




# The Marine Recreational Information Program

## Who Decides How Many Fish I Can Catch?

Scientists, stakeholders, public officials and many others all have a hand in making recreational fishing regulations. But if you're a fisherman, the process ultimately revolves around you.

That's because of the many roles fishermen play when it comes to protecting ocean resources:

-  As an **angler**, you're on the front line of conservation. The decisions you make about when you fish and what you keep have a real impact on the resource, and on how fisheries are managed.
-  As our "**eyes and ears**" on the water, you're a major source of data. What you tell us about how often you fish and what you catch is vital information that helps us understand what's happening in the fishery.
-  As an **engaged constituent**, your input at regional meetings, through your fishing club, at Council and Commission meetings, and at public forums, ensures that recreational fishermen have a voice in the management process.

MRIP is a new tool that is helping NOAA do a better job of counting your catch, and providing new ways to ensure your catch counts.

## Where Can I Learn More?

### Program Questions

Gordon Colvin  
National MRIP  
Program Manager  
TEL: (301) 427-8118  
Gordon.Colvin@noaa.gov

### Outreach Questions

Forbes Darby  
Recreational Fishing  
Outreach Coordinator  
TEL: (301) 427-8528  
Forbes.Darby@noaa.gov

[www.countmyfish.noaa.gov](http://www.countmyfish.noaa.gov)

NOAA



# Improving the Way NOAA Counts Catch

Under MRIP, our general approach to surveying anglers will continue. However the way we collect and report that information will be different – and better.

*How will the new numbers be better?*

**They will be more accurate.** MRIP will remove the potential biases in the way we gather information, allowing for higher quality data. This is a critical improvement that will help managers better conserve ocean resources and ensure fishing regulations are fair and effective.

However, there is no way to predict how reducing the potential for bias will impact the specific estimates. Some may go up, some may go down, and some may stay virtually the same.

## Quick Guide to Estimating Recreational Fishing Activity

<p><b>1 Effort</b> <i>Number of fishing trips</i></p>  <p>Randomly selected fishermen are surveyed by phone or mail.</p>	<p><b>2 Catch</b> <i>What individual anglers caught and discarded</i></p>  <p>Shoreside samplers observe and record catch information from fishing trips.</p>	<p><b>3 Estimate</b> <i>Total number of fish caught</i></p>  $= \sum_h \frac{X_h}{X_*} \sum_i \frac{F_{hi}^{-1}}{F_{hi}^{-1}} \left( X_{hi} \left( \sum_j \frac{X_{hij}}{X_{hi*}} \hat{y}_{3hij} \right) \right)$ <p>After validating the data quality, scientists use statistical methods to make estimates.</p>
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## What's New?

MRIP is challenging the way we've done things in the past through rigorous scientific testing and evaluation of our methods.

WHAT WE'RE TESTING	WHAT WE'VE DONE IN THE PAST	WHAT WE'RE EVALUATING FOR THE FUTURE
How phone surveys are conducted.	Phone surveys were conducted using random-digit dialing of coastal households only. Lots of calls were made to non-anglers, and we never called anglers who don't live on the coast.	The new National Saltwater Angler Registry will serve as a national "phone book" of fishermen, significantly increasing our ability to target anglers directly.
Timeliness of data.	All data has been delivered to managers every two months.	We are developing survey designs that could be modified to provide more frequent updates in response to management needs.
How we measure catch per trip.	We assumed that catch sampled during peak times could accurately estimate catch across an entire 24-hour period.	We will sample sites during four specified six-hour blocks. Sampling during both peak and non-peak times will enable us to more accurately estimate catch across a whole day.
How samplers gather information.	Samplers had some discretion in which sites to go to and in what order.	Samplers will conduct interviews at a specific cluster of sites in a specific randomized order, ensuring more structured sampling and less sampler discretion.
Where samplers interview.	Samplers were directed to maximize the number of angler interviews, potentially creating a bias toward peak times and popular areas.	Samplers will now be directed to maximize the number of sites visited – including continuing to visit sites where there is no or low fishing activity – to ensure a more representative look at fishing activity across a geographic area.
When samplers conduct interviews.	Little or no sampling was done late at night.	Samplers will now work during all day parts, including at night, because the number of people fishing and what they're catching can vary greatly during different times of the day.



