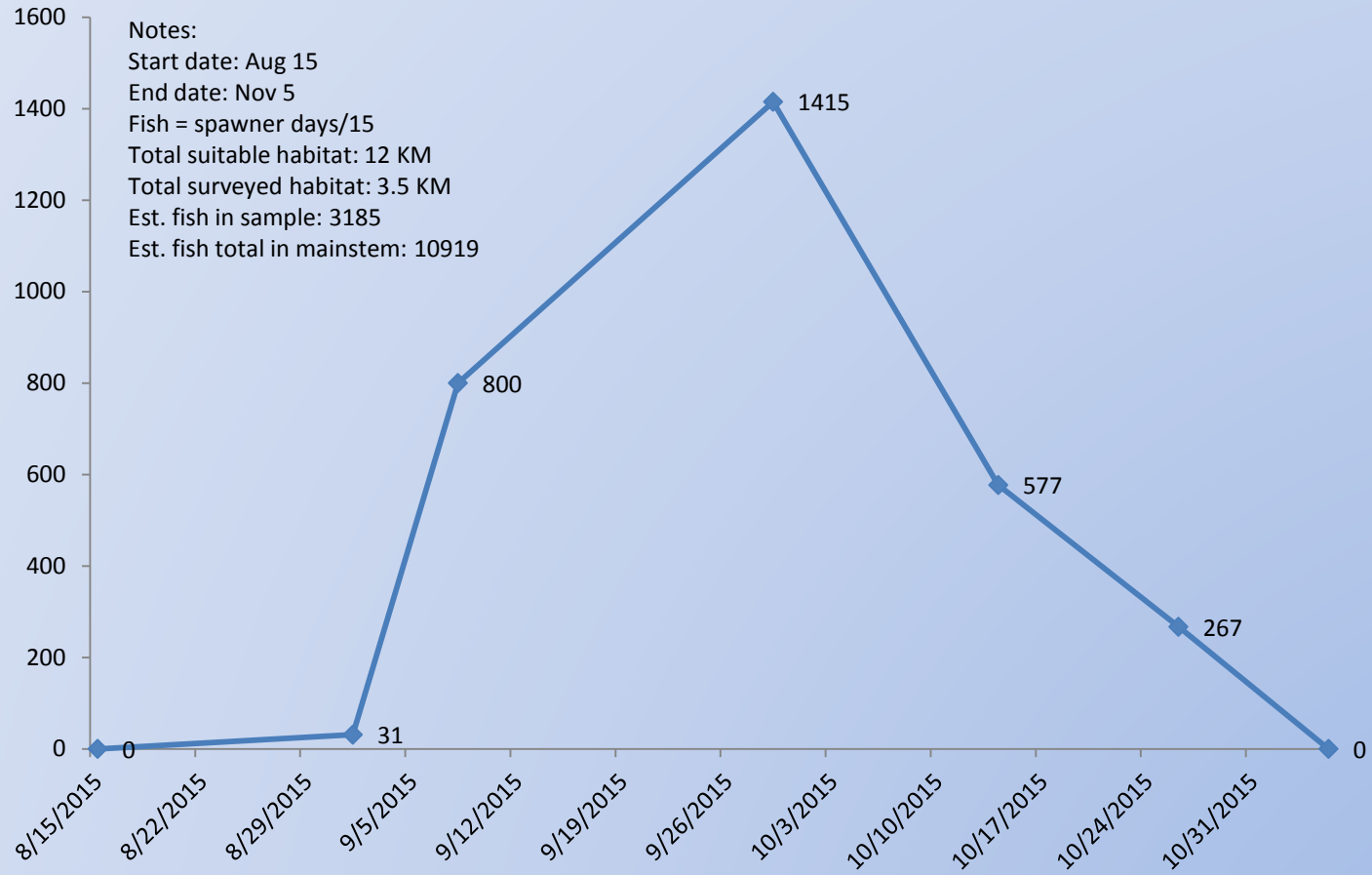
