

Alabama Red Snapper Calibration Update Proposal



Alabama Department of Conservation and Natural
Resources/Marine Resources Division

Gulf of Mexico Fishery Management Council
Scientific and Statistical Committee Meeting
January 11, 2023

Background

- SSC approved a calibration using 2018 and 2019 MRIP CHTS and Snapper Check harvest estimates
 - The ratio was calculated using a ratio of mean landings = 0.4875
- Council requested the SSC to review updating the calibration ratio
 - Reviewers suggested review of additional years of data and removal of 2020 data to account for disruptions to field sampling activities caused by COVID -19
- Use of a longer Snapper Check time series may not be appropriate
 - Snapper Check data was implemented in 2014 but did not receive MRIP certification until 2017
- Alabama does not prefer removing 2020 from calibration update calculation of data surrounding 2020 is used in the calibration
 - Alabama maintained similar intercept performance and weight collection beginning in May 2020 before the start of the red snapper season according to a presentation made to the Council during its April 2021 meeting
- Alabama recommends replacing the harvest data used in the original calibration with harvest data from 2020 and 2021
 - Periods of high angler activity may affect sample collection in the MRIP CHTS dockside survey
 - Sampling discrepancies could lead to inappropriate adjustment or weighting of effort data
 - 2020 and 2021 data are more similar than 2018 and 2019

