Honolulu Laboratory
National Marine Fisheries Service
Honolulu, Hawaii 96822

Marine Recreational Fishing Statistical Survey

Hawaii, 1979-81

The NMFS Marine Recreational Fishing Statistical Survey (MRFSS) was fielded throughout the United States beginning in 1979 and continuing until the present in some areas. It represented a new initiative on the part of NMFS to account for the recreational catch of fish (excluding shellfish and salmon) and was directly linked to the passage of the MFCMA. The MRFSS was conducted in the western Pacific (Hawaii, American Samoa, Guam, and the Northern Mariana Islands) by a private firm (Human Sciences Research, Inc.) under contract from NMFS Headquarters from 1979-81. The survey was fielded in the western Pacific by a local survey research firm, SMS Research Inc. The western Pacific survey was terminated in 1982 due to budgetary constraints and severe problems in survey design. The results from the western Pacific surveys were never published evidently because of flaws in the extrapolation procedures which could not be resolved by NMFS HQ, HSR, or a subsequent private survey research firm under contract to NMFS HQ. The general survey methodology is recorded in Marine Recreational Fishery Statistics Survey, Atlantic and Gulf Coasts, 1979, NMFS Current Fishery Statistics # 8063, December 1980. The NMFS Honolulu Laboratory was able to obtain the *preliminary* extrapolation tables from NMFS HQ and the raw intercept data from SMS Research Inc. The fielding information appears to be realistic, but we were not able to identify the fielding design, i.e., the means through which the samples were extrapolated. Therefore the attached tables should be viewed as indicative of the range of these fisheries, not precise estimates of average annual values and especially not indications of year-to-year variability.

The purpose of the survey was to develop annual estimates of:

1. number of marine recreational fishers in each area
2. number of marine recreational fishing trips
3. total number and weight of each species caught
4. socio-economic information on marine recreational fishing (demographics, costs, etc.)

In the western Pacific the term "recreational" referred to any person who goes fishing (with or without a commercial fishing license) who does not earn his/her primary income from fishing (SMS training manual, 1978). There evidently was some ambiguity about how this was actually applied in Hawaii, but it appears that the

results are indicative of that definition of "recreational".

The survey was conducted with two complementary surveys: a random telephone survey of households in each area, and an intercept survey of fishing participants at shoreline and port locations. Several survey forms were used during the three years the MRFSS was fielded in the western Pacific. The attached forms were used in Hawaii in 1981 to the best of our knowledge.

The telephone survey evidently formed the basis for extrapolation from the intercept survey. In the telephone survey, respondents were asked how many people in the household fished and where they fished (particularly between the four "modes": beach, pier, charter boat, private boat). The telephone survey results from 1981 indicate 719 fishing households in Hawaii. This apparently extrapolates to the estimate of 206,900 total participants in Hawaii, or an average expansion factor of 288x. Detailed comparison of some of the MRFSS total estimates by species with the intercept survey data suggest that there were extrapolation problems in the estimation of total weight from total number. Therefore weight estimates should be used with special care.

The attached table summarizes the main results from 1979-81. Also attached are several individual detailed summary tables from 1981.

Attachments

Survey forms
1979-81 summary table
1981 detailed summary tables

Summary prepared by

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April 22, 1992

mrfss1
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4/22/92
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Summary of NMFS Marine Recreational Finfish Statistical Survey for Hawaii, 1979-81.

	1979	1980	1981
Fish Caught Number 100s by mode	Table 8	Table 7	Table 7
Man-made	2004	3252	4875
Beach/bank	29850	44717	88673
Party/Charter	689	362	305
Private/Rental	7129	14050	21017
All Modes	39671	62382	114870
Fish Caught Weight 100 kg.	Table 22	Table 24	Table 24
Man-made	85	214	203
Beach/bank	34001	5343	8901
Party/Charter	21659	3678	4693
Private/Rental	21364	10695	28122
All Modes	77109	19931	41919
Participants 100s	Table 25	Table 27	Table 27
Residents	1871	2352	1604
Visitors	911	822	465
Total	2782	3174	2069
Trips 100s	Table 26	Table 28	Table 28
Residents	16595	21407	19352
Visitors	1152	1177	705
Total	17747	22589	20066
Trips 100s by mode	Table 27	Table 29	Table 29
Man-made	1287	1340	1517
Beach/bank	10937	14144	12983
Party/Charter	908	883	437
Private/Rental	4615	6217	5120
All Modes	17747	22584	20058

