TRIBAL CONSUMPTION AND RESOURCE USE SURVEY WORK PLAN FOR THE UPPER COLUMBIA RIVER SITE HUMAN HEALTH RISK ASSESSMENT AND REMEDIAL INVESTIGATION/FEASIBILITY STUDY

August 2010

Prepared for:
U. S. Environmental Protection Agency
Region 10

Prepared by:
WESTAT INC

Contract Number: GS-23F-8144H
Requisition Number: EP-R7-08-13

With technical support from:
Colville Tribes Environmental Trust Program
Environment International Ltd.
SRC, Inc.

This page has been intentionally left blank.

Table of Contents

1 INTRODUCTION 1

1.1 Site Background 1

1.2 Document Purpose and Organization 1

1.3 Project Management 2

2 SURVEY GOALS AND OBJECTIVES 3

2.1 Overview 3

2.2 Data Quality Objectives 3

2.2.1 Step 1 – State the Problem 3

2.2.2 Step 2 – Identify the Goal of the Survey 4

2.2.3 Step 3 – Identify Information Inputs 4

2.2.4 Step 4 – Define the Boundaries of the Survey 7

2.2.5 Step 5 – Develop the Analytic Approach 8

2.2.6 Step 6 – Specify Performance Metrics and Acceptable Levels of Uncertainty 9

2.2.7 Step 7 – Develop the Detailed Plan for Obtaining Data 10

3 STUDY PARTICIPANT SELECTION 11

3.1 On-Reservation 11

3.2 Off-Reservation (including the North Half) 12

4 SURVEY INSTRUMENTS 13

4.1 Dietary Exposure Data Collection 13

4.2 Non-Dietary Exposure Data Collection 14

5 DATA COLLECTION PLAN 16

5.1 Household Identification 16

5.2 Household Screening 16

5.3 AMPM Administration 17

5.4 FQ and ReUP Administration 17

5.5 Incomplete Surveys 17

5.6 Transitory Participants 17

5.7 Participant Reimbursement 17
6 INTERVIEWER TRAINING AND PROCEDURES 18
6.1 Training for the AMPM 18
6.2 Training for the FQ and ReUP 19
6.3 Field Coordination and Logistics 19
7 INFORMATION SYSTEMS AND DATA MANAGEMENT 20
7.1 Survey Management System (SMS) 20
7.2 Interview Management System (IMS) 20
8 CONFIDENTIALITY AND SECURITY 21
8.1 Confidentiality 21
8.2 Security 21
9 QUALITY ASSURANCE 22
10 DATA ANALYSIS AND REPORTING PLAN 23
10.1 Overview 23
10.2 Minimum Data Requirements 23
10.3 Summary Statistics 23
10.4 Quantification of Exposure via Food Intake 24
10.4.1 Estimation of the Distribution of Ordinary Intakes 24
10.4.2 Estimation of the Distribution of Ordinary Dose 25
10.5 Analysis of Non-Food Exposure Data 28
10.6 Analysis of Nutritional Information 29
10.7 Reports 29
10.8 Third Party Data and Analysis Review 30
11 RECONCILIATION WITH THE SETTLEMENT AGREEMENT OBJECTIVES 31
12 REFERENCES 33

LIST OF FIGURES

1 Human Health Exposure Pathways and Populations
2 Local Area Map – Household Screen
3 Local Area Map – AMPM
4 Example of the Distribution of Ordinary Intakes (Observed vs. Ideal)
5 Example of the Distribution of Ordinary Intakes (NCI vs. Ideal)
6 Example of the Distribution of Ordinary Doses
7 Illustration of the HHRA Population of Interest for Dietary Exposures

LIST OF TABLES

1 Exposure Parameter Data Needs for the Baseline HHRA
2 Example of Data Needed for Each Survey Respondent to Evaluate Dietary Intake of Species that may be Harvested from the UCR Site

LIST OF ATTACHMENTS

A Within Household Sampling Plan

B Survey Instruments
- B.1 Household Screener
- B.2 Automated Multiple Pass Method (AMPM) Screen Examples
- B.3 Food Questionnaire (FQ) Example
- B.4 Resource Utilization and Practices (ReUP) Questionnaire

C Informed Consent Documents
- C.1 Information Sheet 18+
- C.2 Consent for Adults 18+
- C.3 Information Sheet 9-13
- C.4 Information Sheet 14-17
- C.5 Parental Permission and Assent Document

