

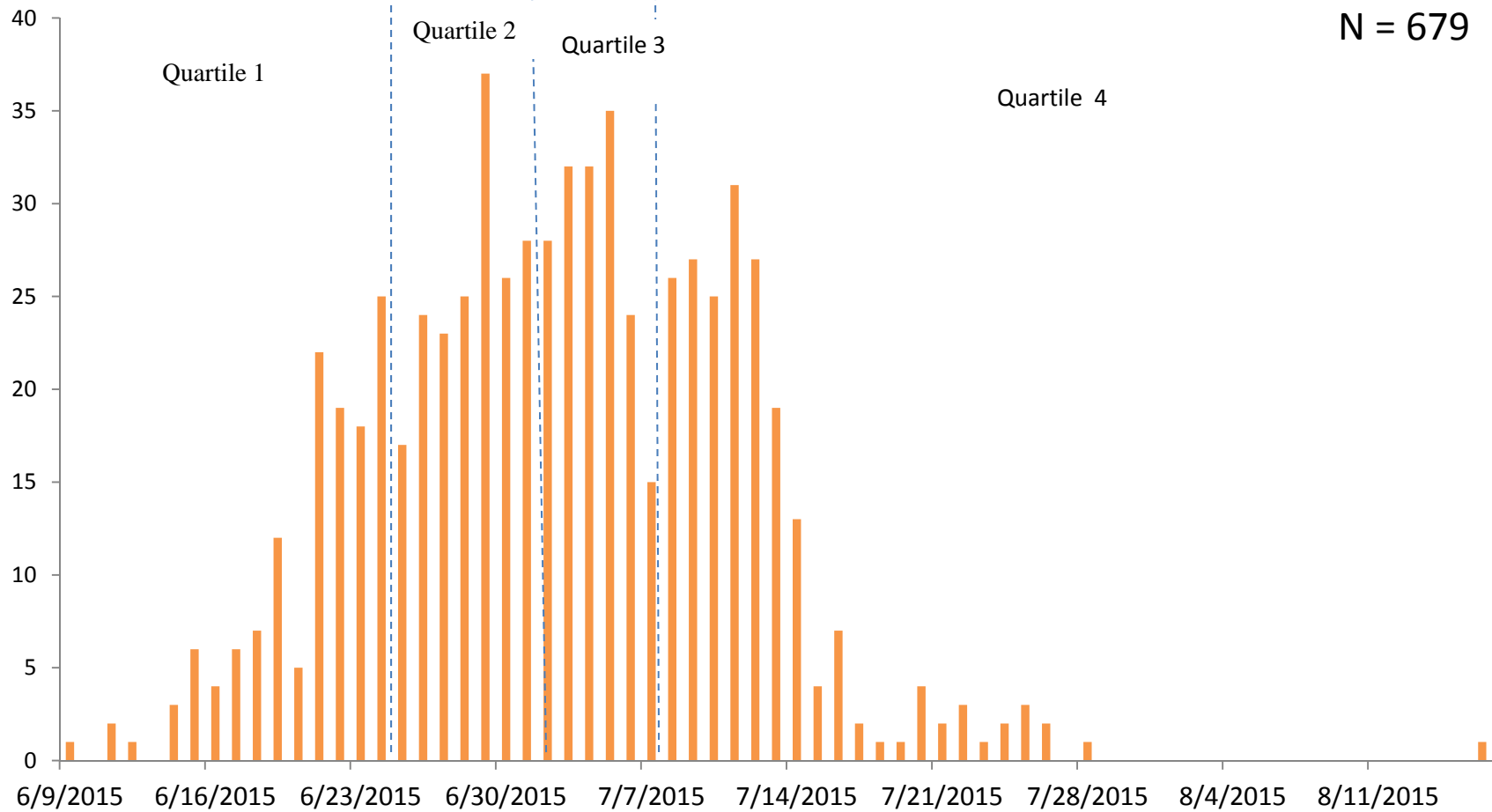
An underwater photograph showing a large group of adult sockeye salmon swimming in clear, shallow water. The fish are silvery with a pinkish-red hue, characteristic of sockeye salmon. They are swimming in various directions, some towards the camera and others away. The water is clear, and the background shows the surface of the water with some ripples and light reflections.

