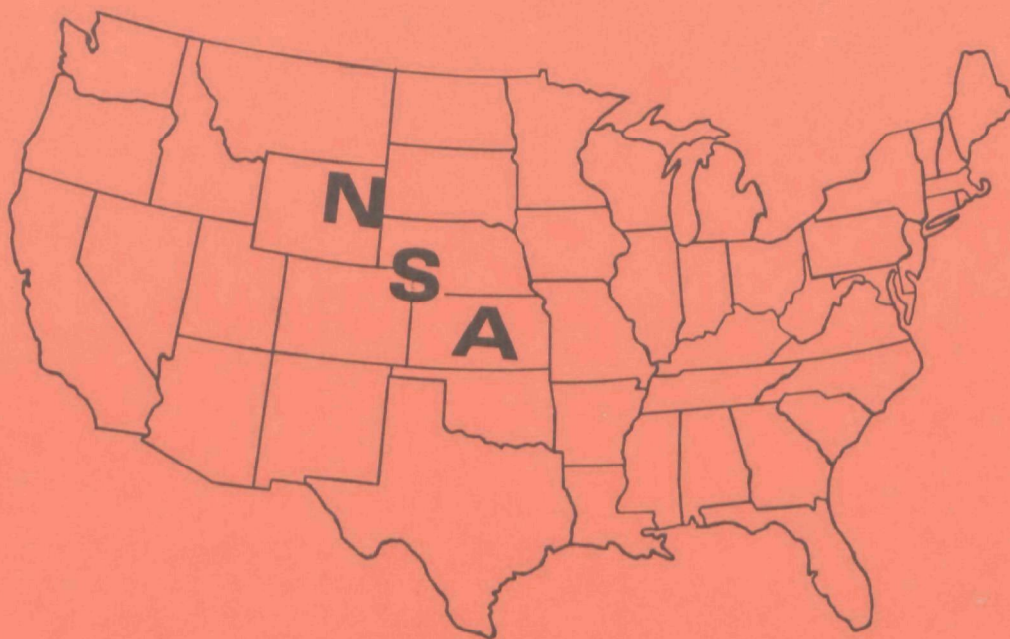


National Statistical Assessment of Rural Water Conditions

1978



U.S. ENVIRONMENTAL PROTECTION AGENCY

A NATIONAL SURVEY OF DRINKING WATER
CONDITIONS IN RURAL AMERICA

SECTION CS
COVER SHEET

CS-1 Interview Number

1 4

CS-2 Deck Number

5 6

CS-3 Address or description

Place

State

CS-4 Latitude

7 8 (Degrees)

9 10 (Minutes)

11 12 (Seconds)

CS-5 Longitude

13 15 (Degrees)

16 17 (Minutes)

18 19 (Seconds)

CS-6 Number of dwelling units in the building containing the sampled household. (If there are more than 98, enter "99.")

20 21

INTERVIEWER INSTRUCTION: If you find the number of dwelling units listed in CS-6 is different than the number reported in the listing, contact your supervisor and report the discrepancy before continuing.

CS-7 Is this a mobile home?

22 0 -- No
1 -- Yes

SECTION A

CS-8 Interviewer Number

23 24

Interviewer Name _____

CS-9 Number of minutes required to complete Section A.
(Code "999" in columns 25 - 27 if Section was
only partially completed. Code "000" if there
was no interview for Section A.)25 26 27

CS-10 Date Section A completed

28 29

Month

Day

30 31

SECTION B

CS-11 Interviewer Number

32 33

Interviewer Name _____

CS-12 Number of minutes required to complete Section B.
(Code "999" in columns 34 - 36 if Section was
only partially completed. Code "000" if there
was no interview for Section B.)34 35 36

CS-13 Date Section B completed

37 38

Month

Day

39 40

SECTION C

CS-14 Interviewer Number

41 42

Interviewer Name _____

CS-15 Number of minutes required to complete Section C.
(Code "999" in columns 43 - 45 if Section was
only partially completed. Code "000" if there
was no interview for Section B.)43 44 45

CS-16 Date Section C completed

46 47

Month

Day

48 49

SECTION D

CS-17 Interviewer Number

50 51

Interviewer Name _____

CS-18 Number of minutes required to complete Section D.
(Code "999" in columns 52 - 54 if Section was
only partially completed. Code "000" if there
was no interview for Section D.)52 53 54

CS-19 Date Section D completed

55 56

Month

57 58

Day

SECTION E

CS-20 Interviewer Number

59 60

Interviewer Name _____

CS-21 Section E completed, partially completed, or
not used

0	Not used
1	Completed
9	Partially completed

61CS-22 Date Section E completed or partially com-
pleted (Code "0000" in columns 62 - 65 if
Section E was not used.)62 63

Month

64 65

Day

SECTION A

HOUSEHOLD WATER SUPPLIES

Time of Starting Section A _____

Interviewer Name _____

Date of Interview ____/____/____
mo day yr

Interviewer Number _____

SOURCE OF DRINKING WATER

A-1 People get drinking water for their homes from many different sources. (Show card 1) This is a list of some that are common. Please tell me where you get your drinking water from.

- ☐ Water system with 15 or more households or that serves more than 25 people (Go to Q A-9)
- ☐ Well (Go to Q A-9)
- ☐ Spring (Go to Q A-9)
- ☐ Surface water (pond, lake, river, stream) (Go to Q A-9)
- ☐ Cistern (Go to Q A-9)
- ☐ Hauled (Go to Q A-4)
- ☐ Purchased bottled (Go to Q A-6)

INTERVIEWER INSTRUCTION: If the Respondent indicates more than one source of drinking water, ask questions A-2 and A-3.

FOR HOUSEHOLDS WITH MULTIPLE DRINKING WATER SUPPLIES

A-2 Why do you have more than one drinking water supply?

- 01 ☐ The major supply is sometimes of insufficient quality to drink
- 02 ☐ The major supply is available all of the time, but does not produce a sufficient quantity of water
- 03 ☐ The major supply is sometimes unavailable (interrupted service)
- 04 ☐ The different supplies serve different parts of the house
- 05 ☐ One supply is too expensive
- 06 ☐ A newer system was installed without removing the old system
- 8 ☐ Don't know
- ☐ Other (specify) _____

A-3 Which one is used the most for drinking?

- 01 ☐ Water system with 15 or more households or that serves more than 25 people (Go to Q A-9)
- 02 ☐ Well (Go to Q A-9)
- 03 ☐ Spring (Go to Q A-9)
- 04 ☐ Surface Water (pond, lake, river, stream) (Go to Q A-9)
- 05 ☐ Cistern (Go to Q A-9)
- 06 ☐ Hauled (Go to Q A-4)
- 07 ☐ Purchased bottled (Go to Q A-6)

ID 1 4

DK 5 6

$$\begin{array}{r} \\ \hline 7 \end{array}$$

8

9

A-1 | 10

11

12

13

A-2
 14 15

A-3 16 17

FOR USERS OF HAULED WATER

A-2

A-4 Why do you haul water?

- 01 ☐ There is no other source of water available in the house
- 02 ☐ Another source of water is available in the house, but it is of insufficient quality to drink
- 03 ☐ Another source of water is available in the house, but the amount of water is insufficient
- 04 ☐ Another source of drinking water is in the house, but is sometimes unavailable
- 05 ☐ The hauled water is more healthful than other water in the house
- 06 ☐ Different supplies serve different parts of the house
- ☐ Other (specify) _____

A-5 About how much water is hauled at one time and how often do you haul it?

_____ (# of gallons) _____ (# times per week)
or
_____ (# times per month)

INTERVIEWER INSTRUCTION: Go to Q A-9.

FOR USERS OF PURCHASED, BOTTLED WATER

A-6 Why do you use purchased, bottled water?

- 01 ☐ There is no other source of water available in the house
- 02 ☐ Another source of water is available in the house, but it is of insufficient quality to drink
- 03 ☐ Another source of water is available in the house, but the amount of water is insufficient
- 04 ☐ Another source of drinking water is available in the house, but it is sometimes unavailable
- 05 ☐ The purchased, bottled water is more healthful than other water in the house
- 06 ☐ Different supplies serve different parts of the house
- ☐ Other (specify) _____

A-7 Where do you get the purchased, bottled water?

- 01 ☐ Buy it from the grocery store
- 02 ☐ Buy it from the health food store
- 03 ☐ Buy it from a distributor
- ☐ Other (specify) _____

A-8 About how much purchased, bottled water do you buy and how often do you buy it?

_____ (# of gallons) _____ (# of times per week)
or
_____ (# of times per month)

A-4	<u>18</u>	<u>19</u>
A-5	<u>20</u>	<u>21</u>
	<u>22</u>	<u>23</u>
A-6	<u>24</u>	<u>25</u>
A-7	<u>26</u>	
A-8	<u>27</u>	<u>29</u>
	<u>30</u>	<u>31</u>

MAJOR HOUSEHOLD WATER SUPPLY

A-3

A-9 Is this drinking water supply also the major household water supply; the one you use for most of your household needs?

- 0 ☐ No
1 ☐ Yes (Go to Q A-11)

A-10 What is the major supply of household water? (Show card 1)

- 01 ☐ Water system with 15 or more households or that serves more than 25 people
02 ☐ Well
03 ☐ Spring
04 ☐ Surface water (pond, lake, river, stream)
05 ☐ Cistern
06 ☐ Hauled
07 ☐ Purchased, bottled

INTERVIEWER INSTRUCTION: Read the following: "For the rest of the interview we will be talking about this major supply of water, the one which supplies most of the water you use in the house and we'll call it your household water supply."

AGE OF THE SUPPLY SYSTEM

A-11 Approximately how many years have you been served by this supply of water?

_____ (# of years)

USES OF WATER

A-12 Now that we have established the major source of water for this house, I would like to find out how it is used. (Show card 2) Here is a list of common indoor uses of water. Which of these describe how the water is used in this house?

- ☐ Drinking
☐ Cooking
☐ Bathing/showering/grooming
☐ Flushing system
☐ Washing dishes
☐ Washing clothes
☐ Cooling the house
☐ Other (specify) _____

A-13 (Show card 3) Is this same source of water used for any of these outside uses?

- ☐ Periodic cleaning such as washing cars/windows/etc.
☐ Watering lawn and/or garden
☐ Ornamental (fountains, etc.)
☐ Recreational (swimming pool)
☐ Farm pond
☐ Water livestock (not pets)
☐ Irrigating farm crops (not garden)
☐ Greenhouse
☐ Other (specify) _____

A-9

32

A-10

3334

A-11

35363738394041

A-12

4243444546474849505152

A-13

53545556575859

SYSTEM OWNERSHIP

A-4

A-14 We are interested in learning a little more about the system which supplies your water. (Show card 4) Who owns the system?

