PRIEST RIVER MIGRATORY WESTSLOPE CUTTHROAT: AN OVERVIEW

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Natural Resources



OVERVIEW

- Project Background
- Tracking/tagging methods
- Results and findings
- Genetic assignments in the Priest River
- Construction of genetic baseline for cutthroat
- Trapping catch trends
- Conclusions





BACKGROUND

2010 2012 2014 2016 2018 2020 2022 2024

Prior to 2010:
Little research on Westslope Cutthroat Trout within the lower Priest River

2011-2012:
Adult cutthroat discovered staging at confluence of Priest & Pend Oreille rivers

2012 – 2015:
Radio Tracking identifies 4 major spawning tributaries

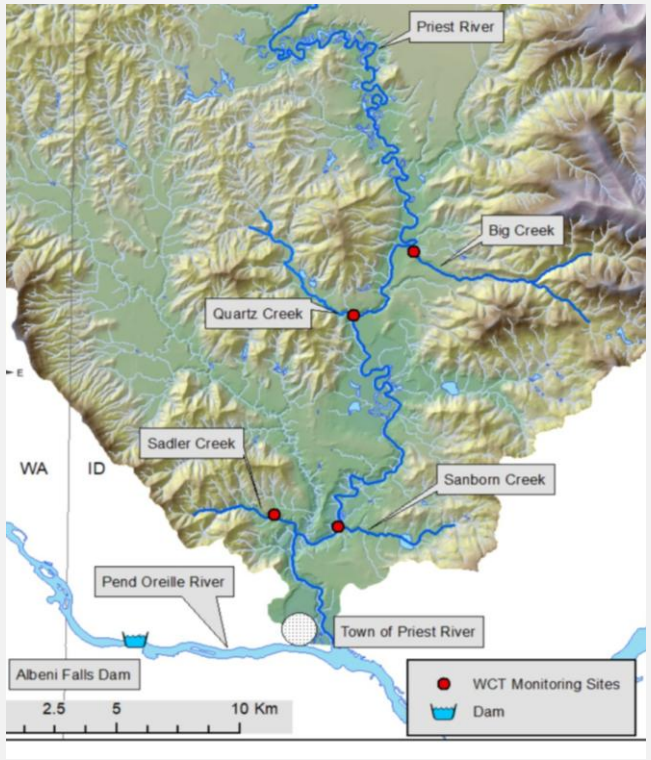
2015-2018:
PIT tag arrays installed at creek mouths

2018-2021:
Trapping and PIT tagging of juveniles and adults

2022-2024:
Trapping catch numbers decreasing. Genetic baseline work



Priest River mouth February 2011





PIT tag array



Juvenile cutthroat



Adult cutthroat

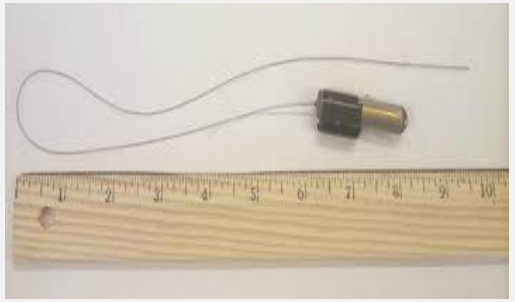
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TRACKING AND TRAPPING METHODS

- Tracking WCT
  - Radio tags
    - Surgically implanted
    - Paired with antennas to monitor movements
    - Used to locate spawning tribs
  - PIT tags
    - “Passive Integrated Transponder”
- Trapping
  - Incline-plane traps
    - Targeting adults and juveniles
    - Facilitates PIT tagging, collection of genetics
    - Traps operated from April to June
    - Paired with PIT-tag arrays
      - Movement in and out of creeks
      - Timing, directionality
      - Arrays operate March – November



