Little Sheep Creek RRS Update

NOAA FISHERIES

- Northwest Fisheries Science Center

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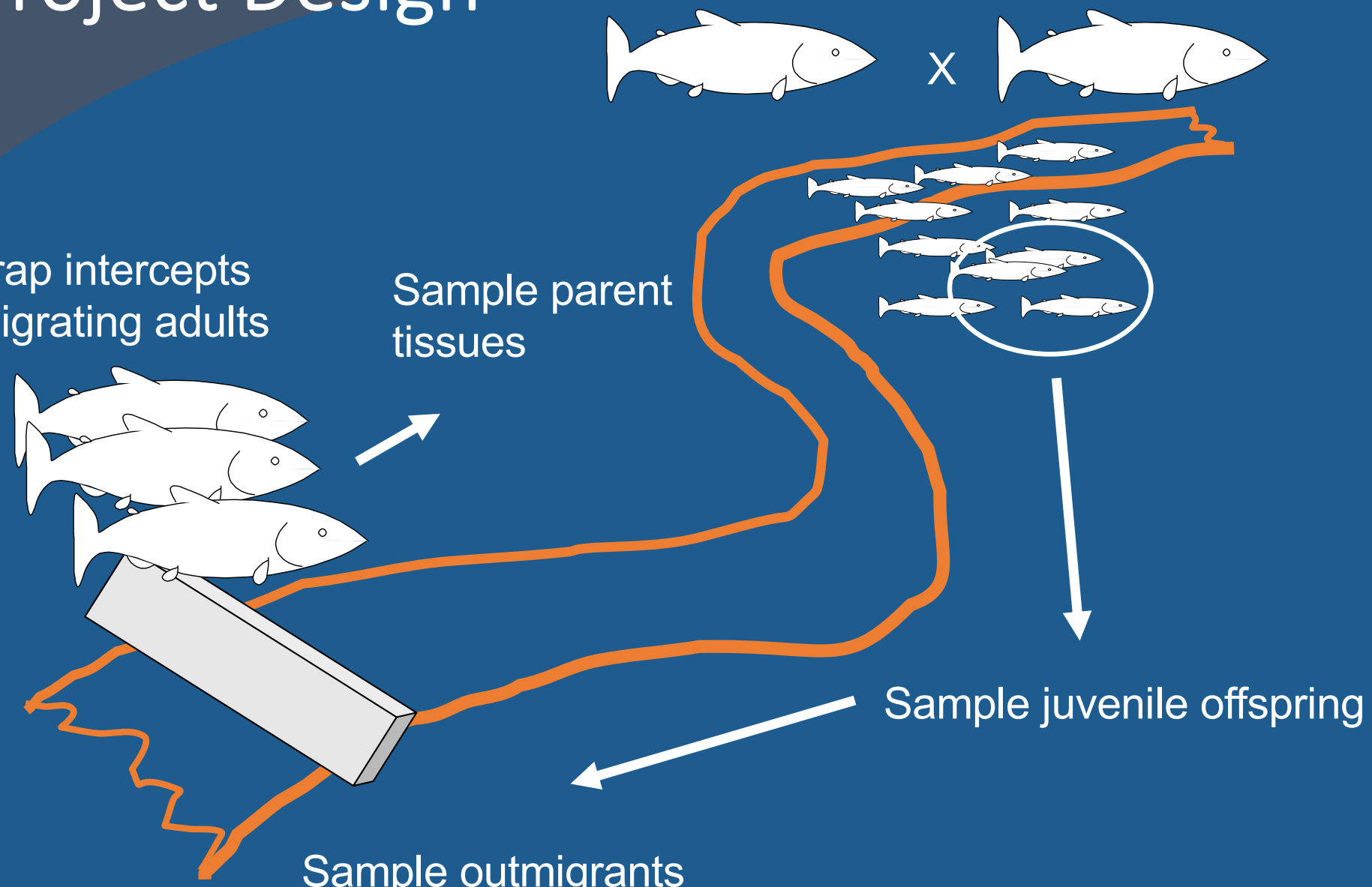
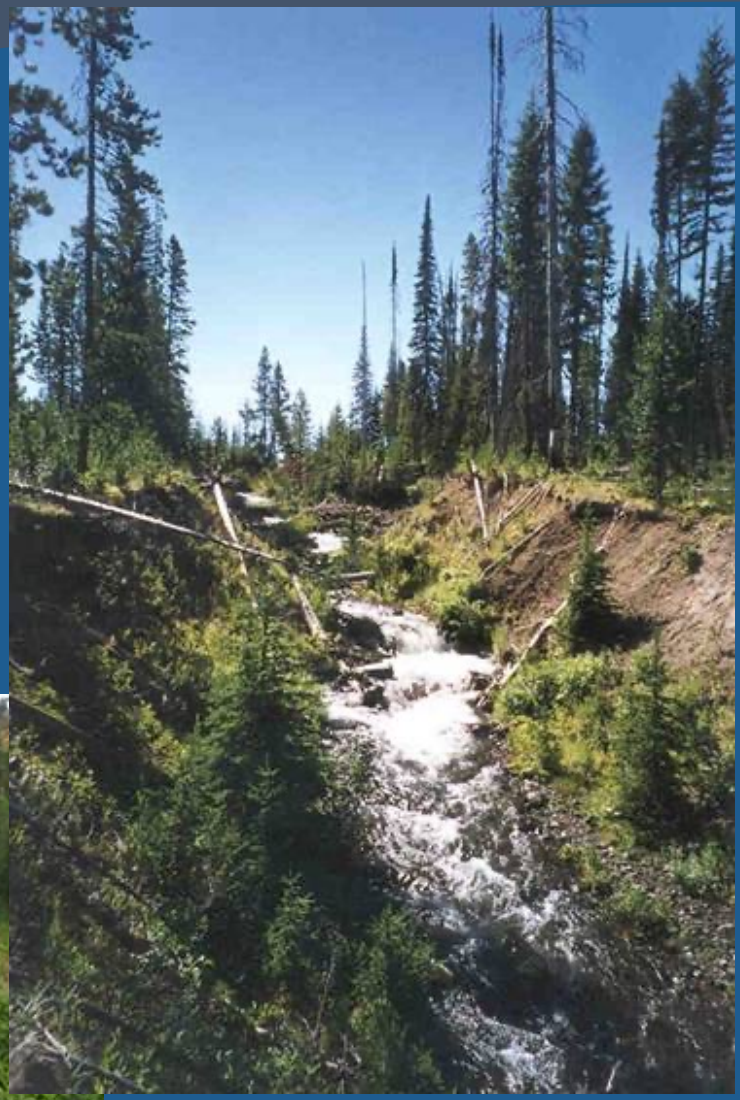
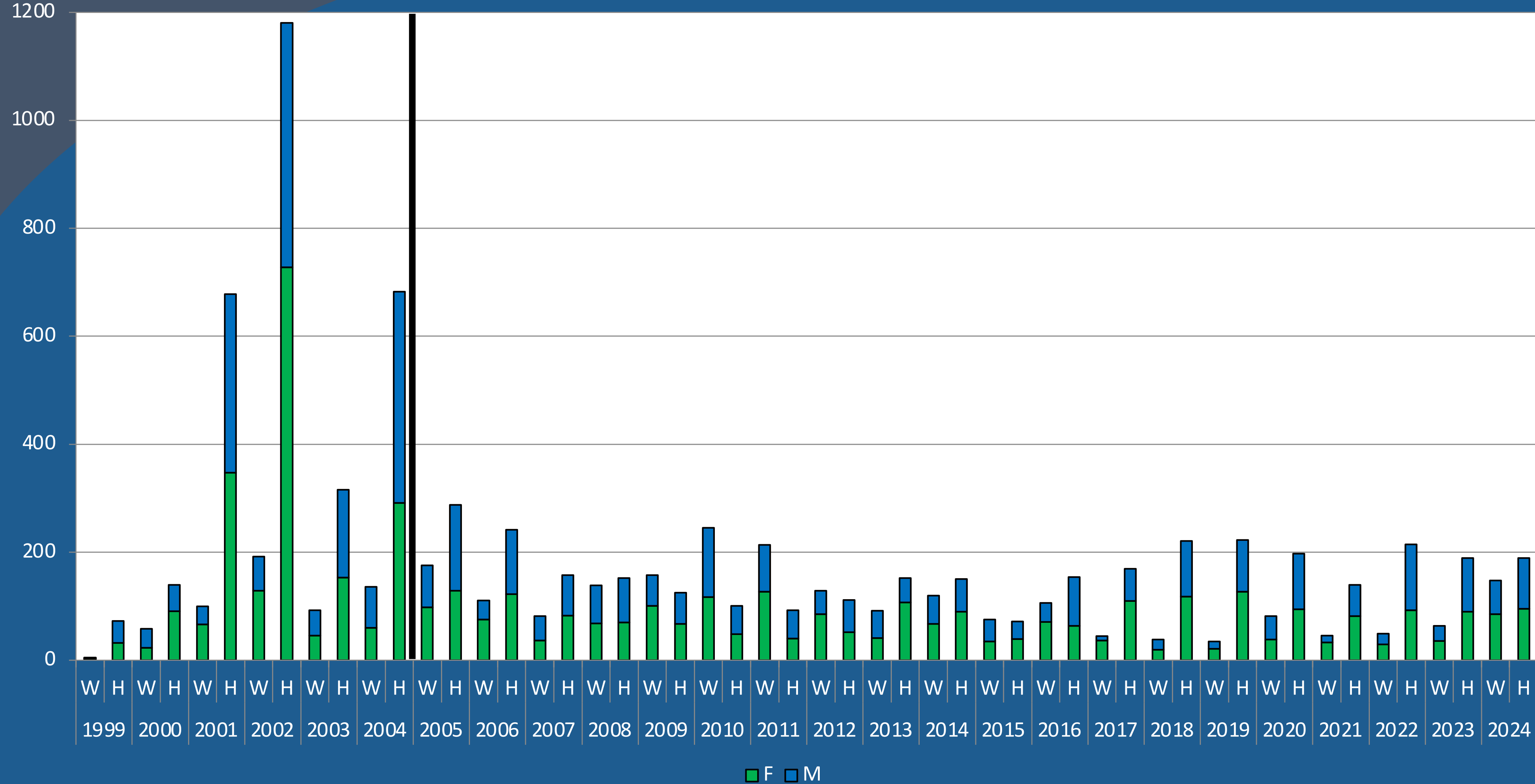
U.S. Department of Commerce | National Oceanic and Atmospheric Administration | NOAA Fisheries | Northwest Fisheries Science Center

