

CWT Tagging Levels

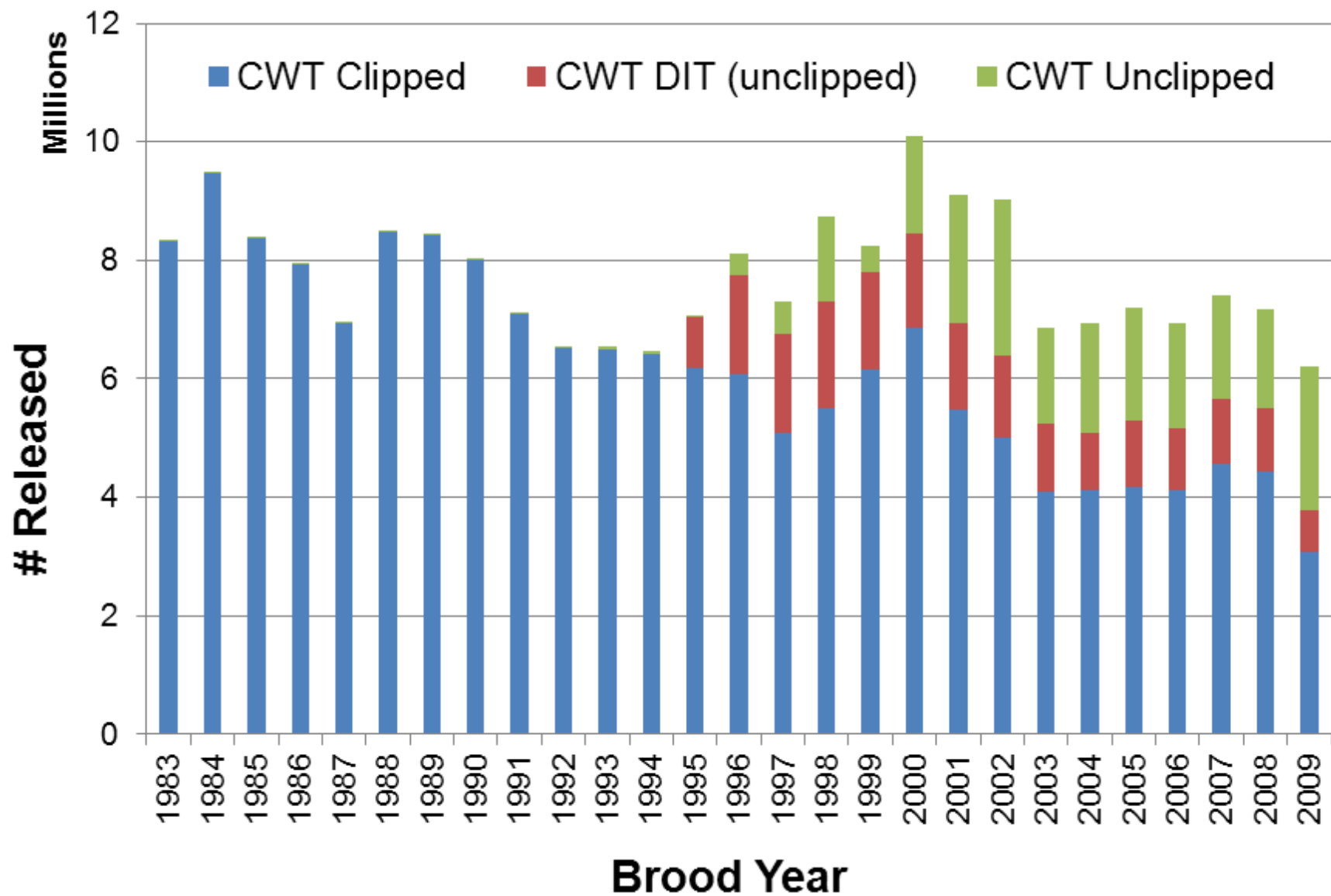


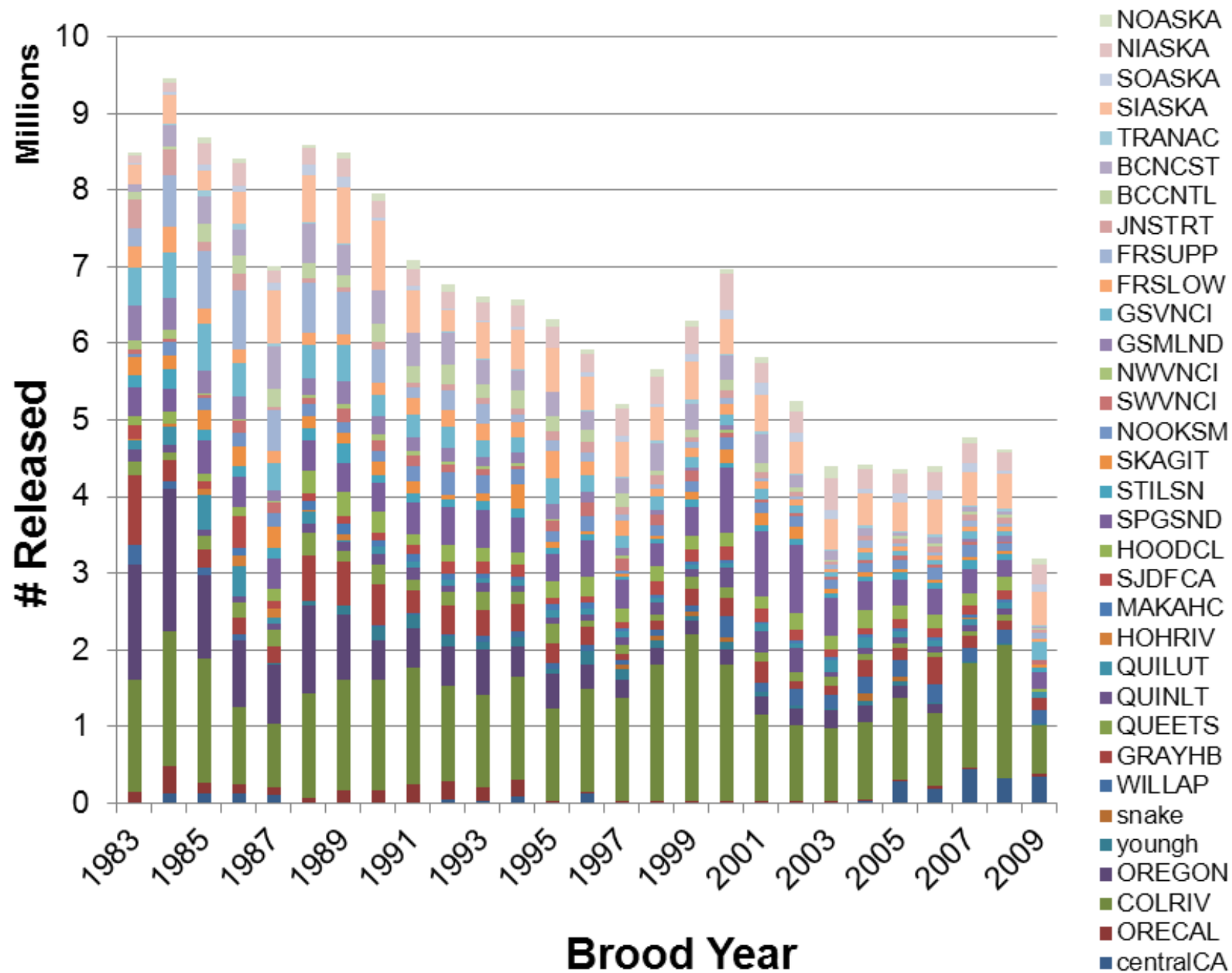
A Review

Emerging Problems with CWT Program

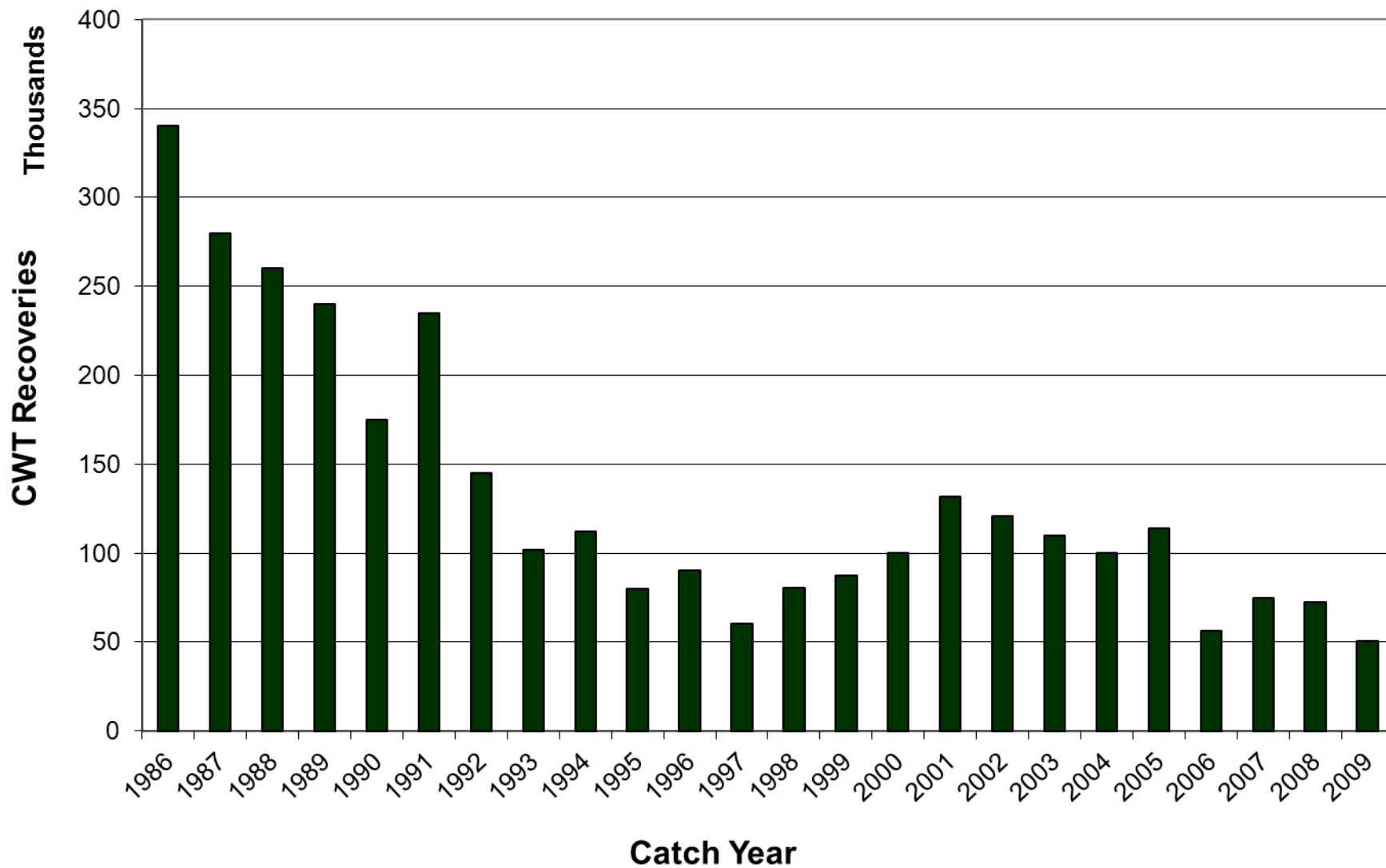
- Decrease in survival
- Decrease in fishery harvest
- Redistribution of CWTs to fisheries where CWT recoveries and accurate estimates of total catch are more difficult to obtain
- Increase in escapement, including strays to natural spawning grounds
- Complications from mass marking and mark-selective fishing