- 01 ☐ Someone from this household
- 02 ☐ Private citizen, other than someone from this household
- 03 ☐ Cooperative
- 04 ☐ Public
- 05 ☐ Private firm
- 06 ☐ No owner
- 8 ☐ Don't know
- ☐ Other (specify) _____
- _____
- _____

SIZE OF SUPPLY SYSTEM

A-15 Is your water supply also connected to other households?

- 0 ☐ No (Go to Q A-21)
- 1 ☐ Yes

A-16 About how many?

(Number)

MULTIPLE CONNECTION SYSTEMS

A-17 What is the name and address of the system which supplies your water?

(Name)

(Address)

(Go to Q A-18)

- ☐ The system has no name
- ☐ Don't know

A-18 Who could I contact that would know about the operation of the water system?

(Name)

(Address)

- ☐ Don't know

A-19 (Show card 5) How well do you like the way the water system is operated and managed?

- 5 ☐ Very well satisfied
- 4 ☐ Well satisfied
- 3 ☐ Satisfied
- 2 ☐ Dissatisfied
- 1 ☐ Very dissatisfied

A-20 (Show card 5) How satisfied are you with the physical facilities of the water system--the pipe size, the storage capacity and things like that?

- 5 ☐ Very well satisfied
- 4 ☐ Well satisfied
- 3 ☐ Satisfied
- 2 ☐ Dissatisfied
- 1 ☐ Very dissatisfied

INTERVIEWER INSTRUCTION: Go to Q A-23

A-14 60 61

A-15 62

A-16 63 64 65 66

A-17 67

A-18 68

A-19 69

A-20 70

INDIVIDUAL SYSTEMS

A-5

A-21 Sometimes people are able to get free information or free advice about their water supply. (Show card 6) Have you ever received free help concerning any of these?

- ☐ No free help (Go to Q A-23)
- ☐ Finding water
- ☐ Siting of the facility
- ☐ Building water facilities (drilling wells, building cistern, etc.)
- ☐ Altering the system
- ☐ Testing the water
- ☐ Other (specify) _____

A-22 Who provided this help?

- ☐ Government agency _____
(Name)
- ☐ Private business _____
(Name)
- ☐ Individual
- ☐ Don't know

SUPPLY PREFERENCE

A-23 Sometimes people can pick out certain things that they like about their water supply; is there anything you particularly like?

- ☐ Nothing in particular
- ☐ Pressure
- ☐ Inexpensive
- ☐ Taste
- ☐ Smell
- ☐ Color
- ☐ Clarity
- ☐ Sediment free
- ☐ Soft
- ☐ Affords independence
- ☐ Reliability
- ☐ Healthful
- ☐ Convenient
- ☐ Temperature
- ☐ Amount of water
- ☐ Other (specify) _____

A-21	71			
	72			
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	80			
ID	1			4
DK	5	6		
A-22	7	8		

A-23	9
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A-24 On the other hand, is there anything you especially dislike about the water supply?

- ☐ Nothing in particular
- ☐ Pressure
- ☐ Expensive
- ☐ Taste
- ☐ Smell
- ☐ Color
- ☐ Cloudy
- ☐ Sediment
- ☐ Hard
- ☐ Does not afford independence
- ☐ Unreliable
- ☐ Not healthful
- ☐ Not convenient
- ☐ Temperature
- ☐ Amount of water
- ☐ Other (specify) _____

A-25 For your situation, do you prefer your present water supply system, or would you rather receive water from a different kind of supply system?

- 1 ☐ Present system (Go to Q A-29)
- 2 ☐ Different system

A-26 Why would you like a system change?

- ☐ Pressure
- ☐ Cost
- ☐ Taste
- ☐ Smell
- ☐ Color
- ☐ Clarity
- ☐ Sediment
- ☐ Softness
- ☐ Independence
- ☐ Reliability
- ☐ Healthfulness
- ☐ Convenience
- ☐ Temperature
- ☐ Amount of water
- ☐ Other (specify) _____

A-24

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A-25

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A-26
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A-27 (Show card 7) What size of water system would you prefer to have for your situation?

- 1 ☐ An individual system
- 2 ☐ A small supply system with a few connections, say less than 15 households or fewer than 25 people
- 3 ☐ A large supply system with many connections, say 15 or more households or 25 or more people

A-28 (Show card 8) What kind of ownership would you prefer for that system?

- 1 ☐ Owned by someone in this house
- 2 ☐ Privately owned system, but owned by someone outside this house
- 3 ☐ Publicly owned system
- 4 ☐ A system owned by a cooperative
- 5 ☐ A system owned by a private firm

ODOR

A-29 Now, I'd like to ask you a series of questions about various characteristics of your household water. I want you to think about these things in light of your experience in this household in the past year. Some of the questions will seem to overlap. For instance, it is hard to distinguish the taste of the water from the way it smells. But as we talk about them, please try to keep them separate. (Show card 9) Sometimes water has an odor or smell. In your opinion, which of these categories best describes the usual smell of the water over the past year?

- 0 ☐ No odor (Go to Q A-31)
- 1 ☐ Slight odor
- 2 ☐ Strong odor

A-30 Can you describe the odor? What does the water smell like?

- 01 ☐ Rotten eggs (sulphur)
- 02 ☐ Chlorine
- 03 ☐ Putrid (sewage odor)
- 04 ☐ Swampy
- ☐ Other (specify) _____
- _____
- _____

A-31 Do you ever notice any changes in the smell of the water?

- 0 ☐ No (If Respondent also answered "No odor" to Q A-29, then go to Q A-36)
- 1 ☐ Yes

A-32 (Show card 10) How often would you say the water has an odor?

- 4 ☐ All of the time
- 3 ☐ Most of the time
- 2 ☐ Some of the time
- 1 ☐ Hardly ever

A-27
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A-28
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A-29
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A-30
69 70

A-31
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A-32
72

A-33 What do you think is the major reason for the odor of the water?

INTERVIEWER INSTRUCTION: Record the response, then check the most applicable category.

- 01 ☐ A problem within the house (plumbing, etc.)
- 02 ☐ A breakdown in the physical facilities of the water system outside the house
- 03 ☐ Inadequacy of the physical facilities of the system (pipes too small, storage capacity too small, inadequate filter, etc.)
- 04 ☐ Mismanagement of the system (ill-trained operators, inattention, etc.)
- 05 ☐ Deliberate or planned activities (additives, etc.)
- 8 ☐ Don't know
- ☐ Other

INTERVIEWER INSTRUCTION: If Respondent mentioned any seasonal factors, check "yes" in Q A-34, then go to Q A-35.

A-34 Do you also notice seasonal variations in the way the water smells?

- 0 ☐ No (Go to Q A-36)
- 1 ☐ Yes

A-35 (Show card 9) Which of these categories do you think best describes the odor of the water for each of the four seasons?

	0	1	2
	No odor	Slight odor	Strong odor
Spring			
Summer			
Fall			
Winter			

A-36 (Show card 11) Which one of these categories best describes how you feel about the smell of the water?

- 5 ☐ I like it a great deal; it is very pleasing to me
- 4 ☐ I like it
- 3 ☐ It is alright. I am used to it and I really don't notice or think about it much
- 2 ☐ I don't like it
- 1 ☐ I dislike it very much and I really wish I could change it

TASTE

A-37 Next I have some questions on the taste of the water. Would you say that over the last year the water has usually had no taste, a slight taste, or a strong taste?

- 0 ☐ No taste (Go to Q A-39)
- 1 ☐ Slight taste
- 2 ☐ Strong taste

A-33 73 74

A-34 75

ID 1 4

DK 5 6

7

A-35 8

9

10

A-36 11

A-37 12

A-38 What do you think it tastes like?

- 01 ☐ Sweet
 02 ☐ Sour
 03 ☐ Bitter
 04 ☐ Salty
 05 ☐ Mineral water
 06 ☐ Chlorine
 07 ☐ Swampy
☐ Other (specify) _____

A-39 Do you ever get noticeable changes in the taste of the water?

- 0 ☐ No (If Respondent also answered "No taste" to Q A-37, then go to Q A-44)
 1 ☐ Yes

A-40 (Show card 10) How much of the time would you say you notice a taste?

- 4 ☐ All of the time
 3 ☐ Most of the time
 2 ☐ Some of the time
 1 ☐ Hardly ever

A-41 What do you think is the major reason for the taste of the water?

INTERVIEWER INSTRUCTION: Record the response, then check the most applicable category.

- 01 ☐ A problem within the house (plumbing, etc.)
 02 ☐ A breakdown in the physical facilities of the water system outside the house
 03 ☐ Inadequacy of the physical facilities of the system (pipes too small, storage capacity too small, etc.)
 04 ☐ Mismanagement of the system (ill-trained operators, inattention, etc.)
 05 ☐ Deliberate or planned activities (additives, etc.)
 -8 ☐ Don't know
☐ Other

INTERVIEWER INSTRUCTION: If Respondent mentioned any seasonal factors, check "yes" to Q A-42, then go to Q A-43.

A-42 Do you also notice any seasonal variations in the taste of the water?

- 0 ☐ No (Go to Q A-44)
 1 ☐ Yes

A-38 $\frac{\quad}{13} \quad \frac{\quad}{14}$

A-39 $\frac{\quad}{15}$

A-40 $\frac{\quad}{16}$

A-41 $\frac{\quad}{17} \quad \frac{\quad}{18}$

A-42 $\frac{\quad}{19}$

A-43 (Show card 12) Which of these categories would you say best describes the taste of the water for each of the four seasons?

	0	1	2
	No taste	Slight taste	Strong taste
Spring			
Summer			
Fall			
Winter			

A-44 (Show card 11) Please indicate which one of these categories best describes how you feel about the taste of the water?

- 5 ☐ I like it a great deal; it is very pleasing to me
 4 ☐ I like it
 3 ☐ It is alright. I am used to it and I really don't notice or think about it much
 2 ☐ I don't like it
 1 ☐ I dislike it very much and I really wish I could change it

TEMPERATURE

A-45 These next few questions relate to the temperature of the water. What would you say that the temperature of the water in the past year has usually been--cold, cool or warm?

- 3 ☐ Cold
 2 ☐ Cool
 1 ☐ Warm

A-46 Do you ever get any noticeable changes in the temperature of the water?

- 0 ☐ No
 1 ☐ Yes

A-47 (Show card 10) How often would you say the water has this usual temperature?

- 1 ☐ All of the time
 2 ☐ Most of the time
 3 ☐ Some of the time
 4 ☐ Hardly ever

A-48 What do you think is the major reason for the temperature of the water?

INTERVIEWER INSTRUCTION: Record the response, then check the most applicable category.

- 01 ☐ Natural temperature of the water
 02 ☐ Pipes are too close to the surface of the ground
 03 ☐ Pipes pass too close to a heating device (furnace, heater, etc.)
 04 ☐ Storage tank is in direct sunlight or otherwise heated
 05 ☐ Seasonal factors (Go to Q A-49)
 -8 ☐ Don't know
☐ Other

INTERVIEWER INSTRUCTION: If the Respondent mentions any seasonal factors, check Q A-49 then go to Q A-50.