Tagging surgery



Radio tag



Mounted radio antenna



Captured WCT adult



Incline-plane trap

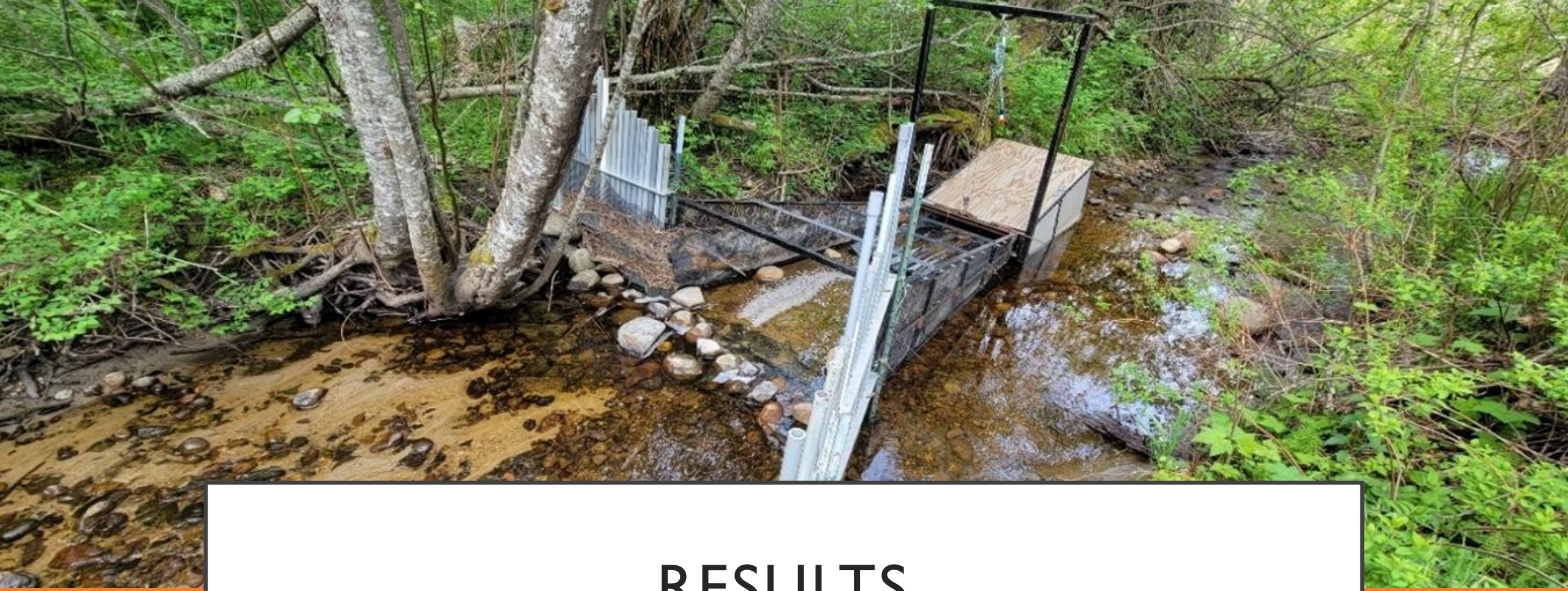




PIT Tag Size

WDFW., “PIT Tag Size” (2025). https://www.eregulations.com/washington/fishing/other-general-information

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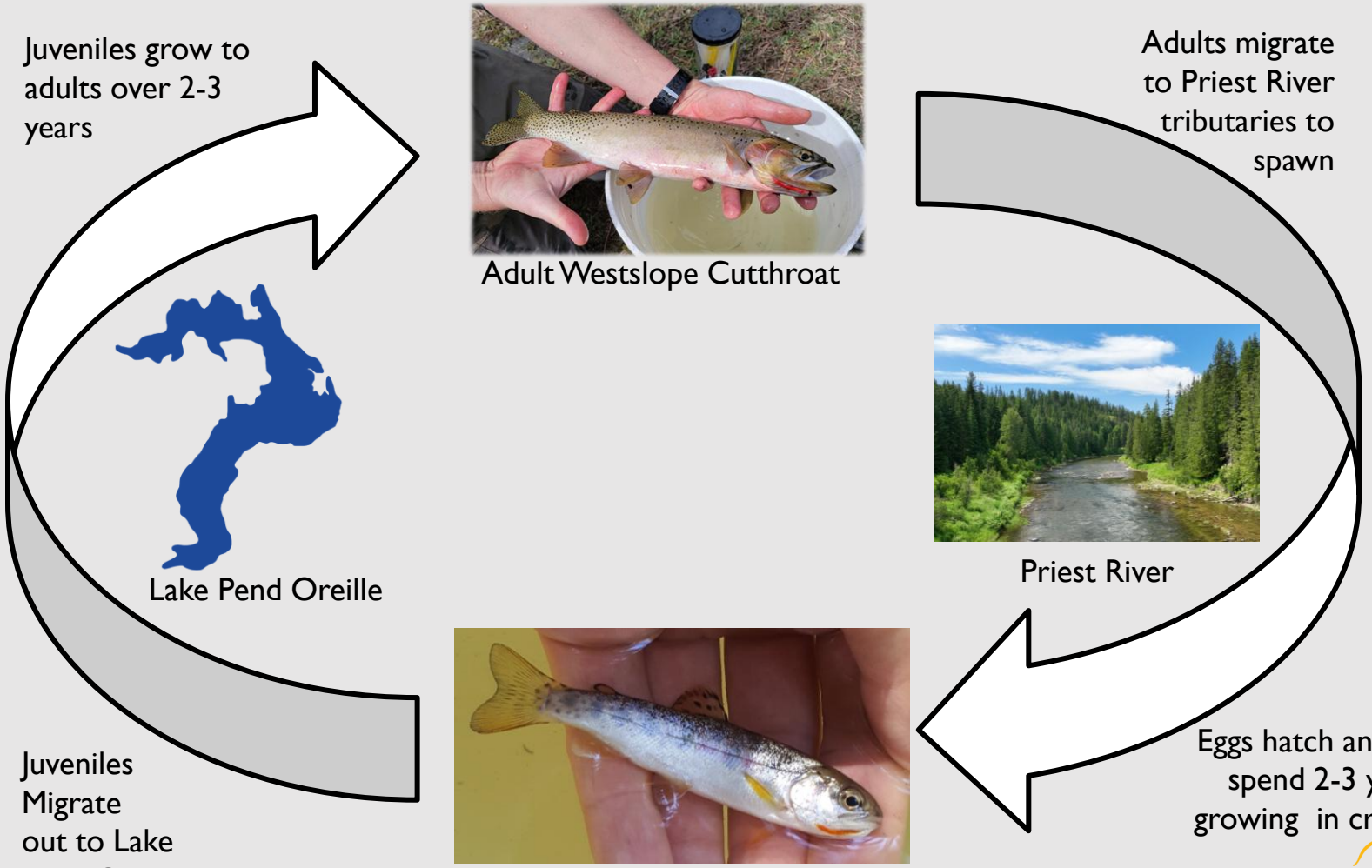
RESULTS