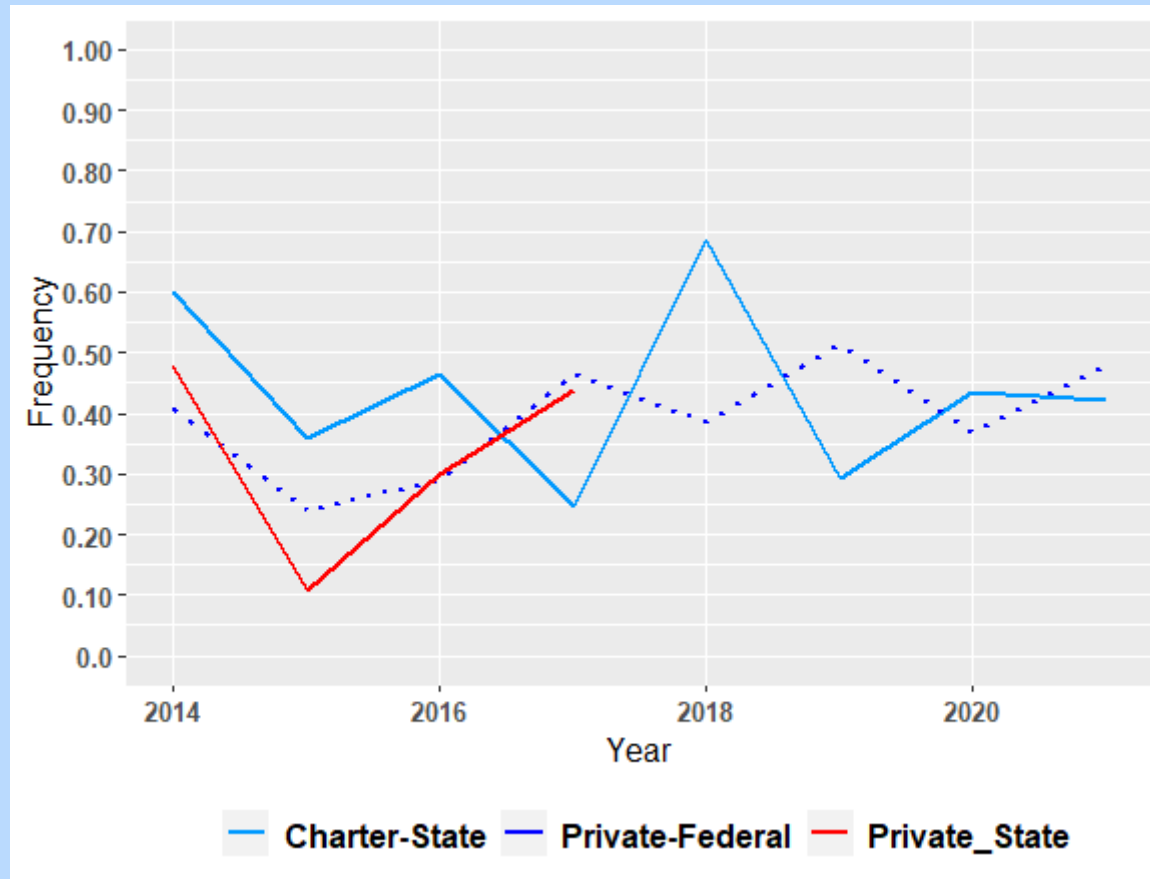
Snapper Check Summary

- Snapper Check is comprised of a mandatory reporting program and dockside survey
 - A vessel representative (captain/owner) is required to submit a landing report before red snapper are landed in Alabama. Dead discards are not required to be reported.
 - The dockside survey attempts to intercept vessels with red snapper to collect biological information and trip information
 - To quantify non-response an attempt to match validation data to landing data using unique identifiers supplied on the landing reports and collected in dockside surveys (vessel reg #, date, # of anglers, fish landed and general time of interview and landing report submission)
 - An adjustment to the number of fish landed, dead discards and anglers is calculated with Proc Survey Means in SAS®

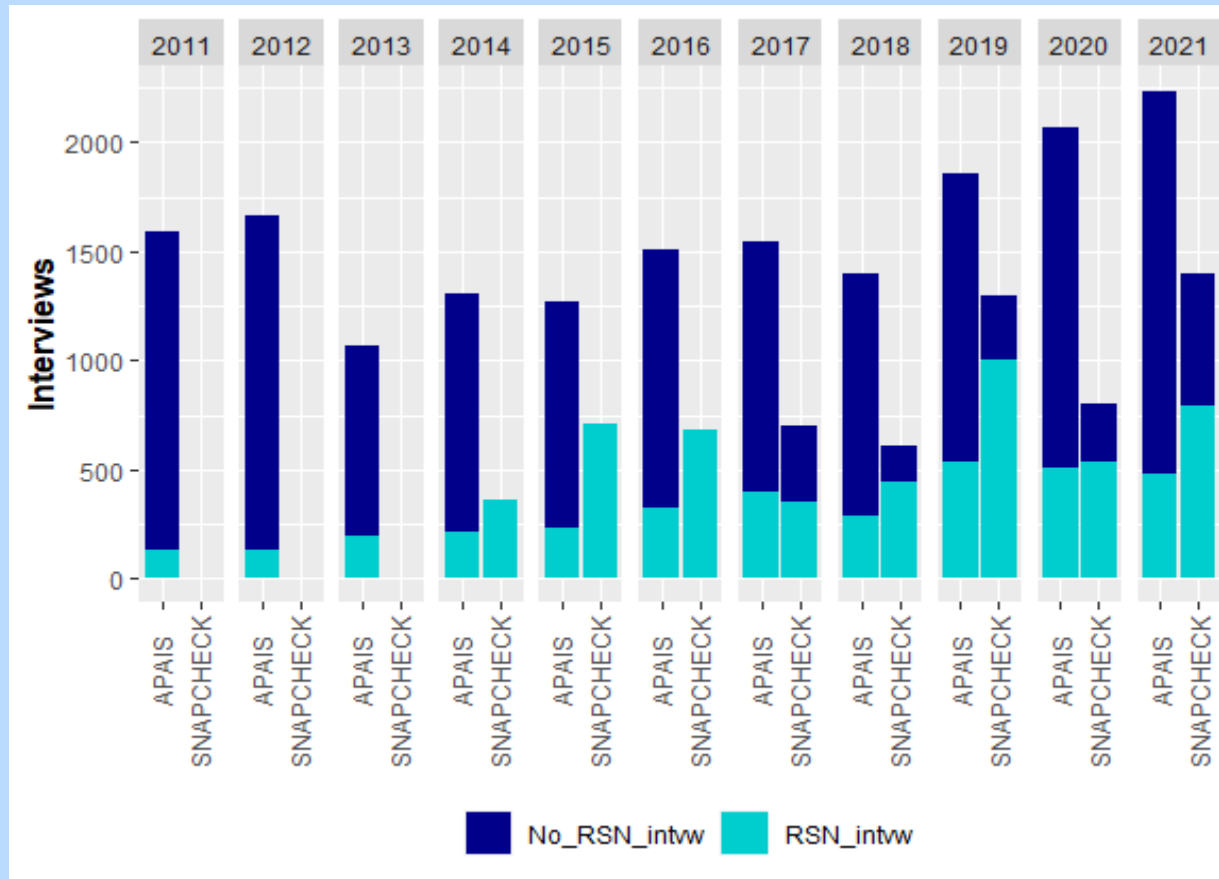


Snapper Check Summary

Annual reporting frequency of vessels with red snapper interviewed in Snapper Check