A-43

	<u>20</u>
	<u>21</u>
	<u>22</u>
	<u>23</u>

A-44

	<u>24</u>
--	-----------

A-45

	<u>25</u>
--	-----------

A-46

	<u>26</u>
--	-----------

A-47

	<u>27</u>
--	-----------

A-48

	<u>28</u>	<u>29</u>
--	-----------	-----------

A-49 Do you also notice seasonal variation in the temperature of the water?

0 ☐ No (Go to Q A-51)

1 ☐ Yes

A-50 (Show card 13) Which one of these categories would you say best describes the temperature of the water for each of the four seasons?

	1 Cold	2 Cool	3 Warm
Spring			
Summer			
Fall			
Winter			

A-51 (Show card 11) Which one of these categories would you say best describes how you feel about the temperature of the water?

5 ☐ I like it a great deal; it is very pleasing to me

4 ☐ I like it

3 ☐ It is alright. I am used to it and I really don't notice or think about it much

2 ☐ I don't like it

1 ☐ I dislike it very much and I really wish I could change it

CLEARNESS-CLOUDINESS

A-52 The next three sets of questions need some explanation. The first group deals with how clear the water looks. The second group deals with the color of the water, and the third asks about sediment, or particles that might be in the water. It can be hard sometimes to keep these things straight, so let me explain. Water can sometimes be cloudy, which makes it harder to see through. If it is cloudy, it may have some sort of color too. But even clear water can sometimes have color, like a grayish or yellowish cast, for example. Also, regardless of whether the water is cloudy or has color, it can have sediment or particles in it. In a glass of water the sediment would settle to the bottom, like sand or something. OK? Now we'll start with how clear or cloudy the water looks.

(Show card 14) For the past year, would you say the water has usually been cloudy or clear?

1 ☐ Clear

2 ☐ Slightly cloudy

3 ☐ Very cloudy

A-53 Do you ever get noticeable changes in the clearness or cloudiness of the water?

0 ☐ No (If Respondent also answered "clear" to Q A-52, then go to Q A-58.)

1 ☐ Yes

A-54 (Show card 10) How often would you say the cloudiness occurs?

4 ☐ All of the time

3 ☐ Most of the time

2 ☐ Some of the time

1 ☐ Hardly ever

A-49 30

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A-50

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A-51 35

A-52 36

A-53 37

A-54 38

A-55 What would you say is the major reason for the cloudiness?

INTERVIEWER INSTRUCTION: Record the response, then check the most applicable category.

01. ☐ A problem within the house (plumbing, etc.)
02. ☐ A breakdown in the physical facilities of the water system outside the house
03. ☐ Inadequacy of the physical facilities of the system (pipes too small, storage capacity too small, etc.)
04. ☐ Mismanagement of the system (ill-trained operators, inattention, etc.)
05. ☐ Deliberate or planned activities (additives, etc.)
- 8 ☐ Don't know
- ☐ Other

INTERVIEWER INSTRUCTION: If Respondent mentioned any seasonal factors, check "yes" in Q A-56, then go to Q A-57.

A-56 Do you also notice seasonal variations in the clearness of cloudiness of the water?

- 0 ☐ No (Go to Q A-58)
- 1 ☐ Yes

A-57 (Show card 14) Which of these categories do you think best describes the clearness or cloudiness of the water for each of the four seasons?

	1 Clear	2 Slightly cloudy	3 Very cloudy
Spring			
Summer			
Fall			
Winter			

A-58 (Show card 11) Which one of these categories would you say best describes how you feel about how clear or cloudy the water is?

- 5 ☐ I like it a great deal; it is very pleasing to me
- 4 ☐ I like it
- 3 ☐ It is alright. I am used to it and I really don't notice or think about it much
- 2 ☐ I don't like it
- 1 ☐ I dislike it very much and I really wish I could change it

COLOR

A-59 Now, we're into the second set of questions dealing with the color of water. Would you say the water is usually very colored or slightly colored or has no color at all?

- 0 ☐ No color (Go to Q A-61)
- 1 ☐ Slightly colored
- 2 ☐ Very colored

A-55
 39 40

A-56
 41

 42

A-57
 43

 44

 45

A-58
 46

A-59
 47

A-60 What is the usual color?

- 01 ☐ Red
- 02 ☐ Orange
- 03 ☐ Black
- 04 ☐ Yellow
- 05 ☐ White
- 06 ☐ Grey
- 07 ☐ Brown
- 08 ☐ Blue
- 09 ☐ Green
- ☐ Other (specify) _____

A-61 Do you ever get noticeable changes in the color of the water?

- 0 ☐ No (If Respondent also answered "No color" to Q A-59, then go to Q A-66.)
- 1 ☐ Yes

A-62 (Show card 10) About how much of the time would you say the water has color?

- 4 ☐ All of the time
- 3 ☐ Most of the time
- 2 ☐ Some of the time
- 1 ☐ Hardly ever

A-63 What do you think is the major reason for the color of the water?

INTERVIEWER INSTRUCTION: Record the response, then check the most applicable category.

- 01 ☐ A problem within the house (plumbing, etc.)
- 02 ☐ A breakdown in the physical facilities of the water system outside the house
- 03 ☐ Inadequacy of the physical facilities of the system (pipes too small, storage capacity too small, etc.)
- 04 ☐ Mismanagement of the system (ill-trained operators, inattention, etc.)
- 05 ☐ Deliberate or planned activities (additives, etc.)
- 8 ☐ Don't know
- ☐ Other

INTERVIEWER INSTRUCTION: If Respondent mentioned any seasonal factors, check "yes" in Q A-64, then go to Q A-65.

A-64 Do you also notice any seasonal variations in the color of the water?

- 0 ☐ No (Go to Q A-66)
- 1 ☐ Yes

A-60 $\frac{\quad}{48}$ $\frac{\quad}{49}$

A-61 $\frac{\quad}{50}$

A-62 $\frac{\quad}{51}$

A-63 $\frac{\quad}{52}$ $\frac{\quad}{53}$

A-64 $\frac{\quad}{54}$

A-65 (Show card 15) Which category would you say best describes the color of the water for each of the four seasons?

	0 No color	1 Slightly colored	2 Very colored
Spring			
Summer			
Fall			
Winter			

A-66 (Show card 11) Which one of these categories would you say best describes how you feel about the color of the water?

- 5 ☐ I like it a great deal; it is very pleasing to me
 4 ☐ I like it
 3 ☐ It is alright. I am used to it and I really don't notice or think about it much
 2 ☐ I don't like it
 1 ☐ I dislike it very much and I really wish I could change it

SEDIMENT OR PARTICLES

A-67 Now, I'll ask you if, in the past year, the water has usually had any sediment in it. (Show card 16) Which of these categories would you say describes the water with regard to sediment or particles?

- 0 ☐ No sediment
 1 ☐ Usually no sediment
 2 ☐ Usually some sediment
 3 ☐ Usually heavy sediment

A-68 Do you every notice any changes in the sediment or particle content of the water?

- 0 ☐ No (If Respondent also said "No sediment" in Q A-67, then go to Q A-73.)
 1 ☐ Yes

A-69 (Show card 10) How often would you say the water has sediment or particles?

- 4 ☐ All of the time
 3 ☐ Most of the time
 2 ☐ Some of the time
 1 ☐ Hardly ever

A-70 What do you think is the major reason for the sediment in the water?

INTERVIEWER INSTRUCTION: Record the response, then check the most applicable category.

- 01 ☐ A problem within the house (plumbing, etc.)
 02 ☐ A breakdown in the physical facilities of the water system outside the house
 03 ☐ Inadequacy of the physical facilities of the system (pipes too small, storage capacity too small, etc.)
 04 ☐ Mismanagement of the system (ill-trained operators, inattention, etc.)
 05 ☐ Deliberate or planned activities (additives, etc.)
 -8 ☐ Don't know
☐ Other

INTERVIEWER INSTRUCTIONS: If Respondent mentioned any seasonal factors, check "yes" in Q A-71, then go to Q A-72.

A-65	55	
	56	
	57	
	58	
A-66	59	
A-67	60	
A-68	61	
A-69	62	
A-70	63	64

A-71 Do you also notice seasonal variations in the sediment or particle content of the water?

- 0 ☐ No (Go to Q A-73)
1 ☐ Yes

A-72 (Show card 16) Which of these categories do you think best describes the sediment content of the water for each of the four seasons in the last year?

	0 No Sediment	1 Usually No Sediment	2 Usually Some Sediment	3 Usually Heavy Sediment
Spring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Summer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fall	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Winter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

A-73 (Show card 11) Which one of these categories would you say best describes how you feel about any sediment or lack of sediment in your water?

- 5 ☐ I like it a great deal; it is very pleasing to me
4 ☐ I like it
3 ☐ It is alright. I am used to it and I really don't think about it much
2 ☐ I don't like it
1 ☐ I dislike it very much and I really wish I could change it

WATER QUANTITY

A-74 Next, I want to ask about the amount of water that is available to you, that is, whether you can get enough water for your needs. (Show card 17) For the past year, which of these categories would you say best describes how much water you generally get for your household uses from your major water supply?

- 1 ☐ All the water I ever want
2 ☐ Usually as much water as I want
3 ☐ Usually not as much water as I want
4 ☐ Never as much water as I want

A-75 Do you ever notice changes in the amount of water you can get?

- 0 ☐ No (If Respondent also answered "all the water I ever want" to Q A-74, then go to Q A-80.)
1 ☐ Yes

A-76 (Show card 10) How often does the condition occur?

- 1 ☐ All of the time
2 ☐ Most of the time
3 ☐ Some of the time
4 ☐ Hardly ever

A-71 65

66

A-72 67

68

69

A-73 70

A-74 71

A-75 72

A-76 73

A-77 What do you think is the major reason you don't get as much water as you need?

INTERVIEWER INSTRUCTION: Record the response, then check the most applicable category.

- 01 ☐ A problem within the house (plumbing, etc.)
- 02 ☐ A breakdown in the physical facilities of the water system outside the house
- 03 ☐ Inadequacy of the physical facilities of the system (pipes too small, storage capacity too small, etc.)
- 04 ☐ Mismanagement of the system (ill-trained operators, inattention, etc.)
- 05 ☐ Deliberate or planned activities (additives, etc.)
- 8 ☐ Don't know
- ☐ Other

INTERVIEWER INSTRUCTION: If Respondent mentioned any seasonal factors, check "yes" in Q A-78, then go to Q A-79.

A-78 Do you also notice any seasonal variations in the amount of water you get?

- 0 ☐ No (Go to Q A-80)
- 1 ☐ Yes

A-79 (Show card 17) Which of these categories do you think best describes how much water you can get for each of the four seasons?

	1	2	3	4
	All the water I ever want	Usually as much water as I want	Usually not as much water as I want	Never as much water as I want
Spring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Summer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fall	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Winter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

A-80 (Show card 11) Which of these categories would you say best describes how you feel about the amount of water you can get throughout the year?

