



Nevada Department of Wildlife



Lake Mead Sportfish Monitoring

LaMeM
February 21, 2013

Presented by Debora Herndon

What we monitor

- ▶ Trends in sport fish harvest and angler use
 - creel survey
- ▶ Prey Base – threadfin shad
 - shad trawls
- ▶ Sportfish abundance
 - Fall lake wide gill net survey
- ▶ Littoral species abundance/YOY recruitment
 - Electrofishing survey

What we monitor

- ▶ Striped bass fishery
 - monitor tournaments quarterly with stomach content checks and length/weight measurements
- ▶ Black bass fishery
 - tournament sampling
 - snorkel surveys

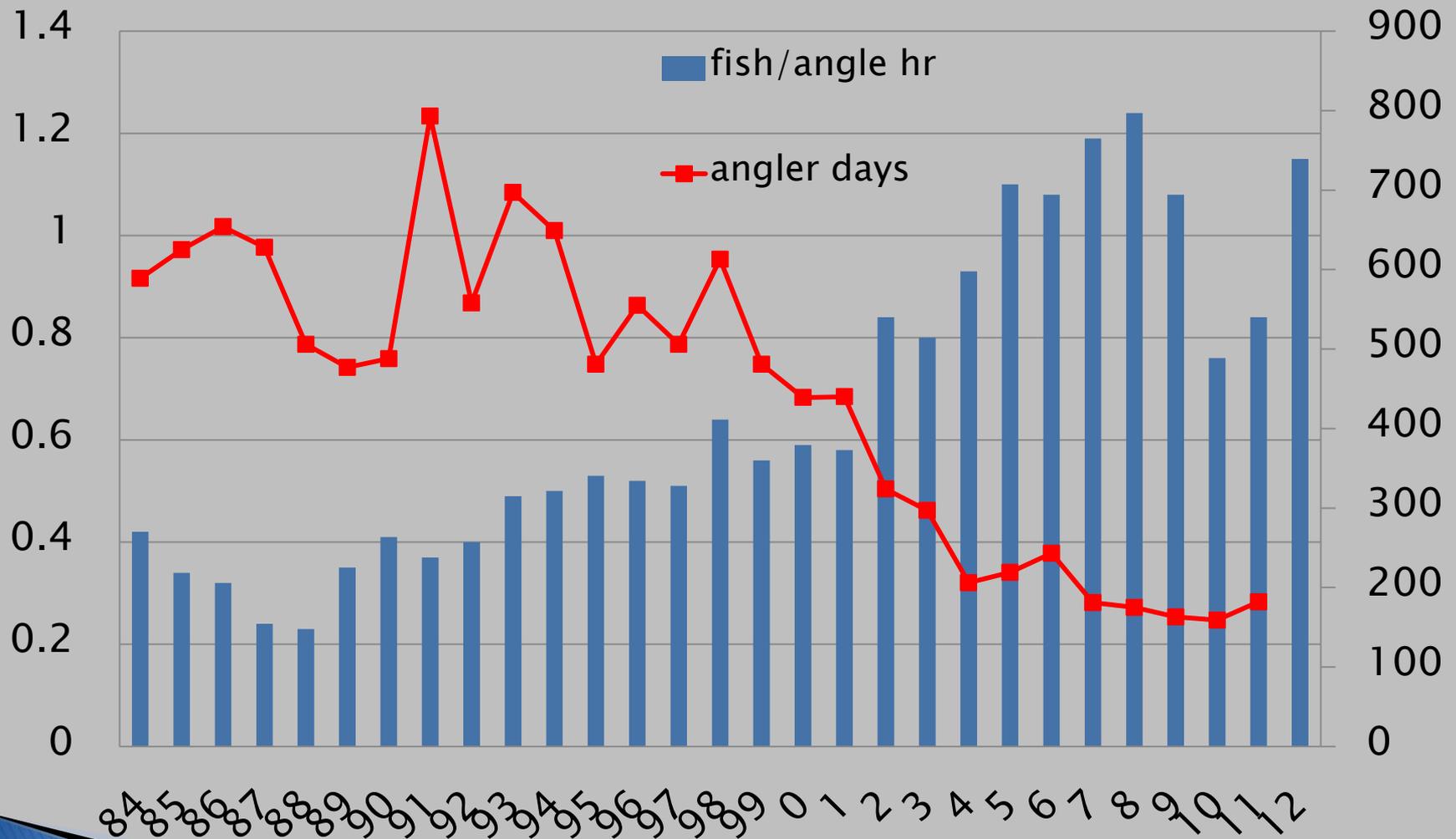
Creel Census



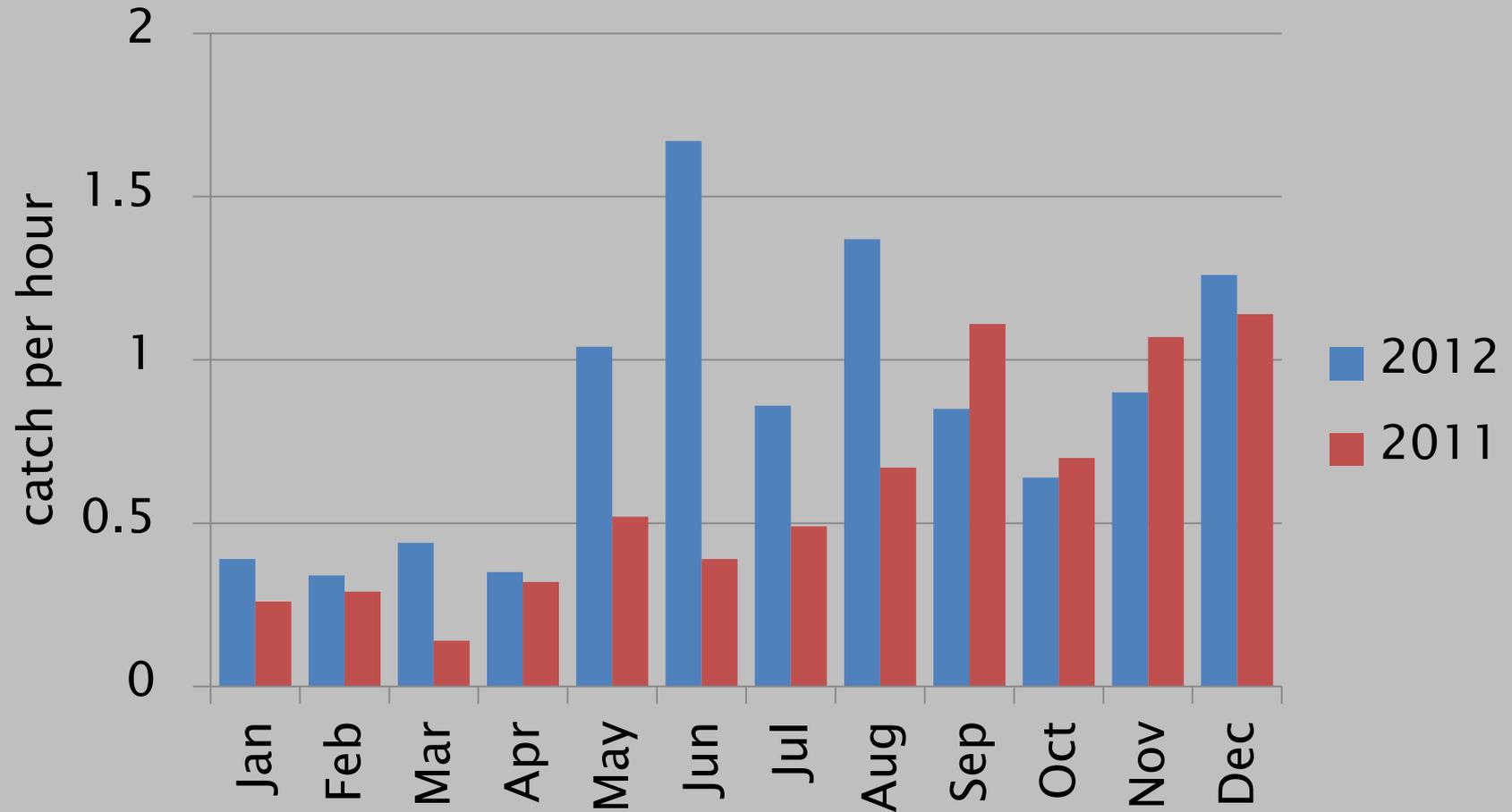
- ▶ 100 days of creel surveys conducted at 4 landings
 - 802 anglers contacted
 - 2833 fish harvested
- ▶ Catch rates increased for 2012
 - Average 1.15 Fish / hour
 - 2011 – average 0.84 fish / hour
- ▶ 5.25 fish / angler day
 - 2011 – 4.0 fish / angler day



