# Headboat At-Sea Sampling Protocols

Table of Contents	
Background	1
Supplies	1
Protocols	
Vessel Selection	1
Arrival on Site	2
Introduction	2
Angler Selection	2
Observing the Anglers	3
Discard Catch	3 3
Type Three Available Catch	5
Type Two Unavailable Catch	6
The Partial MRFSS Interview	7
Finishing the MRFSS Interview	7
End of Fishing and Arrival on Dock	7
Final Editing	8
Appendices	
A. Sample Field Tablet	9
B. Sample Discard Form	10
C. Sample Assignment Summary Form	12

## **Headboat At-Sea Sampling Protocols**

## **Background:**

Headboats are defined as vessels that carry recreational fishing passengers for a per/person fee. MRFSS estimates of fishing effort and catch from for-hire vessels do not include large-capacity vessels that operate primarily as headboats. Most large-capacity headboats are included in the NMFS Southeast Headboat Survey, which estimates headboat effort and catch using separate methods. The at-sea headboat survey will use MRFSS procedures for estimating headboat catch and effort. Estimates using MRFSS procedures will be compared to the NMFS Southeast Headboat Survey estimates.

#### Supplies:

Clipboard, pencils, measuring board Assignment Summary Form, culling baskets MRFSS Intercept Forms, fish-handling gloves MRFSS Discard Forms, needlenose pliers Hand towels, foul weather gear Weight scales for dockside sampling, waterproof field tablet

#### **Protocols:**

## Vessel Selection

Each week, 25% of headboat vessels are randomly selected from the vessel register by state and region (in FL). Each selected vessel is assigned a control number. The vessel assigned the lowest control number is your first primary assignment for the week. Contact the vessel operator at least one week in advance and try to arrange a date and time for two staff to ride on the vessel during the selected week. If that vessel is not fishing during the assigned week or the vessel operator refuses to cooperate during that week, cancel the assignment and report this control number and the reason for cancelling the assignment in your weekly headboat tally to your state supervisor. Select the vessel with the next lowest control number on your list of vessels for that week and attempt to schedule a trip. Continue contacting vessels in this order until you have booked a trip. Once you have booked a trip, coordinate with staff in the region to secure a second sampler to accompany you on the trip. Contact the vessel captain or representative the day before and/or the morning of the trip to confirm the trip status. Contact scheduled samplers to confirm the trip and make sure they are aware of any schedule changes. On the day of the assignment, fill out an Assignment Summary Form. Record the control number and vessel ID. For vessel ID use the last four digits of the vessel ID number for that vessel on the vessel register. If a scheduled trip is canceled just prior to leaving the dock, you may either reschedule another trip on the same vessel for another day that week or, if there is still time to book a trip during that day, you may contact an alternate vessel. An alternate vessel will be the headboat vessel nearest in distance to the vessel you were assigned and that is conducting a similar type trip (example, half or full day trip versus extended or multi-day trip). You may contact up to two alternate vessels per assignment. Reasons for selecting alternate vessels must be given on the Assignment Summary Form.

## Arrival On-Site

Both samplers should arrive at the dock at least one-half hour prior to expected departure. For vessels that may overbook, you may need to arrive one hour prior to expected departure to insure your spot on the vessel. Arrange with the booking office to pay the advertised fare for both samplers. You may want to let the booking agent know that your trip was pre-arranged and confirm with them that you have permission to sample on the vessel that day. Once you have secured your spot on the vessel, introduce yourself to the crew and captain. Samplers must wait until permission to board has been granted by the captain. Once on board, coordinate with the captain or crew as to where to set up sampling gear on the vessel in order to stay out of the way of crew and anglers. Explain to the mate what you will be doing that day and ask if he/she will help by allowing you to see fish before they are discarded or placed in the ice box. Good rapport and communication between the crew and observers will help to ensure a successful sampling trip. Under no circumstances should observers carry on board any electronic devices to record vessel location during the trip.

## Introduction

Each sampler should select one side of the vessel to observe that day. On the way out to the first fishing site, introduce yourself to the customers on your side of the vessel and let them know that you will be conducting surveys and sampling fish during the trip. Ask the customers if they may be willing to participate in a short survey and allow you to observe their fishing activity and take data on their fish.

#### Angler Selection

Once the vessel has reached the first fishing location, allow the anglers to move to the area of the vessel where they intend to fish. When the anglers are situated along the gunwale and have begun fishing, ask those anglers that are in clear view from your side of the vessel and that agreed to participate in the survey if they mind you observing their fishing activity and allowing you to examine any fish they catch.

