



LA CREEL SURVEY

Nicole Smith | GMFMC and SAFMC Joint Workgroup | September 10, 2020

Outline

- How did we get to LA Creel
- Purpose of LA Creel
- Design Criteria
- Key Elements of LA Creel
- Survey Methodology
 - Access Point Survey (weekly dockside)
 - Effort Survey (weekly phone and e-mail)
 - Estimation Calculation
- Timeline to generate estimates
- LA Creel Data (with confidence limits where appropriate)
 - Trips / Effort
 - Landings
- Differences in confidence limits versus MRIP
- Benefits of LA Creel



LA CREEL SURVEY

How Did We Get Where We Are Today?

- Louisiana has been involved with MRFSS/MRIP since the early 1980's
- LDWF began collecting MRFSS in the late 1990's
- Throughout this time LDWF found several issues with the survey
 - Inability to obtain reliable landings at a basin or sub-state level
 - Insufficient sample size (CPUE, size frequency, age data, etc.)
 - Angler participation estimates far exceeded recreational licenses
 - Precision of landings estimates for many species was and remains poor
 - Landing estimates not timely enough to monitor in-season quotas



LA CREEL SURVEY

How Did We Get Where We Are Today?

- In 2012 Louisiana proposed a Regional Management approach for managing the red snapper recreational fishery – That prompted us to develop an intensive red snapper landings survey in 2013
- Louisiana dropped its participation in the MRIP survey and began **LA Creel** on January 1, 2014



LA CREEL SURVEY

How Did We Get Where We Are Today?

- LDWF requested MRIP Certification January 7, 2015
- LA Creel Peer Review – June 2-3, 2015
- Side-by-side surveys in 2015 for purposes of Benchmarking
- Benchmarking evaluation and provisional MRIP certification in 2016
- Certification achieved at the end of 2017
- Began calibration discussions in 2014, and have an SSC recommended calibration ratio for LA Creel to CHTS in 2020.



LA Creel Survey

PURPOSE

To provide *statistically significant* recreational fishery information to aid in management of *Louisiana's valuable fishery resources*. The saltwater component of the recreational fishery encompasses state waters including marsh habitat, bays, beaches and nearshore areas as well as the offshore federally managed waters of the EEZ.



LA Creel Survey

Design Criteria

- Increase the speed with which harvest data can be compiled into landings summaries
- Create a flexible design able to quickly respond to changing needs
- Provide information on area-specific harvest for all species landed by anglers
- Maximize survey efficiency and minimize burden on anglers



Key Features of LA Creel

- Inshore/Offshore site stratification
- Recreational offshore landing permit (ROLP)
- Separate biological sampling program
- Weekly landing estimates



LA Creel Survey

General Methodology

Recreational landings are estimated separately for the private recreational and for-hire sectors

- An access-point survey to collect harvest rate
- A weekly phone/email survey to estimate total effort

Separate biological sampling from LA Creel recreational landing survey



LA Creel Access Point Survey

SITE FRAME - ACTIVITY

Private Angler Inshore Weekday & Weekend
Private Angler Offshore Weekday & Weekend
Charter Inshore Weekday & Weekend
Charter Offshore Weekday & Weekend

WEEKLY SITE ASSIGNMENTS

(Site Selection Based on Proportional Probability)

AREA FISHED

Pontchartrain Basin
Barataria Basin
Terrebonne/Timbalier Basin
Vermilion/Teche Basin
Calcasieu/Sabine Basin
Offshore

Random Selection of Shift (AM/PM)

SITE ASSIGNMENTS DISTRIBUTED TO

CSA'S



LA Creel Access Point Survey

BASIN	WEEKLY ASSIGNMENT DISTRIBUTION	
	Weekdays	Weekends
Lake Pontchartrain	2	4
Upper Barataria-Mississippi River	2	2
Lower Barataria-Mississippi River	2	4
Terrebonne-Timbalier	2	3
Vermillion-Teche-Mermentau	2	2
Sabine-Calcasieu	2	4



LA Creel Effort Survey

PRIVATE ANGLER FRAME (Weekly)

(Random Draw of Licensed Anglers)

400 – ROLP*

1,200 - NON-ROLP

300 - SW Anglers North Region

300 - SW Anglers Southeast Region

300 - SW Anglers Southwest Region

300 - SW Out-Of-State



PHONE/EMAIL SURVEY

(Contracted to SCPDC)

CHARTER FRAME

(Weekly)

(Random Draw of Licensed Charter Captains)

30% - ROLP**

10% - NON-ROLP



PHONE/EMAIL SURVEY

(Collected by CSA Personnel)



- * 400 Private Angler ROLP adjusts to 800 during Red Snapper EEZ Season
- ** 30% Charter ROLP increases to 100% during Red Snapper EEZ Season

LA Creel Effort Data Weekly Draw

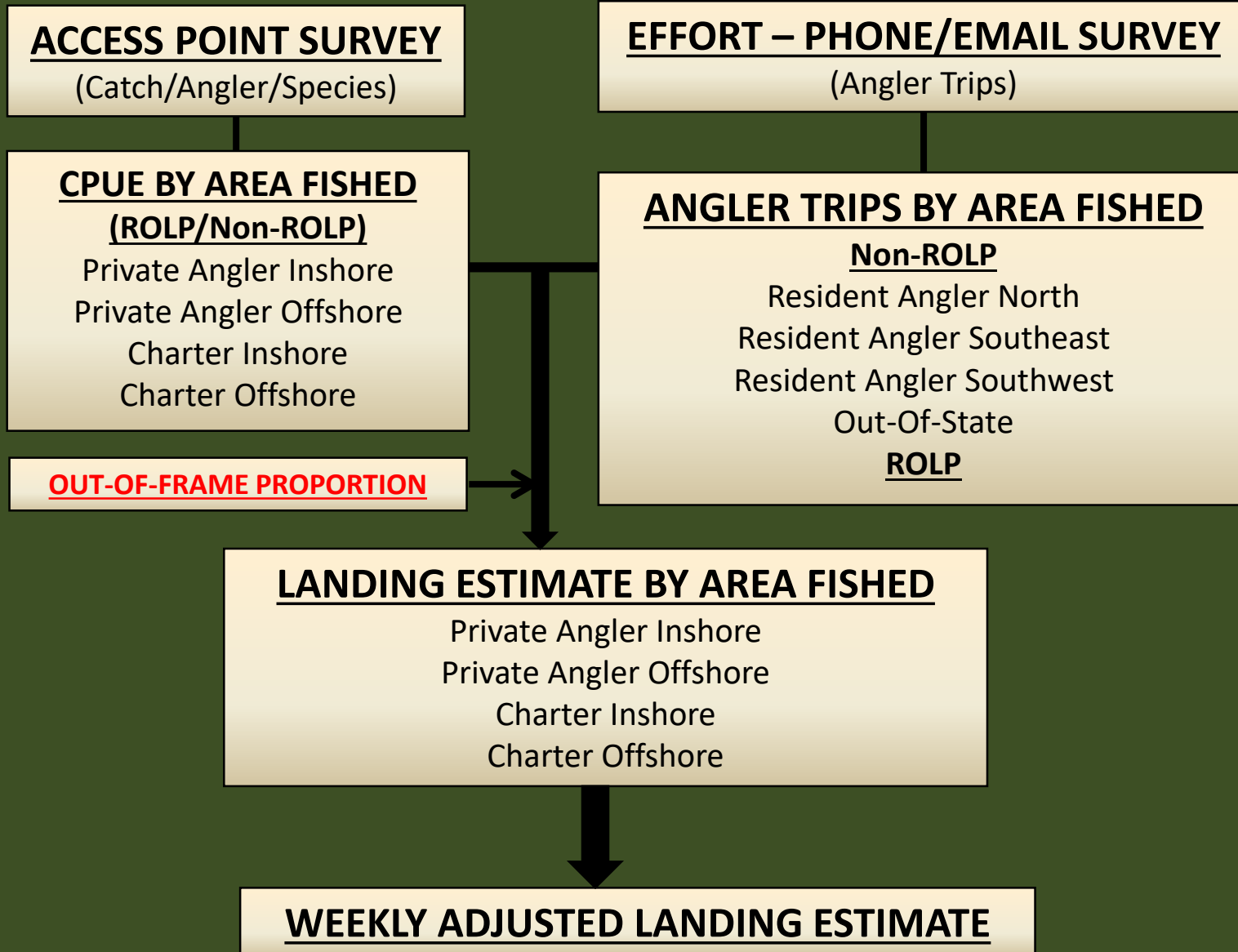
Private Angler Weekly Draw			
Region	# Drawn	# In Frame	
ROLP	*400	23,768	
Out of State	300	26,618	
Louisiana Resident			
	North	300	86,167
	South East	300	242,599
	South West	300	124,502
Total		1,600	503,654
*800 Red Snapper EEZ Season			
Taken during the last period of the 2018/2019 season in period 26			