- ⇒ Decrease in number of CWTs recovered
- ⇒ Increase in statistical uncertainty





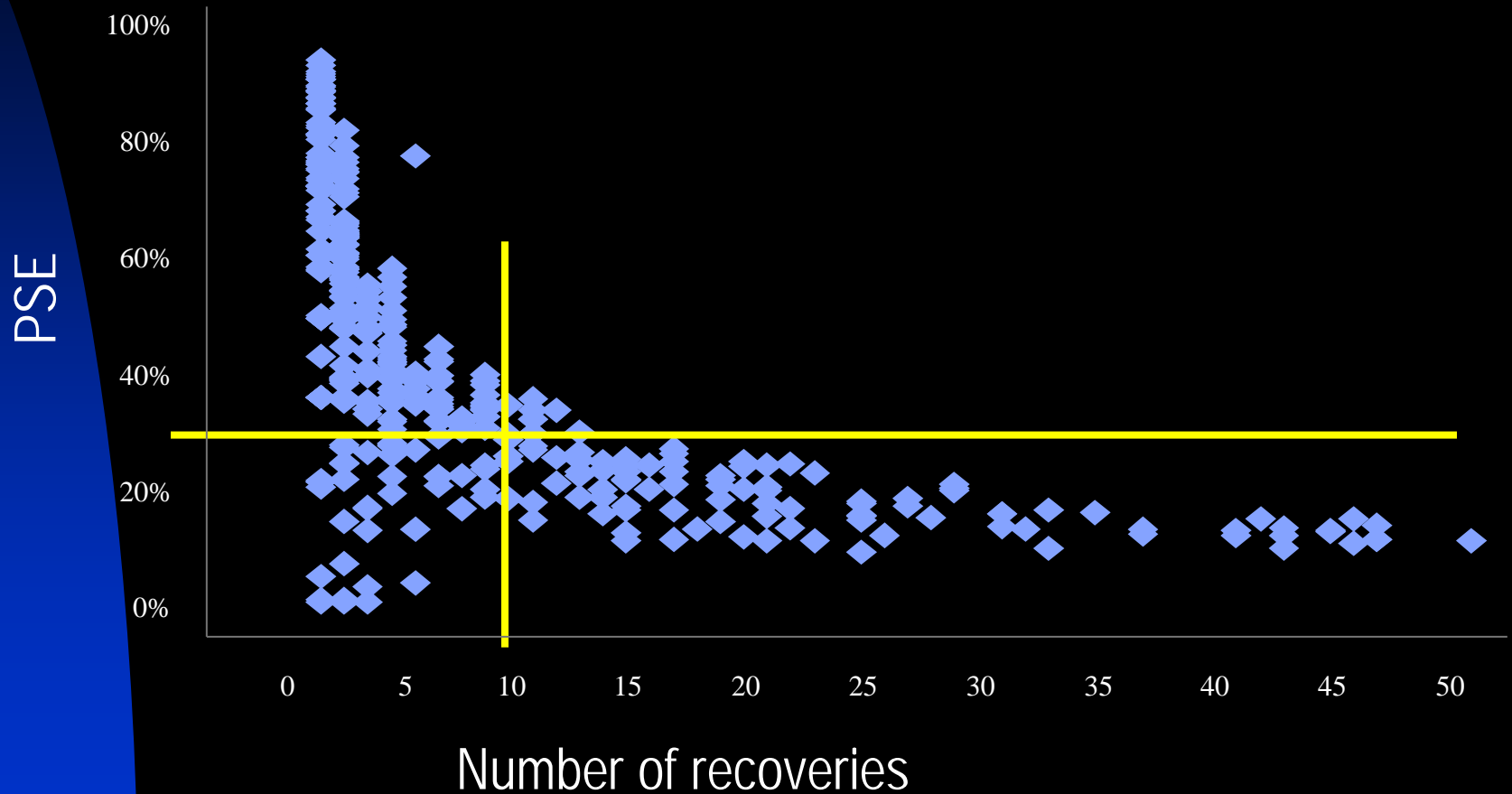
Total Estimated Recoveries in Pre-Terminal Fisheries (stocks of management concern)



PSC CWT Working Group

- Reviewed the past performance of the CWT program
- Assessed its current status
- Developed guidelines to improve the statistical basis for the future program
- Recommended agencies further review their programs and attempt to meet the following criteria to achieve desired precision

Uncertainty in CWT Estimates of ERs (PSE = % Standard Error)



10 tags → PSE(ER) ~ 30% if PSE(N) = 0%

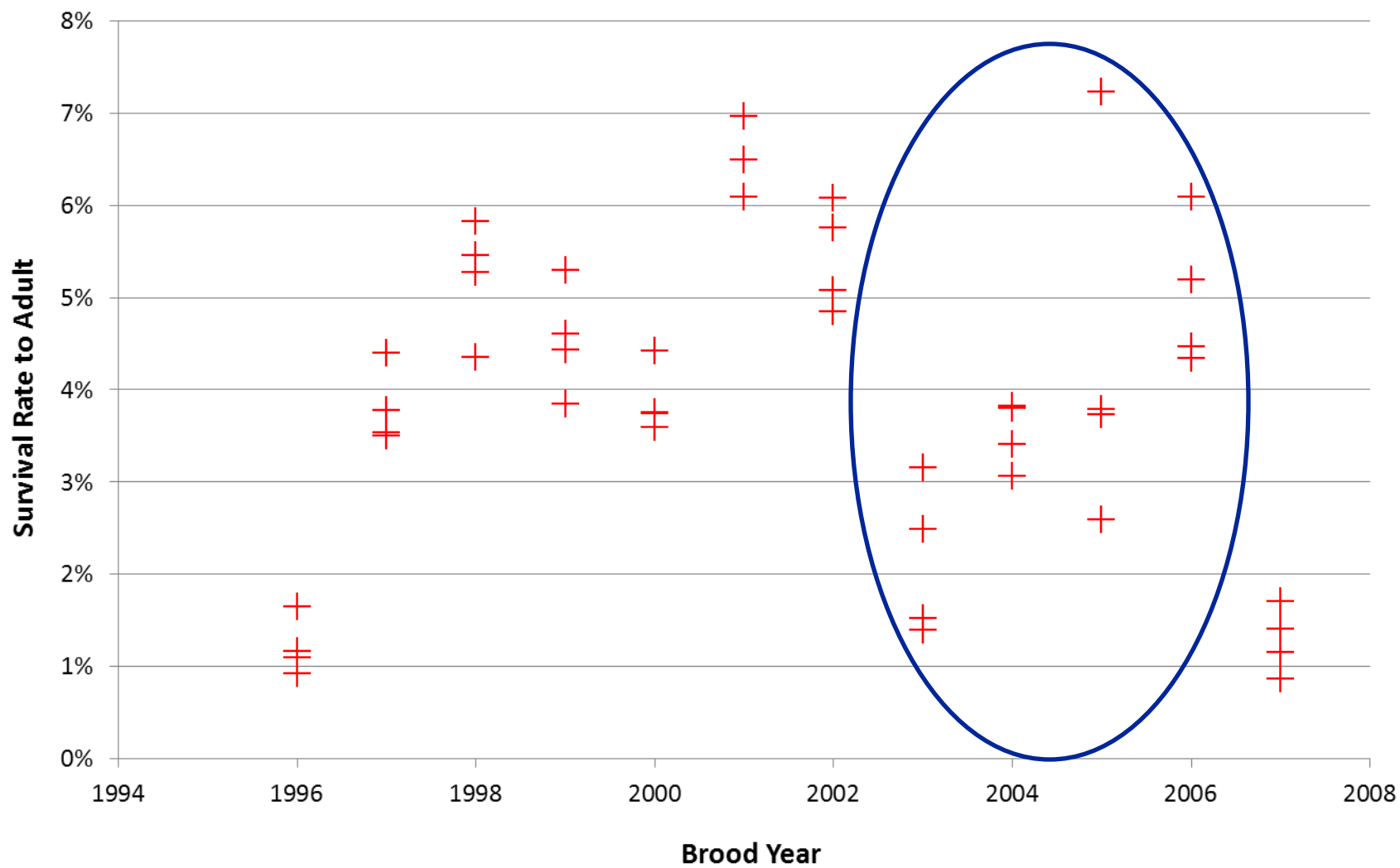
Tagging Evaluation - Criteria

Achieve: $\leq 30\%$ percent standard error around the estimates of exploitation rate

