



RED DRUM ASSESSMENT AND POTENTIAL MANAGEMENT OPTIONS

Jason Adriance | LWFC Meeting | December 1, 2022

Red Drum Management History



Red Drum Management History

- **1984** – Recreational Creel Limit of 50 fish (Combined with Spotted Seatrout). One day possession. Maximum 2 fish over 36 inches with no Minimum Size Limit.
- **1986** – Recreational Size Limit adjusted to no more than 2 fish over 30 inches. Commercial Maximum Length Limit of 30 inches.
- **1987** – Recreational Slot Limit of 14 to 30 inches established with no more than 2 fish over 30 inches. Commercial Slot Limit of 18 to 30 inches established and a quota of 1.8 million pounds set.



Red Drum Management History

- **1988** – Recreational Slot limit of 16 to 27 inches with no more than 1 fish over the Slot and a Creel Limit of 5 fish established. Commercial harvest moratorium established and Red Drum given Gamefish status.
- **1991** – Commercial harvest moratorium made permanent.
- **1997** – Two days recreational possession limit on land established.
- **2018** – Exemptions for fillets and multiday possession limits of Red Drum when angler has been actively on the water or at a location on the water for longer than 2 days when using a boat launch south of Highway 90.



Red Drum Biology



Red Drum Biology

- Long lived species to 39 years.
- 100% maturity in males by age 5 and females by age 6.
- Growth slows after age 5 and it becomes difficult to assign age based on size alone.
- Spawn in nearshore waters and tidal passes from mid-August through mid-November.
- About 2 million eggs per spawn with spawning about every 7 days.

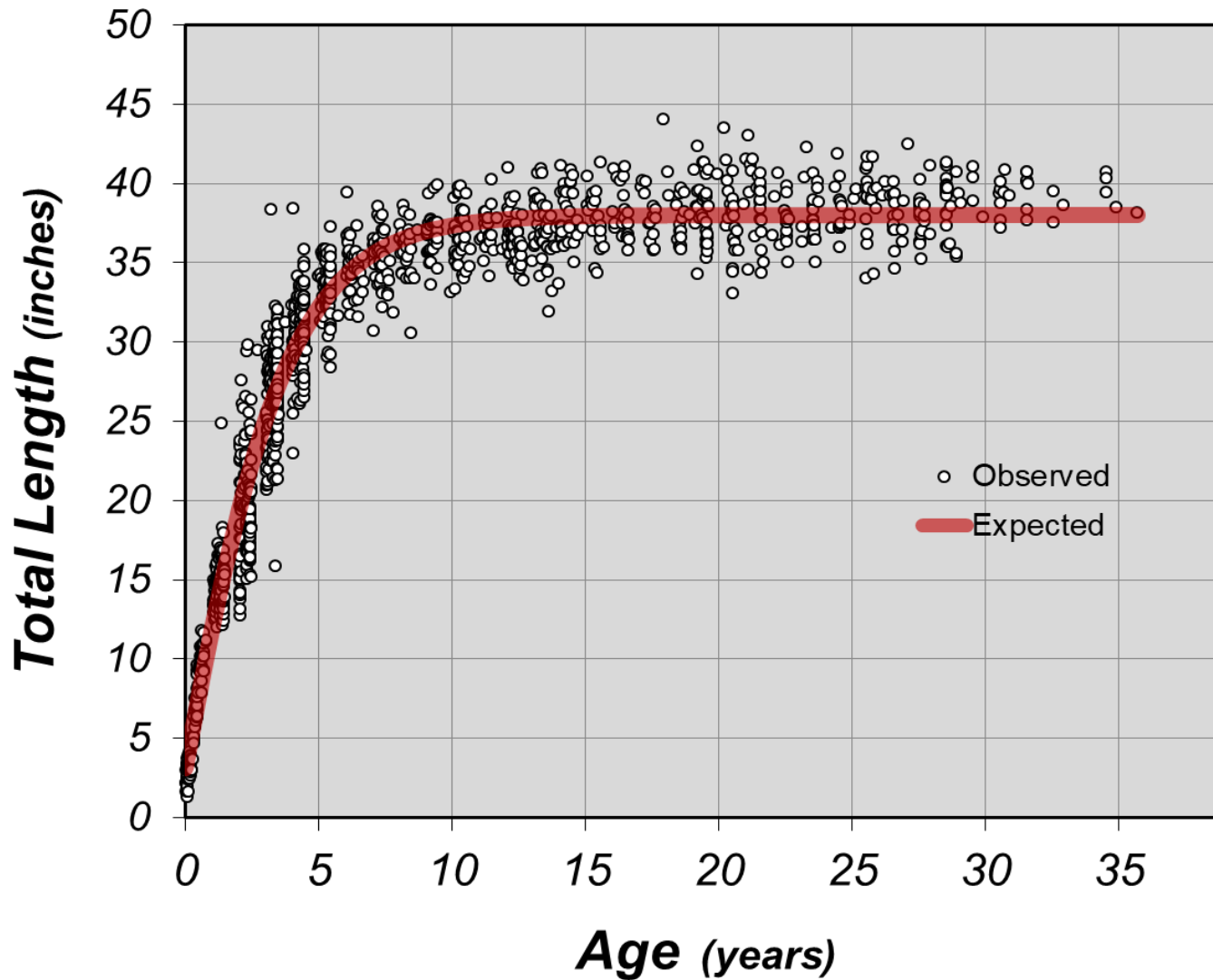


Red Drum Biology

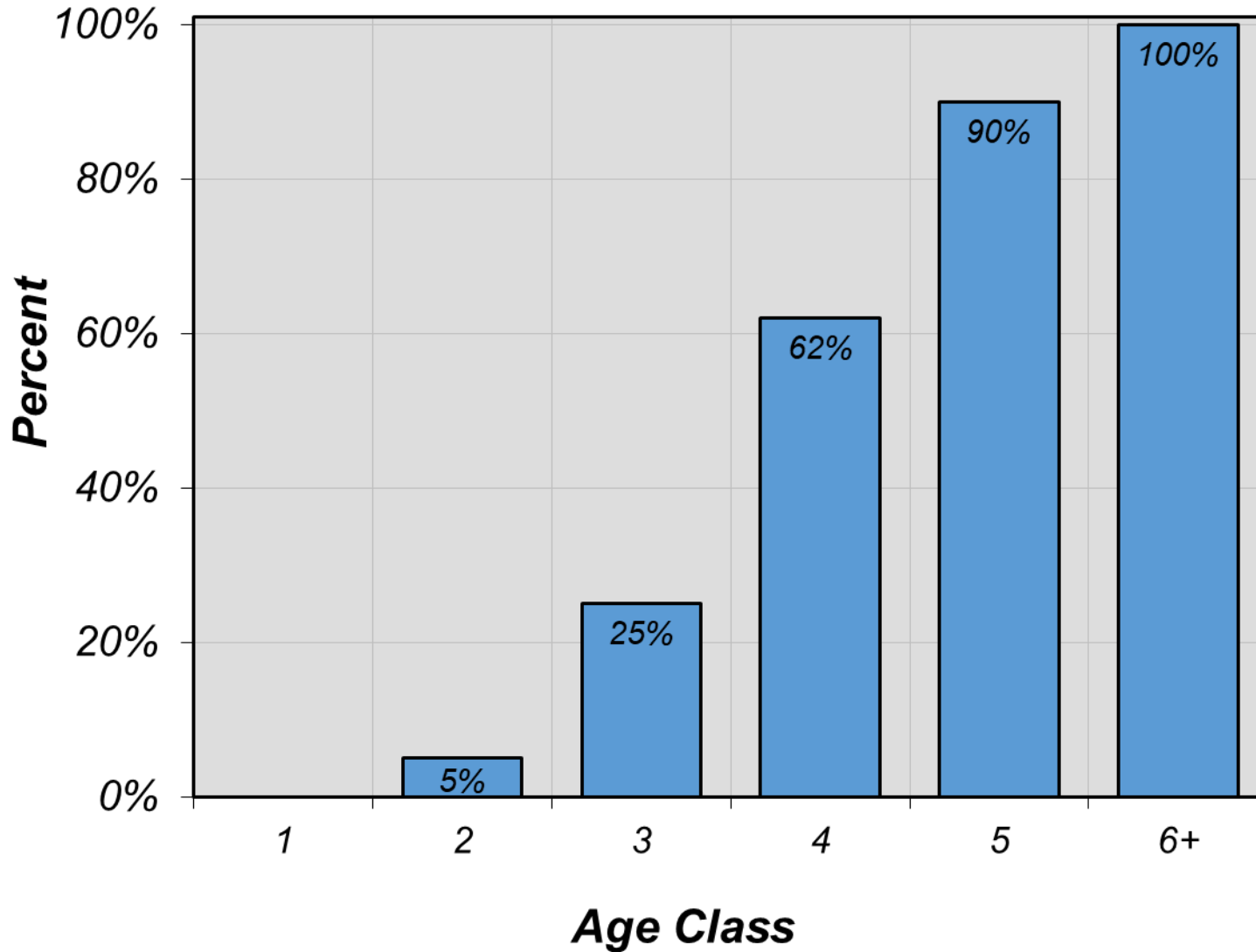
- Eggs hatch in 1 to 2 days and larvae spend about 2 to 3 weeks in offshore water column before moving into the estuaries.
- Grow to about 8 inches by first spring and it takes about 1.5 years (on average) to reach 16 inches.
- The inshore population is comprised of mainly sub-adult fish.
- Red Drum can tolerate a wide range of salinities.



Length at Age



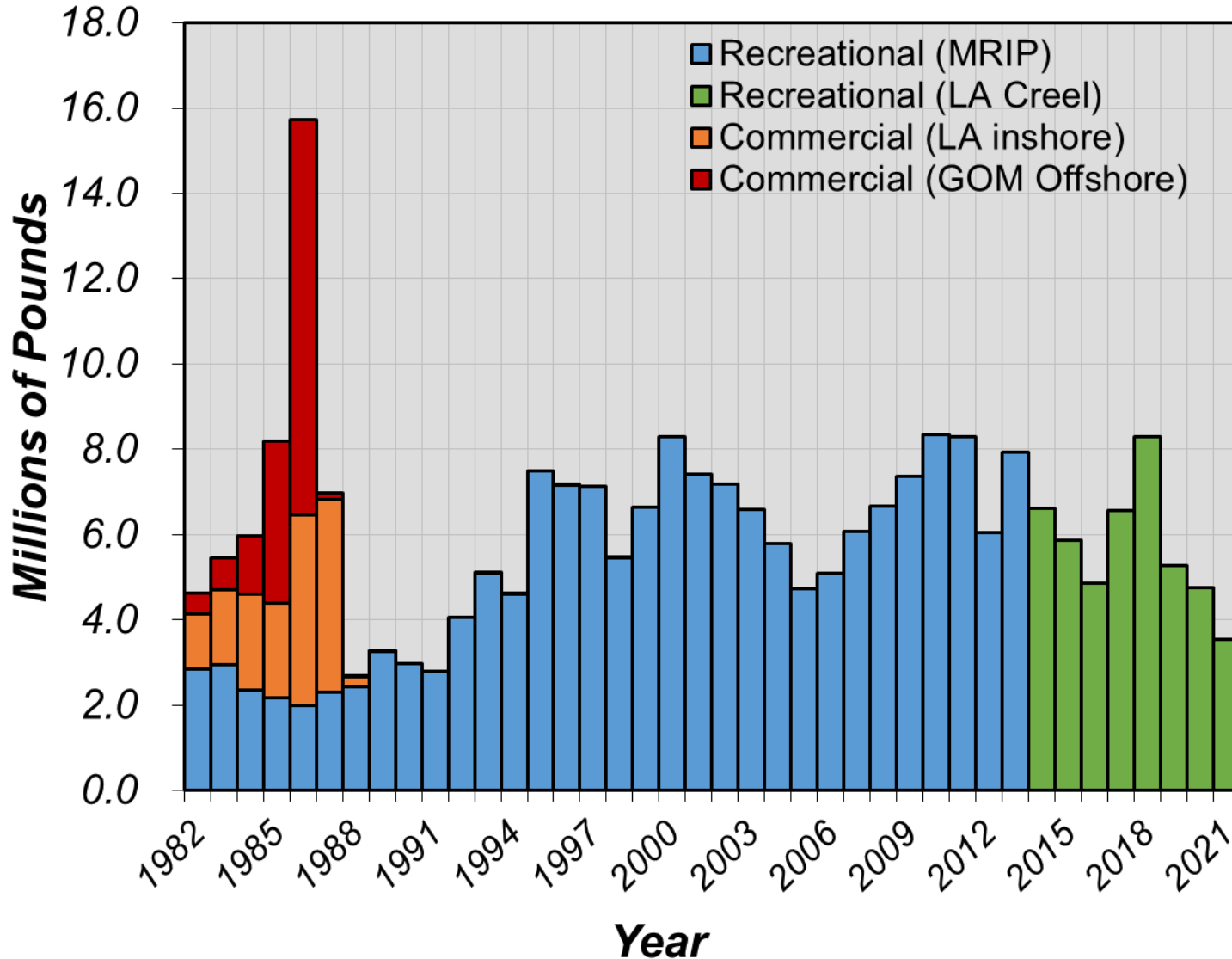
Female Maturity at Age



Fishery Information



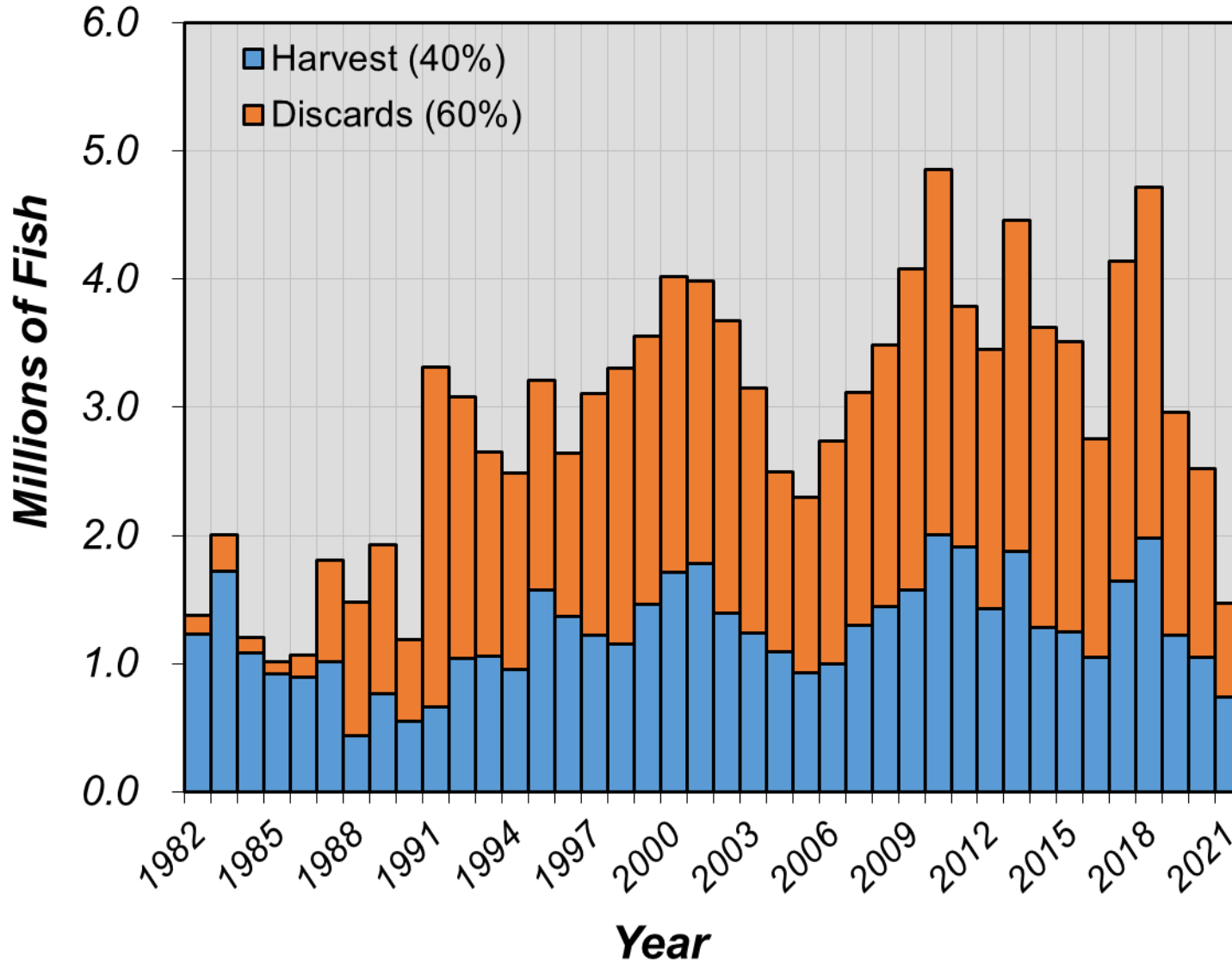
Landings (1982-2021)



