



Humpback Chub in the Little Colorado River Monitoring of Juveniles, Sub-Adults, and Adults and Translocations

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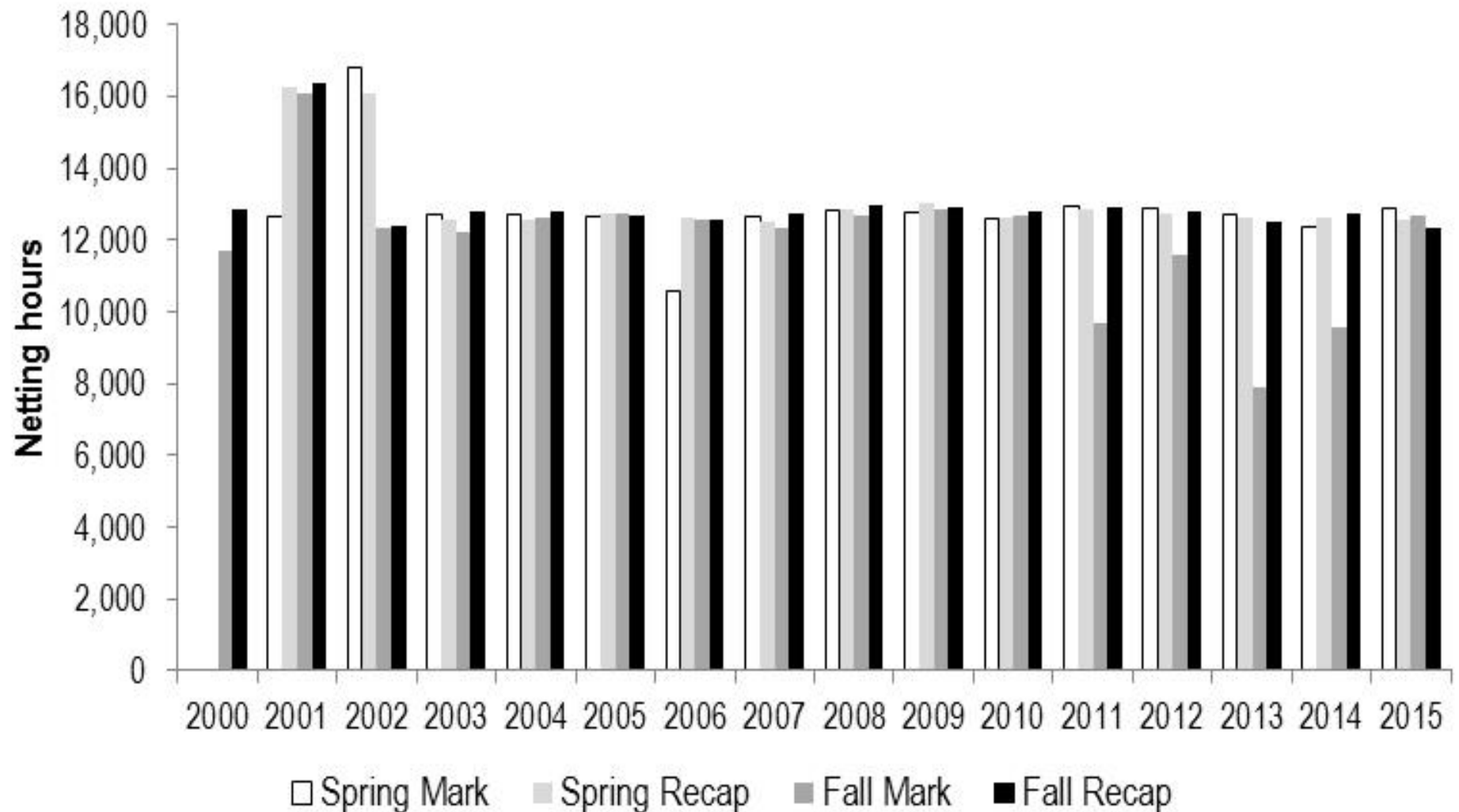


