

Recommended Study Design for a Survey to Evaluate the Effectiveness of Mississippi Delta Fish Advisories

Final Report

June 29, 2007

Prepared for

**The Office of Water, Office of Science and Technology
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460**

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References

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- Pflugh, K.K., L. Lurig, L.A. Von Hagen, S. Von Hagen, and J. Burger. 1999. "Urban Anglers' Perception of Risk from Contaminated Fish." *The Science of the Total Environment* 228:203-218.
- U.S. Census Bureau. State and County Quick Facts.
<http://quickfacts.census.gov/qfd/states/00000.html>.

Appendix A: Final Survey Instrument

**EFFECTIVENESS OF MISSISSIPPI DELTA FISH ADVISORIES
FINAL QUESTIONNAIRE**

INTRODUCTION FOR ON-THE-BANK SURVEY

Hello. My name is _____ and I'm with _____. We are talking with people who fish in the Mississippi Delta as part of a study that we are conducting for the U.S. Food and Drug Administration and the Environmental Protection Agency. We plan to talk with about 1,400 individuals from different counties in the Delta. A summary of the study findings will be posted locally.

My questions will take about 30 minutes. All of the information you provide will be kept completely confidential. The study findings will be presented in summary form so that your name is not associated with your responses.

I hope that you will participate. **(IF NECESSARY, VERIFY THAT INDIVIDUAL IS 18 YEARS OLD OR OLDER.)**

INTRODUCTION FOR HOUSEHOLD SURVEY

Hello. My name is _____ and I'm with _____. We are talking with people who fish in the Mississippi Delta as part of a study that we are conducting for the U.S. Food and Drug Administration and the Environmental Protection Agency. Your household was randomly selected to participate in this study. We plan to talk with about 1,400 individuals from different counties in the Delta. A summary of the study findings will be posted locally.

My questions will take about 30 minutes. All of the information you provide will be kept completely confidential. The study findings will be presented in summary form so that your name is not associated with your responses.

Before we begin, I need to ask you two questions to see if you qualify for the study.

E1. Have you or anyone in your household been fishing anywhere in the Mississippi Delta area in the past year? Do not include fishing for commercial purposes or fishing in catfish ponds. **(SHOW MAP.)** The Delta area includes the area from the levee on the west to the hills on the east. It does not include the Mississippi River.

- | | |
|--------|----------------|
| 1. YES | -8. DON'T KNOW |
| 2. NO | -9. REFUSED |

E2. To the best of your knowledge, have you or anyone in your household eaten wild-caught fish from the Mississippi Delta in the past year? Please include wild-caught fish caught by you or others, including fish you buy.

1. YES

-8. DON'T KNOW

2. NO

-9. REFUSED

I. DETERMINE ELIGIBILITY

IF QUESTION E1 = 1 OR QUESTION E2 = 1

ELIGIBLE → Great! You qualify for the study. I hope that your household will participate.

IF QUESTION E1 = 2 AND QUESTION E2 = 2 (HOUSEHOLD DOES NOT FISH OR DOES NOT EAT FISH)

NOT ELIGIBLE → I'm sorry. You do not qualify for the study. Thank you for your time and have a nice day.

II. IF ELIGIBLE, SELECT INDIVIDUAL IN HOUSEHOLD TO CONDUCT SURVEY

IF QUESTION E1 = 1

May I please speak with the adult (18 years old or older) in this household who fishes most often for wild-caught fish from the Mississippi Delta? **(IF NOT AVAILABLE, SCHEDULE FOLLOW-UP APPOINTMENT.)**

IF QUESTION E2 = 1

May I please speak with the adult in this household who prepares and cooks most of the wild-caught fish that is eaten by your family? **(IF NOT AVAILABLE, SCHEDULE FOLLOW-UP APPOINTMENT.)**

IF QUESTION E1 AND E2 = 1

RANDOMLY SELECT THE PERSON TO INTERVIEW. IF NOT AVAILABLE, SCHEDULE FOLLOW-UP APPOINTMENT.

A. FISHING PRACTICES [COMPLETE THIS SECTION IF THE RESPONDENT FISHES (E1 = 1)]

Thank you for agreeing to participate in our study. I would like to begin by asking you some questions about fishing in the Mississippi Delta. For these questions, please do not include commercial fishing or fishing in catfish ponds.

1. About how many days have you been fishing in the Mississippi Delta area in the past month?

_____ days **(READ RESPONSE LIST ONLY IF NECESSARY.)**

- | | |
|------------|------------------|
| 1. NONE | 5. 10 TO 15, OR |
| 2. 1 TO 3, | 6. MORE THAN 15? |
| 3. 4 TO 6, | -8. DON'T KNOW |
| 4. 7 TO 9, | -9. REFUSED |

2. What are some of the reasons why you fish? **(CIRCLE ALL THAT ARE MENTIONED.)**

- | | |
|-------------------------------|---|
| 1. LOVE/ENJOY FISHING | 9. FEED MY FAMILY |
| 2. RELAXATION / STRESS RELIEF | 10. LIKE TO EAT FISH |
| 3. FAMILY RECREATION | 11. FOR FISH FRIES OR OTHER SOCIAL EVENTS |
| 4. TIME OUTDOORS | 12. OTHER, SPECIFY _____ |
| 5. REDUCE FOOD EXPENSES | _____ |
| 6. CHALLENGE / SPORT | -8. DON'T KNOW |
| 7. TO SELL | -9. REFUSED |
| 8. SPEND TIME WITH FRIENDS | |

3. How often do you give away the fish that you catch to other people? Would you say...

- | | |
|----------------------|----------------|
| 1. never, | -8. DON'T KNOW |
| 2. rarely, | -9. REFUSED |
| 3. some of the time, | |
| 4. most of the time, | |
| 5. all of the time? | |

4. How often do you sell or trade the fish that you catch to other people? Would you say ...

- | | |
|-------------------------|----------------|
| 1. never, | -8. DON'T KNOW |
| 2. rarely, | -9. REFUSED |
| 3. some of the time, | |
| 4. most of the time, or | |
| 5. all of the time | |