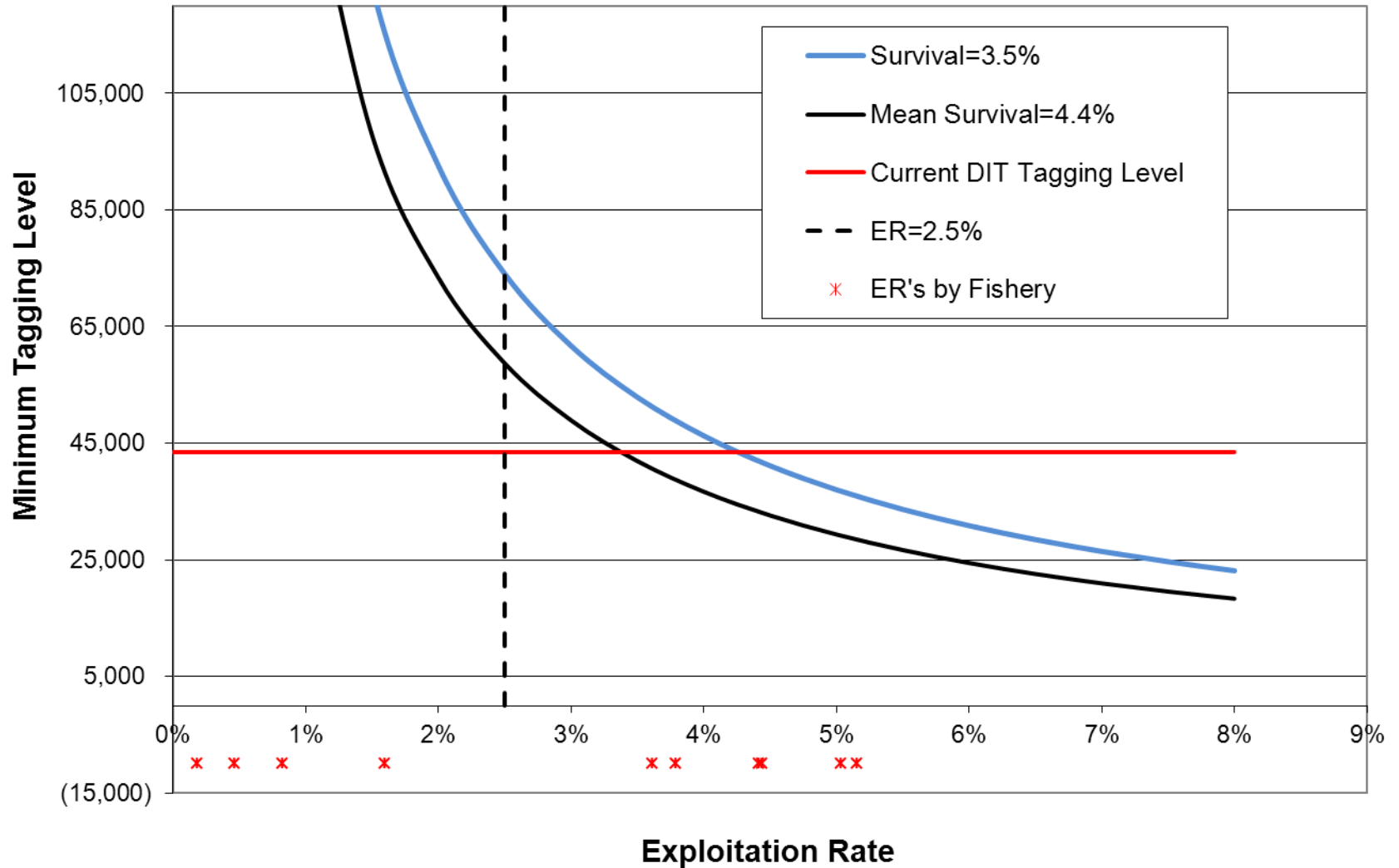
- ≥ 10 observed tags; 80% of the time
- ERs of 2.5% or greater
- Assumes 20% fishery sampling and 100% sampling at the hatchery

