

## Recreational Fisheries Information Network (RecFIN)

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**MRFSS.** The Pacific States Marine Fisheries Commission (PSMFC) commenced a coordinated effort with NMFS and its member states of California, Oregon and Washington to conduct a comprehensive marine recreational fisheries survey in July, 1979. The survey methodology was developed by NMFS and is called the Marine Recreational Fisheries Statistics Survey (MRFSS). The MRFSS samples 12 months of the year in all fishing modes (shore, private/rental boats, and party/charter boats). The MRFSS currently is still being conducted annually on the Pacific, Atlantic and Gulf coasts. The MRFSS survey methods were designed by a NMFS contractor and have been refined over time by the NMFS Fisheries Statistics and Economics Division in Silver Spring, MD. A presentation on the MRFSS methodology will be given Tuesday evening by Dr. Dave VanVorhees, NMFS Division of Fisheries Statistics & Economics, Silver Spring, MD.

The sampling design employs a two-part "complemented surveys approach." Fishing effort is estimated as to number of trips by fishing mode for each two month period throughout the year. This is accomplished by means of a random household telephone survey which is conducted in all coastal counties on the Pacific coast. Households are contacted and those with marine recreational anglers are identified. Data as to the number of trips taken by marine anglers in the household by mode of fishing is tabulated. The prevalence rate of fishing households and the average number of trips by mode is utilized to make estimates of total trips by mode for marine recreational anglers. The telephone survey is conducted nationwide by a NMFS private contractor.

The second portion of the MRFSS is a field Intercept Survey to gather data on the angler's catch. Anglers are intercepted at the fishing site. Fish retained by the angler are identified, and weighed and measured. Information on discards and angler demographic and social data is also collected. From year to year special surveys may be added to the base survey. These add-on surveys collect additional information on economics, pinniped interactions, area of catch and other data as desired. The intercept survey is conducted by the three state

fishery agencies in California, Oregon and Washington with coordination and oversight by PSMFC under a RecFIN cooperative agreement from NMFS.

In summary, the MRFSS was designed as a general overview of the complete marine recreational fishery. It estimates catch by mode, where fish retained by the angler are identified to genus and species and weighed and measured. Fish that are discarded, both dead and alive are also identified as specifically as possible. Additional parameters are also determined including number of participants; various angler demographics, economic and social data, and other biological information that may vary from year to year. The sampling unit is the individual angler trip.

**State Recreational Sampling.** Various types of state recreational fishery sampling programs date back many decades. From the beginning of the MRFSS in 1979, those components of the marine recreational fishery sampled by other state sampling programs were excluded from the MRFSS so that they were not duplicated. In each of the three states recreational fishery sampling programs have targeted primarily salmon. Over time these have evolved into more general ocean boat sampling projects, although salmon is still the core of the various sampling projects. Those components of the fishery sampled by the MRFSS together with the various state agency marine recreational sampling programs provide complete coverage of the Pacific coast marine recreational fishery throughout the year. These state sampling programs in general employ high sample sizes directed primarily at the fish caught with little if any angler or biological data collected. The sample design is generally based on the boat as a sample frame rather than individual anglers like the MRFSS.

**RecFIN.** The Recreational Fishery Information Network (RecFIN) was established in 1993. It was designed to provide a mechanism for a coordinating committee to plan for and oversee better integration of various state and federal recreational sampling programs. In accomplishing this, its purpose is to provide important biological, social, and economic data for Pacific coast recreational fishery biologists, managers and anglers. The four goals of RecFIN are:

1. Develop and implement a State/Federal cooperative program for a coastwide marine recreational fisheries data system.
2. Coordinate collection, management, and dissemination of Pacific coast marine recreational fishery data.
3. Provide the data in a central location on a timely basis in the format needed to support state and federal work on Pacific marine recreational fisheries.
4. Reduce and avoid duplication of data collection efforts between RecFIN members.

The centralized RecFIN database was established in 1996. It currently resides and is accessible on the Pacific States Marine Fisheries Commission's web page at: [www.psmfc.org/recfin](http://www.psmfc.org/recfin). Recreational catch and effort data from 1980 to present is currently available on the RecFIN web site.

**RecFIN & Management Needs.** During the past year, RecFIN has worked with the PFMC Groundfish Management Team (GMT) to provide the team with recreational catch data. The MRFSS, which is the core of the RecFIN database, was designed as an overview survey and as such its methods do not easily lend themselves to providing catch estimates for short time frames or small geographic areas. With management needs for recreational groundfish data increasing, RecFIN and the states are considering whether sampling programs should be modified to better meet increasing management needs. As part of this process, RecFIN is evaluating sample data needs and better integration of state and federal sampling programs under the RecFIN umbrella. To make this process as productive as possible, RecFIN needs guidance from the Council and GMT as to what data elements and catch and effort products are most needed for management purposes. Data currently collected by state sampling programs and the MRFSS is summarized in the attached table.

**RecFIN Restructuring Plan.** The current MRFSS methodology and sample size in the Pacific telephone survey is limited in its ability to meet management needs. It is unable to provide catch and effort estimates by the current coastal management areas. It is also limited in its ability to provide in season estimates of catch and effort for time periods finer than an annual basis.