LCR HBC Monitoring & Translocation Objectives

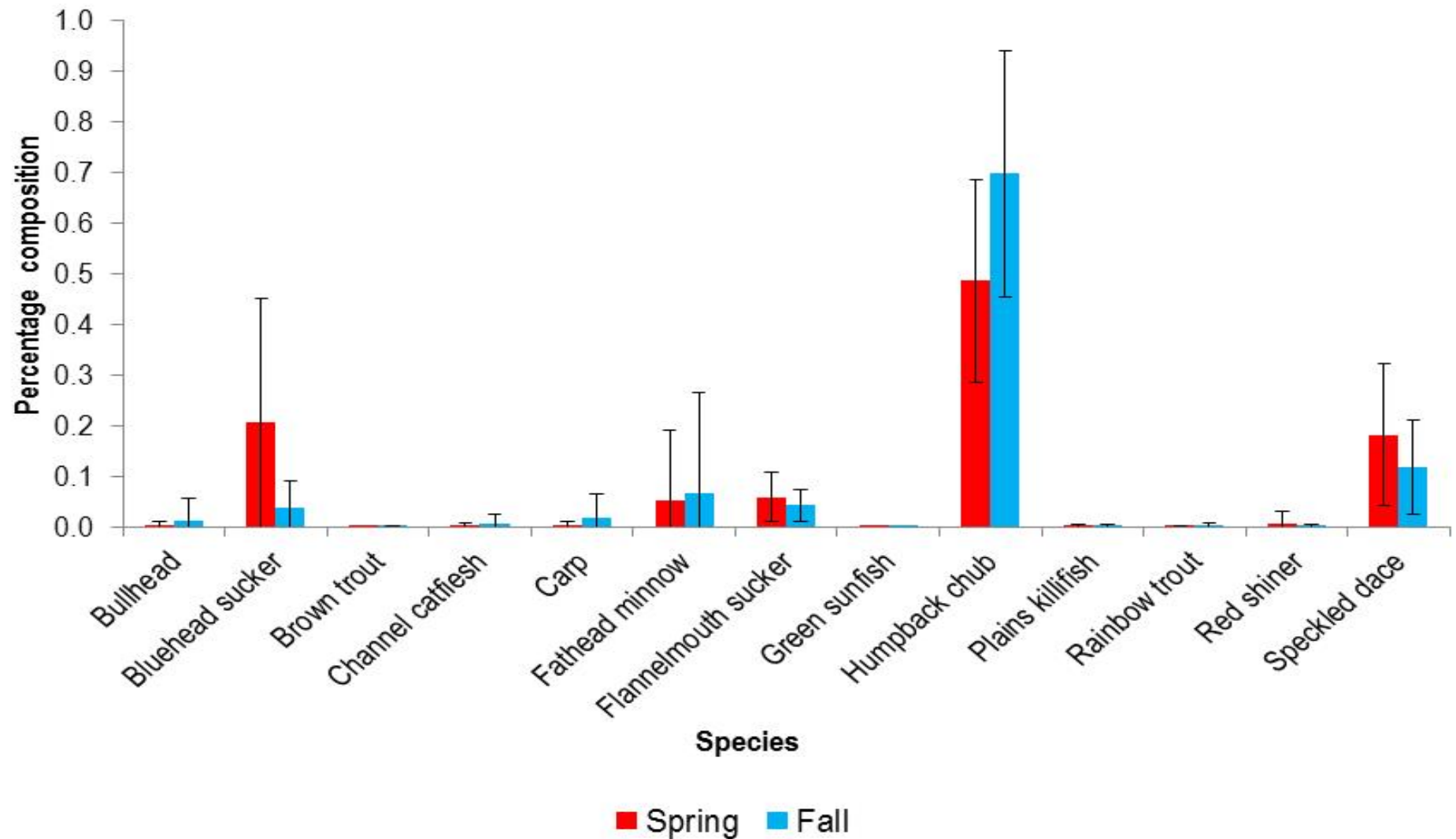
- Conduct long term monitoring of humpback chub (*Gila cypha*) and other fishes in the Little Colorado River via closed mark-recapture and CPUE indices.
- Translocate juvenile humpback chub from/within the Little Colorado River to assist in recovery efforts.

Effort

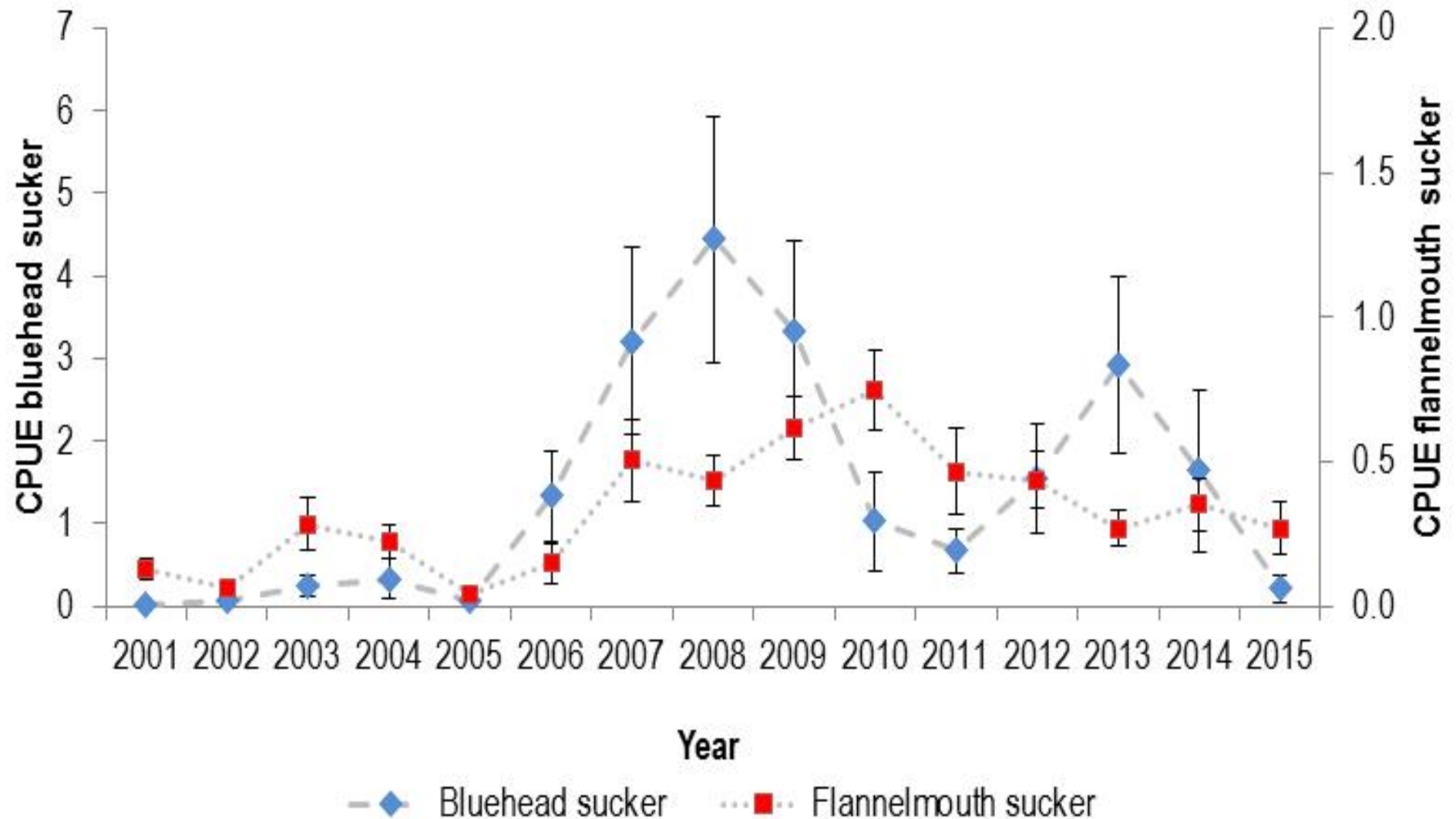
Typical trip = ~13.8 net sites/km minimum
~540 net nights/trip or ~12,500 net hours/trip