- 5 ☐ I like it a great deal; it is very pleasing to me
- 4 ☐ I like it
- 3 ☐ It is alright. I am used to it and I really don't think about it much
- 2 ☐ I don't like it
- 1 ☐ I dislike it very much and I really wish I could change it

WATER PRESSURE

A-81 Now, some questions about the water pressure. (Show card 18) Which of these categories do you think best describes the usual pressure of the water for the last year?

- 01 ☐ About right
- 12 ☐ Too high
- 13 ☐ Too low
- 14 ☐ Goes up and down (fluctuates)
- 9 ☐ Not applicable—not a piped, pressurized system (Go to Q A-88)

A-77 74 75

ID 1 4

DK 5 6

A-78 7

 [8

A-79 9

 [10

 [11

A-80 12

A-81 13 14

A-82 Do you ever notice changes in the water pressure from what is usually is?

- 0 ☐ No (If Respondent also answered "About right" to Q A-81, then go to Q A-87.)
- 1 ☐ Yes

A-83 (Show card 10) About how much of the time in the past year was the water pressure that way?

- 1 ☐ All of the time
- 2 ☐ Most of the time
- 3 ☐ Some of the time
- 4 ☐ Hardly ever

A-84 What do you think is the major reason for that condition?

INTERVIEWER INSTRUCTION: Record the response, then check the most applicable category.

- 01 ☐ A problem within the house (plumbing, etc.)
- 02 ☐ A breakdown in the physical facilities of the water system outside the house
- 03 ☐ Inadequacy of the physical facilities of the system (pipes too small, storage capacity too small, etc.)
- 04 ☐ Mismanagement of the system (ill-trained operators, inattention, etc.)
- 05 ☐ Deliberate or planned activities (additives, etc.)
- 8 ☐ Don't know
- ☐ Other

INTERVIEWER INSTRUCTION: If Respondent mentioned any seasonal factors, check "yes" in Q A-85, then go to Q A-86.

A-85 Do you also notice seasonal variations in the water pressure?

- 0 ☐ No (Go to Q A-87)
- 1 ☐ Yes

A-86 (Show card 18) Which of these categories best describes the water pressure for each of the four seasons?

	01 About Right	12 Too High	13 Too Low	14 Goes up and down
Spring				
Summer				
Fall				
Winter				

A-87 (Show card 11) Which of these categories would you say best describes how you feel about the water pressure you have throughout the year?

- 5 ☐ I like it a great deal; it is very pleasing to me
- 4 ☐ I like it
- 3 ☐ It is alright. I am used to it and I really don't think about it much
- 2 ☐ I don't like it
- 1 ☐ I dislike it very much and I really wish I could change it

A-82 15

A-83 16

A-84 17 18

A-85 19

A-86		<u>20</u>	<u>21</u>
		<u>22</u>	<u>23</u>
		<u>24</u>	<u>25</u>
		<u>26</u>	<u>27</u>

A-87 28

HEALTH

A-88 Okay. The next question deals with the safety of the water. Sometimes water affects people's health, and you may have noticed occasional health problems due to the water here. Would you tell me, please, if in the past year you think that anyone who lives here became ill because of the water provided by the major household water supply?

- 0 ☐ No
 1 ☐ Possibly
 2 ☐ Yes

A-89 Has it ever happened that a visitor or guest became ill after using the water here?

- 0 ☐ No (If Respondent also answered "No" to Q A-88, then go to Q A-91.)
 1 ☐ Possibly
 2 ☐ Yes

A-90 Please describe the illness(es) and about how many times someone was sick from each type of illness in the past year.

Description/Symptoms	No. of Incidents

GENERAL PROBLEMS

A-91 We have talked about the color, temperature, clarity and other characteristics of the water. Do any of these result in specific problems or inconveniences that we have not discussed?

- 0 ☐ No (Go to Q A-93)
 1 ☐ Yes

A-92 What would you say are the problems or inconveniences?

- 01 ☐ The water is not safe to drink
 02 ☐ Don't get enough water
 03 ☐ The water is safe but not palatable
 04 ☐ Cannot depend on the water supply
 05 ☐ It is costly to treat the water
 06 ☐ Affects the laundry
 07 ☐ Affects the flavor or appearance of food and drink
 08 ☐ Leaves deposits
☐ Other (specify) _____

A-88 29

A-89 30

A-90

<u>31</u>	<u>32</u>
<u>33</u>	<u>34</u>
<u>35</u>	<u>36</u>
<u>37</u>	<u>38</u>
<u>39</u>	<u>40</u>
<u>41</u>	<u>42</u>
<u>43</u>	<u>44</u>
<u>45</u>	<u>46</u>
<u>47</u>	<u>48</u>

A-91 49

A-92 50 51

COST OF WATER

A-93 Next we would like to learn some things about the costs of your household water. You may not think a lot about how you pay for water because people pay for their household water in a lot of different ways. Some people get a bill; other people have their own well and pay to repair it or they pay for electricity or gas to run it. Some people don't pay money for water but receive it in exchange for their labor along with wages. For other people, the cost of water is included in their rent or mortgage payment. Now, regardless of how you pay for water, do you feel that the cost of your water is inexpensive, reasonable, expensive, or very expensive?

- 0 ☐ No cost (Go to Q A-97)
 1 ☐ Inexpensive
 2 ☐ Reasonable
 3 ☐ Expensive
 4 ☐ Very expensive
 8 ☐ Don't know

A-94 Do you think the cost of your water has increased, decreased or remained the same during the past year?

- 1 ☐ Decreased
 2 ☐ Remained the same
 3 ☐ Increased

A-95 (Show card 19) How do you pay for the regular use of your household water?

- 01 ☐ Receive a regular water billing
 02 ☐ It is included in the mortgage payment (Go to Q A-97)
 03 ☐ It is included in the rent payment (Go to Q A-97)
 04 ☐ It is the cost of operating and maintaining equipment (electricity, gas, parts, labor, etc.) (Go to Q A-97)
 -8 ☐ Don't know (Go to Q A-97)
☐ Other (specify) _____

A-93
52

A-94
53

A-95
54 55

A-96 Do you have a recent water bill around that I could take a look at?

0 ☐ No (Go to Q A-97)

1 ☐ Yes (Fill in as much information as is available on the bill.)

A. Name of the system _____
Address _____

B. If the water bill is subsumed in a total utility bill which is not itemized, how much is the total bill?

\$ _____

☐ Amount is for water alone

☐ Amount includes other utilities

C. What other utilities does it cover? _____

D. Time period covered by the bill? _____

E. Volume of water? _____

or

F. Meter readings: _____ to _____

G. Is the bill a: 1 ☐ flat rate

2 ☐ uniform rate

3 ☐ block rate

4 ☐ step rate

Other (specify) _____

H. Service charge? \$ _____

I. List the charges per number of gallons (or cubic feet) used:

\$ _____ per _____ gallons

\$ _____ per _____ gallons

\$ _____ Per _____ gallons

A-97 (Show card 20) Let me describe a water system and you tell me which one of these categories best describes how your household water supply compares to it. Imagine a water supply that is clean, cold, good to drink, that has good pressure, and that is always plentiful. How does that water supply compare to the one in this house?

1 ☐ This house's water supply is better than the one you described

2 ☐ They are probably about the same

3 ☐ The water supply you describe is better than the one for this house

A-96

56		
57		60
61		
62		
63		
64		
65		
66		
67		
68		
69		
70	71	
72	73	
74	75	
76	77	

ID

1			4
---	--	--	---

DK

5	6
---	---

A-96

7			12
13			18
19			24
25			
26		29	
30		33	
34			38
39		42	
43			47
48		51	
52			56

A-97

57

A-98 You pay for your water by:

INTERVIEWER INSTRUCTION: Review how the Respondent pays for water--through a bill, by maintaining a well or cistern, labor costs, electricity costs, etc.

(Record relevant additions or comments)

Is that right?

Now I need to ask you a question that will help us understand if people across the country would pay more money for their water if they could have a good water supply. Suppose you were offered a supply of water like I described a minute ago, that is good to drink, that gives as much water as you need for the house and so on. Think how that kind of water supply compares to the one you have now. How much more would you be willing to pay each year to have that water supply--nothing, 5% more, 10%, 25%, twice as much, or what?

- 0 ☐ Willing to pay the same
 1 ☐ Willing to pay less
 2 ☐ Willing to pay more

HOUSING CHARACTERISTICS

A-99 Next I have a few questions concerning your housing. How long have you lived here?

_____ (No. of years)

A-100 Do you own or rent this home?

- 1 ☐ Own
 2 ☐ Rent
☐ Other (specify) _____

A-98
58

A-99
59 60

A-100
61

A-101 (Show card 22) Here is a card that shows some things people have in their homes. Could you please tell me how many of each one there is in this house?

INTERVIEWER INSTRUCTION: If the household is a multiple family dwelling unit, then inquire if any of mentioned items are shared with another unit and indicate those which are shared.

(shared) (number)

<input type="checkbox"/>	_____	Bathtubs
<input type="checkbox"/>	_____	Showers
<input type="checkbox"/>	_____	Bathroom sinks
<input type="checkbox"/>	_____	Kitchen sinks
<input type="checkbox"/>	_____	Flush toilets
<input type="checkbox"/>	_____	Washing machines
<input type="checkbox"/>	_____	Dishwashers
<input type="checkbox"/>	_____	Hot water heaters (capacity _____)
<input type="checkbox"/>	_____	Swamp/evaporative coolers (for cooling house)
<input type="checkbox"/>	_____	Household humidifiers
<input type="checkbox"/>	_____	Other (specify) _____

	<u>62</u>		
	<u>63</u>		
	<u>64</u>		
	<u>65</u>		
	<u>66</u>		
A-101	<u>67</u>		
	<u>68</u>		
	<u>69</u>		
	<u>70</u>	<u>73</u>	
	<u>74</u>		
	<u>75</u>		
	<u>76</u>		
ID	<u>1</u>	<u>4</u>	
DK	<u>5</u>	<u>6</u>	
	<u>7</u>		
A-101	<u>8</u>		
	<u>9</u>		

DEMOGRAPHIC INFORMATION

A-102 The next group of questions asks about everyone who lives in this house on a regular basis. Let's start with the head of the house:

B. Is that a man/boy or woman/girl?

C. (Show card 23) Which one of these groups best describe him/her ?

- | | | |
|----------------------------------|-------------------------------------|--------------------|
| 1 White (Not of Hispanic origin) | 3 Hispanic | 5 Asian or Pacific |
| 2 Black (Not of Hispanic origin) | 4 American Indian or Alaskan Native | Islander |

D. About how old is he/she ? (If person is under 16, then go to item A)

E. (Show card 24) How many years of formal education has he/she completed?

- | | | |
|-------------|--------------------------|-----------------------|
| Elementary | Jr. High and High School | College |
| 1 2 3 4 5 6 | 7 8 9 10 11 12 | 1 2 3 4 5 6 + |
| | | (13 14 15 16 17 18 +) |

F. (Show card 25) Which one of these best describes him/her ?

- | | | |
|---------------------|-------------------|--------------|
| 1 Working full time | 3 Going to school | 5 Retired |
| 2 Working part time | 4 Keeping house | 6 Unemployed |

G. What kind of work does he/she usually do; what is the job called?

H. What are the main duties of the job?

I. About how many hours did he/she work at that job last week?

J. Does he/she also have another job? (If no other job, then go to Item A) What is the job called?

K. What are the main duties?

L. About how many hours did he/she work at that job last week?

M. Does he/she earn more money at the first job or the second job? (write the appropriate code # below)

- 0 About the same 1 First 2 Second 8 Don't know

N. INTERVIEWER INSTRUCTION: Circle this person in column A if he/she is the person being interviewed.

A. Now let's talk about the next person who lives here on a regular basis. Who would that be? (How are they related to the head of the household?)