2015 Snake River Adult Sockeye Passage and Emergency Trap & Haul

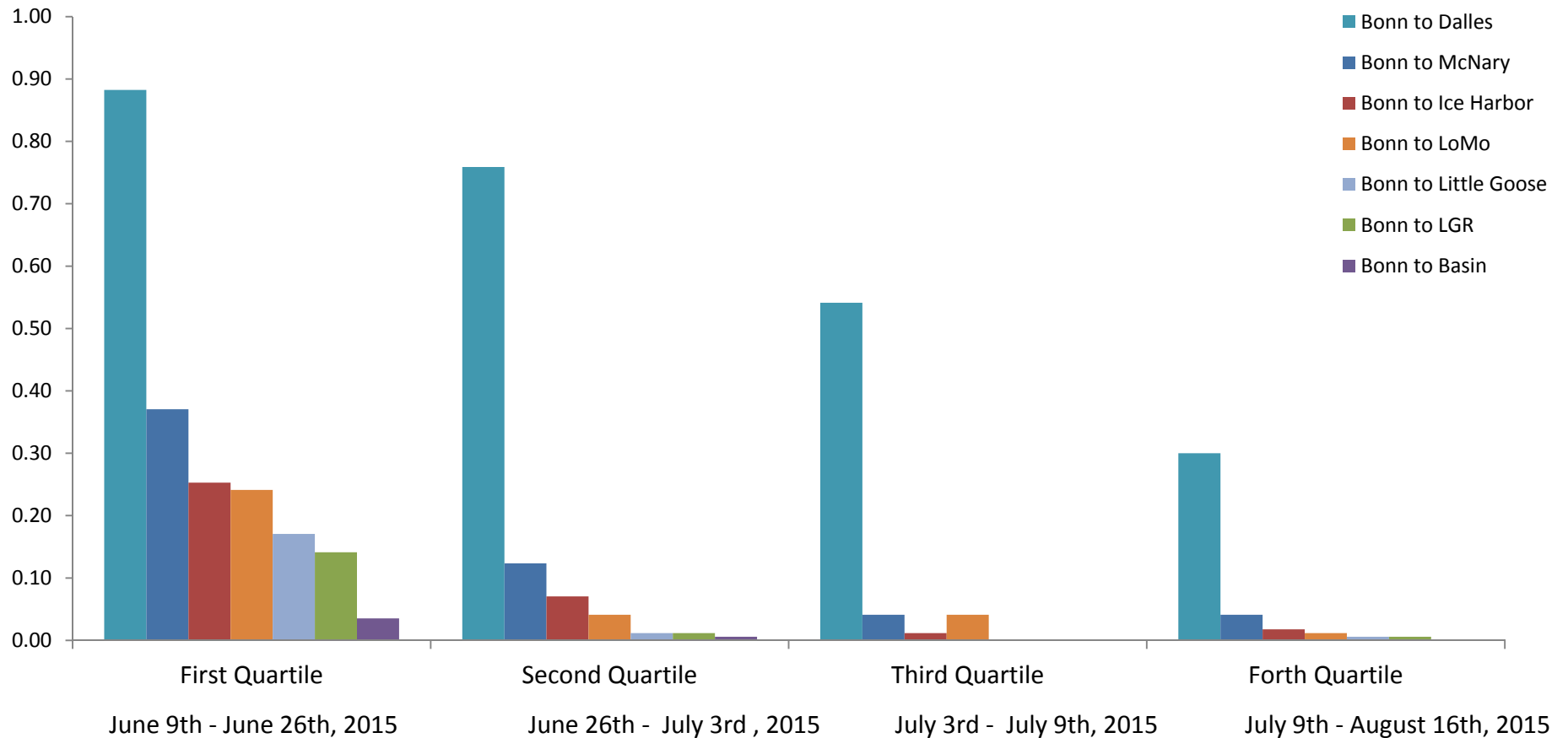
Russ Kiefer

Idaho Department of Fish & Game

PIT Tag Detections at Bonn by Date



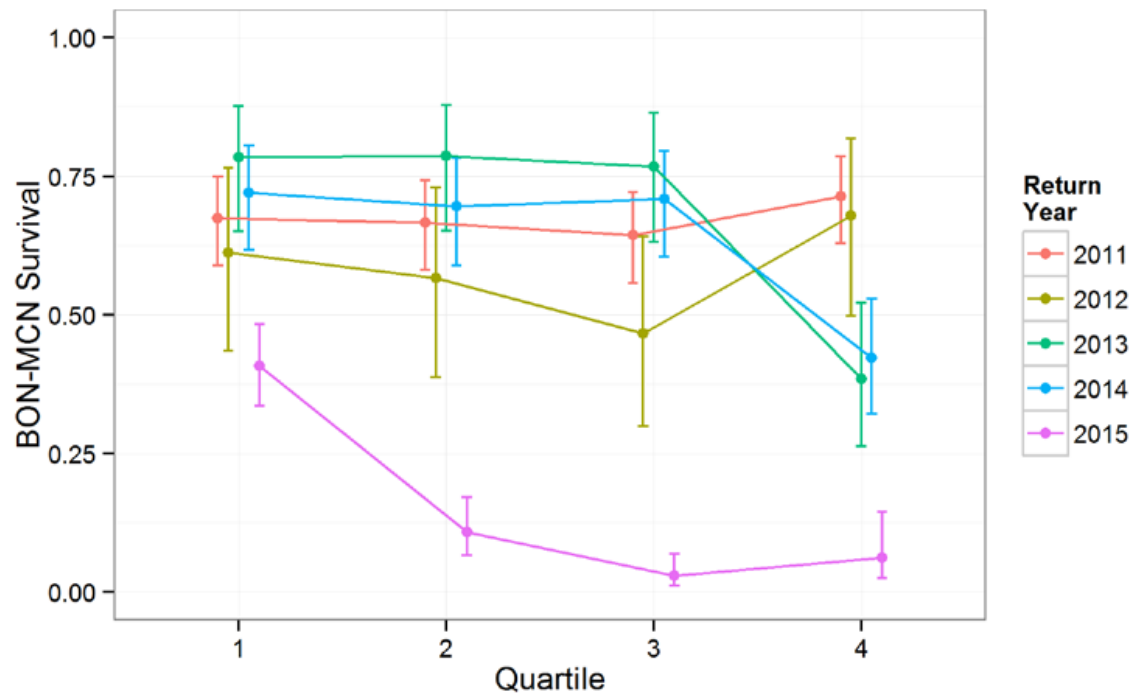
Passage Survival from Bonneville upstream



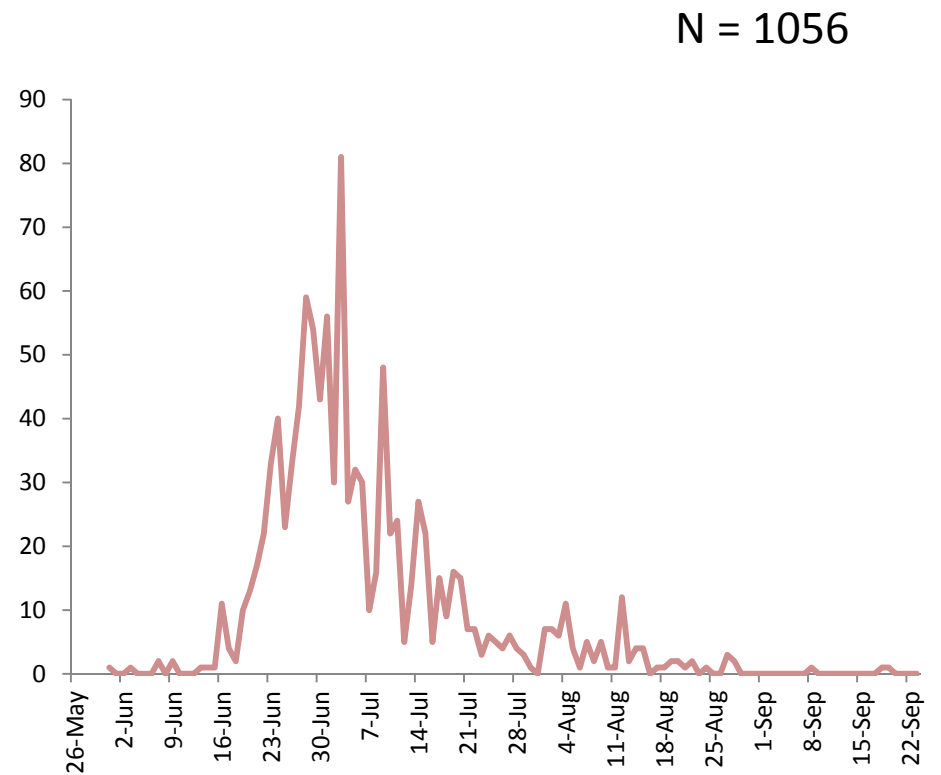
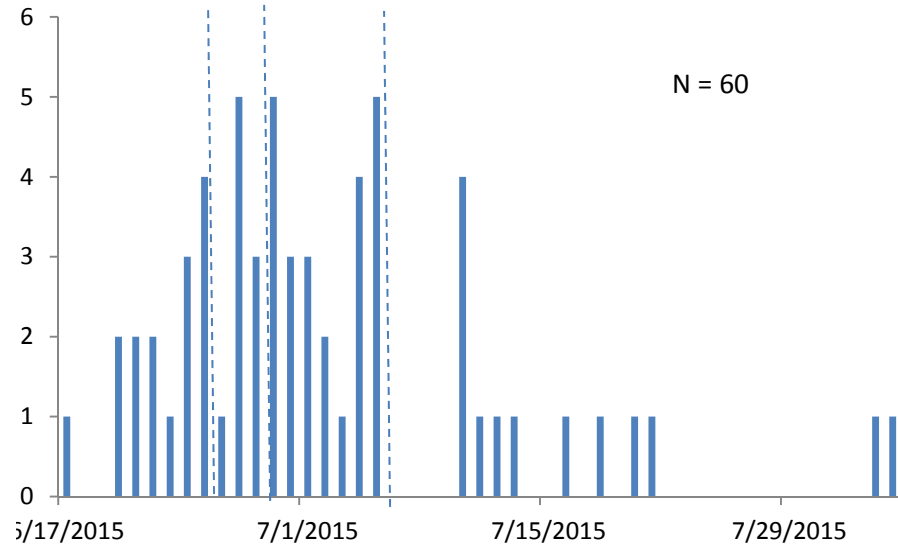
Bonn to McNary Reach