THE BIG PICTURE

"Adfluvial" – Life History Strategy

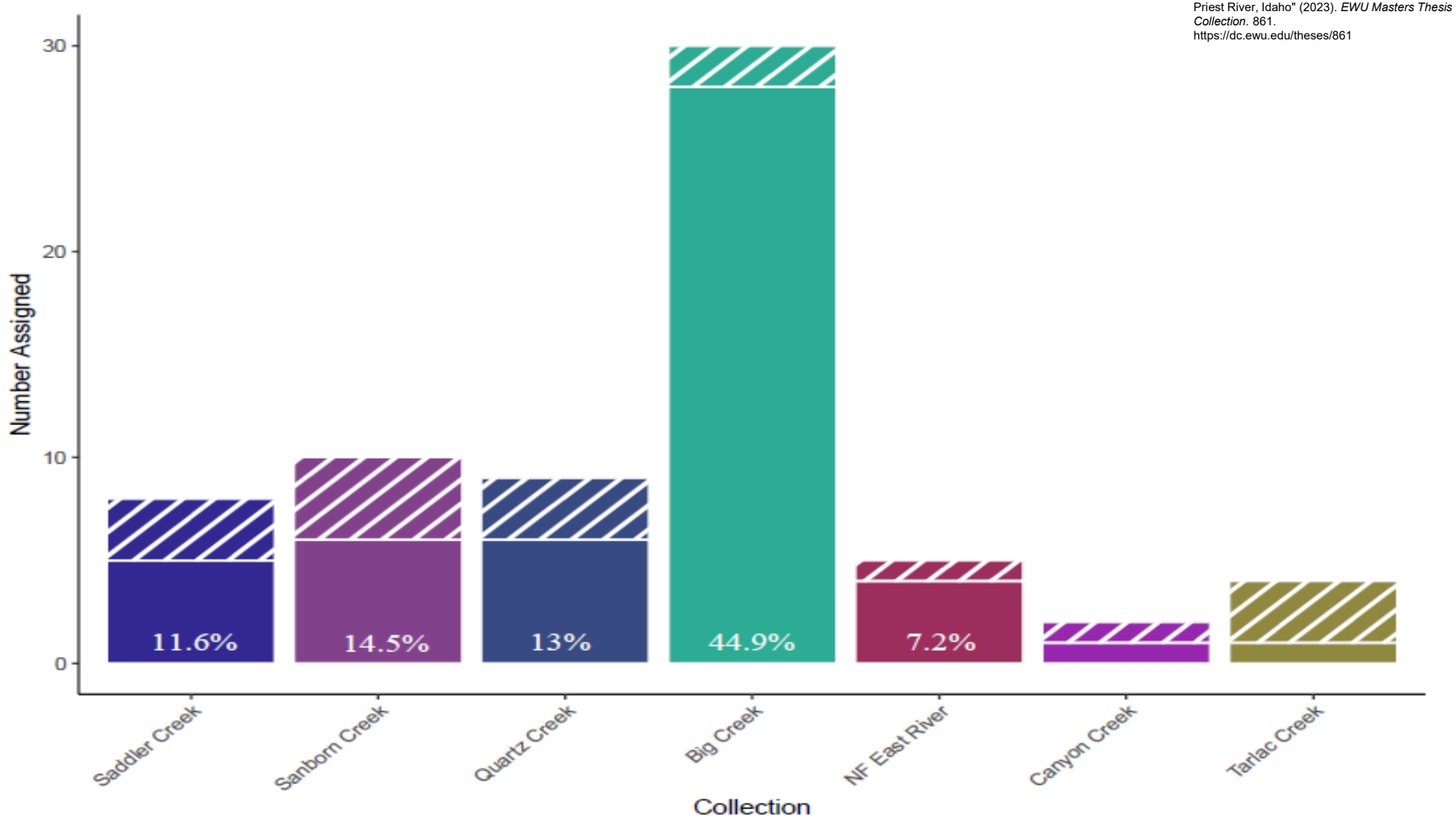
- fish that undergo migrations from a lake system to spawn in tributary streams