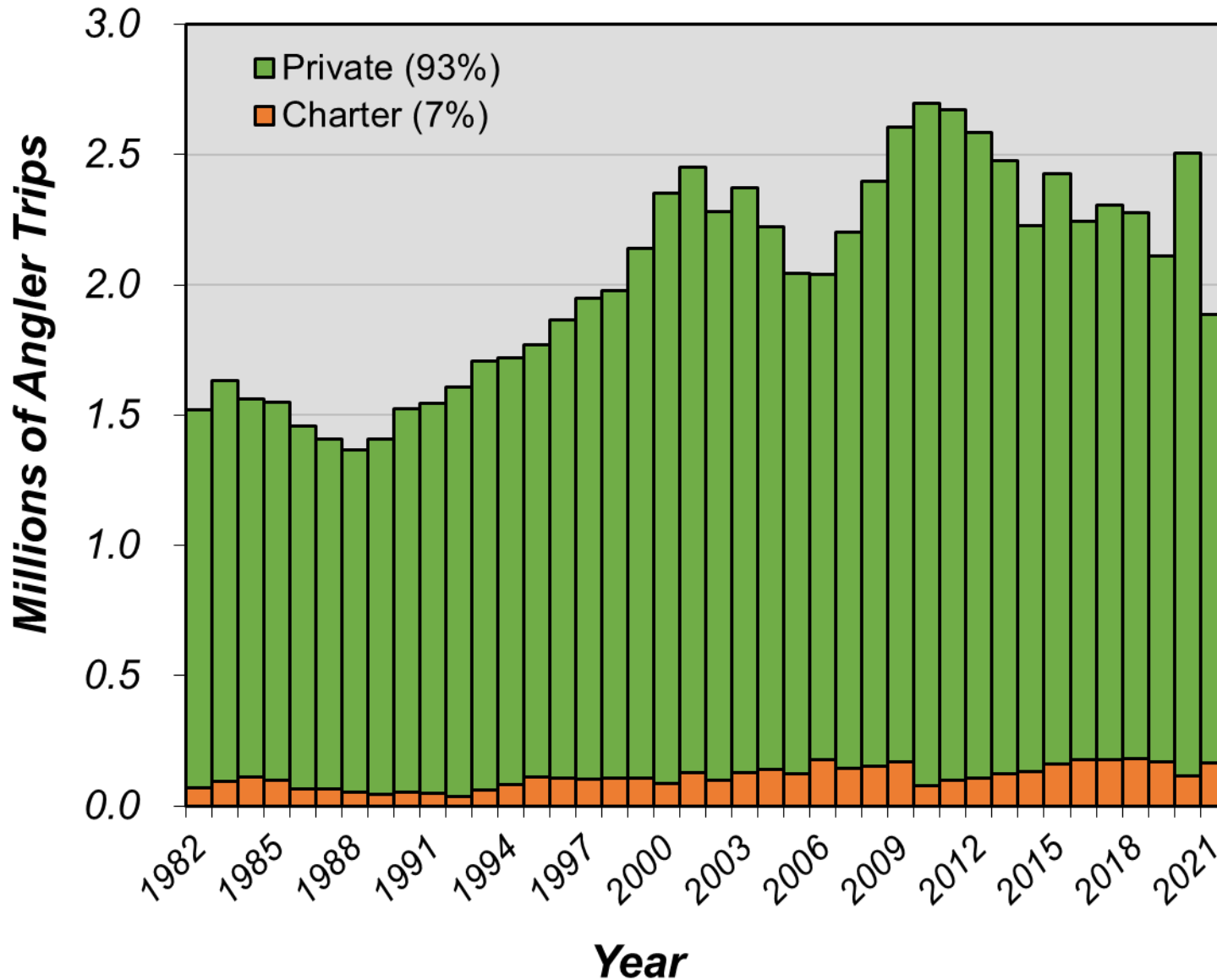
Note: 1982-2013 recreational landings values are MRIP data back-calculated to LA Creel. 2014-2021 landings values are LA Creel values.



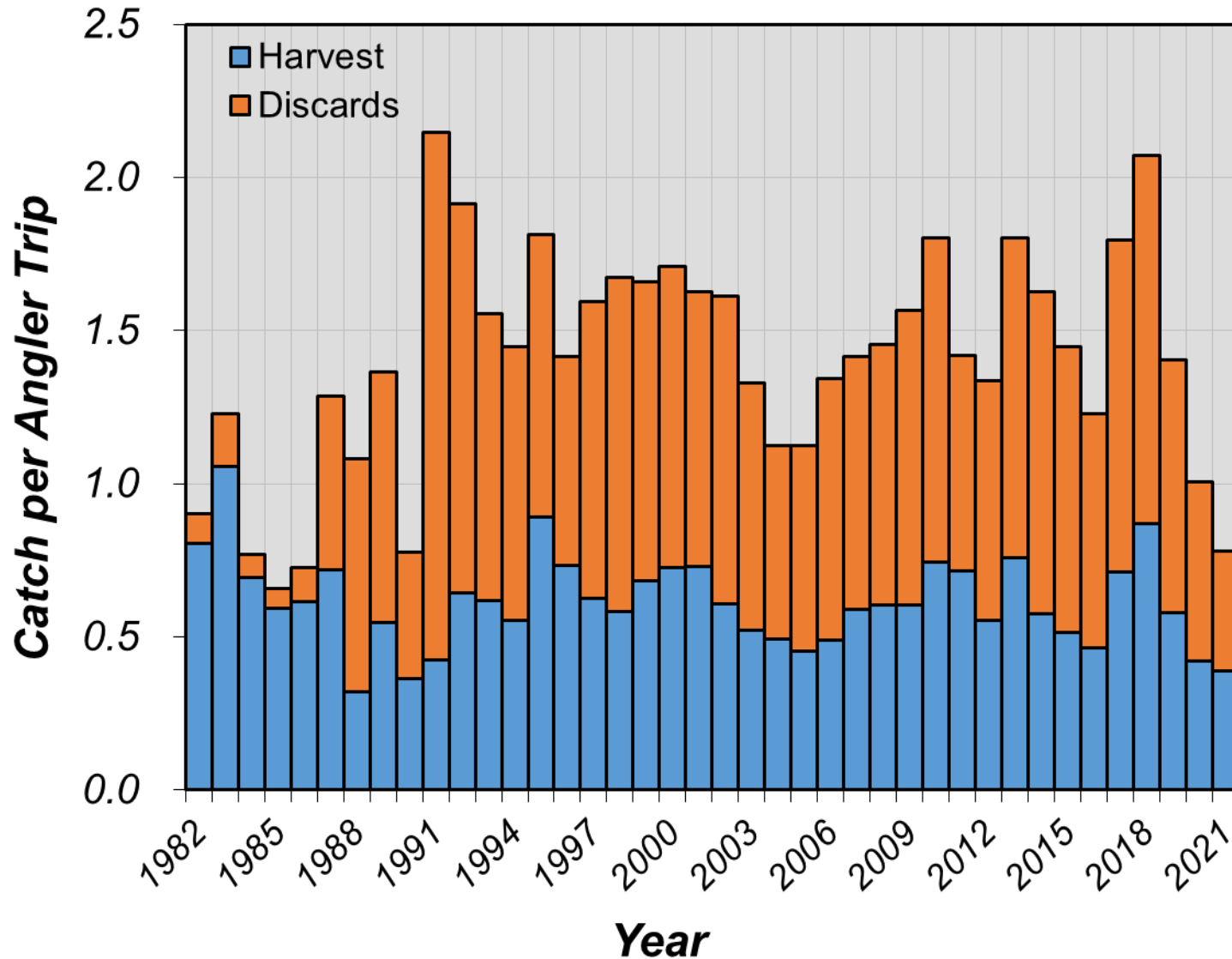
Recreational Catch (1982-2021)



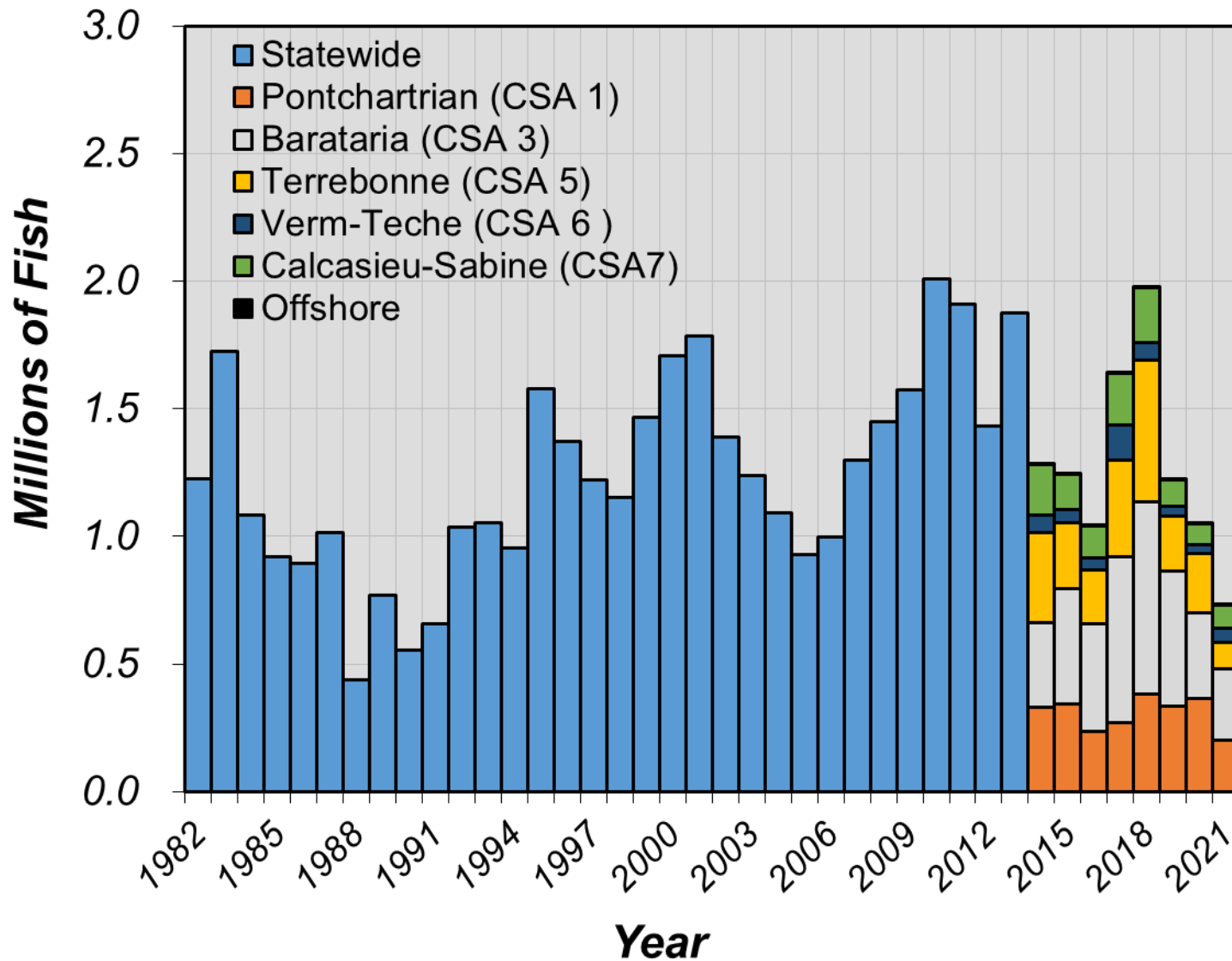
Recreational Fishing Effort (1982-2021)



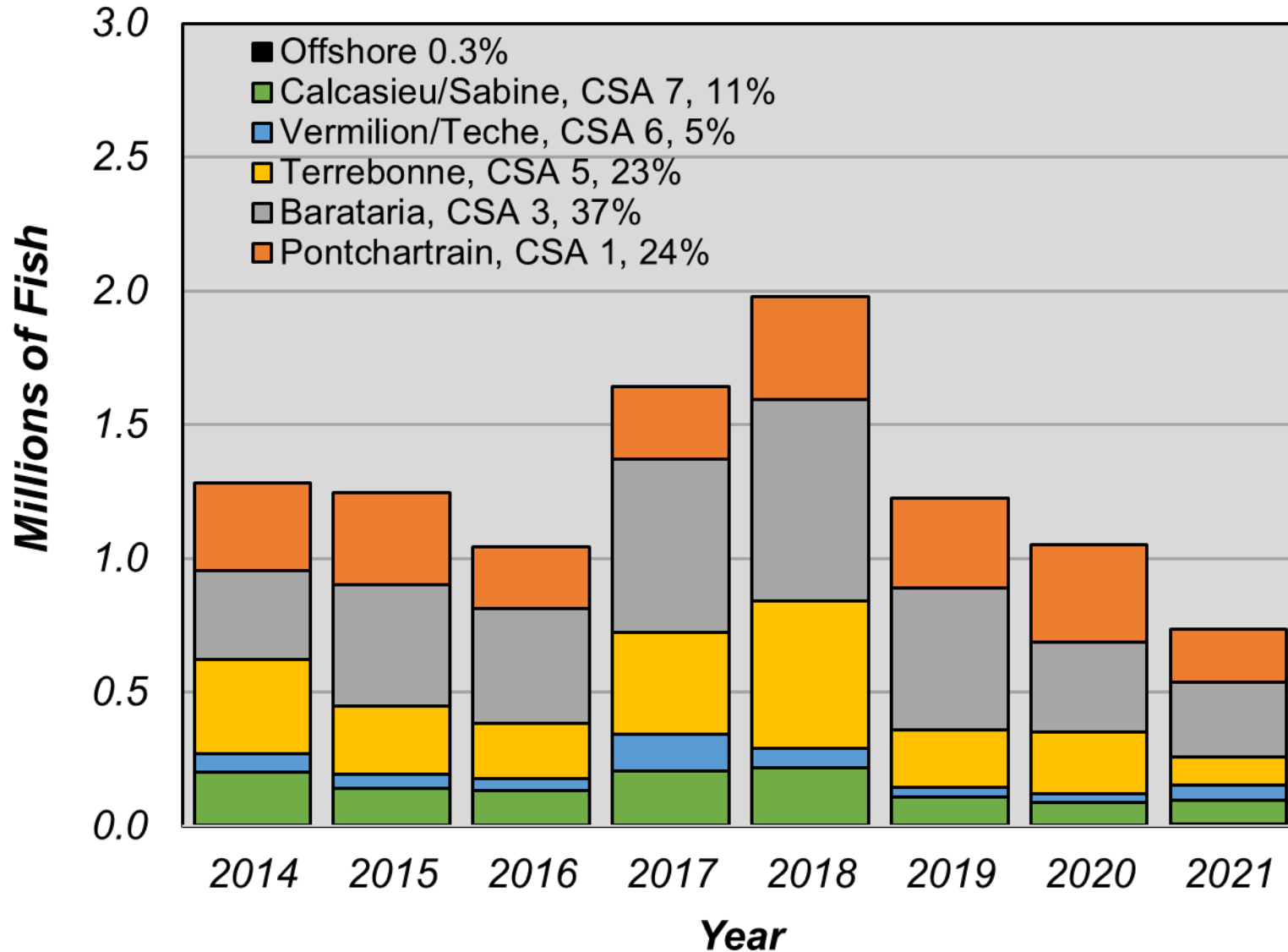
Recreational Catch per Effort (1982-2021)