Usually see similar survival across first three quartiles and drops off for last quartile, this year it dropped off after the first quartile

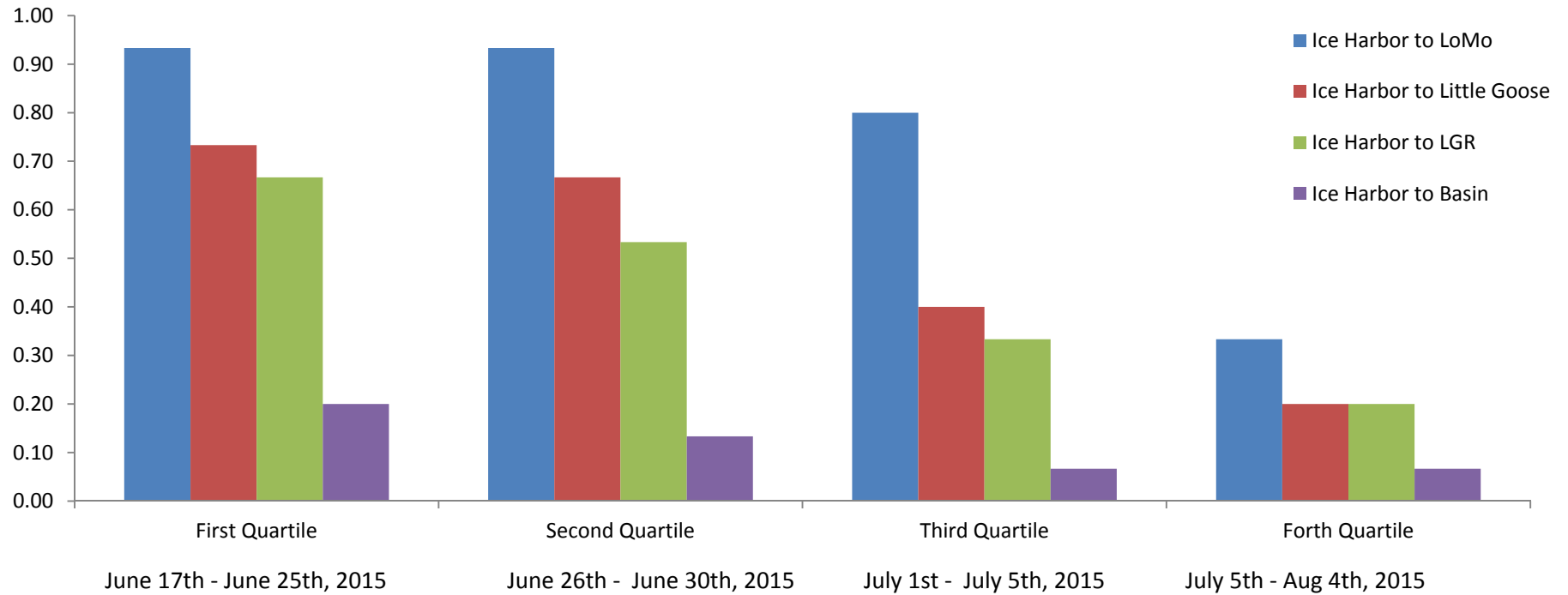
Arrival timing at Bonn did not appear to be different for 2015 vs. earlier years