For vessels with less than 30 anglers, all anglers should be included in the survey and observed by one or the other sampler whenever possible. For vessels with more than 30 anglers, each sampler should select up to 15 anglers that they can easily observe from their side of the vessel, starting from the stern and moving up the side of the vessel, including some anglers from the bow section if possible (for some larger vessels, anglers on the bow may not be easily observed). If anglers are fishing together and grouping their type three catch, you should include all anglers from the group in your observations. For example, if the mate is placing all the harvested fish from three anglers on the same stringer or marks all of their catch with the same mark before placing it in the ice box, those anglers' type three catches cannot be separated at the end of the trip and that catch will be recorded on the first MRFSS interview form for that group of anglers.

Assign a MRFSS intercept number for each angler that you intend to observe. The MRFSS intercept number will be the number that you record on each angler's MRFSS Interview Form and also the number you record for each anglers' discard catch on the MRFSS Discard Form. Anglers that arrived as a group and whose catch will likely not be separated by the crew should be assigned sequential MRFSS intercept numbers so their Type 3 catch can be grouped on the first angler's MRFSS interview form.

NOTE: Samplers can not use the same intercept numbers for anglers on either side of the vessel. For example, one sampler should number their intercepts 1-15 and the second sampler should number their intercepts 16-30. Samplers should agree on this at the start of the survey.

NOTE: Both samplers must agree on a single sampler ID number to use for all MRFSS forms for that day. The observer whose code was not used should be recorded in the comments section of the Assignment Summary Form.

## **Observing the Anglers**

Record descriptive features for each selected angler next to their assigned MRFSS intercept number in the first column of your field tablet or on the back of your first Discard Form. Descriptive features may include hair color, gender, name, clothing descriptions, etc. For ease of tracking, you may ask selected anglers to wear a tag, such as a lanyard they wear around their neck or a stick-on tag that you can write their interview number on. Identify groups of anglers with brackets either on the back of your Discard Form or the left margin of your field tablet.

On the top of your field tablet, record the date and time anglers began fishing at the first fishing site, and your sampler ID number. As working mates collect harvested fish from your observed anglers or groups of anglers, record how the mates separate the anglers' catches (i.e. stringer number, mark on fish, etc.). Record this information in the first column of your field tablet along with their angler intercept numbers and descriptive features.

Monitor the selected anglers as they fish. Ask each angler you are observing to not release fish before you have seen them. Also ask to see any fish that they retain and use for bait. Allow the mates to assist the anglers as they normally would. This is how they make tips! If the mate allows, you may assist anglers by removing fish from hooks so that they may be measured; however, do not assist the anglers in any other way that may increase their catch rates. If the mate unhooks fish for the customers, make sure that he/she knows you would like to see fish for those anglers before they are discarded or placed in the ice box. Do not put fish in the ice box for the anglers—we do not want to be responsible for mix-ups with people's fish! Return the fish to the mate for storage.

#### Discard Catch

As your selected anglers catch fish, ask them what they intend to do with the fish. If they plan to release the fish or use it for bait, ask if you may measure it first. If they are not sure, do not influence their decision. For size-regulated species, allow the mate to measure the fish and determine the final disposition. Do not question or influence the mate's decision to keep or release a fish.

Disposition Codes for discarded fish are as follows:

- Thrown back alive/legal
  Thrown back alive/not legal
  Used for bait/plan to use for bait
- 6 Thrown back dead/plan to throw away

Length should be measured using standard MRFSS protocols (refer to the most recent version of the MRFSS Procedures Manual). If no length can be obtained, record '9999' for the length. Try to obtain lengths for all state and federally managed species. It is important that you record at least the species name, intercept number, and disposition for every fish that does not go in the ice box. You are not expected to measure dangerous species, such as morays or scorpionfish. Some fish you may or may not be able to measure, such as sharks. Use your best judgment. You also do not need to collect data on invertebrate species.

For fish that will be released, do not do anything that will influence the release condition of the fish. If the mates typically vent fish before releasing them, ask them to do so before handing you the fish. If the mates do not vent fish before releasing them, do not vent the fish yourself. Simply measure the fish and release it.

Remember, you are an observer collecting data on the normal fishing operations of headboat vessels.

Try to record release condition for all state and federally managed species. To determine the release condition, you must observe the fish in the water immediately after release until it is completely out of sight.

Release condition codes are:

- 1. Fish swam toward bottom immediately upon entry into the water
- 2. Fish was disoriented upon release and slowly swam towards the bottom
- 3. Fish was very disoriented upon release and remained at the surface
- 4. Fish was either dead or unresponsive upon entering the water
- 5. Fish was eaten by a bird, another fish or a marine mammal
- 9. Unable to observe discarded fish, not applicable

If you are busy measuring other discards or are unable to observe a fish until it is out of sight, code the discard condition as 9.

