



Louisiana Recreational Statistics Program

LA Creel Survey Design

AFS Annual Meeting
Tampa, FL
August 23, 2017

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



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 phone/email survey to estimate total effort

Separate biological sampling from LA Creel recreational landing survey



ACCESS-POINT

Pressures and
Assignment Draws

Dockside Interview
Process

PRIVATE ANGLER

SW Angler Call
Process

SW Angler Call
Interview Process

CHARTER

Charter Captain Call
Draw Process

Charter Captain Call
Interview Process

DATA MANAGEMENT PROCESS

Dockside QC

SW Angler Call QC

Charter Captain
Call QC

Harvest Rate,
Compliance Estimation

Private Inshore/Offshore
Effort Estimation

Charter Inshore/Offshore
Effort Estimation

TOTAL LANDINGS ESTIMATES



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)

BASIN

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



Visualization of the Basins

- Map below shows each LA CREEL site located within each of the major basins in Louisiana.
- For purposes of LA CREEL the Mississippi River Delta Basin is lumped together with the Barataria basin.
- These basins constitute the domains for our estimates, for both dockside and telephone surveys.



Key Features of Access Point Survey

- Inshore/Offshore site stratification
- Separate biological sampling program



Inshore/Offshore Site Stratification

- Provides more representative species specific catch rates by directing access point assignments to sites with similar fishing activity
- Promotes a more efficient survey design by allowing an access point survey to be selected to focus on an activity
- Provides flexibility in site assignments that can be adjusted to improve accuracy and estimate precision



Separate Biological Sampling Program

Benefits in removing biological sampling from an access point survey

- Provides representative biological samples that are based on where a species is landed rather than where the majority of anglers land their catch
- Provides time for interviewers to survey more angler trips



Key Features of Effort Survey

- Real-time saltwater license frame
- Recreational offshore landing permit (ROLP)
- Telephone and email surveys



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

CHARTER FRAME

(Weekly)

(Random Draw of Licensed Charter Captains)

30% - ROLP**

10% - NON-ROLP

PHONE/EMAIL SURVEY

(Contracted to SCPDC)

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

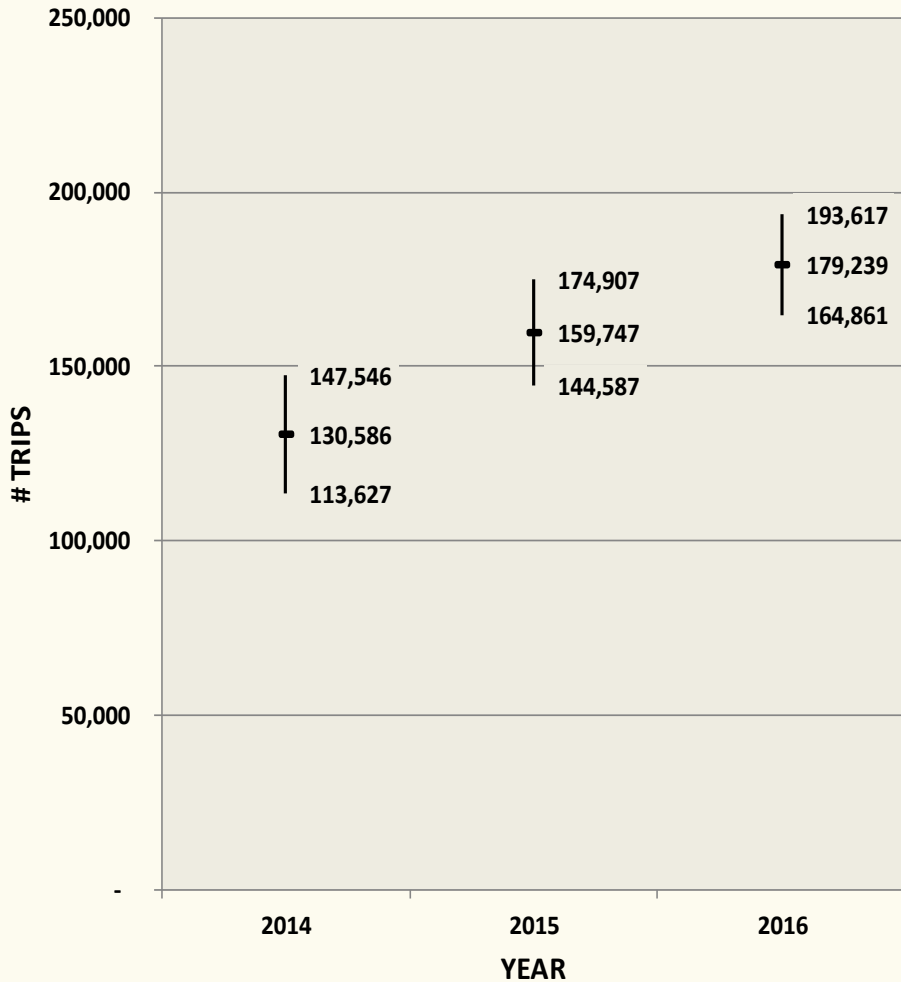
Real-time Saltwater License and ROLP Sampling Frame (Phone/Email Effort Survey)

