

# MONITORING JUVENILE SALMON IN MAT-SU BASIN STREAMS

Wiggle Creek

**ARRI**  
Aquatic Restoration & Research Institute

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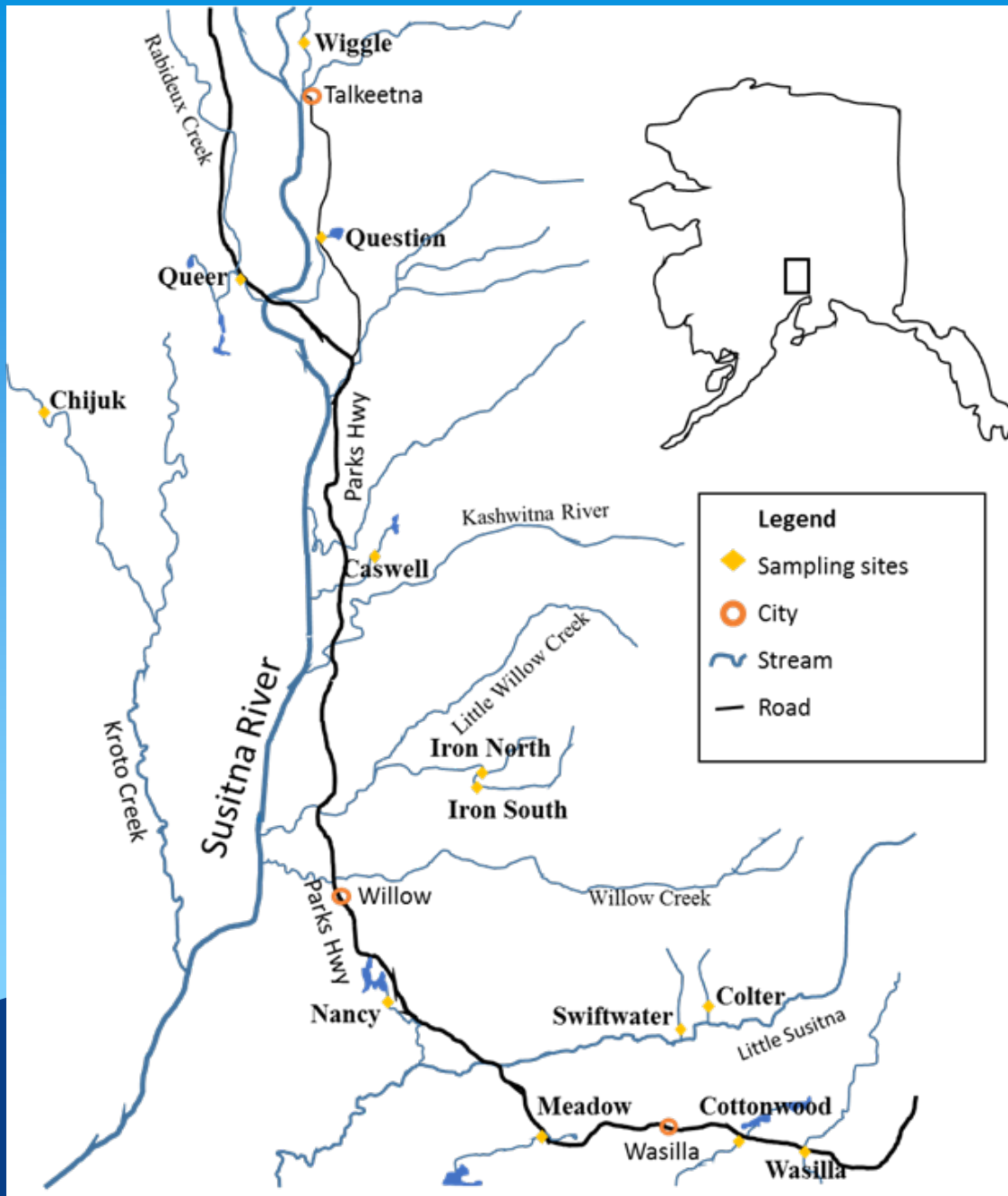
# PARTNERSHIP OBJECTIVES

- \* **Objective 1.2: Habitat Quality**

By 2020, characteristics of habitats that are critical for salmon at each life stage (spawning, rearing, and overwintering) will be identified and used to develop critical habitat definitions to identify places that provide these habitats.

- \* **Strategic Action 1.4.4. Support Biological Monitoring**

Support projects that monitor and track changes to biotic communities (e.g. macroinvertebrates) that can be indicators of degrading water quality or physical habitat, following established state methods where developed.



- **Wetland Streams**

- Wiggle Creek (Talkeetna R)
- Queer Creek (Rabideux Creek)
- Chijuk Tributary (Moose Creek)
- Little Meadow Creek (Knik Arm)

- **Upland Streams**

- North Fork Iron Creek (Little Willow)
- South Fork Iron Creek (Little Willow)
- Swiftwater Creek (Little Susitna)
- Colter Creek (Little Susitna)
- Wasilla Creek (Knik Arm)

- **Lake/Stream Complex**

- Question Creek (Susitna R)
- Cottonwood Creek (Knik Arm)
- Caswell Creek (Susitna R)
- Nancy (Lake) Creek (Little Susitna)