Used the Sampling Guidelines Model created by the CWT Workgroup

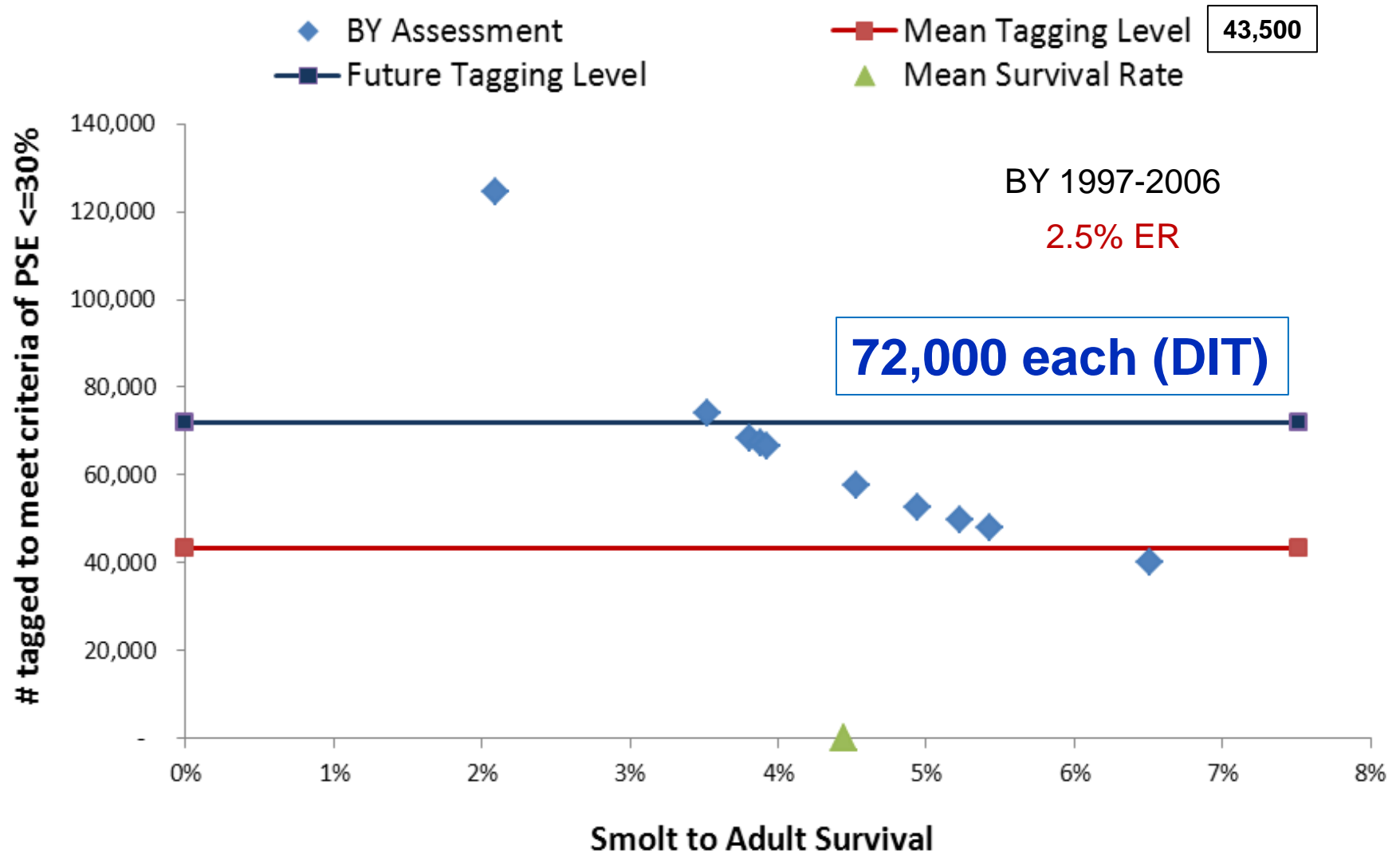
Quilcene Coho Survival Rate (Tags only)



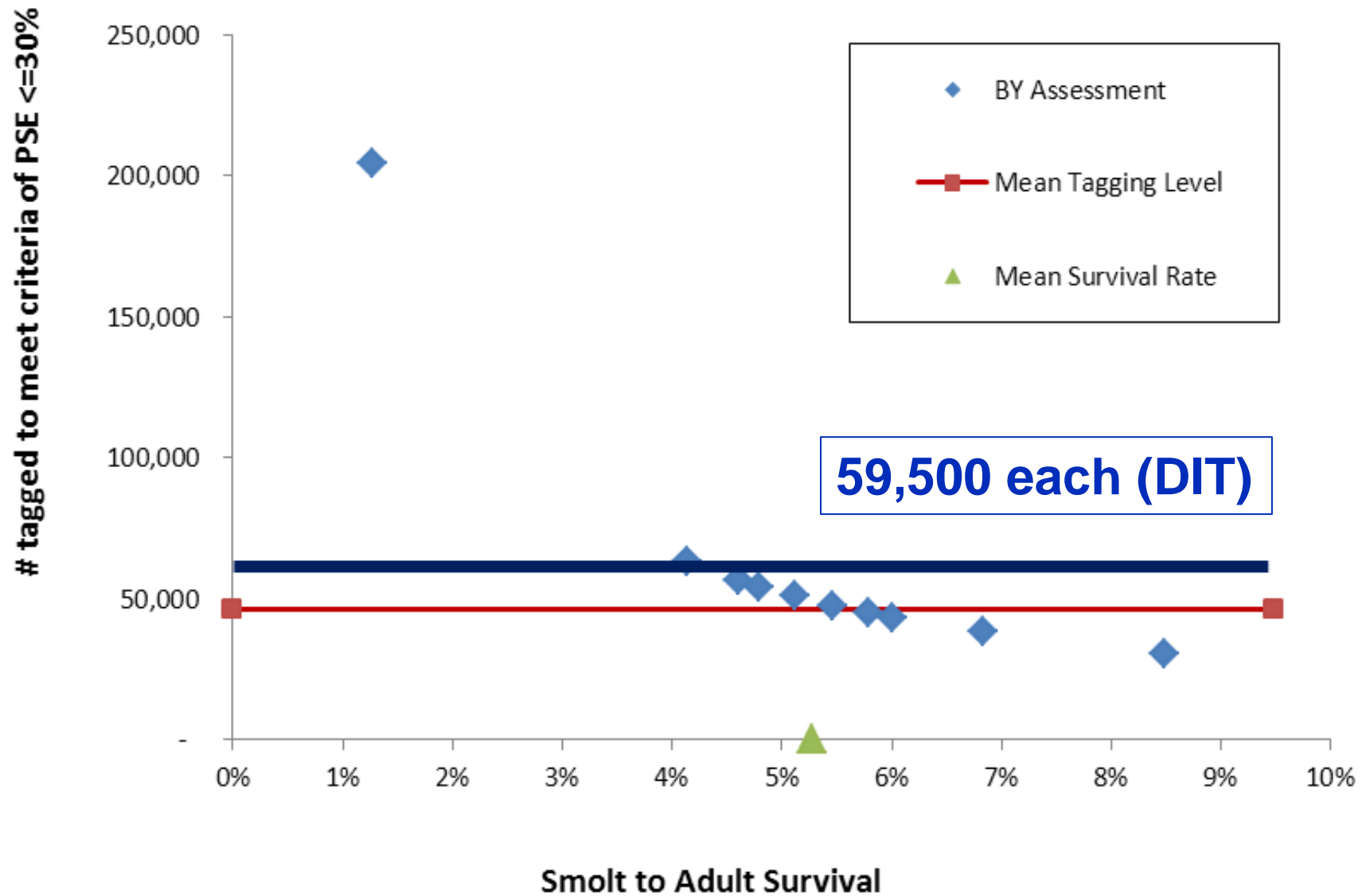
Quilcene Coho - Minimum Number of Tags to be Released; Given 20% Sampling Rate