Charter/For-Hire Weekly Draw		
	% Drawn	# In Frame
ROLP	*30%	190
Non-ROLP	10%	726
*100% of ROLP drawn during the Red Snapper Season		
Taken during the last week of 2018 period 52		

Completed Surveys				
Mode	Dockside Trips Surveyed		Effort Survey Contacts	
	2018	2019	2018	2019
Charter Boat	2,308	2,263	3,759	3,760
Private/Shore	9,101	8,635	52,602	55,986
Total	11,409	10,898	56,361	59,746



LA Creel Landing Estimate Calculation



Timeline of Estimates

- Effort Survey for the previous week (week 0)
- Monday (Week 1) – List of Random Private Anglers sent to SCPDC and Charter Captain List sent to Coastal Study Areas for effort survey of previous week (Week 0)
- During Week 1 Access Point Survey Data is being Quality Controlled and Finalized for Week 0.
- Monday Afternoon (Week 1) – Effort E-mails sent to Anglers and Captains.
- Wednesday through Weekend (Week 1) – Effort phone calls conducted if E-mail survey not completed.



Timeline of Estimates (con't.)

- Tuesday (Week 2) – Effort phone call and e-mail data is received at LDWF from SCPDC.
- Tuesday - Thursday (Week 2) – Further QA/QC of dockside access point and effort data occurs. Estimation programs are run.
- Thursday (Week 2) Estimate is generated for Week 0 fishing.
- Weekly estimates are provided but are for the fishing week from 2 weeks prior.
- In time sensitive situations the timeline does have some flexibility.

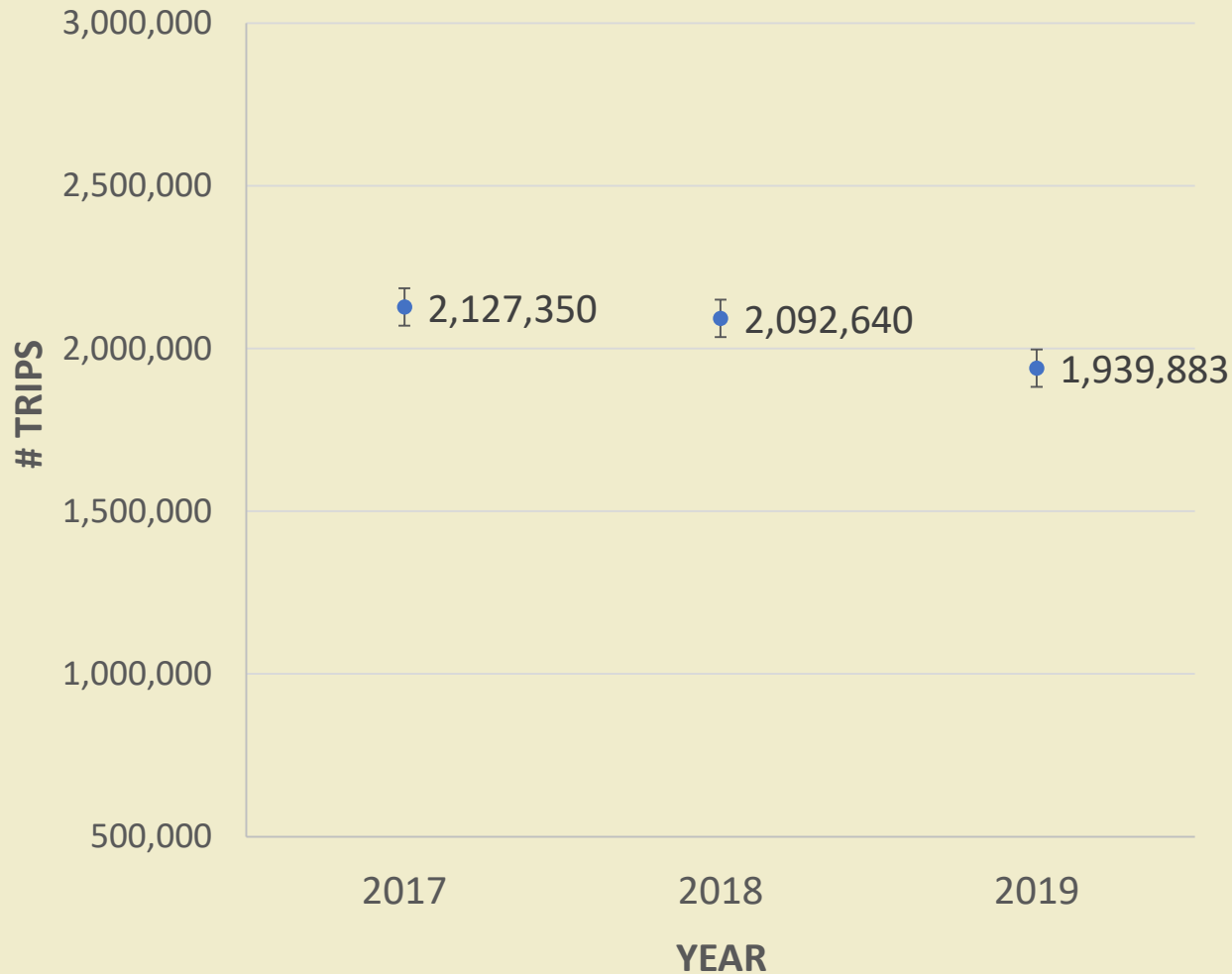
Example

- A red snapper landed during the week of May 25 through May 31st is available in our estimates produced on June 9.