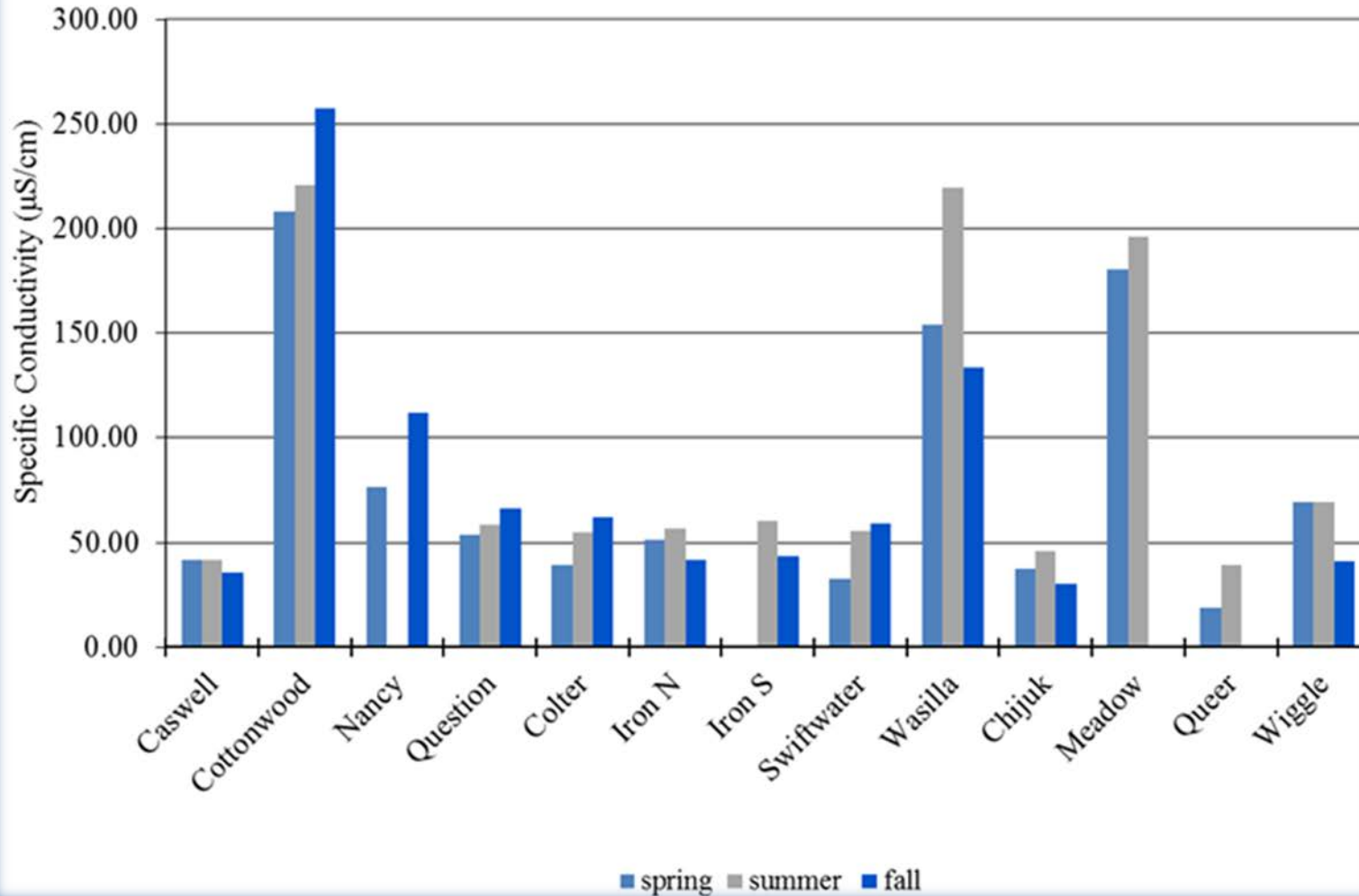


# SAMPLING METHODS

- Baited Minnow Traps (20/~200m sampling reach)
- Temperature (HOBO Loggers)
- Discharge
- pH, Spec. Cond., D.O., Turbidity
- Substrate size (pebble counts)
- Channel width, depth, slope
- Large woody debris
- Flow type classification (2013)
- Invertebrate drift (2013)