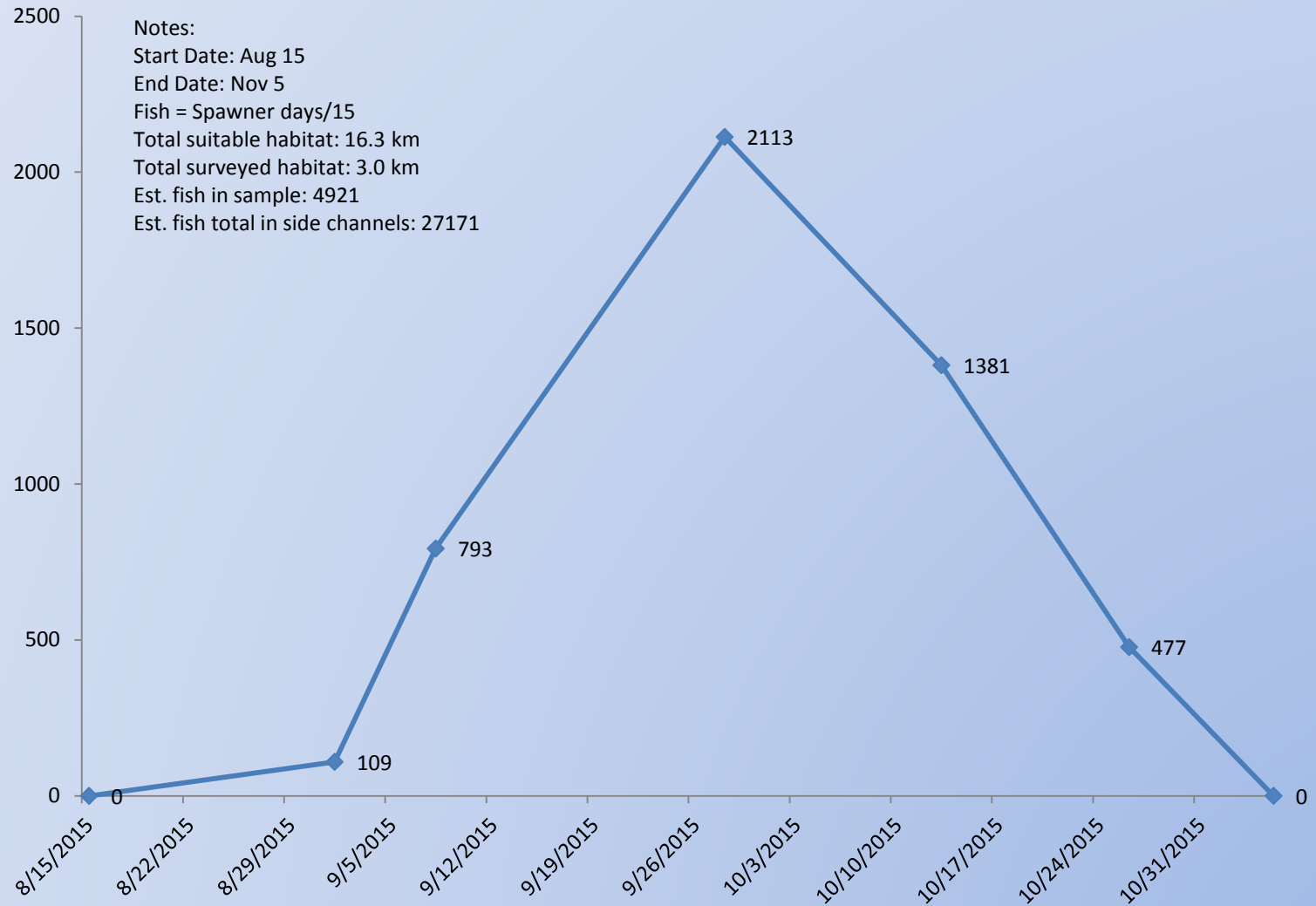