5. How often do you eat the fish you catch? Would you say ...
- | | |
|-------------------------|----------------|
| 1. never, | -8. DON'T KNOW |
| 2. rarely, | -9. REFUSED |
| 3. some of the time, | |
| 4. most of the time, or | |
| 5. all of the time? | |
6. How often do other people in your household eat the fish you catch? Would you say ...
- | | |
|-------------------------|----------------|
| 1. never, | -8. DON'T KNOW |
| 2. rarely, | -9. REFUSED |
| 3. some of the time, | |
| 4. most of the time, or | |
| 5. all of the time? | |
7. How much do you depend on the fish that you catch to provide food for your family? Would you say ...
- | | |
|------------------|----------------|
| 1. not at all, | -8. DON'T KNOW |
| 2. a little bit, | -9. REFUSED |
| 3. somewhat, or | |
| 4. a lot? | |

B. FISH CONSUMPTION PRACTICES [COMPLETE THIS SECTION IF THE RESPONDENT EATS FISH (E2 = 1)]

Now I would like to ask you some questions about eating wild-caught fish from the Mississippi Delta. For these questions, please include wild-caught fish that you or family members catch, wild-caught fish that other people catch and give to you, and wild-caught fish that you buy. Do not include pond-raised catfish.

8. At what age did children in your household start eating wild-caught fish from the Mississippi Delta? Would you say they were...
- | | |
|----------------------------|-----------------------------|
| 1. less than 1 year old, | 5. NO CHILDREN IN HOUSEHOLD |
| 2. 1 to 2 years old, | -8. DON'T KNOW |
| 3. 3 to 5 years old, or | -9. REFUSED |
| 4. older than 5 years old? | |

9. For you and each person in your household, please tell me the initials of that person starting with yourself, their age, whether they are male or female, about how many ounces of fish they usually eat when fish is served at a meal, and about how often they eat wild-caught fish from the Mississippi Delta.

Persons in household <i>(enter initials)</i>	Age <i>(enter age)</i>	Gender		Amount eaten in ounces per meal <i>(show model)</i>	Frequency of eating <i>(enter number)</i>	
		<i>(circle one)</i>	<i>(circle one)</i>		<i>(circle one)</i>	<i>(circle one)</i>
_____	_____	M	F	_____	___ times per	week / month / year
_____	_____	M	F	_____	___ times per	week / month / year
_____	_____	M	F	_____	___ times per	week / month / year
_____	_____	M	F	_____	___ times per	week / month / year
_____	_____	M	F	_____	___ times per	week / month / year
_____	_____	M	F	_____	___ times per	week / month / year

- 8. DON'T KNOW
-9. REFUSED

10. Did you or others in your household eat gar in the past year? **(SHOW PICTURE.)**
1. YES
2. NO **(GO TO Q.11)**
- 8. DON'T KNOW **(GO TO Q.11)**
-9. REFUSED **(GO TO Q.11)**

- 10A. For you and each person in your household, please tell me the initials of that person and about how often they eat gar.

Persons in household <i>(enter initials)</i>	Frequency of eating	
	<i>(enter number)</i>	<i>(circle one)</i>
_____	_____ times per	week / month / year
_____	_____ times per	week / month / year
_____	_____ times per	week / month / year
_____	_____ times per	week / month / year
_____	_____ times per	week / month / year
_____	_____ times per	week / month / year

- 8. DON'T KNOW
-9. REFUSED

11. Did you or others in your household eat carp in the past year? **(SHOW PICTURE.)**
1. YES
2. NO **(GO TO Q.12 ON PAGE 6)**
- 8. DON'T KNOW **(GO TO Q.12)**
-9. REFUSED **(GO TO Q.12)**

11A. For you and each person in your household, please tell me the initials of that person and about how often they eat carp.

Persons in household <i>(enter initials)</i>	Frequency of eating	
	<i>(enter number)</i>	<i>(circle one)</i>
_____	_____ times per	week / month / year
_____	_____ times per	week / month / year
_____	_____ times per	week / month / year
_____	_____ times per	week / month / year
_____	_____ times per	week / month / year
_____	_____ times per	week / month / year

- 8. DON'T KNOW
-9. REFUSED

12. Did you or others in your household eat wild-caught catfish that are longer than 22 inches in the past year? Do not include pond-raised catfish. **(SHOW PICTURE.)**

- | | |
|---------------------------|------------------------------------|
| 1. YES | -8. DON'T KNOW (GO TO Q.13) |
| 2. NO (GO TO Q.13) | -9. REFUSED (GO TO Q.13) |

12A. For you and each person in your household, please tell me the initials of that person and about how often they eat large catfish.

Persons in household <i>(enter initials)</i>	Frequency of eating	
	<i>(enter number)</i>	<i>(circle one)</i>
_____	_____ times per	week / month / year
_____	_____ times per	week / month / year
_____	_____ times per	week / month / year
_____	_____ times per	week / month / year
_____	_____ times per	week / month / year
_____	_____ times per	week / month / year

- 8. DON'T KNOW
-9. REFUSED

13. Did you or others in your household eat buffalo fish in the past year? **(SHOW PICTURE.)**

- | | |
|-------------------------------------|------------------------------------|
| 1. YES | -8. DON'T KNOW (GO TO Q.14) |
| 2. NO (GO TO Q.14 ON PAGE 7) | -9. REFUSED (GO TO Q.14) |

13A. For you and each person in your household, please tell me the initials of that person, about how often they eat buffalo fish, and where the buffalo fish was caught.