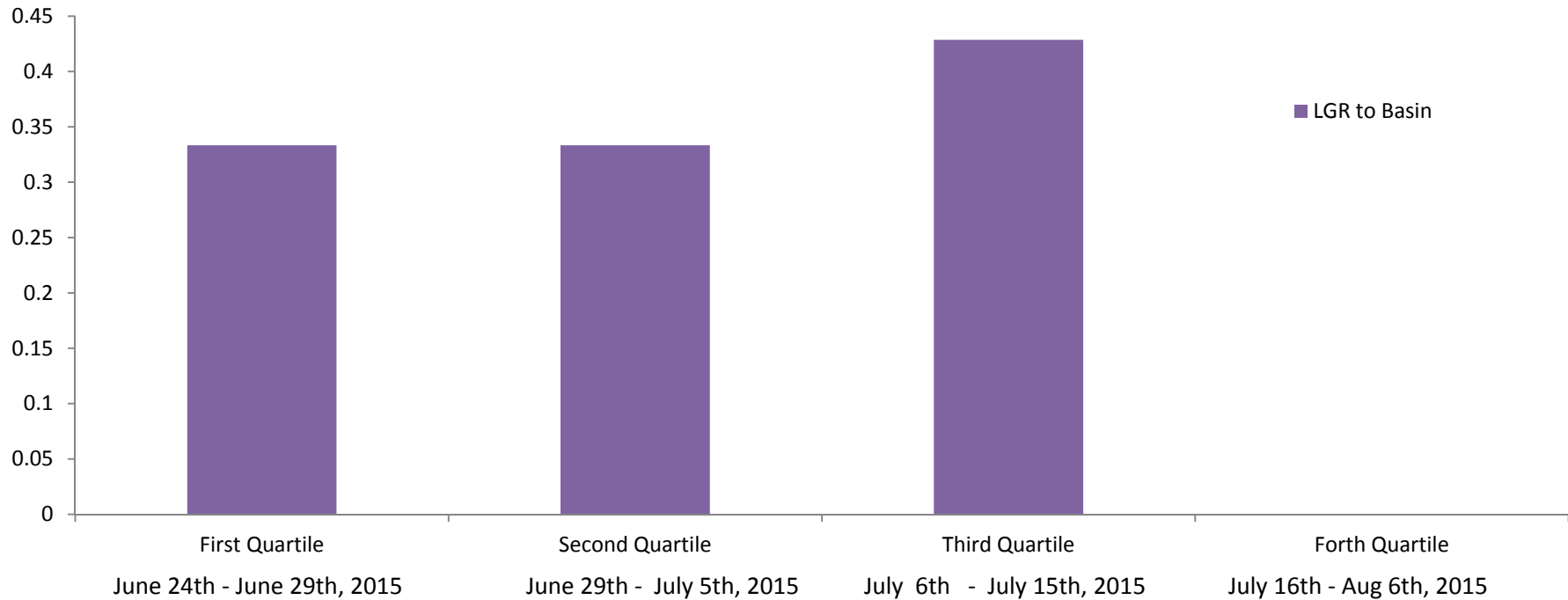
PIT Tag Detections and Window Counts at Ice Harbor Dam