The PSMFC and the state agency members of RecFIN are committed to achieving within three years state and federal recreational sampling that is more fully integrated under RecFIN. The primary goal of this better integration would also include a better standardization of data elements in both state and federal field sampling programs. It would also work to achieve a means to produce fishery statistics that meet both state and Council management needs. This process is being led by PSMFC and is currently underway. Meetings on this task were held in April and May. This topic will also be discussed by the RecFIN Committee at their next meeting on July 27, 1999. The RecFIN Committee is making an official request to the PFMC and its GMT as well as other management teams to provide RecFIN with its desired recreational fishery data needs for the currently evolving management options including any allocation issues.

The RecFIN Committee thanks the Council for this opportunity to present a brief status report on RecFIN and request input to our process from the Council.

## RecFIN Committee Members

<b>Russell Porter,</b>	PSMFC, Chairman
<b>Steve Crooke,</b>	CDFG
<b>Don Bodenmiller,</b>	ODFW
<b>Greg Bargman,</b>	WDFW
<b>Steve Freese,</b>	NMFS/NWR
<b>Svein Fougner,</b>	NMFS/SWR
<b>Cindy Thomson,</b>	NMFS/SWFSC
<b>Cara Campbell,</b>	NMFS/NWFSC
<b>Dave VanVorhees,</b>	NMFS/Headquarters
<b>Jim Seeger,</b>	PFMC

# Recreational Fishery Sampling Project Data Coverage in California, Oregon and Washington

Holes or mismatches in data requests at PSMFC's RecFIN database by sampling project

**Data Element or Analysis**      **MRFSS**      **CA Salmon**      **OR OSM**      **WA OSP**      **Notes**

## PFMC DATA REQUESTS

Regional estimates	2	0	1	1	2 = Columbia river not separate in MRFSS
County level estimates	2	1	1	1	2 = variation in annual estimate is large
Monthly estimates	0	1	1	1	MRFSS estimates every two months
Target species estimates	1	0	2	2	2 = lumped by trip type
Residence county estimates	1	0	0	0	
Species of catch estimates	1	2	2	1	2 = lumped by fishery or subsampled
Weight of catch estimates	1	0	0	0	
Bycatch (discard) estimates	1	2	0	0	2 = lumped into taxonomic groups
Bycatch (returned alive) estimates	1	0	0	0	
Measure of variation in estimate	1	0	0	1	
Length distribution for a species	1	0	0	0	
Total estimates (including inland marine)	1	0	0	0	

## NMFS DATA REQUESTS

Seal or sea lion interactions	1	0	0	0	
Economic expenditure data	1	0	0	0	
Economic value data	1	0	0	0	
Location of catch data	1	0	2	2	2 = Large port areas (OSM starting in 1999)

## STATE DATA REQUESTS

Shore modes estimates	1	0	0	0	
Port or site estimates	0	1	1	1	
Fate of catch	1	0	0	0	Eaten, used for bait, thrown back alive, etc.
Location of catch in S. California	1	0	0	0	No data before 1999 in MRFSS
Length to weight relationships	1	0	0	0	
Ethnic group of anglers	2	0	0	0	2 = Only asked in special add-on survey years
Percent fishing households by county	1	0	0	0	
Estimates of trips by distance from shore	2	0	0	0	2 = For 3 mi EEZ, not for 1 mi long-line limit
Average time spent fishing by trip type	1	0	0	0	
Catch composition of pier sites	1	0	0	0	

### Code Key:

- 1 = Data collected and available
  - 0 = Data not collected or not available
  - 2 = Data partially collected or partially available
- MRFSS** - Marine Recreational Fisheries Statistics Survey  
**CA Salmon** - CDFG Ocean boat anglers  
**OR OSM** - ODFW Ocean Salmon Management  
**WA OSP** - WDFW Ocean Sampling Program

# Pacific Coast Marine Recreational Fisheries Statistics Survey (MRFSS) Summary Statistics

*Fishing by anglers is classed by mode of angling.*

Modes of fishing covered: Number of sites: 800  
 Number by mode:  
 1) Man made 30%  
 2) Beaches and banks 37%  
 3) Party and charter boats 7%  
 4) Private and rental boats 26%



Sites by State:  
 California 57%  
 Oregon 10%  
 Washington 33%

*Site assignments are chosen one a month for each of the modes based on expected numbers of anglers or "pressure code" in each mode for weekend days or weekdays. Pressure codes are updated monthly as needed.*

1997:  
 Number of Assignments: 2,484  
 Number of site visits: 3,549  
 Average interviews per assignment: 15

*About 40 samplers interviewed anglers and examined catch in 1997.*

Number of interviews: 36,563  
 Number of fish counted: 95,832  
 Number of fish measured: 73,817  
 Number of fish weighed: 70,479

Number of fish reported by anglers as discarded: 62,549



*Each interview takes about 3 minutes and about 3 more minutes on average to examine the catch. More fish take more time.*

Number of questions: 40

*Most angling occurs during the summer months with fewer anglers northward during the winter.*

10% Winter  
 20% Spring  
 44% Summer  
 27% Fall

**40 Interviewers**  
 15 in S. California  
 12 in N. California  
 6 in Oregon  
 7 in Washington

**Average work per form:**  
 (Sampler mileage, time, cost)

CA	OR	WA
6 mi	23 mi	6 mi
44 min	117 min	64 min
\$ 21	\$ 42	\$43

### 1997 Data Storage

Data elements per interview: 80  
 Total data records: 157,000  
 Storage requirement: 8.6 MB  
 Forms: 73 reams of 40# stock