- Provides weekly list of eligible anglers capturing spikes in license sales including trip licenses
- Provides separate sample frames for two different groups of anglers who have been shown to have differing avidities and catch rates
- Provides high level of valid contact information including email allowing a required minimum 50% contact rate for effort surveys
- Allows the survey to more efficiently target offshore effort

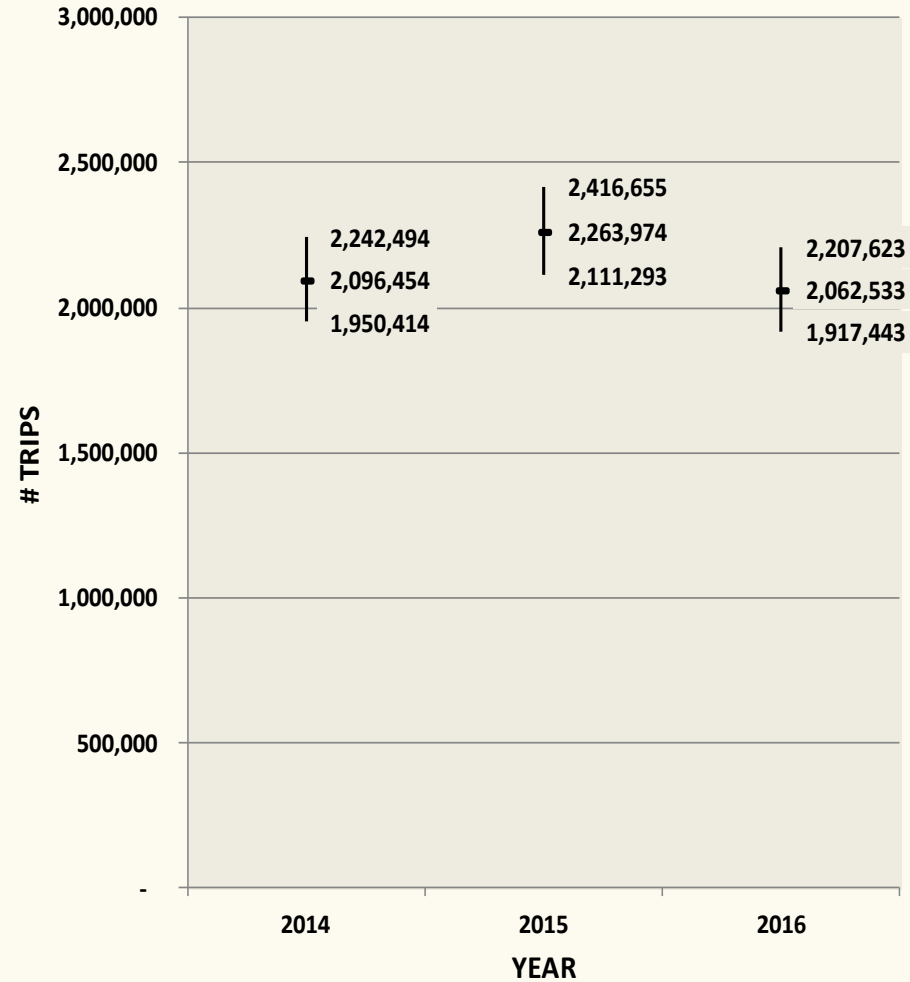


Angler Trips By Year

LA Creel Estimated Angler Fishing Trips by Year (Charter)