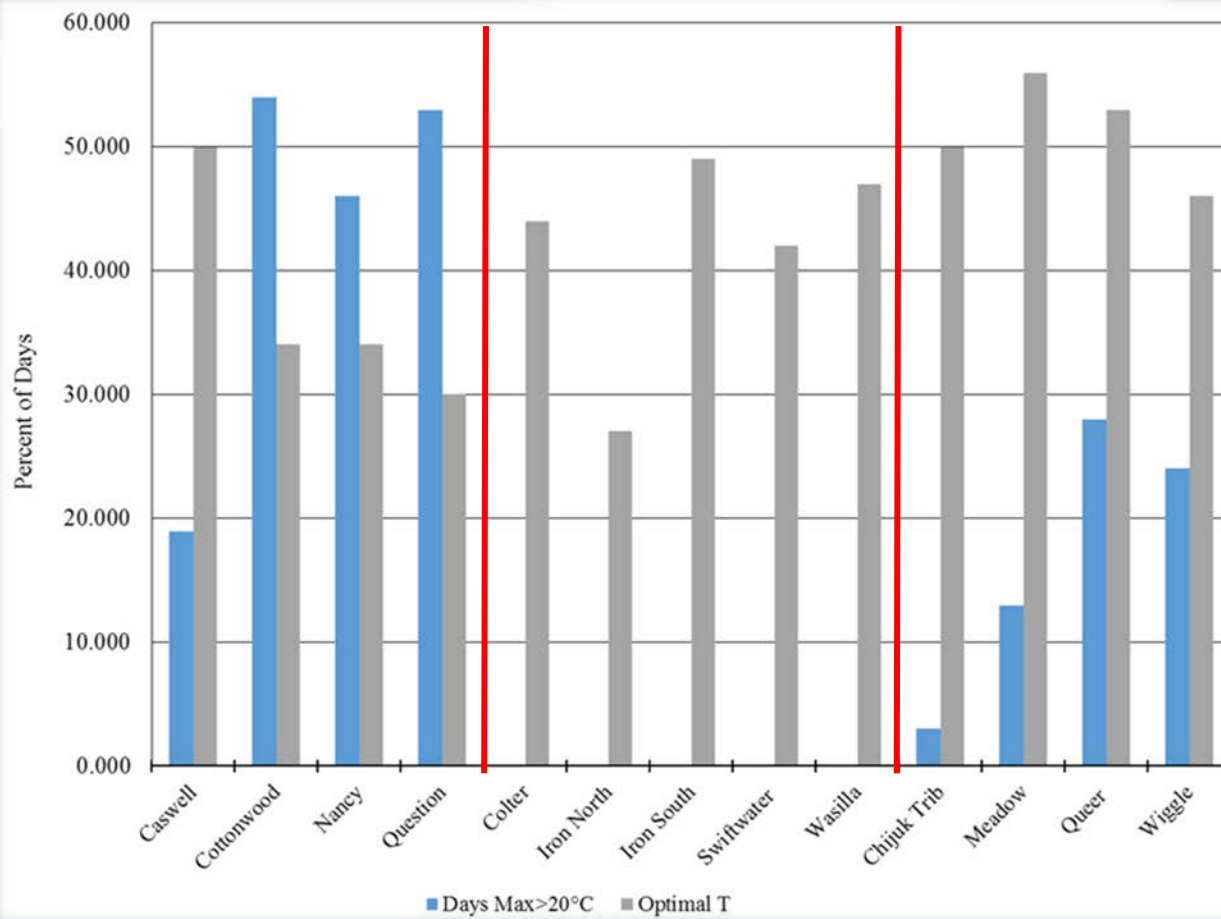


# Water Quality

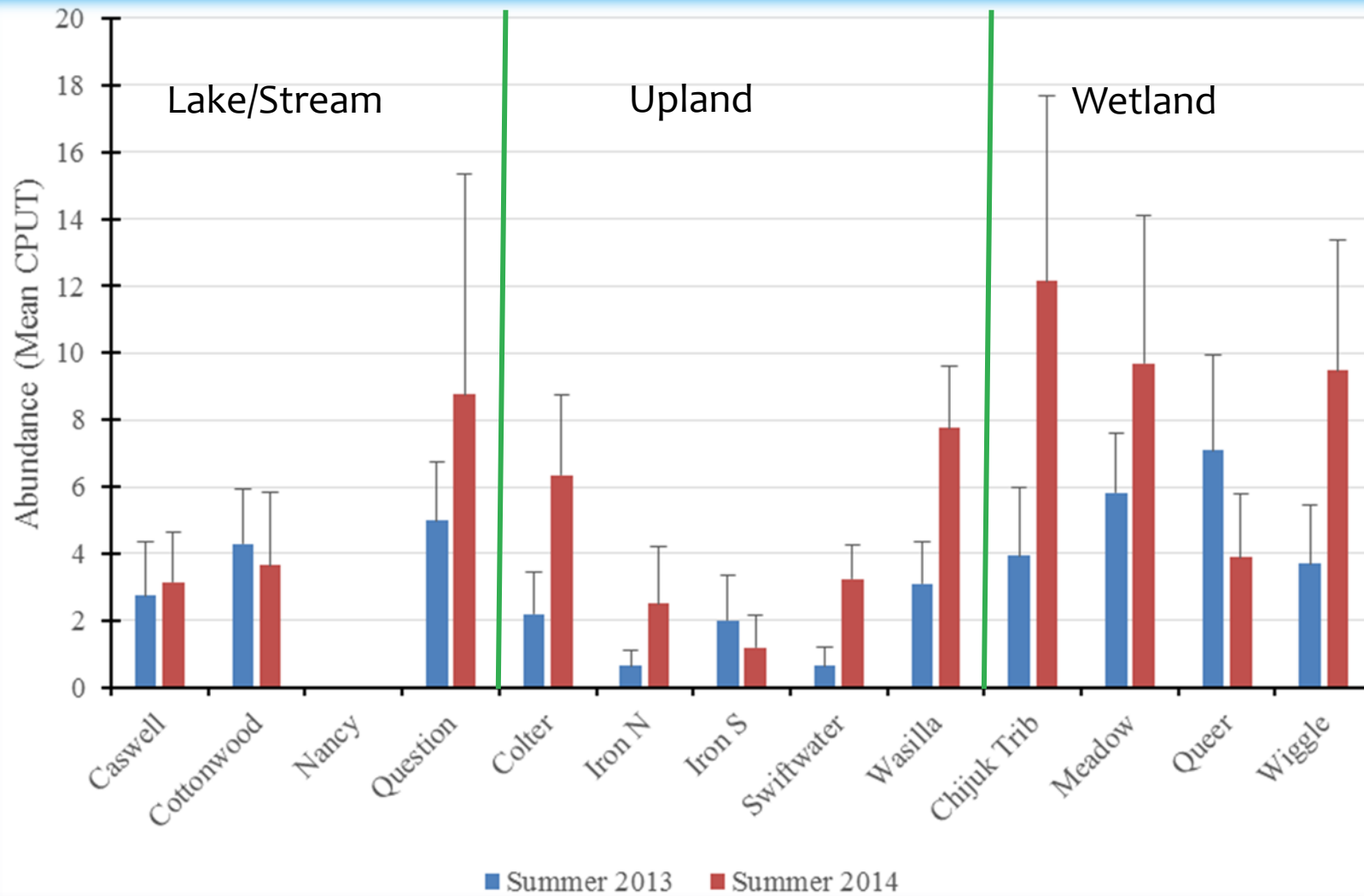




# Water Temperature