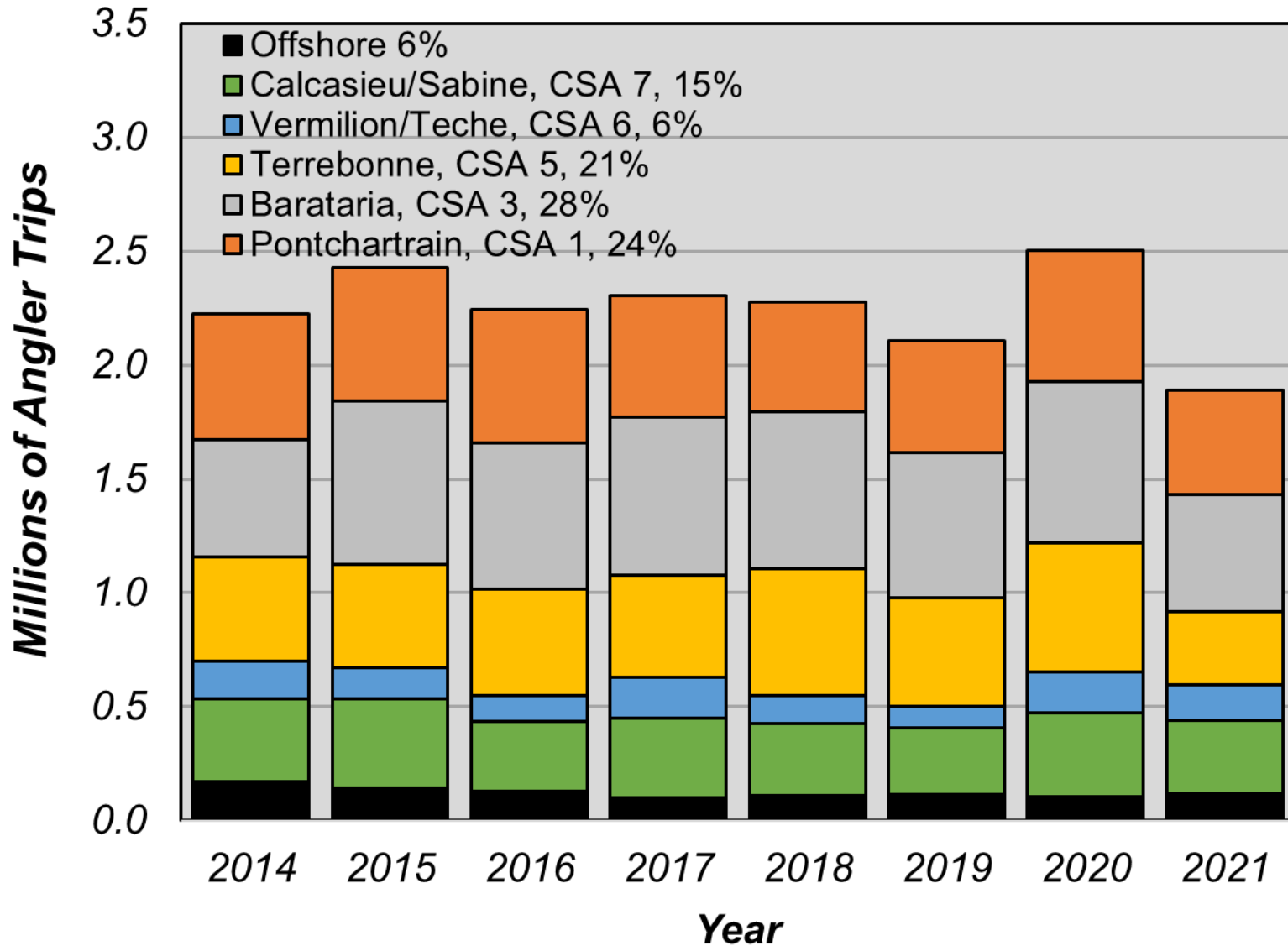
Recreational Harvest (1982-2021)



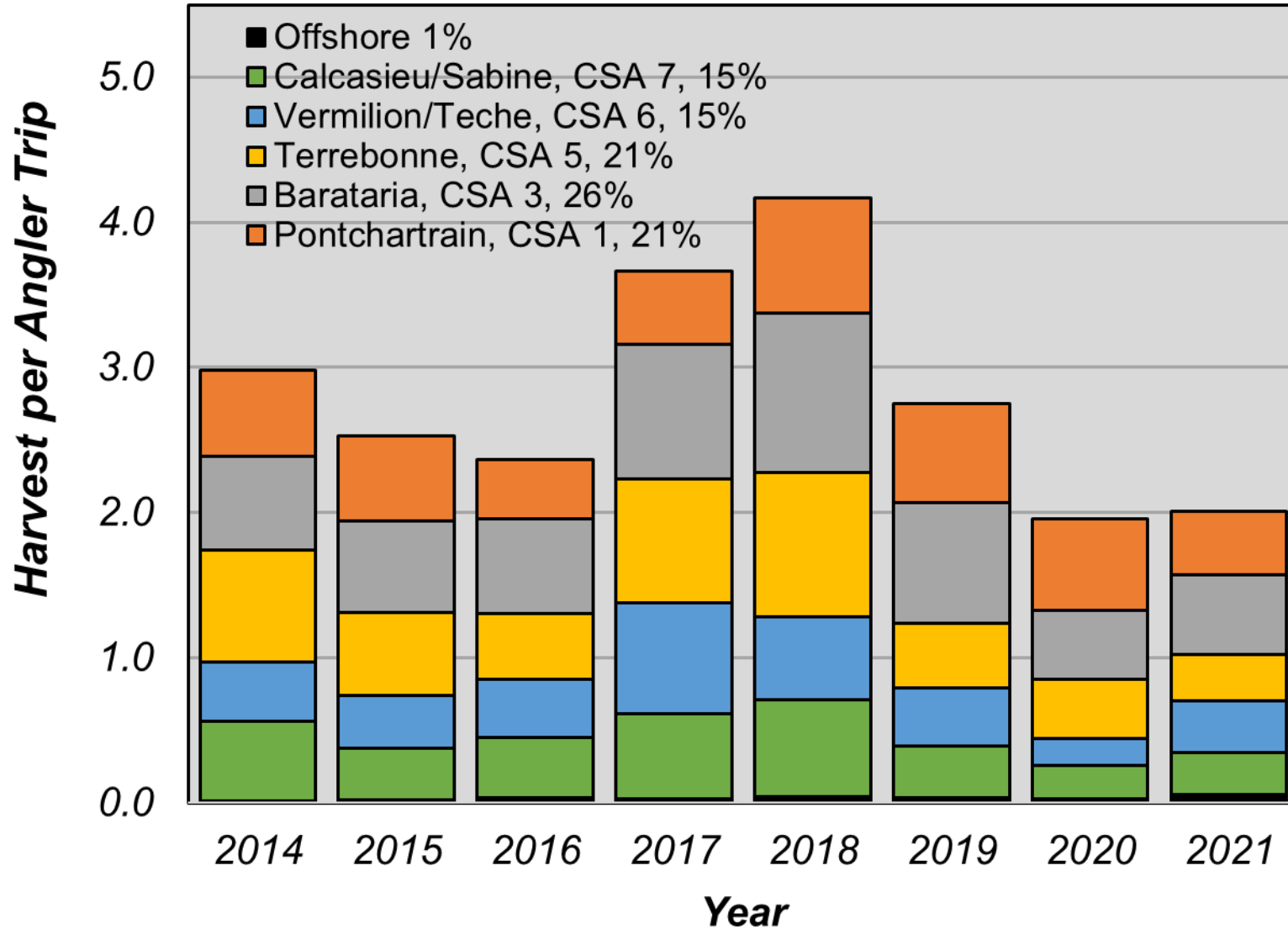
Recreational Harvest (2014-2021)



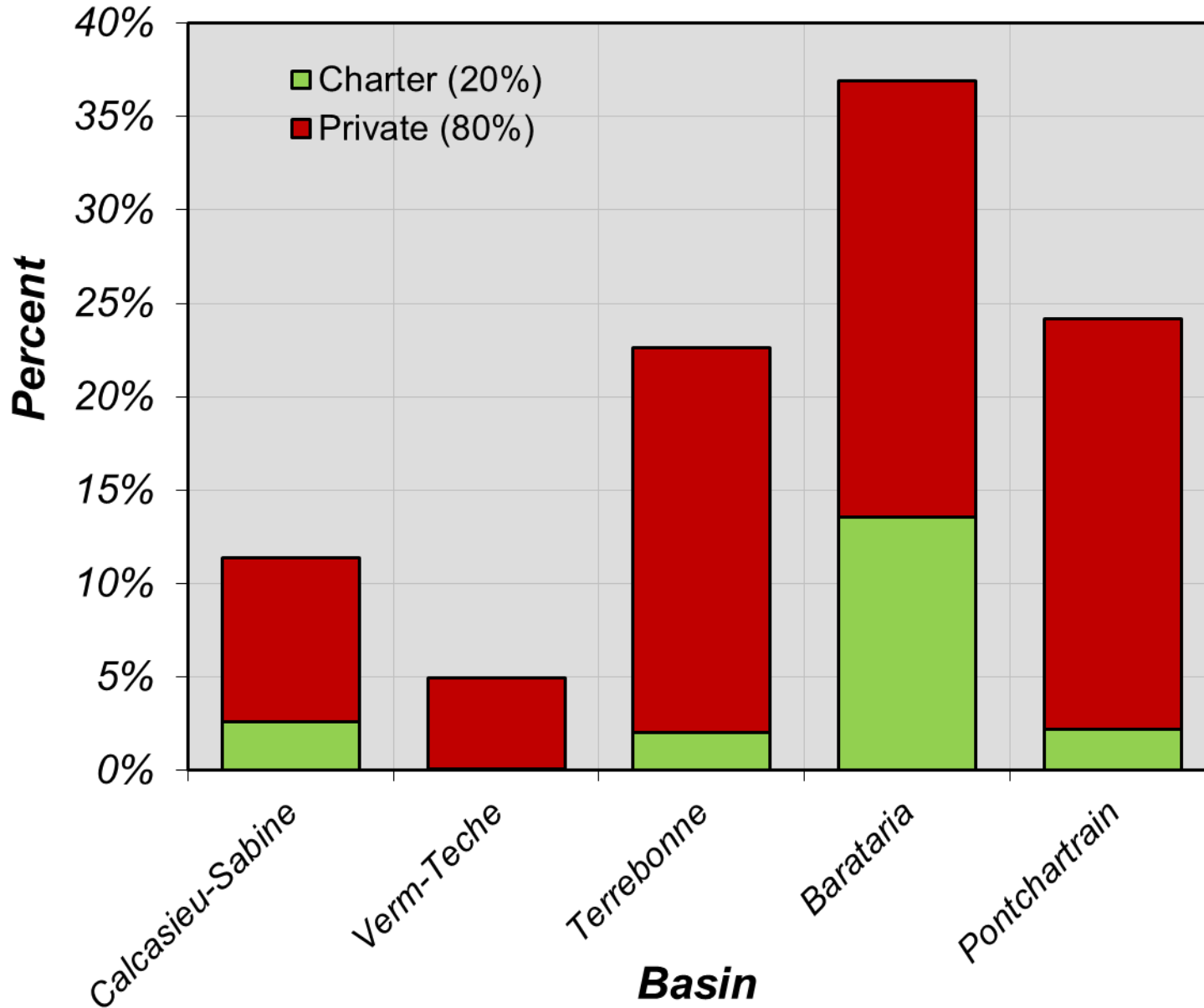
Recreational Fishing Effort (2014-2021)



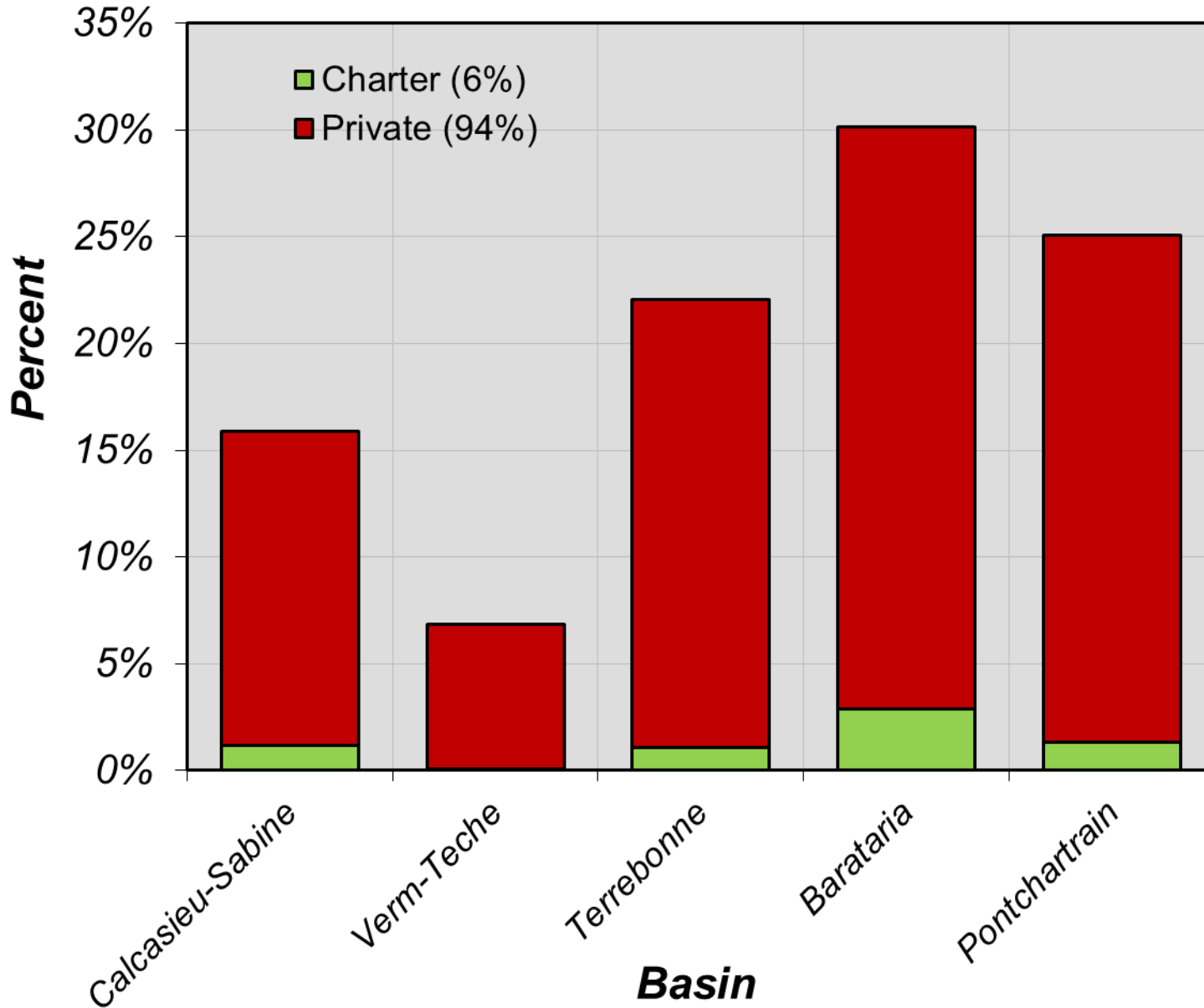
Recreational Harvest per Effort (2014-2021)



