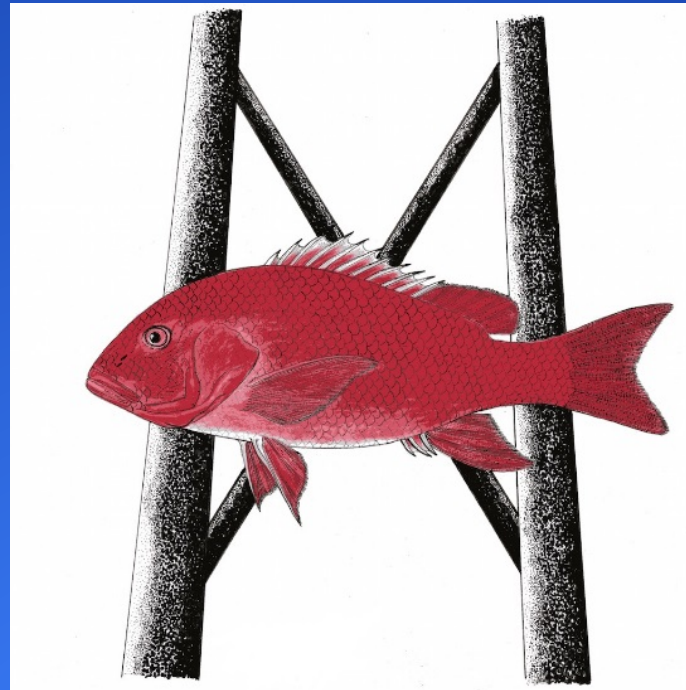




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# Tails n' Scales: Use of an Innovative Reporting System for Recreational Red Snapper Management in Mississippi



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Office of Marine Fisheries  
December 5, 2017

The logo of the Mississippi Department of Marine Resources is a circular seal. It features a central image of a fish, likely a red snapper, swimming. The words "MISSISSIPPI" and "DEPARTMENT OF MARINE RESOURCES" are written around the perimeter of the seal. There are also stars and other decorative elements.

# Recreational Red Snapper Management in Mississippi

- Important species for our coastal fishing economy
- Mississippi has a unique fishery
  - Small For-Hire fleet
  - Habitats are changing on multiple levels
  - Fishing efforts are changing on an annual basis
- Red Snapper management has and will continue to push fisheries management boundaries

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# MS Recreational Red Snapper Reporting Timeline

Mississippi began voluntary reporting of Red Snapper harvest in 2014

Mississippi's Commission on Marine Resources adopted a regulatory modification in December, 2014 requiring reporting of all Red Snapper landed in Mississippi

MDMR then contracted with a developer to create the electronic reporting system Tails n' Scales

Mandatory reporting with Tails n' Scales began in 2015

2016 Tails n' Scales: Updated system including addition of email verification, archived data available to anglers and reporting of released catch

The logo of the Mississippi Department of Marine Resources is a large, faint circular seal in the background. It features a central image of a fish (likely a red snapper) and the text "MISSISSIPPI DEPARTMENT OF MARINE RESOURCES" around the perimeter.

# Program Priorities

- Allow fishery managers to collect recreational red snapper trip reports in real time, accurately estimate annual harvest and effort
- Provide Mississippi anglers with a user-friendly and efficient way to report red snapper harvest using their smart phones, a web portal or a toll-free number
- Mississippi Department of Marine Resources is responsible for ensuring every angler can acquire a trip number 24 hours a day, 7 days a week
- Develop the system so that:
  - Anglers targeting Red Snapper must acquire a trip authorization number prior to fishing for them
  - Anglers must close their trip prior to opening a new one
  - Anglers have 24 hours to report their trip information before it expires

Tails n' Scales Free App  
(iphone and Android)

tailsnscales.org

1-844-MSSNAPP  
(1-844-677-6277)

Reporting user  
account creation  
and user data entry

Marine Patrol  
(access to trip #  
Vessel registration #)

Database  
Harvest/User/Landing  
Info

Administrator Access  
(Unrestricted)

Data Compilation  
and validations  
completed

Master Dataset  
for Analysis

Metadata for  
Validation

Reported results  
adjustments and  
Standard Error  
compilation

RESULTS

Catch, effort, total  
trips, total harvest,  
anglers count,  
habitat fished, etc.