Persons in household <i>(enter initials)</i>	Frequency of consumption		Where did you or others catch the fish? <i>(location)</i>
	<i>(enter number)</i>	<i>(circle one)</i>	
_____	_____ times per	week / month / year	_____
_____	_____ times per	week / month / year	_____
_____	_____ times per	week / month / year	_____
_____	_____ times per	week / month / year	_____
_____	_____ times per	week / month / year	_____
_____	_____ times per	week / month / year	_____

-8. DON'T KNOW
-9. REFUSED

14. Now I would like to know how you usually prepare and cook each of the fish that we just talked about.

Type of fish	Do not eat <i>(check if No)</i>	Do you remove skin before cooking? <i>(circle one)</i>	Do you remove belly fat before cooking? <i>(circle one)</i>	Do you remove the head before cooking? <i>(circle one)</i>	Do you gut the fish and discard internal organs? <i>(circle one)</i>	Do you usually eat the fillet, a steak, or the whole fish? <i>(circle one)</i>	How do you usually cook the fish? <i>(circle one)</i>
Gar	<input type="checkbox"/>	Y or N	Y or N	Y or N	Y or N	Fillet Steak Whole fish	Fry / Grill Soup / Stew Broil / Bake Other
Carp	<input type="checkbox"/>	Y or N	Y or N	Y or N	Y or N	Fillet Steak Whole fish	Fry / Grill Soup / Stew Broil / Bake Other
Catfish (< 22 in)	<input type="checkbox"/>	Y or N	Y or N	Y or N	Y or N	Fillet Steak Whole fish	Fry / Grill Soup / Stew Broil / Bake Other
Catfish (> 22 in)	<input type="checkbox"/>	Y or N	Y or N	Y or N	Y or N	Fillet Steak Whole fish	Fry / Grill Soup / Stew Broil / Bake Other
Buffalo fish	<input type="checkbox"/>	Y or N	Y or N	Y or N	Y or N	Fillet Steak Whole fish	Fry / Grill Soup / Stew Broil / Bake Other

-8. DON'T KNOW
-9. REFUSED

C. DETERMINE IF RESPONDENT IS AWARE OF MISSISSIPPI DELTA ADVISORY

15. How safe do you think it is to eat wild-caught fish from the Mississippi Delta, would you say that it is ...

- | | |
|----------------------|----------------|
| 1. not very safe, | -8. DON'T KNOW |
| 2. somewhat safe, or | -9. REFUSED |
| 3. very safe? | |

15A. Why do you think it is **(INSERT RESPONSE FROM Q.15)** to eat the fish?

- 8. DON'T KNOW
- 9. REFUSED

16. Are you aware of any warnings or advisories about eating wild-caught fish from the Mississippi Delta? **[IF RESPONDENT IS NOT SURE OR CANNOT RECALL: These advisories were first issued in 2001–2002. The advisory recommends that you don't eat too much of certain fish because of chemicals in the fish.]**

- | | |
|---|--|
| 1. YES (GO TO SECTION E ON PAGE 12) | -8. DON'T KNOW (COMPLETE SECTION D, THEN GO TO SECTION H) |
| 2. NO (COMPLETE SECTION D, THEN GO TO SECTION H) | -9. REFUSED (COMPLETE SECTION D, THEN GO TO SECTION H) |

D. QUESTIONS FOR RESPONDENTS NOT AWARE OF ADVISORY **[COMPLETE THIS SECTION IF Q.16 = 2, -8, OR -9]**

17. The advisory recommends that you should not eat any buffalo fish from Roebuck Lake and that you should not eat more than two meals a month of buffalo fish, carp, gar, and catfish greater than 22 inches from other Mississippi Delta waters. **(SHOW PICTURE OF ADVISORY.)**

How believable to you is the information in the advisory, would you say that it is ...

- | | |
|----------------------------|----------------|
| 1. not very believable, | -8. DON'T KNOW |
| 2. somewhat believable, or | -9. REFUSED |
| 3. very believable? | |

18. In terms of protecting your health, how important do you think it is to follow the advisory's recommendations? Would you say...
- 1. not very important, -8. DON'T KNOW
 - 2. somewhat important, or -9. REFUSED
 - 3. very important?
19. How difficult would it be for you and your family to limit how much you eat of buffalo fish, carp, gar, and large catfish? Would you say...
- 1. not a problem at all, -8. DON'T KNOW
 - 2. somewhat of a problem, or -9. REFUSED
 - 3. a very big problem?
 - 4. **DO NOT EAT THESE FISH (GO TO Q.25 ON PAGE 11)**
20. How likely are you to follow the advisory's recommendations? Would you say ...
- 1. not very likely, -8. DON'T KNOW
 - 2. somewhat likely, or -9. REFUSED
 - 3. very likely?
- 20A. Why would you be **(INSERT RESPONSE FROM Q.20)** to follow the recommendation? **(RECORD RESPONSE.)**
-
- 8. DON'T KNOW
-9. REFUSED
21. Before learning about the advisory, how concerned were you about eating wild-caught buffalo fish, carp, gar, and large catfish from the Mississippi Delta? Would you say...
- 1. not very concerned, -8. DON'T KNOW
 - 2. somewhat concerned, or -9. REFUSED
 - 3. very concerned?
22. Now that you know about the advisory, how concerned are you about eating wild-caught buffalo fish, carp, gar, and large catfish from the Mississippi Delta? Would you say...
- 1. not very concerned, -8. DON'T KNOW
 - 2. somewhat concerned, or -9. REFUSED
 - 3. very concerned?

22A. Why are you **(INSERT RESPONSE FROM Q.22)? (RECORD RESPONSE.)**

-8. DON'T KNOW

-9. REFUSED

23. How likely do you think it is that you or members of your family would get sick from eating wild-caught buffalo fish, carp, gar, or large catfish from the Mississippi Delta? Would you say...

1. not very likely,

-8. DON'T KNOW

2. somewhat likely, or

-9. REFUSED

3. very likely?

24. How likely is it that you or members of your family would have serious long-term health problems from eating wild-caught buffalo fish, carp, gar, or large catfish from the Mississippi Delta? Would you say...

1. not very likely,

-8. DON'T KNOW

2. somewhat likely, or

-9. REFUSED

3. very likely?

