

Diné Network for Environmental Health (DiNEH) Project Water and Land Use, Environmental and Health Survey

[INSTRUCTION TO INTERVIEWER — PLEASE READ THIS INTRODUCTION AS WRITTEN BEFORE OBTAINING CONSENT OR ADMINISTERING THIS SURVEY.]

INTRODUCTION: Greetings. My name is _____ and my partner here is _____. We are conducting a survey of how people in the Eastern Agency use water they haul from unregulated water sources, such as windmills and springs. This survey is part of a study called the Diné Network for Environmental Health Project, or DiNEH Project. We are testing water from unregulated water sources, estimating how people are exposed to uranium and other contaminants that might be in the water and in their communities. We are working with 20 chapters in the Eastern Agency to identify safe and unsafe drinking water sources.

The DiNEH Project is supported by all 20 Chapters in the study area and is being conducted by the Eastern Navajo Health Board, the Crownpoint Hospital, Southwest Research and Information Center, and the University of New Mexico. The project is sponsored by the National Institutes of Health. We also have support from Navajo Nation President Joe Shirley, Jr., and approval by the Navajo Nation Human Research Review Board, or “Navajo IRB”. Here is brochure that describes the DiNEH Project. Feel free to take a few minutes to read it.

This survey is purely voluntary and will take about 1 hour. And if you agree to be interviewed, we will pay you \$10 voucher for goods, with a limit of 2 vouchers per household. OK, would you like to participate in this survey?

[If answer is "No", thank the person for their time and tell them they may keep the brochure. If the answer is "Yes," ask the following question:]

Do you haul water for yourself or someone else? Self Someone else
[If the answer is yes or no continue with the survey] Self & someone else Refused

Have you been interviewed for this survey before? Yes No
[If 'yes', stop here and thank them for their time; if "No," proceed to the next question.]

What Chapter do you live in? _____
[If the person does NOT live in one of the 20 Chapters in the Study Area, tell them they are not eligible to participate in the study and thank them for their time. If the person lives in one of the Chapters in the Study Area, proceed.]

Would you like to be interviewed in the Navajo or English language?
 Navajo English Combination of both

I am going to read two documents, called "Consent to Participate in Research" and a "HIPAA" form.
[Read the Consent Form. Make sure the participant initials each page and obtain participant's signature on the form before proceeding. Hand the participant a blank copy of the Consent Form after he or she has signed the original. You, the Interviewer, will keep the original signed consent form. Make sure the HIPAA and release forms are signed also.]

Was the "Consent to Participate in Research" read in English Navajo Combination of both

Date of Survey: _____

Interviewer: _____

Location of interview: _____

Section I: Personal Information

First, I will ask you a few questions about yourself and where you live.

A. What is your name? _____

B. What is your mailing address?

P.O. Box	Street Address
City	State
	Zip Code

C. What is the location of your home? *[The participant may give his or her house number and street/road name, rural address, nearest highway or natural feature, or distance from Chapter House.]*

D. Please help us find your home on this map. *[GPS coordinates, or attach map with location of home clearly marked. If using an aerial or topographic map of the area; point out your location and any other points that might help the participant locate his or her home.]*

Latitude N 3 Longitude W - 1 0

E. How long have you lived in your current home? _____ Years

F. Please tell us all the places you have lived throughout your life, even as a child, and how long you lived at each place.

Location	Description	# of years	Latitude	Longitude
_____	_____	_____	<u>N 3</u>	<u>W - 1 0</u>
_____	_____	_____	<u>N 3</u>	<u>W - 1 0</u>
_____	_____	_____	<u>N 3</u>	<u>W - 1 0</u>
_____	_____	_____	<u>N 3</u>	<u>W - 1 0</u>

G. Where do you vote in Chapter or Navajo Nation elections? I don't vote.
[Write the name of the Chapter.]

H. Where do you vote in county, state, and/or US federal elections? I don't vote.
[Write the name of the Chapter or town.]

Section IA: Demographics

Next, I am going to ask you more questions about yourself and your family.

1. Sex **Male** **Female** *[Don't ask the person what sex he or she is, simply mark the appropriate box based on your observation and proceed to Question 2.]*

2. How old are you? _____ **Years** **Date of Birth** __ / __ / _____

3. How tall are you? _____ **feet** _____ **inches**

4. How much do you weigh? _____ **pounds**

[If the participant does not know his or her height and/or weight, ask them if you can measure and weigh them. If they refuse, estimate their height and weight and indicate so on this form by writing "E" next to the figures you record.]