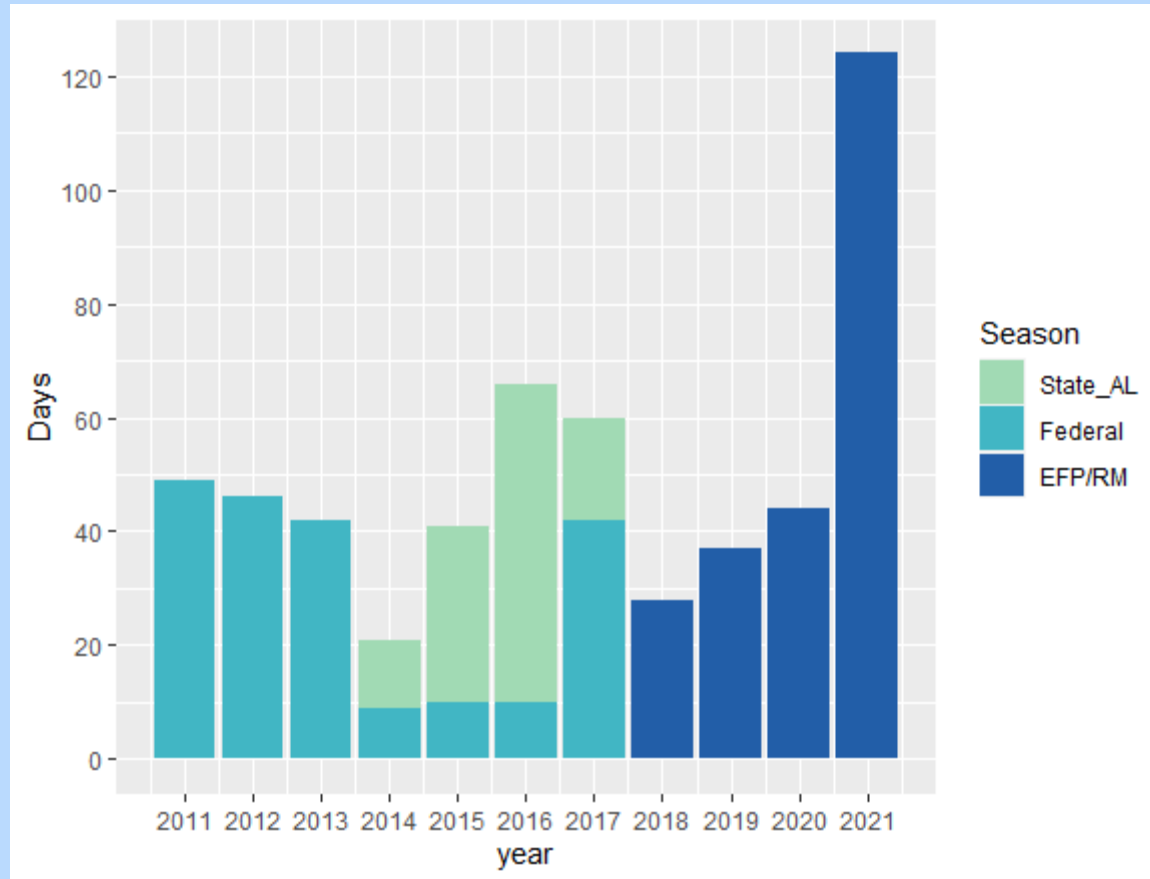
Snapper Check and APAIS Intercepts



Snapper Check interviews represent an interviewed vessel.
APAIS interviews represent an interviewed angler.