D Data Collection Timeline

E Hypothetical Example of Data Analysis Plan Implementation for Food Intake

LIST OF ACRONYMS AND ABBREVIATIONS

AMPM	Automated Multiple Pass Method
CCT	Confederated Tribes of the Colville Reservation
COI	Chemical of Interest
CTE	Central Tendency Exposure
DQO	Data Quality Objective
EPA	U.S. Environmental Protection Agency
EROC	Electronic Record of Calls
FQ	Food Questionnaire
FNDDS	Food and Nutrient Database for Dietary Studies
HHRA	Human Health Risk Assessment
ID	Identification
IMS	Interview Management System
IRB	Institutional Review Board
MOP	Manual of Operating Procedures
NCI	National Cancer Institute
NHANES	National Health and Nutrition Examination Survey
QC	Quality Control
ReUP	Resource Utilization and Practices
RI/FS	Remedial Investigation and Feasibility Study
RME	Reasonable Maximum Exposure
SMS	Survey Management System
STI	Spokane Tribe of Indians
Teck	Teck Cominco American Incorporated
UCL	Upper Confidence Limit
UCR	Upper Columbia River
Westat	Westat Inc.

1 INTRODUCTION

1.1 Site Background

The Upper Columbia River (UCR) Site is located in the north central portion of the State of Washington and includes approximately 150 river miles of the Columbia River, extending from the United States-Canada border south and west to the Grand Coulee Dam. The U.S. Environmental Protection Agency (EPA) is concerned about potential risks to humans and the environment at the Site that stem from discharges of hazardous substances into the Columbia River, including but not limited to discharges of granulated slag, liquid effluents, emissions, and accidental spills and "upsets" from smelting processes and facility operations by the Teck Cominco Metals Limited (currently Teck Resources Limited) facility in Trail, British Columbia.

On June 2, 2006, the United States Department of Justice, the EPA, Teck Cominco Metals Ltd., and Teck Cominco American Incorporated (Teck), signed a Settlement Agreement which requires Teck to perform a Remedial Investigation and Feasibility Study (RI/FS) to characterize the nature and extent of environmental contamination at the UCR Site. In accordance with the Settlement Agreement, Teck will complete the baseline ecological risk assessment and EPA will complete the baseline human health risk assessment (HHRA).

As discussed in the UCR HHRA Work Plan (EPA 2009), the UCR Site is used for recreation, subsistence hunting, fishing, and gathering, and for cultural pursuits important to local Native American tribes, including the Spokane Tribe of Indians (STI) and the Confederated Tribes of the Colville Reservation (CCT). The STI have developed exposure parameters which provide site-specific information on traditional subsistence exposure scenarios (Harper et al., 2002; EPA 2005a). However, no information is currently available on exposure scenarios for the CCT population. Therefore, a survey of exposure parameters for the CCT population will be conducted, with special emphasis on use of the UCR Site as a food source (e.g., fish, shellfish, waterfowl, game, aquatic plants, etc.) or a source of materials utilized in tribal practices (e.g., reeds for basket-weaving, water for sweat lodges, native plants for ceremonial activities, etc.). In accordance with the Settlement Agreement, EPA and the Tribes will conduct this Tribal survey.

1.2 Document Purpose and Organization

This document is the Work Plan for the UCR Tribal Consumption and Resource Use Survey. The purpose of this document is to describe the survey objectives, the selected study design, and the data analysis methodology which will be utilized to address the data needs for the baseline HHRA and RI/FS.

- Section 2 presents the survey goals and objectives, including a summary of the data quality objectives (DQOs). These DQOs <u>describe the nature of the data needed</u> to support the baseline HHRA.
- Sections 3-9 <u>describe how the data will be collected</u>, and include a detailed description of the selection of study participants, the survey instruments that will be utilized, the data collection plan, interviewer training and procedures, data management, confidentiality and security measures, and quality assurance practices.
- Section 10 <u>describes how the collected data will be evaluated</u> (i.e., the data analysis methods and data reduction strategies that will be utilized) to support the exposure assessment for the baseline HHRA.
- Section 11 summarizes how this survey will address the specific study objectives described in the

Settlement Agreement.

- Section 12 provides full citations for all documents and scientific publications referenced in this work plan.

All referenced figures, tables, and attachments are provided at the end of this document.

1.3 Project Management

All work on the UCR Tribal Survey will be overseen by the EPA and the CCT. Survey interviews will be conducted by interviewers hired and supervised by the CCT. The CCT Project Leader will serve as the point of contact for access to CCT members, lands, and other tribal resources to ensure success of the survey. The CCT will also gather information as needed for the design and implementation of the survey, and is responsible for the recruitment of survey subjects.