5. Are you Navajo? **Yes** **No**

If "no," what is your tribe? _____

6. What language do you speak most often:

At work?	<input type="checkbox"/> English	<input type="checkbox"/> Navajo	<input type="checkbox"/> Both	<input type="checkbox"/> N/A
At home with family?	<input type="checkbox"/> English	<input type="checkbox"/> Navajo	<input type="checkbox"/> Both	<input type="checkbox"/> Other
With friends?	<input type="checkbox"/> English	<input type="checkbox"/> Navajo	<input type="checkbox"/> Both	<input type="checkbox"/> Other

7. What is the highest grade in school you completed?

<input type="checkbox"/> No education	<input type="checkbox"/> High school graduate/GED	<input type="checkbox"/> Bachelor's degree
<input type="checkbox"/> 1 st to 6 th grade	<input type="checkbox"/> Some college, no degree	<input type="checkbox"/> Graduate or professional degree
<input type="checkbox"/> 7 th to 9 th grade	<input type="checkbox"/> Associate degree	<input type="checkbox"/> Other _____
<input type="checkbox"/> 9 th to 12 th grade, no diploma		

8. Including yourself, how many people live in your house? _____

9. What is your annual household income?

<input type="checkbox"/> Less than \$5,000	<input type="checkbox"/> \$15,000-\$24,999	<input type="checkbox"/> \$50,000-\$74,999	<input type="checkbox"/> Refused
<input type="checkbox"/> \$5,000-\$10,000	<input type="checkbox"/> \$25,000-\$34,999	<input type="checkbox"/> \$75,000-\$99,999	
<input type="checkbox"/> \$10,000-\$14,999	<input type="checkbox"/> \$35,000-\$49,999	<input type="checkbox"/> \$100,000+	

10. In good weather, how long does it take to travel one way in hours or minutes to:

Buy food and supplies	_____ hours	_____ minutes
Work <input type="checkbox"/> does not work	_____ hours	_____ minutes
Medical services	_____ hours	_____ minutes
Get water	_____ hours	_____ minutes

Section II: Water

We now will ask you questions about your water use.

11. Do you use water from any of the following sources for any purpose? *[Check all that apply.]*

- | | |
|--|---|
| <input type="checkbox"/> Cistern or tank | <input type="checkbox"/> Pond |
| <input type="checkbox"/> Grocery or convenience store/
trading post | <input type="checkbox"/> Private well |
| <input type="checkbox"/> Lake | <input type="checkbox"/> Rain Water |
| <input type="checkbox"/> NAPI/Irrigation Water | <input type="checkbox"/> Spring |
| <input type="checkbox"/> NTUA | <input type="checkbox"/> Stream |
| | <input type="checkbox"/> Windmill or other well |

12. Is your home connected to a community water system? Yes No *[If No, skip to #14]*

If yes, what is the name of the water system? _____

13. Do you think the community water system is good or bad for your health? Good Bad No opinion

14. Do you think the water you haul is good or bad for your health?

- Good Bad Both No Opinion

15. Do you filter, treat, disinfect, or boil the water you haul? Yes No Do not know

16. How many places do you haul water from currently? Please tell me the names those water sources and their locations. *[If the water source is within the Chapter, try to find its location on a topographic map; otherwise, write down the participant's location description.]*

Name of Water Source	Description	Latitude	Longitude
A. _____	_____	<u>N 3</u>	<u>W - 1 0</u>
B. _____	_____	<u>N 3</u>	<u>W - 1 0</u>
C. _____	_____	<u>N 3</u>	<u>W - 1 0</u>
D. _____	_____	<u>N 3</u>	<u>W - 1 0</u>
E. _____	_____	<u>N 3</u>	<u>W - 1 0</u>

	Site A	Site B	Site C	Site D	Site E
16a. How often do you haul water from each site?	____ x day ____ x week ____ x month ____ x year	____ x day ____ x week ____ x month ____ x year	____ x day ____ x week ____ x month ____ x year	____ x day ____ x week ____ x month ____ x year	____ x day ____ x week ____ x month ____ x year
16b. How many years have you hauled from this site?	___ years				
17. How much water do you haul at one time from each site? <u># of containers x container size = # of gallons</u>	___ x ___ = ____gallons				
18a. What type of containers do you use?	<input type="checkbox"/> Plastic <input type="checkbox"/> Metal <input type="checkbox"/> Glass <input type="checkbox"/> Wood	<input type="checkbox"/> Plastic <input type="checkbox"/> Metal <input type="checkbox"/> Glass <input type="checkbox"/> Wood	<input type="checkbox"/> Plastic <input type="checkbox"/> Metal <input type="checkbox"/> Glass <input type="checkbox"/> Wood	<input type="checkbox"/> Plastic <input type="checkbox"/> Metal <input type="checkbox"/> Glass <input type="checkbox"/> Wood	<input type="checkbox"/> Plastic <input type="checkbox"/> Metal <input type="checkbox"/> Glass <input type="checkbox"/> Wood
18b. What is the size or volume of these containers?	___ gallons				

Please tell us how much water you obtain from each of the water sources you just named for each of the following uses. Each site should add up to no more than "ALL".