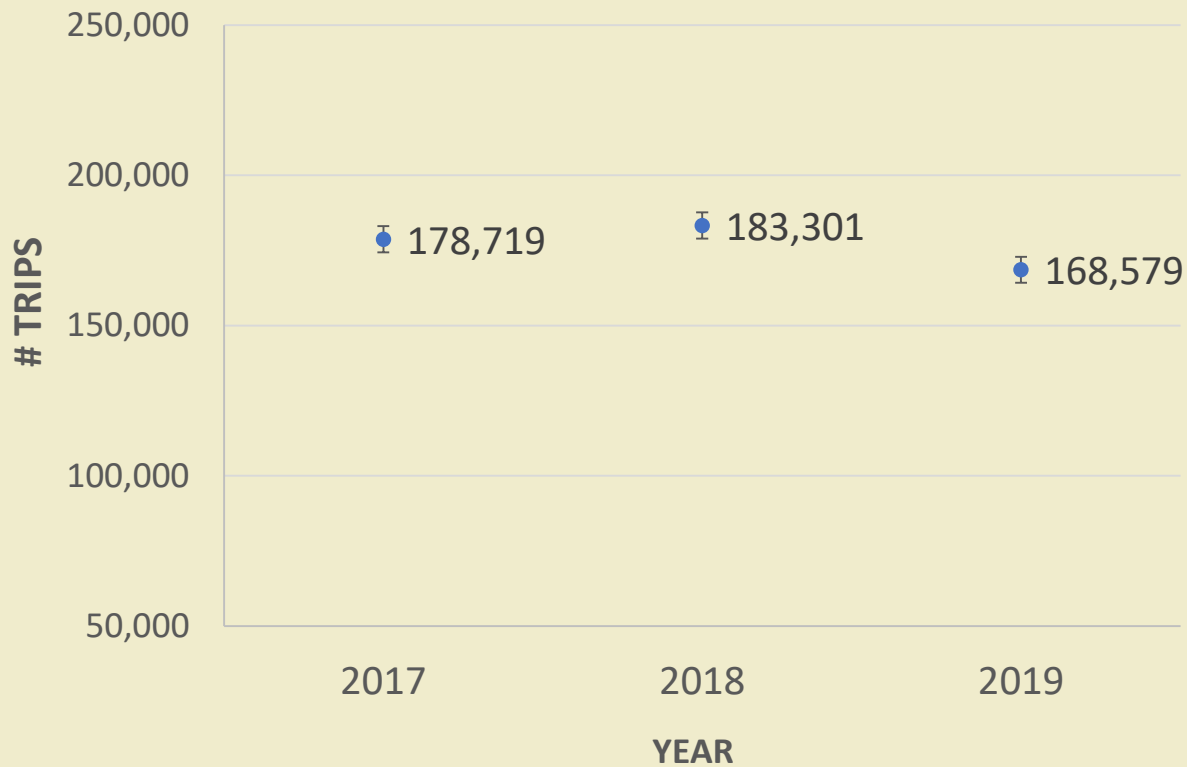
Angler Trips By Year

LA Creel Estimated Angler Fishing Trips by Year
(Private Angler)



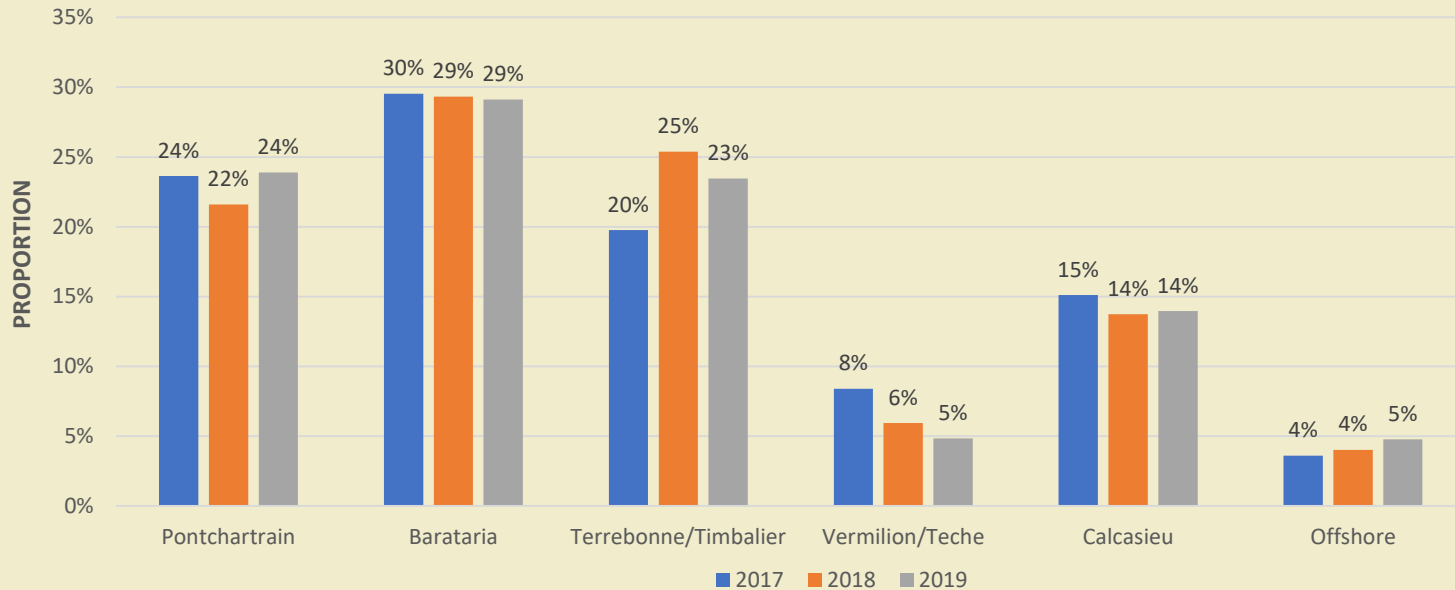
Angler Trips By Year

LA Creel Estimated Angler Fishing Trips by Year
(Charter)