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

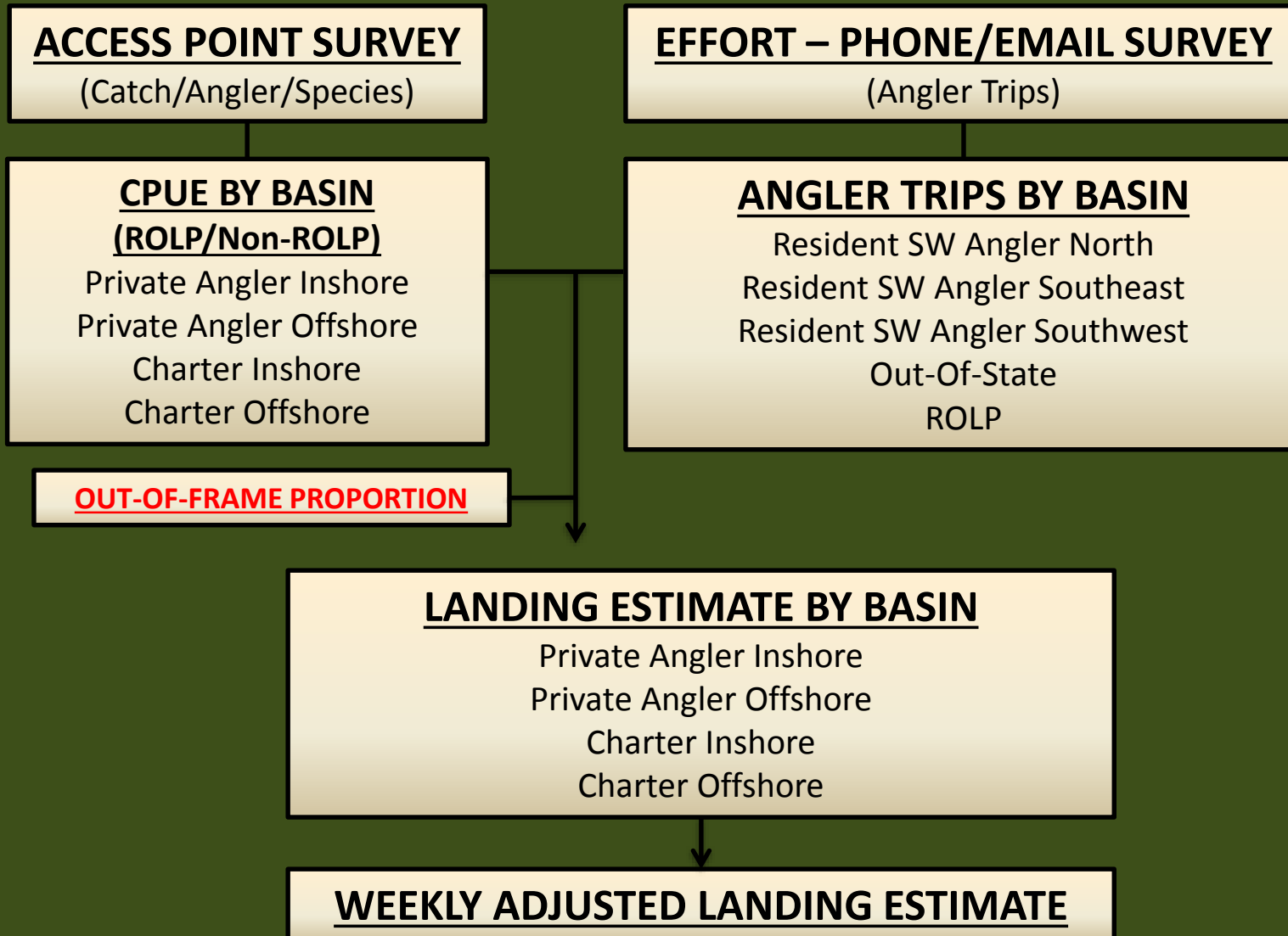


Key Features of Estimate Calculation

- Basin level estimates
- Weekly landing estimates



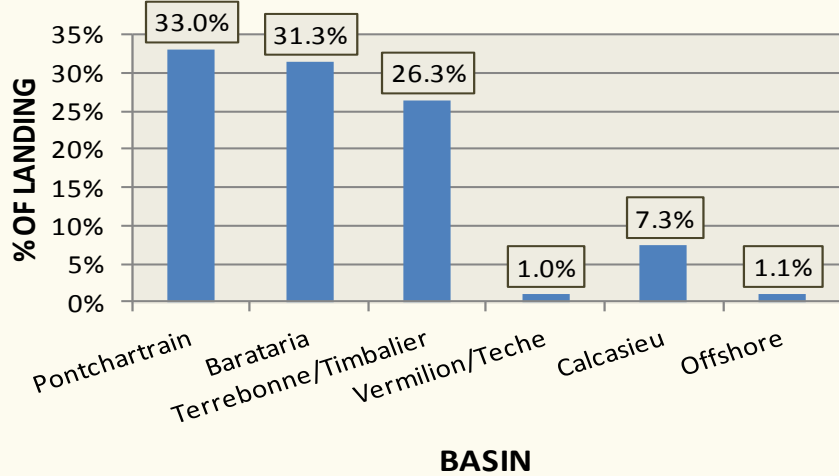
LA Creel Landing Estimate Calculation



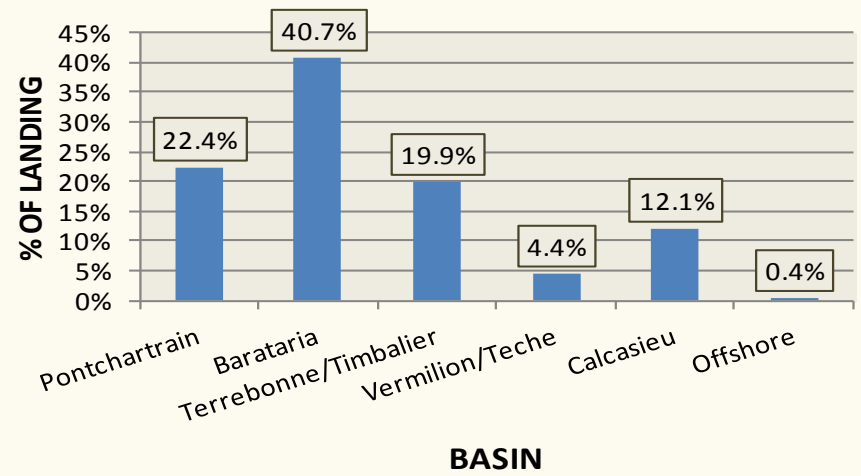
Basin Level Estimates

- provides regional management options

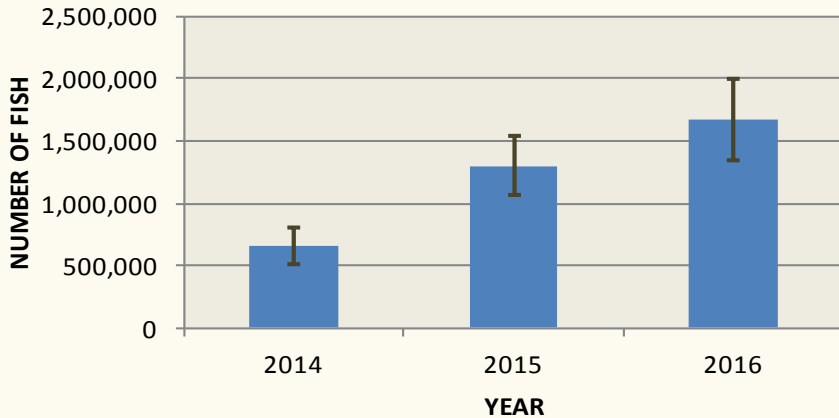