 Email

 Password

☐ Remember Me

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[Forgot your password?](#)



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# User Profile



## Trip Close Data

Note: Fields with \* are required.

Trip Taken? ☒ Yes ☐ No

Hours Fished \*

Choose Hours Fished

Number of  
Anglers \*

1

# Red Snapper  
Harvested? \*

Fish Harvested

# Red Snapper  
Released? \*

Fish Released

Habitat Fished \*

Select Habitat Fished

**BACK**

**END TRIP**

# Admin Profile

Create New Trip

Active Trips

Completed Trips

Pending Trips

Abandoned Trips

All Trips

## Filter

Date Range

Start Date



End Date



Trip Type (Private or Charter)

-- Choose Trip Type --

Landing County

Type here to select county...

DMR

SEARCH

EXPORT TO CSV

Choose Year

2017

## Abandoned Trip Details

2 Trips 0 Fish Harvested 0 Hours 0 Anglers

Authorized Trip Number 0819178665 Abandoned



Vessel Registration Number DMRTEST! Expiration Date 08/20/2017 11:16 PM

Marina PEARLINGTON PUBLIC BOAT RAMP Landing County HANCOCK

Reason Abandoned Other

Start 08/19/2017 11:16 PM End 08/19/2017 11:18 PM



Authorized Trip Number 0601175391 Abandoned



Vessel Registration Number DMRTEST! Expiration Date 06/02/2017 08:30 PM

Marina PEARLINGTON PUBLIC BOAT RAMP Landing County HANCOCK

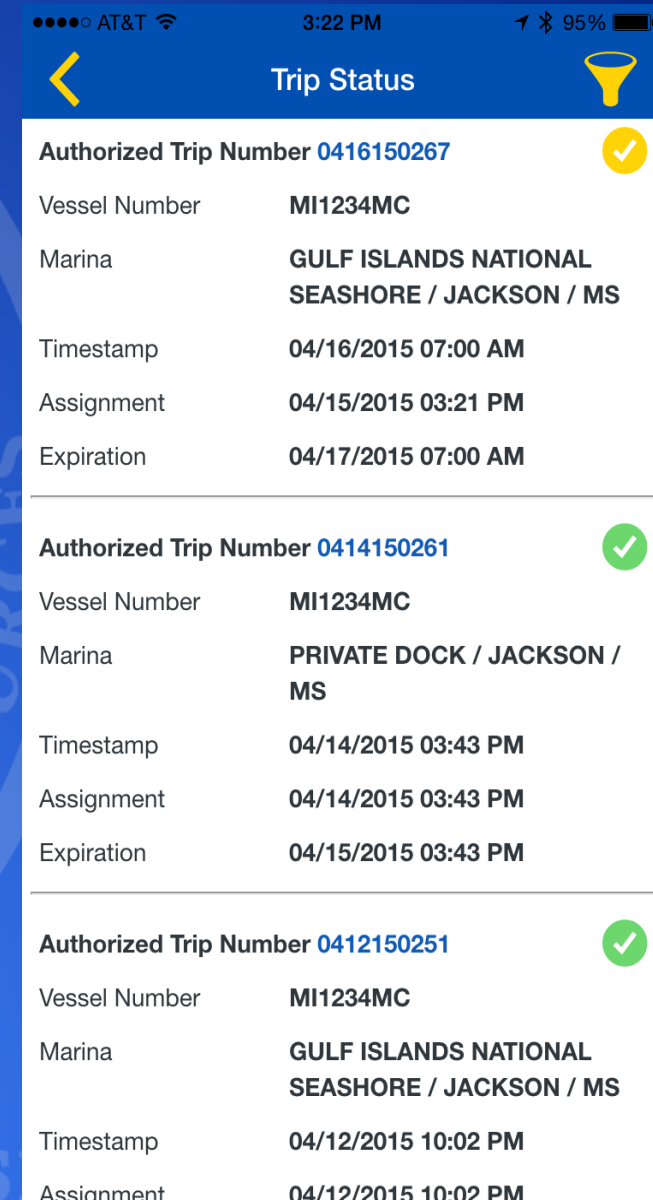
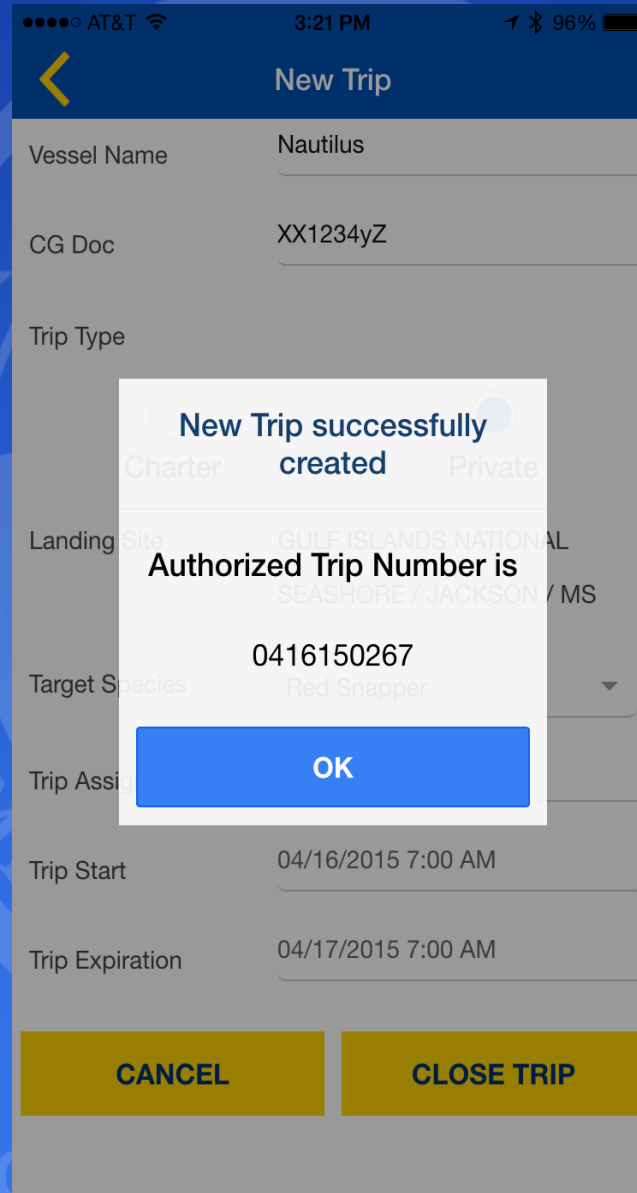
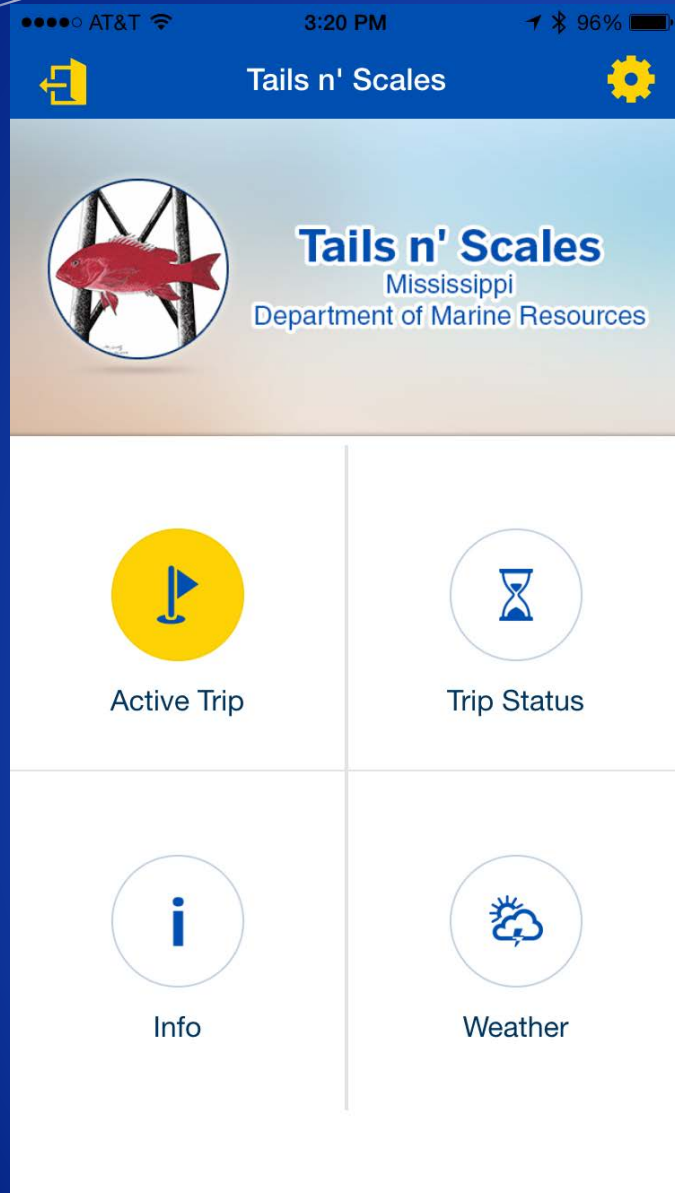
Reason Abandoned Weather