You may record information on discard catch directly onto a Discard Form, or you may record discard data on a field tablet and transfer that data to a clean Discard Form at the completion of the fishing trip. To record discard catch on the Discard Form, record the species name, length, disposition code, release condition and interview number for each discard as it is caught and observed by you. You may use multiple discard forms if necessary. In windy, wet conditions, you may wish to record discard catch onto a field tablet instead of a Discard Form. Below is a description of how to record discard catch on a field tablet. An example of a field tablet and data recording are given in Appendix A.

For common species that you expect to see a number of discards for, record the name of the species at the head of a blank column on your field tablet. As you observe fish of each species, record the length of the fish, disposition code, and release condition code separated by dashes in the column that you designated for that species on the row that corresponds to the angler's intercept number,.

**Example:** Write "white grunt" at the top of the second column on your field tablet. For white grunt released by angler #1 that is 220 mm in length with a disposition of 1 and release condition of 1, record "220-1-1" on the first row corresponding to angler #1 (see sample field tablet, Appendix A).

Less common discard species may be noted in a separate column titled "Other Discards". In the "Other Discards" column on the row that corresponds to the MRFSS intercept number for the angler that caught the discarded fish, record a notation for the species name, length, disposition code, and condition code.

**Example:** RG-304-2-1 for a red grouper 304 mm in length, disposition of 2, and release condition of 1 caught by angler #1 (see sample field tablet, Appendix A).

## Type Three Available Catch

If the angler plans to keep a fish and the mate determines that the fish is legal to keep on board, that fish will be recorded in the last column of your field tablet labeled "Type 3" on the row that corresponds to that angler's intercept number. Type 3 data will later be recorded on the MRFSS Interview Forms for each angler or angler group in the Available Catch section, question number 31. Question 31 is a Key Item on the MRFSS Interview Form and any MRFSS Intercept Form that does not contain complete information for Question 31 must be coded as a Status 5 interview.

To avoid incomplete catch records, you must record the species and number of fish that are retained by each angler or angler group as the fish are caught. Do not wait until the end of the fishing trip to obtain this information. Once the vessel arrives at the dock, anglers often collect their fish and leave immediately or share some or all of their fish. Other fish are cleaned before you have a chance to see them. When this happens, you are left with an incomplete record of Type Three Available Catch (question 31 on MRFSS Form) and any data you collect for these anglers will be unusable. As mates collect the anglers' fish, determine which ones will not be able to separate their catch at the end of the trip. For example, if a mate is putting fish from three of your anglers on the same stringer, in the left margin of your field tablet, bracket the three rows that correspond to those three anglers' intercept numbers. In the first column on the row that corresponds to the first angler intercept number for that group, record the group's stringer number. If instead of a stringer number, the mate is marking a group's fish with a characteristic mark (such as cutting an "x" on the head, clipping one fin, etc.), record that information. This information will be very important at the end of the trip when you must determine which MRFSS interview form to link grouped type three catches to.

Because measurements from harvested fish may be obtained at a later time, it is more important to obtain measurements from released fish at the time they are caught. For type 3 data, it is important to keep at least a tally of the number of fish for each species harvested by each angler or angler group. In the last column of your field tablet in the row that corresponds to the observed angler or angler group, record the species name and begin a tally for that species. You may abbreviate.

**Example:** "red snapper III" or "RS III" recorded in the last column of your field tablet would indicate that the angler or angler group harvested three red snapper. If fishing is slow and you have time, you may obtain lengths from harvested fish as they are caught. Record the species, length, and disposition code in the last column of your tablet in the row that corresponds to the angler or the first angler of a group who caught the fish.

**Example:** "YT/360/3" caught by angler #4 would be a yellowtail snapper, 360 mm with a disposition of 3 (see sample field tablet, Appendix A). If you are not using a field tablet, you may keep track of harvested fish directly on your Discard Form. On the Discard Form, record the species name, length if you are able to measure the fish at time of capture, disposition code, and intercept number. For release condition, record "H" to indicate that the fish was harvested and not released. Note, you will have to fill out a new Discard Form at the completion of the trip. Data from

discarded fish will be transferred to the new Discard Form, and data from harvested fish (any fish with a release condition of "H") must be transferred to the MRFSS Interview Forms for each corresponding angler or angler group.

