

# JUVENILE SPRING CHINOOK MIGRATION IN THE MIDDLE FORK WILLAMETTE RIVER AND USE OF LOOKOUT POINT RESERVOIR

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# Objectives

- Evaluate migration timing and size of Chinook entering reservoir
- Chinook fry distribution along nearshore habitat
- Vertical distribution of Chinook near dam
- Dam passage timing patterns

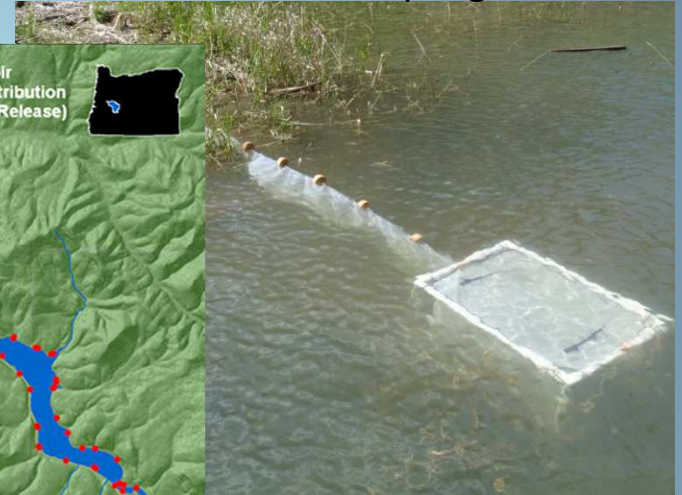
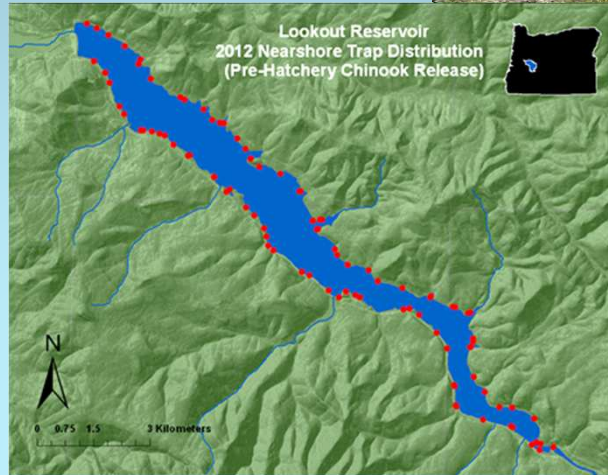


