



Adult Ladder Counts Spring Summer Chinook

- Counts readily available and have been used in past years to assess passage and timing
- Counts include all run rear types, hatchery and wild
- Counts do not account for fallback, re-ascension
- How to adjust daily adult counts for fallback, re-ascension: Looked at several approaches using PIT tags data presented in the Dart passage model along with the Adult Count Data at Lgo May 1 to July 8, 69 days

Adjusting for Fallback/Re-ascension

- 494 Unique PIT Tags Detected at LGO, On Average, 8 per day, range from 1 to 21
- 51 fallback/re-ascensions
- No fallback/re-ascension detections 27 of 62 days,
- One detection in 22 of 62 days
- Two detections in 10 of 62 days.
- One day each with 7,5 and 3 detections.
- Using the total PIT tags and fallback/re-ascensions from the DART model estimates a fallback/re-ascension rate of 10.3 % for spring-summer Chinook passage from May 1 to July 8

Outcome

- *With the limited PIT tag data I did not find an approach that enabled me to estimate daily fallback re-ascension to adjust daily adult counts with any degree of confidence*
- *Can we use adult ladder counts, yes, but must be aware of potential bias*
- *Ladder counts still provide a tool to assess in-season passage.*
- *Weekly count totals can be adjusted based on PIT tagged adult passage and PIT estimated fallback/reascension data to correct total passage counts and monitor in-season conversion rates.*

Travel Times for Hatchery Origin PIT Tagged Adults

- ***382 Known Hatchery origin PIT tagged adults.***
- ***TT for all H origin PIT tagged fish: Harmonic Means 2.9 days, Median 2.7 days***
- ***TT for 29 H origin PIT tagged fish, 7.1%, was 18 or more days***
- ***Represented 19 different release groups and locations***
 - Four release sites, groups with 30 or more returns

Individual Site Return Travel Times

- KNOXB, 81 returns, *Harmonic Mean 2.5 days*,
 - Four fish with tt greater than 18 days
- RAPH; 76 returns,, *Harmonic Mean 2.6 days*
 - Only one fish with tt greater than 18 days
- CATHEP, 32 returns, *Harmonic Mean 2.0 days*,
 - One fish 27 d tt
- SELWY1, 31 returns, *Harmonic Mean 2.0 days*,
 - Four fish with tt greater than 18 days

Travel Time for Wild Origin PIT Tagged Adults

- *96 Known wild origin PIT tagged adults*
- *Harmonic mean travel time for all wild origin Chinook was 2.4 days, median TT was 2.8 days*
- *7 wild origin adults with TT of 18 or more days, 7.3 %*

TT for Juveniles Tagged Above or at Lgr

- For those tagged at LGR, Wild origin
 - 13 Barge transport, Harmonic Mean: 1.9 days
 - 23 Returned to River, Harmonic Mean: 2.5 days
- For those tagged at Sites/traps above Lgr, Wild origin
 - 60 Adults, Harmonic Mean 2.4 days

Questions ?