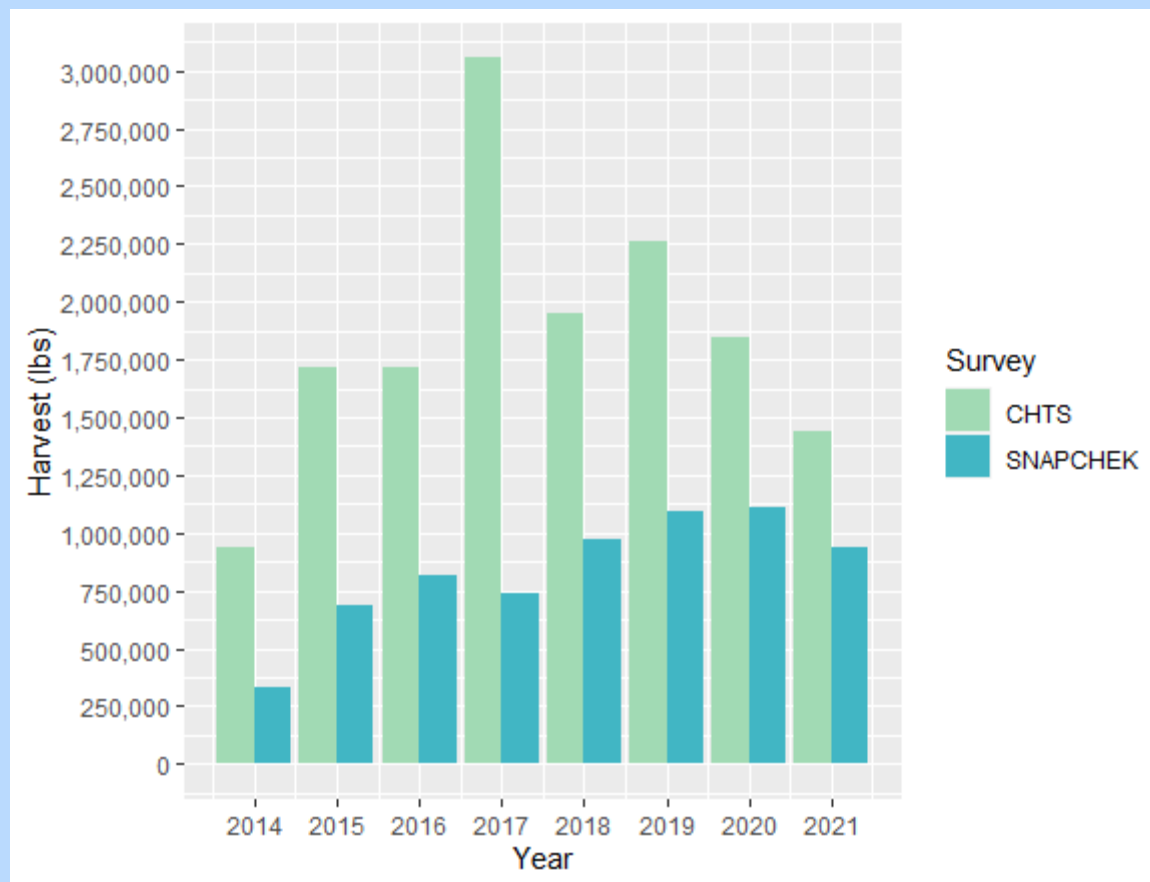


Alabama Red Snapper Season



Exempted Fishing Permit / Regional Management Amendment 50 implemented in 2018

Harvest for CHTS and Snapper Check

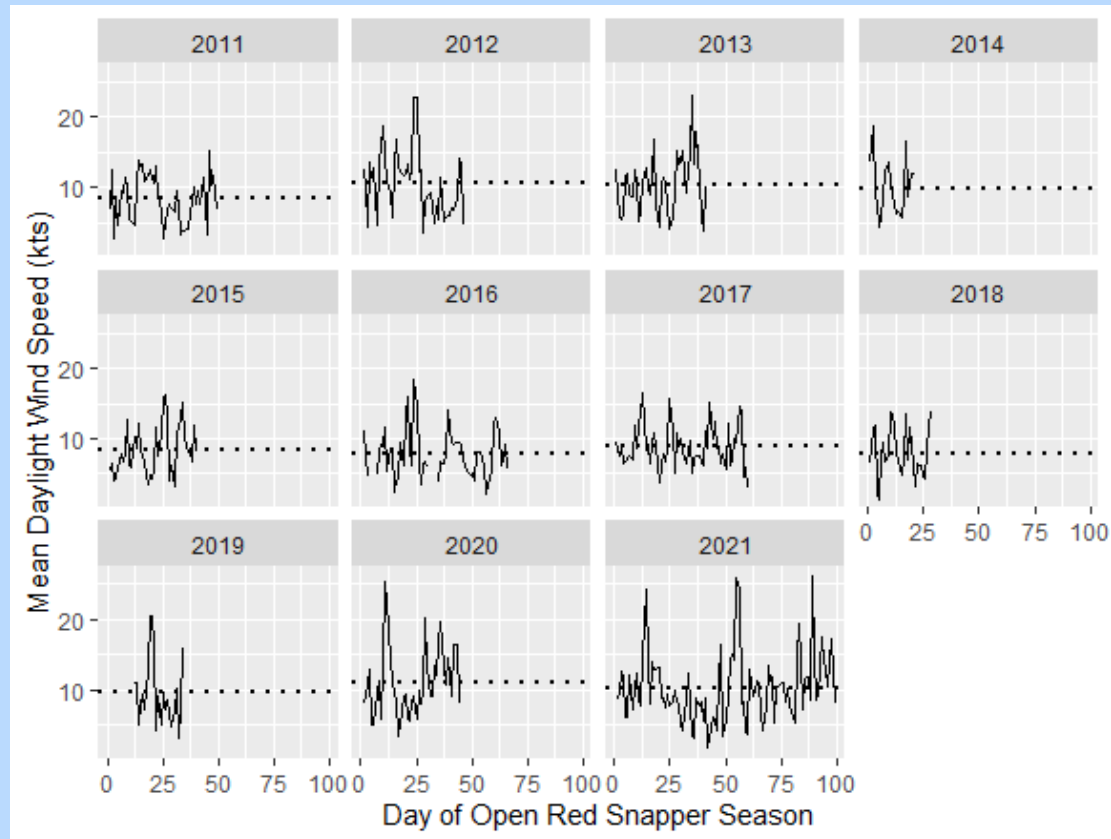


Wind Speed during Open Season days

Includes days Alabama waters were open.

In 2018 and 2019, the season included Fridays-Sundays.

In 2020 and 2021, the season included Fridays-Monday.

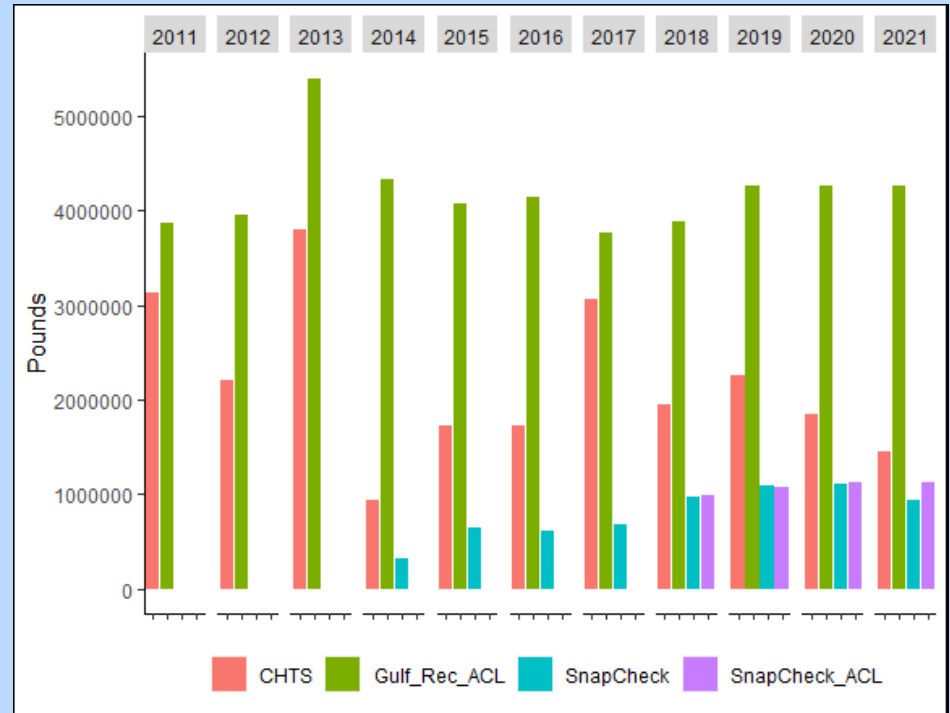


Dotted line indicates mean wind speed for the entire season



CHTS harvest, Gulf ACL, Snapper Check harvest and AL EFP/RM ACL

- CHTS harvests varied in the earliest part of the time series but have been declining since 2017
- Snapper Check harvests have been increasing slightly because of increases in the ACL
- CHTS harvest in 2017 was 81% of the Gulf recreational sector ACL
- 2017 was unusual for the fact that there was an initial 3-day federal season followed by a 39-day weekend season
- High angler activity at specific sites and MRIP field sampling protocols may result in unrepresentative samples of Alabama's anglers being used to adjust effort

