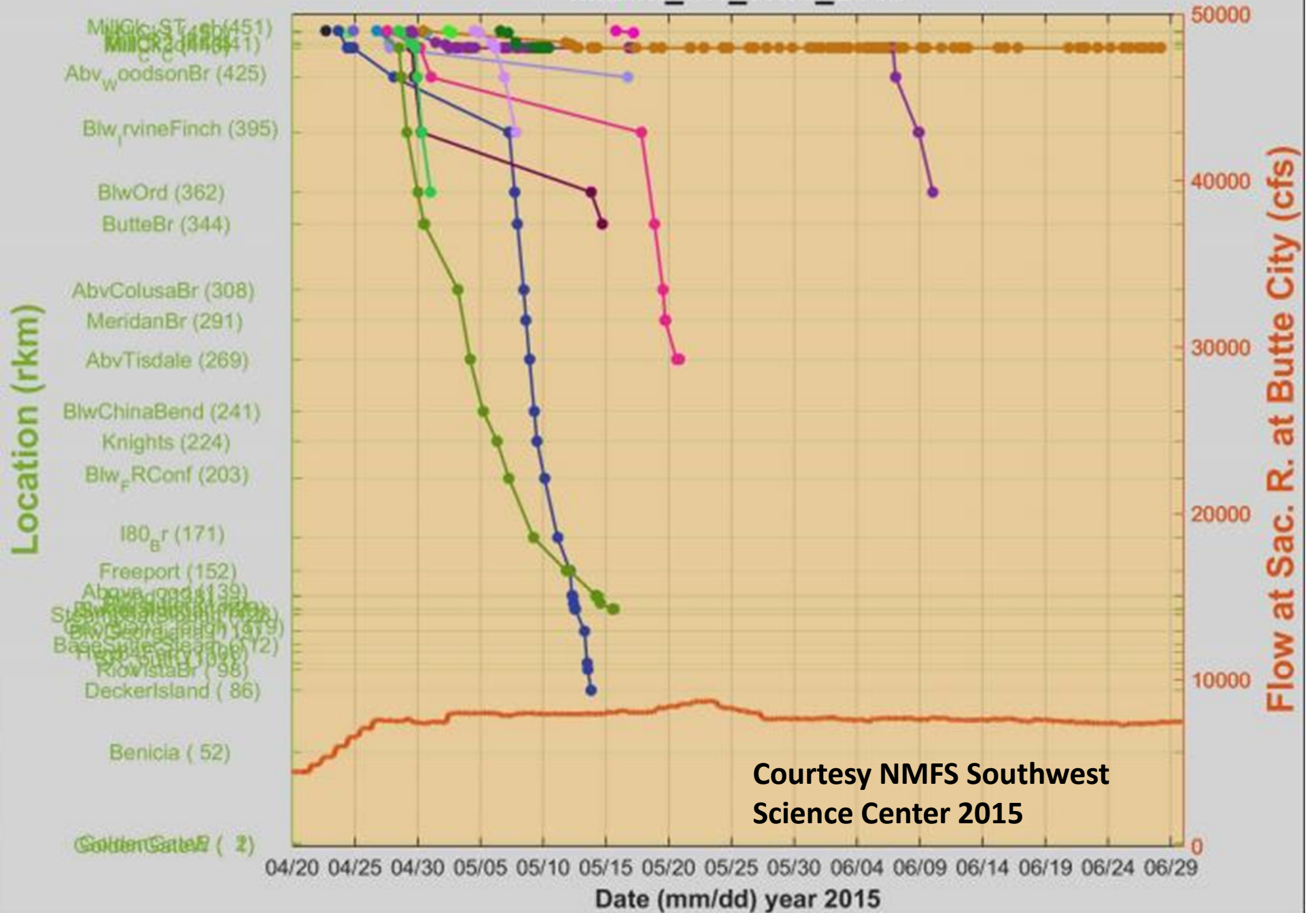
# Success Rate (2008-2009)

## Mill Creek Wild Steelhead

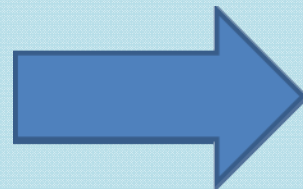




# MillCk\_SH\_Wild\_2015



# Selection pressure



**Residency?**



# Conclusions

- Mill Creek is a stronghold for remaining wild CV steelhead
- Poor smolt survival downstream?
- On going selection pressure against anadromy in Mill Creek?
- Recovery planning should be focused downstream
- Additional acoustic tagging data needed to identify areas of smolt mortality



End. Questions?

## Acknowledgements:

Curtis Milliron, Jason Roberts,  
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Mache, and Brendan Barney  
PSMFC

Mike Berry DWR