2016 SPOTTED SEATROUT (% LANDED)



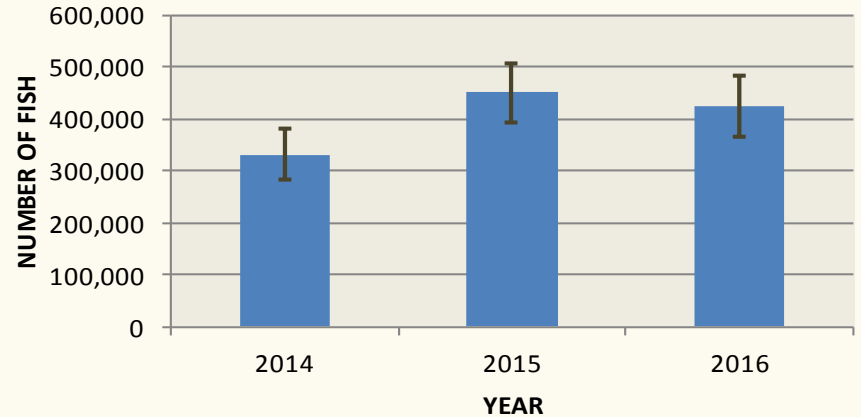
2016 RED DRUM (% LANDED)



SPOTTED SEATROUT LANDING (95% CL) BARATARIA BASIN



RED DRUM LANDING (95% CL) BARATARIA BASIN



Weekly Landing Estimates

- Provides near real-time landing estimates for in-season quota monitoring
- Improves accuracy of landing estimates by reducing recall bias