Passage Survival from Ice Harbor upstream

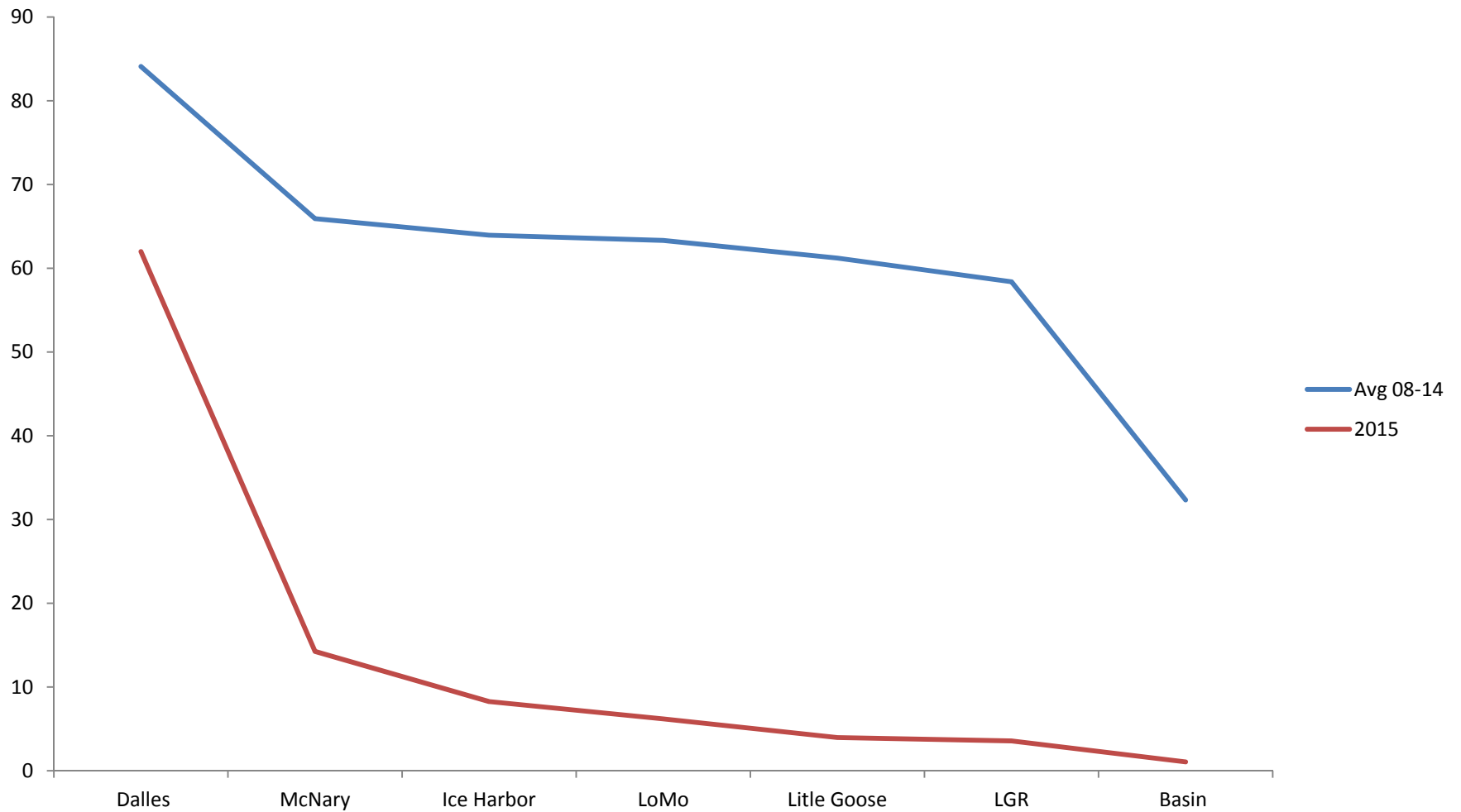


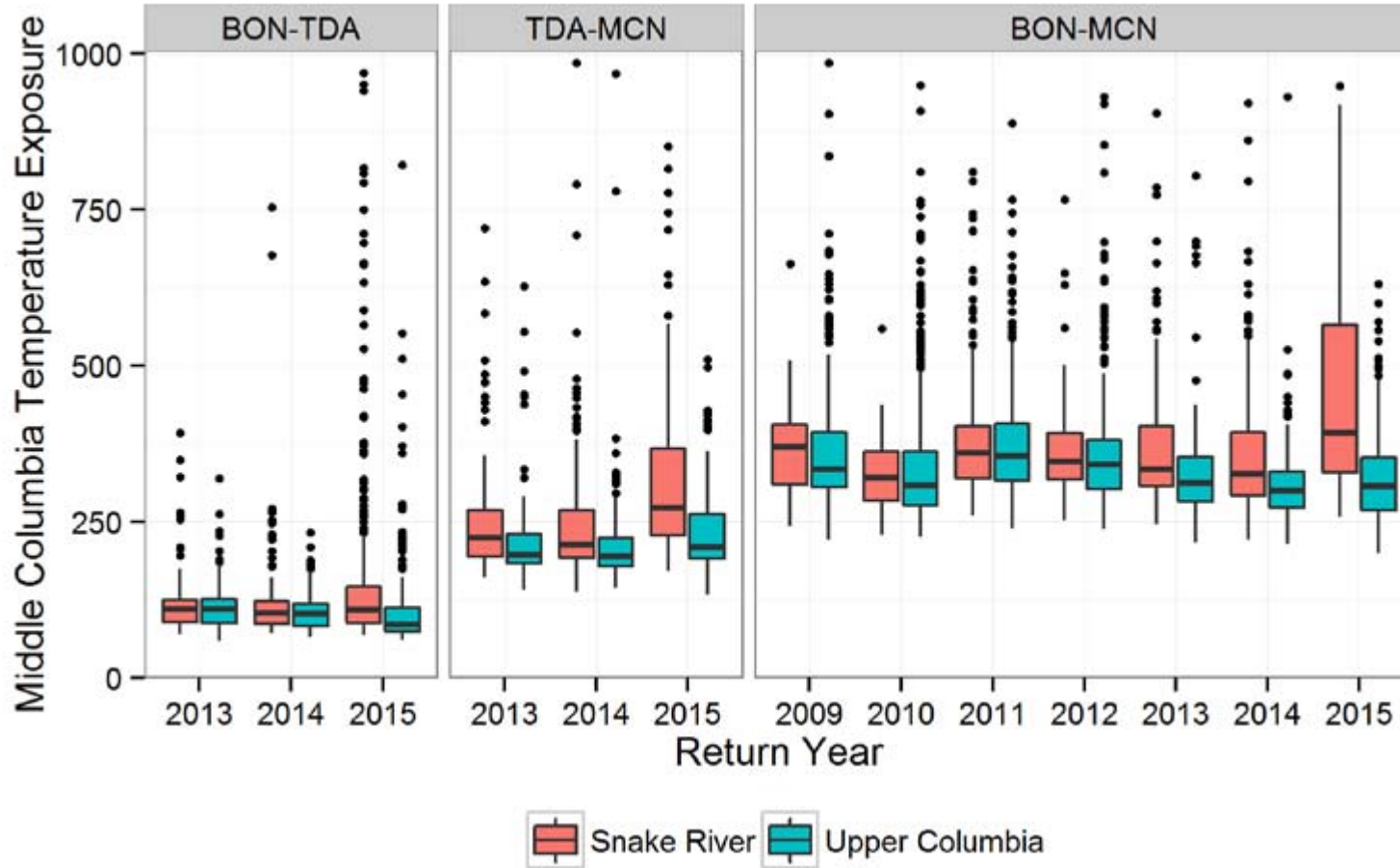
Passage Survival from LGR to Basin



Average Survival = 30%, No fish passing LGR in-river after 7/16/15 made it back

Cumulative Run Survival





FPC Report: Temperature exposure from Bonneville to The Dalles, The Dalles to McNary, and Bonneville to McNary Dam by return year and origin.

Summary

- Fish passing Bonn in the first quartile had higher survival than all other quartiles (dropped off significantly after June 25th).
- No fish passing Bonn after July 3rd made it to the basin (in river).
- Survival from Bonn to Dalles relatively high and dropped off from the Dalles to McNary for the whole run.
- FPC found a strong relationship between cumulative temperature and survival

Bonn to Basin Survival

- Estimated ~4000 adults at Bonneville this year,
- Avg. Survival from Bonn – Basin = 44%
- Estimated 2015 Survival = 1%

- If 44% made it back to basin, ~1760 adults could have been trapped (new record).



2015 Emergency Trap and Haul

Trapping Protocol

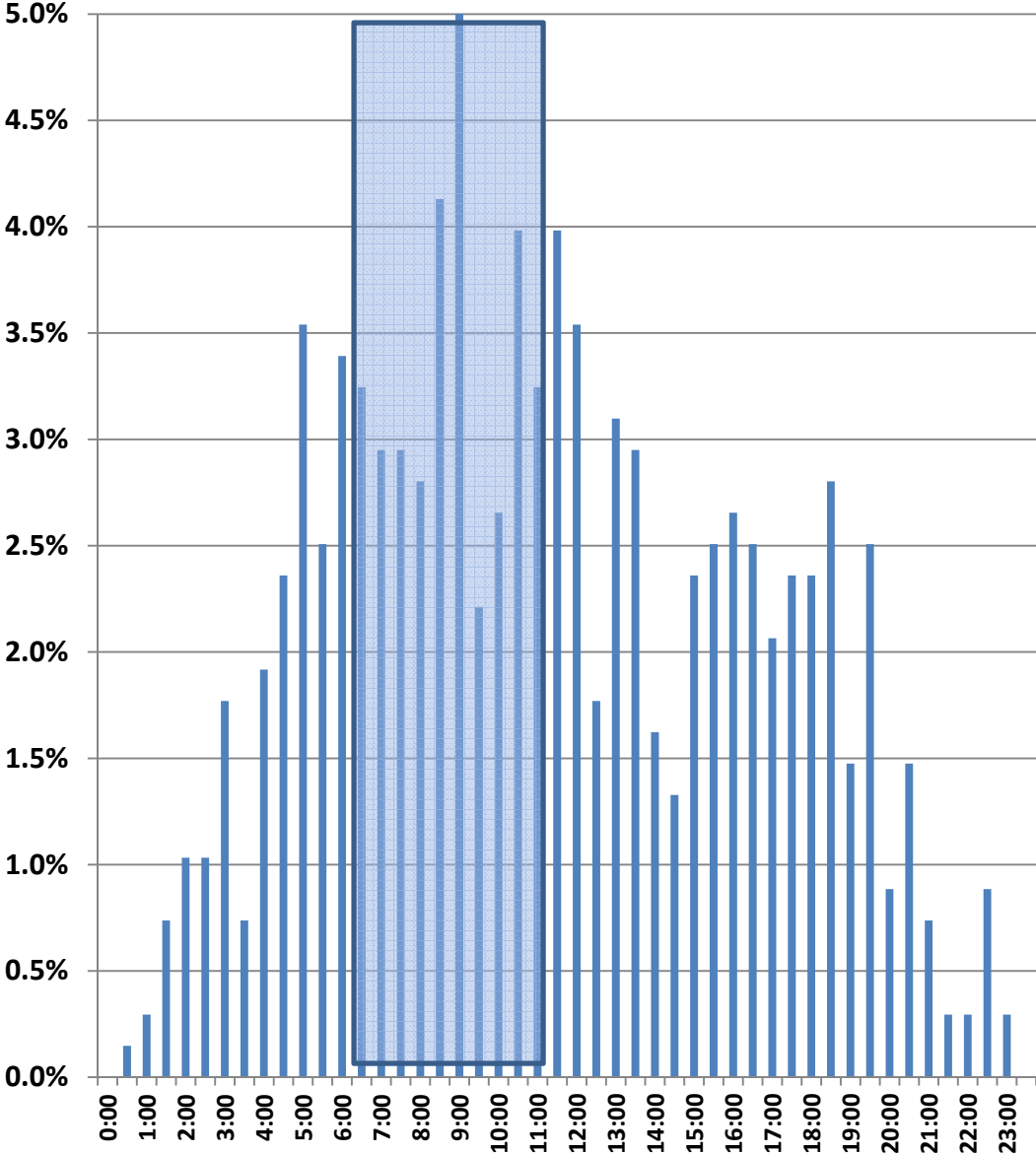
- Trapping Rate – 4 hour period from 7 am – 11 am (100% trapping rate)
- Initiated 7/13 through end of month
- Monday – Friday
- Sometimes extended to 12 pm if fish was observed in viewing window
- Initially all fish brought back in same day, later fish were held at LGR for one night and also collected on the juvenile separator