INTERVIEWER INSTRUCTION: When the Respondent has identified everyone in the household, count the number you have recorded then ask if that is the correct number of people who live in this household on a regular basis. If it is not, then continue listing individuals until you have the correct number.

A B C D E F

G (J)

H (K)

I(L) M

(Circle the person interviewed)

Relation to Head of House	Sex	Ethnic Origin	Age	Yrs. of Ed.	Work Code	Job Title	Duties	# Hrs. Worked	Most \$
Head						P			
						S			

A-102 First Person	<u>10</u>	<u>11</u>		
	<u>12</u>			
	<u>13</u>			
	<u>14</u>	<u>15</u>		
	<u>16</u>	<u>17</u>		
	<u>18</u>			
	<u>19</u>			<u>22</u>
	<u>23</u>	<u>24</u>		
	<u>25</u>			<u>28</u>
	<u>29</u>	<u>30</u>		
	<u>31</u>			
	<u>32</u>			

A	B	C	D	E	F	G (J)	H (K)	I (L)	M
(Circle the person interviewed)									
Relation to Head of House	Sex	Ethnic Origin	Age	Yrs of Ed.	Work Code	Job Title	Duties	# Hrs. Worked	Most \$
						P			
						S			
						P			
						S			
						P			
						S			
						P			
						S			
						P			
						S			
						P			
						S			
						P			
						S			

A-102
Second
Person

<u>33</u>	<u>34</u>		
<u>35</u>			
<u>36</u>			
<u>37</u>	<u>38</u>		
<u>39</u>	<u>40</u>		
<u>41</u>			
<u>42</u>			<u>45</u>
<u>46</u>	<u>47</u>		
<u>48</u>			<u>51</u>
<u>52</u>	<u>53</u>		
<u>54</u>			
<u>55</u>			

A-102
Third
Person

<u>56</u>	<u>57</u>		
<u>58</u>			
<u>59</u>			
<u>60</u>	<u>61</u>		
<u>62</u>	<u>63</u>		
<u>64</u>			
<u>65</u>			<u>68</u>
<u>69</u>	<u>70</u>		
<u>71</u>			<u>74</u>
<u>75</u>	<u>76</u>		
<u>77</u>			
<u>78</u>			

A		B	C	D	E	F	G (J)	H (K)	I (L) M	
(Circle the person interviewed)										
Relation to Head of House	Sex	Ethnic Origin	Age	Yrs. of Ed.	Work Code	Job Title	Duties	# Hrs. Worked	Most \$	
						P				
						S				
						P				
						S				
						P				
						S				
						P				
						S				

A-103 (Ask only in multiple family dwelling units)
 Would you please tell me the total number of people that presently live here, including the members of this household? _____ (# of people)

INCOME	
A-104 Do you own or lease a farm?	0 <input type="checkbox"/> No (Go to Q A-107) 1 <input type="checkbox"/> Yes
A-105 What was the gross farm income last year?	\$ _____
A-106 What was the net farm income for last year?	\$ _____
A-107 What was the total combined income (wages, interest, pensions, net business profits, etc.) of everyone in this household from non-farm sources last year?	\$ _____
Time Section A Completed _____	

ID 1 4

DK 5 6

A-103 7 8

A-104 9

A-105 10 16

A-106 17 22

A-107 23 28

SECTION B

PHYSICAL FACILITIES

Time of Starting Section B _____

Interviewer Name _____

Date of Interview ____/____/____
mo day yr

Interviewer Number _____

INTERVIEWER INSTRUCTION: After obtaining the required information from Section A, read the following statement to the Respondent.

Before continuing with the next set of questions, which deals generally with physical facilities, I would like to once again establish the type of (major) water supply serving this household. In an earlier question, you indicated that this supply is a _____.

WATER SUPPLIES

B-1 Now, of all the supplies that provide water to this household, are there any that you haven't told me about?

0 ☐ No (If the Respondent said in Section A that the (major) supply is a well, spring, surface water source or cistern, go to Q B-4; otherwise, go to Q B-15.)

1 ☐ Yes

B-2 (Show card 1) Which of these categories best describes the additional supply or supplies?

- ☐ Water system with 15 or more households or that serves more than 25 people
- ☐ Well
- ☐ Spring
- ☐ Surface water (pond, lake, river, stream)
- ☐ Cistern
- ☐ Hauled
- ☐ Purchased, bottled

B-3 Why does this household have the additional supply (ies)?

- ☐ The major supply is sometimes of insufficient quality to drink
- ☐ The major supply is available all of the time, but does not produce a sufficient quantity of water
- ☐ The major supply is sometimes unavailable (interrupted service)
- ☐ The different supplies serve different parts of the house
- ☐ One supply is too expensive
- ☐ A newer system was installed without removing the old system
- ☐ Don't know
- ☐ Other (specify) _____

ID 1 4

DK 5 6

B-1 7

[8

9

10

B-2 11

12

13

14

]

[15

16

17

18

19

B-3

20

21

22

23

24

]

INTERVIEWER INSTRUCTION: If the major supply of household water is a water system with 15 or more connections or that serves more than 25 people, then go to Q B-15.

- B-4 Concerning the (major) water supply again, _____ (Specify distance in units used by the respondent, i.e., meters, feet, yards, or miles)
what is the approximate distance between the building and the point at which the water is withdrawn?

- 8 ☐ Don't know

WELLS

INTERVIEWER INSTRUCTION: Ask this set of questions only if the (major) supply of water is a well. If this supply is a cistern, go to Q B-12. Otherwise, go to Q B-15.

- B-5 The next few questions will be about the well that serves as this household's (major) water supply. Initially, I need to know how long ago the well was last modified. A modification includes such activities as increasing the well's depth, installing or replacing its casing, or any other type of major improvement or change. If the well hasn't been altered, I need to know how long ago it was put in. Could you provide me with either piece of information? _____ (# of years)

-8 ☐ Don't know

- B-6 Sometimes, when a well is dug or improvements are made to it, a permit is necessary before work can begin, or before the well can be used. (Show card 26) Have you had to obtain a permit or approval for any of these?

- ☐ No (Go to Q B-8)
☐ Well siting
☐ Well sinking
☐ Using the well
☐ Don't know (Go to Q B-8)
☐ Other (specify) _____

- B-7 Who issued the permit or approval?

- ☐ State agency _____ (Name)

☐ County agency _____ (Name)

☐ Local agency (city, town, village) _____ (Name)

☐ Land owner
☐ Don't know
☐ Other (specify) _____

B-4 25 28

B-5 29 30

31

32

33

B-6 34

35

36

37

38

39

40

41

42

B-7 43

44

45

46

47

B-8 Could you please tell me the approximate depth of the well?

(Specify depth in units used by the respondent, i.e., meters, feet, yards, or miles)

B-9 How was the well put in? Was it dug, bored, drilled, driven, jetted, or installed in some other way?

1 ☐ Dug (Go to Q B-15)

2 ☐ Bored

3 ☐ Drilled

4 ☐ Driven

5 ☐ Jetted

8 ☐ Don't know

☐ Other (specify) _____

B-10 What is the diameter of the well casing?

(# of inches)

-8 ☐ Don't know

B-11 Is the head of the well grouted?

0 ☐ No

1 ☐ Yes

8 ☐ Don't know

INTERVIEWER INSTRUCTION: Go to Q B-15.

CISTERNS

INTERVIEWER INSTRUCTION: Ask this set of questions only if the (major) supply of water is a cistern.

B-12 Does the cistern have a manual device, an automatic device, or no device for preventing first water from entering it?

0 ☐ No device

1 ☐ Manual

2 ☐ Automatic

8 ☐ Don't know

B-13 Does the cistern have a cleaning drain?

0 ☐ No

1 ☐ Yes

8 ☐ Don't know

B-14 (Show card 27) Which of these best describes the cistern catchment area?

1 ☐ Roof top

2 ☐ Ground surface

3 ☐ Both roof and ground

8 ☐ Don't know

☐ Other (specify) _____

B-8 48 50

B-9 51

B-10 52 54

B-11 55

B-12 56

B-13 57

B-14 58

WATER SUPPLY SYSTEM BREAKDOWNS

B-15 Occasionally, people have difficulties with their water supply systems because of problems with the equipment. Pipes sometimes break and pumps stop operating. During the past year, were there any breakdowns in the supply system such that you could not get water? 00 ☐ No (Go to Q B-19) ☐ Yes _____ (# of breakdowns)

B-16 How many of these breakdowns occurred inside the household/building and how many occurred outside? (Number) ☐ _____ Inside household ☐ _____ Outside household ☐ Don't know

B-17 For both categories of breakdowns, inside the household/building or outside the household/building, how many breakdowns lasted for more than six hours? (Number) _____ Inside household _____ Outside household ☐ Don't know

B-18 When a breakdown occurs, what do you or the other members of the household usually do to get water? ☐ Wait ☐ Repair system ☐ Borrow from neighbors ☐ Use another supply here at the building ☐ Buy water or some other liquid ☐ Don't know ☐ Other (specify) _____

WASTEWATER SYSTEM

B-19 I would now like to ask you a few questions about this household's/building's wastewater disposal system. What kind of system is it?

01 ☐ Wastewater runs into a pond, lake, or stream
 02 ☐ Wastewater runs into a sewage lagoon
 03 ☐ Septic tank
 04 ☐ Aerobic tank
 05 ☐ Cesspool
 06 ☐ Composting or biological disposal systems
 07 ☐ Chemical toilet
 08 ☐ Incineration
 09 ☐ Privy
 10 ☐ Public sewage system
 -8 ☐ Don't know
☐ Other (specify) _____

B-15 59 60

B-16 { 61 62
 63 64

B-17 { 65 66
 67 68

B-18 { 69
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ID 1 2 3 4

DK 5 6

B-19 7 8

B-20 During the past year, were there any breakdowns in the disposal system(s) so you couldn't use it/them? How many?

.00

☐

No (Fill in information after Q B-22, then go to Section C) ^{B-5}

☐

Yes

_____ (# of breakdowns)

B-21 Do you know why the breakdown(s) occurred?