Start 06/01/2017 08:30 PM End 06/02/2017 08:47 AM





# Mobile App

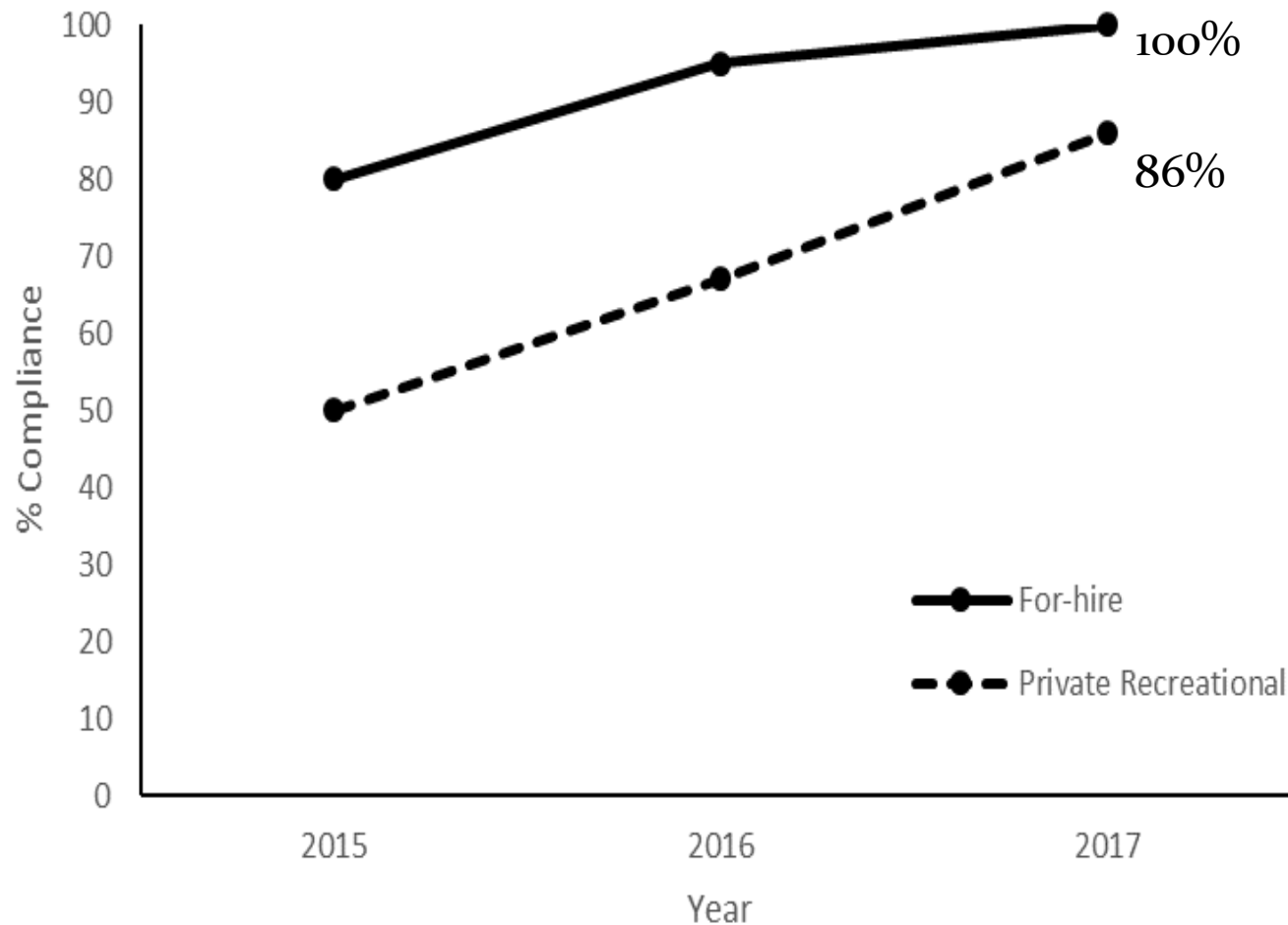


The background of the slide features a large, faint, circular logo of the Mississippi Department of Marine Resources. The logo contains a central emblem with a fish and a star, surrounded by the text "MISSISSIPPI DEPARTMENT OF MARINE RESOURCES".

# Validation

- Dockside Interviews
- Enforcement reports – method helpful to distinguish between private access and public access anglers
- E-Mail messaging and phone interviews for expired reports not completed by angler
- Optional Validation methods:
  - At-Sea Observations (Vessel and Aircraft)
  - Trailer Counts at Selected Docks

# Trip Compliance Rates



The logo of the Mississippi Department of Marine Resources is a circular seal. It features a central illustration of a fish, likely a red snapper, swimming. Above the fish is a bird in flight. The seal is surrounded by a circular border containing the text "MISSISSIPPI DEPARTMENT OF MARINE RESOURCES".

# What Is The Value Of Mississippi's Recreational Reporting System?

- Seasonal trends
- Effort analyses
- Stock assessment inputs (effort, landings, angler universe changes, biological data, etc.)
- Estimation and projection of harvest in real time
- Can be used as a float plan
- Protects Mississippi's Red Snapper resource by providing accurate and precise estimates of red snapper harvest each year
- Understanding our universe and user groups of anglers better each year

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# Electronic Reporting System

## Pros

- Potentially cost effective
- Real time management – instant access to user information
- Ease of use and easily accessible by a majority of anglers
- App customization
- Saves time, agency resources, personnel
- Prior trip authorization – allows on-the-water enforcement

## Cons

- Potentially cost prohibitive
- System problems/malfunctions
- User error – technical abilities
- Time sink – takes personnel time, agency resources away



# Electronic Reporting System

## Pitfalls

- Initial setup time – well worth the effort put into the project
- Changes/updates to existing structure
- Email validation
- Angler universe
- Season shifts and lengths
- Short-term or long-term reporting?
- Self-reported data - validations

## Cost Estimate

- Anywhere from a few thousand to several hundred thousand dollars
- Depends on:
  - Agency time and effort spent
  - Developer process
  - Multi-platform?
  - App customization
  - Expansions/Updates
  - Annual maintenance and hosting fees

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# Acknowledgements

- Mississippi Department of Marine Resources Staff
- Alabama Marine Resources Division
- Elemental Methods, LLC
- Mississippi Interactive
- Call Experts
- Mississippi Charter Captains
- Recreational Red Snapper Anglers

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