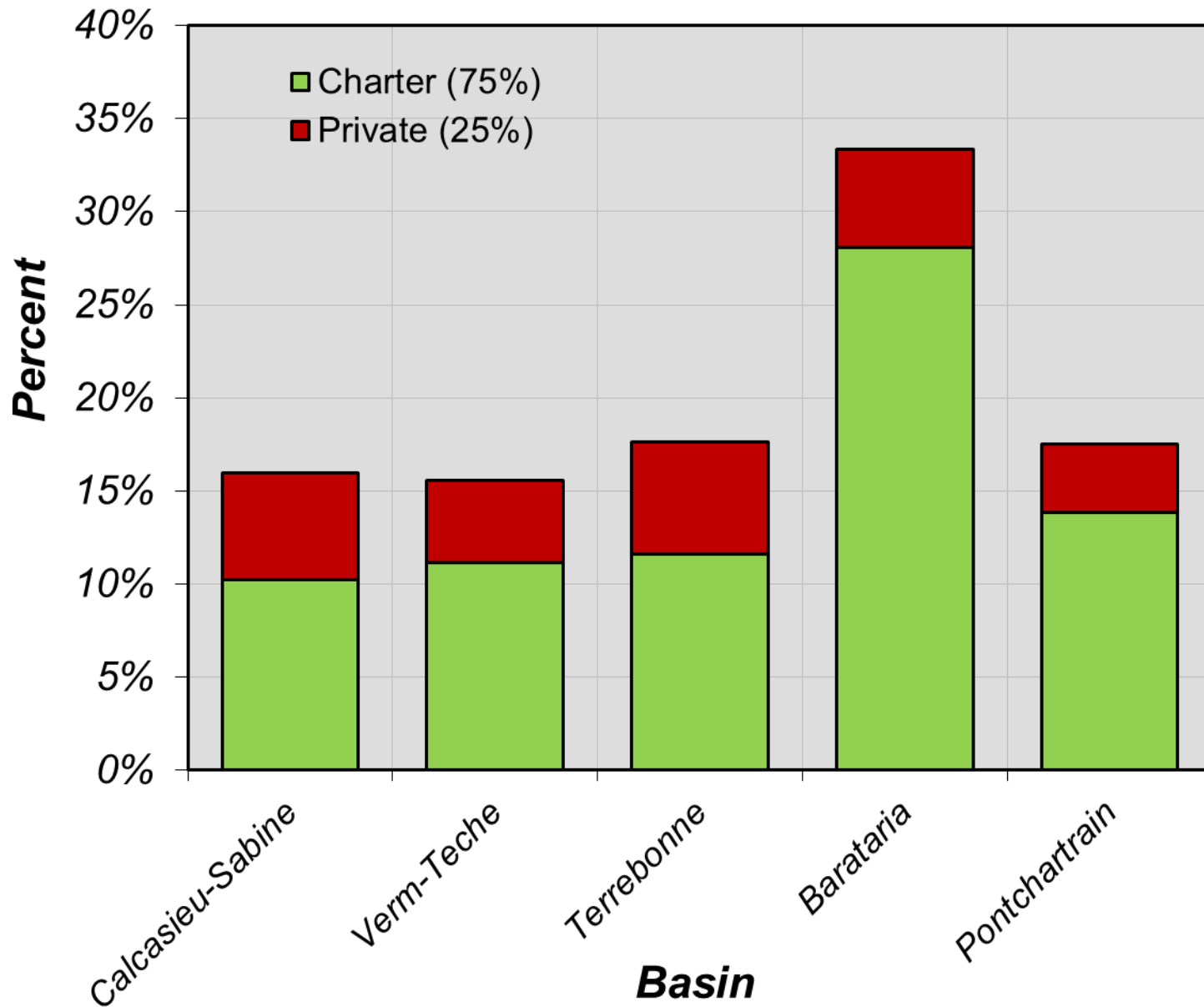
Recreational Harvest (2014-2021)



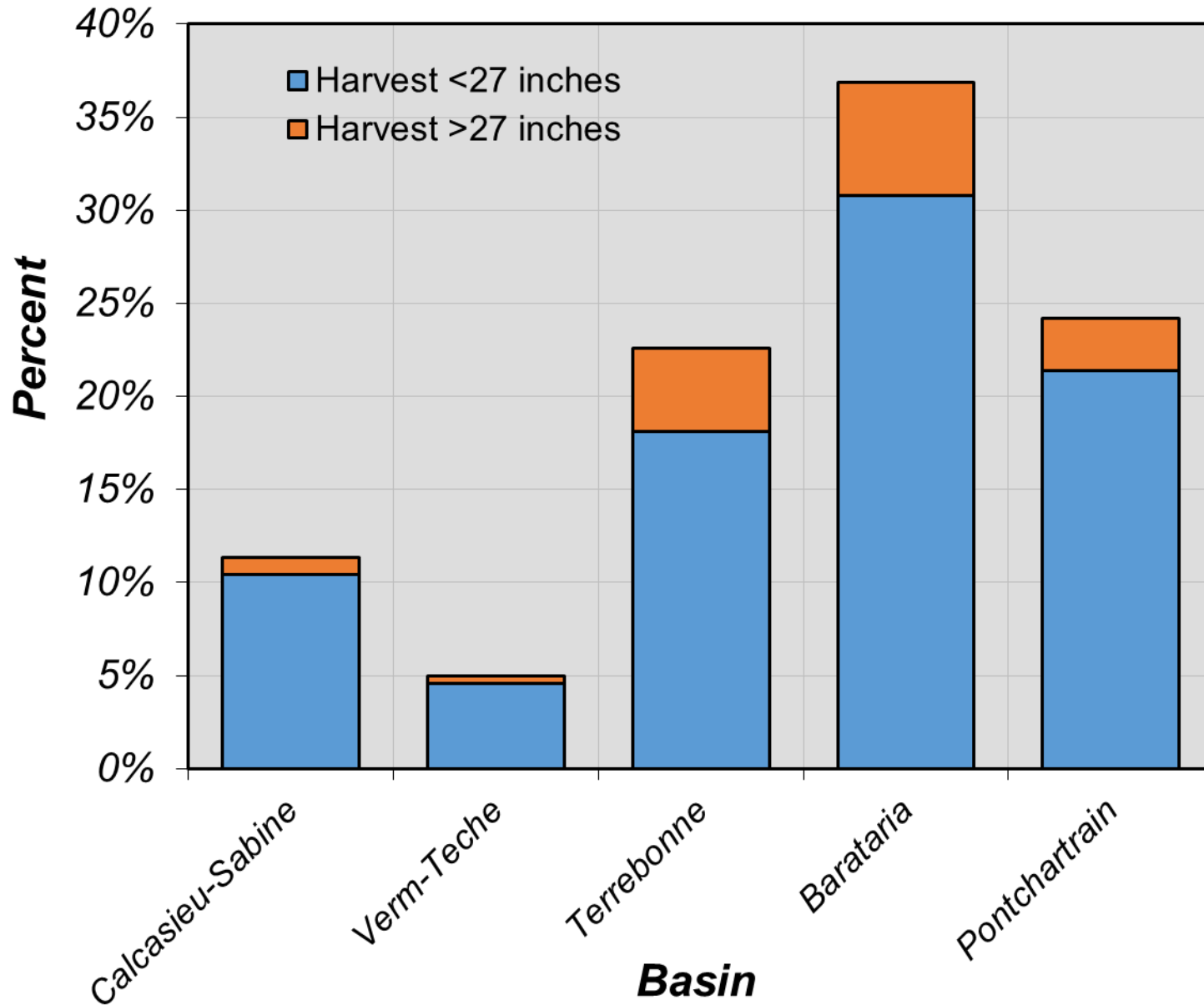
Recreational Effort (2014-2021)



Recreational Harvest per Effort (2014-2021)



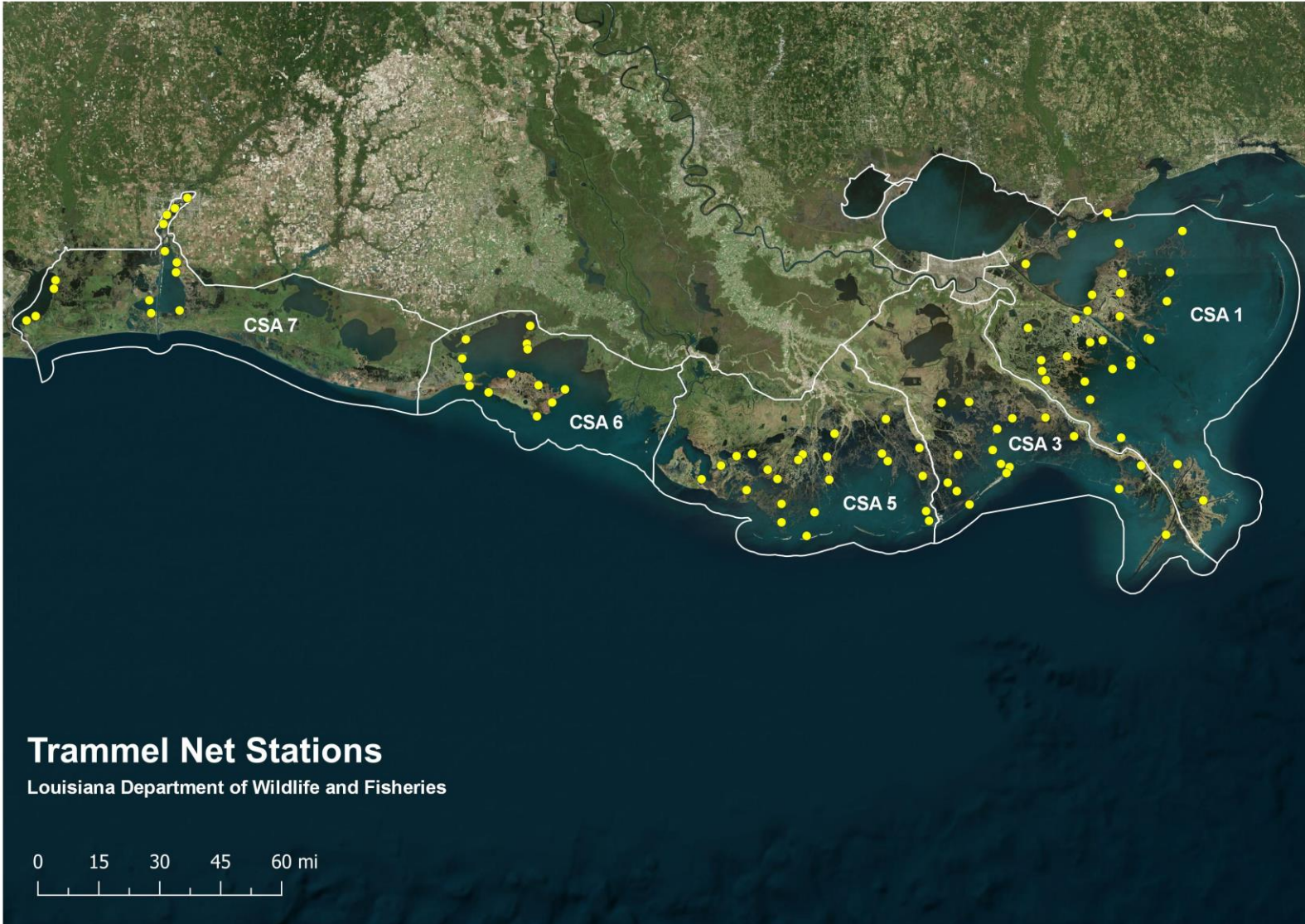
Recreational Harvest at Size (2014-2021)