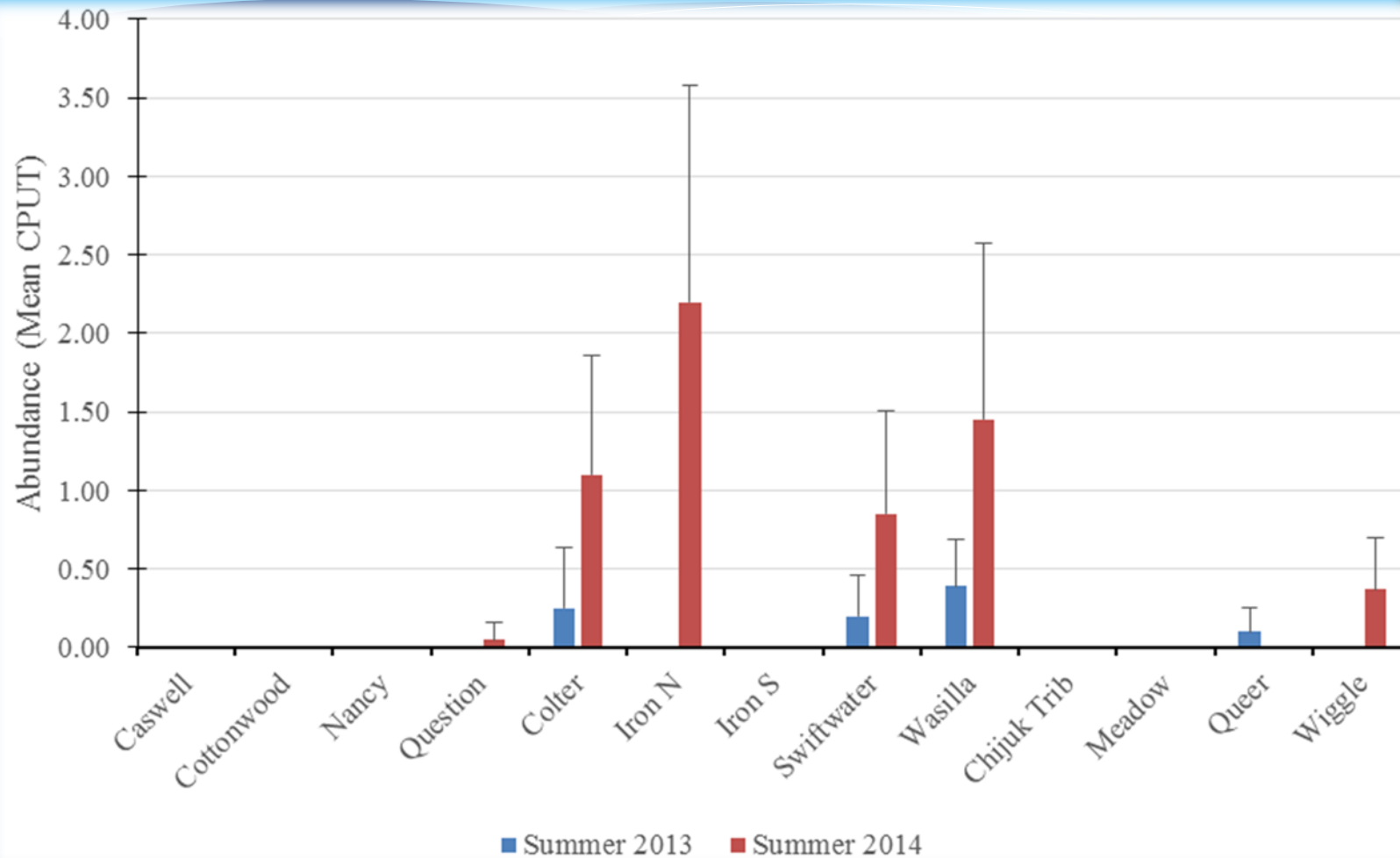


# Coho salmon



CPUT in 2014 > 2013  
CPUT in Wetland > Upland

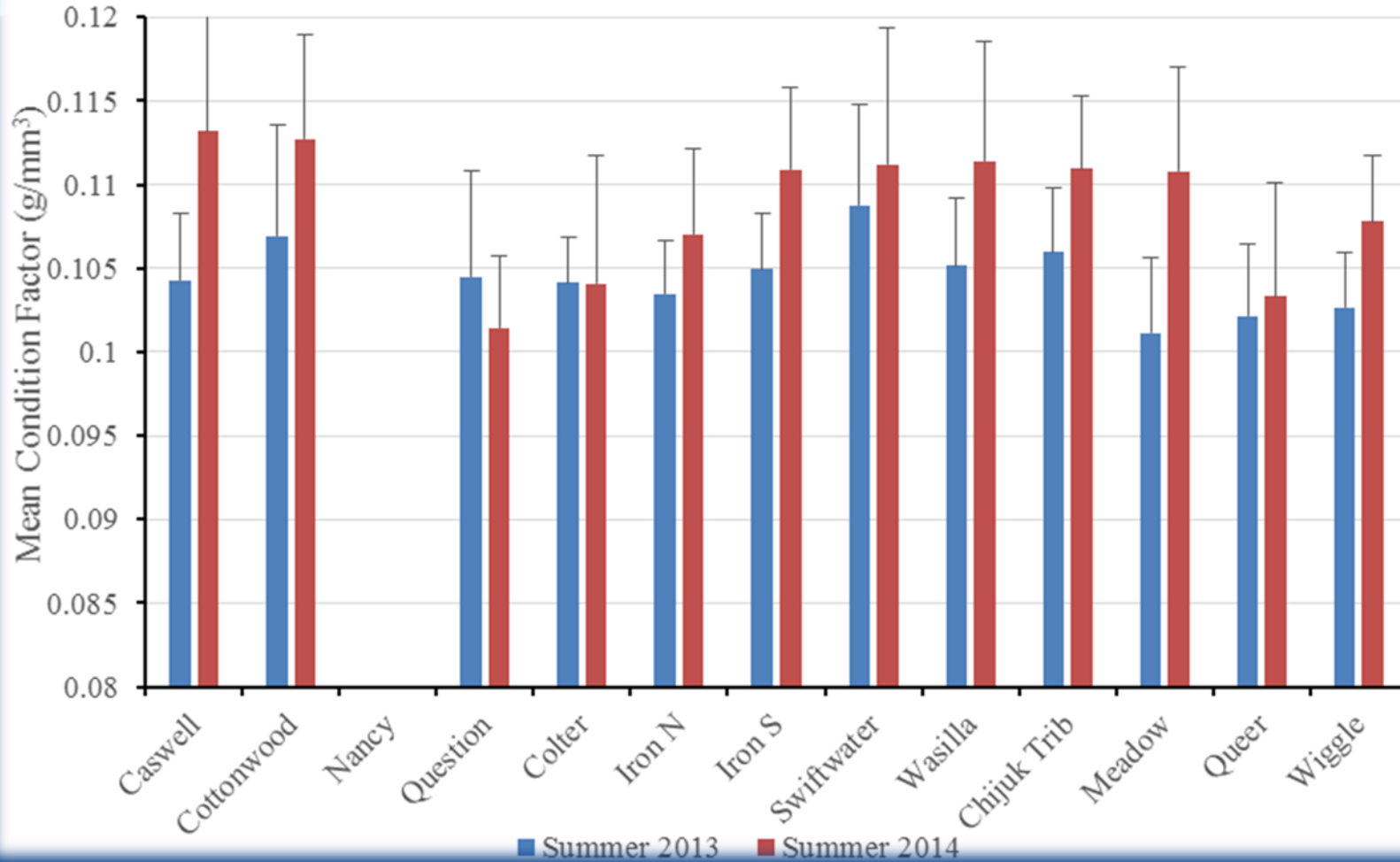