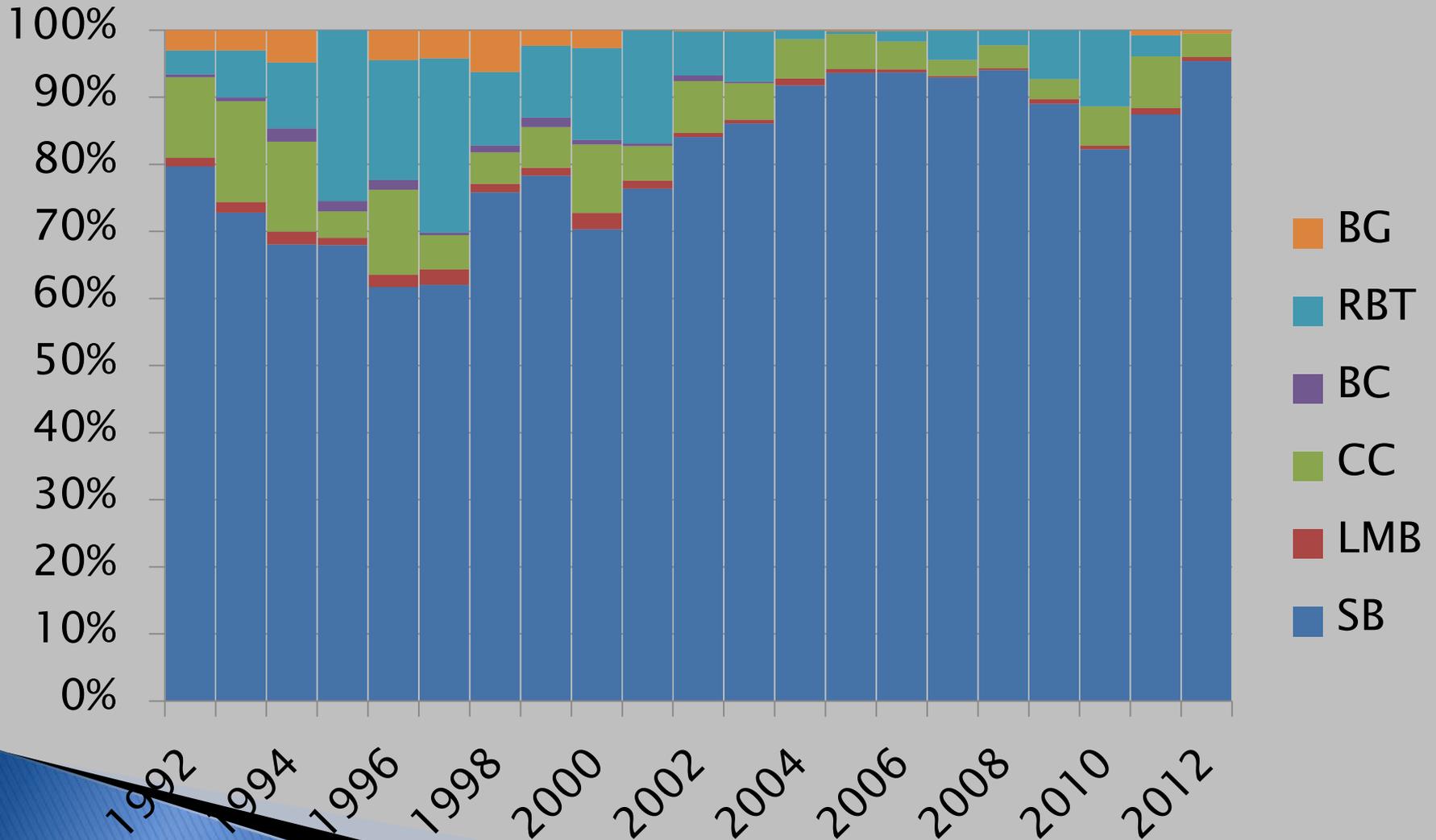
Fish per angler hour



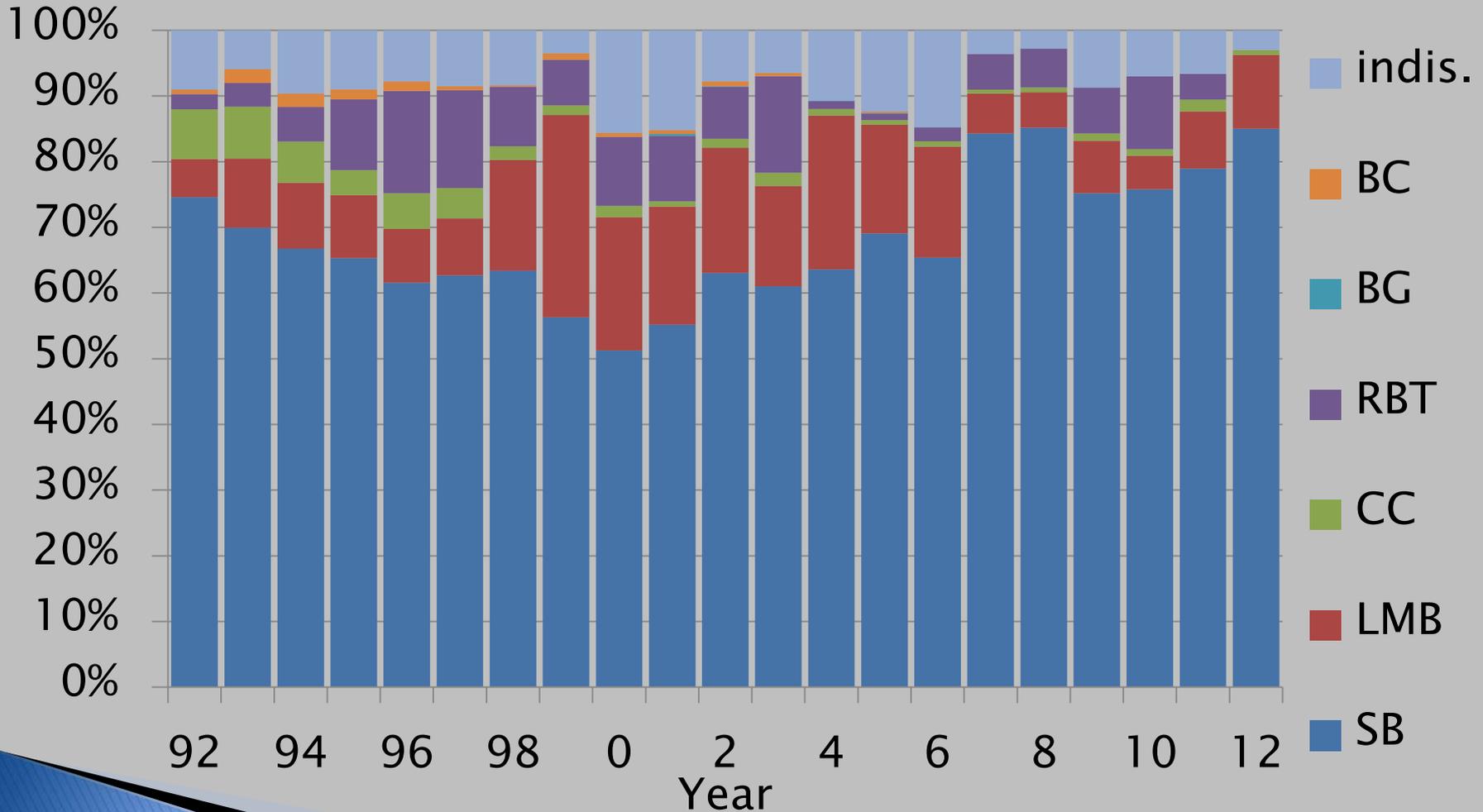
Striped bass catch rate



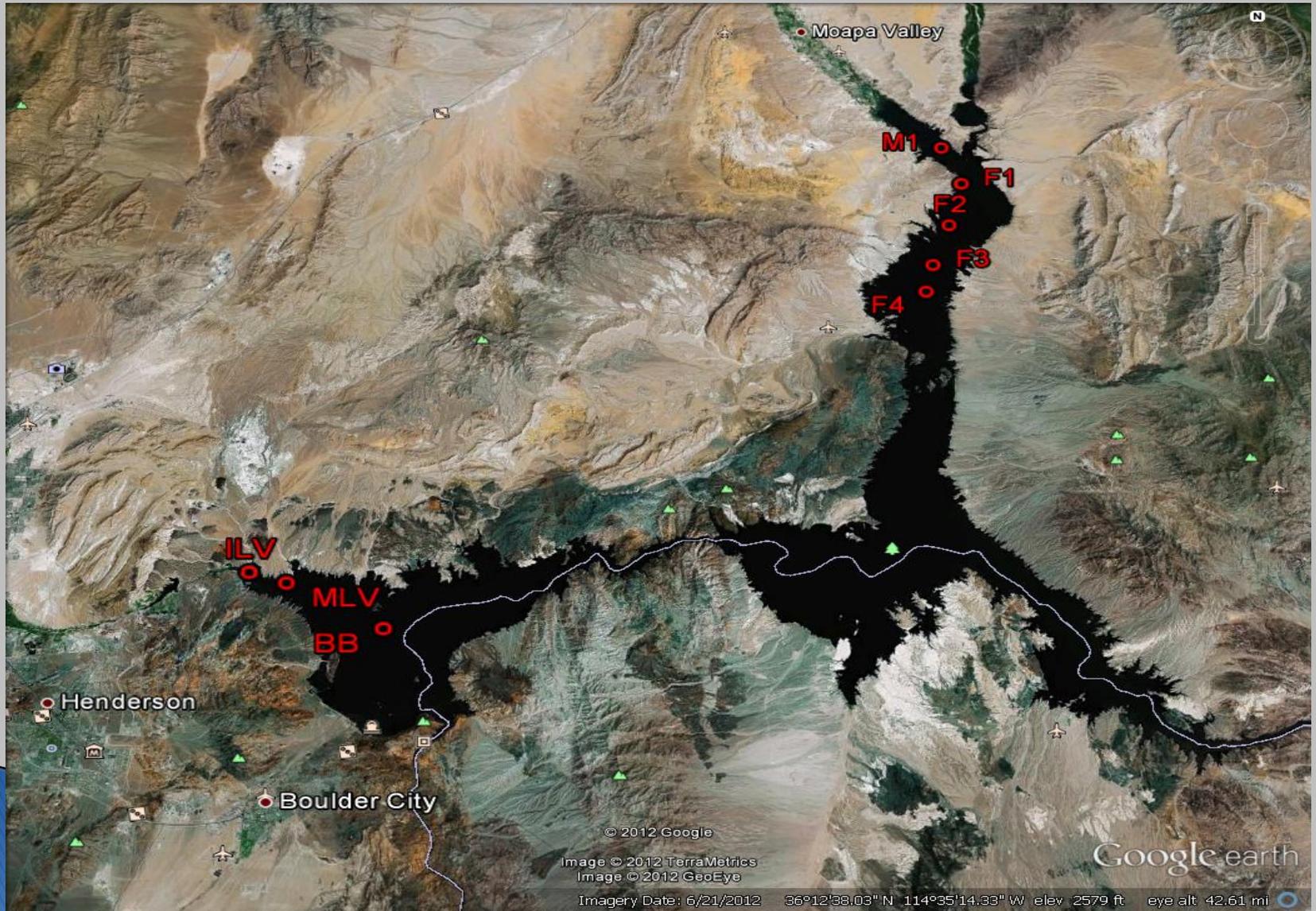