# Methods

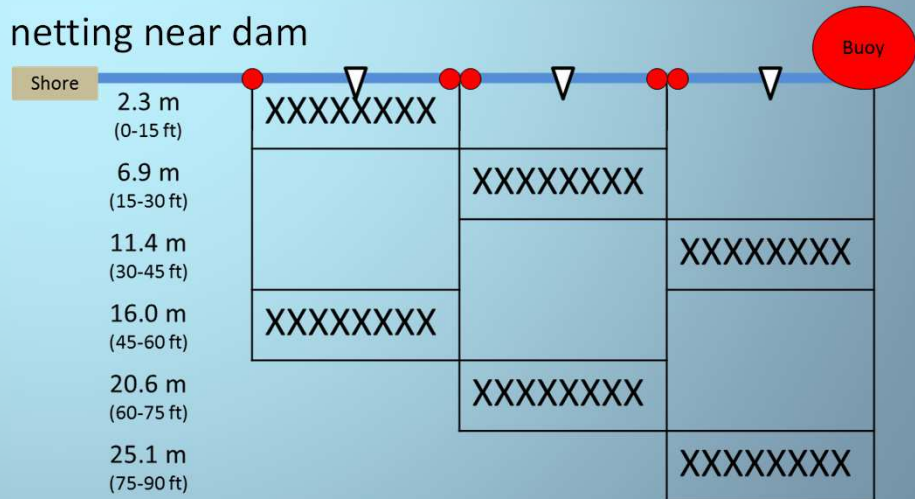
Above reservoir



Nearshore sampling



Gill netting near dam

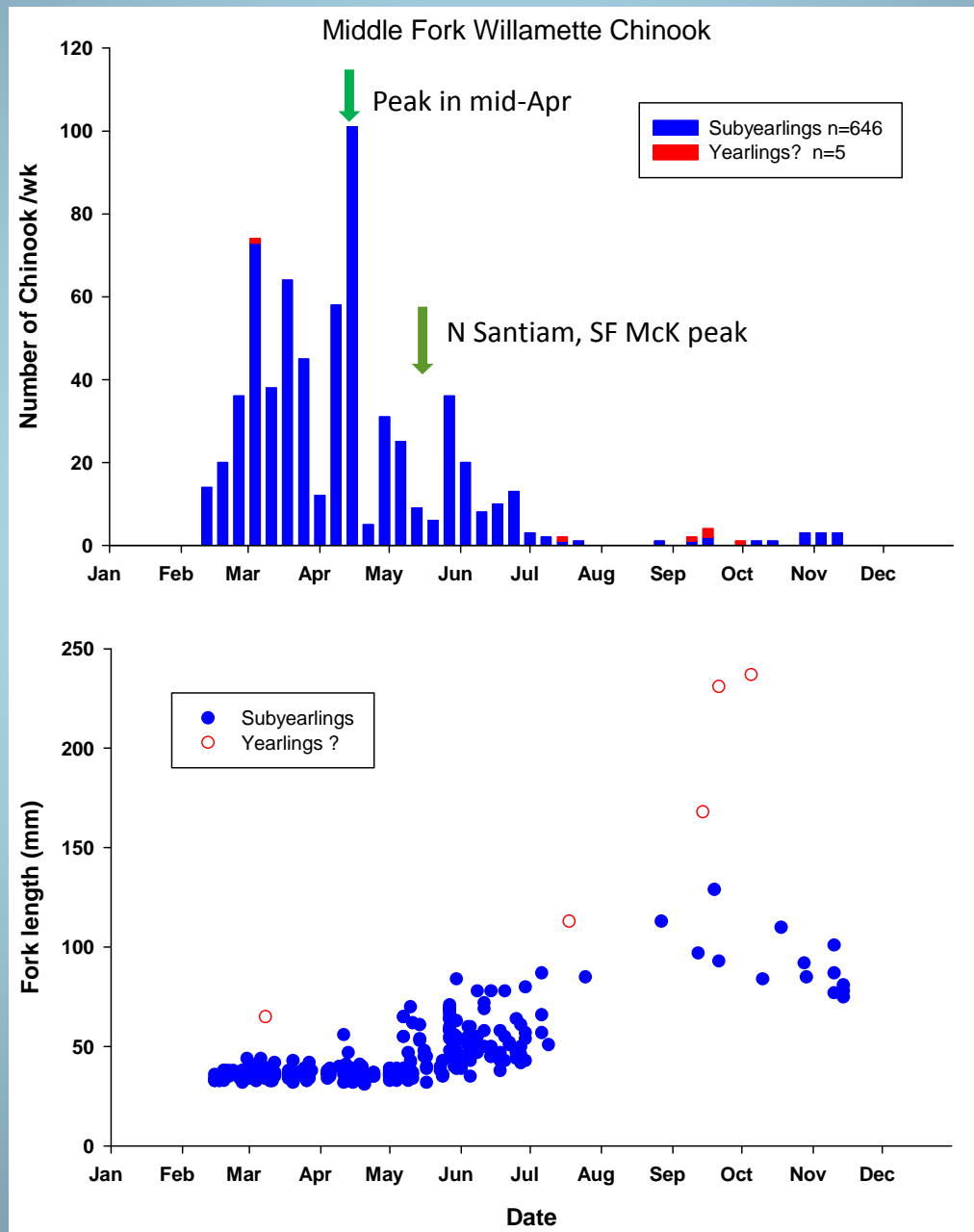


- Hung off 'rope boom' at dam
- July-Dec
- Changed pattern twice weekly