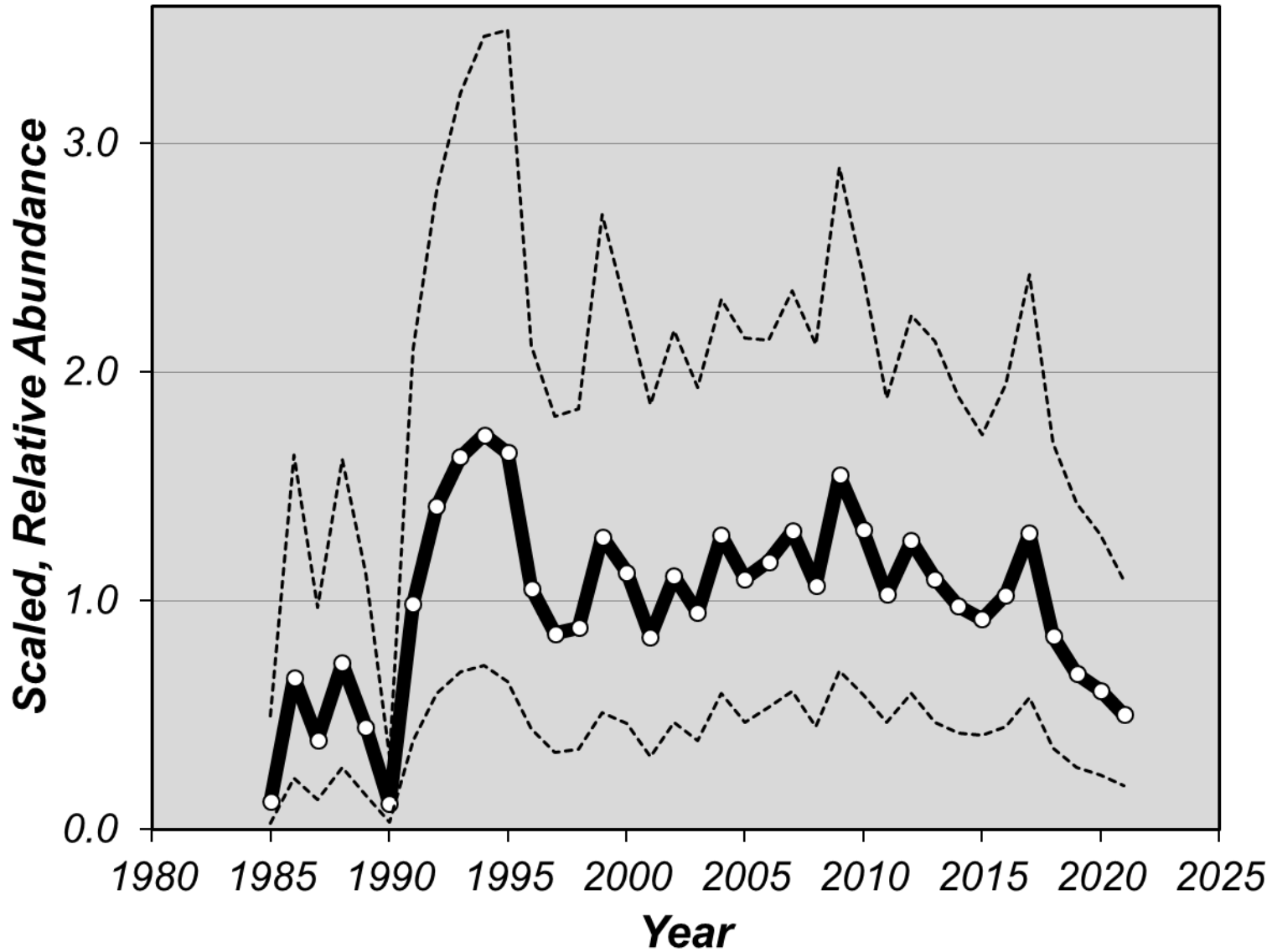
Fishery Independent Surveys



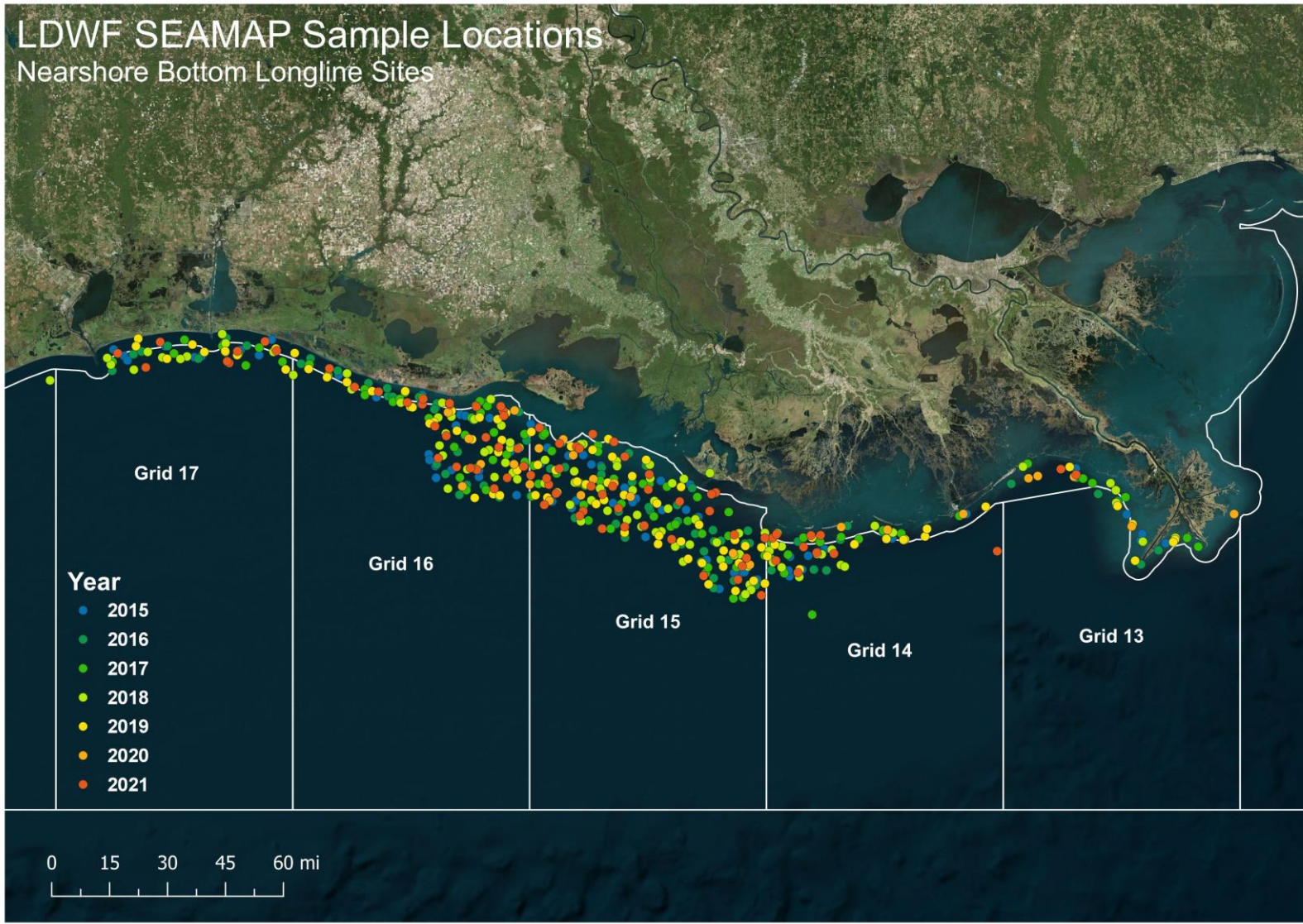
Estuarine Trammel Net Survey (1985-present)



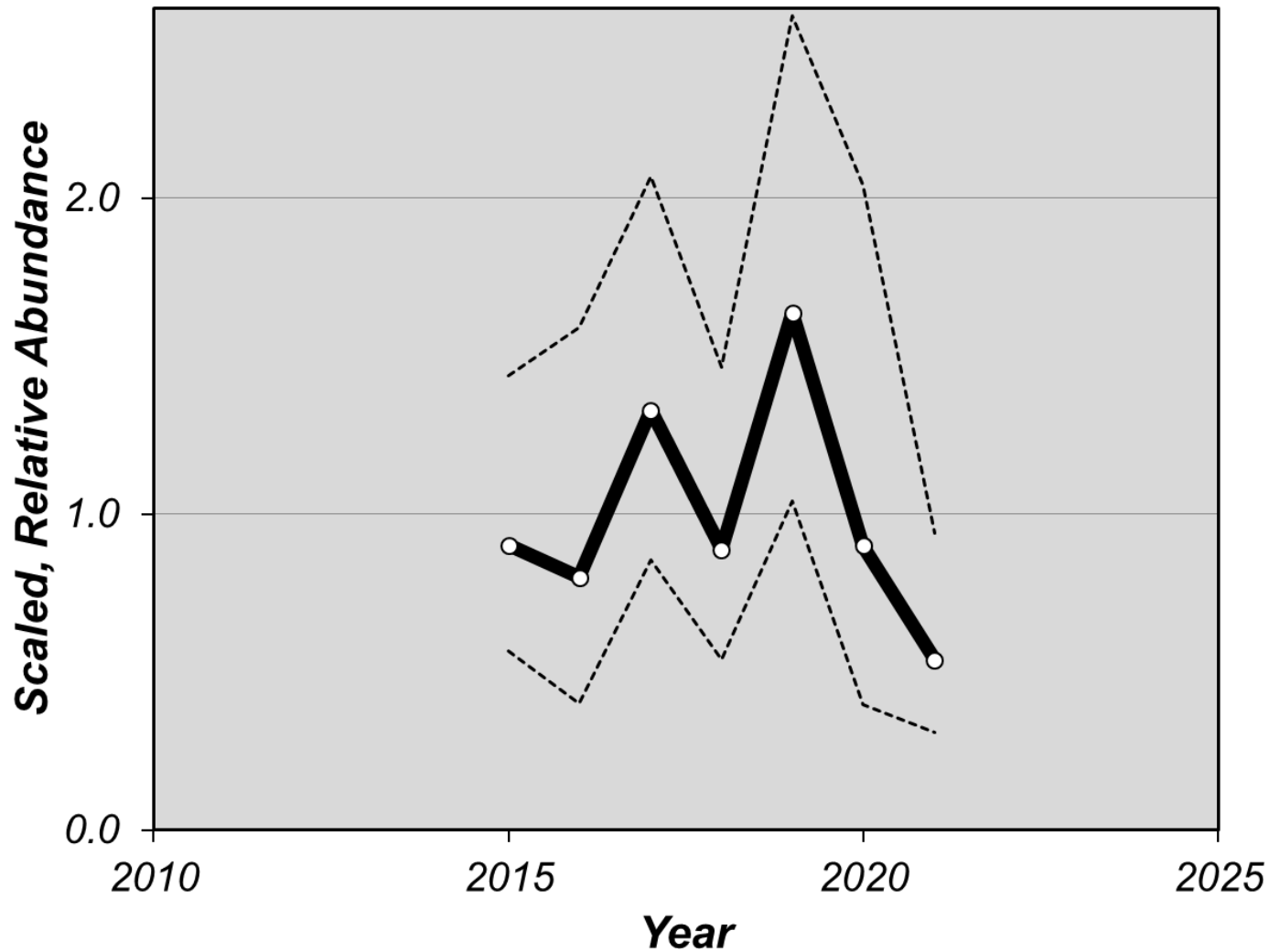
Estuarine Trammel Net Survey (1985-2021)



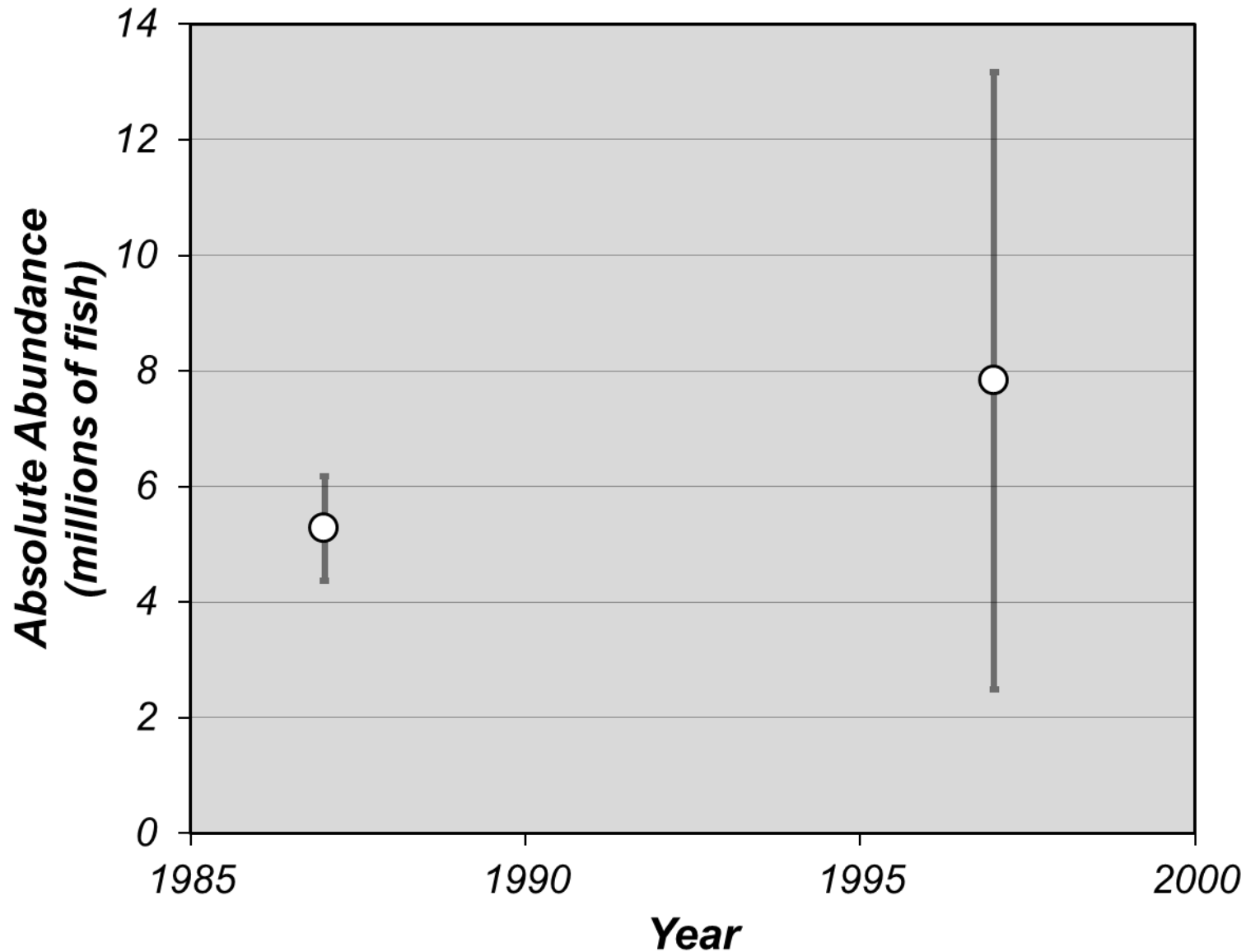
Nearshore Bottom Longline Survey (2015-present)



Nearshore Bottom Longline Survey (2015-2021)