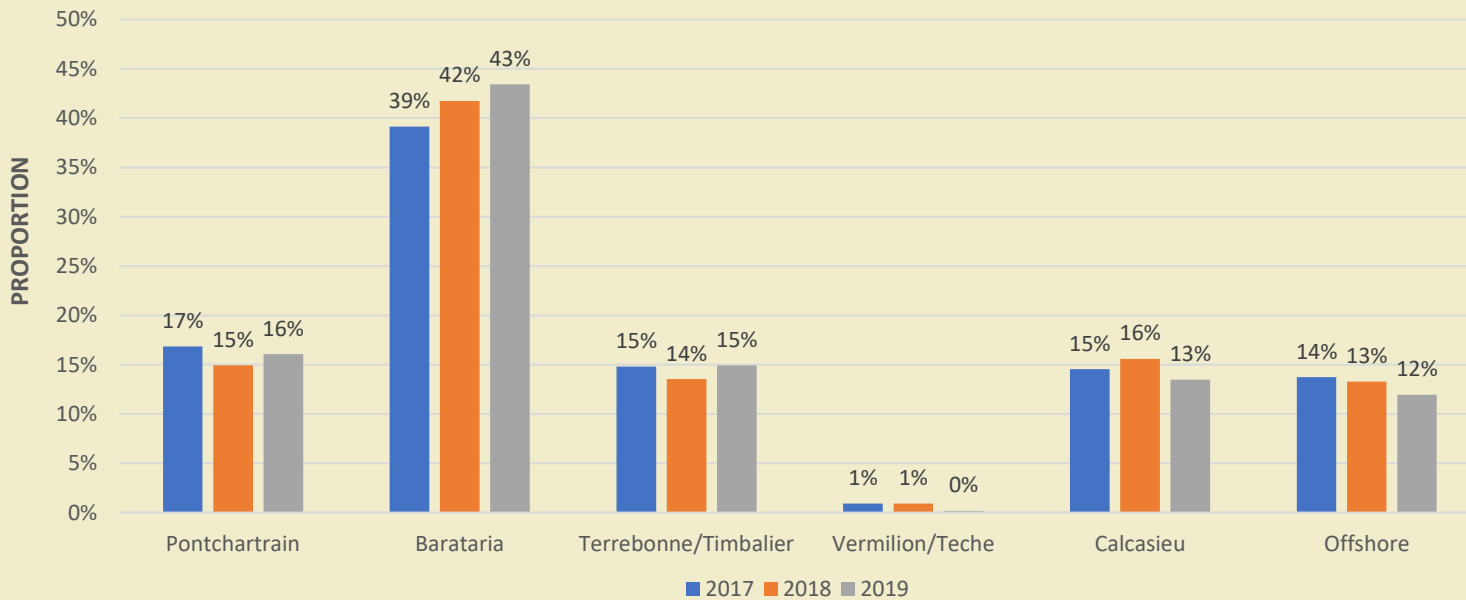
Proportion of Private Trips By Basin

Proportion of Private Angler Trips Taken By Basin
(LA Creel Effort Survey)



Proportion of Charter Trips By Basin

Proportion of Charter Angler Trips Taken By Basin
(LA Creel Effort Survey)



Trips Surveyed

Charter Boat				
Area Fished	2018		2019	
	# of Fishing Trips Surveyed	% Area Fished	# of Fishing Trips Surveyed	% Area Fished
State Territorial Waters	1,714	74%	1,730	76%
Federal EEZ Waters	594	26%	533	24%
Total	2,308	100%	2,263	100%

Private Angler				
Area Fished	2018		2019	
	# of Fishing Trips Surveyed	% Area Fished	# of Fishing Trips Surveyed	% Area Fished
State Territorial Waters	8,421	93%	7,986	92%
Federal EEZ Waters	680	7%	649	8%
Total	9,101	100%	8,635	100%

Total Trips Surveyed	11,409		10,898	
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Interviews Completed

	Completed Interviews	Refusals	Incomplete Cards Given	Incomplete Cards Returned
2018	11,649	188	417	60
2019	11,042	271	295	45



Landings Estimates

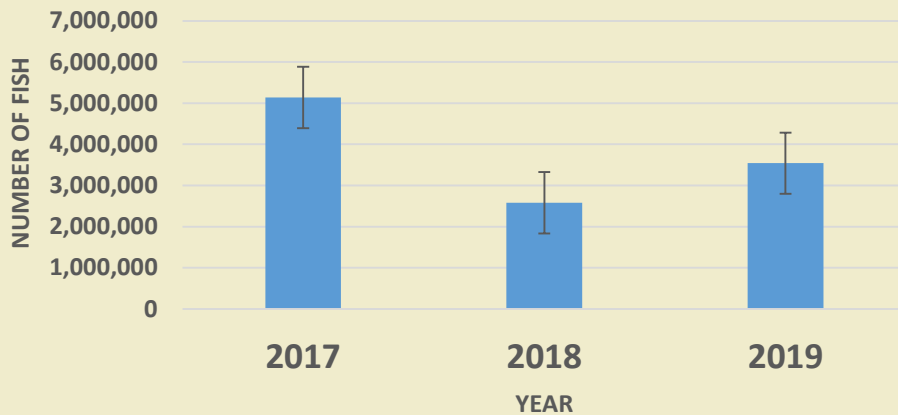
Inshore Species			
	2017	2018	2019
	# Fish Land	# Fish Land	# Fish Land
Spotted Seatrout	5,135,729	2,577,106	3,541,643
Red Drum	1,642,516	1,977,147	1,224,198
Sheepshead	552,381	307,765	399,492
Sand Seatrout	359,036	425,375	313,727
Largemouth Bass	215,633	160,907	130,433
Atlantic Croaker	149,741	134,050	86,495
Black Drum	142,565	147,459	120,664
Southern Flounder	93,667	64,528	102,900
Blue Catfish	73,191	32,504	83,306
Gafftopsail Catfish	30,379	102,288	30,610

Offshore Species			
	2017	2018	2019
	# Fish Land	# Fish Land	# Fish Land
Red Snapper	118,125	101,068	123,140
Grey Snapper	79,502	74,569	84,304
Yellowfin Tuna	22,961	5,669	4,813
Blackfin Tuna	15,134	11,831	7,353
Dolphin	9,642	11,829	36,317
Vermilion Snapper	6,488	14,130	32,446
Cobia	5,581	6,942	5,700
Greater Amberjack	404	10,223	5,924