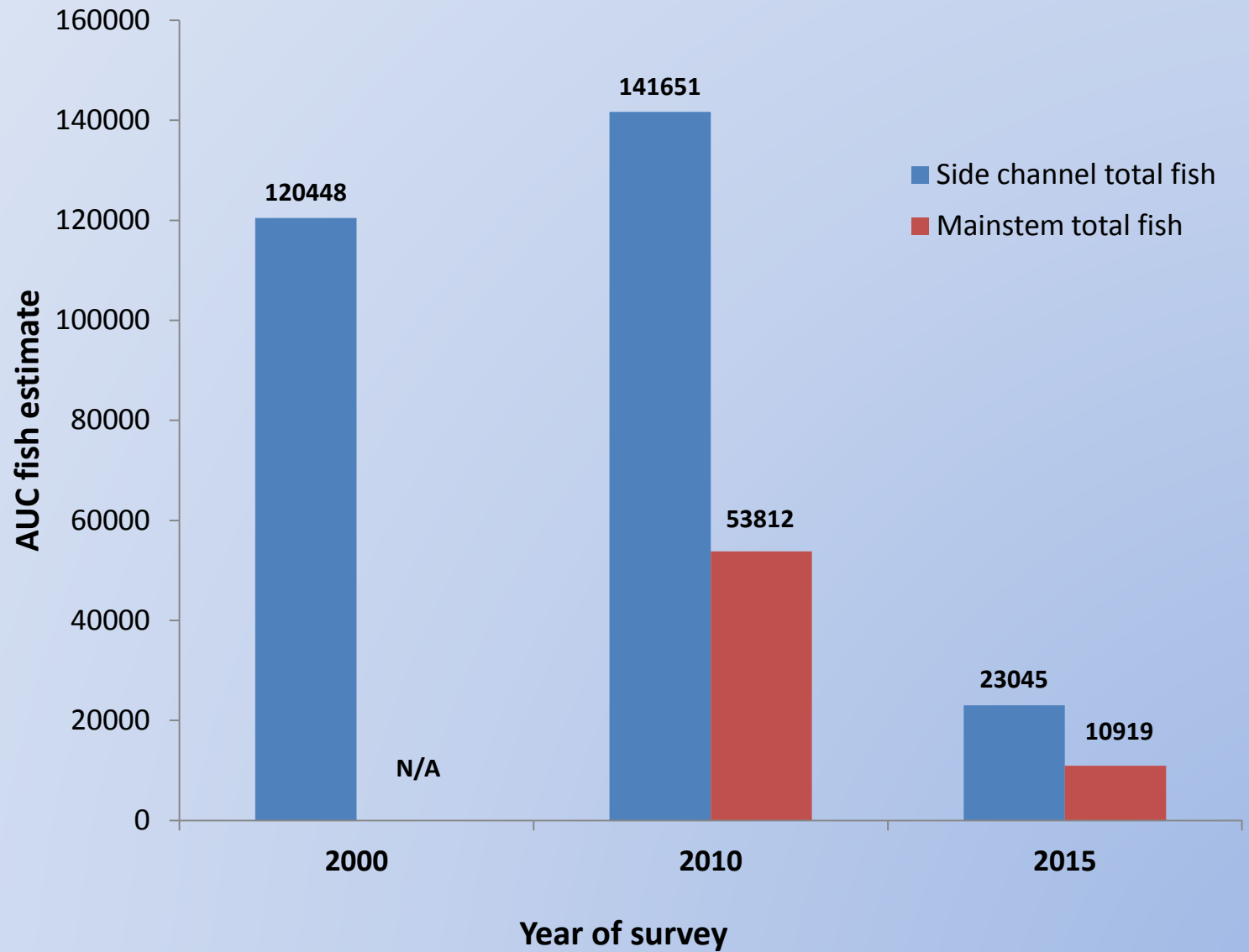