1. Adults migrate from Lake Pend Oreille to Priest River tributaries to spawn
2. Eggs hatch and juveniles rear in tributaries for 2-3 years
3. Juveniles outmigrate to Lake Pend Oreille in late spring
4. Juveniles grow to adults in Lake Pend Oreille and return to river to spawn



PRIEST RIVER TRIBUTARY GENETIC ASSIGNMENT

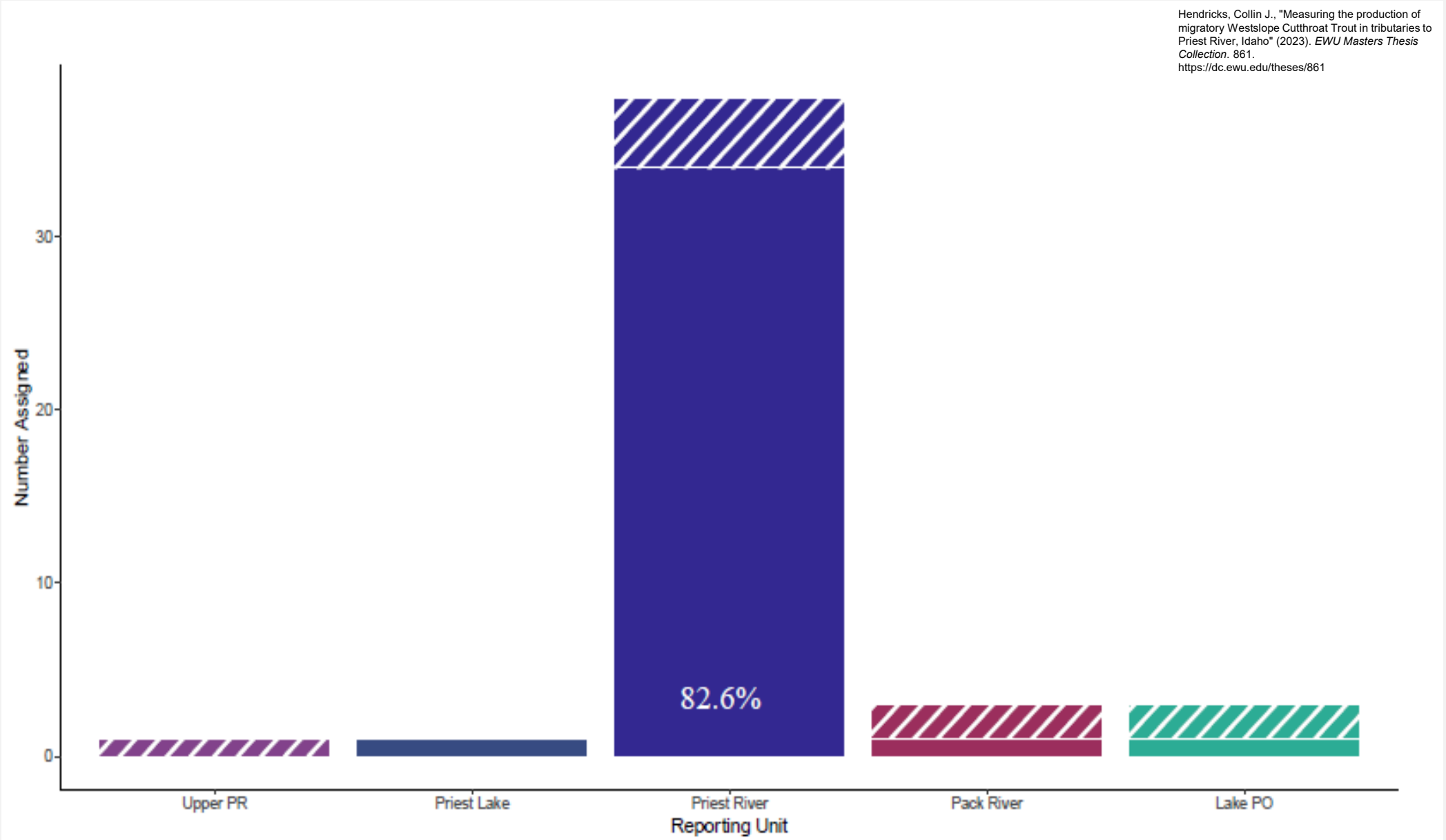
Hendricks, Collin J., "Measuring the production of migratory Westslope Cutthroat Trout in tributaries to Priest River, Idaho" (2023). *EWU Masters Thesis Collection*. 861. https://dc.ewu.edu/theses/861



