Science, Service, Stewardship

Fisheries Forum 2011: Recreational Catch Data Collection

Summary of Current methods and Attributes of Data and Tradeoffs of Improvements

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Recreational Catch Accounting

- Overview of current recreational surveys
- Uses of recreational Catch Accounting Data
- Limits of data for Management: Summer Flounder examples
- Timeliness of Data Delivery: a particular concern

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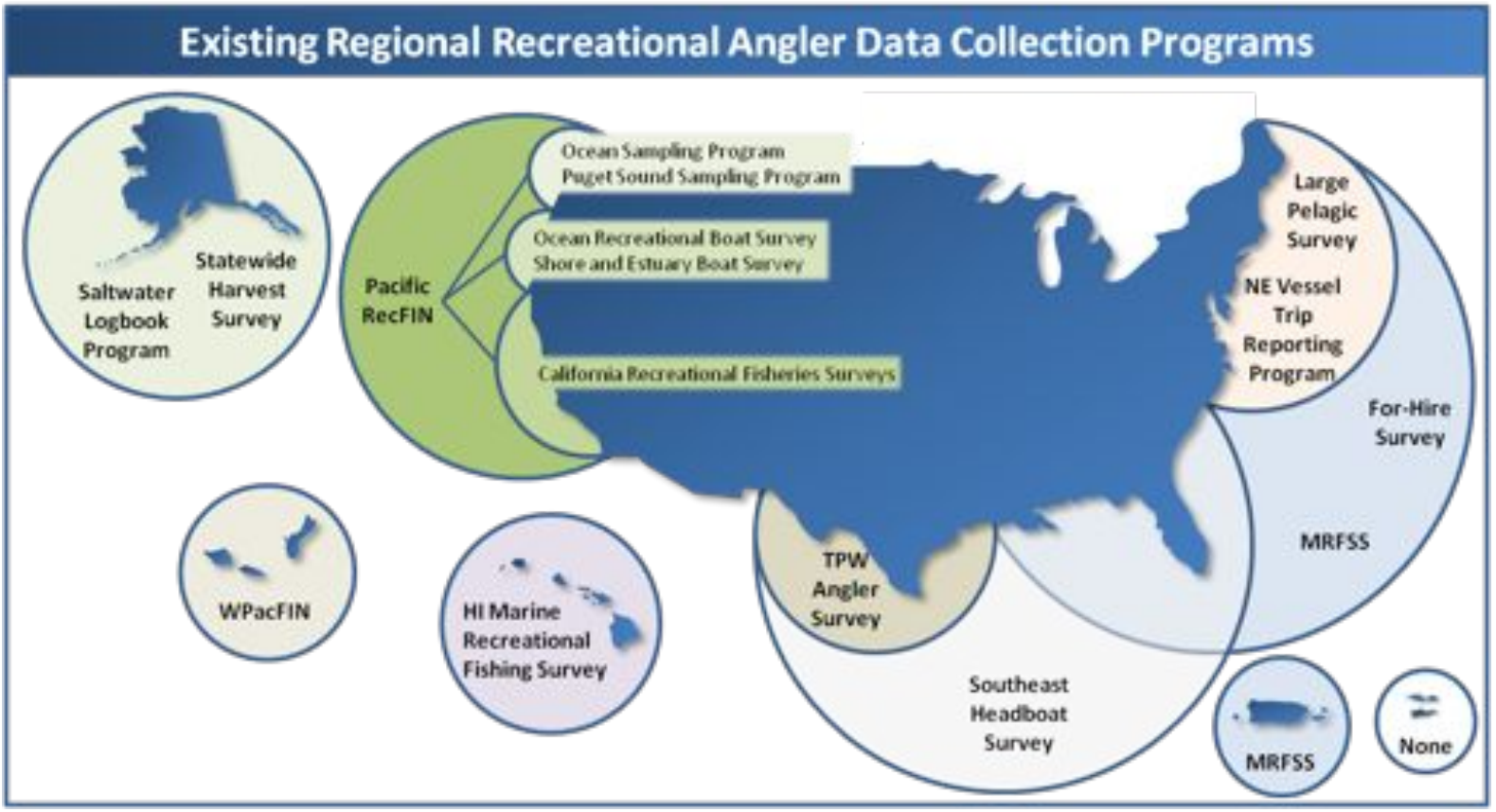
How Did We Get Here?