Creel harvest Species percentage



Species preference



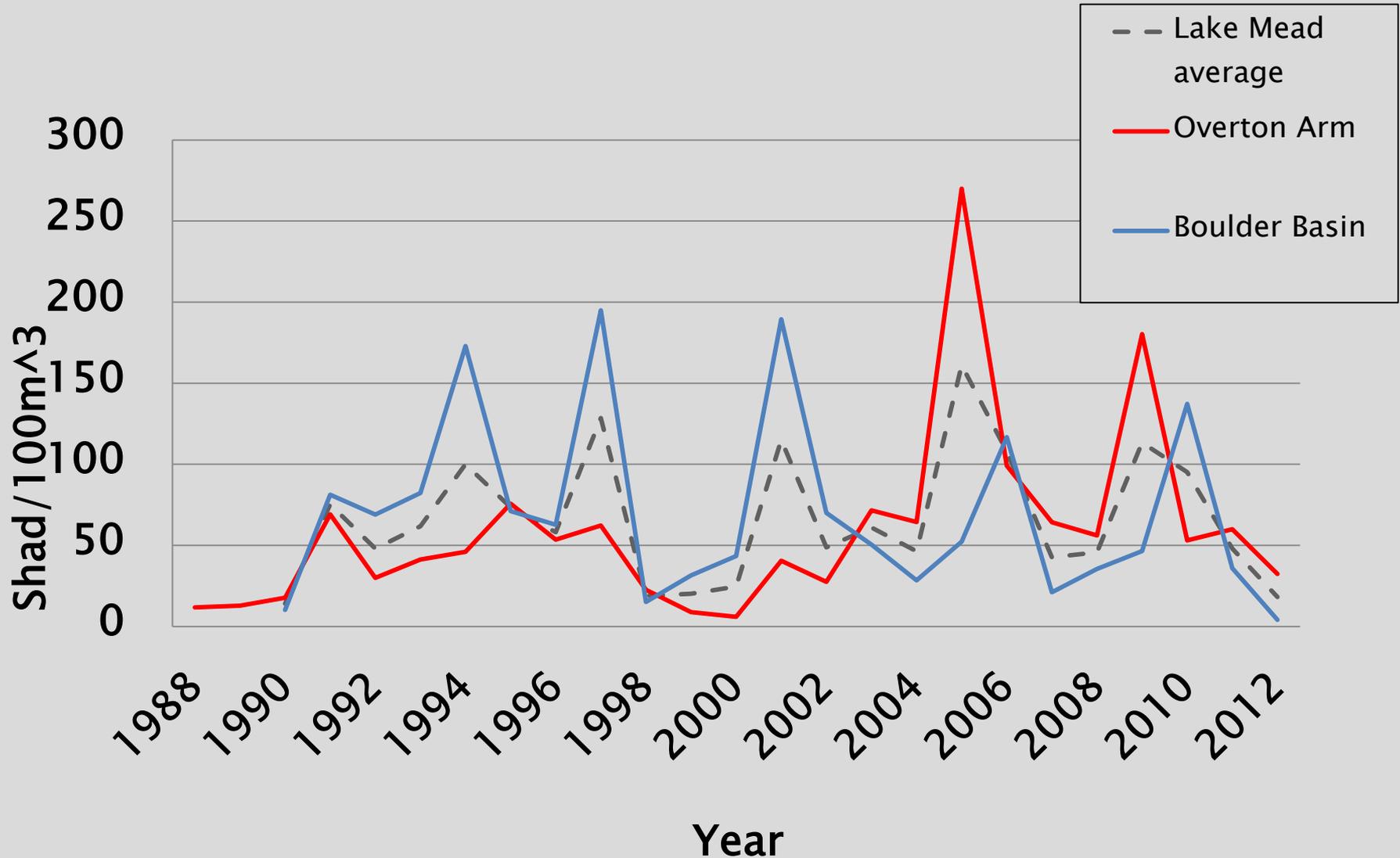
Prey base – shad trawls



Larval shad 8-22 millimeters



Shad production by year