# Results

**Migration Timing and Size of Chinook Entering Reservoir**  
**- enter mainly as “fry” in early spring**

# Migration Timing and Size of Chinook Entering Reservoir

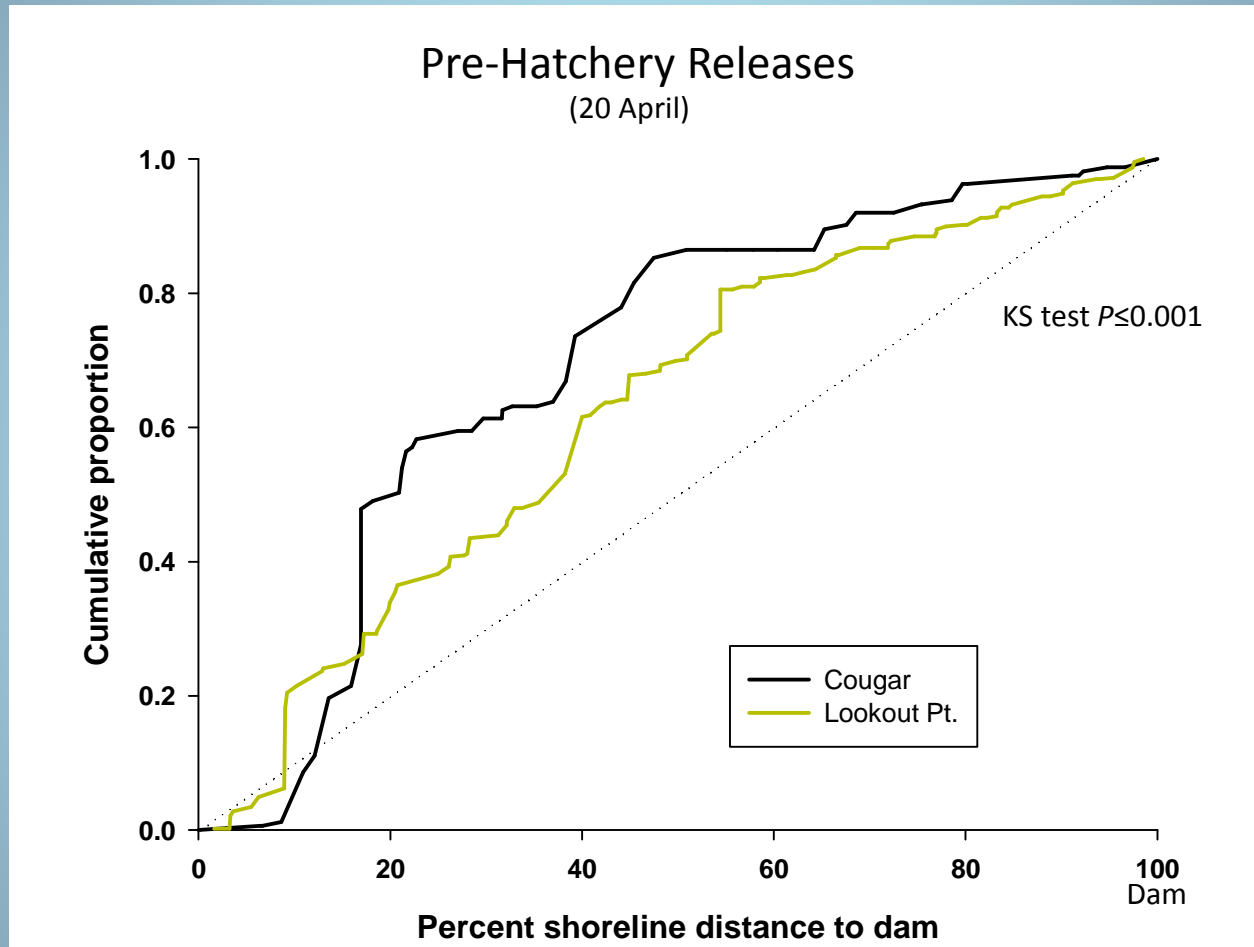