- Provides flexibility to adjust effort and access point surveys weekly (red snapper EEZ season)
- Promotes survey efficiency by targeting an event (red snapper EEZ season)



Timeline of Estimates

- Effort Survey for the previous Week
- 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

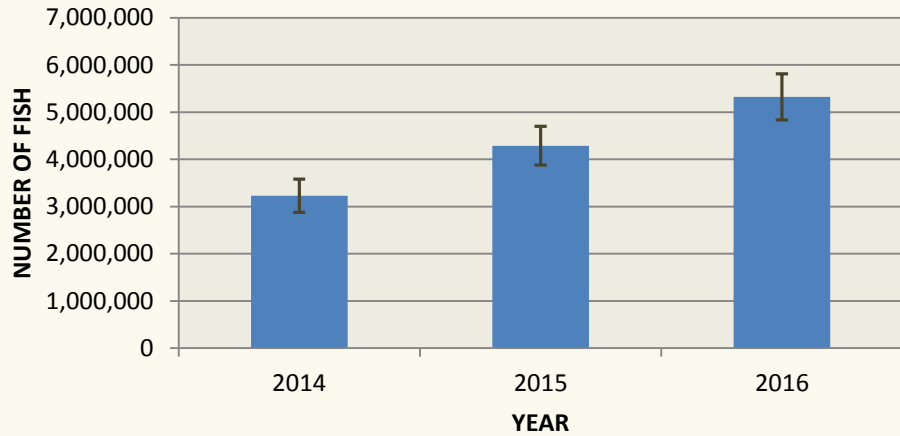
- A red snapper landed during the week of May 29 through June 4 was available in our estimates produced on June 15.