# Chinook salmon



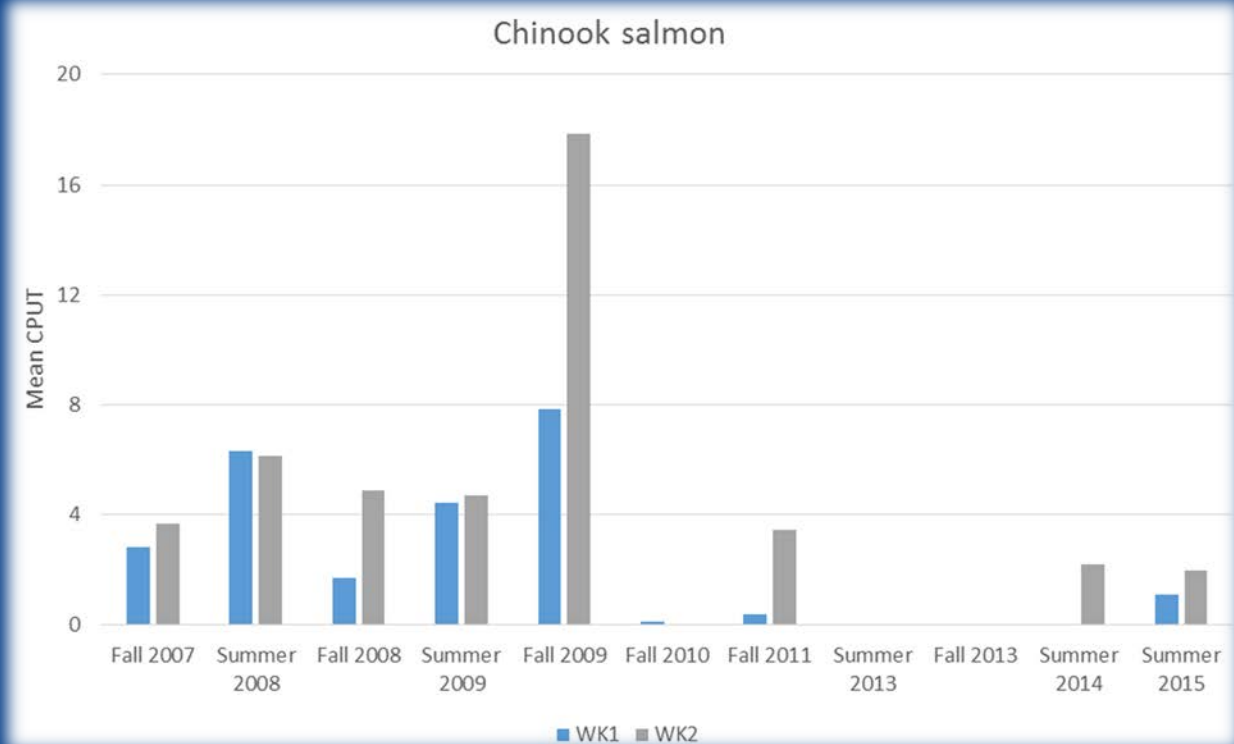
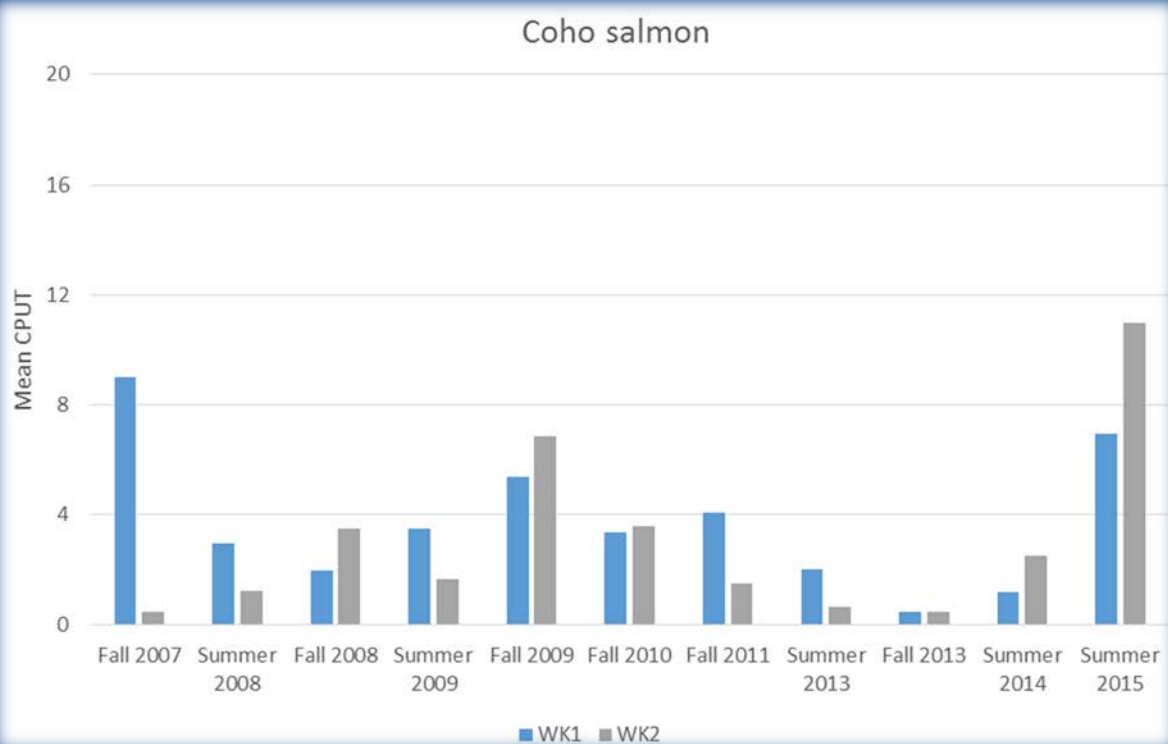
CPUT in 2014 >>> 2013