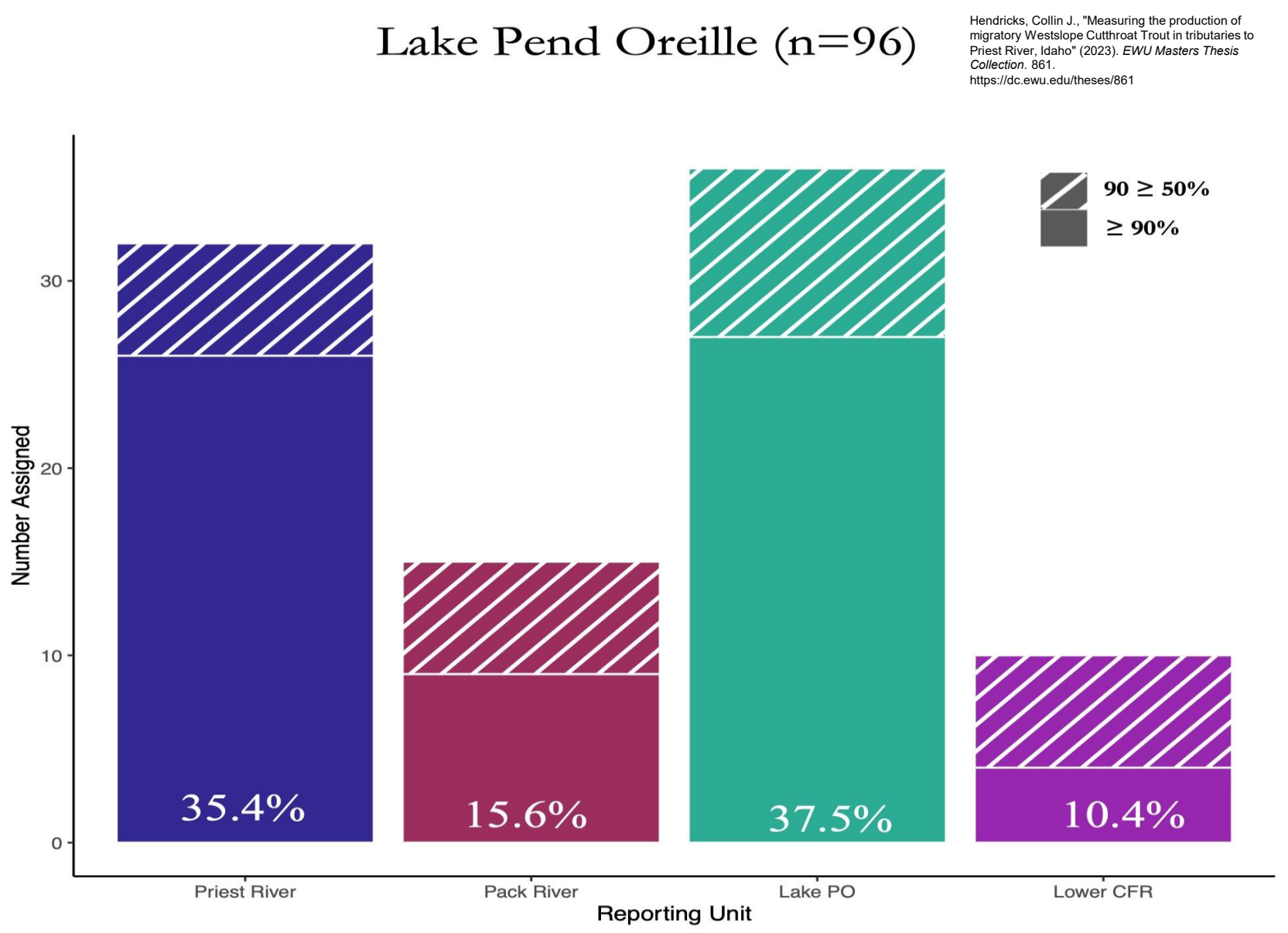
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DOWNSTREAM ALBENI FALLS DAM GENETIC ASSIGNMENT