	1979	1980	1981
Costs per person by mode	Table 28	Table 30	Table 30
Man-made			
Hours	3.40	3.60	4.00
Cost	2.30	3.00	3.60
Work Days	5.00	5.00	3.00
Vacation Days	2.70	3.10	.00
Beach/bank			
Hours	3.80	4.30	4.60
Cost	3.50	4.60	6.80
Work Days	5.00	5.00	1.00
Vacation Days	2.10	2.40	.00
Charter/party			
Hours	6.60	7.50	7.10
Cost	65.10	57.10	76.60
Work Days	5.30	5.20	
Vacation Days	3.40	3.40	
Private/rental			
Hours	6.30	6.70	6.40
Cost	12.90	26.20	18.70
Work Days	5.00	5.10	
Vacation Days	2.20	2.70	
Intercepts (actual number)	Table 34	Table 37	N/A
Male	6,437	6,508	
Female	930	975	
Total	7,367	7,483	
Intercepts	Table 48	Table 50	Table 48
Man-made	599	959	1,175
Beach/bank	4,044	4,507	4,427
Party/Charter	378	493	230
Private/Rental	2,871	2,074	2,160
All Modes	7,892		7,992
Telephone Surveys	Table 35	Table 37	Table 35
Fishing Household	524	683	719
Non-Fishing	4,294	3,910	4,735
Total	4,818	4,593	5,454

~~214~~ 214 09 12

(1981)

15 001

CALL RECORD FORM

Card type 1 (1)
Survey type 1 (2)

0 0 0 0 0 0 0 0 0 0 (3-12)

Telephone No. _____ _ ___

Subregion 8 (13)

Anticipated County/State HAWAII

Wave 1 2 3 (4) 5 6 (14)

Code Number 21522 (15-20)

County/State Code 1 5 0 0 3 (21-25)

Group Number 2 (26)

Tadao (male)

Interviewer	Date	Time	Result	Comments
2005	8/29	245	74	
2002	9/17	830	82	

Final Result 82

Result Code ~~74~~ 82 (27-28)

Town or County, if County unknown: _____

How many people in your household have been saltwater finfishing in the last 12 months from this state or from a boat launched in this state? 2 (29-30)

How many have been saltwater finfishing in the last 2 months from this state or from a boat launched in this state? 02 0 0 (31-32) 0 0 (33-34)

Number of 2-month fishermen interviewed 02 (35-36)

Number of 2-month fishermen not interviewed: refusal 00 (37-38)

Number of 2-month fishermen not interviewed: unavailable 00 (39-40)

Number of 2 month fishermen not interviewed: other
(SPECIFY) _____) 00 (41-42)

15 001

Record Type 2 (1)

Code No. 211522 (2-7)

Fisherman No. 01 (8-9)

Year/Month/Day 810917 (10-15)

Interviewer 2002 (16-19)

Information Provided by 1 (20)

Language of Interview 01 (21-22)

Two Month Recall 1 (23)

Number of Type 3 Records/Trips 004 (24-26)

Record Type	Trip	Year	Month	Day	Type	Mode	Gear	Area	Three Miles	State/County	State	County	
3	001	81	08	13	1	8	01	1	1	Bay	15	003	(1-21)
3	002	81	08	12	1	8	01	1	1		15	003	(1-21)
3	003	81	07	29	1	8	01	1	1		15	003	(1-21)
3	004	81	07	23	1	8	01	1	1		15	003	(1-21)
3	005				1								(1-21)
3	006				1								(1-21)
3	007				1								(1-21)
3	008				1								(1-21)
3	009				1								(1-21)

FINFISH INTERCEPT FORM

COMMERCIAL LICENSE
Yes
No

1 2 *(1-2)*

1. Interviewer code . . . . . 2 *(3-6)*
2. Year/month/day . . . *(7-12)*
3. Interview number . . . . . 0 0 2 *(13-15)*
4. Hour . . . . . 1 0 1 5 *(16-19)*
5. State . . . . . 5 2 *(20-21)*
6. County . . . . . *(22-24)*
7. Site code . . . . . 1 1 1 *(25-27)*

This study is being conducted in accordance with the Privacy Act of 1974. You are not required to answer any question that you consider to be an invasion of your privacy. I have a copy of the Privacy Act Statement which you may look at if you like.