	Site A	Site B	Site C	Site D	Site E
19a. Drinking water (includes water for cooking)?	<input type="checkbox"/> All <input type="checkbox"/> Most <input type="checkbox"/> About Half <input type="checkbox"/> Some <input type="checkbox"/> None	<input type="checkbox"/> All <input type="checkbox"/> Most <input type="checkbox"/> About Half <input type="checkbox"/> Some <input type="checkbox"/> None	<input type="checkbox"/> All <input type="checkbox"/> Most <input type="checkbox"/> About Half <input type="checkbox"/> Some <input type="checkbox"/> None	<input type="checkbox"/> All <input type="checkbox"/> Most <input type="checkbox"/> About Half <input type="checkbox"/> Some <input type="checkbox"/> None	<input type="checkbox"/> All <input type="checkbox"/> Most <input type="checkbox"/> About Half <input type="checkbox"/> Some <input type="checkbox"/> None
19b. Water for other uses like cleaning and bathing?	<input type="checkbox"/> All <input type="checkbox"/> Most <input type="checkbox"/> About Half <input type="checkbox"/> Some <input type="checkbox"/> None	<input type="checkbox"/> All <input type="checkbox"/> Most <input type="checkbox"/> About Half <input type="checkbox"/> Some <input type="checkbox"/> None	<input type="checkbox"/> All <input type="checkbox"/> Most <input type="checkbox"/> About Half <input type="checkbox"/> Some <input type="checkbox"/> None	<input type="checkbox"/> All <input type="checkbox"/> Most <input type="checkbox"/> About Half <input type="checkbox"/> Some <input type="checkbox"/> None	<input type="checkbox"/> All <input type="checkbox"/> Most <input type="checkbox"/> About Half <input type="checkbox"/> Some <input type="checkbox"/> None
19c. Livestock water?	<input type="checkbox"/> All <input type="checkbox"/> Most <input type="checkbox"/> About Half <input type="checkbox"/> Some <input type="checkbox"/> None	<input type="checkbox"/> All <input type="checkbox"/> Most <input type="checkbox"/> About Half <input type="checkbox"/> Some <input type="checkbox"/> None	<input type="checkbox"/> All <input type="checkbox"/> Most <input type="checkbox"/> About Half <input type="checkbox"/> Some <input type="checkbox"/> None	<input type="checkbox"/> All <input type="checkbox"/> Most <input type="checkbox"/> About Half <input type="checkbox"/> Some <input type="checkbox"/> None	<input type="checkbox"/> All <input type="checkbox"/> Most <input type="checkbox"/> About Half <input type="checkbox"/> Some <input type="checkbox"/> None
19d. Irrigation water?	<input type="checkbox"/> All <input type="checkbox"/> Most <input type="checkbox"/> About Half <input type="checkbox"/> Some <input type="checkbox"/> None	<input type="checkbox"/> All <input type="checkbox"/> Most <input type="checkbox"/> About Half <input type="checkbox"/> Some <input type="checkbox"/> None	<input type="checkbox"/> All <input type="checkbox"/> Most <input type="checkbox"/> About Half <input type="checkbox"/> Some <input type="checkbox"/> None	<input type="checkbox"/> All <input type="checkbox"/> Most <input type="checkbox"/> About Half <input type="checkbox"/> Some <input type="checkbox"/> None	<input type="checkbox"/> All <input type="checkbox"/> Most <input type="checkbox"/> About Half <input type="checkbox"/> Some <input type="checkbox"/> None

Interviewer Comments on water hauling:

20. Do you eat the meat of the livestock you raise? Yes No

[If the participant does raise livestock but does not haul water for them, note that livestock is free range.]

Please tell us what animals you eat and the specific parts you eat, including the organs.

20a. Sheep/Goat Cattle Horse Pig Chicken Turkey

20b. Muscle Liver Kidney Brain Intestine Testicles

Tongue Heart Other

Notes:

21. Do you eat the vegetables or fruit you grow? Yes No

21a. Please tell us what vegetables or fruits that you grow and eat:

- Apples Apricots Beans Bell Peppers Carrots Chile
 Corn Cucumbers Melons Onions Peaches Potatoes
 Squash Strawberries Tomatoes
 Other _____

Notes:

22. At other times in your life, have you drunk water hauled from other sites? Yes No
 [If "no," proceed to Question 23; if the answer is "yes," fill in the following table in Question 22a.]