25. What would you say are the two best ways to get information on fishing advisories to people like yourself who fish or eat wild-caught fish from the Mississippi Delta? **(SHOW CARD WITH LIST; CIRCLE ONLY TWO RESPONSES. READ CARD IF NECESSARY.)**

1. Radio

12. Post information and provide brochures at Women, Infant, and Children (WIC) clinics

2. Television

3. Newspaper

13. Post information and provide brochures at doctors' offices, hospitals, and clinics

4. Magazine

14. Provide information through local churches

5. Post signs at lakes, rivers, and other water sources

15. Go door to door to provide information

6. Mail information to home

16. Fishing clubs

7. Internet or Web site

17. OTHER, SPECIFY _____

8. Wildlife and fish expos

9. Health fairs

10. Post information and provide brochures at bait shops

11. Post information and provide brochures at fish markets

-8. DON'T KNOW

-9. REFUSED

26. Who do you most trust to provide information on fishing advisories? **(SHOW CARD WITH LIST; CIRCLE ONE.)**

- | | |
|---|-------------------------|
| 1. Local or state government officials | 7. University extension |
| 2. Federal government officials | 8. Fishermen |
| 3. University professors | 9. OTHER, SPECIFY _____ |
| 4. Church leaders | _____ |
| 5. Friends or family | -8. DON'T KNOW |
| 6. Doctors or other health care providers | -9. REFUSED |

27. Would you like to have more information about the advisory?

- | | |
|---|---|
| 1. YES | -8. DON'T KNOW (GO TO SECTION H) |
| 2. NO (GO TO SECTION H ON PAGE 22) | -9. REFUSED (GO TO SECTION H) |

27A. What information would you like to have? **(RECORD RESPONSE.)**

- 8. DON'T KNOW
-9. REFUSED

GO TO SECTION H ON PAGE 22

E. QUESTIONS FOR RESPONDENTS AWARE OF ADVISORY [COMPLETE THIS SECTION IF Q.16 = 1]

28. To the best of your knowledge, tell me what the advisory recommends about eating fish. **(CIRCLE ALL THAT ARE MENTIONED.)**

- | | |
|--|---|
| 1. DO NOT EAT ANY BUFFALO FISH FROM ROEBUCK LAKE | 7. DO NOT EAT MORE THAN TWO MEALS A MONTH OF BUFFALO FISH |
| 2. DO NOT EAT TOO MUCH OF CERTAIN FISH | 8. DO NOT EAT MORE THAN TWO MEALS A MONTH OF CARP |
| 3. DO NOT EAT TOO MUCH BUFFALO FISH | 9. DO NOT EAT MORE THAN TWO MEALS A MONTH OF GAR |
| 4. DO NOT EAT TOO MUCH CARP | 10. DO NOT EAT MORE THAN TWO MEALS A MONTH OF LARGE CATFISH |
| 5. DO NOT EAT TOO MUCH GAR | 11. OTHER, SPECIFY _____ |
| 6. DO NOT EAT TOO MUCH LARGE CATFISH | _____ |
| | -8. DON'T KNOW |
| | -9. REFUSED |

29. How did you hear or learn about the advisory? **(CIRCLE ALL THAT ARE MENTIONED.)**

- | | |
|--|--------------------------|
| 1. RADIO NEWS OR TALK SHOW | 7. BROCHURE / PAMPHLET |
| 2. RADIO ADVERTISEMENT | 8. CHURCH |
| 3. TELEVISION NEWS OR TALK SHOW | 9. FAMILY / FRIENDS |
| 4. TELEVISION SHOW | 10. OTHER, SPECIFY _____ |
| 5. NEWSPAPER | _____ |
| 6. SIGNS POSTED AT LAKES /RIVERS / WATER | -8. DON'T KNOW |
| | -9. REFUSED |

30. Have you seen signs posted about the advisory at places where you fish?

- | | |
|-----------------------------|----------------|
| 1. YES | -8. DON'T KNOW |
| 2. NO | -9. REFUSED |
| 3. RESPONDENT DOES NOT FISH | |

31. Did you get a brochure or pamphlet about the advisory?

- | | |
|---------------------------|------------------------------------|
| 1. YES | -8. DON'T KNOW (GO TO Q.32) |
| 2. NO (GO TO Q.32) | -9. REFUSED (GO TO Q.32) |

31A. Where did you get or who gave you the brochure or pamphlet? **(CIRCLE ALL THAT ARE MENTIONED.)**

- | | |
|--|--------------------------|
| 1. HEALTH FAIR | 8. PARK RANGER |
| 2. COMMERCIAL FISHERMAN | 9. CHURCH |
| 3. BAIT SHOP | 10. FAMILY / FRIENDS |
| 4. WILDLIFE AND FISH EXPO | 11. OTHER, SPECIFY _____ |
| 5. FISH MARKET | _____ |
| 6. WIC CLINIC | -8. DON'T KNOW |
| 7. DOCTOR, HOSPITAL, OR OTHER HEALTH CARE PROVIDER | -9. REFUSED |

31B. How useful was the brochure or pamphlet? Would you say ...

- | | |
|------------------------|--------------------------|
| 1. not at all useful, | 4. DID NOT READ BROCHURE |
| 2. somewhat useful, or | -8. DON'T KNOW |
| 3. very useful? | -9. REFUSED |

32. Did you know about the toll-free hotline that you can call to get information on the advisory?

- | | |
|--------------------------------------|------------------------------------|
| 1. YES | -8. DON'T KNOW (GO TO Q.33) |
| 2. NO (GO TO Q.33 ON PAGE 14) | -9. REFUSED (GO TO Q.33) |

32A. Did you call the advisory hotline?

- | | |
|--------------------------------------|------------------------------------|
| 1. YES | -8. DON'T KNOW (GO TO Q.33) |
| 2. NO (GO TO Q.33 ON PAGE 14) | -9. REFUSED (GO TO Q.33) |

32B. How useful was the information you got from the advisory hotline? Would you say ...