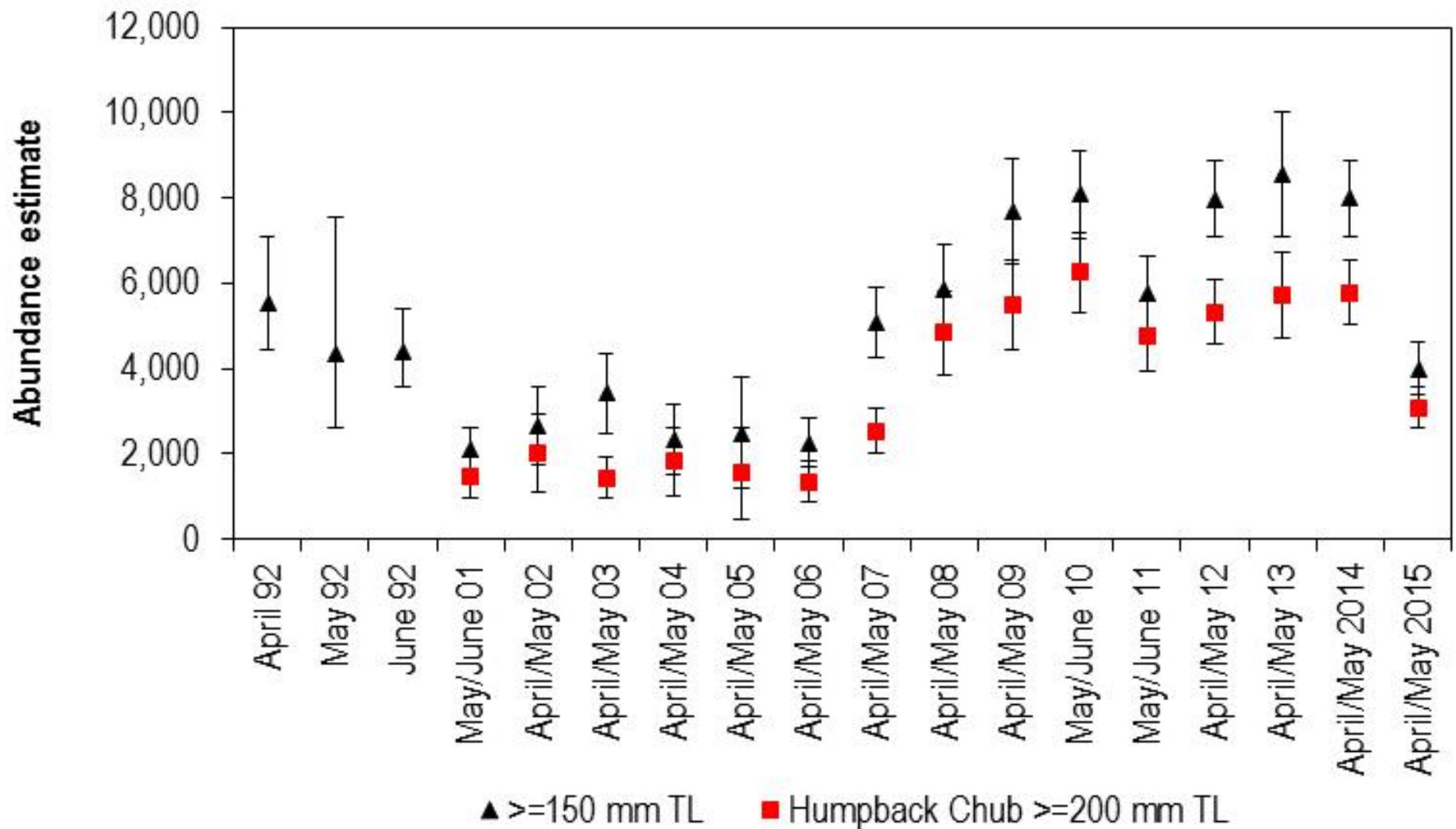
Observed species composition in LCR using hoop nets (2000-2015)



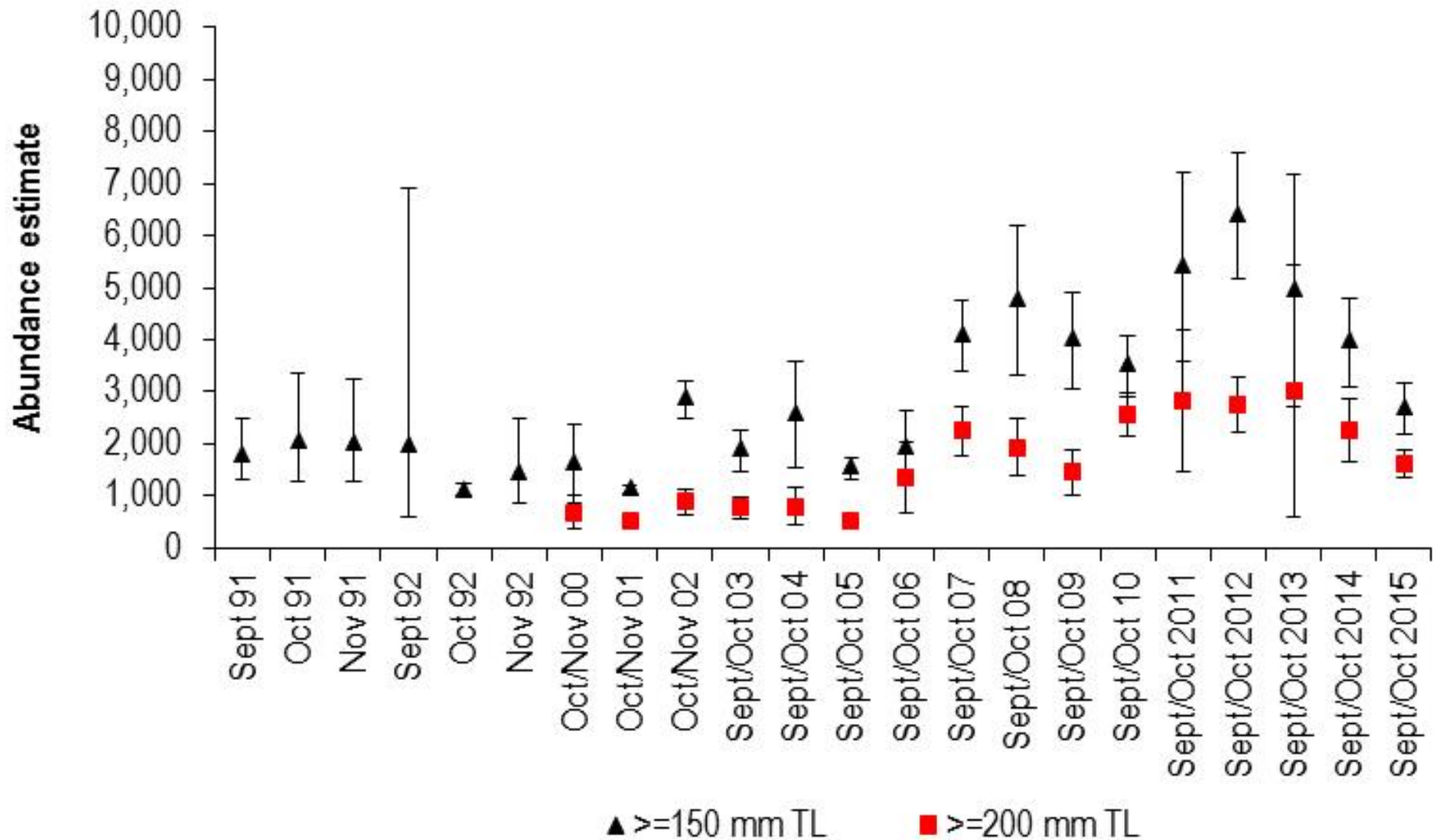
Spring bluehead and flannemouth sucker CPUEs in LCR during blue water trips