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Basic Recreational Survey Design

- "Complemented Design"
- Effort = # of trips
  - By random household telephone survey (MRFSS)
  - By angler/vessel registry survey (AK; LPS;FHS)
  - By on-site surveys/observation (WPacFIN; WA & OR)
- Catch = number caught (and number landed per trip)
  - By angler telephone/mail survey (AK)
  - By intercept survey (MRFSS)
  - By Trip report (SEHBS; CRFS for-hire; AK for-hire)

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Regional Partnerships

- ACCSP
- Gulf FIN
- RecFIN
- Alaska Rec Surveys
- WPacFIN
- HMRFS

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Regional Survey Design Choices

The principal decisions that regional survey partners will make include:

- Basic survey design choice(s);
- Coverage beyond the standard minimum to accommodate region-specific data needs, including geographic scope and species included;
- Sample design to increase the spatial resolution of estimates below the state level;
- Sample design, frequency and data reporting and analysis processes to deliver estimates more (or less) frequently than the standard;
- Requirement for a census vs. a sample-based survey for the for-hire mode;
- Supplemental surveys required to produce or improve estimates of: infrequently caught species; protected resources; social and economic data;
- Supplemental surveys required to verify and improve confidence in basic survey estimates;
- Biological sampling requirements;
- Regional outreach programs, including measures to build and maintain stakeholder awareness, involvement and support for the data collection program, and confidence in the resulting estimates.

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Preliminary National Standards for Recreational Survey Coverage and Basic Data Elements Issued May 2009 (1)

Coverage Standards: Surveys produce **annual estimates by regions and for each state within a region**. Regions are as identified in 50 CFR 600.1417(b)(1). States are as defined in 16 U.S.C. 1802. Surveys cover all recreational fishing for **marine, estuarine and anadromous finfish in all marine waters and estuaries bordering the states.**

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Preliminary National Standards for Recreational Survey Coverage and Basic Data Elements Issued May 2009 (2)

Required Data Elements: The following estimates are produced not less frequently than annually for each state in a region:

1. ***Number of recreational fishing days****;*

2. ***Number of participating recreational fishers and number of*** **participating for-hire fishing vessels** derived from survey estimates or from directories based on license or registration data;

3. ***Recreational catch and landings in numbers of fish for each*** **species** (or, where multi-species groups are managed or assessed as a unit, by such species group), and further specified as:

a) ***By mode of fishing****, including at a minimum, shore,* private boat and for-hire modes; and

b) ***By area fished****, including, at a minimum, EEZ, territorial* sea, and internal waters of the state, or other primary jurisdictions applicable to regional management.

4. Unless not utilized in management or stock assessment for the species, **mean weights of fish landed for each species** (or, where multi-species groups are managed or assessed as a unit, by such species group), and further specified as:

a) ***By mode*** *of fishing, including, at a minimum, shore,* private boat and for-hire modes; and

b) ***By area fished****, including, at a minimum, EEZ, territorial* sea and internal waters of the state, or other primary jurisdictions applicable to regional management.

5**. Mean lengths and weights of fish caught and released for each species**, wherever direct observations and measurements can be obtained.

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Key Uses of Rec Catch Data

- Account for landings and discards to measure against ACLs
- Measure removals from stock for assessment
- Measure trends in catch/effort for assessments
- Determine timing, location, length-frequency and # landed/trip to analyze effects of management measures
- Trip, directed trip and participation numbers used in economic analyses (e.g. to calculate angler expenditures using other data for expenditures per trip)
- Length, age other biological samples for assessments and specialized catch accounting (e.g. % hatchery salmon)

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Summer Flounder: Maryland

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Summer Flounder Landings

Maryland

Year	HARVEST (TYPE A + B1)	PSE
2000	258,211	11.8
2001	139,392	16.8
2002	68,891	16.9
2003	41,201	20
2004	65,949	19.3
2005	85,192	24.8
2006	58,386	33
2007	157,360	20.6
2008	89,729	22
2009	89,660	18.3

New Jersey

Year	HARVEST (TYPE A + B1)	PSE
2000	3,022,809	6.4
2001	2,070,234	6.3
2002	988,878	6.2
2003	1,784,356	6.2
2004	1,887,193	6.8
2005	1,395,626	7.9
2006	1,560,505	9.1
2007	1,327,567	7.9
2008	851,447	15.2
2009	1,012,806	8.2

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2007 Summer Flounder

State	Minimum Size	Possession Limit	Open Season
MA	17.5	5 fish	June 10 – Aug. 15
RI	19.0	7 fish	May 18 - Sept. 16
CT	18.0	5 fish	April 30 - Sept. 5
NY	19.5	4 fish	April 29 - Sept. 17
NJ	17.0	8 fish	May 26 - Sept. 10
DE	18.0	4 fish	All year
MD-At	15.5	4 fish	All Year
MD-Ch	15.0	2 fish	All year
PRFC	15.0	2 fish	All year
VA	18.5 & Dec. 31	5 fish	April 1 – July 22 July 29 –
NC	14.5	8 fish	All year

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2007 Fishery Results

State	2007 Target	2007 Landings	Overage(+%)/Underage (-%)
MA	134	82	-39
RI	138	221	+60
CT	91	108	+19
NY	430	667	+55
NJ	954	1,317	+38
DE	77	110	+42
MD	72	140	+94
VA	407	397	-2
NC	137	175	+27