- | | |
|------------------------|----------------|
| 1. not at all useful, | -8. DON'T KNOW |
| 2. somewhat useful, or | -9. REFUSED |
| 3. very useful? | |

33. If you have access to a computer, did you look at the information that the Mississippi Department of Environmental Quality has on the advisory?

- | | |
|--|------------------------------------|
| 1. YES | -8. DON'T KNOW (GO TO Q.34) |
| 2. NO (GO TO Q.34) | -9. REFUSED (GO TO Q.34) |
| 3. DO NOT HAVE ACCESS TO A
COMPUTER (GO TO Q.34) | |

33A. How useful was the information on the Web site? Would you say ...

- | | |
|------------------------|----------------|
| 1. not at all useful, | -8. DON'T KNOW |
| 2. somewhat useful, or | -9. REFUSED |
| 3. very useful? | |

34. Did your church pastor talk about the advisory at all?

- | | |
|-------------------------|----------------|
| 1. YES | -8. DON'T KNOW |
| 2. NO | -9. REFUSED |
| 3. DO NOT ATTEND CHURCH | |

35. Did your doctor or other health care provider talk with you about the advisory?

- | | |
|--------------------------------|----------------|
| 1. YES | -8. DON'T KNOW |
| 2. NO | -9. REFUSED |
| 3. HAVE NOT BEEN TO THE DOCTOR | |

36. Do you remember seeing or hearing information about the advisory on any of the following TV or radio programs? **(READ LIST AND CIRCLE ONE FOR EACH.)**

	Yes	No	Don't Know	Refused
Local TV news or talk show	01	02	-8	-9
Mississippi Outdoors program on ETV	01	02	-8	-9
Local radio news or talk show	01	02	-8	-9
Radio advertisements	01	02	-8	-9

37. The advisory recommends that you should not eat any buffalo fish from Roebuck Lake and that you should not eat more than two meals a month of buffalo fish, carp, gar, and catfish greater than 22 inches from other Mississippi Delta waters. **(SHOW PICTURE OF ADVISORY.)**

How believable to you is the information in the advisory, would you say that it is ...

- | | |
|----------------------------|----------------|
| 1. not very believable, | -8. DON'T KNOW |
| 2. somewhat believable, or | -9. REFUSED |
| 3. very believable? | |

38. In terms of protecting your health, how important do you think it is to follow the advisory's recommendations? Would you say...

- | | |
|---------------------------|----------------|
| 1. not very important, | -8. DON'T KNOW |
| 2. somewhat important, or | -9. REFUSED |
| 3. very important? | |

39. How difficult is it for you and your family to limit how much you eat of buffalo fish, carp, gar, and large catfish? Would you say...

- | | |
|---|----------------|
| 1. not a problem at all, | -8. DON'T KNOW |
| 2. somewhat of a problem, or | -9. REFUSED |
| 3. a very big problem? | |
| 4. DO NOT EAT THESE FISH (GO TO Q.43 ON PAGE 16) | |

40. How concerned are you about eating wild-caught buffalo fish, carp, gar, and large catfish from the Mississippi Delta? Would you say...

- | | |
|---------------------------|----------------|
| 1. not very concerned, | -8. DON'T KNOW |
| 2. somewhat concerned, or | -9. REFUSED |
| 3. very concerned? | |

- 40A. Why are you **(INSERT RESPONSE FROM Q.40)? (RECORD RESPONSE.)**

-8. DON'T KNOW
-9. REFUSED

41. How likely do you think it is that you or members of your family would get sick from eating wild-caught buffalo fish, carp, gar, or large catfish from the Mississippi Delta? Would you say...

- | | |
|------------------------|----------------|
| 1. not very likely, | -8. DON'T KNOW |
| 2. somewhat likely, or | -9. REFUSED |
| 3. very likely? | |

42. How likely is it that you or members of your family would have serious long-term health problems from eating wild-caught buffalo fish, carp, gar, or large catfish from the Mississippi Delta? Would you say...

- | | |
|------------------------|----------------|
| 1. not very likely, | -8. DON'T KNOW |
| 2. somewhat likely, or | -9. REFUSED |
| 3. very likely? | |

43. What would you say are the two best ways to get information on fishing advisories to people like yourself who fish or eat wild-caught fish from the Mississippi Delta? **(SHOW CARD WITH LIST; CIRCLE ONLY TWO RESPONSES. READ CARD IF NECESSARY.)**

- | | |
|--|---|
| 1. Radio | 12. Post information and provide brochures at Women, Infant, and Children (WIC) clinics |
| 2. Television | 13. Post information and provide brochures at doctors' offices, hospitals, and clinics |
| 3. Newspaper | 14. Provide information through local churches |
| 4. Magazine | 15. Go door to door to provide information |
| 5. Post signs at lakes, rivers, and other water sources | 16. Fishing clubs |
| 6. Mail information to home | 17. OTHER, SPECIFY _____ |
| 7. Internet or Web site | |
| 8. Wildlife and fish expos | |
| 9. Health fairs | |
| 10. Post information and provide brochures at bait shops | |
| 11. Post information and provide brochures at fish markets | -8. DON'T KNOW |
| | -9. REFUSED |

44. Who do you most trust to provide information on fishing advisories? **(SHOW CARD WITH LIST; CIRCLE ONE.)**

- | | |
|---|-------------------------|
| 1. Local or state government officials | 7. University extension |
| 2. Federal government officials | 8. Fishermen |
| 3. University professors | 9. OTHER, SPECIFY _____ |
| 4. Church leaders | |
| 5. Friends or family | -8. DON'T KNOW |
| 6. Doctors or other health care providers | -9. REFUSED |

45. Would you like to have more information on the advisory?

- | | |
|--------------------------------------|------------------------------------|
| 1. YES | -8. DON'T KNOW (GO TO Q.46) |
| 2. NO (GO TO Q.46 ON PAGE 17) | -9. REFUSED (GO TO Q.46) |

45A. What information would you like to have? **(RECORD RESPONSE.)**

- 8. DON'T KNOW
- 9. REFUSED

F. SELF-REPORTED CHANGES IN FISHING PRACTICES [COMPLETE THIS SECTION IF RESPONDENT FISHES (E1 = 1) AND RESPONDENT IS AWARE OF ADVISORY (Q.16 = 1)]

46. After reading or hearing about the advisory, did you change how often you usually fish in Mississippi Delta waters? Do you fish ...