☐

Septic tanks, cesspool or other disposal device became inoperative

☐

Breakdown in household facilities (pipes, toilets, etc.)

☐

Water was unavailable

☐

The public sewage disposal system was inoperative

☐

Don't know

☐

Other (specify) _____

B-22 Could you please tell me how many of these breakdowns lasted for more than 6 hours?

_____ (# of breakdowns)

☐

Don't know

INTERVIEWER INSTRUCTION: Go to Section C

Time Section B completed _____

INTERVIEWER--Did you have to change respondents for Section B?

0

☐

No

1

☐

Yes

B-20 9 10

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B-21

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B-22 19 20

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SECTION C

WATER QUALITY ASSAY

Time of Starting Section C _____

Interviewer Name _____

Date of Interview ____/____/____
mo day yr

Interviewer Number _____

INTERVIEWER INSTRUCTION: Read the following to the Respondent:

An important part of the information I need concerns the actual physical quality of the household water. Regarding this, I have several questions about contamination, history of water tests, and whether or not the water supply system includes such devices as a pressure tank, water softener, or chlorinator. Following these questions, I need to take some specimens of the water for the laboratory assay (the process of doing the analysis on water).

CONTAMINATION

C-1 (Show card 28) In the past year do you think the household water has been subject to contamination from any of these?

- ☐ None (Go to Q C-3)
- ☐ Septic tank or cesspool
- ☐ Privy (outhouse)
- ☐ Animal waste
- ☐ Fuel tank
- ☐ Industrial waste
- ☐ Agricultural fertilizer
- ☐ Biocides (herbicides or pesticides)
- ☐ Highway salt
- ☐ Flooding
- ☐ Mining sludge
- ☐ Naturally occurring contaminants
- ☐ Other (specify) _____

C-2 What action, if any, did you take to correct this problem?

- ☐ Do nothing
- ☐ Remove the source of contamination
- ☐ Contact the party responsible for the contamination
- ☐ Contact legal authorities
- ☐ Contact the landlord or property owner
- ☐ Install some sort of protection from the contamination
- ☐ Bring legal suit
- ☐ Go to a new water supply
- ☐ Other (specify) _____

ID 1 4

DK $\frac{\quad}{5} \quad \frac{\quad}{6}$

C-1

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C-2

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WATER TEST HISTORY

C-2

C-3 For various reasons your household water may have been tested at one time or another. That is, a water specimen may have been collected and sent to a laboratory where it was examined by qualified personnel using standard laboratory procedures. Has your household water ever been tested in that manner?

- 0 ☐ No (Go to Q C-10)
 1 ☐ Yes
 8 ☐ Don't know (Go to Q C-10)

C-4 How many times has it been tested while you have lived here?

(Write in the number)

C-5 When was the water last tested?

____/____ (month and year)
 mo yr

-8 ☐ Don't know

C-6 Why was the last test made?

- 01 ☐ Water system was newly installed
 02 ☐ The house was sold
 03 ☐ Someone became ill
 04 ☐ To check the water after some natural disaster or catastrophe (flooding, earthquake, etc.)
 05 ☐ To check the water after a breakdown
 06 ☐ To check the water after a system alteration
 07 ☐ To determine if system alterations were needed
 -8 ☐ Don't know
☐ Other (specify) _____

C-7 Who requested the test?

- 01 ☐ Respondent did, or some other person in the household
 02 ☐ Local officials
 03 ☐ State officials
 04 ☐ Federal officials
 05 ☐ Bank or someone interested in purchasing the property
 06 ☐ Contractor
 07 ☐ Standard procedure for the facility
 -8 ☐ Don't know
☐ Other (specify) _____

C-3 35

C-4 36 37

C-5 $\left[\begin{array}{cc} \hline 38 & 39 \\ \hline 40 & 41 \end{array} \right]$

C-6 42 43

C-7 44 45

C-8 Was the last test a chemical test, a bacteriological test, both, or what?

- 1 ☐ Chemical
 2 ☐ Bacteriological
 3 ☐ Both
 8 ☐ Don't know

Other (specify) _____

C-9 What were the results of the test?

Bacteriological Results

- 1 ☐ Acceptable levels of bacteria
 2 ☐ Unacceptable levels of bacteria
 8 ☐ Don't know
 9 ☐ Not applicable

Chemical Results

- ☐ All chemical constituents were at an acceptable level
- 01 ☐ High levels of iron
 02 ☐ High levels of sulphur
 03 ☐ Unacceptable levels of arsenic
 04 ☐ Unacceptable levels of barium
 05 ☐ Unacceptable levels of cadmium
 06 ☐ Unacceptable levels of calcium
 07 ☐ Unacceptable levels of chromium
 08 ☐ Unacceptable levels of fluoride
 09 ☐ Unacceptable levels of lead
 10 ☐ Unacceptable levels of selenium
 11 ☐ Unacceptable levels of silver
 12 ☐ Unacceptable levels of magnesium
 13 ☐ Unacceptable levels of manganese
 14 ☐ Unacceptable levels of mercury
 15 ☐ Unacceptable levels of nitrate
 16 ☐ Unacceptable levels of sodium
 17 ☐ Unacceptable turbidity
 -8 ☐ Don't know
 -9 ☐ Not applicable
☐ Other (specify) _____

C-8
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C-9

INTERVIEWER INSTRUCTION: Read the following to the respondent: "I have some containers I need to fill with water. May I now collect some water from the kitchen faucet?"

C-10 Record the date.

____/____/____
mo day yr

C-11 Record the time of day (check the correct time to the nearest hour) and record the time zone.

TIME OF DAY

01	<input type="checkbox"/>	1:00 am	13	<input type="checkbox"/>	1:00 pm
02	<input type="checkbox"/>	2:00 am	14	<input type="checkbox"/>	2:00 pm
03	<input type="checkbox"/>	3:00 am	15	<input type="checkbox"/>	3:00 pm
04	<input type="checkbox"/>	4:00 am	16	<input type="checkbox"/>	4:00 pm
05	<input type="checkbox"/>	5:00 am	17	<input type="checkbox"/>	5:00 pm
06	<input type="checkbox"/>	6:00 am	18	<input type="checkbox"/>	6:00 pm
07	<input type="checkbox"/>	7:00 am	19	<input type="checkbox"/>	7:00 pm
08	<input type="checkbox"/>	8:00 am	20	<input type="checkbox"/>	8:00 pm
09	<input type="checkbox"/>	9:00 am	21	<input type="checkbox"/>	9:00 pm
10	<input type="checkbox"/>	10:00 am	22	<input type="checkbox"/>	10:00 pm
11	<input type="checkbox"/>	11:00 am	23	<input type="checkbox"/>	11:00 pm
12	<input type="checkbox"/>	12:00 noon	24	<input type="checkbox"/>	12:00 midnight

TIME ZONE

1 ☐ Eastern
2 ☐ Central
3 ☐ Mountain
4 ☐ Pacific

INTERVIEWER INSTRUCTION: Collect all specimens from the cold water faucet. Turn the faucet to the desired setting and do not adjust. Don't begin by running the cold water for any time period longer than would be considered normal for getting a drink of water. Put on the rubber gloves. Make sure to place the correct chemicals in the proper containers. If, for any reason, a chemical is placed in the wrong container, remove the label and tie it on a new, spare container which is identical in size and additive (where appropriate) to the container being discarded. Return the discarded container to your supervisor. Make sure all identification labels correspond to: (1) the number of the sampled household and (2) the number representing the order in which the sample specimen was taken. Cap each container firmly, but not so tight that leaks are caused. Do each of the following items in order and check each as it is completed.

C-12 Take the water temperature. (Turn on the tap, let the water flow over the thermometer bulb for 30 seconds, then record the reading.)

_____ temperature (degrees Centigrade)

C-13 Fill the one pint container labeled "#1" (Microbiological) with water. Tightly cap and set aside. Check the box when completed. (Thiosulfate should already be present in the container as a preservative.)

☐ Step C-13 completed

C-14 Fill the one quart cubitainer labeled "#2" (General Physical and Chemical) with water. Tightly cap and set aside. Check box when completed. (There is no preservative for this container.)

☐ Step C-14 completed

C-10 $\left[\begin{array}{cc} \overline{65} & \overline{66} \\ \overline{67} & \overline{68} \\ \overline{69} & \overline{70} \end{array} \right]$

C-11 $\left[\begin{array}{cc} \overline{71} & \overline{72} \\ \overline{73} & \end{array} \right]$

C-12 $\overline{74} \quad \overline{75}$

C-13 $\overline{76}$

C-14 $\overline{77}$

C-15 Break the small ampule labeled "Nitric Acid." Pour the contents into the one quart cubitainer labeled "#3" (Metals). Discard the broken ampule in the sack provided. Fill container #3 with water, tightly cap and set aside. Check the box when completed.

☐ Step C-15 completed

C-16 Break the ampule labeled "Mercuric Chloride" Pour the contents into the one quart cubitainer labeled "#4" (Nitrates). Discard the broken ampule in the sack provided. Fill container #4 with water, tightly cap and set aside. Check the box when completed.

☐ Step C-16 completed

C-17 Fill a one quart glass container labeled "#5" (Pesticides and Herbicides) with water. Tightly cap and set aside. Check the box when completed. (There is no preservative for this container.)

☐ Step C-17 completed

C-18 Fill the one quart glass container which has a teflon-lined cap labeled "#6" (Pesticides and Herbicides) with water. Tightly cap and set aside. Check the box when completed. (There is no preservative for this container.)

☐ Step C-18 completed

C-19 Break the large ampule labeled "Nitric Acid." Pour contents into the one gallon cubitainer labeled "#7" (Radio-logical). Discard the broken ampule in the sack provided. Fill container #7 with water, tightly cap and set aside. Check the box when completed.

☐ Step C-19 completed

C-20 Turn the water off. Put the pressure gauge in place. Turn on the cold water tap, full force. Read and record the pressure.

☐ _____ # of pounds of pressure
☐ Not applicable (not a pressurized system).

C-21 Record the effective volume of the pressure tank. Close all water taps. Allow the pump to run until the pressure tank has reached full pressure and the pump stops. Connect the hose to the faucet and fill the bucket provided to the top level marked on the bucket. Turn off the faucet. Empty the bucket and repeat the procedure. When the pump comes on, turn the water off. Record the number of times the bucket was filled and the number of gallons in the bucket the last time it was filled, when the pump engaged.

_____ Number of times the bucket was filled and emptied before the pump engaged.

_____ Fraction of a bucket (to the nearest gallon)

☐ Unable to monitor the pump

☐ Unable to perform the measurement

(Explain) _____

☐ No pressure tank

☐ Not a pressurized system

C-15 78C-16 79ID 1 4DK 5 6C-17 7C-18 8C-19 9C-20 10 12C-21 13 15

INTERVIEWER INSTRUCTION: The next two questions should be asked of the respondent, but if he/she is unable to provide the information, then complete them as adequately as possible according to your observations of the facilities during the physical inspection. If you fill in any responses by your observations, label them as your observations in the left margin.