8. Language of respondent . . . . . 1 1 *(28-29)*

English = 01 Filipino = 07 Chamarro = 13
Spanish = 02 Korean = 08 Samoan = 14
French = 03 American Indian = 09
Italian = 04 Native Alaskan (Eskimo, Aleut) = 10
Japanese = 05 Other (specify: _____) = 11
Chinese = 06 Unknown = 12

9. Sex of respondent . . . . . 1 *(30)*

Male = 1 Unknown = 3
Female = 2

10. Estimate of mode of fishing . . . . . 5 *(31)*

Pier, dock = 1
Jetty, breakwater, breachway = 2
Bridge, causeway = 3
Other man-made structure = 4
Beach or bank = 5
Partyboat = 6
Charter boat = 7
Private or rental boat = 8

11. Interview status . . . . . 1 *(32)*

Agrees to interview = 1
Refuses interview initially = 2
Nonresponse due to language barrier, age, or other = 3
Refuses interview after start–questionnaire not usable = 4

12. Ask appropriate mode combination:

Would you say you were fishing from . . . . . [5] (33)

. . . a pier, a dock, a bridge, a jetty, a breakwater, a breachway, or a causeway?
. . . a beach, a bank, rocks or some other shore area?
. . . a boat? If Boat, ask: Was that a partyboat, a charter boat, a rental boat, or a private boat?

Pier, dock = 1
Jetty, breakwater, breachway = 2
Bridge, causeway = 3
Other man-made structure = 4
Beach or bank = 5
Partyboat = 6
Charter boat = 7
Private or rental boat = 8

13. Did you do any other (specify mode) fishing today besides here? . . . . . [0][1] (34-35)

If No, Code 01. If Yes, ask: At how many places, including here, did you (specify mode) fish today?

14. Were you fishing for anything in particular today? . . . _____ [ ] (36-45)

If No, Code 0 in all blocks. _____ [ ] (46-55)

If Yes, ask: What species? _____ [ ] (56-65)

15. Would you say that most of your (specify mode) fishing effort today was in the ocean, a sound, a river or bay? . . . . . [1] (66)

Ocean = 1
Sound = 2
River = 3
Bay = 4
Other (specify: _____) = 5
Don't know = 6
Refusal = 9

15 a. If *not* ocean, Code 0. If Ocean, ask: Was that more than three miles or three miles or less from shore? . . . . . [2] (67)

More than three miles = 1
Three miles or less = 2
Don't know = 3
Refusal = 9

16. If mode is *not* boat, Code the State of intercept.
If mode is Boat, ask: In what state's waters was most of your (specify mode) fishing effort? . . . . . [14] ~~[5][2]~~ (68-69)

Don't know = 98
Refusal = 99

17. Have you been fishing here today primarily with a hook and line? . . . . . [0 1] (70-71)

If Yes, Code 01. If No, ask: What type of fishing have you been doing?

Dip net = 02	Trawl = 06	Other (specify: _____) = 10
Cast net = 03	Trap = 07	Refusal = 99
Gill net = 04	Spear = 08	
Seine = 05	Hand = 09	

18. How many (specify gear) have you been using? . . . . . [0 2] (72-73)

19. To the nearest half hour, how many hours have you spent (specify mode) fishing today with your (specify gear) in the water? . . . . . [1 3 . 0] (74-77)

20. If complete trip, Code 00.0.
If incomplete trip, ask: How many additional hours do you expect to (specify mode) fish today? . . . . [1 3 . 0] (78-81)

21. Not counting today, within the past 12 months how many days have you gone saltwater sport finfishing in this state? . . . . . [1 5 5] (82-84)

22. Not counting today, within the past 2 months how many days have you gone saltwater sport finfishing from this state? . . . . . [2 3] (85-86)

23. Now I'd like to ask you about your finfishing from other states. How many days have you been saltwater sport finfishing in the past 12 months from other states? . . . . . [0 0 0] (87-89)

24. Within the past 2 months, how many days have you gone saltwater sport finfishing from other states? . . . . . [0 0] (90-91)

25. We are trying to get an estimate of how much leisure time people who fish have. First, in an average week, how many days do you work at your regular job or jobs? (IF RETIRED OR UNEMPLOYED, RECORD 0) . . . . . [0] (92)