Trapping window

PIT tags were used to inform passage timing of Sockeye Salmon at LGR

Staffing schedules, temperature, and logistics for driving were also important

Based upon PIT tag data, 30% of the run could be collected from 7 am – 11 am

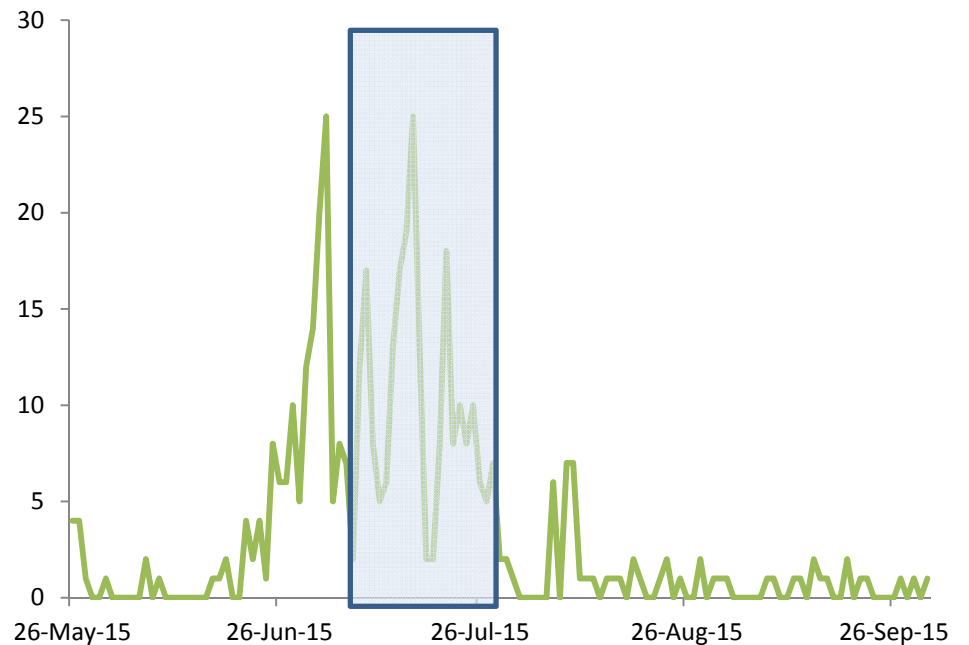


Run Timing at LGR

Historic Run Timing Data at LGR was also used to determine when to start trap and haul so peak wasn't missed, started before historic peak of run, trap and haul ran throughout the majority of the run at LGR and was representative sample of run timing, especially since earlier fish survived better than later fish

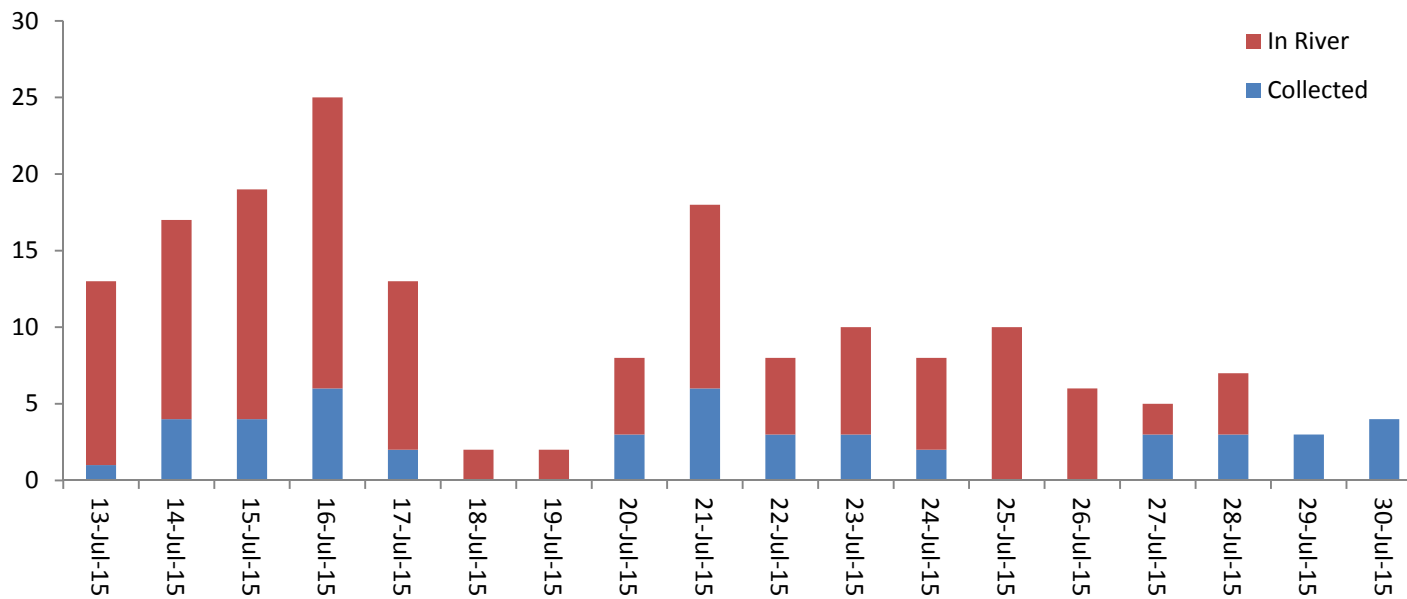
Year	Ice Harbor	Lower Granite
2008	7 Jul (4-12 Jul)	11 Jul (9-16 Jul)
2009	7 Jul (2-10 Jul)	13 Jul (11-14 Jul)
2010	7 Jul (3-12 Jul)	10 Jul (7-16 Jul)
2011	14 Jul (10-17 Jul)	18 Jul (15-23 Jul)
2012	13 Jul (6-18 Jul)	16 Jul (9-24 Jul)
2013	8 Jul (5-12 Jul)	13 Jul (7-27 Jul)
2014	10 Jul (5-14 Jul)	16 Jul (10-19 Jul)