- | | |
|--------------------------------------|----------------|
| 1. more often, | -8. DON'T KNOW |
| 2. about the same amount of time, or | -9. REFUSED |
| 3. less often? | |

47. After reading or hearing about the advisory, did you change the locations where you usually go fishing in the Mississippi Delta? Do you fish ...

- | | |
|--|------------------------------------|
| 1. in the same places or (GO TO Q.48) | -8. DON'T KNOW (GO TO Q.48) |
| 2. different places? | -9. REFUSED (GO TO Q.48) |

47A. Tell me about the changes you've made in where you fish in the Mississippi Delta. **(RECORD RESPONSE.)**

- 8. DON'T KNOW
- 9. REFUSED

48. Before reading or hearing about the advisory, did you ever fish in Roebuck Lake in Leflore County? **(SHOW ON MAP, IF NECESSARY.)**

- | | |
|--------|----------------|
| 1. YES | -8. DON'T KNOW |
| 2. NO | -9. REFUSED |

49. Since reading or hearing about the advisory, have you fished in Roebuck Lake?

- | | |
|--------|----------------|
| 1. YES | -8. DON'T KNOW |
| 2. NO | -9. REFUSED |

50. After reading or hearing about the advisory, did you make any changes in the types of fish that you usually fish for in the Mississippi Delta? Do you fish ...

1. for the same types of fish or **(GO TO SECTION G)**
2. different types of fish?
- 8. DON'T KNOW **(GO TO SECTION G)**
- 9. REFUSED **(GO TO SECTION G)**

50A. Tell me about the changes you made in the types of fish that you fish for in the Mississippi Delta. **(RECORD RESPONSE.)**

- 8. DON'T KNOW
-9. REFUSED

G. SELF-REPORTED CHANGES IN FISHING CONSUMPTION [COMPLETE THIS SECTION IF RESPONDENT OR PERSON IN HOUSEHOLD EATS FISH (E2 = 1) AND RESPONDENT IS AWARE OF ADVISORY (Q.16 = 1)]

51. After reading or hearing about the advisory, did you change how much wild-caught fish from the Mississippi Delta that you eat? Do you eat ...

1. more fish, **(GO TO Q.52 ON PAGE 19),**
2. the same amount of fish, **(GO TO Q.52 ON PAGE 19)**
3. less fish, or
4. more of some fish and less of others?
- 8. DON'T KNOW **(GO TO Q.52)**
- 9. REFUSED **(GO TO Q.52)**

51A. Why do you eat **(INSERT RESPONSE FROM Q.51)** **(RECORD RESPONSE.)**

- 8. DON'T KNOW
-9. REFUSED

51B. Since learning about the advisory, what types of wild-caught fish have you stopped eating? What types of wild-caught fish do you eat less of now? What types of wild-caught fish did you quit buying or buy less of now? **(DO NOT READ LIST. CIRCLE ALL THAT ARE MENTIONED.)** NOTE: IF RESPONDENT SAYS "CATFISH," PROBE: Any specific size of catfish?; IF RESPONDENT SAYS "BIG FISH," PROBE: Any specific type of fish?

	Stopped eating? <i>(Circle all that are mentioned)</i>	Eat less of now? <i>(Circle all that are mentioned)</i>	Stopped buying or buy less of now? <i>(Circle all that are mentioned)</i>
BUFFALO	01	01	01
CARP	02	02	02
GAR	03	03	03
CATFISH	04	04	04
LARGE CATFISH (> 22 inches)	05	05	05
SMALL CATFISH	06	06	06
DRUM	07	07	07
BREAM	08	08	08
LARGE MOUTH BASS	09	09	09
CRAPPIE	10	10	10
OTHER, SPECIFY _____	11	11	11
NONE	12	12	12
DON'T KNOW	-8	-8	-8
REFUSED	-9	-9	-9

51C. Since you cut back or stopped eating certain wild-caught fish, what are you eating instead? **(CIRCLE ALL THAT ARE MENTIONED.)**

- | | |
|--|---|
| <p>1. EAT OTHER TYPES OF FISH / DRUM / BREAM / LARGE MOUTH BASS / CRAPPIE / FISH THAT ARE NOT IN THE ADVISORY</p> <p>2. EAT FARM / POND-RAISED CATFISH INSTEAD</p> <p>3. BUY FISH FROM FISH MARKET OR GROCERY STORE INSTEAD</p> <p>4. EAT SMALLER FISH INSTEAD</p> | <p>5. HAVE LESS FOOD TO EAT NOW</p> <p>6. BUY AND EAT CHICKEN INSTEAD</p> <p>7. BUY AND EAT BEEF / PORK / MEAT INSTEAD</p> <p>8. OTHER, SPECIFY _____</p> <p>_____</p> <p>-8. DON'T KNOW</p> <p>-9. REFUSED</p> |
|--|---|

52. After reading or hearing about the advisory, did you change the size of wild-caught fish from the Mississippi Delta that you eat? Do you usually eat ...