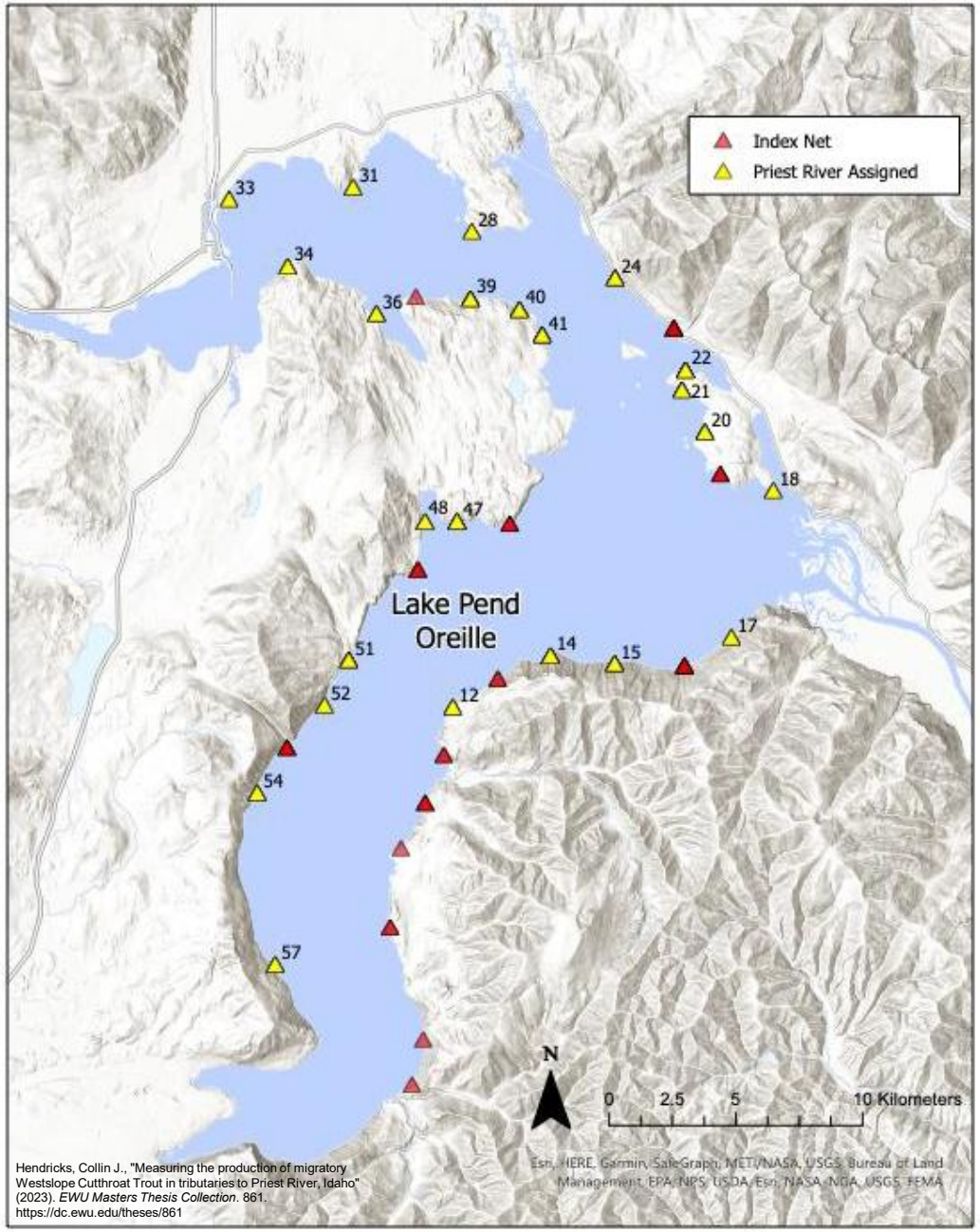
Hendricks, Collin J., "Measuring the production of migratory Westslope Cutthroat Trout in tributaries to Priest River, Idaho" (2023). *EWU Masters Thesis Collection*. 861. https://dc.ewu.edu/theses/861