C-22 (Show card 29) Do you know how many of each of these devices are connected to this building's/household's major water supply system?

- ☐ None of the devices
☐ Don't know

(Number)

- _____ Pressure tanks (volume in gallons _____)
 _____ Water pumps (capacity in gallons per minute _____)
 _____ Storage tanks (volume in gallons _____)
 (not hot water heaters)
 _____ Softeners
 _____ Chlorinators
 _____ Settling tanks
 _____ Phosphate feeders
 _____ Oxidation filters
 _____ Activated carbon filters
 _____ Other (specify) _____

C-23 (Show card 30) Which one of these best describes how water is brought into the building/house?

- 01 ☐ Pressurized public system
 02 ☐ Electric pump
 03 ☐ Hand pump
 04 ☐ Diesel or gasoline driven pump
 05 ☐ Windmill
 06 ☐ Artesian pressure
 07 ☐ Gravity flow
 08 ☐ Hand carried
 09 ☐ Hauled
 -8 ☐ Don't know
☐ Other (specify) _____

C-22	16		
	17		
	18		21
	22		
	23		25
	26		
	27		30
	31		
	32		
	33		
	34		
	35		
	36		
	37		
C-23	38		
	39		
	40		
	41	42	
	43		

INTERVIEWER INSTRUCTION: The following questions apply only to those households where the major household water supply is on a system with 14 or fewer household connections or which serves 25 or fewer people. Determine the following information by physical inspection at the termination of the interview. Explain to the respondent that you would like to look at the water facilities and ask him/her to show them to you. If physical inspection of the water facilities is not possible, then check here ☐ and explain below, then ask the Respondent the physical inspection questions.

(explain) _____

C-24 Does the water source have an acceptable cover for intrusion protection?

1 ☐ Unacceptable

2 ☐ Acceptable

8 ☐ Don't know (explain) _____

C-25 Is the water source adequately maintained?

0 ☐ No

1 ☐ Yes

8 ☐ Don't know (explain) _____

C-26 Measure the distance between the center of the well head, cistern, or point of water withdrawal, from spring, lake, etc., to the possible source of contamination.

(Specify distance and unit used in determining distance--feet, yards, meters, etc.)

_____ Sewage disposal system

_____ Oil or gasoline tank

_____ Animal waste

_____ Surface water contamination

_____ Industrial waste

_____ Agricultural fertilizer or runoff

_____ Other (specify) _____

☐ Not applicable

INTERVIEWER INSTRUCTION: If the major household water supply is a well, continue; otherwise go to Section D.

C-27 Is the cover of the well splash-proof?

0 ☐ No

1 ☐ Yes

8 ☐ Don't know (explain) _____

☐ Not applicable

C-24 44

C-25 45

C-26	<u>46</u>	<u>48</u>
	<u>49</u>	<u>51</u>
	<u>52</u>	<u>54</u>
	<u>55</u>	<u>57</u>
	<u>58</u>	<u>60</u>
	<u>61</u>	<u>63</u>
	<u>64</u>	<u>66</u>
	<u>67</u>	<u>69</u>
	<u>70</u>	<u>72</u>
	<u>73</u>	<u>75</u>

C-27 76

C-28 Does the well have a pitless adapter or a buried seal?

- 0 ☐ Neither
1 ☐ Pitless adapter
2 ☐ Buried seal
8 ☐ Don't know (explain) _____

9 ☐ Not applicable

C-29 Which of these best describes the well?

- 1 ☐ It is in the open, uncovered
2 ☐ It is in the open, but protected from the elements
3 ☐ It is in a pit with a water-tight cover
4 ☐ It is in a pit with a cover which is not water-tight
5 ☐ It is in a pit with no cover
8 ☐ Don't know (explain) _____

9 ☐ Not applicable

☐ Other (specify) _____

C-30 Which of these best describes how the pit drains?

- 1 ☐ No drain
2 ☐ Drains to open ground
3 ☐ Runs to a drainline or sewer line
8 ☐ Don't know (explain) _____

9 ☐ Not applicable

☐ Other (specify) _____

Time Section C completed _____

C-28
77

C-29
78

C-30
79

INTERVIEW INSTRUCTION: Write a brief description of the interview situation, the interview, and any peculiarities or special circumstances that would assist in understanding the interview.

SECTION D

SUPPLY SYSTEM

Time of Starting Section D _____

Interviewer Name _____

Date of Interview ____/____/____
mo day yr

Interviewer Number _____

INTERVIEWER INSTRUCTION: This section applies to households served by multiple connection water systems (i.e., provides water to two or more households). It is to be administered only to an individual who is sufficiently familiar with various aspects of the water supply system. In the case of private systems, qualified respondents include the owner, manager, or operator. If the system is public, the respondent must be the superintendent or someone familiar with the operation of the system. You are not restricted to only one person. If several people are present, get the best response available from them.

Name of the supply system: _____

Address: _____

This information may be
available from Section A
Q A-96 Item A.

Date of interview: _____

SYSTEM SIZE

D-1 First, I would like to ask about some general system characteristics such as size. Approximately how many service connections are on the system? _____ (# of connections)

D-2 About what proportion of the connections is metered? _____ (Percent or number)

☐ Don't know

D-3 How many miles of lines are in the system? _____ (Miles)

☐ Don't know

D-4 What is the average daily usage? _____ (Gallons per day)

☐ Don't know

D-5 What is the maximum daily amount of water the system can supply? _____ (Gallons per day)

☐ Don't know

WATER SOURCES

D-6 (Show card 31) From which of the following types of sources does the system obtain water?

☐ Ground water

☐ Surface water

☐ Water is purchased

☐ Don't know

ID	<u>1</u>	<u> </u>	<u> </u>	<u> </u>	<u>4</u>
DK	<u>5</u>	<u>6</u>			
D-1	<u>7</u>	<u> </u>	<u> </u>	<u> </u>	<u>11</u>
D-2	<u>12</u>	<u>13</u>			
D-3	<u>14</u>	<u> </u>	<u> </u>	<u> </u>	<u>17</u>
D-4	<u>18</u>	<u> </u>	<u> </u>	<u> </u>	<u>23</u>
D-5	<u>24</u>	<u> </u>	<u> </u>	<u> </u>	<u>29</u>
D-6	<div><div></div><div><u>30</u></div><div><u>31</u></div><div><u>32</u></div></div>				

D-7 Do you ever have any difficulties acquiring water from the source(s)?

- ☐ No (Go to Q D-9)
☐ Yes (Ground water)
☐ Yes (Surface water)
☐ Yes (Water purchased)

D-2

D-8 What were the difficulties?

- ☐ Equipment breakdowns (Name source) _____
☐ Water was unavailable (Name source) _____
☐ Weather problems (drought, flooding)
(Name source) _____
☐ Loss of a supply (Name source) _____
☐ Contamination (Name source) _____
☐ Lack of money (Name source) _____
☐ Other (Specify the difficulty and the source) _____

BREAKDOWNS

D-9 In the past year, have any breakdowns occurred in the system? How many?

00 ☐ No (Go to Q D-12)

☐ Yes

_____ (# of breakdowns)

D-10 Of these breakdowns, how many have resulted in an actual loss of service to water users?

_____ (# of breakdowns)

D-11 What were the causes of all the breakdowns?

(# of times)

_____ Pump breakdown

_____ Ruptured lines

_____ Treatment failure

_____ Drought

_____ Flooding

_____ Vandalism

_____ Other (specify) _____

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D-8	37
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D-8	52
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D-9 67 68

D-10 69 70

D-11	71	72
	73	74
	75	76
	77	78
ID	1	4
DK	5	6
D-11	7	8
	9	10
	11	12
	13	14
	15	16
	17	18

WATER TREATMENT

D-12 Does the water that the system supplies receive any treatment, and if so, what types?

- ☐ No (Go to Q D-14)
☐ Yes (Filtration)
☐ Yes (Chlorination)
☐ Yes (Softening)
☐ Yes (Fluoridation)
☐ Yes (Other) (Specify) _____

☐ Don't know (Go to Q D-14)

D-13 What types of treatment devices are installed and presently operating in the system?

- ☐ None
☐ Oxidation filter
☐ Activated carbon filter
☐ Softener
☐ Chlorinator
☐ Fluoridator
☐ Settling tank
☐ Chemical feeder unit (phosphate, lime, carbon, etc.)

Identify chemical dispensed

- ☐ Don't know
☐ Other (specify) _____

OPERATORS

D-14 How many people work at operating this system's equipment?

_____ (Number)

D-15 How many of these are volunteers, paid part-time employees, or paid full-time employees?

(Number)

_____ Volunteers

_____ Paid part-time

_____ Paid full-time

☐ Don't know

D-16 About how many man-days per month does it normally take to operate the system?

_____ (Number of man-days)

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D-13

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D-14

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D-15

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44	45
46	47

D-16

48	49
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- D-17 How many operators have received special training or schooling in the operation of the system's equipment? (Training other than that received on the job, such as state training, equipment manufacturer's workshops, Cooperative Extension, etc.) _____ (# of operators)
- ☐ Don't know

SYSTEM ALTERATIONS

- D-18 Have there been any major alterations since the system was constructed? That is, have there been any changes which substantially increased the system's capacity or which improved the quality of the water it provides?
- 0 ☐ No (INTERVIEWER INSTRUCTION: Read the following: The next questions ask about the original construction of the system.)
- 1 ☐ Yes
- 8 ☐ Don't know

- D-19 What facilities were installed then?

- ☐ Service lines
- ☐ Treatment facilities
- ☐ Storage tank
- ☐ Pump
- ☐ Don't know
- ☐ Other (specify) _____
- _____
- _____

- D-20 How long has it been since this work was completed?

_____ (# of years)

- D-21 How much did it cost?

\$ _____

- ☐ Don't know (Go to Q D-34)

- D-22 What portion of the cost was financed through government loans?

\$ _____ or % _____ (If 0, go to Q D-26)

- ☐ Don't know (Go to Q D-26)

D-17 51 52

D-18 53

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D-19
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D-20 62 63

D-21 64 65 66 67 68 69 70

D-22 71 72 73

D-23 What agencies provided the loans?

☐ FmHA (Farmers' Home Administration)

X _____ years _____

D-24 What is the interest rate?

☐ EPA (Environmental Protection Agency)

X _____ years _____

D-25 What is the repayment period?

☐ HUD (Housing and Urban Development)

X _____ years _____

☐ Department of Defense

X _____ years _____

☐ EDA (Economic Development Administration)

X _____ years _____

☐ CSA (Community Services Administration)

X _____ years _____

☐ State agency (name) _____

X _____ years _____

☐ Regional agency (name) _____

X _____ years _____

☐ Don't know☐ Other (specify) _____

X _____ years _____

D-26 What portion of the cost was
financed through bonds?