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A Few Thoughts About Timeliness

- Timeliness
  - Frequent updates of data and statistics
- Quality Data and Statistics
  - Error-free data ➔ unbiased catch statistics
  - Sufficient sampling ➔ precise catch statistics
- Access to Data and Statistics
  - As immediate as possible
- Reliable Forecasting
  - Accounting for known changes in fishery

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Timeliness Consideratons

- Managers want more frequent updates to catch statistics
  - Current frequency varies by region and fishery:
    - Bimonthly – Atlantic, Gulf, Puerto Rico, Hawaii,
    - Monthly – Pacific ocean groundfish, Atlantic HMS
    - Weekly or daily – Pacific salmon and halibut
  - Desired improvements in survey designs:
    - Scalability for finer temporal resolution
    - Scalability for finer spatial resolution
    - Sufficient QA/QC to assure error-free data
    - Sufficient sampling to provide desired statistical precision

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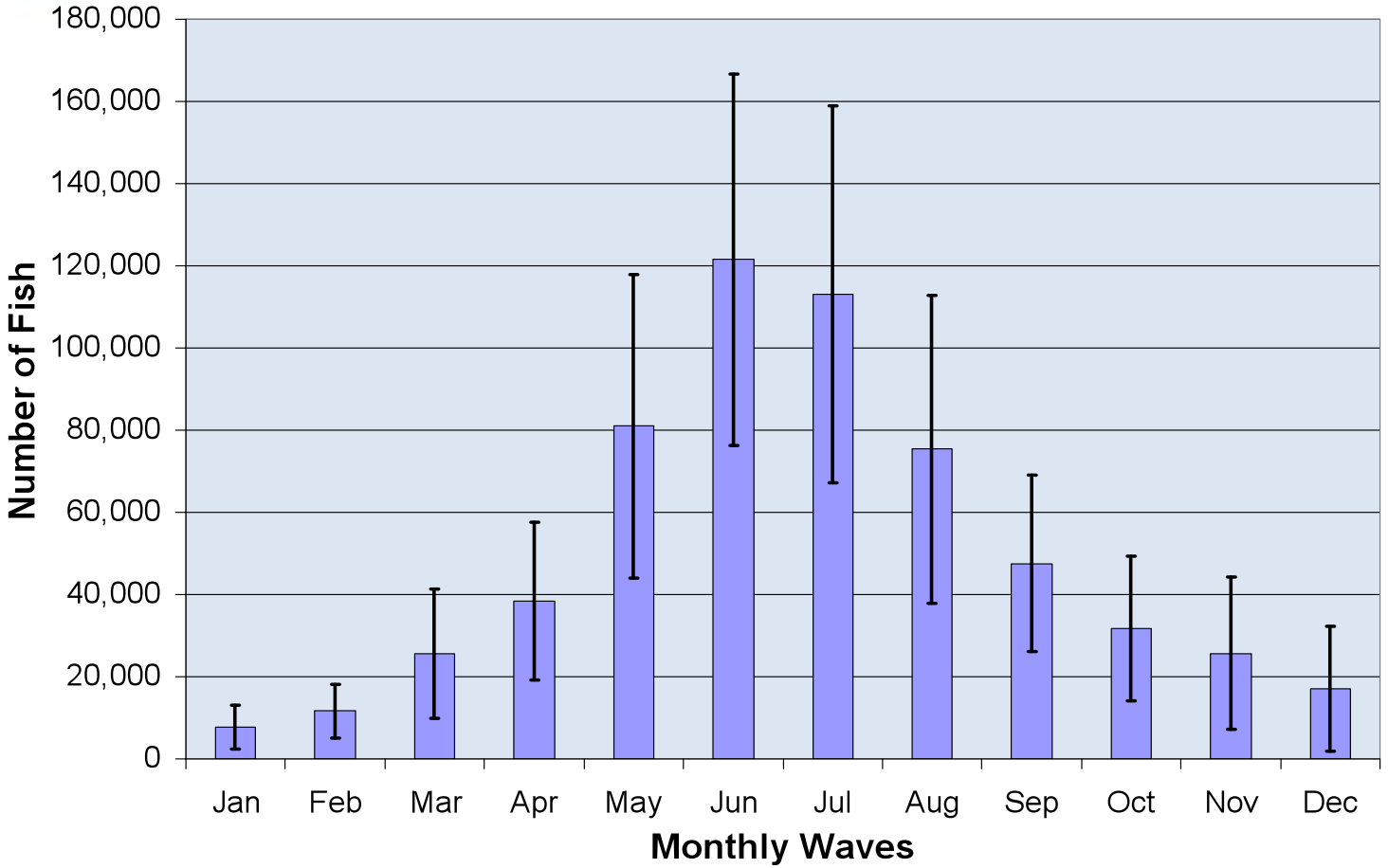
Monthly Catch Estimates
How precise must each of these be?