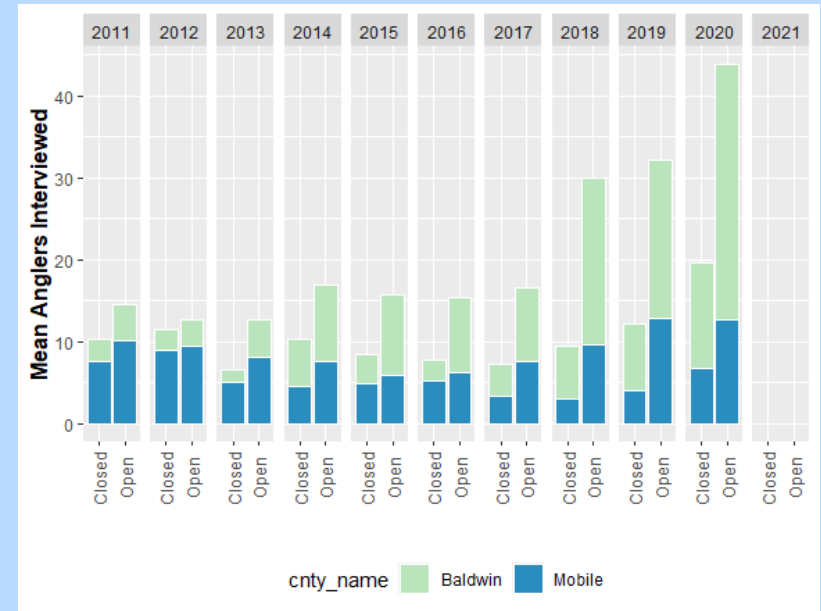
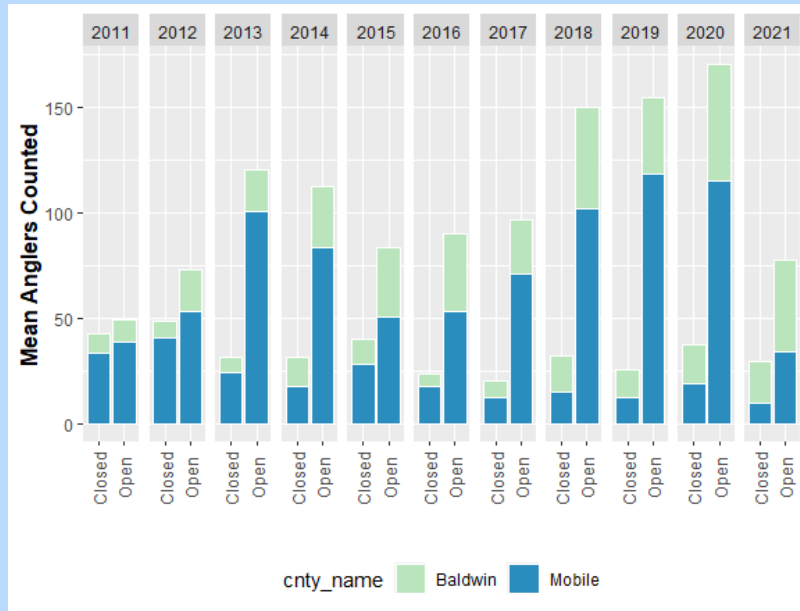


APAIS dockside sampling in Alabama

- MRIP Angler Access Intercept Protocols (APAIS) protocols were updated in 2013
 - Samplers are required to count all anglers during each 6-hr assignment
 - When time allows, samplers are trained to approach potential anglers to determine survey participation and eligibility
 - While conducting individual angler interviews, the sampler must continue to monitor angler activity
- Residency status (state and county) of each interviewed angler collected during each wave at all sites are used to adjust the effort information calculated from the effort survey
- The requirement to maintain counts of anglers could lead to decreased numbers of intercepts being collected at sites with high boating/angling activity
- Frequent assignments at sites with high angler activity and low intercept productivity may result in an unrepresentative sample of fishing trips or anglers at those sites



APAIS private angler counts and interviews by year and coastal Alabama county for Waves 3 and 4 during days when red snapper season was open or closed to harvest.