#### Type Two Unavailable Catch

If an angler that you selected to monitor quits fishing and/or moves to another area on the vessel where you can no longer observe them, follow up with that angler at the end of fishing. Ask them if they released any fish that you and/or the mate did not get to see. For each angler that you believe you observed 100% of the time, verify with them that they did not release any fish or use any fish for bait that you or the mate did not get to see. On the back of the Discard Form in the Discard Summary section, record the angler intercept number and:

• If they answer "no", record an observation status of "1" for 100% of fishing time monitored.

• If they answer "yes", record an observation status of "2" for less than 100% of fishing time monitored. Record the species, number of fish, and disposition of the reported catch that you did not observe in the Unavailable Catch section of that angler's MRFSS Interview Form (Q. 25).

You may also place fish that cannot be identified to species or that the angler is unwilling to let you observe in the Unavailable Catch section of the angler's MRFSS Interview Form. For example, a fish that was bitten in half and cannot be identified to species, or fish that were used for bait or packed in a cooler before you could observe them, can be recorded in the Unavailable Catch section.

## The Partial MRFSS Interview

Between fishing sites while the vessel is underway, begin a MRFSS intercept form for your selected anglers (fill out Q. 2 through Q. 24). **The earlier you can start these interviews, the better.** Any anglers that you are unable to interview between fishing times may be interviewed at the end of the trip as the vessel is returning to the dock. Do not interview anglers while they are fishing, only interview them between fishing times or after their fishing is completed. This is a good time to ask anglers what stringer number or mark their fish are identified by and who is included in their fishing group, if you don't already know this information. It helps to note this information somewhere in the margins directly on the MRFSS Interview Forms. If the angler you are interviewing does not have a stringer number or other fish identifier because they have not caught any fish yet, you may want to note this somewhere and check back with them again at the end of the trip. This will help you identify anglers that did not contribute to a type 3 record.

#### Finishing the MRFSS Interview

After fishing is completed and the vessel is returning to the dock, approach your anglers one last time to complete the MRFSS interview. This includes recording any catch that you were unable to observe, as discussed in the section above titled "Type 2 Unavailable Catch". For any anglers that had not caught any harvestable fish at the time of the partial MRFSS interview, follow up with them at this time. If they did not harvest any fish and you were monitoring their fishing as part of a group of anglers, make sure you code question 26 for that angler's interview as "NO" and do not count them as a contributor in question 29 of the first angler's form for the angler group.

If there is time before arriving back to the dock, you may also start filling out Q. 26 through Q. 30 and Box D on each MRFSS Interview Form. This is the best time to do this while you can still go back to the anglers if there are any questions.

## End of Fishing and Arrival at the Dock

If you were unable to measure harvested fish at the time of capture, you should attempt to obtain length measurements from harvested fish at the end of the fishing trip. At the end of the trip, ask the mate if you may obtain measurements from harvested fish as the vessel is returning to the dock or, if they prefer, if you may obtain measurements dockside. If measuring fish at the dock, wait until the fish are unloaded by the crew and obtain measurements from anglers as they leave the dock with their fish or wait for their fish to be cleaned. If an angler or group is in a hurry and does not allow you to measure their fish, record this on the back of that angler's MRFSS form.

Record length measurements of Type 3 harvested fish in the Available Catch section (Q. 31) on the back of the MRFSS Intercept form for each angler or first angler of each angler group. Attempt to obtain measurements from as many harvested fish as possible, up to 15 fish of each species per angler. Leave the number of fish blank until later and only record the common name, length, and disposition at the dock. Measure fish of like species at the same time, and record their lengths on the MRFSS form before measuring the next species.

Last, but not least, thank the anglers for participating and thank the mate and Captain for allowing you to sample on their vessel.

## Final Editing

At the completion of your trip, transfer data for discarded fish from both samplers onto a clean Discard Form. You may need to use multiple Discard Forms. Fill in the top of each Discard Form, including assignment number, state code, county code, vessel code (last four digits of the vessel ID number on the vessel register), interviewer ID number, date, and vessel name. On the back of the first Discard Form, fill in the intercept number and observation status (1=100% of fishing time monitored, 2=Less than 100% of fishing time monitored) for all anglers that each field sampler observed. Also, fill in Depth of water fished (in feet) on the back of the Discard Form at the top of the section titled, "Discard Summary." Do not throw out your original Discard Forms. Include copies of your original Discard Forms when you deliver your forms to your headboat coordinator. If you used a field tablet, photocopy the original data before erasing your records and include this photocopy when you deliver your forms to your headboat coordinators should include the photocopies of both sampler's original data in your mailing to your state supervisor.