- | | |
|---|------------------------------------|
| 1. larger fish, (GO TO Q.53) | -8. DON'T KNOW (GO TO Q.53) |
| 2. the same size of fish, (GO TO Q.53) | -9. REFUSED (GO TO Q.53) |
| 3. smaller fish, or | |
| 4. smaller-sized fish for some types of fish and the same size for other types of fish? | |

52A. For what types of fish do you eat smaller-sized fish? **(CIRCLE ALL THAT ARE MENTIONED.)**

- | | |
|------------|-------------------------|
| 1. BUFFALO | 7. LARGE MOUTH BASS |
| 2. CARP | 8. CRAPPIE |
| 3. GAR | 9. OTHER, SPECIFY _____ |
| 4. CATFISH | _____ |
| 5. DRUM | -8. DON'T KNOW |
| 6. BREAM | -9. REFUSED |

53. After reading or hearing about the advisory, did you make any changes in how you prepare or cook wild-caught fish from the Mississippi Delta?

- | | |
|---------------------------|------------------------------------|
| 1. YES | -8. DON'T KNOW (GO TO Q.54) |
| 2. NO (GO TO Q.54) | -9. REFUSED (GO TO Q.54) |

53A. Which of the following changes did you make? **(SHOW CARD WITH LIST; CIRCLE ALL THAT APPLY.)**

- | | |
|--|---|
| 1. Started removing skin from fish before cooking | 5. Stopped making fish stew or soup |
| 2. Started removing belly fat from fish before cooking | 6. Started broiling, baking, or grilling fish instead of frying |
| 3. Started eating fillets instead of whole fish | 7. OTHER, SPECIFY _____ |
| 4. Stopped frying fish or fry fish less often | _____ |
| | -8. DON'T KNOW |
| | -9. REFUSED |

54. We are especially interested in the fish-consumption practices of pregnant women. Has anyone in your household been pregnant since 2001, that is, since the advisory?

- | | |
|--------------------------------------|------------------------------------|
| 1. YES | -8. DON'T KNOW (GO TO Q.55) |
| 2. NO (GO TO Q.55 ON PAGE 20) | -9. REFUSED (GO TO Q.55) |

54A. Were any changes made in the types and amount of wild-caught fish that she ate or how fish was prepared and cooked for her while she was pregnant?

- | | |
|--------------------|-----------------------------|
| 1. YES | -8. DON'T KNOW (GO TO Q.55) |
| 2. NO (GO TO Q.55) | -9. REFUSED (GO TO Q.55) |

54B. What kind of changes were made? (RECORD RESPONSE.)

- 8. DON'T KNOW
- 9. REFUSED

55. After reading or hearing about the advisory, were any changes made in the types and amount of wild-caught fish or how fish was prepared and cooked for children under the age of 7?

- | | |
|---|-----------------------------|
| 1. YES | -8. DON'T KNOW (GO TO Q.56) |
| 2. NO (GO TO Q.56) | -9. REFUSED (GO TO Q.56) |
| 3. DO NOT PREPARE AND COOK FISH FOR CHILDREN (GO TO Q.56) | |

55A. What kind of changes were made? (RECORD RESPONSE.)

- 8. DON'T KNOW
- 9. REFUSED

56. How often do you follow the recommendations provided in the advisory? Would you say ...

- | | |
|-------------------------|----------------|
| 1. never, | -8. DON'T KNOW |
| 2. rarely, | -9. REFUSED |
| 3. some of the time, | |
| 4. most of the time, or | |
| 5. all of the time? | |

57. Did you make changes in the types and amount of fish you and your family usually eat when you first learned about the advisory, but have now gone back to your usual practices before the advisory?

- | | |
|--------|----------------|
| 1. YES | -8. DON'T KNOW |
| 2. NO | -9. REFUSED |

H. DEMOGRAPHICS

Now I would like to ask you a few questions about yourself. Remember, all the information you provide will be kept completely confidential.

58. RECORD GENDER.

- 1. MALE
- 2. FEMALE
- 8. DON'T KNOW
- 9. REFUSED

59. What is the highest level of education that you have completed?

- 1. 5TH GRADE OR LESS
- 2. 6TH TO 8TH GRADE
- 3. 9TH TO 11TH GRADE
- 4. HIGH SCHOOL DIPLOMA OR GED
- 5. SOME COLLEGE
- 6. 2-YEAR COLLEGE DEGREE
- 7. 4-YEAR COLLEGE DEGREE
- 8. ADVANCED DEGREE
- 8. DON'T KNOW
- 9. REFUSED

60. Are you Hispanic or Latino?

- 1. YES
- 2. NO
- 8. DON'T KNOW
- 9. REFUSED

61. What is your race? **(SHOW CARD WITH LIST. CIRCLE ALL THAT ARE MENTIONED)**

- 1. White
- 2. Black or African American
- 3. Asian
- 4. Native Hawaiian or other Pacific Islander
- 5. American Indian or Alaskan Native
- 6. OTHER, SPECIFY _____
- 8. DON'T KNOW
- 9. REFUSED

62. What is your marital status?

- 1. SINGLE
- 2. MARRIED
- 3. DIVORCED / SEPARATED
- 4. WIDOWED
- 5. LIVING WITH PARTNER
- 8. DON'T KNOW
- 9. REFUSED

63. Do you own or rent your home?

- 1. OWN
- 2. RENT
- 8. DON'T KNOW
- 9. REFUSED

64. Do you own a vehicle?

- 1. YES **(GO TO Q.65)**
- 2. NO
- 8. DON'T KNOW
- 9. REFUSED

64A. Do you have access to a vehicle?

- | | |
|--------|----------------|
| 1. YES | -8. DON'T KNOW |
| 2. NO | -9. REFUSED |

65. Which of the following best describes your work status? Are you ...

- | | |
|--------------------------------------|-------------------------|
| 1. employed full time, | 8. OTHER, SPECIFY _____ |
| 2. employed part time, | _____ |
| 3. unemployed, (GO TO Q.66) | -8. DON'T KNOW |
| 4. retired, (GO TO Q.66) | -9. REFUSED |
| 5. disabled, (GO TO Q.66) | |
| 6. a student, or (GO TO Q.66) | |
| 7. a homemaker? (GO TO Q.66) | |

65A. What kind of job do you have? **(SHOW CARD WITH LIST. CIRCLE ONE.)**

- | | |
|---------------------------------------|--------------------------|
| 1. Farming | 8. Retail trade |
| 2. Agricultural services | 9. Services |
| 3. Mining | 10. Government |
| 4. Manufacturing | 11. OTHER, SPECIFY _____ |
| 5. Construction | _____ |
| 6. Transportation or public utilities | -8. DON'T KNOW |
| 7. Wholesale trade | -9. REFUSED |

66. Do you grow food for you and your family?

- | | |
|--------|----------------|
| 1. YES | -8. DON'T KNOW |
| 2. NO | -9. REFUSED |

67. Do you have a current sport fishing license for the state of Mississippi? Do not include commercial fishing licenses.