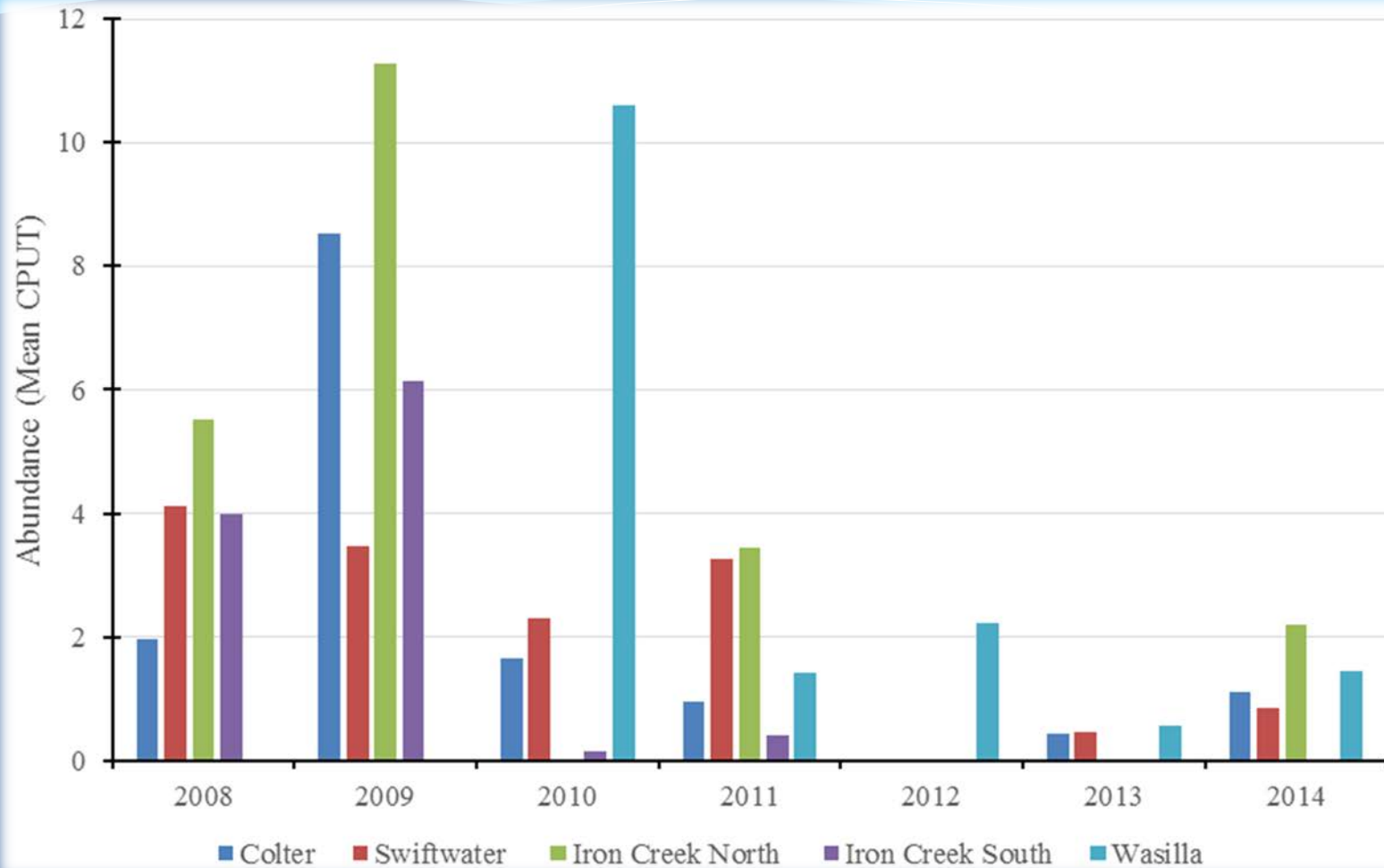
# Condition Factors



# Trends in Relative Abundance

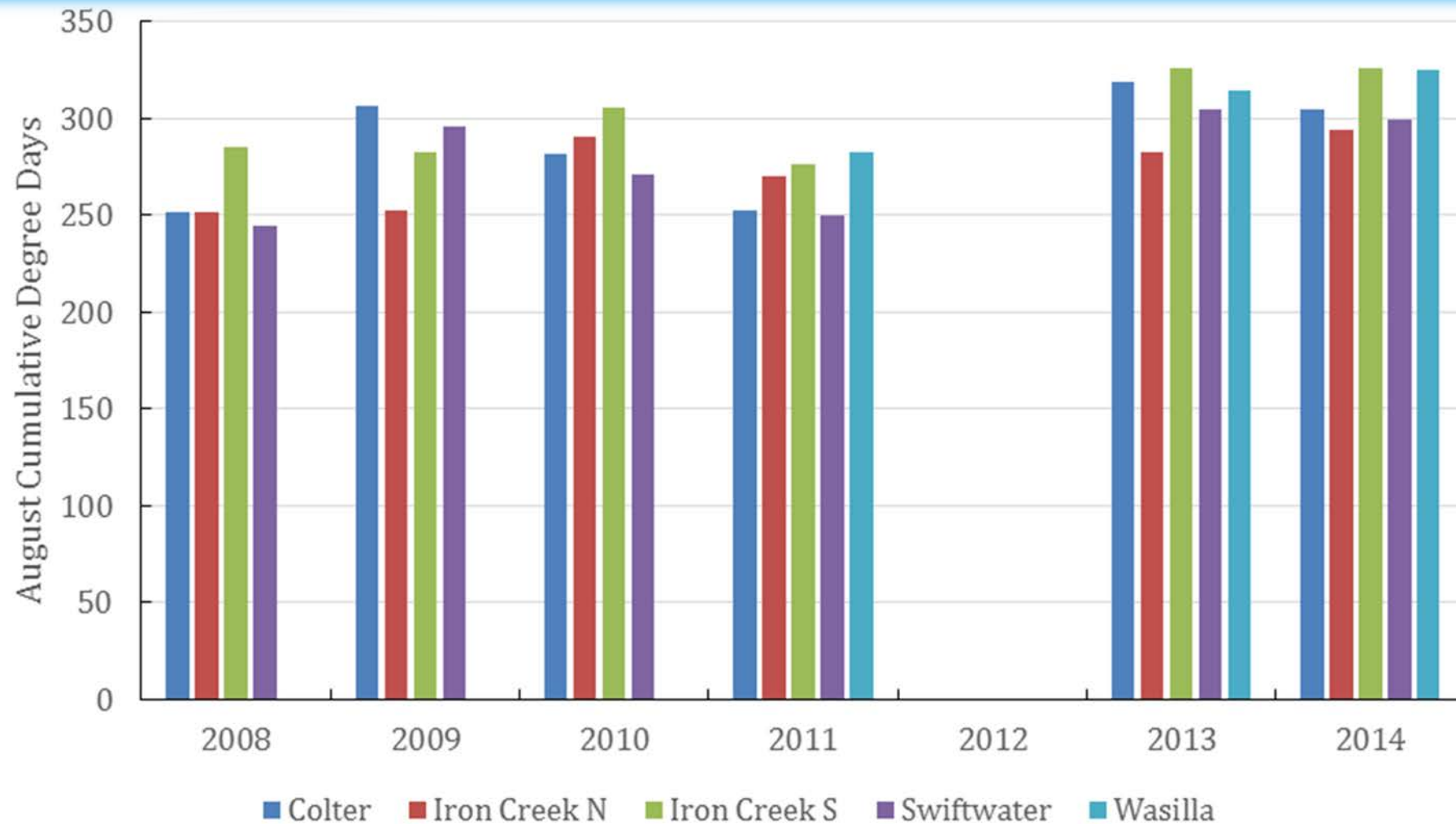


# Trends in Juvenile Chinook Relative Abundance