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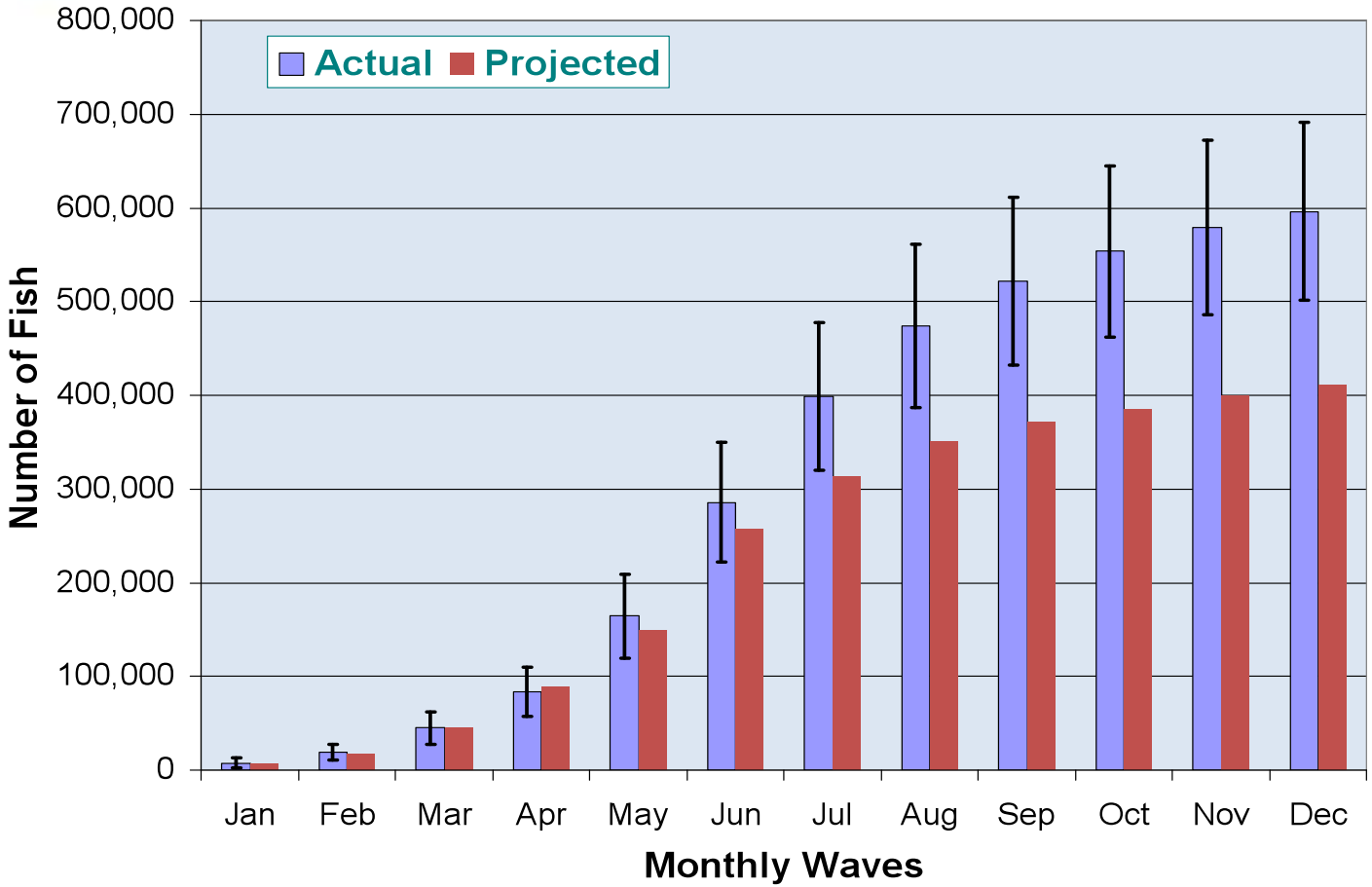
Monthly Catch Updates
Aren't these estimates the most important ones?



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Important Issues

- The individual monthly estimates will not be as precise as standard individual bimonthly estimates.
  - —Unless sample sizes are doubled across the board
- However, monthly estimates could be combined to produce cumulative estimates that are as precise as those based on standard bimonthly estimates
  - —As long as sample sizes are increased by 40-50%

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Issues for Discussion

- Where does recreational catch data come from?
  - Mainly self-reported; not usually validated;
  - Participation voluntary for private anglers/vessels;
  - Data collections done by NMFS contractors and states.

- What should be the role for Councils in producing high quality recreational catch data?