# Kokanee mainstem AUC estimate



# Kokanee side channel AUC estimate

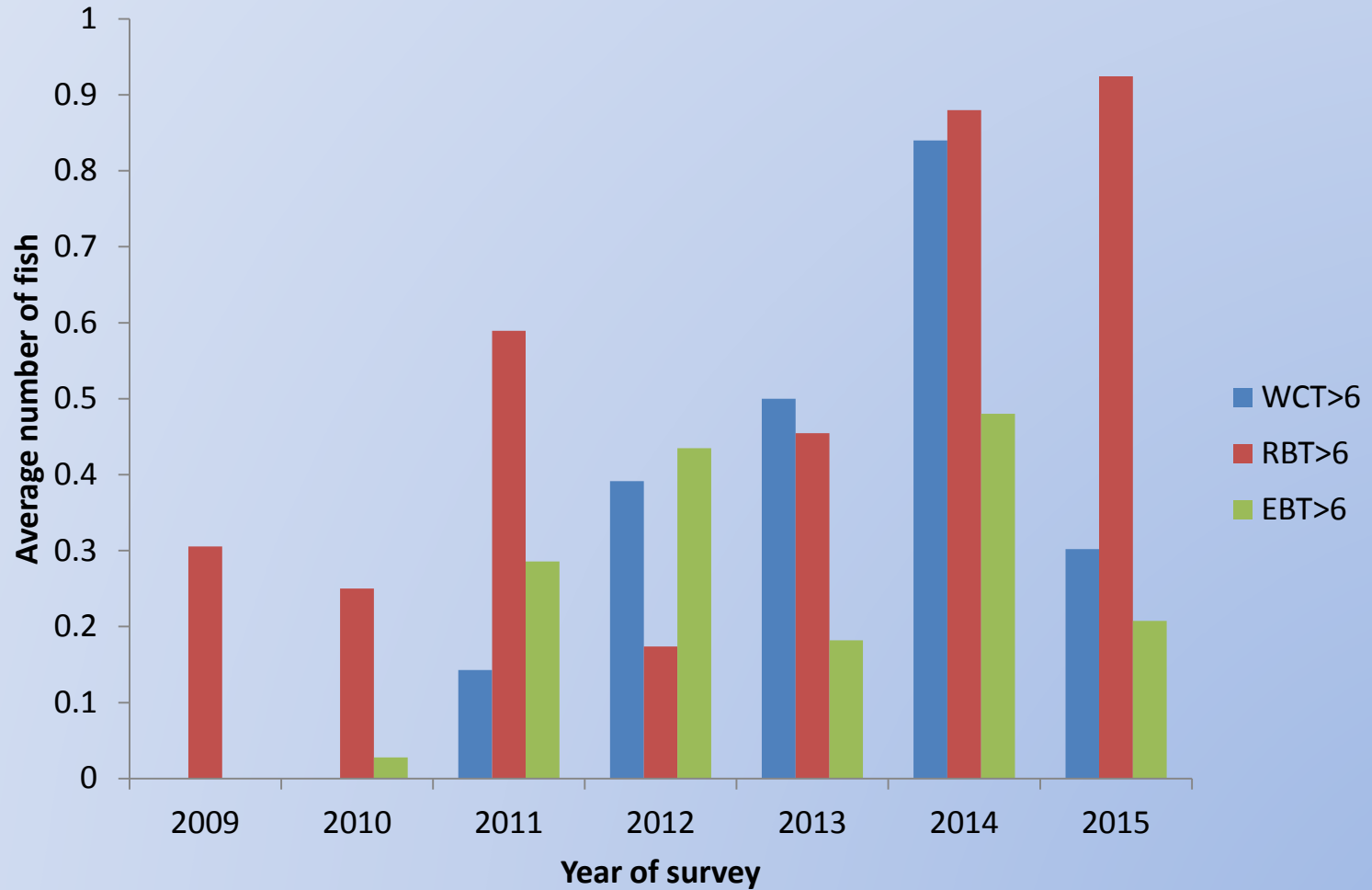




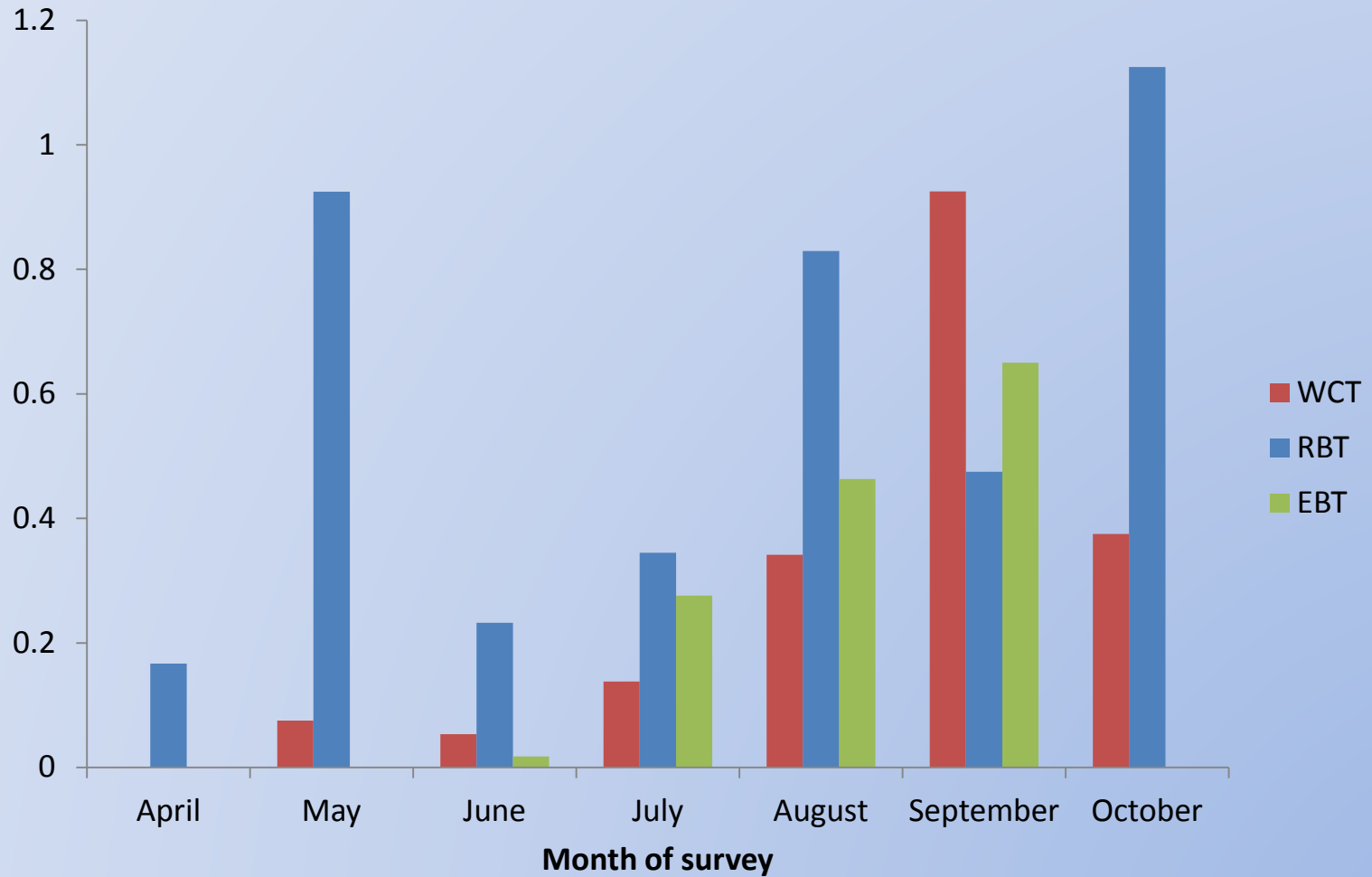
## 2015 expanded Kokanee survey results

- Survey estimated 33,964 kokanee; **17%** of the return estimated in 2010
- Extremely low water in mainstem and many side channels- where did the fish go?

## Stehekin side channel snorkel surveys, average fish counts per index site; 2009 to 2015



## Seasonal use of Stehekin River side channels; average number of fish > 6" by month, 2009 - 2015



## 2015 Stehekin River side channels snorkel surveys results

- Increased the temporal scope of surveys- May 5 to Sept 8
- No WCT redds or actively spawning fish observed
- One WCT angled in company creek side channels on Sept 2; appeared to have spawned – had numerous scrapes on it side and emaciated appearance

## Number and species of fry identified by DNA analysis; 2011 - 2014



### DNA analysis of newly emerged trout fry

- Hybrids are widespread and common, rainbow trout prevalent
- WCT detected in index site i5 in 2013, likely newly planted hatchery fish (due to location and fish size)
- Otherwise no WCT fry detected. Increase temporal and spatial variability in the future



## **2016 NPS proposed scope of work**

- Stehekin side channels trout spawning surveys - 6 surveys; from May 1 to Aug 31
- Stehekin side channels trout abundance surveys – 2 surveys in October
- Assist CPUD with kokanee surveys on CPUD index sites – 2 surveys in October
- DNA analysis of newly emerged fry – four sites, 25 samples from each site
- eDNA sample collection – 2 surveys Sept to October