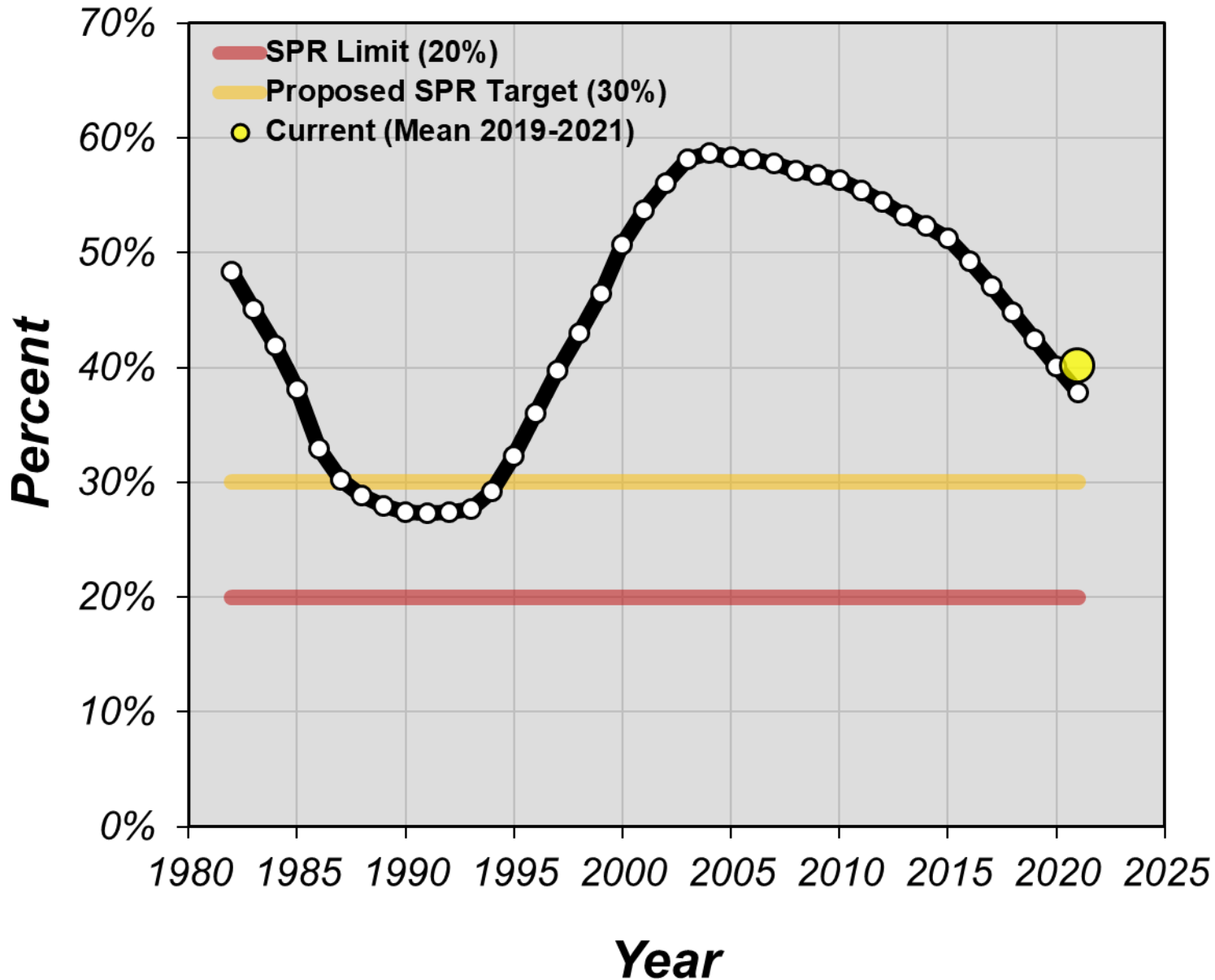
NOAA Fisheries Population Estimates



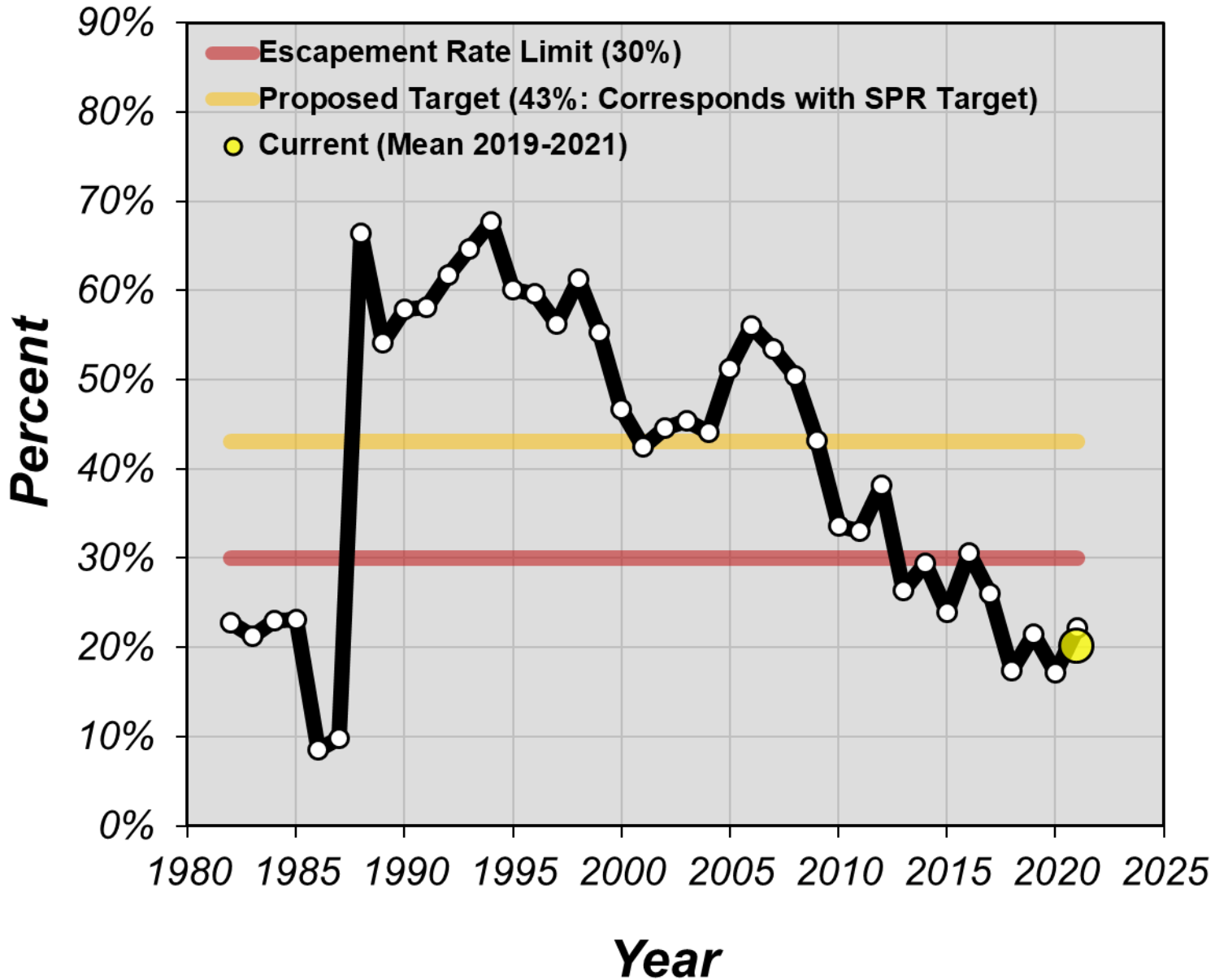
Stock Assessment Results



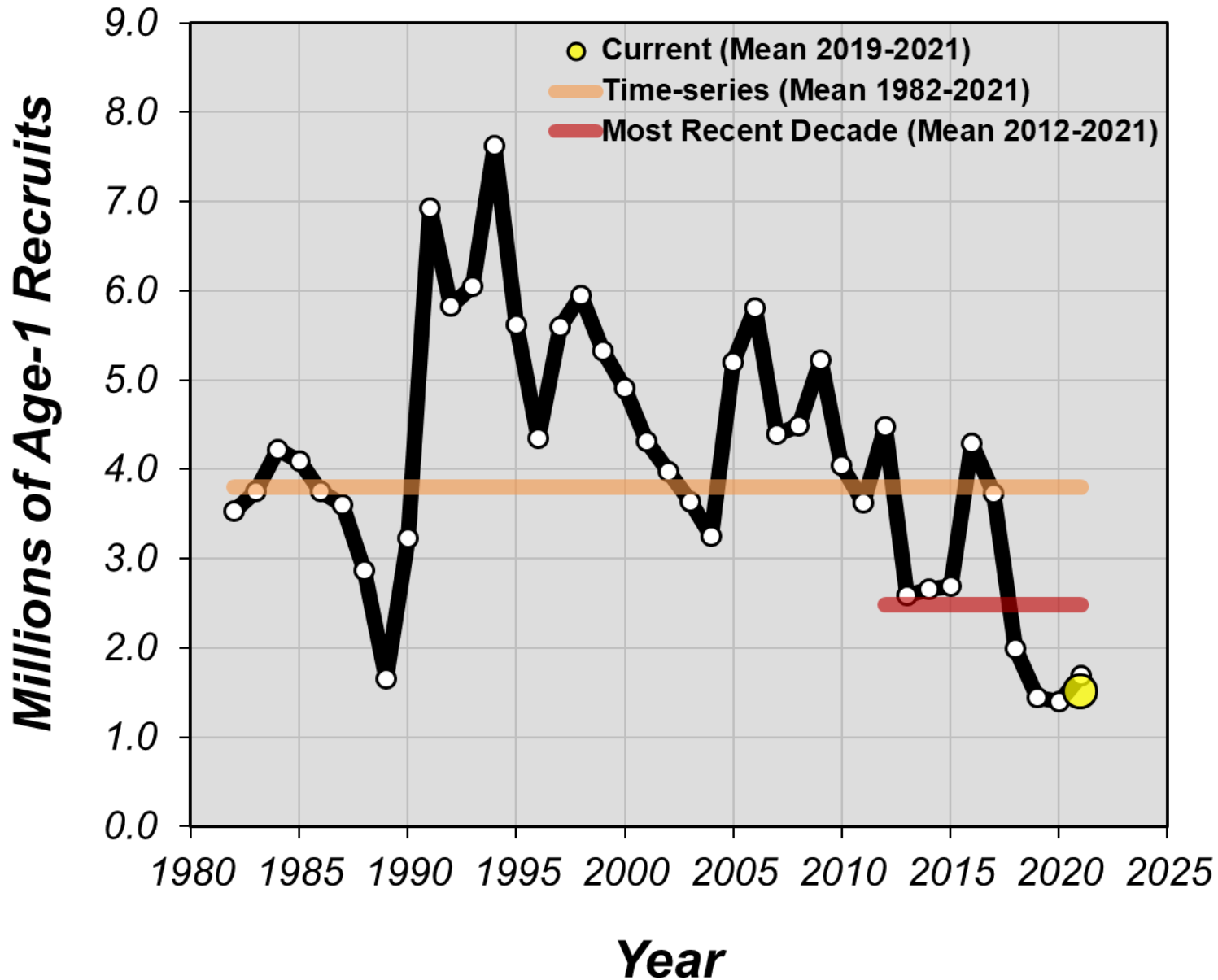
Spawning Potential Ratio



Escapement Rates



Recruitment



Assessment Summary

- Red Drum stock is not overfished (depleted), but overfishing (depletion) is currently occurring.
- Overfishing has occurred frequently in the most recent decade (80%).
- SPR began trending downward in 2005.
- Recent recreational landings at lowest level observed since the 1980's.
- Current recruitment estimate is at lowest level observed and have been declining since 1994.
- The assessment was peer reviewed by other Gulf state's Marine Fisheries agencies, NOAA Fisheries, and outside stock assessment scientists and was well received with no major technical issues (comments and responses in LWFC materials).



Stock Projections

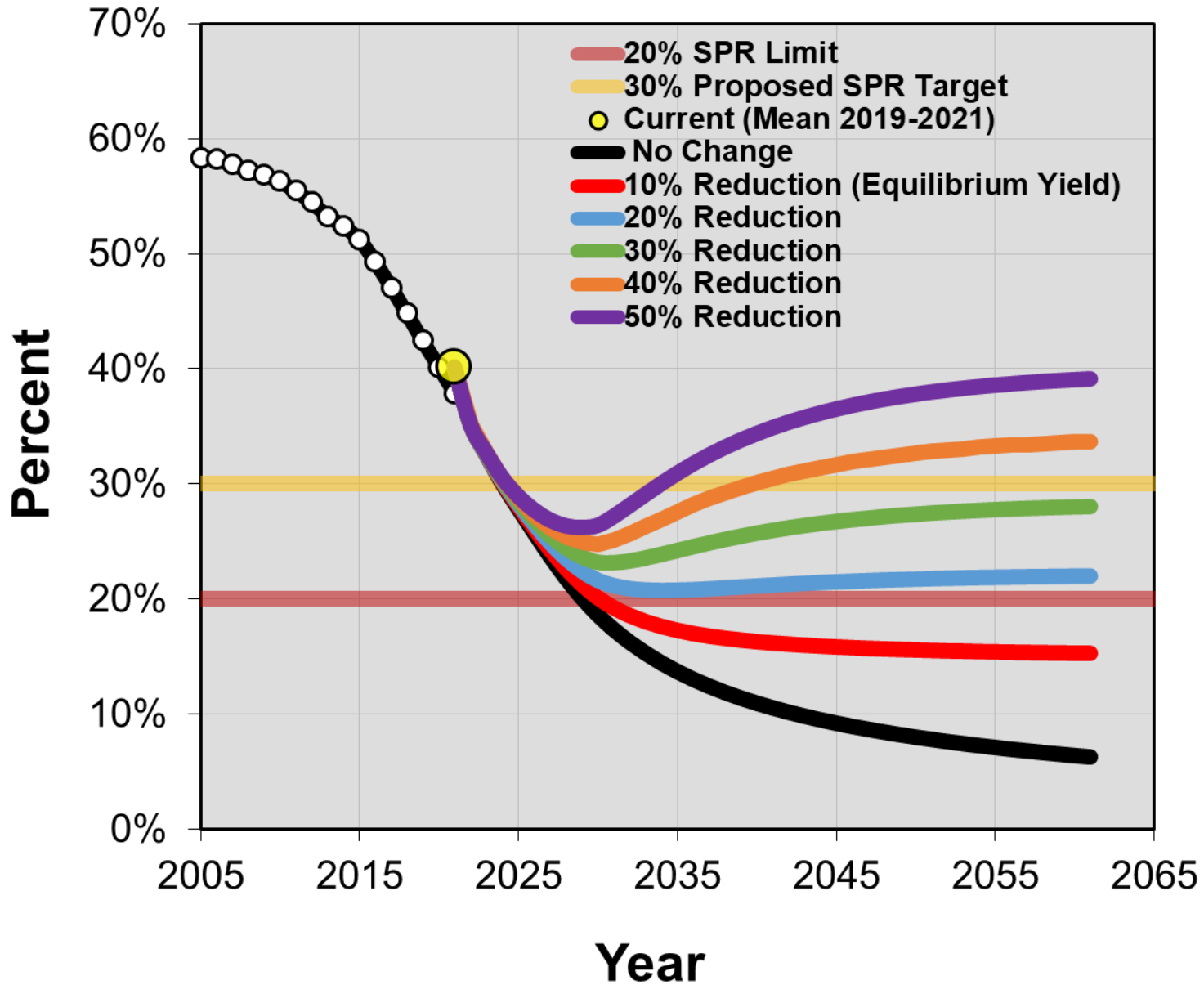


Projection Summary

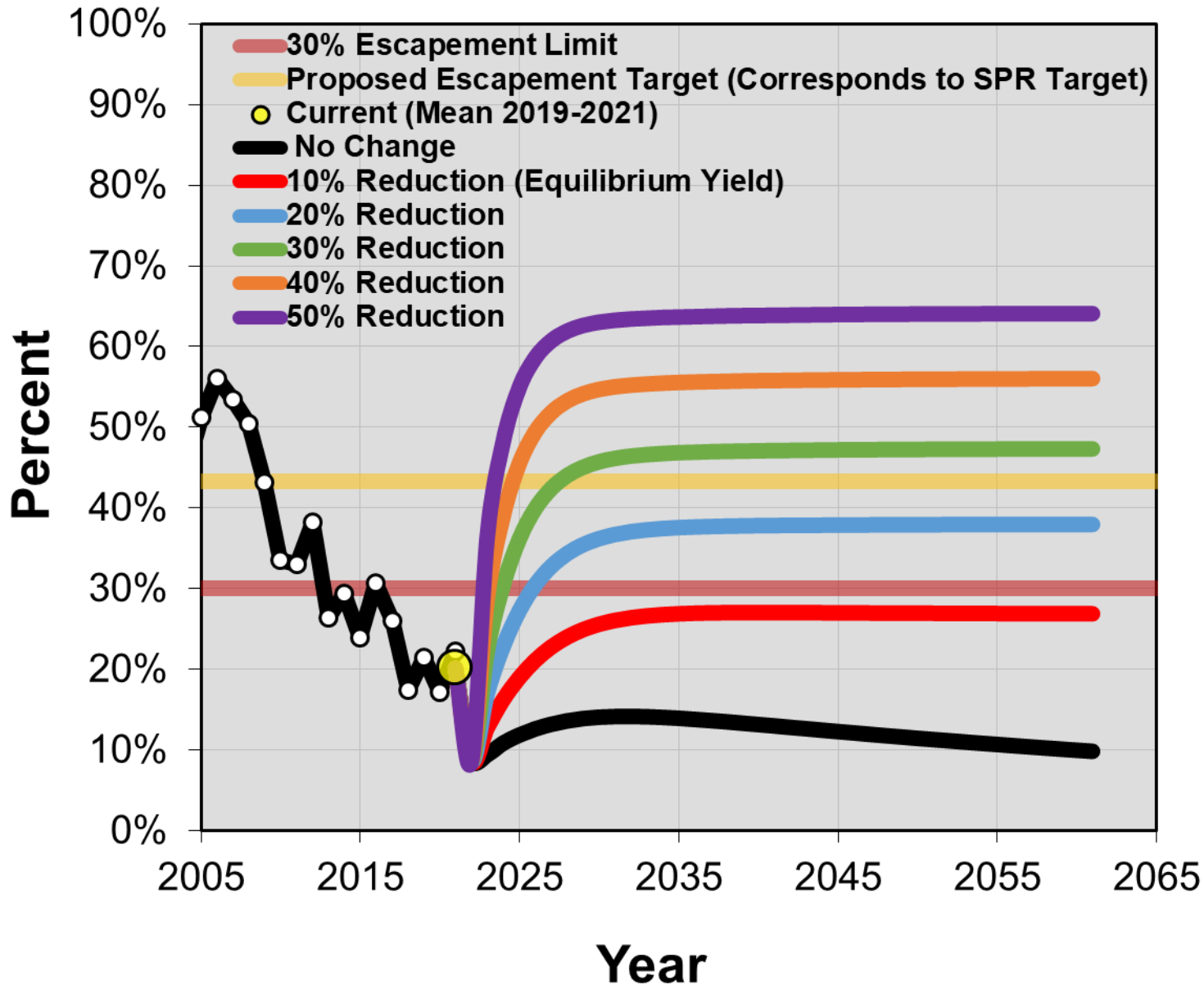
- **Thirty-nine year stock projection (2023-2061) of base model**
- **Projected population metrics are stock status indicators only (SPR and juvenile escapement rates)**
- **Future recruitment levels assumed equivalent to the most recent decade (mean 2012-2021)**
- **Each management scenario represents a specific percent reduction of landings in terms of weight (0 to 70% by factors of 5)**