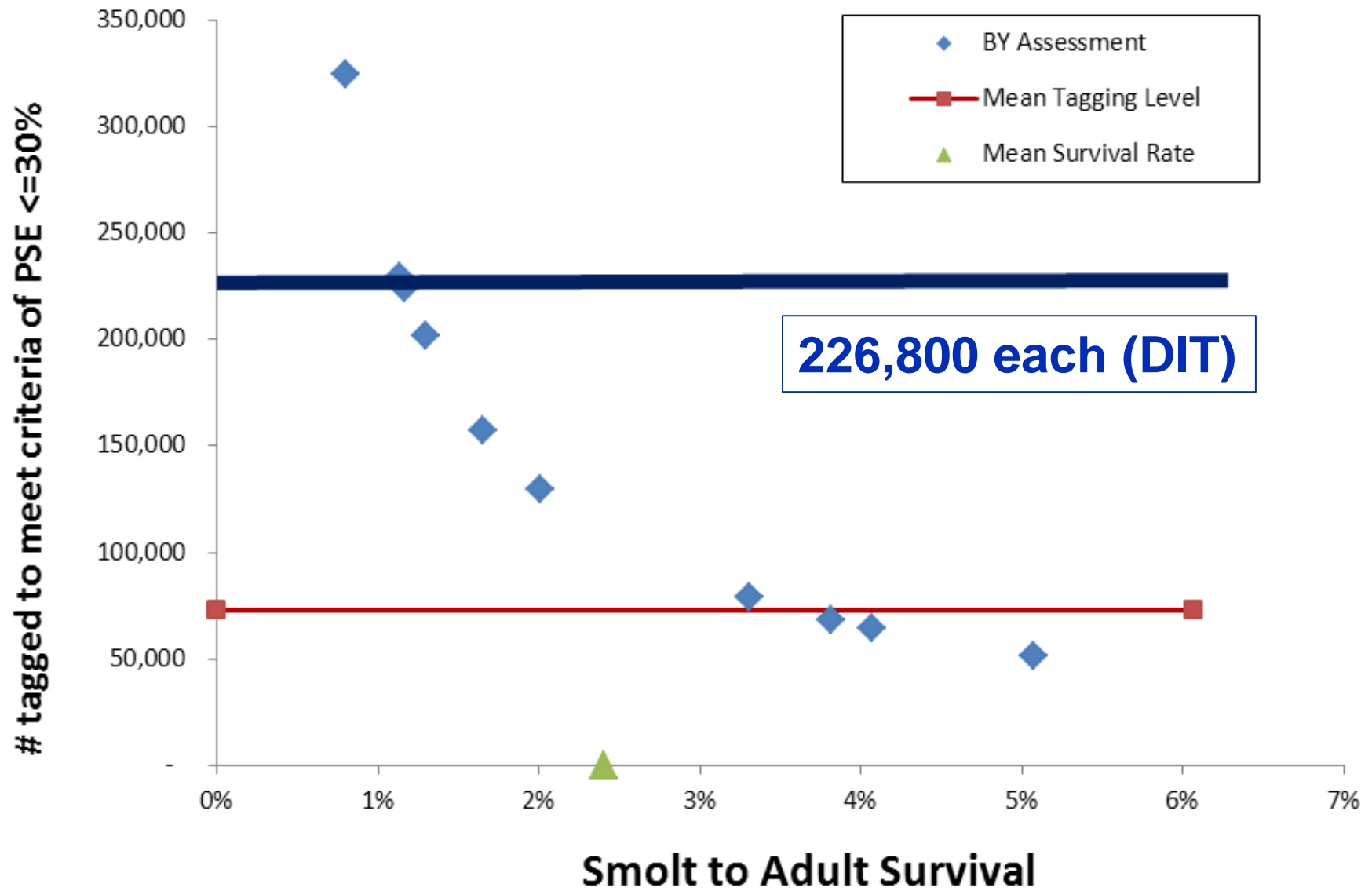
Quilcene NFH - Marked Coho



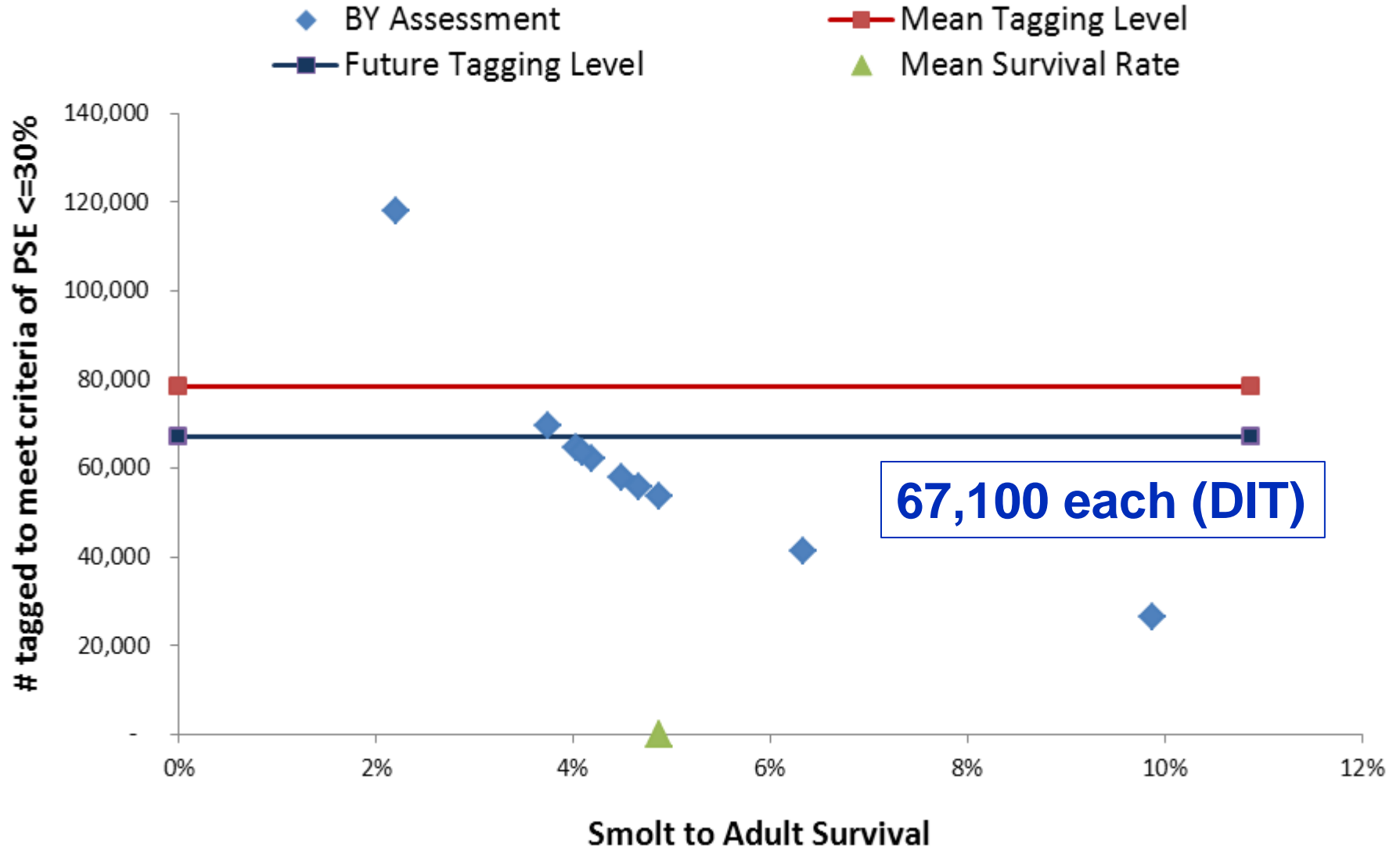
Marblemount H. (Cascade River)