25a. And during the past twelve months, how many weeks of vacation or free time from your regular job did you have? (IF RETIRED OR UNEMPLOYED, RECORD 52) . . . . . [5 2] (93-9

26. Not counting gas for your car, how much would you estimate it has cost you to fish here today? Here is a list of expenses fishermen often have. Hand respondent expense card. . . . . [0 0 0 0 . 0 0] (96-1

27. May I have your age? . . . . . [0 1] (103-104)

Under 5 years = 01
5 to 13 = 02
14 to 17 = 03
18 to 24 = 04
25 to 34 = 05
35 to 44 = 06
45 to 54 = 07
55 to 64 = 08
65 and over = 09
Refusal = 99

28. What is your county and state of residence? . . . . . _____ County [0 0 3] (105-10

_____ State [1 4] (108-10

If county is unknown, ask: What city or town do you live in? _____

29. Yes or no, do you have a home telephone? . . . . . [1] (110)

Yes = 1
No = 2
Refusal = 9

In the event that my supervisor wishes to verify that I have been conducting interviewers here today . . .

If the person has an available phone: Would you be willing to give me your name and phone number so that he might contact you?

Name: M. Kordoska

Phone Number PH 7056 (If not home telephone, specify: _____)
Area Code

If the person does not have a phone or refuses to answer question 29, or refuses to give phone number:

Would you be willing to give me your name and address so that he might contact you?

Name _____

Address _____

_____
ZIP Code

30. Did you catch any fish while you were (specify mode) fishing today that I might be able to look at? . . . . . [2] *(111)*

Yes = 1 No = 2

30a. If Yes, and this person's available catch is on someone else's form, Code 00. . . . . [ ] *(112-113)*

If No, Code 00

If Yes, and this person's available catch is *not* on someone else's form, ask:

Did you catch all of these yourself, or did someone else catch some of these?

If someone else, ask: Can you separate out your individual catch?

If No, ask: How many fishermen including yourself have their catch here? Please don't include anyone who did not catch anything. Only count those people who have their catch here.

31. Number of Type 2 records on Page 6. . . . . [ ] *(114-115)*

32. Number of Type 3 records on Page 7, or, if this person's available catch is on someone else's form, Code 000. . . . . [ ] *(116-118)*

33. Is there a Type 4 record, that is, is this person's available catch on someone else's form? If No, Code 0. If Yes, Code 1. [ ] *(119)*

34. Before I start looking at your available catch, I'd like to ask you about any catch you might have had that are *not* here with you. Did you catch any fish while you were (specify mode) fishing today that you threw back, gave away, used for bait and so forth?

If No, skip to Item 35. If Yes, fill out the following table by asking the following:

34a. Can you give me the names of the species you caught that are *not* here with you?

_____

_____

34b. What did you do with the (specify species) that you caught?

Thrown back alive = 1	Used for bait = 4	Filleted and cleaned = 7
Thrown back dead = 2	Sold = 5	Other (Specify:_____) = 8
Given away = 3	Not in vicinity of interview site = 6	Refusal = 9

34c. How many (species) did you (disposition) ?

Repeat 34b and 34c until all unavailable species are accounted for.

	Species		Species Code	Disposition	No. of Fish	
1.	_____	2				(1-15)
2.	_____	2				(1-15)
3.	_____	2				(1-15)
4.	_____	2				(1-15)
5.	_____	2				(1-15)
6.	_____	2				(1-15)
7.	_____	2				(1-15)
8.	_____	2				(1-15)
9.	_____	2				(1-15)
10.	_____	2				(1-15)

Enter number of Type 2 Records in Item 31, Page 5.

35. If the available catch for this fisherman has already been recorded on someone else's form, enter the interview code number of that person's form.

4 (1-14)

If the available catch for this fisherman has *not* been recorded on someone else's form, ask to see the catch and complete the following table:

	Species Name		Species Code	Total No.	Length	Weight	
1.		3				.	(1-23)
2.		3				.	(1-23)
3.		3				.	(1-23)
4.		3				.	(1-23)
5.		3				.	(1-23)
6.		3				.	(1-23)
7.		3				.	(1-23)
8.		3				.	(1-23)
9.		3				.	(1-23)
10.		3				.	(1-23)

Enter number of Type 3 Records in Item 32, and complete Item 33, Page 5.