LAKE PEND OREILLE GENETIC REPRESENTATION



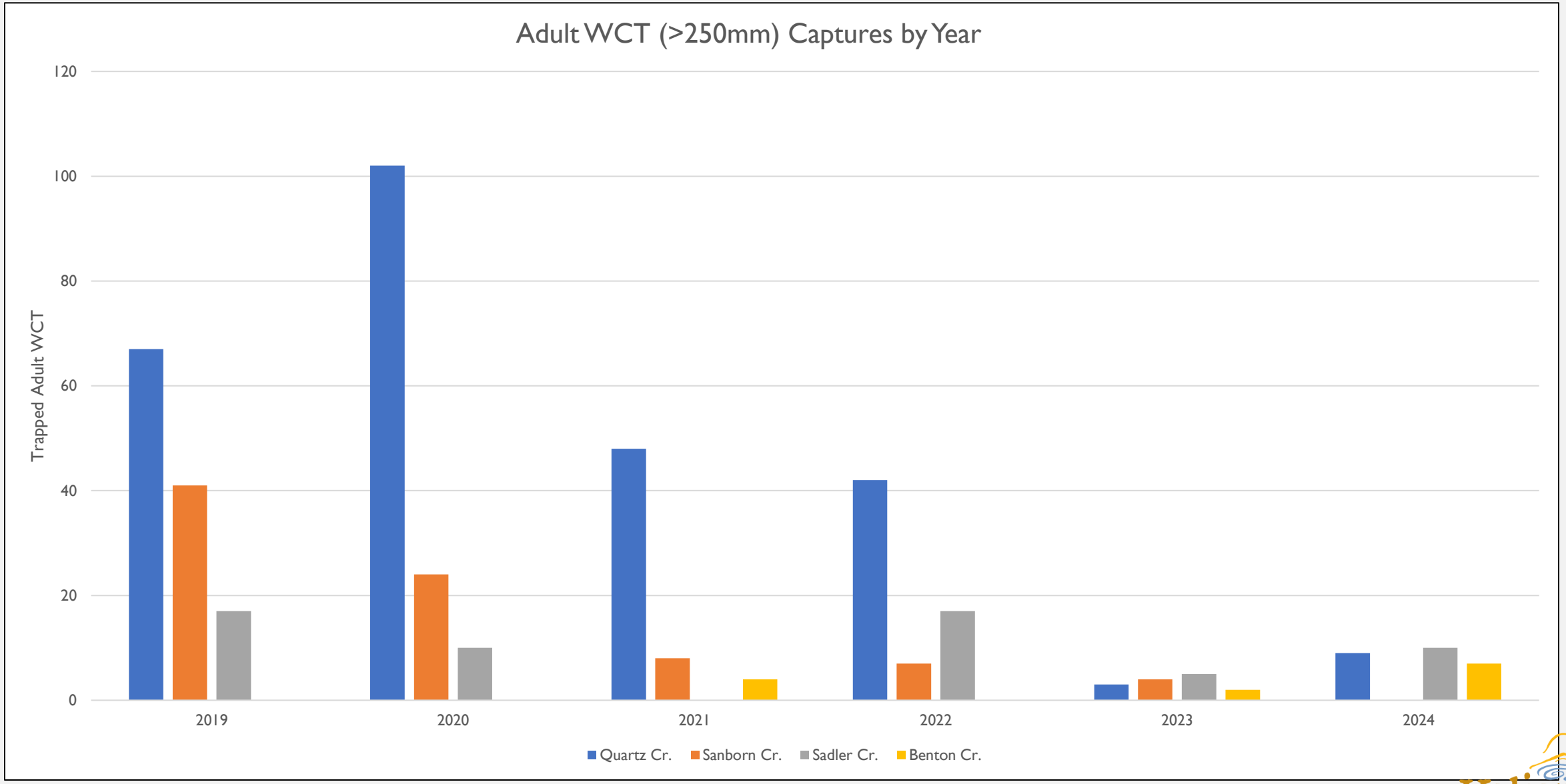
IDFG Index Net Locations



Hendricks, Collin J., "Measuring the production of migratory Westslope Cutthroat Trout in tributaries to Priest River, Idaho" (2023). *EWU Masters Thesis Collection*. 861.
https://dc.ewu.edu/theses/861