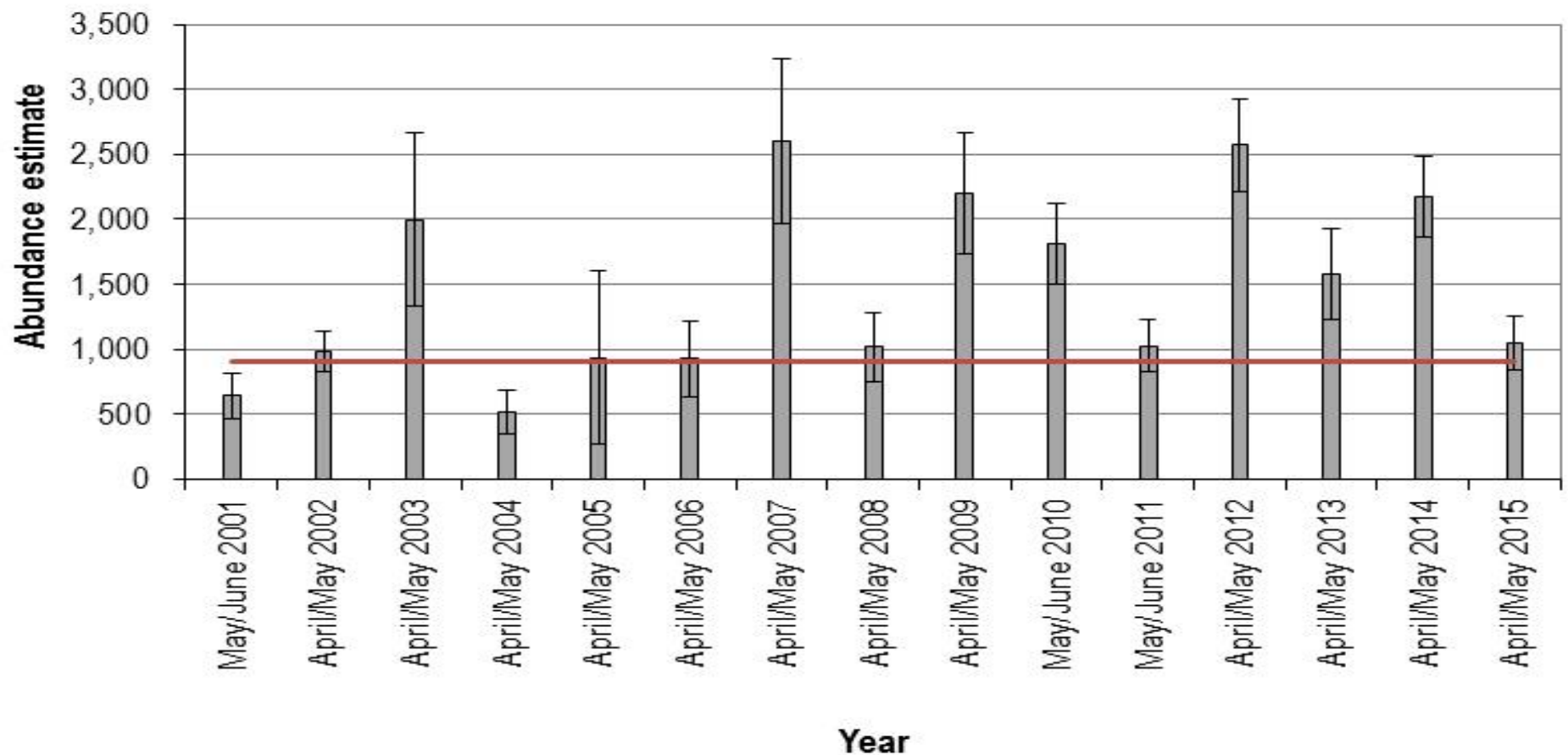
Annual spring abundances of humpback chub ≥ 150 mm and ≥ 200 mm in lower 13.6 km of LCR