Project Design

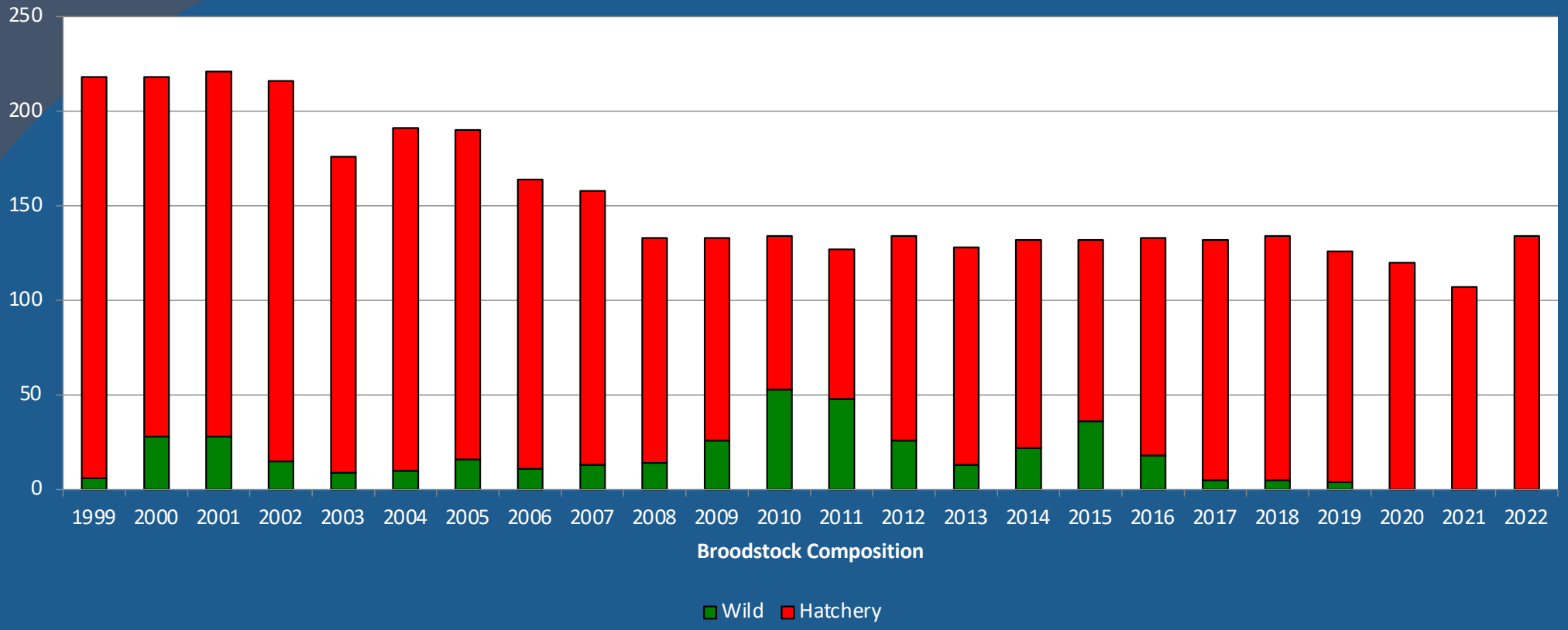




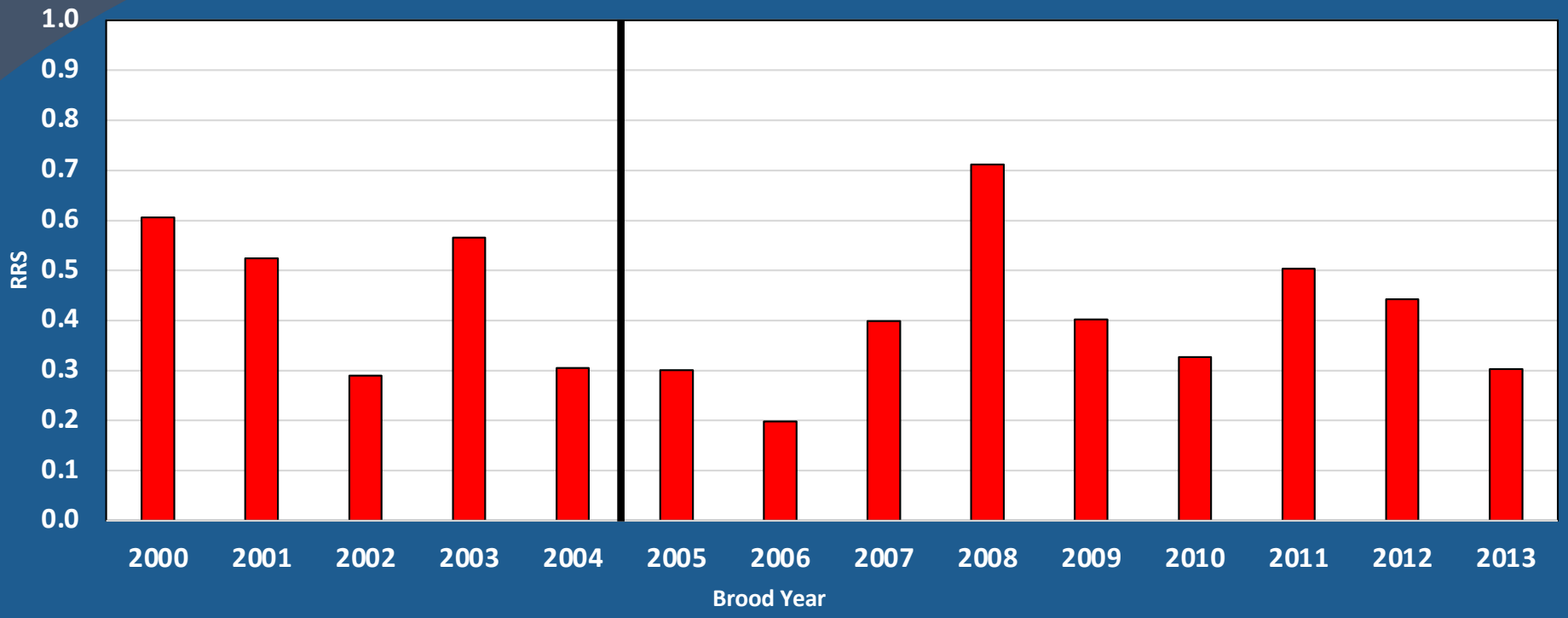
Fish passed above the weir



Hatchery Broodstock Composition



Adult to Adult RRS by Origin

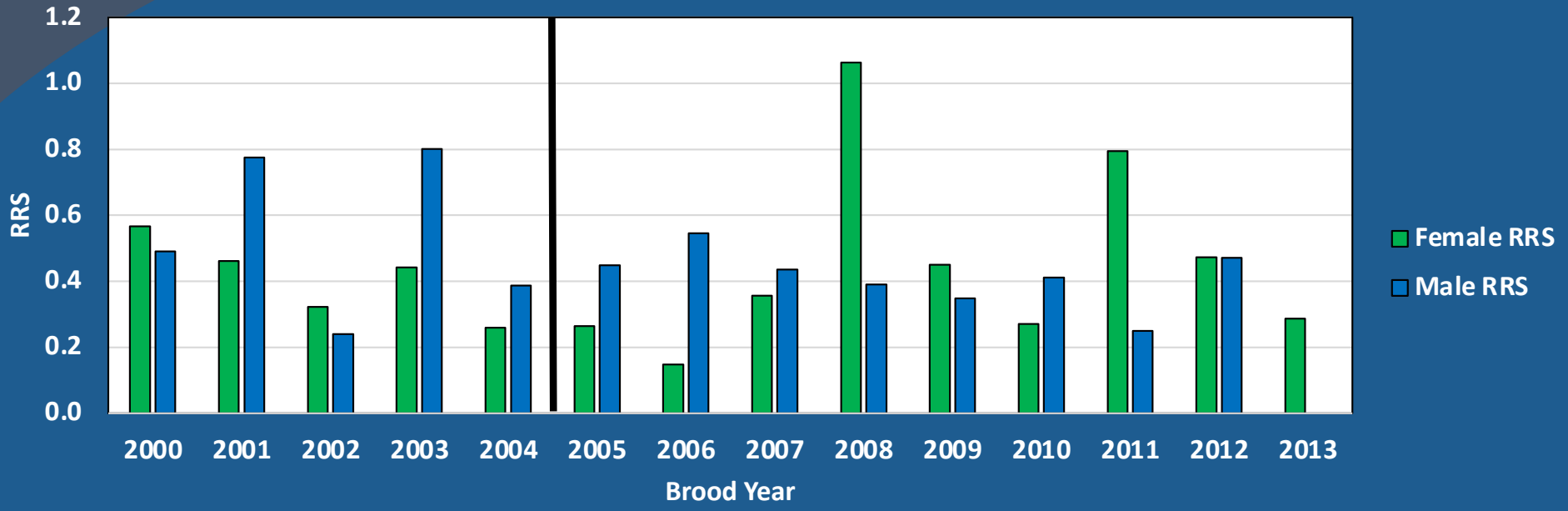


Geomean RRS overall = 0.397

Geomean RRS early = 0.437

Geomean RRS late = 0.376

Adult to Adult RRS by Sex and Origin



Geomean RRS Females overall = 0.390
Males overall = 0.239

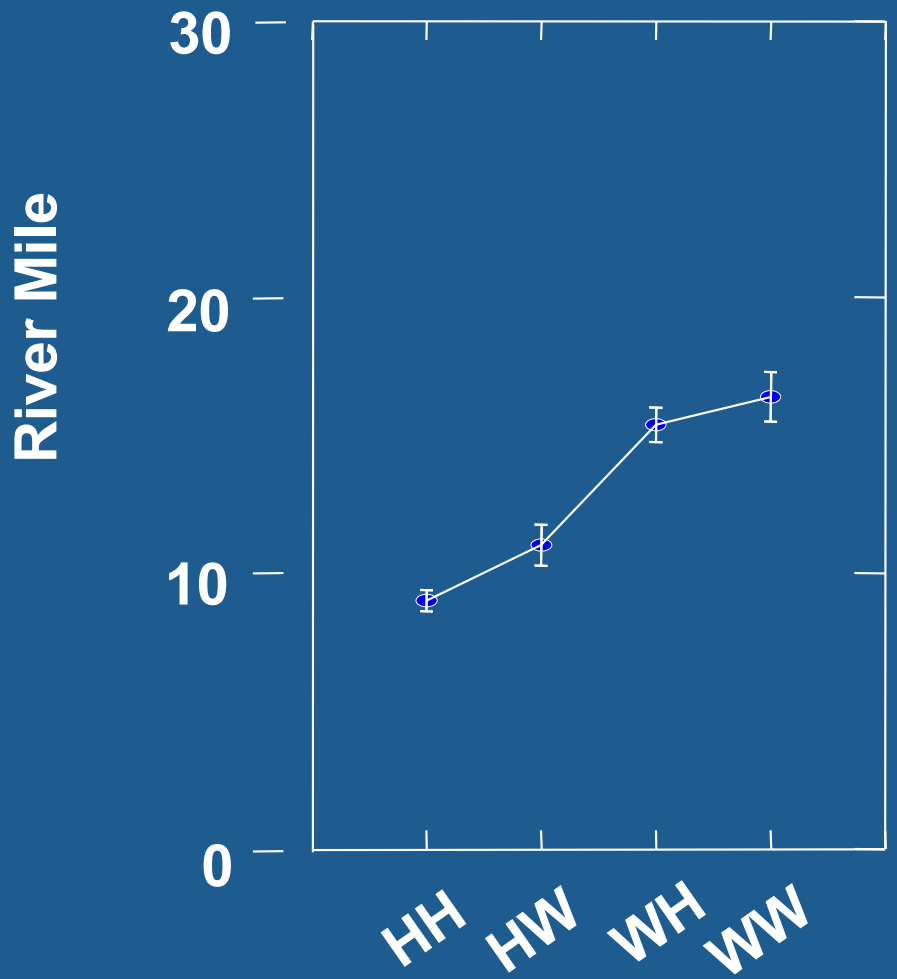
Geomean RRS Females early = 0.396
Males early = 0.490

Geomean RRS Females late = 0.387
Males late = 0.160

GLM analysis

- Factors considered:
  - sex
  - origin (H vs. W)
  - date of return
  - length
  - density
- Best model:
  - origin
  - length
  - number of same-sex competitors
    - wild better than hatchery with higher number of competitors
    - males better competitors than females

Spawning location vs. mating type



Take aways:

- Hatchery steelhead have significantly lower RRS than wild counterparts in Little Sheep Creek.
  - No consistent difference between hatchery males and hatchery females in performance.
  - Lower hatchery RS seen at both parr and adult stages.
  - Hatchery spawners least able to compete with high numbers same-sex competitors.
  - Females less competative than males with high numbers same-sex competitors (space-limited?).