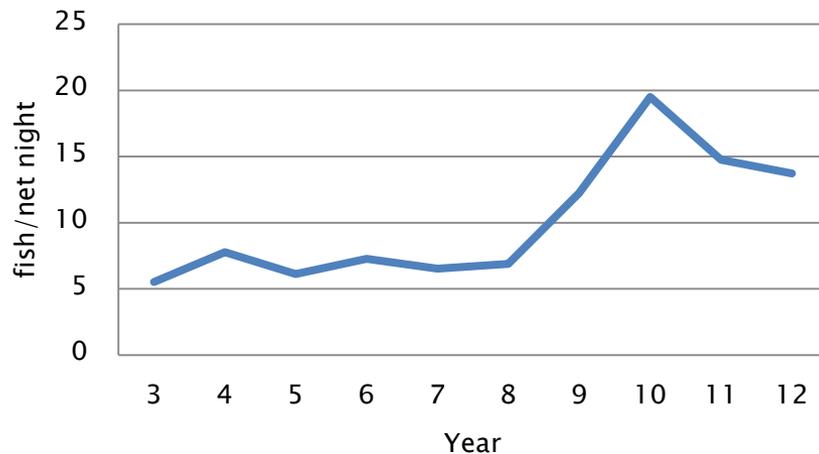
Sport fish abundance – Fall gill nets



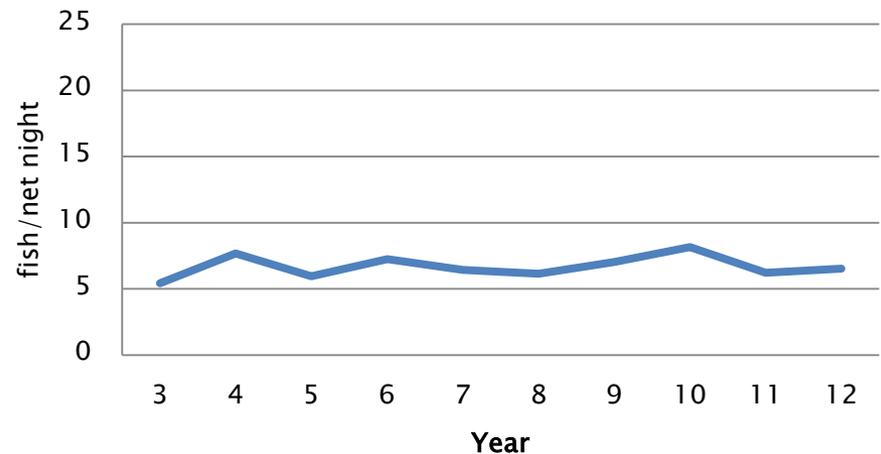
Sport fish abundance – Fall gill nets

- ▶ 77 nets, 111 net nights of effort
