

# Reintroduction Program Updates

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# 2019 Spring Chinook Fry Releases.

- Spring Chinook Fry Released: 496,400
  - Metolius River: 168,500
  - Lake Creek: 51,500
  - Spring Creek: 12,000
  - Deschutes River: 19,000
  - Crooked River: 162,000
  - Ochoco Creek: 23,800
  - Whychus Creek: 59,600

# 2019 Spring Chinook Smolt Releases

- Spring Chinook Smolts Released: 55,200
  - T&V Releases: 1,200
  - Direct Released: 45,200
    - Metolius: 23,400
    - Whychus: 10,400
    - Crooked: 10,400
- Released below Re-Regulation Dam in Lower River: 10,000
  - Acclimated for 10 days at Opal Springs prior to release.

# 2019 Summer Steelhead Fry Releases

- Summer Steelhead Fry Released: 196,825
  - No fry released in 2019 in Whychus Creek
  - Crooked River: 114,050
  - McKay Creek: 26,950
  - Ochoco Creek: 55,825

# 2019 Summer Steelhead Smolt Releases

- Summer Steelhead Smolts Released: 47,468
  - T&V Releases: 800
  - Direct Released: 26,364
    - Whychus: 14,944
    - Crooked: 11,420
  - Total Smolts Acclimated prior to Release (Live Cars): 14,206
    - Whychus: 8,206 (\*possible loss of 1,500 due to live car failure)
    - Ochoco Creek: 6,000
  - Released below Re-Regulation Dam in Lower River: 6,098
    - Acclimated at Opal Springs for 10 days prior to release

# Adaptive Management Changes in Reintroduction

- Discontinuation of Fry Releases
- Increased Smolt Releases
- Smolt Rearing
- Change in hatchery practices
- Acclimation Facilities
- The use of wild steelhead for brood in the Reintroduction program and Round Butte Hatchery

# Summer Steelhead Fry and Smolt Programs

Year	Total Fry Releases	Total Smolt Releases	Fry Release (RM) captured at SWW	Smolt Release (LM) captured at SWW	% Fry (RM) release captured at SWW	% Smolt (LM) release captured at SWW
2014	703,900	10,287	1,083	1,044	0.002	0.18
2015	698,700	55,857	932	2,787	0.001	0.06
2016	613,500	45,369	1,683	2,341	0.002	0.05
2017	516,659	48,821	3,771	6,937	0.006	0.14
2018	529,000	45,001	2,695	6,193	0.005	0.14

# Spring Chinook Fry and Smolt Program

Year	Total Fry Releases	Total Smolt Releases	Fry Release (RM) captured at SWW	Smolt Release (LM) captured at SWW	% Fry (RM) release captured at SWW	% Smolt (LM) release captured at SWW
2014	259,062	23,579	13,161	5,917	0.02	0.25
2015	0	51,155	5,275	10,166	0.02	0.19
2016	494,400	47,057	4,199	14,099		0.29
2017	159,980	50,626	13,927	15,971	0.028	0.31
2018	588,500	48,363	11,179	10,362	0.06	0.23



# Releases of Fry and Smolt into Reintroduction Area

- Discontinuation of Fry Releases in 2020
- Increase smolt releases from 50,000 to 100,000, of both spring Chinook and summer steelhead in 2020
- Smolts will be acclimated prior to release



# Smolt Rearing

- All summer steelhead smolts will be reared at Wizard Falls hatchery....Why?:
  - Densities and pond size; Water Temperature; Ability to change rearing strategies if needed
- All spring Chinook smolts will be reared at Fall River...Why?:
  - Available space; Colder water temperature; Can adhere to more “natural or wild” feeding profile