LA Creel Estimates

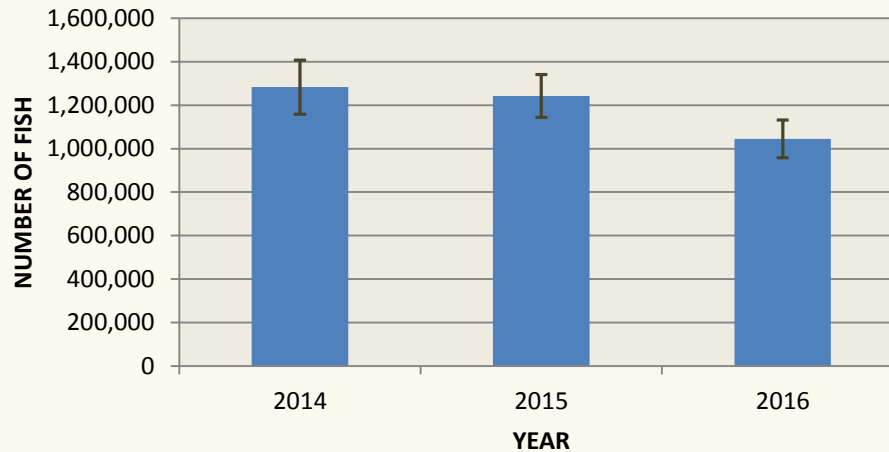
STATEWIDE LANDING ESTIMATES (95% CL)

SPOTTED SEATROUT



STATEWIDE LANDING ESTIMATES (95% CL)

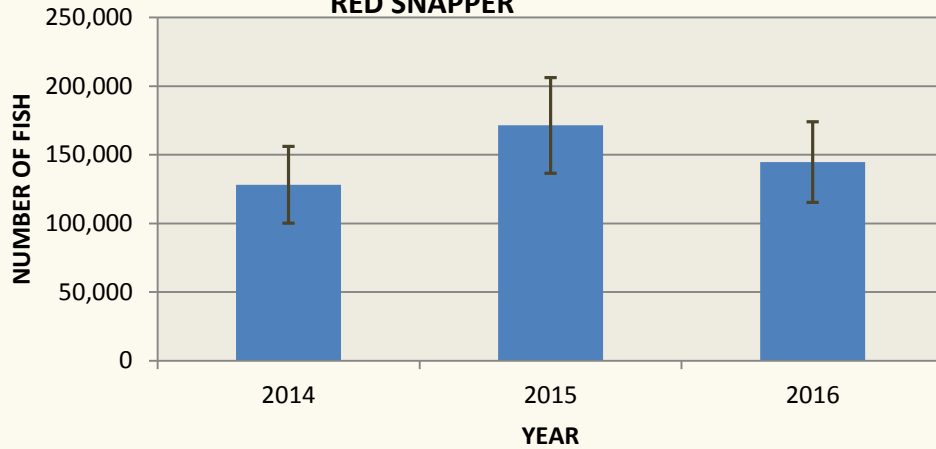
RED DRUM



LA Creel Estimates

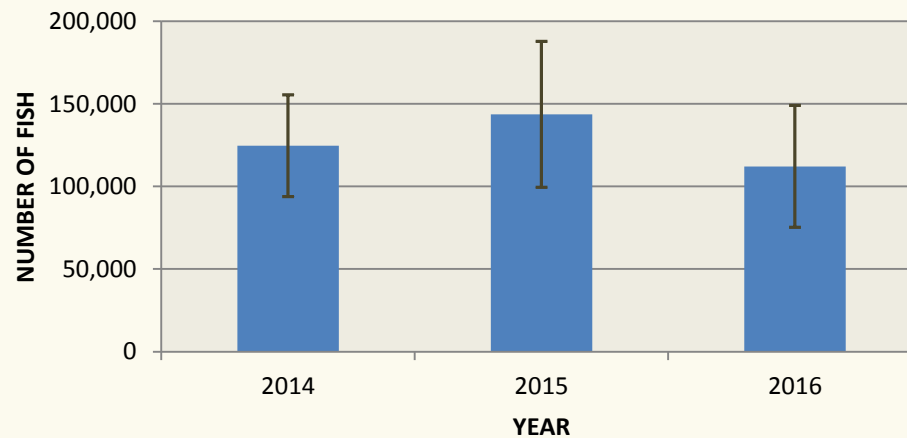
STATEWIDE LANDING ESTIMATES (95% CL)