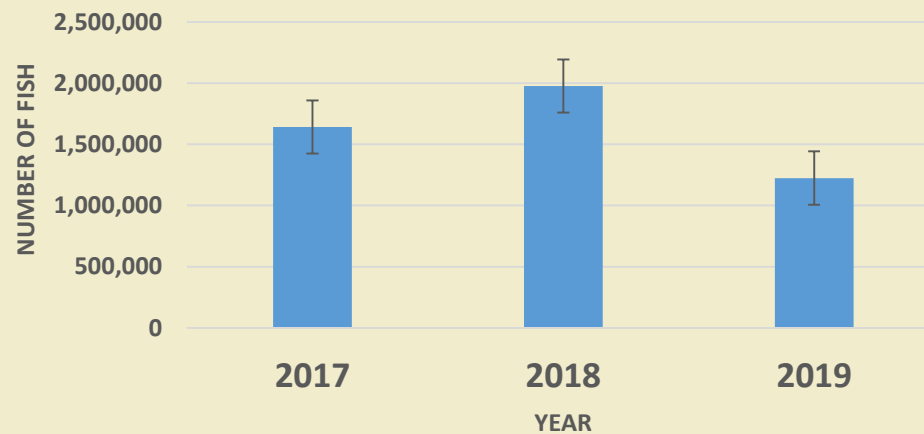


LA Creel Estimates

**STATEWIDE LANDING ESTIMATES (95% CL)
SPOTTED SEATROUT**

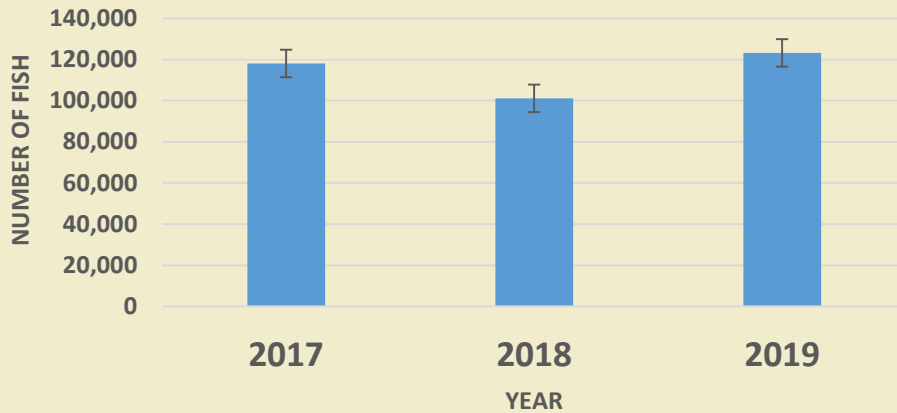


**STATEWIDE LANDING ESTIMATES (95% CL)
RED DRUM**



LA Creel Estimates

**STATEWIDE LANDING ESTIMATES (95% CL)
RED SNAPPER**

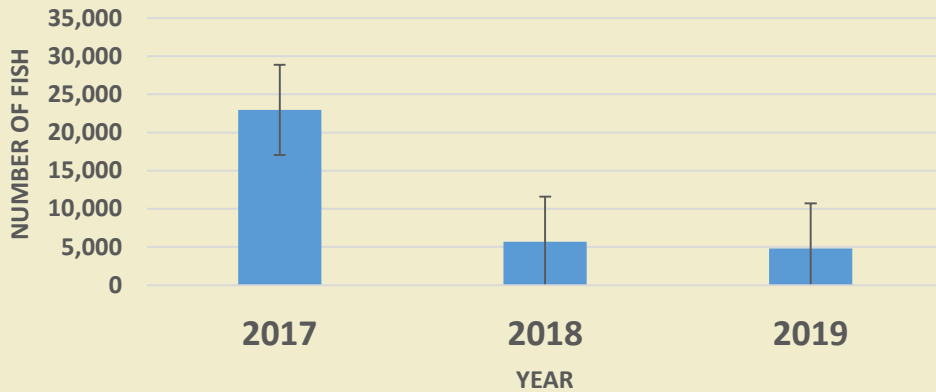


**STATEWIDE LANDING ESTIMATES (95% CL)
GRAY SNAPPER**

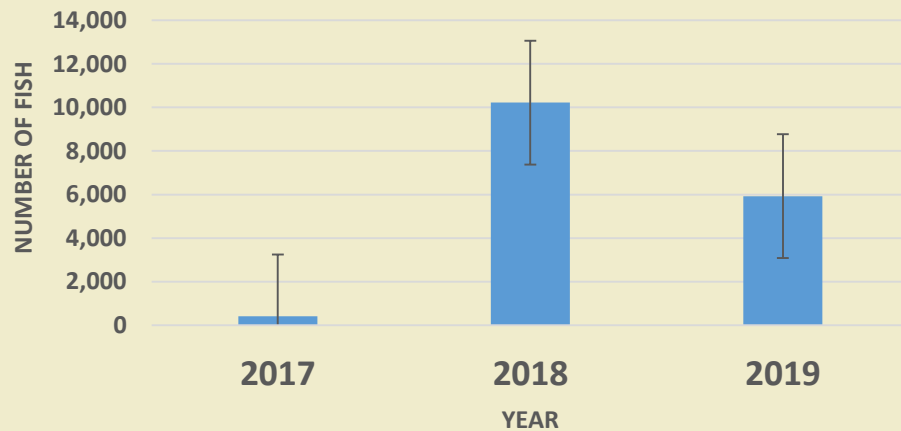


LA Creel Estimates

**STATEWIDE LANDING ESTIMATES (95% CL)
YELLOWFIN TUNA**

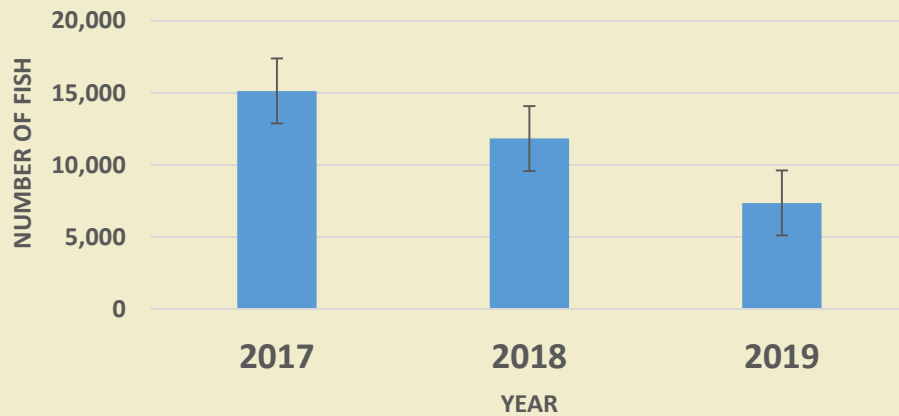


**STATEWIDE LANDING ESTIMATES (95% CL)
GREATER AMBERJACK**