Transfer any Type Three data recorded on field tablets or original Discard Forms onto the back of each angler's MRFSS Interview Form or onto the back of the first angler's MRFSS Interview Form from a group. Combine all the MRFSS Interview Forms collected by each sampler in order by Intercept Number. Fill in the time of interview so that the time is sequential from the first to last intercept.

Date: 05	105/05 Rb = Red grouper VS= vermillion WG- wh growt V5/05 VT= yeilowtail TT= tomtale 00m Stop: 12:00pm SAmpler ID: 5354					
Start . 9	White GRUNT	Sand Perch	Other Lut	Tupe 3		
1 9 Red shint 6 blue shorts Stringer 6	220-1-1 209-1-1 99-1-2		RG-304-2-1	RG II		
2 stringer 4 3 brown hain white t-shirt	204-1-1	89-4-9 102-4-9 120-4-9	YT- 440-2-9			
Jod - bluehat Stringe White 20 Shorts		9999-1-1		NS-599-3		
4 Fromada CANAda Mom - Tong-sleen White shirt			YT-245-2·1	YT-360-3 YT-371-3 YT-445-3		
5 9 youth mick up make t-shirt	9999-1-1 204-1-1			VS -289-3		
4-shirt 6 Youth 07 MINNIE MOUSE +-shirt	9999-1- 7774.11		RG-369-2-1			
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9 NY YAWKEED 9 That 6 Tringer 16			GAG 545-2-1 YT 240-2-1			
10 Boston Red Sox hat				RG - 601-3		
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"I love beer" +-shirt o				TT 11		
L No shirt Khaki shorts	9999-4-9					
15 07 English Accent			RG-209-2-1	WG 297-3 WG 198-3 WG 209-3		

2007 MRFSS INTERCEPT SURVEY – Discard Form	1 Me
2. ASSIGNMENT NO. Please indicate if this is your first or second assignment talky, by writing "1" or "2"	STATE CODE 6. COUNTY CODE 7. VESSEL/SITE CODE
3. INTERVIEWER ID. 5320	$\rho$ , $\rho $ , $\rho$ , $\rho$
4. YR/MO/DAY 2007 02	al s. VESSEI. NAME Captain Michael
DISPOSITION CODES FOR DISCARDED CATCH	RELEASE CONDITION CODES FOR DISCARDED CATCH SHI SWAM TOWARD BOTTOM INND ATTA DEOR NIKY INNO IIII WATER SHI WAA LIRON, NITTA UNN RELEASE AND SLOWLY AWA MIT THE BOTTOM
2 THROWN BACK ALIVE/ NOT LEGAL	SH WAS LISONI-NITU'D URWERTLASE AND ELOWELY SWOM TOWARDS THE BOTTOM SH WAS UTSY TORONEN'S LU ULUWA LISAN AND KRAMBERD AT THE SUBA-RI SH WAS ETTEN TORONEN'S LU ULUWA LISAN AND KRAMBERD AT THE SUBA-RI SH WAS UTSY TO KRAMBERD AND AND AND AND AND AND AND AND AND AN
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3	9999 1 1 0 4
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5	9999 1 1 06
6	9999 1 1 07
7	0208 1 1 07
8	01701107
9	01981108
10.	9999 1 1 08
11	9999 1 1 0 8
12	01791108
13	01741108
14	01871108
15	0178 1 1 09
16	01751109
17	02071111
18	0204 1 1
19. Knobbed Porgy/	169201 0263 1 1 D7
20 Duffer	0255 1 1 10
21. JOUTIEVI PUTTOV	173297 0220 1 2 09
22. Red Grouper 23. Spotled Scorpionfish	167702 0470 a 101
23. Spotley Scorpionitism	166835 9999 1 1 10
24. Blue Runner	168612 9999 11 01
25	9999 1103
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27	0347 1 1 04
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31.	0357 1 05
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3.			-		034	15 1	108
4					030		109
5.					034	16 1	109
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shing time or n	iol.			1 31 2 2			
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ype of hook	s used by maj	ority of anglers:r	Circle	Treble Oth	her		
	OBSERVATI	ON STATUS: 1=100% of fishing time n	nonitored, 2=	Less than 100% of	f fishing time moni	tored	
NTERCEPT NUMBER	OBSER. STATUS	ANGLER IDENTIFIER		INTERCEPT NUMBER	OBSER. STATUS	ANGLE	RIDENTIFIER
01	1	Red Hat			-31/11.3		
02	L	Yellow Hat F					
03	1	Red Shirt					- 41
04		Gry Shirt					
05	l	Booty					
07		blue					
08	l	Bandand					
09	L	Yellow hat M					
10		Black hat					
11	1	NB Shors					
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