 - NDOW, AGFD, & BOR
- ▶ 1,528 fish captured
- ▶ CPUE=13.72 Fish/net night

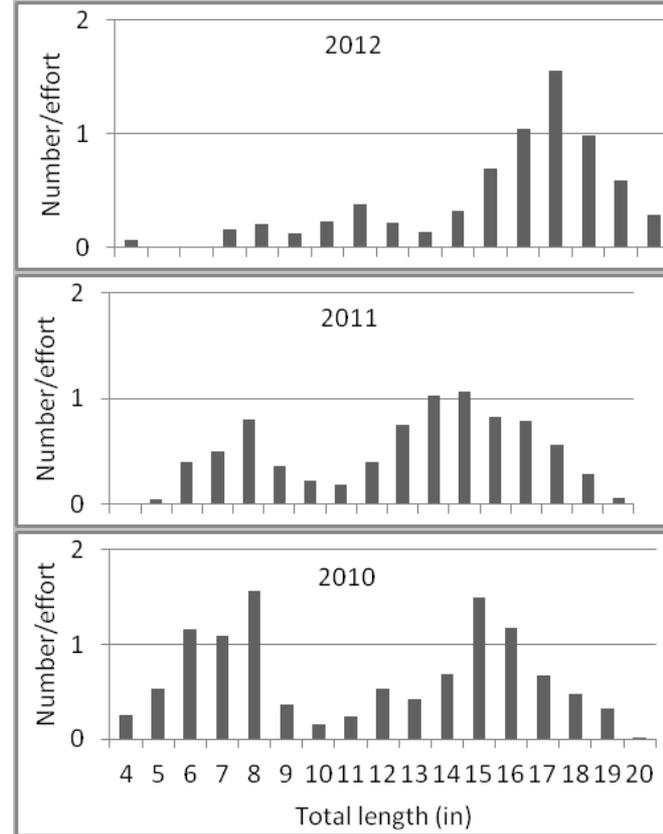
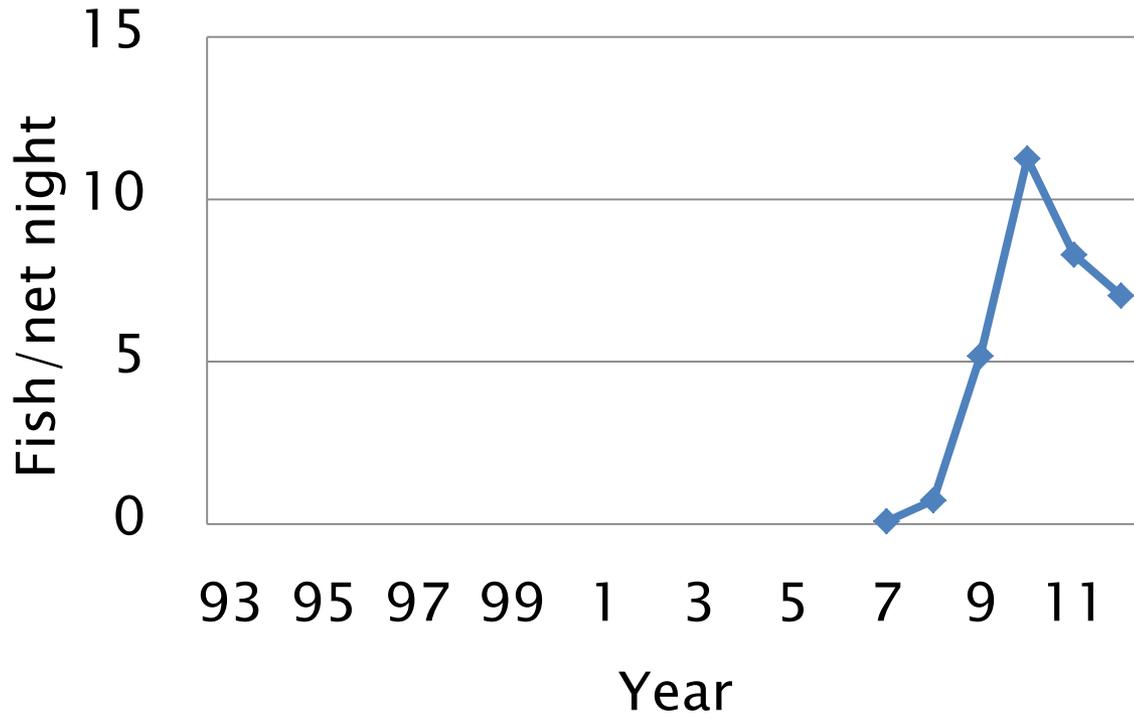
CPUE