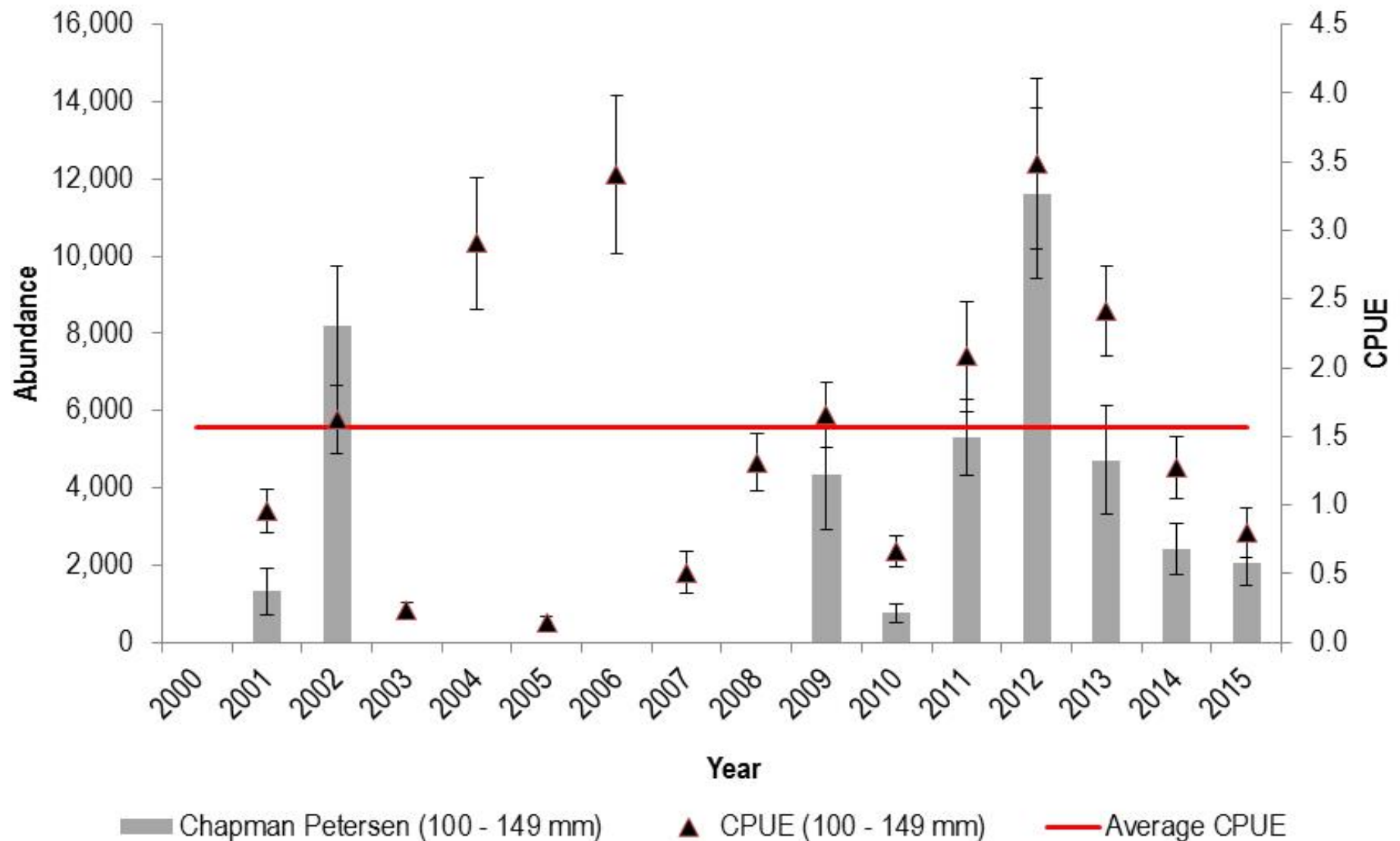
Annual fall abundances of humpback chub ≥ 150 mm and ≥ 200 mm in lower 13.6 km of LCR



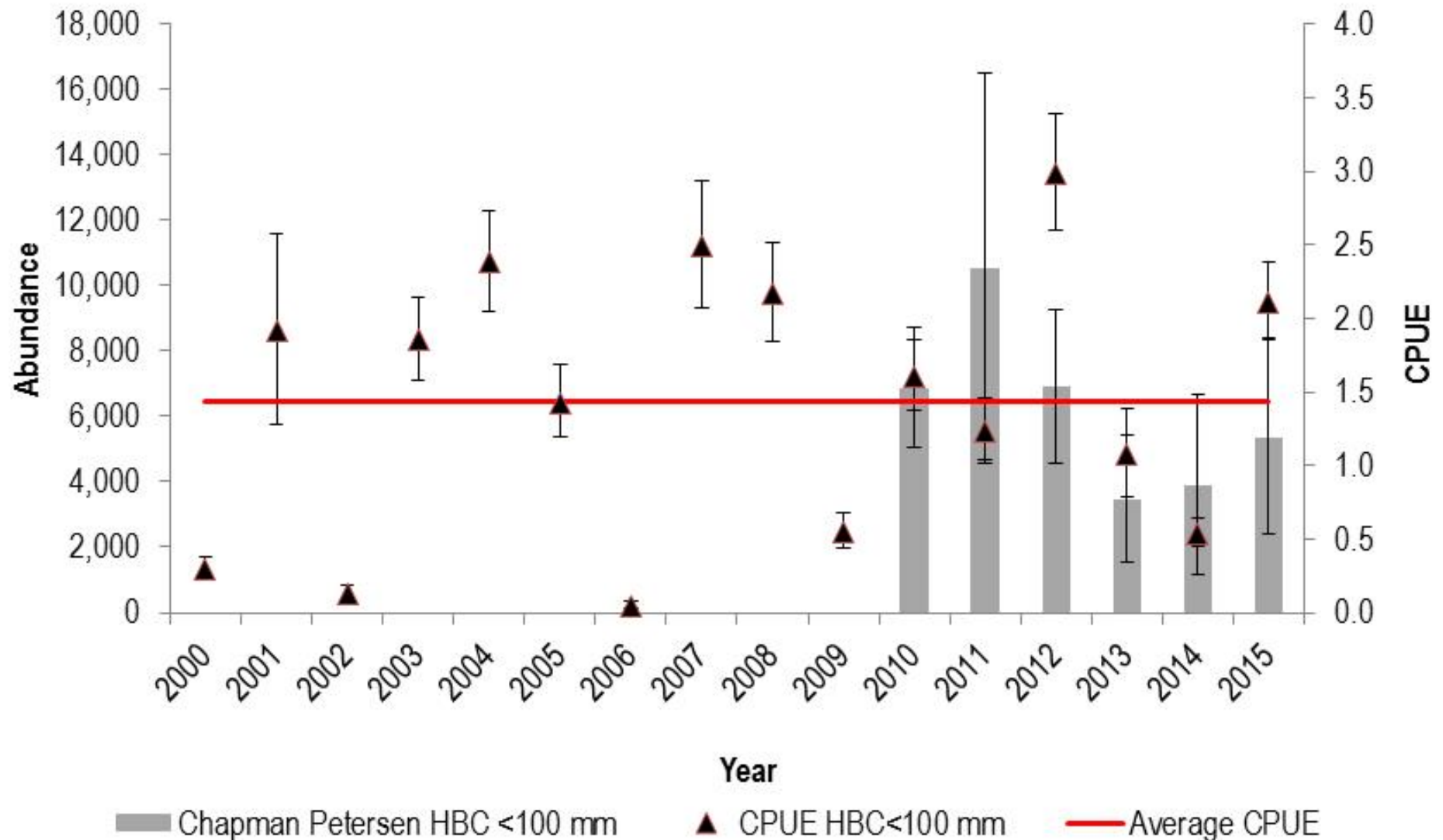
Spring LCR 150-199 mm humpback chub & current trout removal trigger