# Results

## Subyearling Nearshore Distribution

-confounded by hatchery releases in LOP

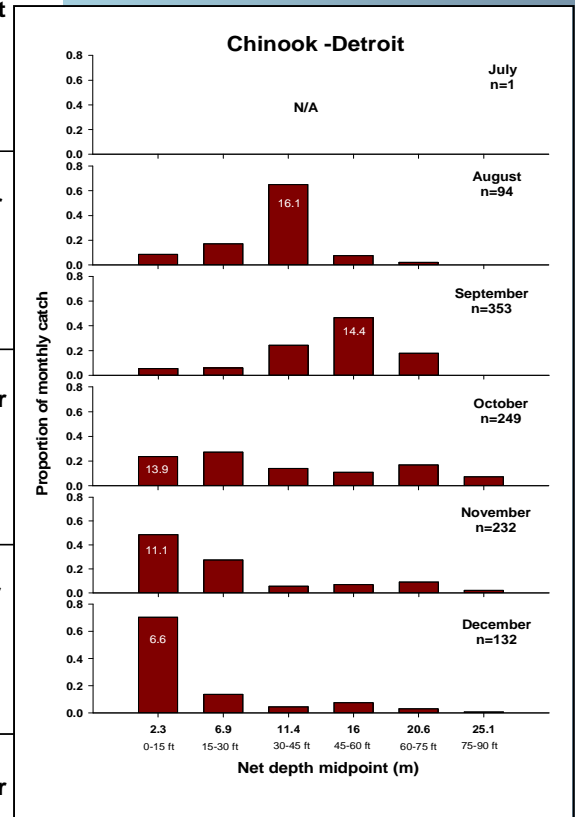
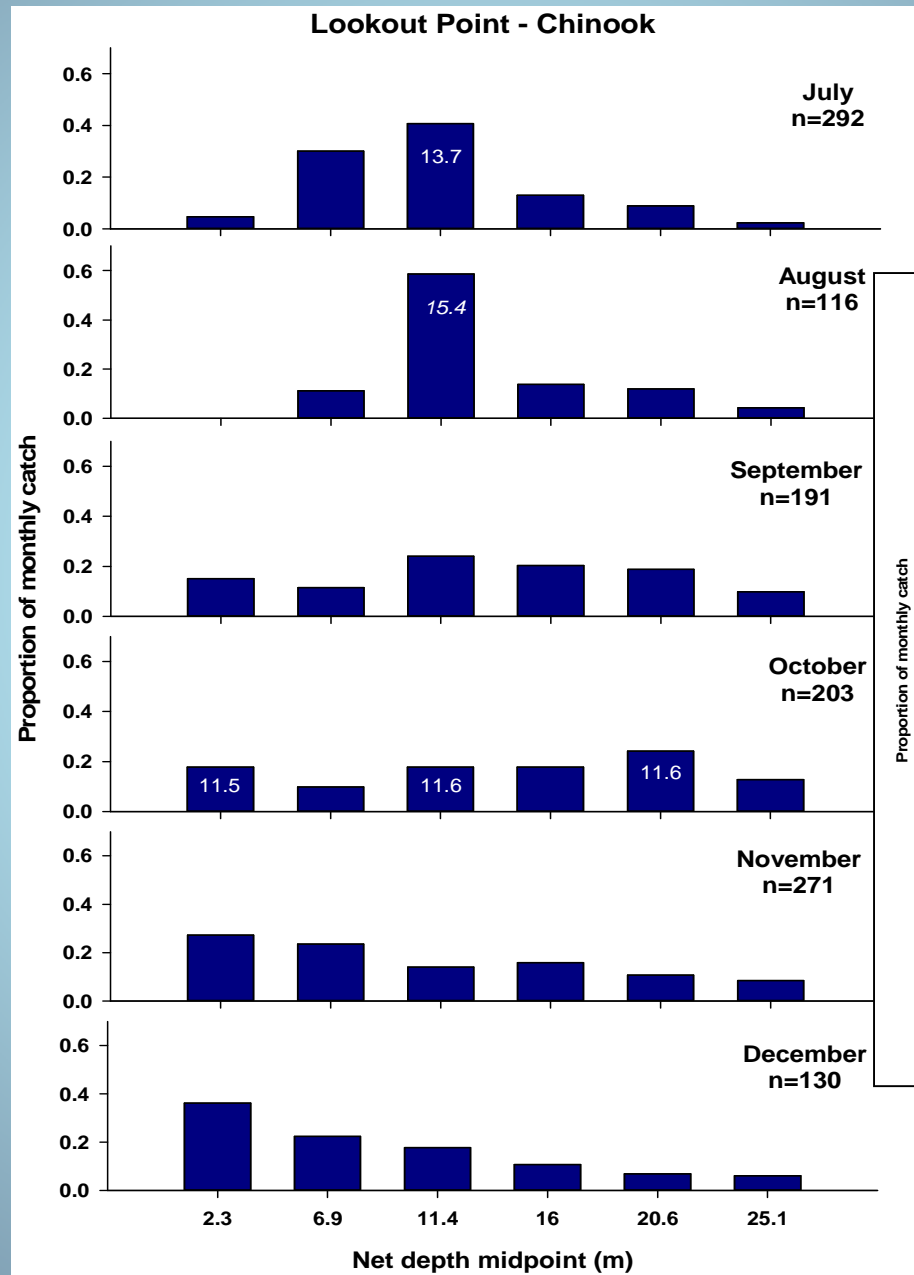
## Subyearling Nearshore Distribution