\$ _____ or X _____ (If 0, go to Q D-29)

☐ Don't know (Go to Q D-29)

D-27 What is the interest rate?

_____ (percent)

D-28 What is the repayment period?

_____ (# of years)

D-29 What portion of the cost was financed
through grants?

\$ _____ or X _____ (If 0, go to Q D-31)

☐ Don't know (Go to Q D-31)

D-23	<u>74</u>		
	<u>75</u>		
	<u>76</u>		
	<u>77</u>		
	<u>78</u>		
	<u>79</u>		
ID	<u>1</u>	<u>4</u>	
DK	<u>5</u>	<u>6</u>	
D-23	<u>7</u>		
	<u>8</u>		
	<u>9</u>		
	<u>10</u>		
	<u>11</u>		
	<u>12</u>		

D-24

<u>13</u>	<u>15</u>
<u>16</u>	<u>18</u>
<u>19</u>	<u>21</u>
<u>22</u>	<u>24</u>
<u>25</u>	<u>27</u>
<u>28</u>	<u>30</u>
<u>31</u>	<u>33</u>
<u>34</u>	<u>36</u>
<u>37</u>	<u>39</u>
<u>40</u>	<u>42</u>
<u>43</u>	<u>45</u>
<u>46</u>	<u>48</u>

D-25

<u>49</u>	<u>50</u>
<u>51</u>	<u>52</u>
<u>53</u>	<u>54</u>
<u>55</u>	<u>56</u>
<u>57</u>	<u>58</u>
<u>59</u>	<u>60</u>
<u>61</u>	<u>62</u>
<u>63</u>	<u>64</u>
<u>65</u>	<u>66</u>
<u>67</u>	<u>68</u>
<u>69</u>	<u>70</u>
<u>71</u>	<u>72</u>

D-26 73 75D-27 76 78ID 1 4DK 5 6D-28 7 8D-29 9 11

D-30 What agencies provided the grants?

- ☐ FmHA (Farmers' Home Administration)
☐ EPA (Environmental Protection Agency)
☐ HUD (Housing and Urban Development)
☐ Department of Defense
☐ Bureau of Reclamation
☐ Corps of Engineers
☐ EDA (Economic Development Administration)
☐ CSA (Community Services Administration)
☐ State Agency
☐ Regional Agency
☐ Don't know
☐ Other (specify) _____

D-31 What portion of the cost was financed through commercial loans?

\$ _____ or % _____ (If 0, go to Q D-33)

☐ Don't know (Go to Q D-33)

D-32 What was the interest rate?

_____ (percent)

D-33 How much of the cost was financed through reserve funds of the system?

\$ _____ or % _____

☐ Don't know
SYSTEM FINANCES

D-34 What was the total annual revenue of the system for last year?

\$ _____ (If 0, go to Q D-37)

☐ Don't know (Go to Q D-37)

D-35 What portion or how much of the revenue is allocated to system operating and maintenance costs?

\$ _____ or % _____

☐ Don't know

D-36 What portion or how much of the revenue is allocated to debt retirement?

\$ _____ or % _____

☐ Don't know
BACTERIOLOGICAL WATER QUALITY TESTS

D-37 Are bacteriological tests performed on this system's water?

0 ☐ No (Go to Q D-41)1 ☐ Yes8 ☐ Don't know (Go to Q D-41)

D-30	12	D-36	<u>45</u>	<u>47</u>
	13	D-37	<u>48</u>	
	14			
	15			
	16			
	17			
	18			
	19			
	20			
	21			
	22			
	23			
	24			
	25			
D-31	<u>26</u>	<u>28</u>		
D-32	<u>29</u>	<u>31</u>		
D-33	<u>32</u>	<u>34</u>		
D-34	<u>35</u>	<u>41</u>		
D-35	<u>42</u>	<u>44</u>		

D-38 Who usually does the bacteriological tests?

- 01 ☐ Private lab
 02 ☐ System lab
 03 ☐ Public Health Department
 04 ☐ State Environmental Department
 05 ☐ Federal lab
 -8 ☐ Don't know
☐ Other (specify) _____

D-39 How often are the tests performed?

- 1 ☐ Once a year or less
 2 ☐ At least once every six months
 3 ☐ At least once every three months
 4 ☐ At least once every month
 5 ☐ At least once a week
 6 ☐ At least once a day
 8 ☐ Don't know
☐ Not applicable

D-40 Of the tests performed during the past year or of the last twelve tests, whichever is fewer, how many had acceptable results?

_____ (Total # of tests in the last year if fewer than 12)
 _____ (Number of tests which passed)

CHEMICAL WATER QUALITY TESTS

D-41 Are chemical water quality tests performed on the system's water?

- 0 ☐ No (Go to end of interview)
 1 ☐ Yes
 8 ☐ Don't know (Go to end of interview)

D-42 When was the last test performed?

_____/_____/_____ (date)
 mo day yr

D-38 $\frac{\quad}{49}$ $\frac{\quad}{50}$

D-39 $\frac{\quad}{51}$

D-40 $\left[\begin{array}{cc} \frac{\quad}{52} & \frac{\quad}{53} \end{array} \right.$

D-41 $\left[\begin{array}{cc} \frac{\quad}{54} & \frac{\quad}{55} \end{array} \right.$

$\frac{\quad}{56}$

D-42 $\left[\begin{array}{cc} \frac{\quad}{57} & \frac{\quad}{58} \\ \frac{\quad}{59} & \frac{\quad}{60} \\ \frac{\quad}{61} & \frac{\quad}{62} \end{array} \right.$

D-43 (Show card 32) What were the results of the last test for each of these constituents?

_____. Specific conductance
 _____. Nitrate
 _____. Sulfate
 _____. Calcium
 _____. Magnesium
 _____. Iron
 _____. Manganese
 _____. Sodium
 _____. Lead
 _____. Turbidity
 _____. Color
 _____. Arsenic
 _____. Barium
 _____. Cadmium
 _____. Chromium
 _____. Mercury
 _____. Selenium
 _____. Silver
 _____. Fluoride

INTERVIEWER INSTRUCTION: Thank the Respondent(s) then excuse yourself. If the Respondent(s) were not able to provide information on all of the questions, you must locate additional people who are knowledgeable about the system to complete the interview. Record below the time the interview was completed.

Time Section D completed _____

ID	1	4
DK	5	6
	Blank	
	7	9
	10	13
	Blank	
	14	
	15	17
	Blank	
	18	
	19	22
	Blank	
	23	
	24	28
	Blank	
	29	
	30	34
	Blank	
	35	
D-43	36	40
	Blank	
	41	
	42	46
	Blank	
	47	
	48	51
	Blank	
	52	
	53	57
	Blank	
	58	
	59	62
	Blank	
	63	
	64	65

ID	1	4
DK	5	6
	Blank	
	7	9
	10	13
	Blank	
	14	
	15	19
	Blank	
	20	
	21	25
	Blank	
	26	
	27	31
	Blank	
	32	
D-43	33	37
	Blank	
	38	
	39	42
	Blank	
	43	
	44	48
	Blank	
	49	
	50	52

INTERVIEW INSTRUCTION: Write a brief description of the interview situation, the interview, and any peculiarities or special circumstances that would assist in understanding the interview.

SECTION E

NON-INTERVIEW DISPOSITION

Time of Starting Section E _____

Interviewer Name _____

Date of Interview / /
mo day yr

Interviewer Number _____

E-1 Which of these categories best portrays the reason an interview was not obtained for this household

- 01 ☐ Household unit was not found. (Listing of units indicated a household unit was present when it wasn't.

INTERVIEWER INSTRUCTION: Contact supervisor for instructions.

- 02 ☐ Household unit no longer exists. (Unit was torn down, burned, washed away by high water, etc.)

- 03 ☐ Household is inaccessible (Natural catastrophe, hazardous conditions, etc., prevent interviewing)

- 04 ☐ Address is not a household unit. (Commercial property, religious, civic, fraternal meeting place, etc.)

INTERVIEWER INSTRUCTION: Contact supervisor for instructions.

- 05 ☐ Household is not eligible for inclusion in this study. (Located on a military reservation, in a city of over 2500, or is an institutional setting.)

INTERVIEWER INSTRUCTION: Contact supervisor for instructions.

- 06 ☐ Household unit vacant.

- 07 ☐ No one at home. (Household unit appears to be lived in but no one has been contacted after three calls.)

- 08 ☐ Respondent is absent. (Someone is at the household but eligible respondent has been absent on each of the three calls.)

- 09 ☐ Respondents are incapable or unable to respond. (Respondent is illiterate, doesn't speak the language and no interpreter is available. Respondent is drunk on all calls. Acute illness prevents respondent from being interviewed.)

- 10 ☐ Respondent refused to be interviewed.

- ☐ No interview obtained for a reason other than any of the above (explain) _____

ESTIMATED DEMOGRAPHIC CHARACTERISTICS

E-2 Do you think the probable respondent owns or rents the household unit?

- 1 ☐ Owns

- 2 ☐ Rents

- 3 ☐ Don't know

- ☐ Other (specify) _____

ID 1 4

DK 5 6

E-1 7 8

E-2 9

E-10 What is the ethnicity of the probable respondent?

- 1 ☐ White (Not of Hispanic origin)
- 2 ☐ Black (Not of Hispanic origin)
- 3 ☐ Hispanic
- 4 ☐ American Indian or Alaskan Native
- 5 ☐ Asian or Pacific Islander
- 8 ☐ Don't know

E-11 What is the educational attainment of the probable respondent?

- 1 ☐ Grade school (1 - 6 years)
- 2 ☐ Junior high (7 - 9)
- 3 ☐ High school (10 - 12)
- 4 ☐ College
- 8 ☐ Don't know

E-12 What is the total income of the probable respondent's household?

- 01 ☐ 0 - 2999 dollars
- 02 ☐ 3000 - 5999 dollars
- 03 ☐ 6000 - 8999 dollars
- 04 ☐ 9000 - 11999 dollars
- 05 ☐ 12000 - 14999 dollars
- 06 ☐ 15000 - 17999 dollars
- 07 ☐ 18000 - 20999 dollars
- 08 ☐ 21000 - 23999 dollars
- 09 ☐ 24000 - 26999 dollars
- 10 ☐ 27000 - 29999 dollars
- 11 ☐ 30000 + dollars
- 8 ☐ Don't know

E-13 From which of the following does this household unit get its drinking water?

- 01 ☐ Water system with 15 or more households or that serves more than 25 people
- 02 ☐ Well
- 03 ☐ Spring
- 04 ☐ Surface water (pond, lake, river, stream)
- 05 ☐ Cistern
- 06 ☐ Hauled
- 07 ☐ Purchased, bottled
- 8 ☐ Don't know

E-10
20

E-11
21

E-12
22 23

E-13
24 25

EXPLANATORY NOTES

INTERVIEWER INSTRUCTION: Note below any detailed comments which would explain or clarify the non-interview situation. If a comment refers to a specific question in Section E, note the question number.