Spawning Potential Ratio



Escapement Rates



Fishery Reductions

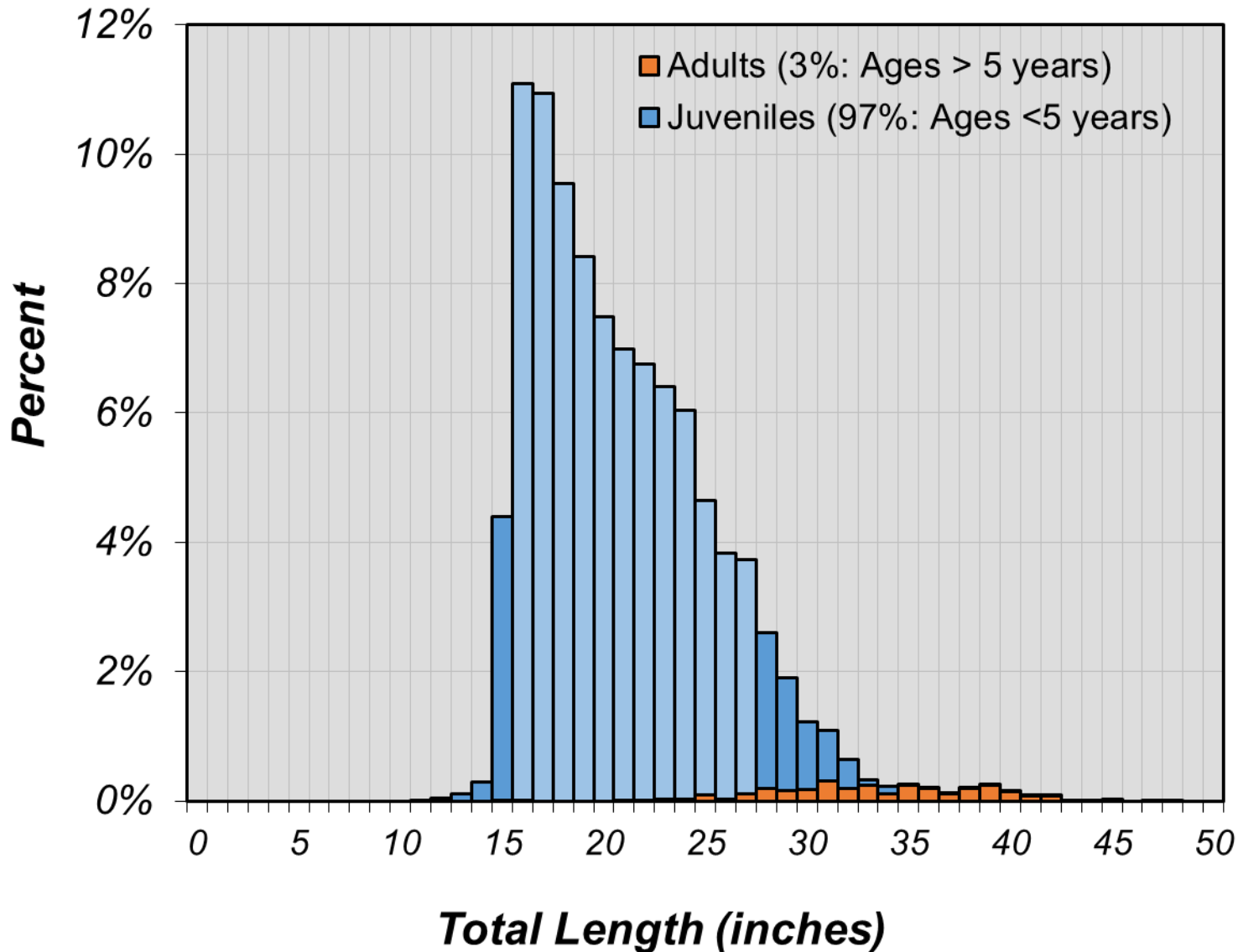


Fishery Reductions Summary

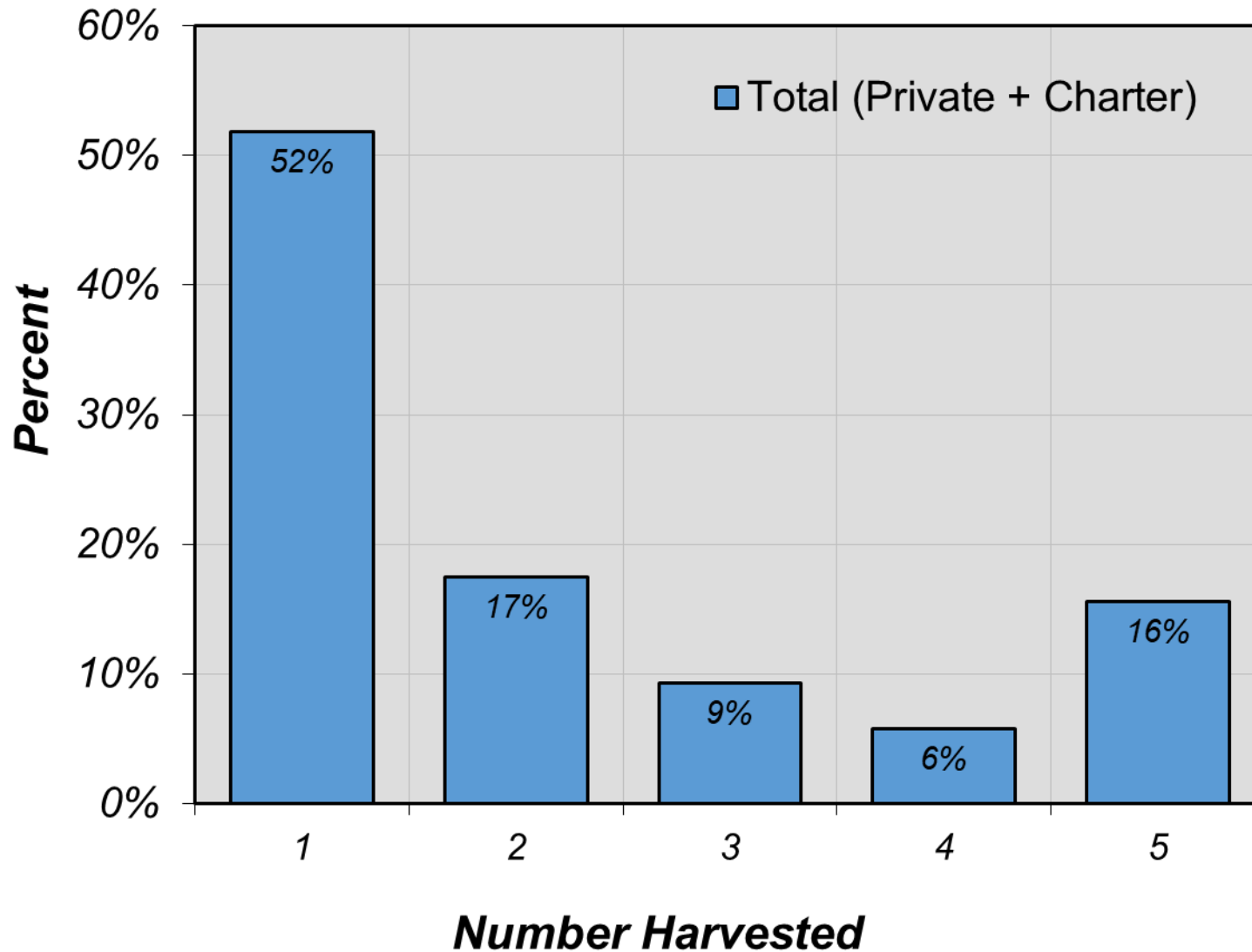
- **Fishery reductions calculated from the LDWF Recreational Creel and Biological Sampling Programs (2019-2021)**
- **Reductions in terms of fishery yield (total weight landed)**
- **Reductions from creel and slot limit changes only**
- **Creel limit reductions based on future directed effort and recruitment remaining comparable to current**
- **Size limit savings based on a 5% discard mortality rate assumption**
- **Proposed minimum yield reduction of 35%**



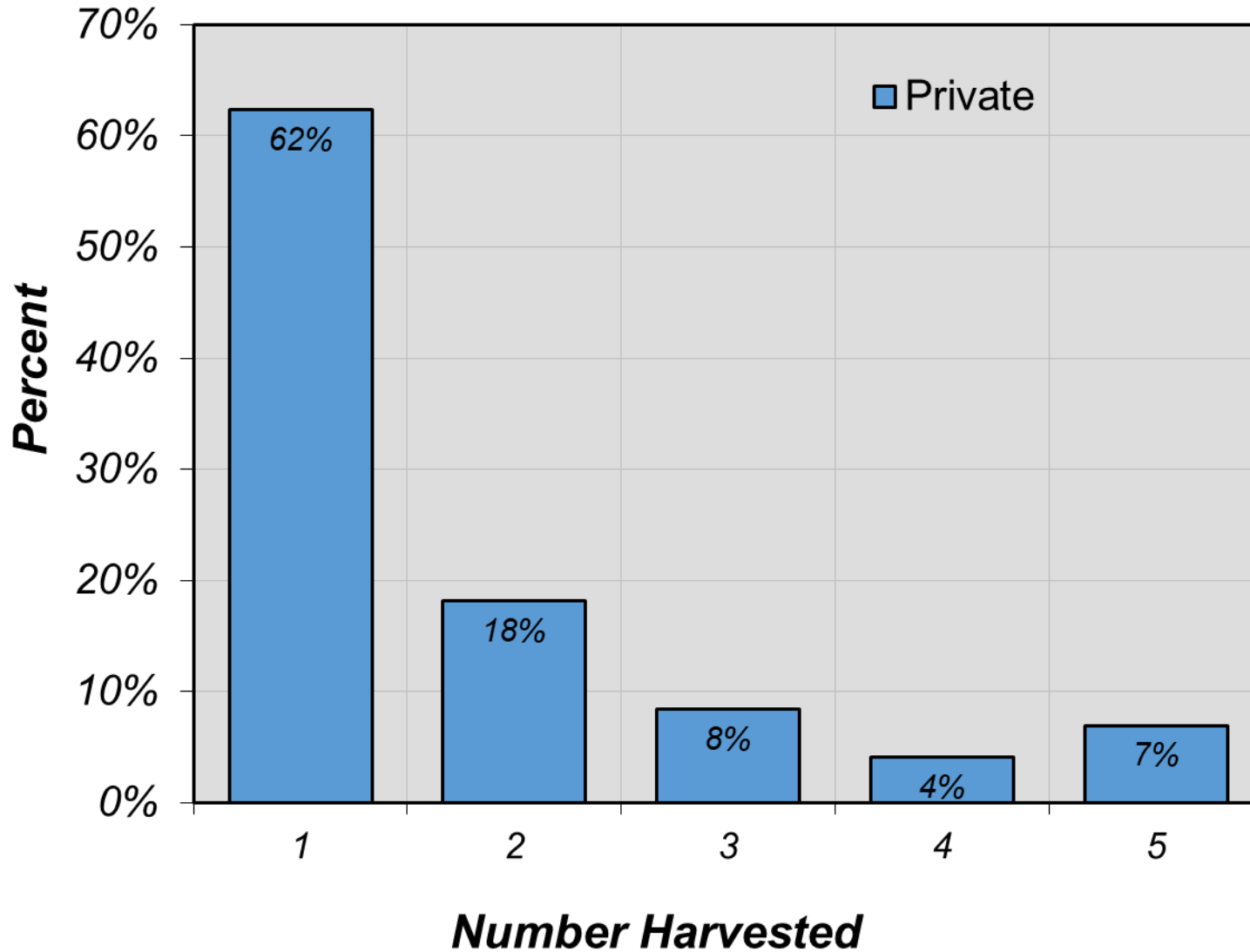
Harvest at Size (2019-2021)



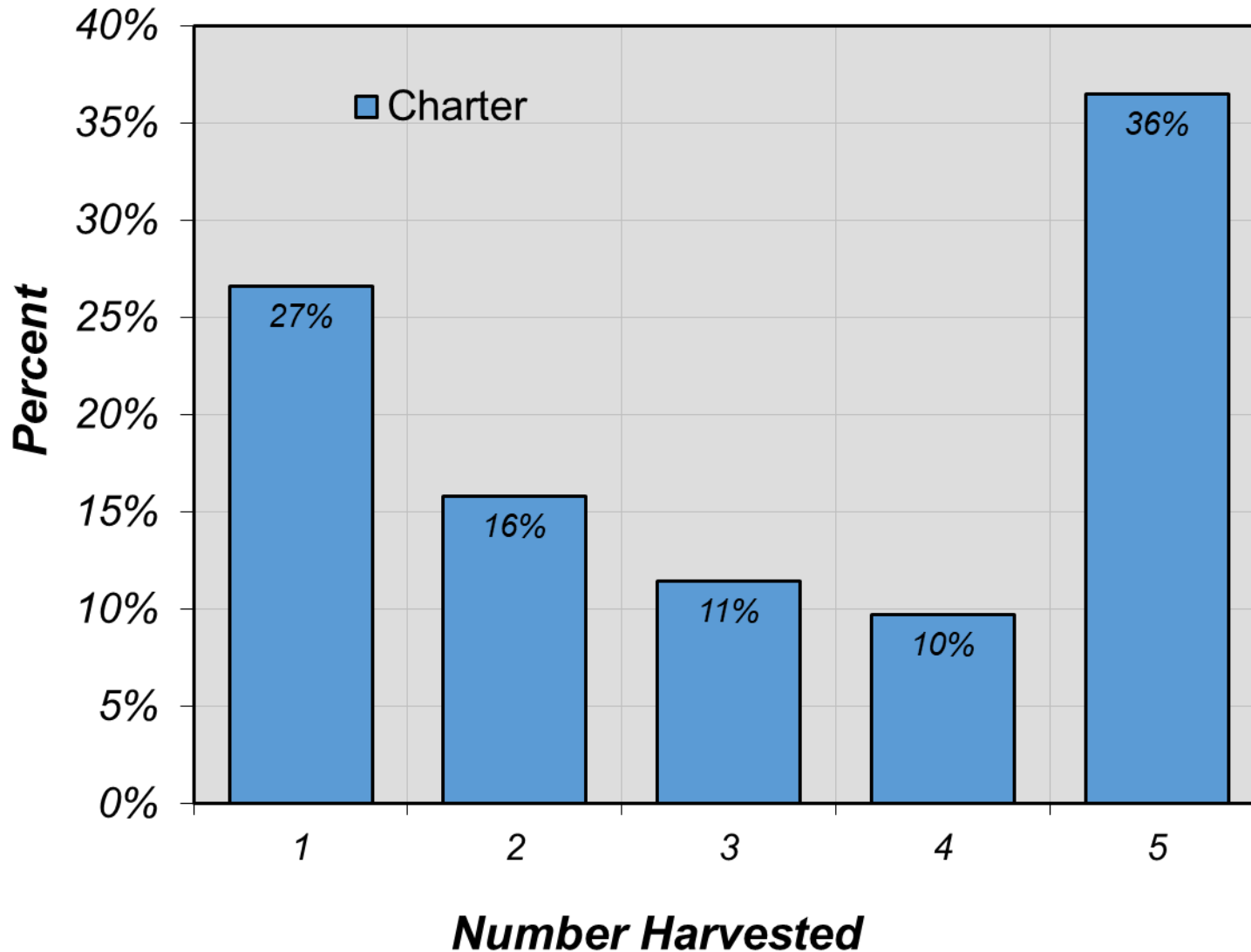
Angler Trip Harvest Frequency (2019-2021)



Angler Trip Harvest Frequency (2019-2021)