- Chinook were further dispersed into LOP compared to Cougar Reservoir by 20 Apr
- Earlier migration timing in LOP
- LOP is twice as long

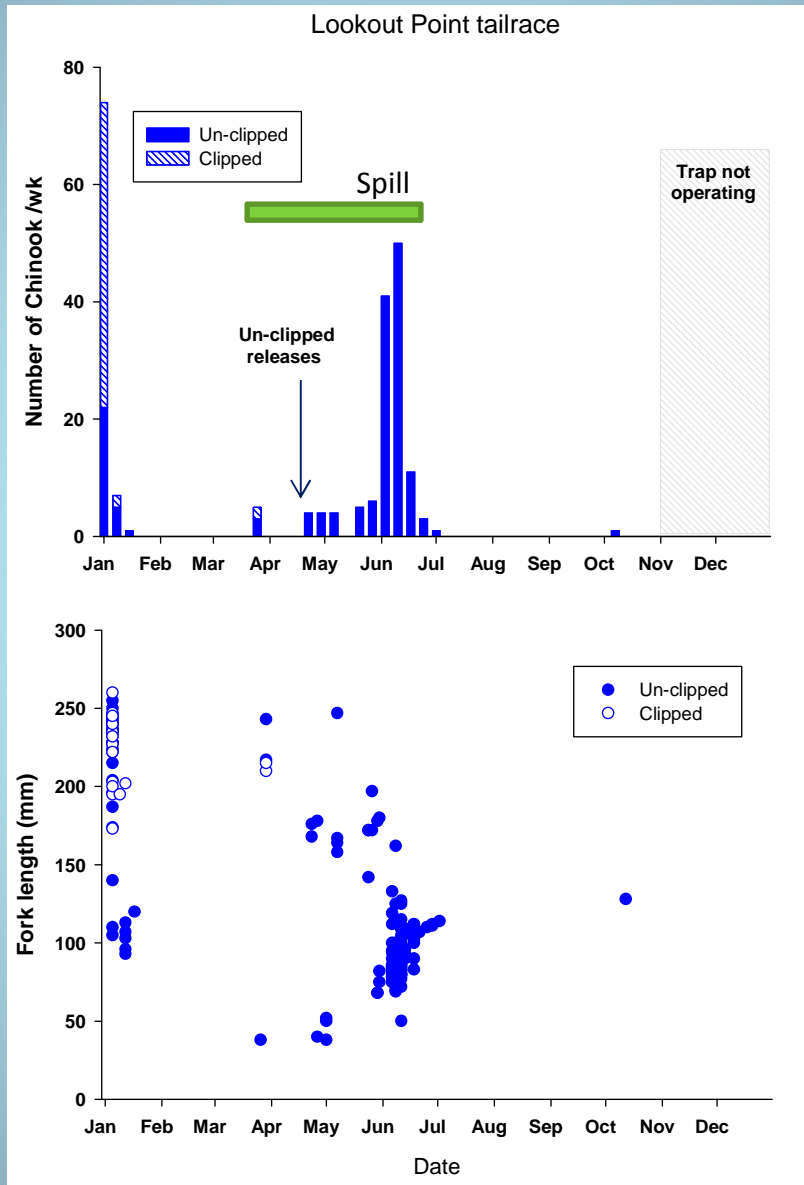


# Vertical Distribution



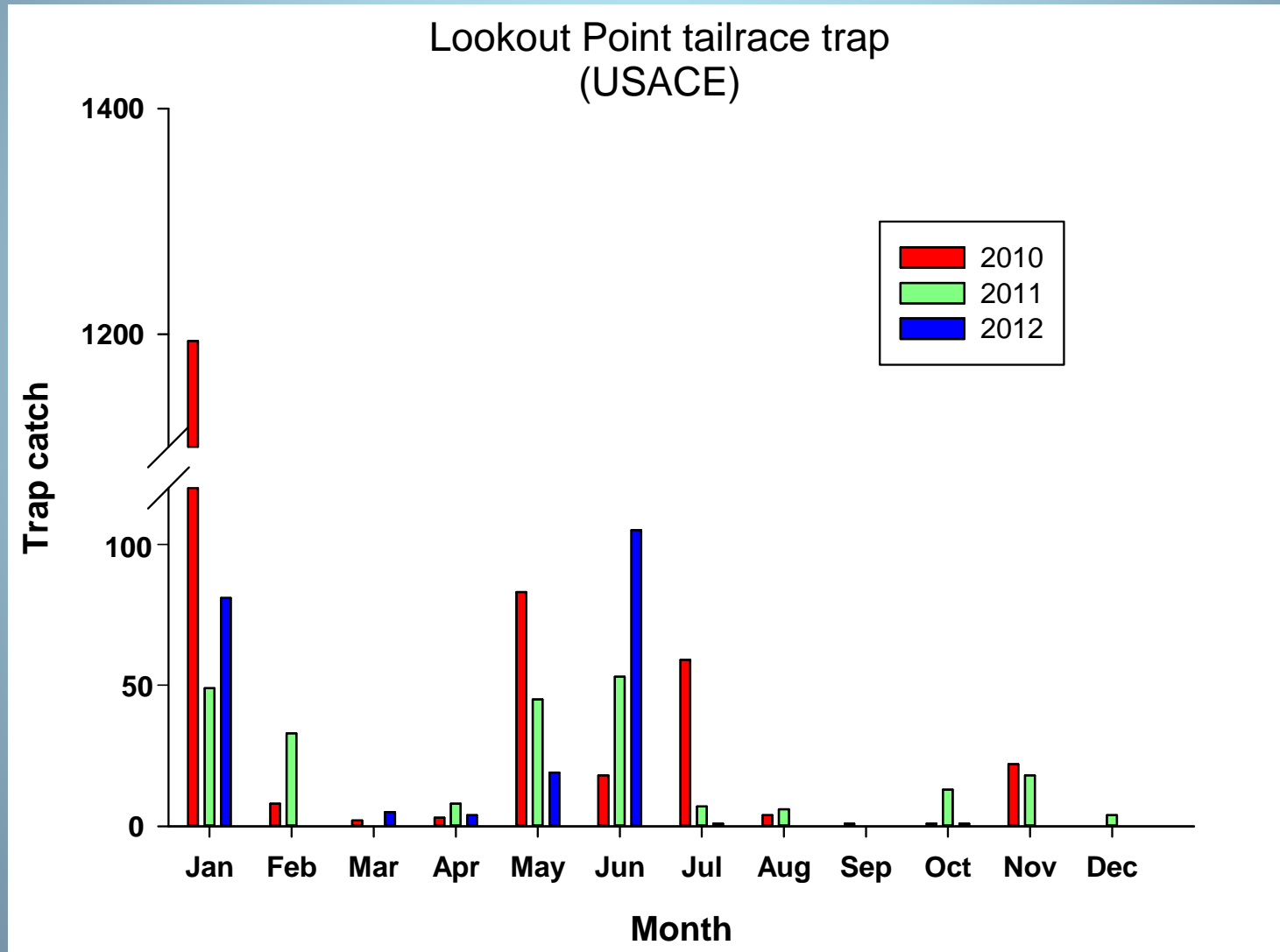


# Migration Timing and Size of Chinook Exiting Reservoir



(USACE data)

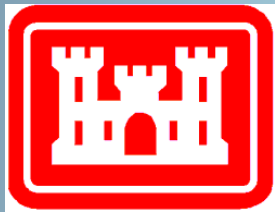
# Migration Timing of Chinook Exiting Reservoir 2010-2012



# Conclusion

- Juvenile Chinook enter Lookout Point in mostly in spring as fry
  - peak in mid-April
  - earlier than N. Santiam and SF McKenzie, later than S. Santiam
- Subyearlings dispersed further into LOP than Cougar subyearlings
- Chinook descend into deeper water (~11 m or more) in summer and return to surface in fall
  - similar to Chinook in Detroit
- Chinook exit LOP with spill in late spring and in fall/winter

# Acknowledgments



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