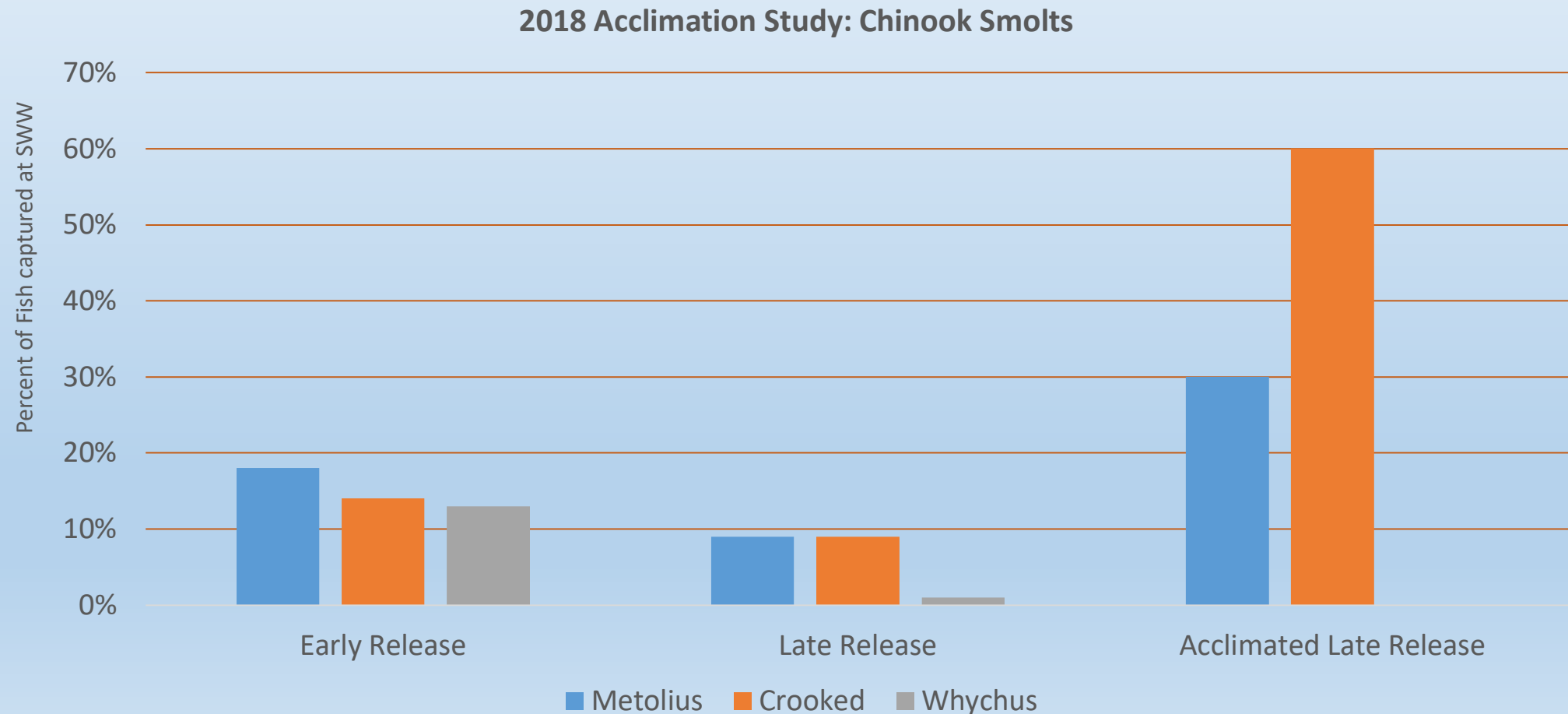
# Change in hatchery practices

- Creating a better smolt
- Grading of summer steelhead
- Feed profile for spring Chinook changed to “wild” fish template
- Change in feed type 8 weeks prior to release
- Release timing and Size at Release



# Acclimation

- Shrader (2018) found significance in acclimated vs non-acclimated with % of fish collected at SWW for Chinook smolts, though not for Steelhead:





# Acclimation

- Helps to imprint fish to specific water sources
- Approximate 3 week acclimation period
- Batched Releases
- Allows for longer holding period





# Acclimation Facilities

- Facilities are currently being developed on Whychus Creek and Crooked River area for 2020, Metolius facility is still in works.
- Modutank system
  - Pump water into tank via screened irrigation pump
  - Acclimate both spring Chinook and summer steelhead prior to release



# Use of wild Deschutes summer steelhead for brood

- In final stages of consultation with NOAA on HGMP
- Based on Model using in-season data at Shears Falls Trap on total wild Deschutes steelhead run
  - Predicted wild run size  $< 2,500$ , no fish will be collected
  - Predicted wild run size  $\geq 2,500$ , fish will be collected at 4% of predicated run
  - Rolling 3 year average
- First 20 pairs (20 females) will go towards use in Reintroduction Program brood and any other wild fish will go towards Round Butte Hatchery brood integration
- Capped at 100 fish maximum per brood year

# Possible Studies in Future

- Acclimation
- Change in hatchery practices
- Fall River rearing of Spring Chinook smolts
- Wild summer steelhead brood
- Transporting smolts after acclimation lower into tributaries



# Thank you for your attention

- And a special thanks especially too:
  - Shaun Montgomery and Round Butte Staff
  - Luke Allen and Wizard Falls Staff
  - Brett Hodgson and ODFW staff
  - Portland General Electric staff
  - Deschutes Land Trust
  - United States Forest Service
  - Central Oregon Fly Fishers
  - Backcountry Hunters and Anglers
  - Confederated Tribes of Warm Springs
  - All volunteers and other basin staff that helped with fry and smolt releases