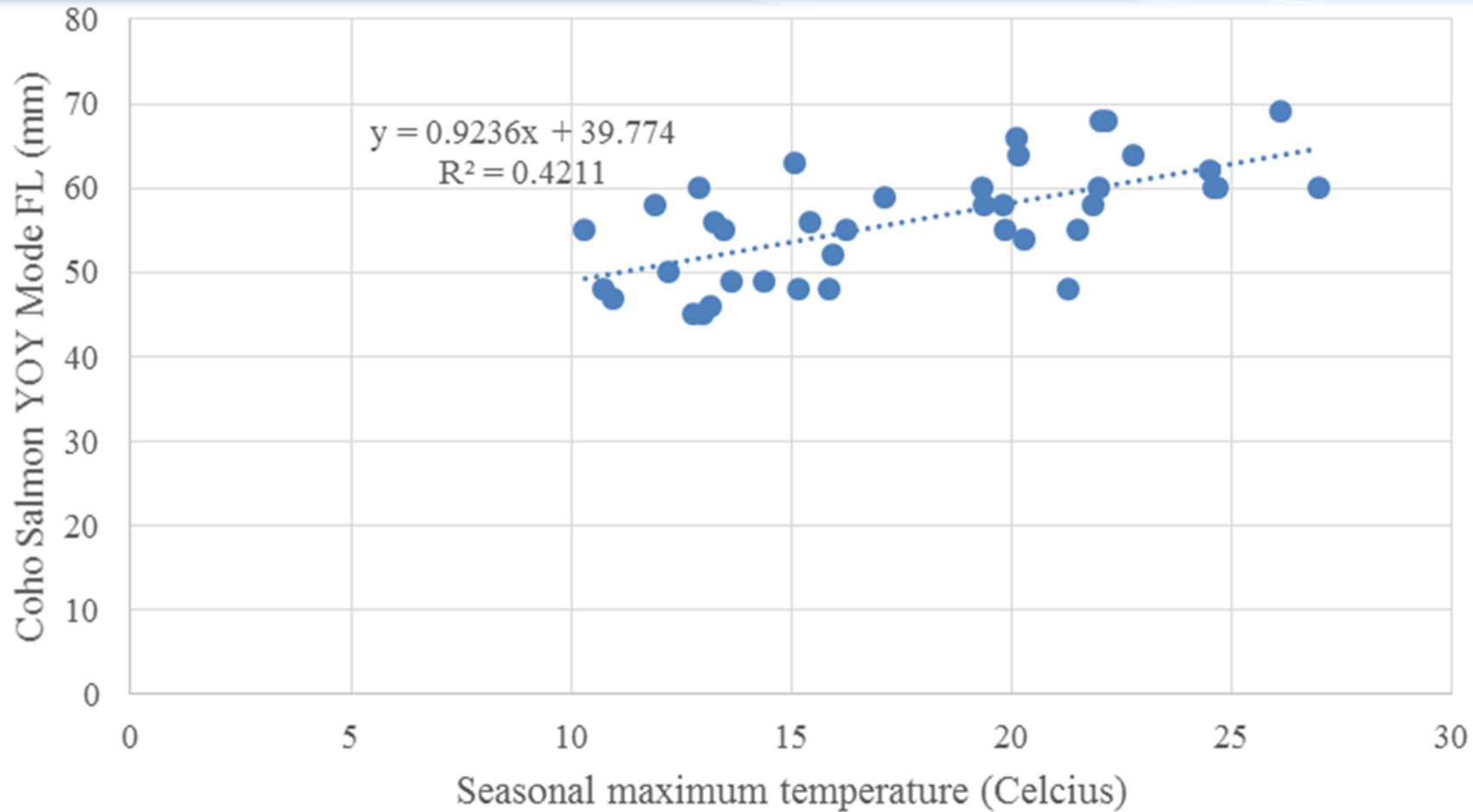




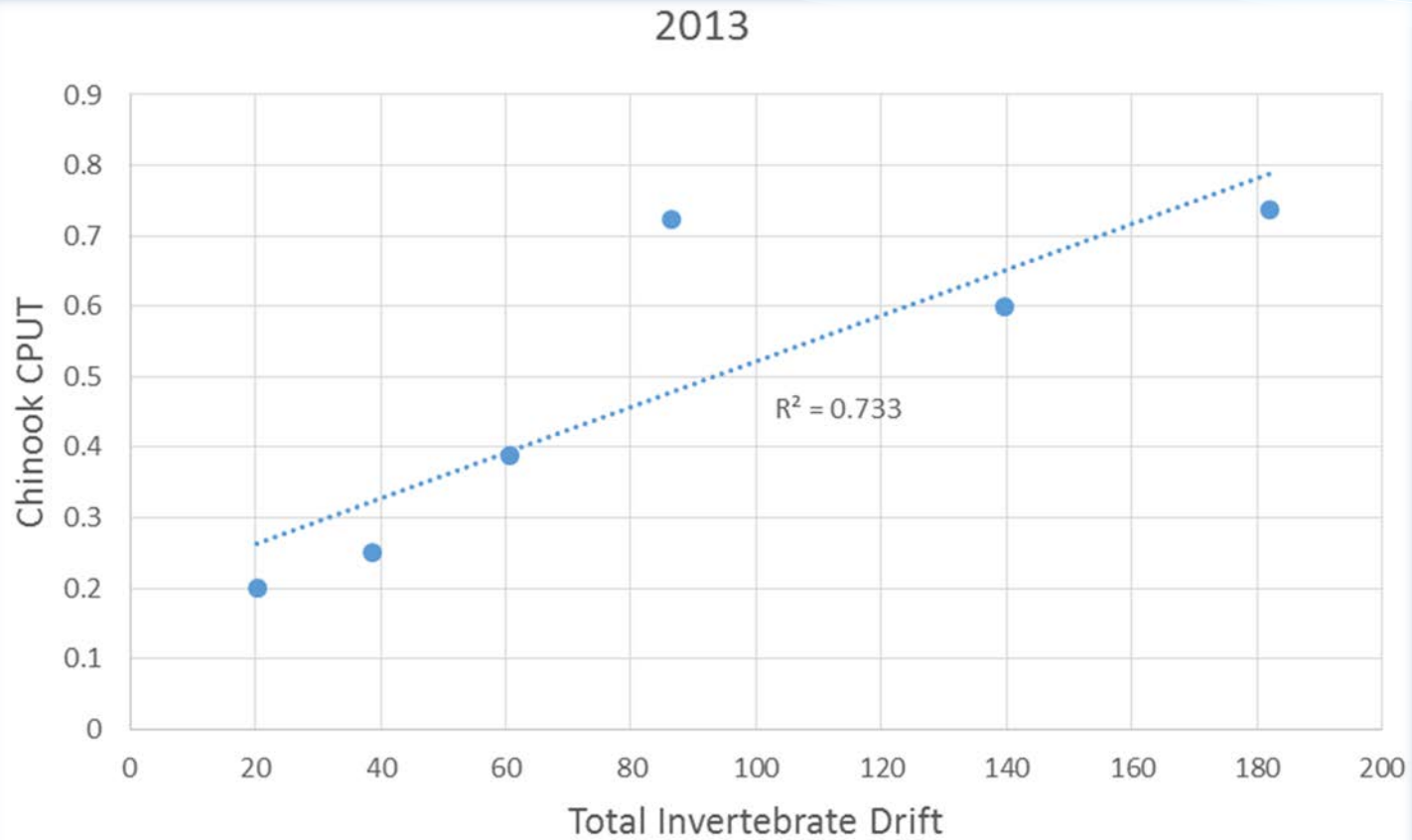
# Trends in WQ and Physical Habitat



# Relationships with Physical Characteristics



# Relationships with Biotic Characteristics





# PROJECT SUPPORT

## Mat-Su Basin Salmon Habitat Partnership under the FWS National Fish Habitat Action Plan

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