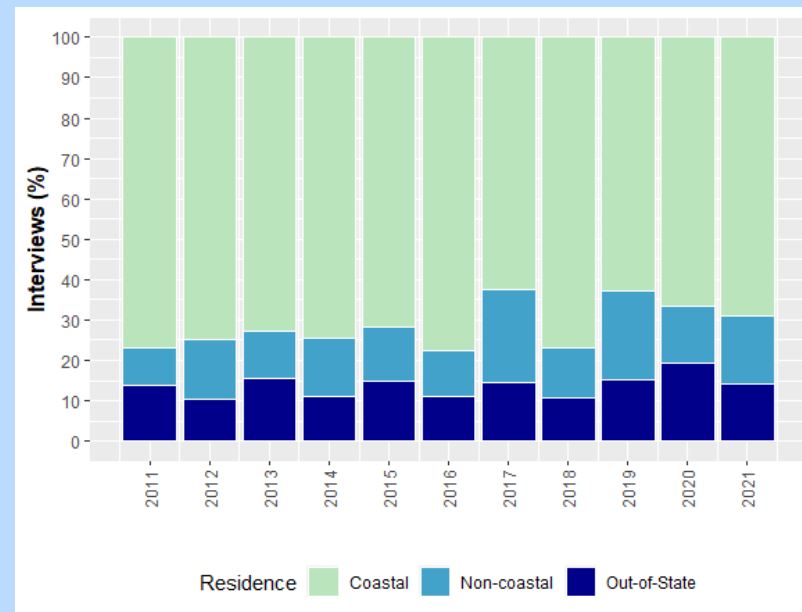
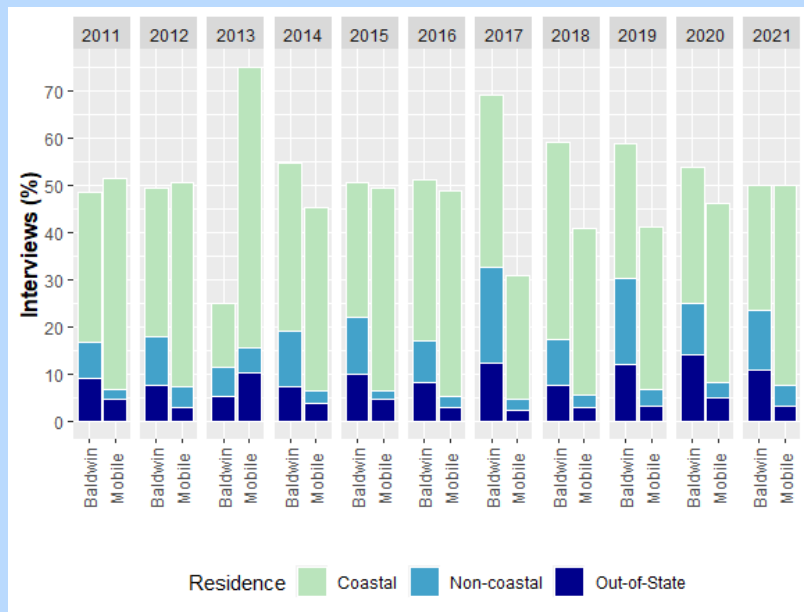
Anglers counted during APAIS assignments is significantly higher when red snapper season is open.

Most of the observed anglers were at Mobile County sites

Since 2014, most of the interviews were collected from Baldwin County sites.



APAIS private angler interviews by year, residence and coastal Alabama county for Waves 3 and 4.



More anglers in Baldwin County tend to be from places outside the coastal area compared to Mobile County. Baldwin County offers more temporary housing than Mobile Co.

Angler residence status has been consistent for much of the time series with the exception of 2017 and 2019. Further investigation is needed to determine effects of sampling issues.



Conclusions

- 2018 and 2019 MRIP CHTS harvest data may have been impacted by elevated effort estimates caused by sampling that was not representative of Alabama's anglers.
- Daily angler effort has been significantly reduced in 2021 (and 2022) compared to 2018 as the number of days has increased 340% yet Snapper Check harvests have increased slightly (due to ACL increases) and declined in MRIP CHTS
- Having a sufficient ACL will help minimize the need to set seasons that are so short they promote derby behavior in anglers. The current calibration ratio applied to Alabama's ACL will result in a 20-day fishing season using 2018 and 2019 data.
- The issue with reduced sampling efficiency needs further investigation and should be included in upcoming MRIP Transition Team topics of research.