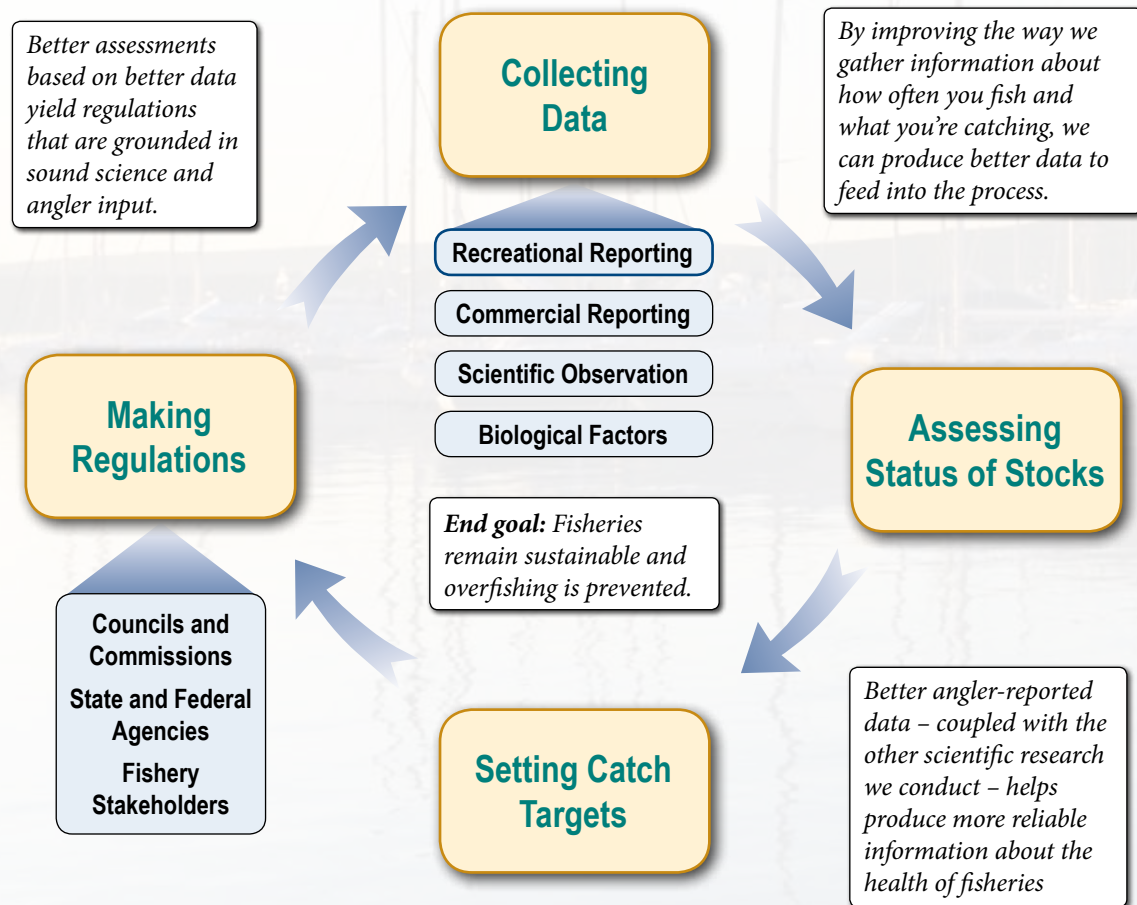
# Counting Your Catch – What Saltwater Anglers Should Know



## Doing a Better Job of Making Your Catch Count

Fisheries management decisions, like size and catch limits and the length of open seasons, are based on a continuous cycle of collecting data, assessing fishery health, setting catch targets, and making effective regulations to keep those targets from being exceeded. Our goal is to ensure fisheries remain productive – now and for generations to come.

Improvements made under MRIP have a positive ripple effect throughout the process.



## How Does MRIP Impact Fisheries Regulations?

Some level of uncertainty is a foregone part of any activity where all the variables cannot be known up front.

Just like a family may have to make hard choices in its household budgeting to respond to changing circumstances, fisheries managers often must make adjustments – sometimes very difficult ones – to regulations based on what they learn about past fishing activity as the information becomes available.

Since it's not possible to count every fish caught right as it's landed, managers have to wait until catch estimates are available before they can determine the allowable catch for any given species. If the numbers show that too many fish were caught during one fishing season, adjustments have to be made to ensure that

recreational fishing is sustainable for future seasons. MRIP will help to reduce the two kinds of uncertainties fisheries managers must consider: those inherent in the process of survey sampling, and those that result from the time required to develop estimates.

- Better methods we've implemented will make our estimates more accurate right out of the gate, improving the decision-making process.
- Gathering more data through increased telephone and intercept surveys will enhance the precision of our estimates.
- As MRIP evolves, it may be possible to shorten the time it takes to make estimates, reducing the lag time between fishing activities and management actions.

## Why Haven't I Ever Been Surveyed?

Although we talk to thousands upon thousands of fishermen each year through our surveys and dockside sampling, you may never be one of them. By its very nature, random sampling means that some people get interviewed, and some people don't.

## Can Sampling Surveys Really Produce Accurate Numbers?

With 15 million saltwater recreational anglers taking 100 million fishing trips a year, it is simply not possible to interview every angler to find out when they went fishing and what they've caught. We understand that no angler and no trip are the same. However, NOAA gets an accurate picture of an entire fishery by looking at the activities of a random sample of anglers. The same concept applies to political polling and TV ratings, or to sipping a spoonful of soup to know what the whole bowl tastes like.

## Will MRIP Look at Other Ways to Estimate Catch?

MRIP will constantly evolve. The more we learn as we make improvements to our processes, the more we'll know moving forward what types of changes have the most impact. That knowledge in turn will fuel new ideas, new studies, and ultimately new solutions.

## Have Fishermen Been Part of the Process?

Recreational fishermen have played a major role in developing and implementing MRIP. The MRIP team includes charter boat operators, fishing club leaders, recreational fishing advocates and fishing conservation groups working side-by-side with Council and Commission staff, marine scientists, state and federal workers, and many others to build MRIP from the ground up.