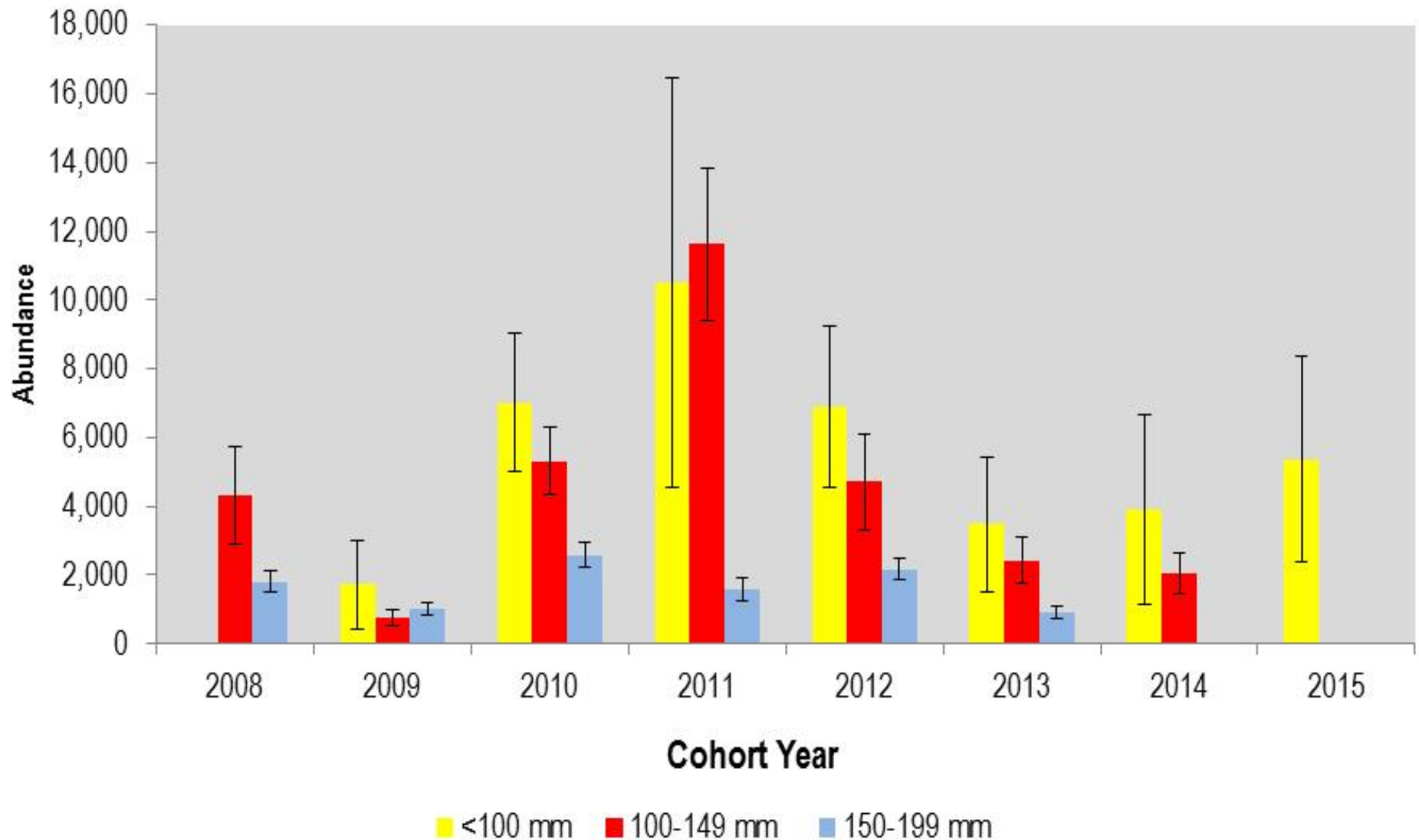
Spring abundances and CPUEs of HBC in the 100-149 mm size class (roughly age-1)



Fall abundances and CPUEs of HBC < 100 mm (age-0)