2015 LGR Daily Fish Passage Counts



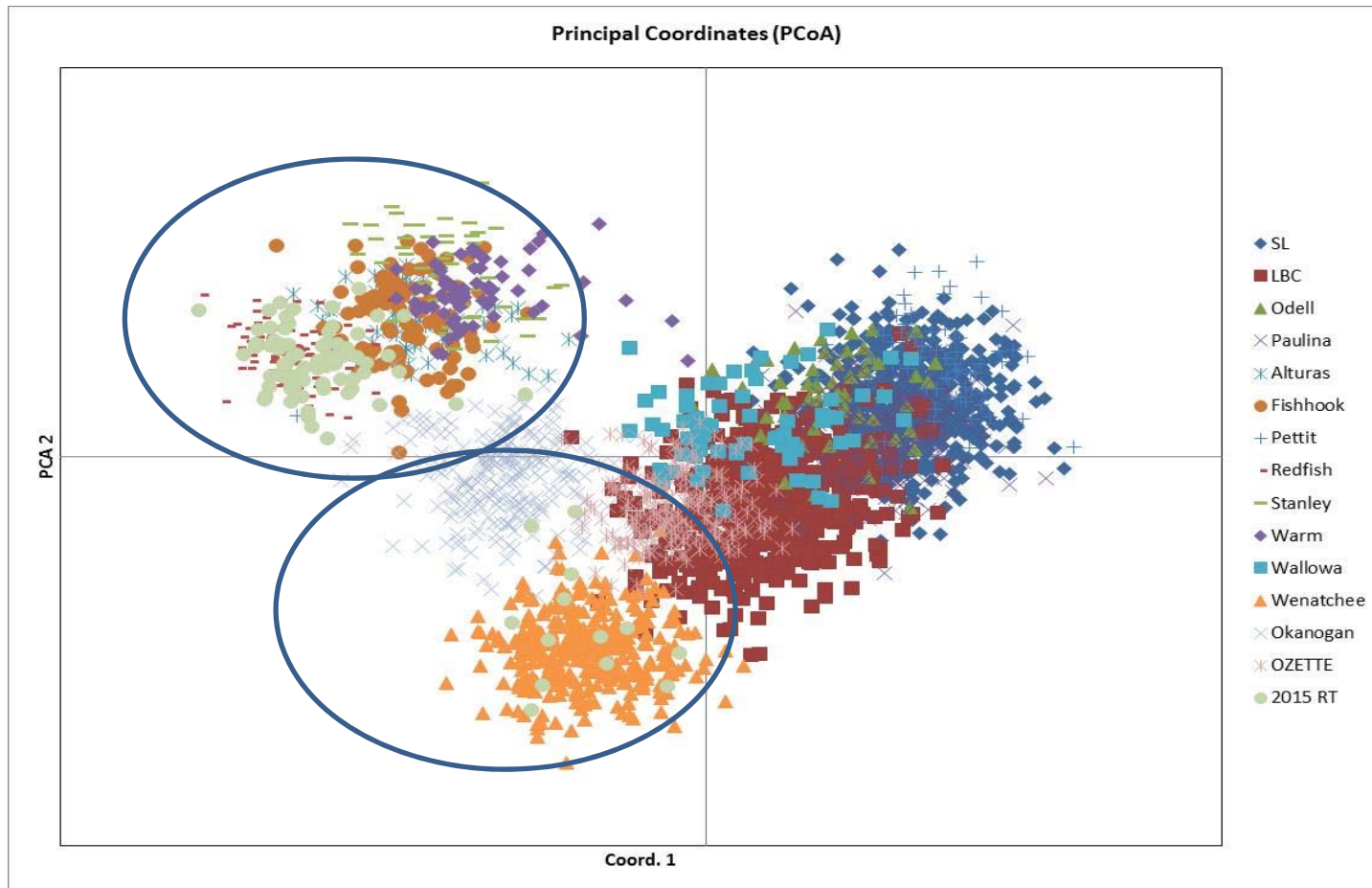
Fish collected at LGR

- We were able to collect 30% of fish at LGR as predicted by PIT tags in the 4 hour window of 5 day trapping