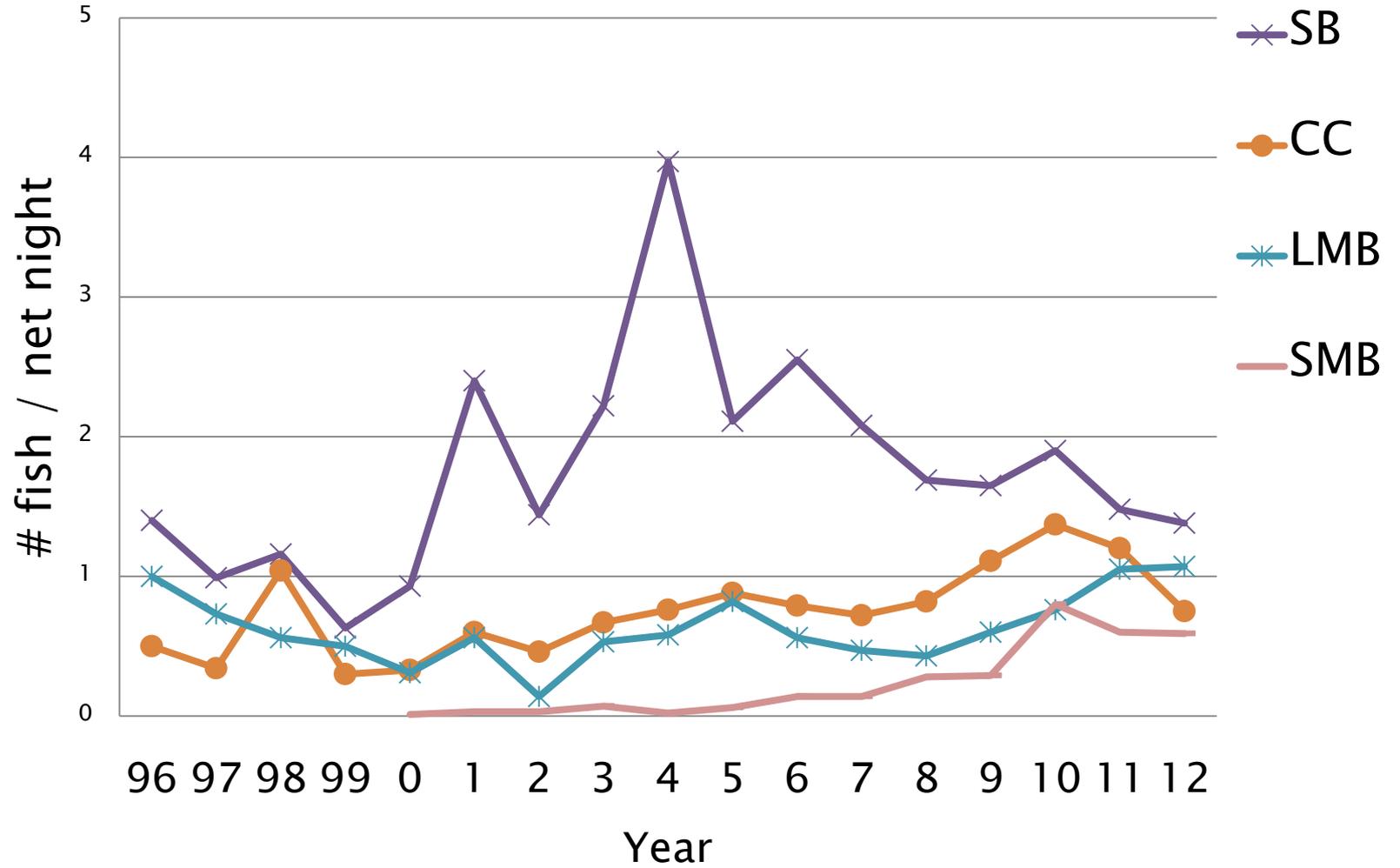
CPUE minus gizzard shad



Gizzard shad CPUE



Gill net CPUE

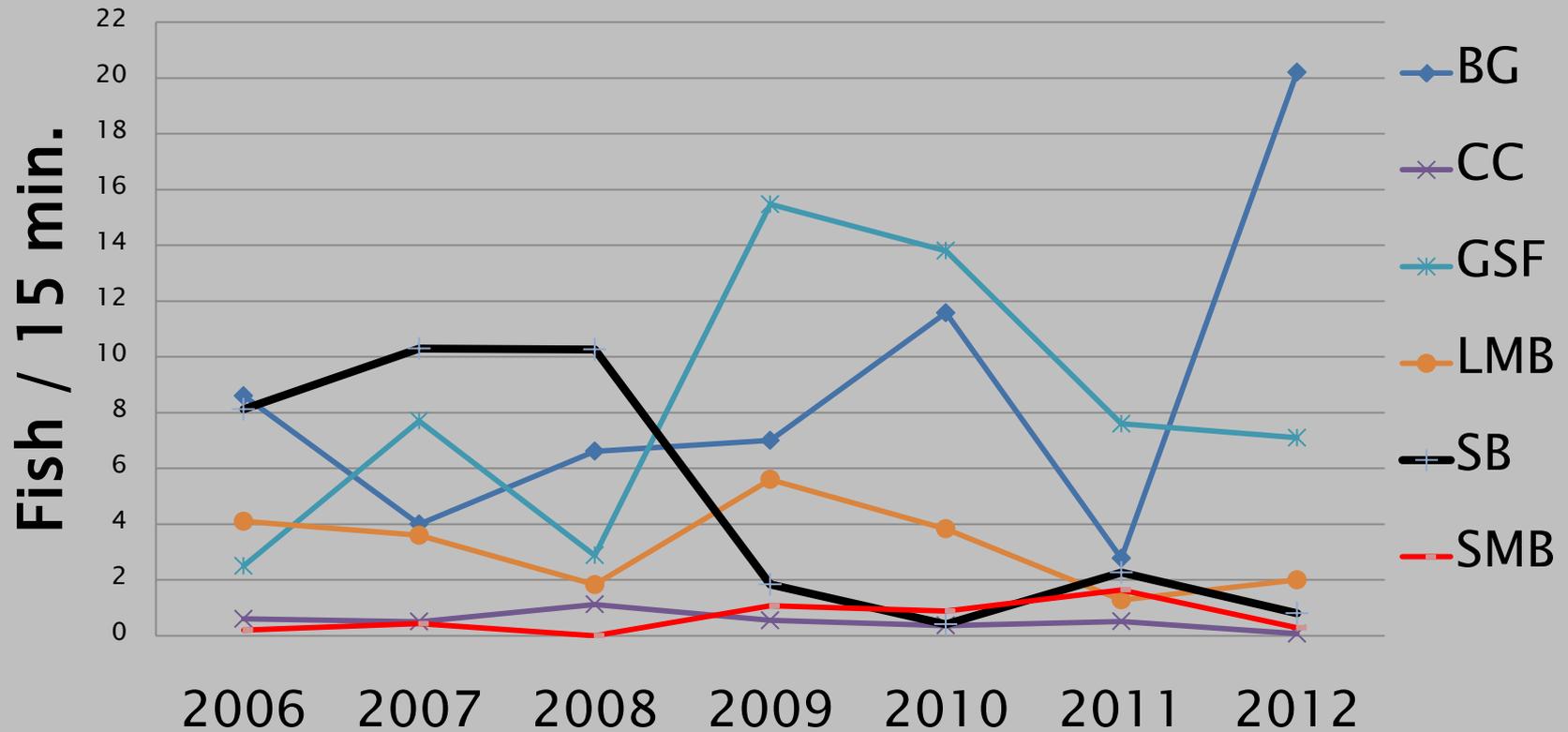


Littoral species /YOY recruitment – electrofishing



- ▶ Boat electroshocking
- ▶ During the evening hours

Littoral species /YOY recruitment – electrofishing



Tournament striped bass

- ▶ Average length 19.8 inches, weight 2.5 lbs.
 - 2011 – 20 inches, weight 2.75 lbs.
- ▶ Average condition factor $K(FL) = 1.06$, 29% poor condition



Striped bass stomach content

- ▶ Biased by what anglers are using as bait

Rank

- ▶ #1 = empty
- ▶ #2 = anchovy
- ▶ #3 = unidentified fish mass
- ▶ #4 = crayfish
- ▶ #5 = corn
- ▶ #6 = shad