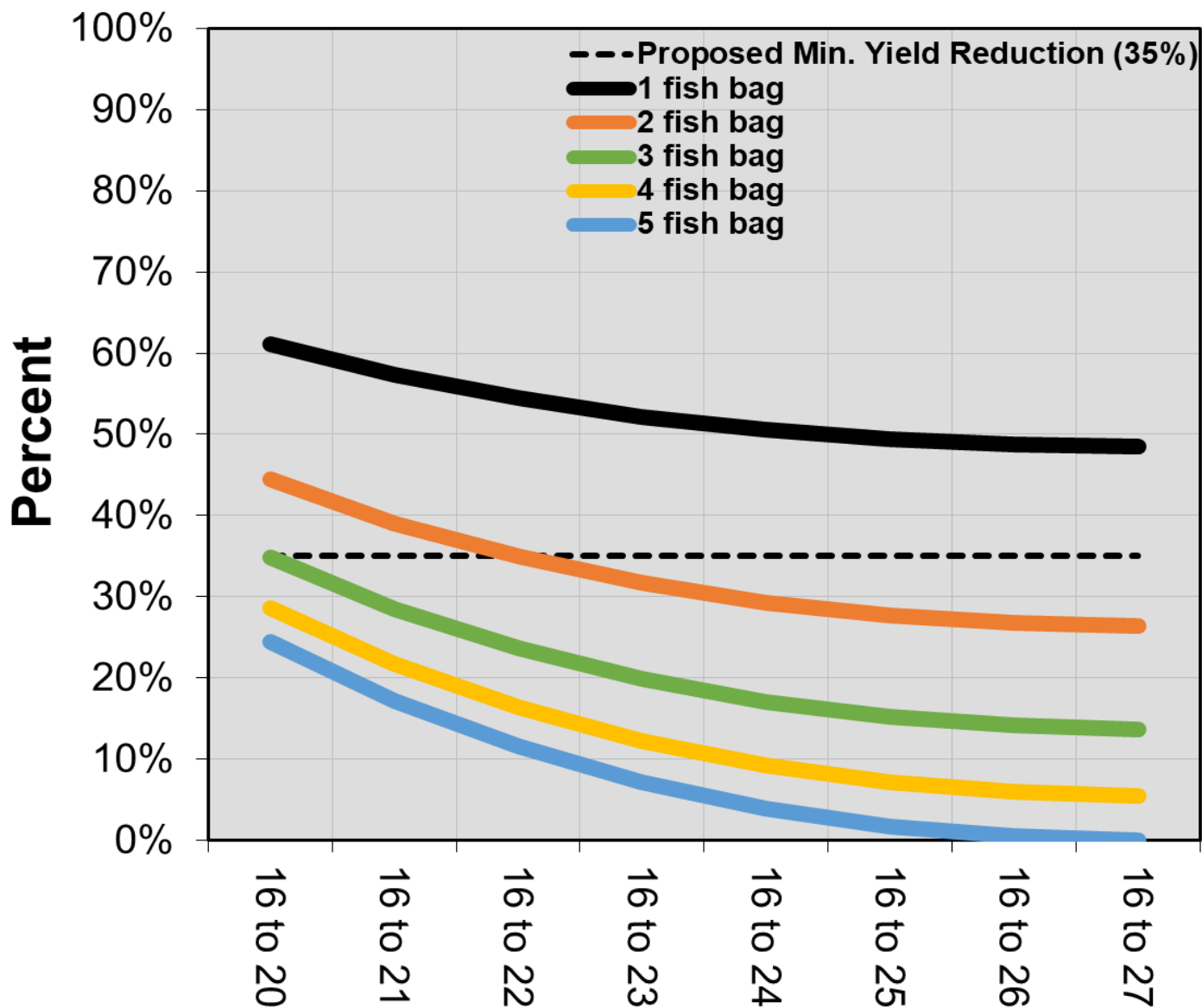


Angler Trip Harvest Frequency (2019-2021)



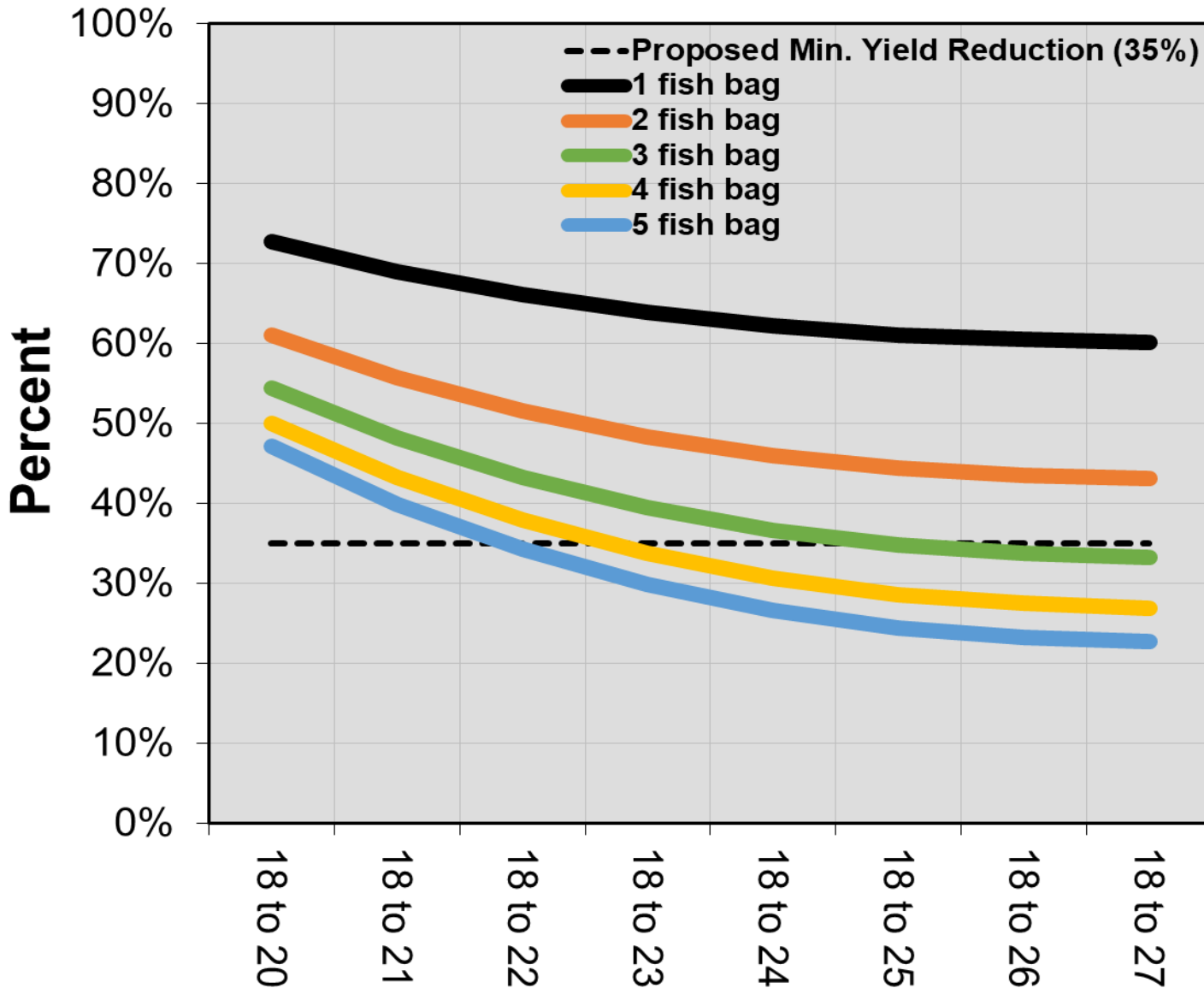
Creel and Harvest Slot Limit Reductions

1 fish allowed over slot



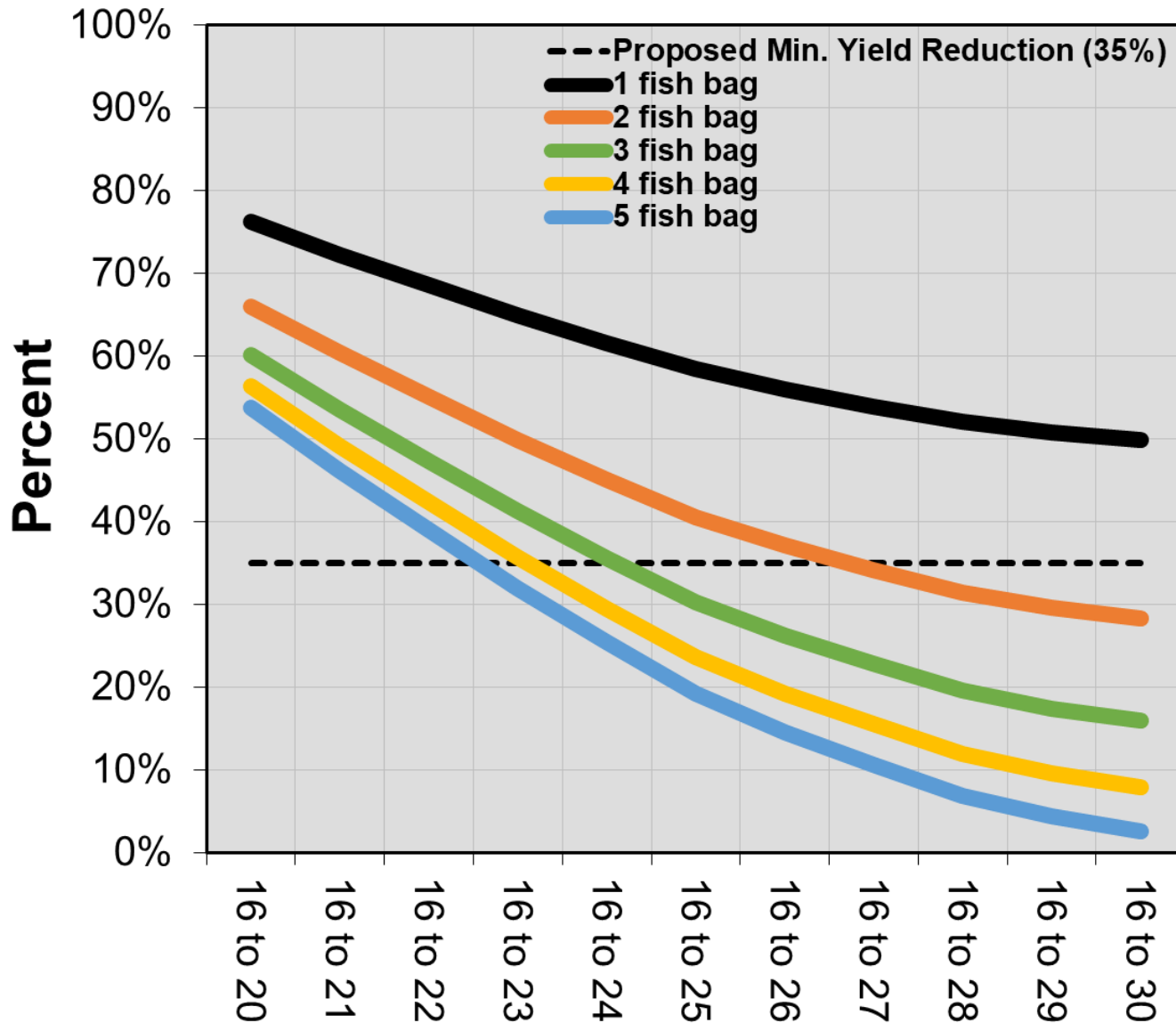
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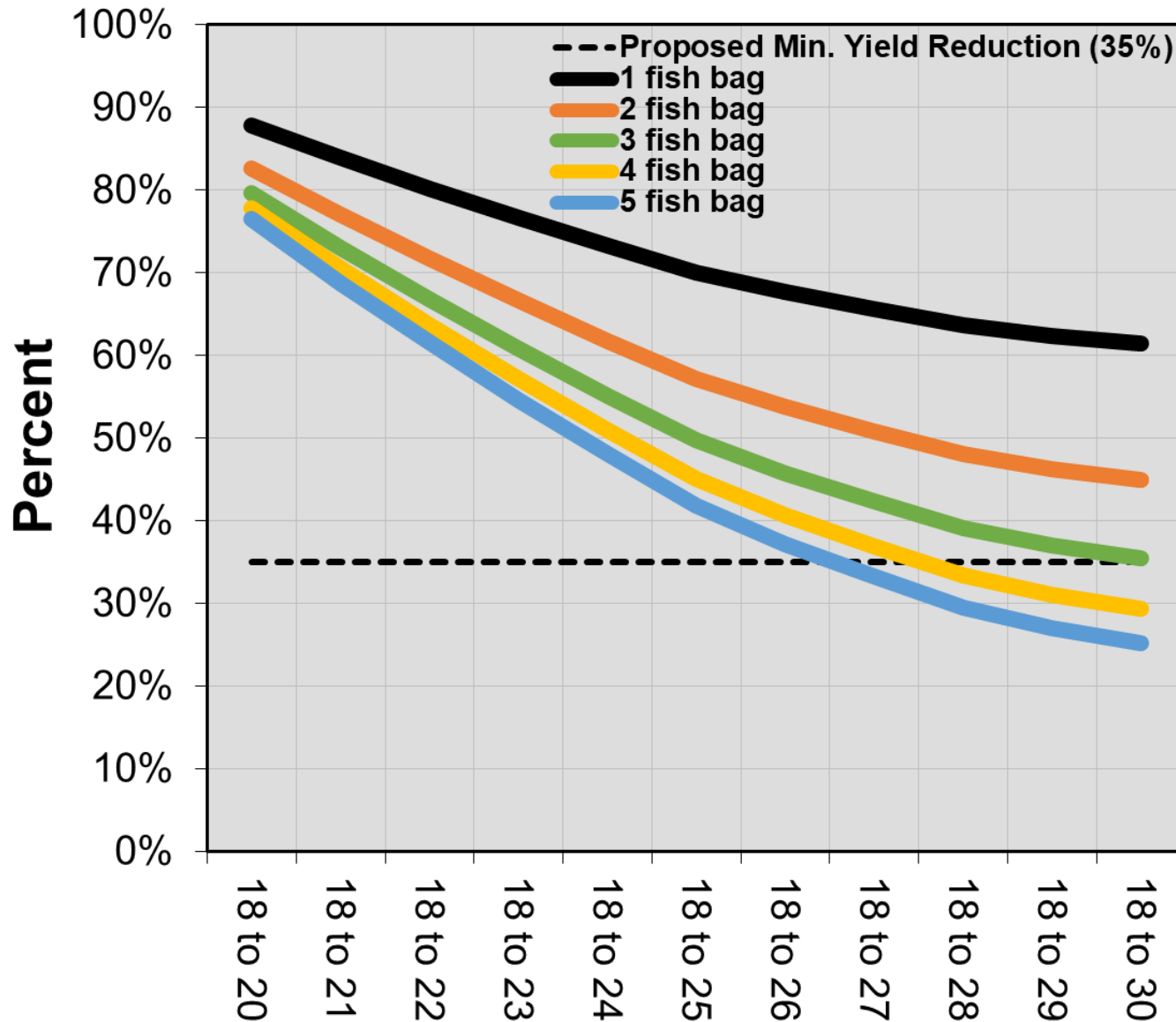
Creel and Harvest Slot Limit Reductions

0 fish allowed over slot



Creel and Harvest Slot Limit Reductions

0 fish allowed over slot



Next Steps

- Guidance to LDWF on how to proceed:
 - Keep or eliminate a fish over the slot?
 - Maximize creel by shrinking slot?
 - Sacrifice creel for slot width?
 - Elimination of guide limits?
- Guidance on how the LWFC would like to structure public input on potential management .
- Guidance on a timeline for implementing management.
- LDWF recommendation is a minimum 35% reduction in yield which corresponds to a possibility of rebuilding above target SPR by 2050, but there are more drastic reductions in yield that could rebuild the stock faster (shortest rebuild occurs at 65% reduction by 2031).



Questions ?

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Limits in Other Gulf States

- **Texas** - Bag limit 3 per person in a slot of 20 to 28 inches. One red drum over 28 inches allowed annually (tag required)
- **Mississippi** – Bag limit is 3 per person in a slot of 18 to 30 inches. One red drum over 30 inches allowed in bag.
- **Alabama** – Bag limit is 3 per person in a slot of 16 to 26 inches. Once red drum allowed over 26 inches in bag.
- **Florida** – Bag limit 1 per person in a slot of 18 to 27 inches. Vessel limit of 4 fish from Panhandle to Tampa Bay Region. Vessel limit of 2 fish from Tampa Bay region south.