QUESTIONS?



Proposed Calibration Option 1

Option #1: Update the calibration ratio using harvest data from 2018-2021				
	Year	Snapper Check	MRIP CHTS	Ratio
	2018	973,652	1,947,713	0.4999
	2019	1,091,424	2,259,154	0.4831
	2020	1,106,679	1,847,874	0.5989
	2021	937,280	1,443,056	0.6495
Approved Calibration Ratio (mean harvest for 2018-2019)*		1,032,538	2,103,434	0.4909
Sub-option 1a: Ratio of Mean Harvest for 2018-2021		1,000,785	1,883,308	0.5314
Sub-option 1b: Mean of Annual Ratios for 2018-2021				0.5579
Sub-option 1c: Ratio of Mean Harvest for 2018-2021 removing 2020		1,000,785	1,883,308	0.5314
Sub-option 1d: Mean of Annual Ratios for 2018-2021 removing 2020				0.5442
* - Snapper Check harvest estimates were updated since the original calibration ratio was calculated (0.4875)				



Proposed Calibration Option 2

Option #2: Update the calibration ratio using 2020 and 2021 harvest data only			
	Year	Snapper Check	MRIP CHTS
	2020	1,106,679	1,847,874
	2021	937,280	1,443,056
Current Calibration Ratio (mean harvest for 2018-2019)			0.4910
Sub-option 2a: Ratio of Mean Harvest for 2020-2021*		1,021,980	1,645,465
Sub-option 2b: Mean of Annual Ratios for 2020-2021			0.6242
* - Snapper Check harvest estimates were updated since the original calibration ratio was calculated (0.4875)			



Proposed Calibration Option 3

Option #3: Update calibration ratio using state survey data over a longer time period				
	Year	Snapper Check*	MRIP CHTS	Ratio
	2014	327,119	934,843	0.3499
	2015	688,608	1,717,626	0.4009
	2016	815,394	1,719,288	0.4743
	2017	742,829	3,054,327	0.2432
	2018	973,652	1,947,713	0.4999
	2019	1,091,424	2,259,154	0.4831
	2020	1,106,679	1,847,874	0.5989
	2021	937,280	1,443,056	0.6495
Current Calibration Ratio (mean harvest for 2018-2019)**				0.4909
Sub-option 3a: Ratio of Mean Harvest for 2014-2021		835,373	1,865,485	0.4478
Sub-option 3b: Mean of Annual Ratios for 2014-2021				0.4625
Sub-option 3c: Ratio of Mean Harvest for 2014-2021 removing 2020		796,615	1,868,001	0.4265
Sub-option 3d: Mean of Annual Ratios for 2014-2021 removing 2020				0.4430
Sub-option 3e: Ratio of Mean Harvest for 2015-2021		907,981	1,998,434	0.4543
Sub-option 3f: Mean of Annual Ratios for 2015-2021				0.4785
Sub-option 3g: Ratio of Mean Harvest for 2015-2021 removing 2020		874,865	2,023,527	0.4323
Sub-option 3h: Mean of Annual Ratios for 2015-2021 removing 2020				0.4585
* - Snapper Check harvest estimates for 2014-2016 not MRIP-certified				
** - Snapper Check harvest estimates were updated since the original calibration ratio was calculated (0.4875)				



Snapper Check Harvest by Fishing Mode

Year	Mode	Season	Harvest	PSE
2014	Private	Federal	306,606	8.8
2015	Private	Federal	617,392	9
2016	Private	Federal	553,975	19.3
2017	Private	Federal	564,590	19.3
2018	Private	Federal	934,984	21
2019	Private	Federal	1,000,980	21.6
2020	Private	Federal	1,050,040	20.5
2021	Private	Federal	801,922	15.2
2014	Private	State	13,558	31.2
2015	Private	State	39,880	51.2
2016	Private	State	209,263	29.7
2017	Private	State	61,622	22.2
2018	Private	State	.	.
2019	Private	State	.	.
2020	Private	State	.	.
2021	Private	State	.	.
2014	Charter		14,088	28.8
2015	Charter		31,336	39.5
2016	Charter		52,156	34.8
2017	Charter		116,617	58.1
2018	Charter		38,667	45.0
2019	Charter		90,443	63.4
2020	Charter		56,639	50.8
2021	Charter		135,358	67.7
Private vessels are assigned to fishing seasons				