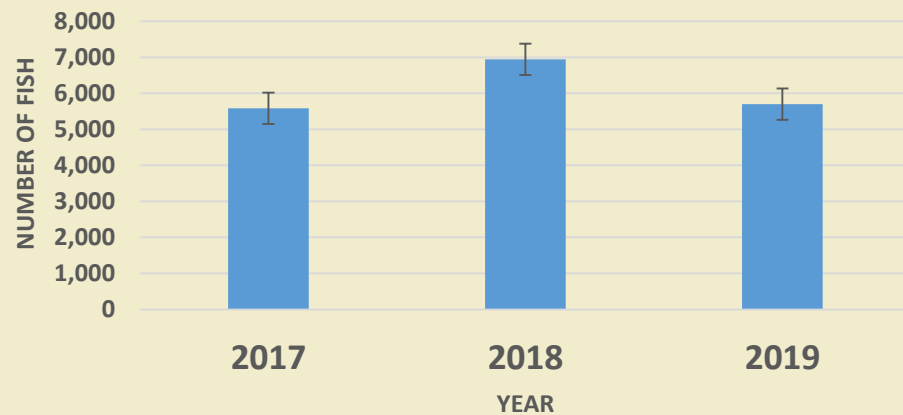


LA Creel Estimates

**STATEWIDE LANDING ESTIMATES (95% CL)
BLACKFIN TUNA**



**STATEWIDE LANDING ESTIMATES (95% CL)
COBIA**

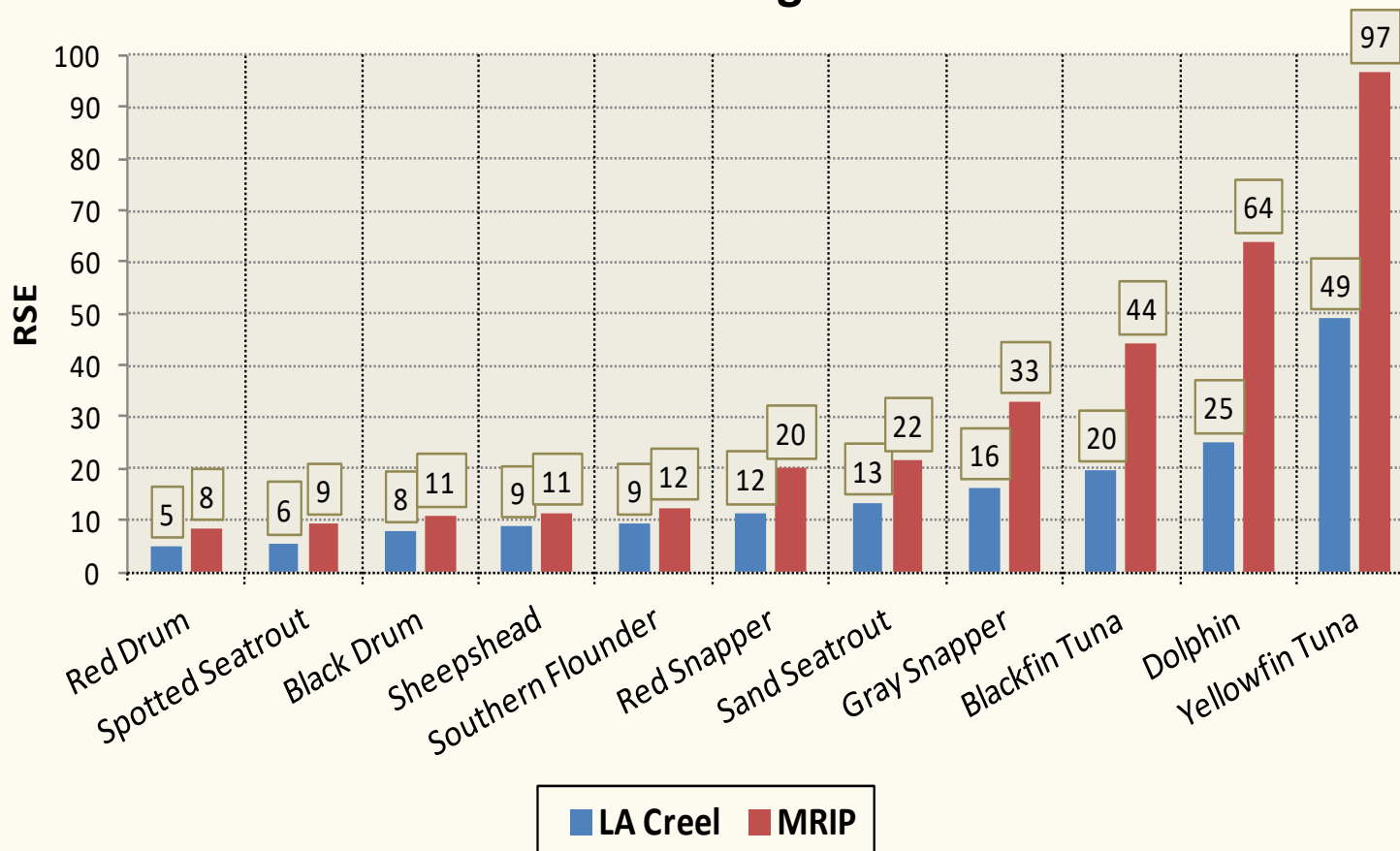


2015 LA Creel and MRIP

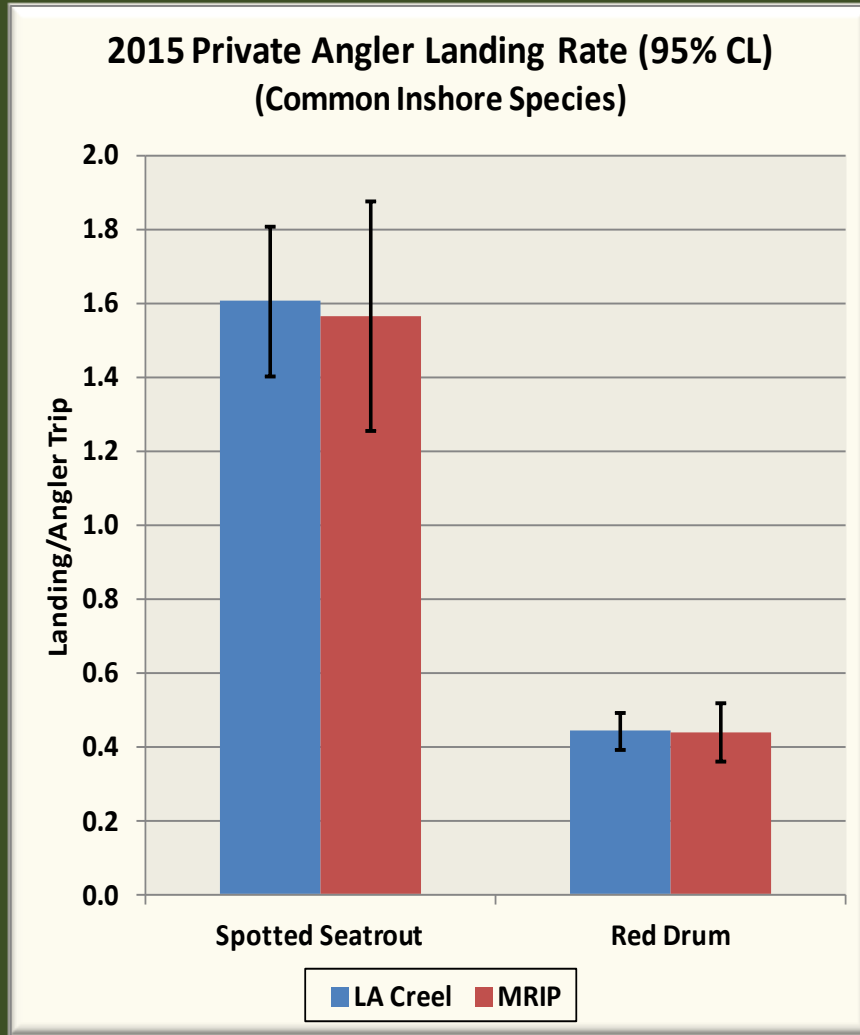


Benefits to Stratified Offshore Sites & ROLP

Relative Standard Error of 2015 Landings Private Angler

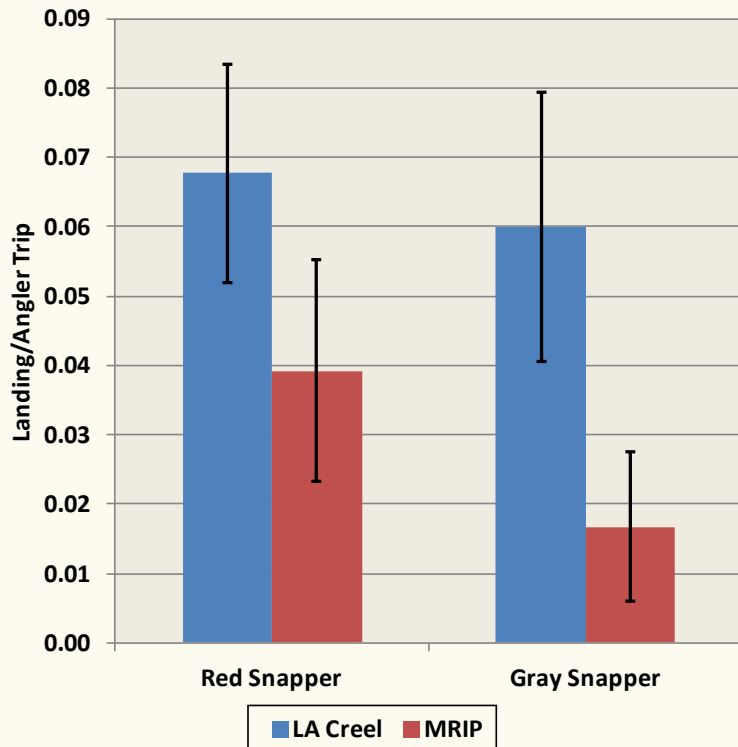


LA Creel Inshore Species

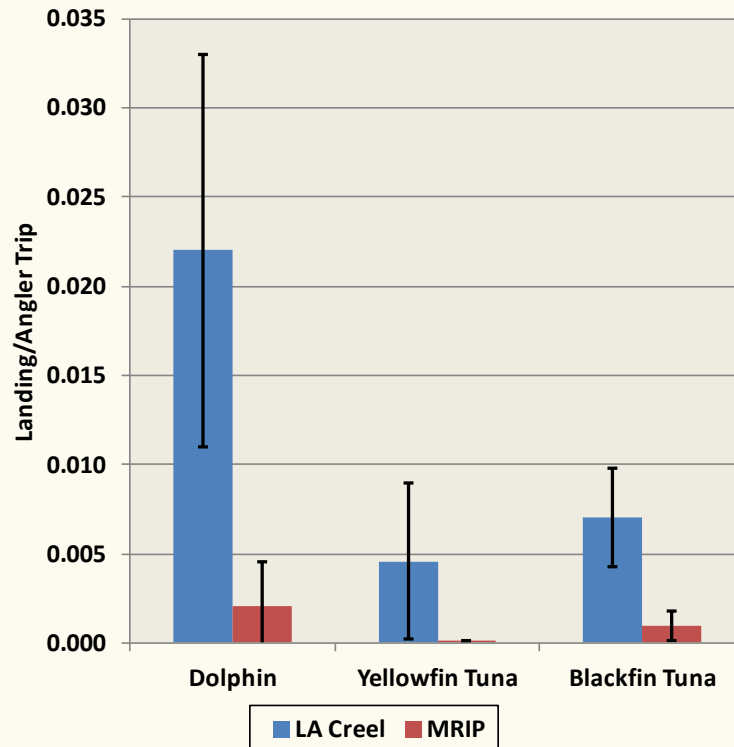


LA Creel Reef Fish and Highly Migratory Fish

2015 Private Angler Landing Rate (95% CL)
(Offshore Reef Fish Species)