22a. Please tell us the name of those other sites, their locations if you remember them, and the number of years you used water from those sites.

Other water hauling sites	Latitude	Longitude	Number of years water used
A.	<u>N 3</u>	<u>W - 1 0</u>	_____ years
B.	<u>N 3</u>	<u>W - 1 0</u>	_____ years
C.	<u>N 3</u>	<u>W - 1 0</u>	_____ years

Section III: Occupational and Environmental History

Now we would like to ask you some questions about where you have worked and about the environmental conditions in the areas where you have lived.

23. Have you ever worked in a uranium mine? Yes No (If no, skip to question 24.)

23a. To the best of your knowledge, what year did you start working?

1940's 1950's 1960's 1970's 1980's 1990's

23b. How long did you work? _____

Participant's description: _____

24. Have you ever worked in a uranium mill? Yes No (If no, skip to question 25.)

24a. To the best of your knowledge, what year did you start working?

1940's 1950's 1960's 1970's 1980's 1990's

24b. How long did you work? _____

Participant's description: _____

25. Have you ever worked on the reclamation of a uranium mine or mill, or hauled uranium ore or tailings in a truck or other vehicle? Yes No (If no, skip to question 26.)

25a. To the best of your knowledge, what year did you start working?

1940's 1950's 1960's 1970's 1980's 1990's

25b. How long did you work? _____

Participant's description: _____

26. Have you ever lived near a uranium mine? By "near," I mean downwind of, along a road, in a floodplain, or within two miles. Yes No (If no, skip to question 27.)

26a. To the best of your knowledge, what year did you start living near a mine?

1940's 1950's 1960's 1970's 1980's 1990's

26b. How long did you live there? _____

Participant's description: _____

27. Have you lived near a uranium mill? By "near," I mean downwind of, along a road, in a floodplain, or within two miles. Yes No (If no, skip to question 28.)

27a. To the best of your knowledge, what year did you start living near a mill?

1940's 1950's 1960's 1970's 1980's 1990's

27b. How long did you live there? _____

Participant's description: _____

28. Can you think of any other ways you might have come in contact with uranium, such as

28a. Playing on a uranium tailings pile or waste dump? Yes No
 When? 1940's 1950's 1960's 1970's 1980's 1990's
 How long? _____

28b. Playing outdoors near or next to a uranium mine, mill or waste dump? Yes No
 When? 1940's 1950's 1960's 1970's 1980's 1990's
 How long? _____

28c. Drinking, wading into or coming into contact with uranium mine water or waste spills? Yes No
 When? 1940's 1950's 1960's 1970's 1980's 1990's
 How long? _____

28d. Herding livestock on or next to a uranium mine, mill or waste dump? Yes No
 When? 1940's 1950's 1960's 1970's 1980's 1990's
 How long? _____

28e. Sheltering livestock in an abandoned mine? Yes No
 When? 1940's 1950's 1960's 1970's 1980's 1990's
 How long? _____

28f. Living in a mining camp? Yes No
 When? 1940's 1950's 1960's 1970's 1980's 1990's
 How long? _____

28g. Washing or handling clothes of a friend or family member who was a uranium worker? Yes No
 When? 1940's 1950's 1960's 1970's 1980's 1990's
 How long? _____

28h. Used materials from an abandoned uranium mine or mill for any purpose, like building a home or constructing a sheep corral? By "materials," we mean wood, sheet metal, metal pipes, rocks, and sand. Yes No
 When? 1940's 1950's 1960's 1970's 1980's 1990's
 How long? _____

29. Have you ever worked in the following jobs and industries? [Check all that apply.]

- | | |
|--|---|
| <input type="checkbox"/> Petroleum production | <input type="checkbox"/> Gold and silver mining |
| <input type="checkbox"/> Coal mining | <input type="checkbox"/> Other mining (e.g., copper, iron, lead, vanadium) |
| <input type="checkbox"/> Electronics manufacturing | <input type="checkbox"/> Plastics manufacturing |
| <input type="checkbox"/> Gold/Silver smithing | <input type="checkbox"/> Military (agent orange, depleted uranium, high explosives) |

Section IV: Health

Now we would like to finish this interview with some questions about your health.

30. During the past month, other than for your regular job, did you participate in any physical activities, such as running, gardening, golf, basketball, walking for exercise, herding sheep?