RED SNAPPER



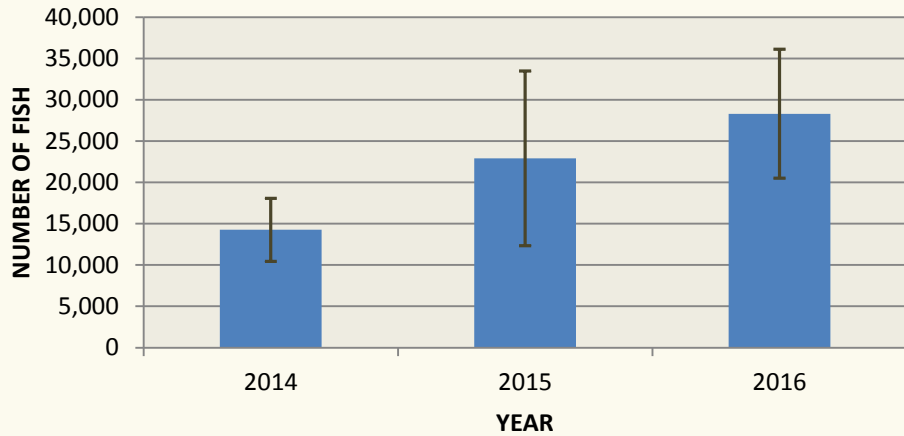
STATEWIDE LANDING ESTIMATES (95% CL)

GRAY SNAPPER

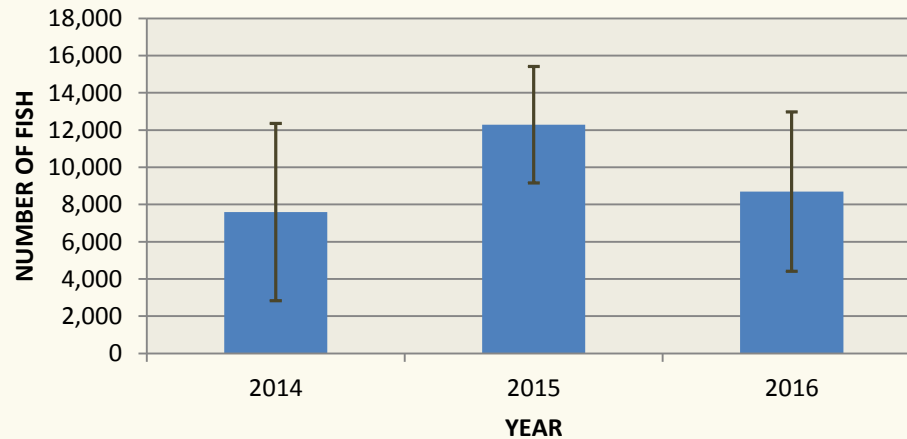


LA Creel Estimates

STATEWIDE LANDING ESTIMATES (95% CL)
YELLOWFIN TUNA



STATEWIDE LANDING ESTIMATES (95% CL)
GREATER AMBERJACK



Summary

- The LA Creel survey is based on a complemented survey design, where an on-site access-point survey is combined with off-site telephone surveys in order to calculate total landings estimates for fish species across different recreational fishing activities.
- Access point survey is primarily used to estimate harvest rates (harvest per angler trip or harvest per charter trip).
- Telephone survey is primarily used to estimate total effort (total number of angler or charter trips).
- Total landings estimates for a certain period of time are simply the product of the harvest rate and total effort values.
- 10 day turn around that creates weekly basin level estimates.





QUESTIONS?