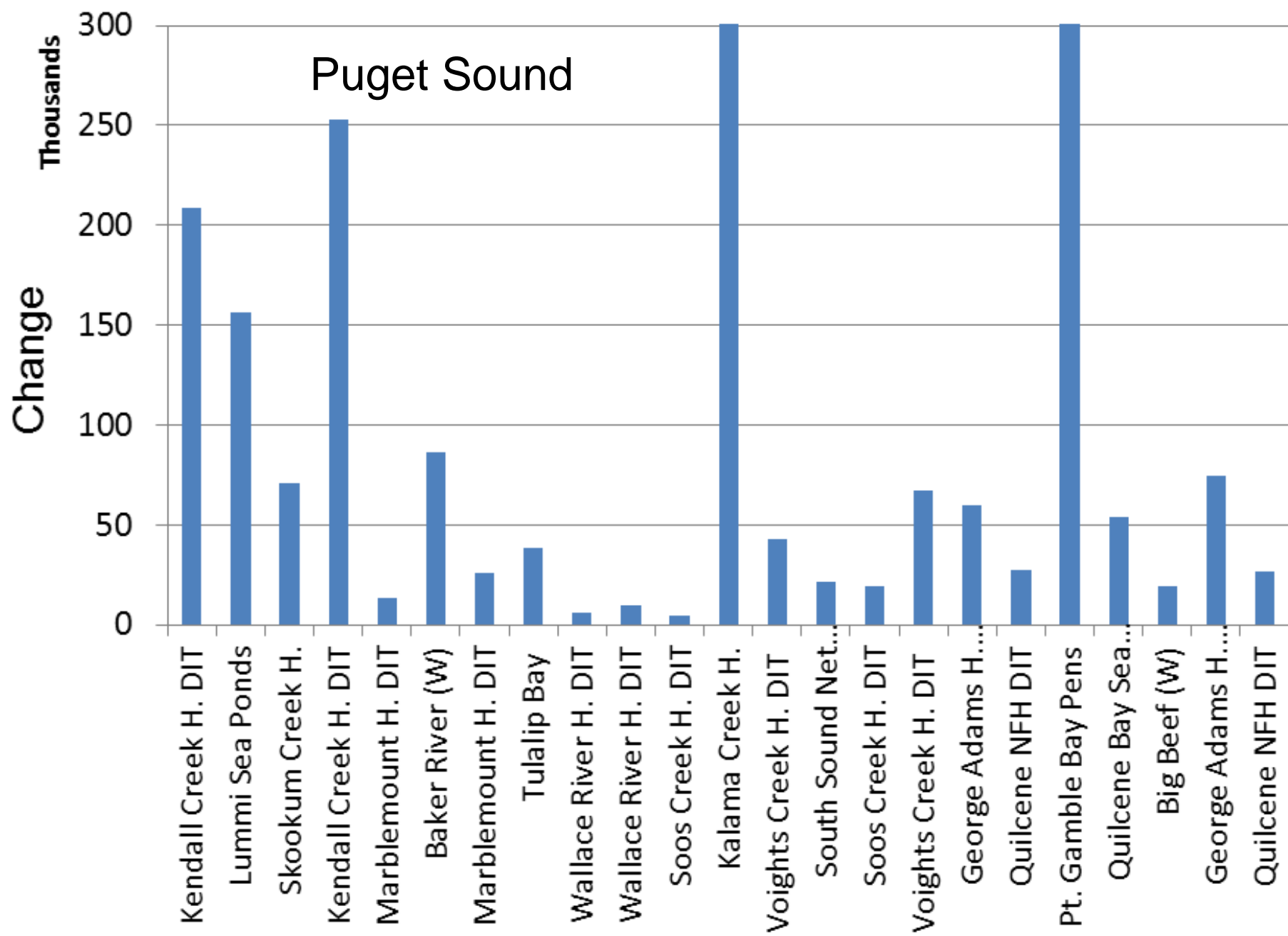
Bingham Creek H.