- Yes No Don't know or not sure

31. Have you now or ever had any of the following health problems? [Check all that apply.]

- a. High blood pressure e. Diabetes i. Autoimmune disease (such as lupus, rheumatoid arthritis, Chron's disease)
 b. Heart disease f. Kidney disease j. Cancer (If yes, what kind?)
 c. Heart attack g. Kidney stone [Indicate in list below]
 d. Stroke h. Arthritis k. None of the above

- Bladder Breast Cervical Colorectal Kidney Liver Lung Melanoma
 Non-Hodgkin's Lymphoma Oral Ovarian Pancreas Prostate Stomach
 Thyroid Uterus Unknown Other _____

32. Are you taking medicine for high blood pressure? Yes No

- If yes, what is the name of that medicine? Atenolol Amolodipine Norvasc
 Hydrochlorothiazide Benazepril HCL Benazepril Diltiazem Lisinopril
 Losartan Clonidine Felodipine Metoprolol Labetalol Prazosin
 Nisoldipine Unknown Other _____

[If the participant does NOT have diabetes, skip to Question 35.]

33. If you now have diabetes, how long have you had it?

- a. Less than 1 year c. 4 to 5 years e. 11 to 15 years
 b. 1 to 3 years d. 6 to 10 years f. more than 15 years

34. How is your diabetes controlled now? [Check all that apply.]

- a. Pills b. Insulin c. Diet d. Other _____

35. Are you on dialysis? Yes No If so, for how long? _____

36. Have you ever had a kidney transplant? Yes If so, when? _____
 No On waiting list

37. Over the past 5 years, where have you gone for health care? [Please check all the healthcare centers where the participant has received care over the past 5 years. Write in the name(s) of the facility for 'Other'. Please include any comments about where or when care was received on the back of this page.]

Healthcare facility	Care provided in the past year	2 yrs ago	3 yrs ago	4 yrs ago	5 yrs ago
Crownpoint Healthcare Facility					
Gallup Indian Medical Center					
Rehoboth Christian Medical Ctr.					
Northern Navajo Med. Ctr. Shiprock					
Acoma, Canoncito, Laguna IHS					
Dzilth-Na-O-Dith-Hle Health Ctr.					
Other Healthcare Facility					

38. Do you think you have ever been affected by lightning? Yes No

39. Has your grandparent, mother, father, sister or brother had any of the following? [Check all that apply.]

- a. Diabetes c. Heart attack before age 55 e. Kidney disease
 b. High blood pressure d. Stroke before age 55 f. Cancer (Indicate type below)

- Bladder Breast Cervical Colorectal Kidney Liver Lung Melanoma
 Non-Hodgkin's Lymphoma Oral Ovarian Pancreas Prostate Stomach
 Thyroid Uterus Unknown

40. Has any blood relative (grandparent, mother, father, sister or brother) been told they have kidney disease, been on dialysis, or had a kidney transplant? Yes No

41. Do you take any of the following medications, and if "yes," how often and how much?
 [If "no," skip to Question 42; if "yes," use the photos in your handbook to help the respondent identify the medication she or he takes.]

	Motrin/Ibuprofen	Tylenol/Acetaminophen	Aspirin
Do you take the medication?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
How often?	___ x day ___ x week <input type="checkbox"/> As needed	___ x day ___ x week <input type="checkbox"/> As needed	___ x day ___ x week <input type="checkbox"/> As needed
How many pills at one time?			

42. Do you smoke cigarettes except for ceremonial use? Yes No

[If "yes," fill in one of the following blanks; typically, the respondent will answer in terms of packs of cigarettes per day.]

Packs per day _____, or Packs per week _____, or Packs per month _____

43. Do you use chewing or dipping tobacco? Yes No

[If "yes," fill in one of the following blanks; typically, the respondent will answer in terms of cans or pouches of chew per week.]

Bags/Cans per day _____, or Bags/Cans per week _____, or Bags/Cans per month _____

44. Do you drink beer? Yes No

[If "yes," fill in one of the following blanks.]

Number of beers per day _____, or Number of beers per week _____, or Number of beers per month _____

45. Do you drink any other alcohol, such as wine and liquor? Yes No

Number of drinks per day _____, or Number of drinks per week _____, or Number of drinks per month _____

[Interviewers, please take time to review the survey to check that you have put the participant number on each page, that the interviewer is identified, all questions have been asked and that a response or no response has been documented, that the participant's age and time spent working and/or living in different locations agree. For example, on page 2 if the participant is 75 years old then in F. the number of years where they have lived should add up to 75 years. Use the space on the back of the survey to document any additional comments.]