Cohort tracking – Fall age-0 to spring age-1 to next spring age-2



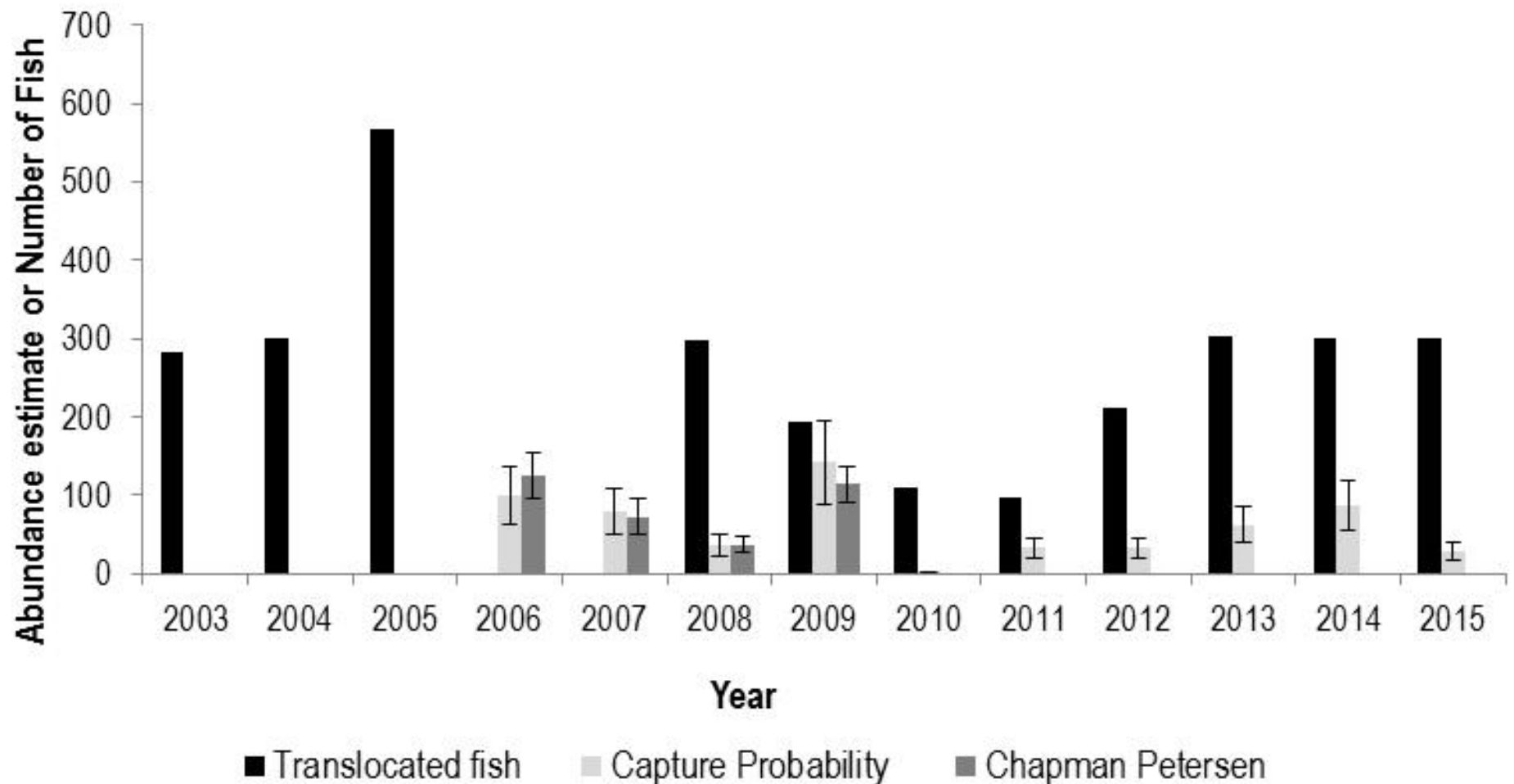
Summary

- LCR still dominated by native species (~90%).
- All three large bodied native fish are showing signs of a decline during spring spawning season. HBC display the most recent signal of a potential decline.
- At this time, we are uncertain if this apparent decline is real, and if so, what may be causing it.
- We have the ability to track abundances of different size classes using closed mark-recapture, although tracking the age-0 cohort is the most problematic (VIE tagging vs PIT tagging).