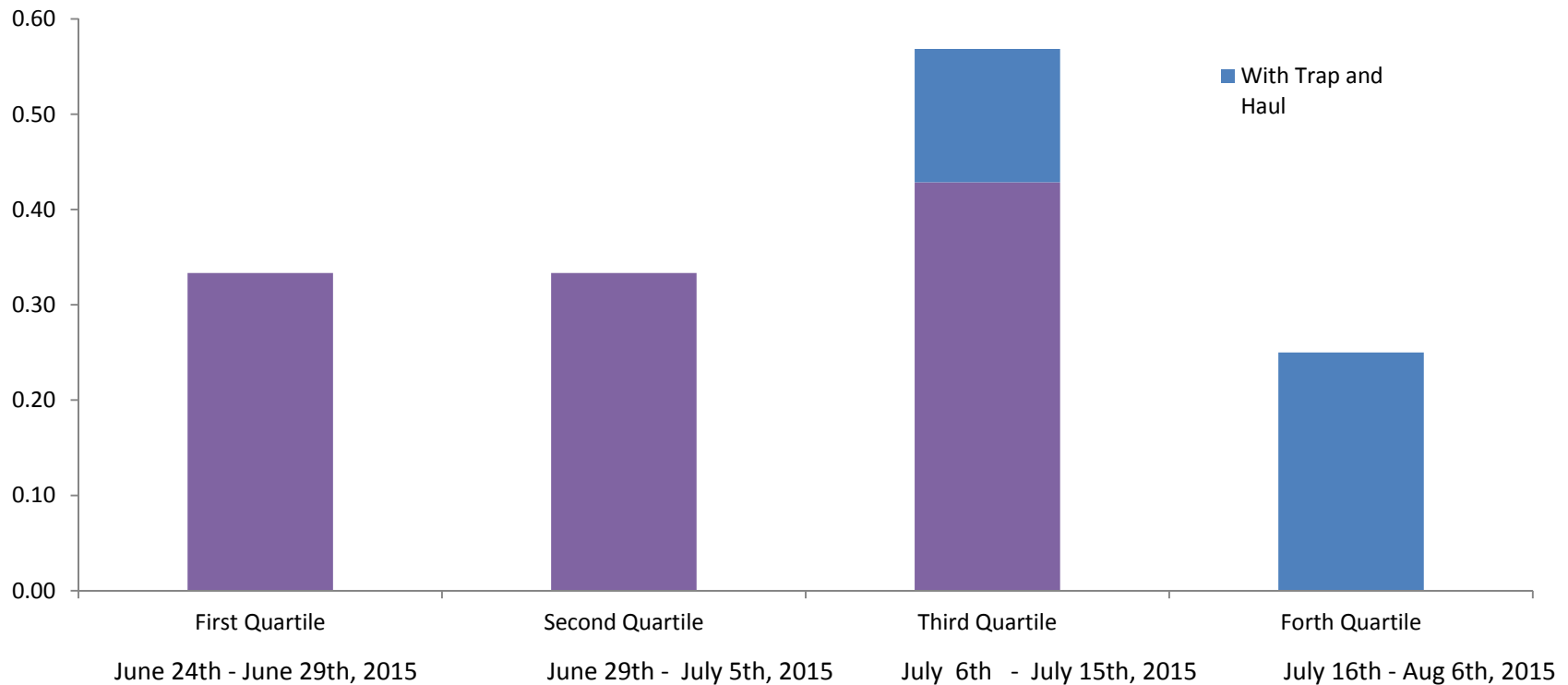


Fish Collected at LGR

- Some fish were identified to be of non Snake River Sockeye Salmon origin (N = 16)



Survival with Trap and Haul



PIT Tag Survival Increased for LGR to the Basin with fish collected at LGR

Trap and Haul Summary

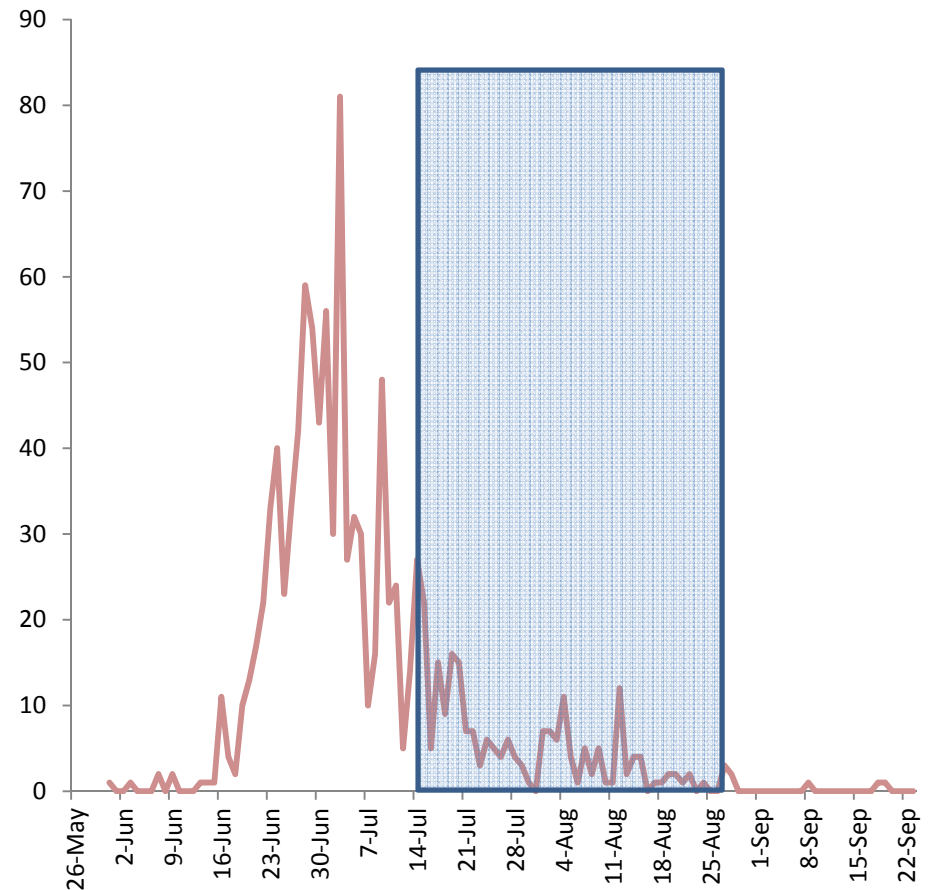
- Captured 30% of what passed LGR as pre-transport analysis estimated we would
- Gains in survival achieved and able to increase survival for fish that would not have returned in-river (especially last quartile)
- Represented run-timing at LGR with transport collections so run-timing was not over-represented
- Did collect non- Snake River fish at LGR

Run Timing at Ice Harbor Dam

Peak of Run at Ice Harbor is a ~week earlier than LGR

If initiated trap and haul at Ice Harbor, would have captured and over-estimated tail end of run and not have been representative this year, triggers for transport need to be made earlier for Ice Harbor broodstock collections

Year	Ice Harbor	Lower Granite
2008	7 Jul (4-12 Jul)	11 Jul (9-16 Jul)
2009	7 Jul (2-10 Jul)	13 Jul (11-14 Jul)
2010	7 Jul (3-12 Jul)	10 Jul (7-16 Jul)
2011	14 Jul (10-17 Jul)	18 Jul (15-23 Jul)
2012	13 Jul (6-18 Jul)	16 Jul (9-24 Jul)
2013	8 Jul (5-12 Jul)	13 Jul (7-27 Jul)
2014	10 Jul (5-14 Jul)	16 Jul (10-19 Jul)



2015 Production Targets

Able to Release 494 adults into RFL and 98 adults into Pettit this year and meet natural production release targets

Able to Spawn >1500 adults to generate ~ 800K smolts for production
(2X more than any previous release)

Backed down 1M Smolt Release to release adults into natural environment

In the Future: Enough eggs are taken from captive broodstock each year to meet broodstock and production goals so should be able to meet targets with CB fish only

Anadromous fish confer fitness benefits to the program (especially if they made it in-river the entire way)



- Any Questions?