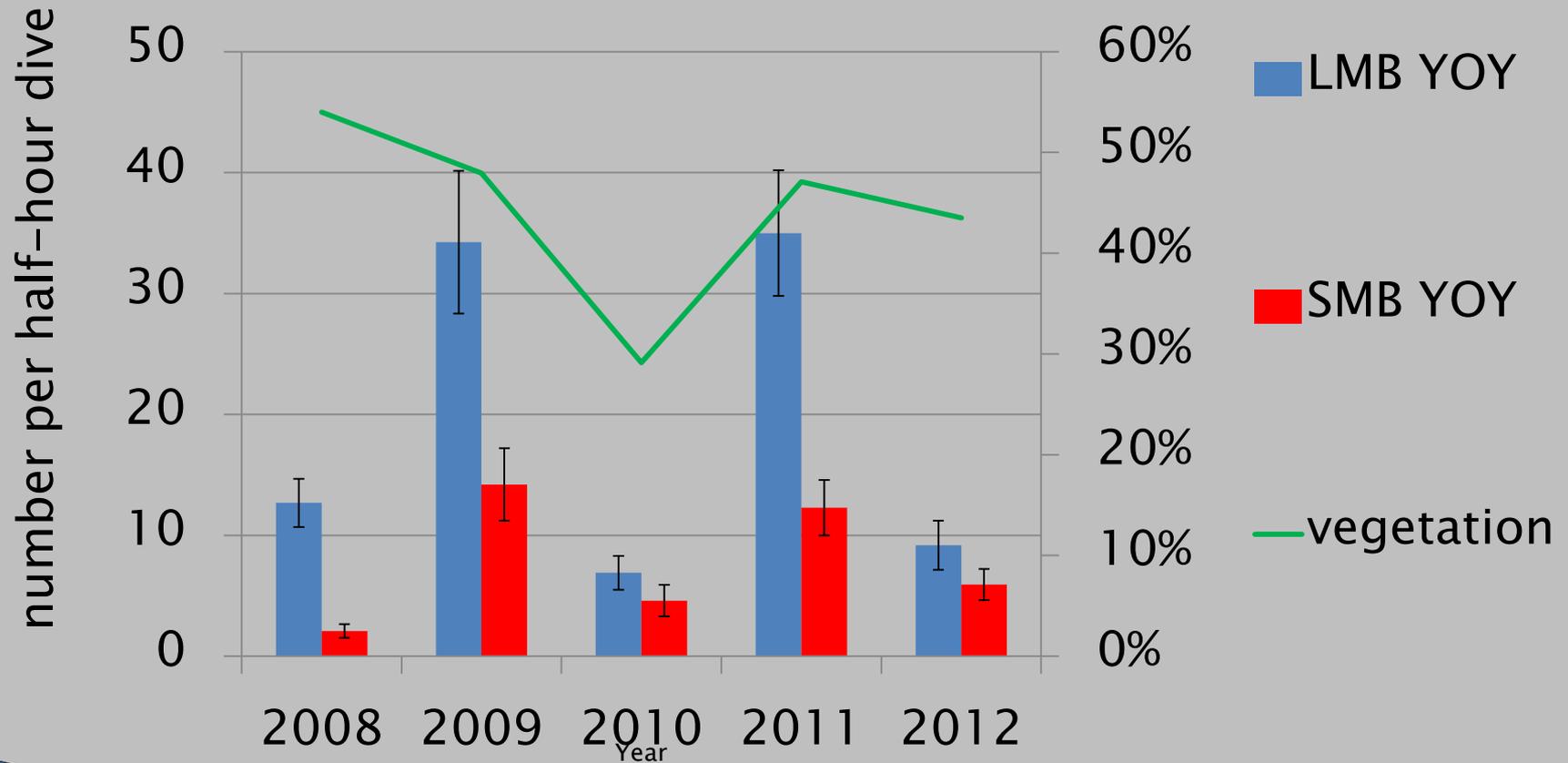
Black Bass fishery monitoring

- ▶ 30 Bass tournaments in 2012, data was collected at 9 tournaments
- ▶ Largemouth bass
 - Average 16.5 inches, 2.3 lbs.
 - Condition factor $K = 1.36$
 - (2011 16.3 inches, 2.1 lbs.
 - (Condition factor $K = 1.34$)

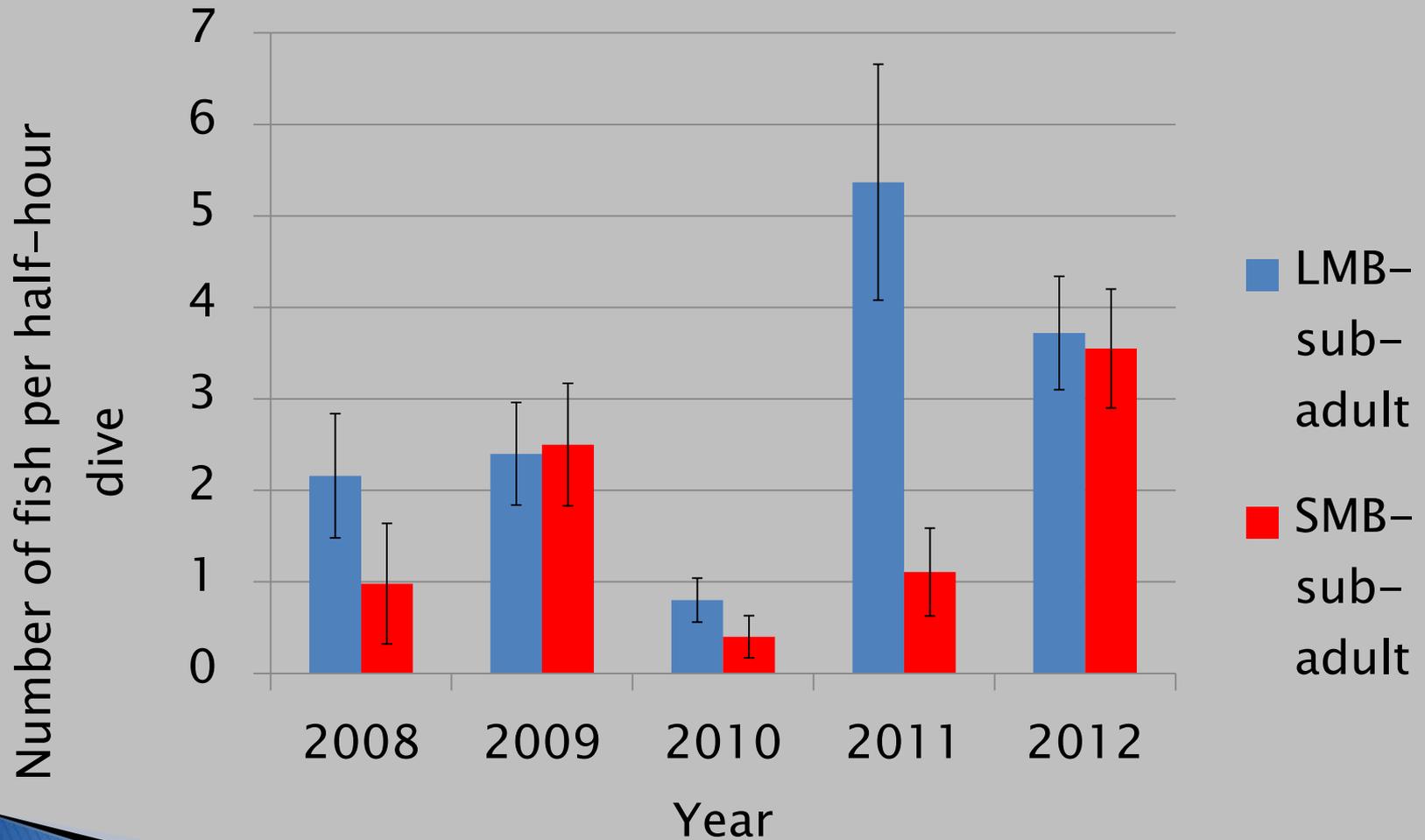
Black Bass fishery monitoring

- ▶ Smallmouth bass
 - Average 15.8 inches, 1.9 lbs.
 - Condition factor $K = 1.29$
 - (2011 – 15.6 inches, 1.8 lbs.)
 - Condition factor $K = 1.32$)
 - Average 40% of tournament catch

Snorkel surveys



Snorkel surveys



Summary

- ▶ The lake elevation has dropped from that of 2011
 - Still a good amount of submerged vegetation in the backs of coves.
- ▶ Improved angler catch rates for 2012
 - over 1 fish per angler hour, 5 fish per day
- ▶ Improved striper catch rates for the summer months
- ▶ Low threadfin shad production for 2012

Summary

- ▶ Poor striped bass condition
- ▶ Low numbers of LMB and SMB YOY in snorkel surveys
- ▶ Good survival of sub-adult LMB and SMB
- ▶ Decreasing gizzard shad abundance in gill net surveys and ageing of the gizzard shad population

Thank you.