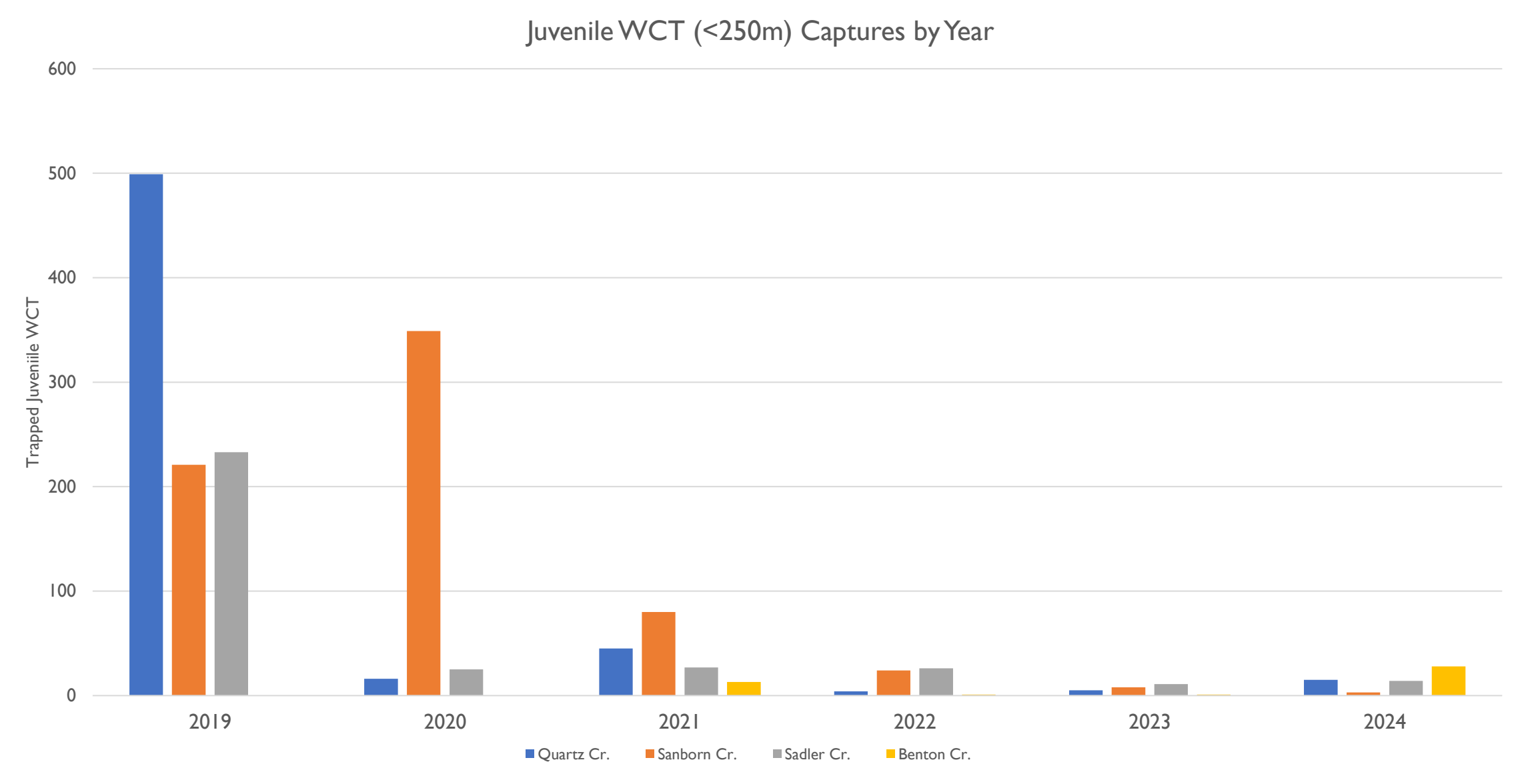
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PRIEST RIVER TRAPPING TRENDS



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PRIEST RIVER TRAPPING TOTALS PT. 2



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CONCLUSIONS

1) Adfluvial life cycle
   Lake Pend Oreille ⟷ Priest River

2) A handful of small tributaries to the Priest River represent the some of the most crucial WCT spawning habitat in the region

3) 34 % of Lake Pend Oreille WCT began their life in the Priest River

4) Priest River cutthroat populations are collapsing

The Lower Priest River is incredibly important locally to Westslope Cutthroat Trout populations regionally.



QUESTIONS?





Thanks to:

- Kalispel Tribe of Indians
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- EWU Staff
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- IDFG Staff
  - Rob Ryan, Andy Dux





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