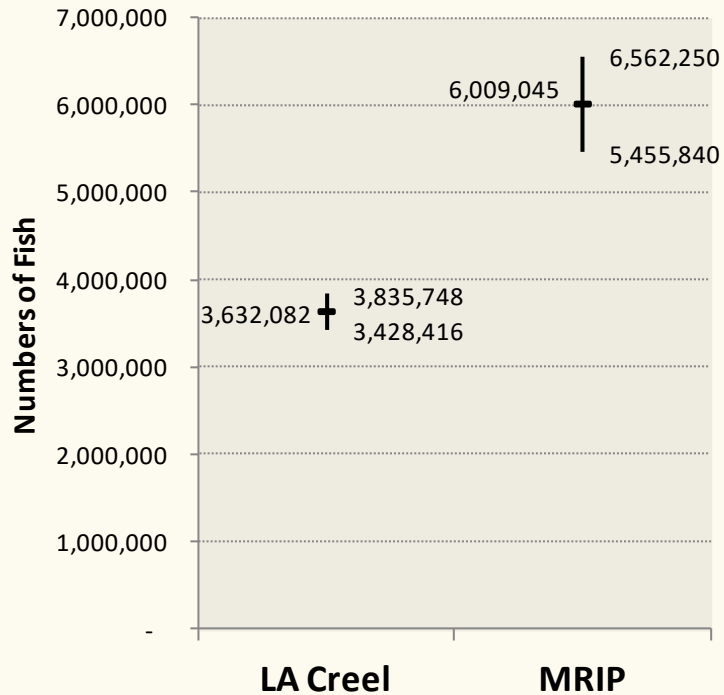


2015 Private Angler Landing Rate (95% CL)
(Offshore Highly Migratory Species)

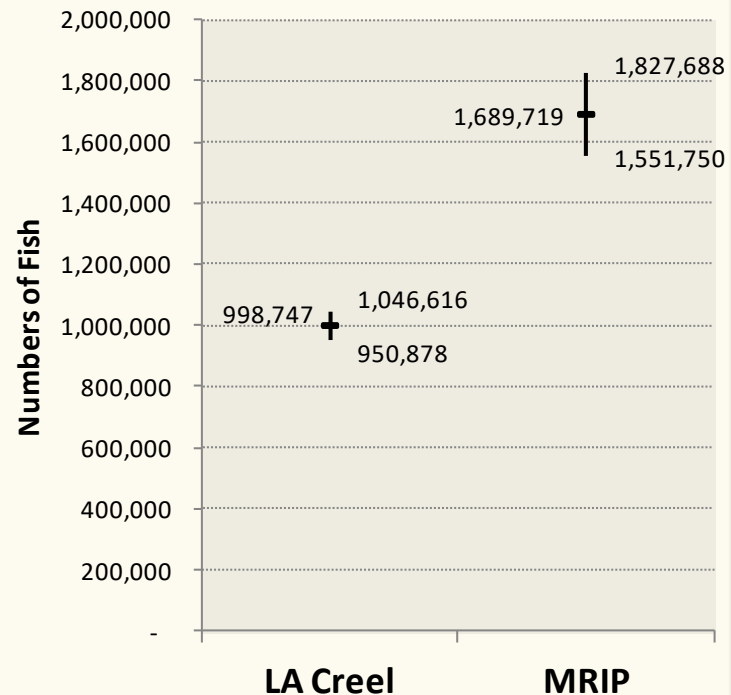


Inshore Species

2015 Spotted Seatrout Landings Private Angler

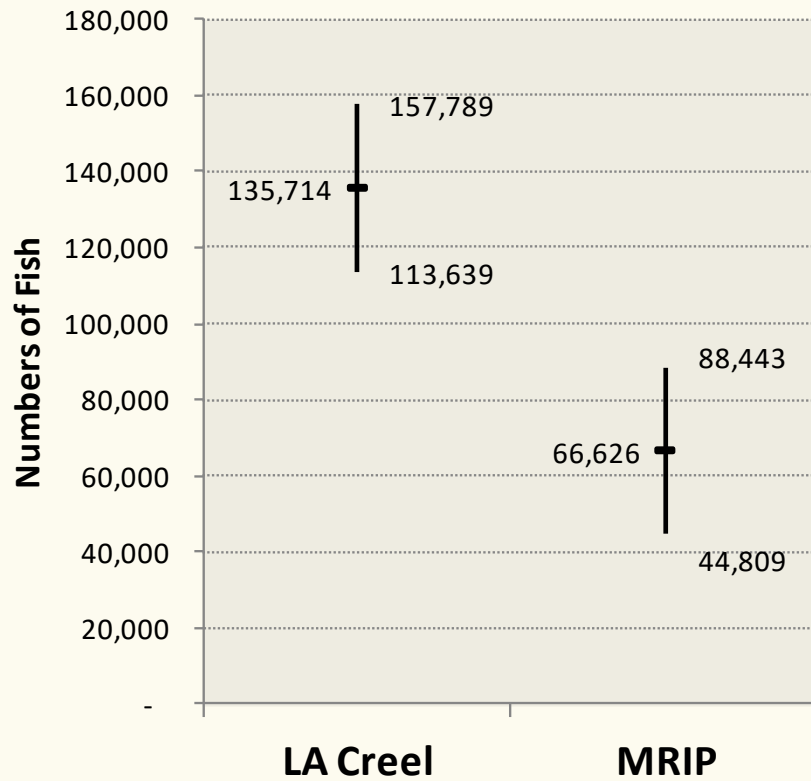


2015 Red Drum Landings Private Angler



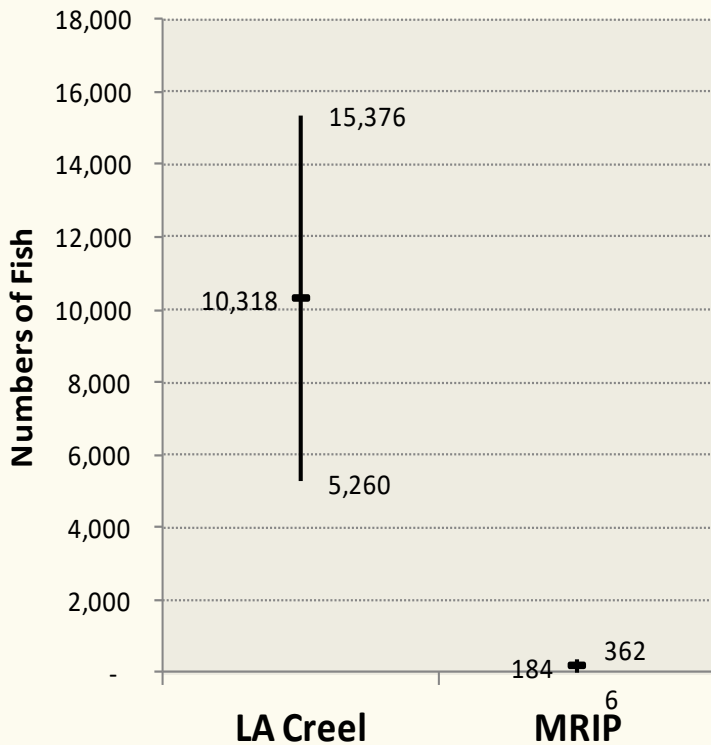
Reef Fish Species

2015 Gray Snapper Landings Private Angler

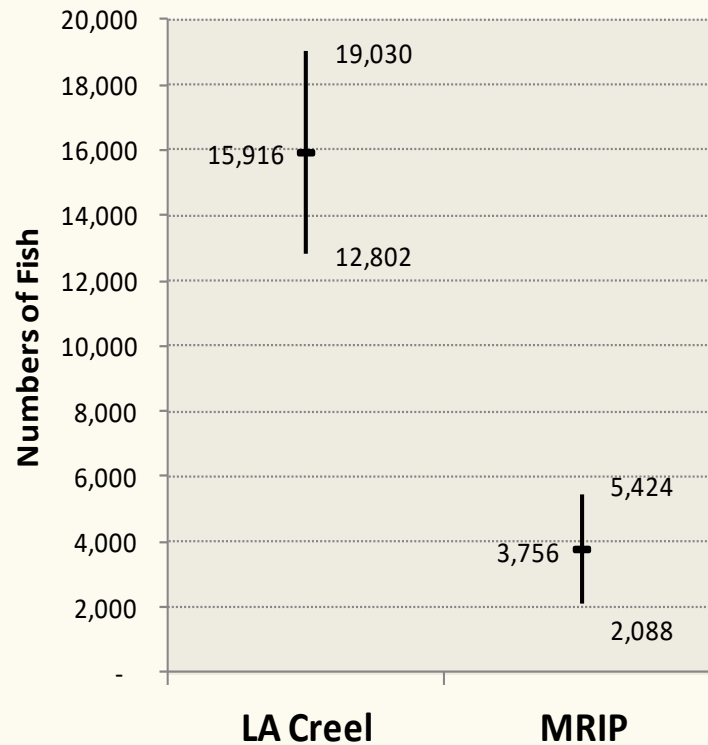


Highly Migratory Species

2015 Yellowfin Tuna Landings Private Angler



2015 Blackfin Tuna Landings Private Angler



LA Creel Survey Benefits

- Offshore and Inshore Strata provides more representative and precise landing estimates
- Saltwater licensed anglers and ROLP permittees surveyed for effort results in greater precision and provides efficiency in collection of estimates
- Near real-time estimates (weekly) provides timely management information
- Increased estimate precision provides confidence in estimates



LA Creel Survey Benefits

- Basin level estimates provides regional management options
- Flexible and efficient survey design
- Representative biological samples by separating biological sampling from creel survey



QUESTIONS?