- | | |
|--------|----------------|
| 1. YES | -8. DON'T KNOW |
| 2. NO | -9. REFUSED |

68. What was your total household income in 2006 before taxes? Include income from all persons living in your house. **(SHOW CARD WITH LIST AND CIRCLE ONE. IF RESPONDENT IS RELUCTANT TO RESPOND REMIND HIM / HER THAT THE INFORMATION WILL BE KEPT CONFIDENTIAL AND ONLY USED FOR ANALYSIS PURPOSES.)**

- | | |
|----------------------|---------------------|
| 1. less than \$9,999 | 5. \$40,000–49,999 |
| 2. \$10,000–19,999 | 6. \$50,000 or more |
| 3. \$20,000–29,999 | -8. DON'T KNOW |
| 4. \$30,000–39,999 | -9. REFUSED |

I. AWARENESS OF NATIONAL ADVISORY ON MERCURY IN FISH AND SHELLFISH

We're almost done with the interview. My last questions are about seafood in general, not necessarily seafood caught in the Mississippi Delta. By seafood, I mean all types of fish and shellfish including tuna fish, fish sticks, shrimp, oysters, crab, and so on.

69. Have you heard anything about it being healthy to eat seafood?

- | | |
|---------------------------|------------------------------------|
| 1. YES | -8. DON'T KNOW (GO TO Q.70) |
| 2. NO (GO TO Q.70) | -9. REFUSED (GO TO Q.70) |

69A. What health benefits have you heard of? **(CIRCLE ALL THAT ARE MENTIONED.)**

- | | |
|--------------------------------------|--------------------------------|
| 1. GENERALLY HEALTHY / NUTRITIOUS | 8. ANTIOXIDANT / GOOD FOR SKIN |
| 2. LOW FAT | 9. HIGH PROTEIN |
| 3. BRAIN FOOD | 10. OIL / FISH OIL |
| 4. HEART HEALTHY | 11. OTHER, SPECIFY _____ |
| 5. OMEGA-3 FATTY ACIDS | _____ |
| 6. CHOLESTEROL LOWERING | -8. DON'T KNOW |
| 7. LOW CALORIE / AIDS IN WEIGHT LOSS | -9. REFUSED |

70. Have you heard of any health problems from eating seafood, other than the Mississippi Delta advisory that we've already talked about?

- | | |
|---------------------------------------|------------------------------------|
| 1. YES | -8. DON'T KNOW (GO TO Q.71) |
| 2. NO (GO TO Q.71A ON PAGE 23) | -9. REFUSED (GO TO Q.71) |

70A. What health problems have you heard of? **(CIRCLE ALL THAT ARE MENTIONED.)**

- | | |
|---|-----------------------------|
| 1. MERCURY / METHYL MERCURY (GO TO Q.71A ON PAGE 25) | 8. PESTICIDES |
| 2. PCBs | 9. CHEMICALS |
| 3. DIOXIN | 10. POLLUTION/CONTAMINATION |
| 4. VIBRIO | 11. OTHER, SPECIFY _____ |
| 5. HEPATITIS | _____ |
| 6. GERMS / PARASITES / BACTERIA | -8. DON'T KNOW |
| 7. ALLERGIES | -9. REFUSED |

71. Have you heard anything about mercury as a problem in some seafood?

- | | |
|---------------------------------------|-------------------------------------|
| 1. YES | -8. DON'T KNOW (GO TO Q.71B) |
| 2. NO (GO TO Q.71B ON PAGE 25) | -9. REFUSED (GO TO Q.71B) |

71A. What kinds of seafood have mercury problems? **(IF RESPONDENT ANSWERS "TUNA," PROBE FOR TYPE. CIRCLE ALL THAT ARE MENTIONED.)**

- | | |
|---------------------------------|--------------------------|
| 1. GENERAL TUNA | 9. TILE FISH |
| 2. TUNA STEAK | 10. SALMON |
| 3. CANNED TUNA | 11. SHELLFISH |
| 4. ALBACORE OR CHUNK WHITE TUNA | 12. ANY LARGE FISH |
| 5. LIGHT TUNA | 13. OTHER, SPECIFY _____ |
| 6. SWORDFISH | _____ |
| 7. SHARK | -8. DON'T KNOW |
| 8. KING MACKEREL | -9. REFUSED |

71B. Have you heard of any particular group of people who are advised to be especially careful not to eat too much seafood that might have mercury?

- | | |
|---------------------------|------------------------------------|
| 1. YES | -8. DON'T KNOW (GO TO Q.72) |
| 2. NO (GO TO Q.72) | -9. REFUSED (GO TO Q.72) |

71C. Which group of people should not eat too much seafood that might have mercury? **(CIRCLE ALL THAT ARE MENTIONED.)**

- | | |
|--|-------------------------|
| 1. PREGNANT WOMEN OR WOMEN WHO MIGHT BECOME PREGNANT | 4. OTHER, SPECIFY _____ |
| 2. NURSING MOTHERS | _____ |
| 3. YOUNG CHILDREN | -8. DON'T KNOW |
| | -9. REFUSED |

72. What else would you like to know about the possible health benefits and problems from eating seafood? **(RECORD RESPONSE.)**

- _____
- 8. DON'T KNOW
-9. REFUSED

***Thank you for completing the survey!
Give respondent information on the advisories.***