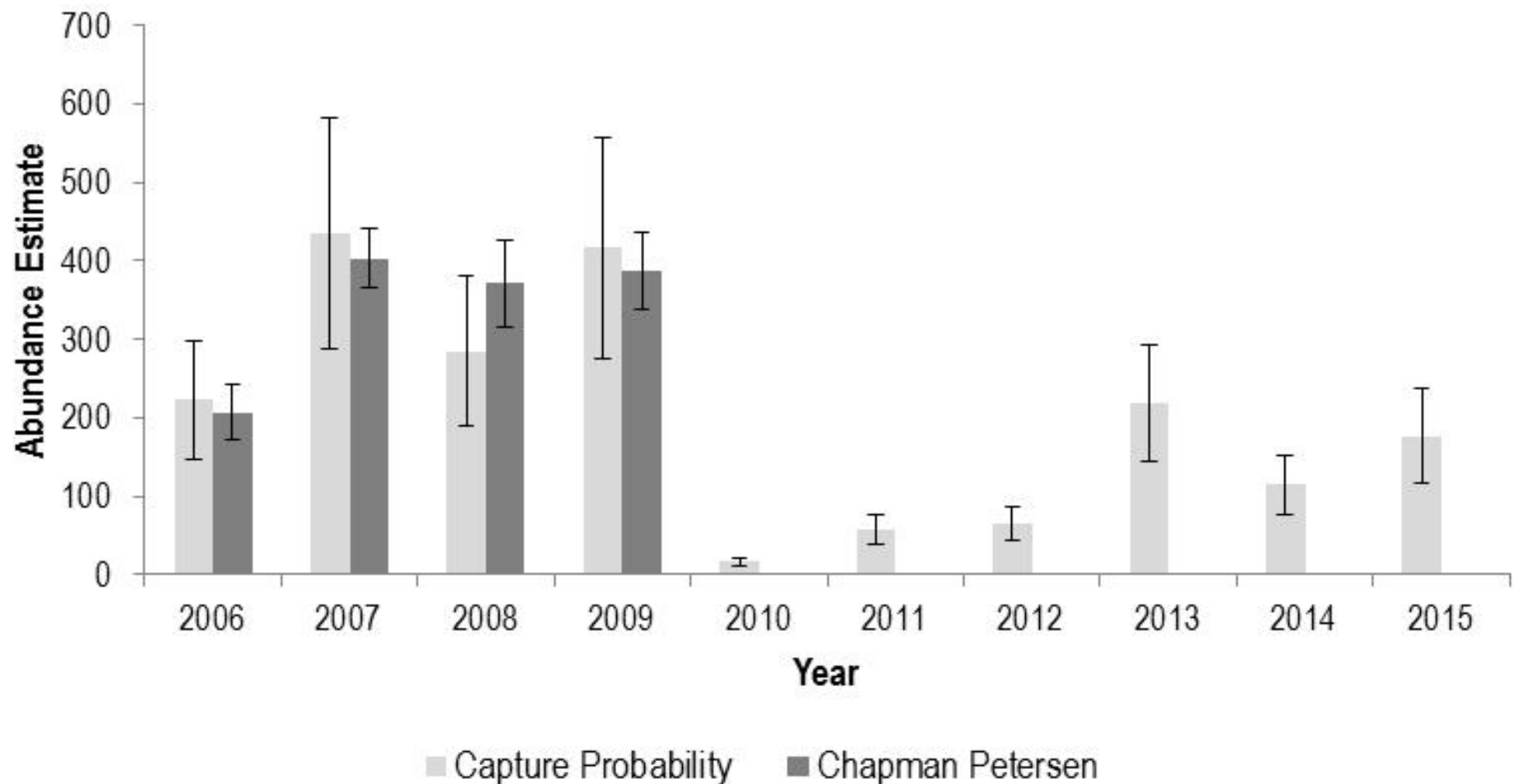
Chute Falls Monitoring



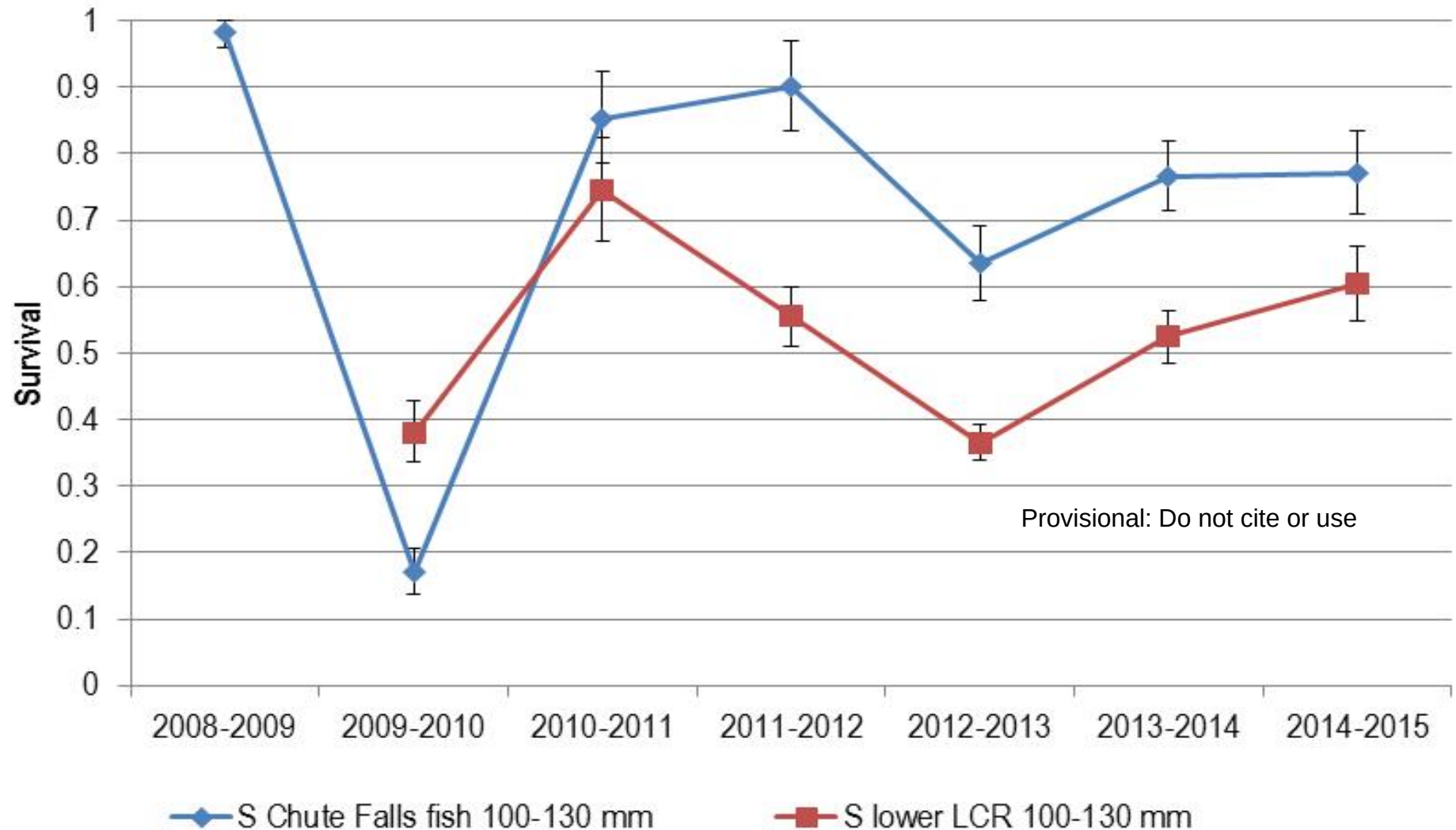
Number of HBC translocated each year (black bars) and abundance of adult HBC above Chute Falls (rkm 14.1-17.8)



Abundance of adult HBC in Lower Atomizer reach (rkm 13.7-14.1)



Apparent Survival of translocated chub (100-130 mm) vs lower LCR (100-130 mm)



Thank You