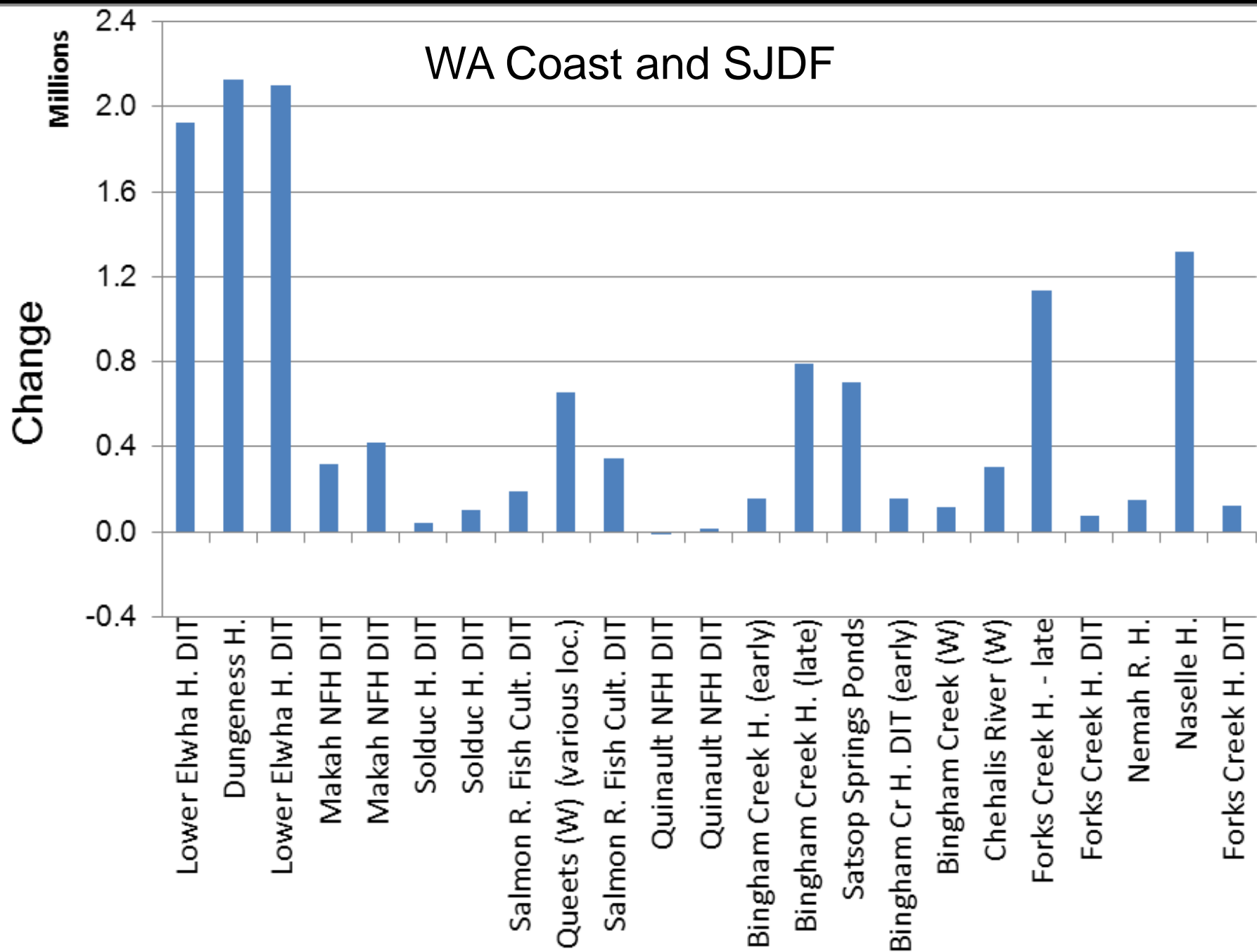
Quinault NFH - Marked Coho



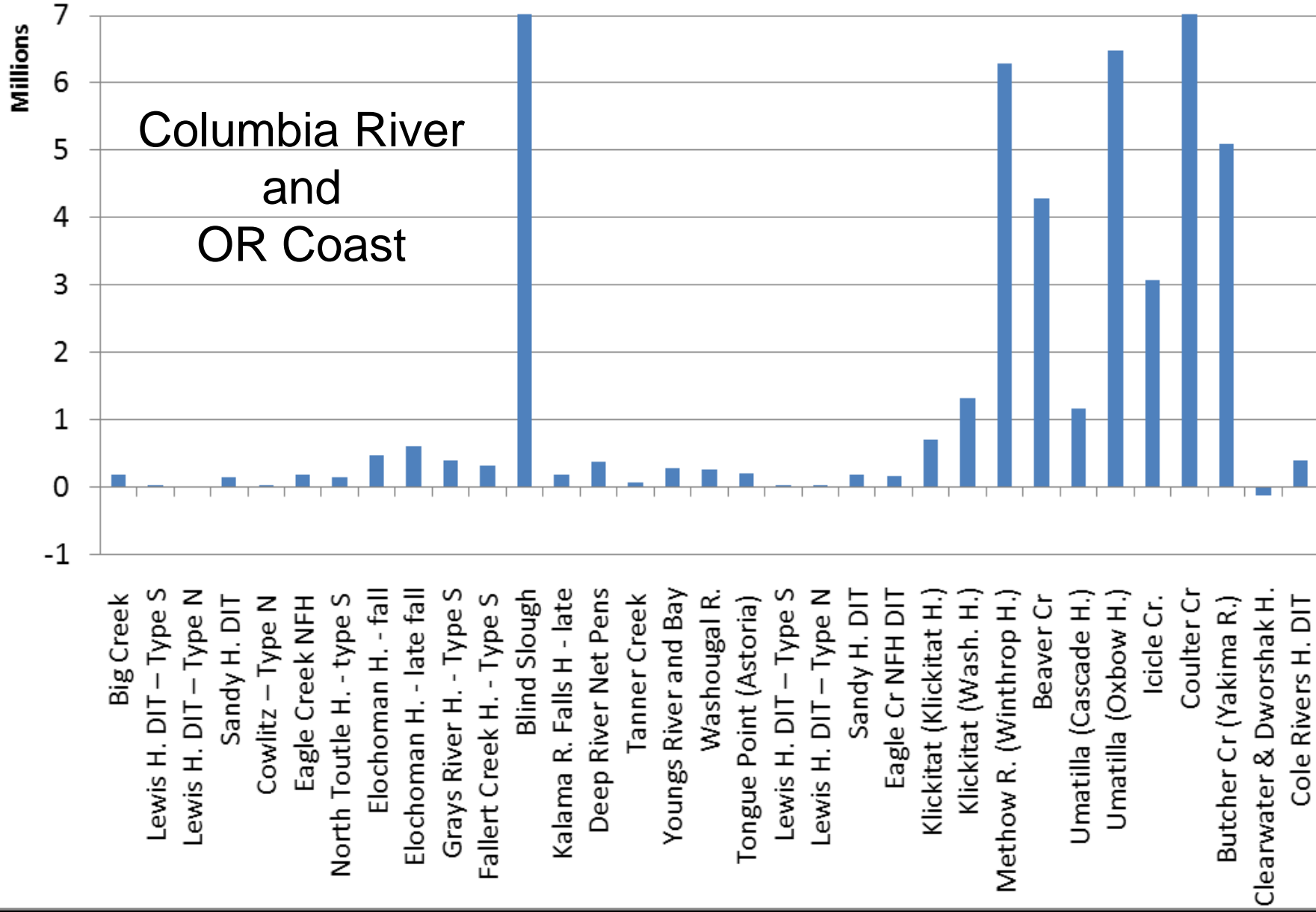
Puget Sound



WA Coast and SJDF



Change



Questions?