Under contract to EPA, Westat Inc. (Westat) is responsible for designing the data collection instruments, as well as developing the study design and sampling strategies. Westat will also conduct pilot testing of instruments, as needed, and will provide on-site training for CCT interviewers. In consultation with the CCT, Westat will prepare a Manual of Operating Procedures (MOP) for the field staff, which will contain quality control procedures and other procedures necessary for the successful implementation and completion of the survey. Westat will complete preliminary data analyses and prepare the data for archiving, in accordance with EPA standards. Westat will also be responsible for data reduction and final analyses and reporting.

The survey has been approved by the Institutional Review Boards (IRBs) at Westat and EPA. A Research Permit application was also approved by the CCT.

2 SURVEY GOALS AND OBJECTIVES

2.1 Overview

The Tribal consumption and resource study is a requirement for the RI/FS specified in the Settlement Agreement between Teck and the EPA. As stated in Exhibit A of the Settlement Agreement (the Statement of Work for Remedial Investigation and Feasibility Studies at the UCR Site):

> *The Tribal consumption and resource use study shall include the planning and conduct of consumption and use surveys from the tribes based on personal interviews and other survey methods. [The Tribal survey] should identify consumption of any foodstuffs that may be harvested from the study area, including vegetation, wild game, and fish/shellfish. The consumption and use surveys shall occur over one or more years and include data relevant to all seasons of harvest. The surveys shall be designed to elicit specific information on the types of resources (e.g., wild and cultivated plants, wild game, fish/shellfish) harvested within the study area and from areas representing background conditions in a manner sensitive to intellectual and cultural properties of the affected tribes. The surveys also should define the proportion harvested from each location, the frequency of consumption annually for each resource consumed, the average and maximum amounts consumed, general cleaning, preparation and cooking methods, and the ages and gender of those in each family that consume the resources and other factors as appropriate. Tribal use must also consider exposure from sources other than consumption (e.g., sweat lodges, medicinal uses, basket weaving, etc.).*

2.2 Data Quality Objectives

DQOs define the type, quality, quantity, purpose, and intended uses of data to be collected (EPA 2006). In brief, the DQO process utilizes a seven-step procedure, as follows:

1. State the problem
2. Identify the goal of the study
3. Identify information inputs
4. Define the boundaries of the study
5. Develop the analytic approach
6. Specify performance or acceptance criteria
7. Develop the detailed plan for obtaining data

Following these seven steps helps ensure that the sampling plan is carefully thought out and that the data collected will provide sufficient information to support the key decisions which must be made.

2.2.1 Step 1 – State the Problem

Humans may be exposed to contaminants in UCR-related environmental media by several pathways, including ingestion, inhalation, and dermal contact exposure scenarios. Figure 1 summarizes the exposure scenarios that are planned for evaluation in the baseline HHRA. As shown, the following exposure pathways are of interest for the purpose of evaluating risks to the CCT population:

- Incidental ingestion of and dermal contact with UCR beach sediment and/or upland soils
- Incidental ingestion of and dermal contact with UCR surface water

- Inhalation of outdoor air near UCR beaches
- Ingestion of fish, shellfish, plants, wild game, and waterfowl derived from the UCR Site
- Ingestion of crops irrigated with and livestock watered with impacted groundwater or untreated UCR surface water
- Ingestion of drinking water derived from untreated groundwater or UCR surface water

There are also several tribal-specific exposure scenarios that are of interest, including:

- Inhalation of chemicals in sweat lodges due to use of untreated UCR surface water
- Incidental ingestion of and dermal contact with plant materials from the UCR Site during basket-weaving activities
- Dermal contact with animal tissues from the UCR Site during preparation/preservation activities
- Dermal contact with plant and animal tissues from the UCR Site used medicinally and/or ceremonially
- Inhalation of smoke derived from burning of plant materials during medicinal/ceremonial or preparation/preservation activities

Currently, site-specific exposure information is not available for CCT-specific exposure parameters. Because preliminary risk estimates presented in the UCR HHRA Work Plan (EPA 2009) suggest that risks may approach or exceed a level of potential concern for one or more exposure scenarios, CCT-specific exposure parameter data are needed to allow for reliable risk assessment and risk management decision-making.

2.2.2 Step 2 – Identify the Goal of the Survey

The primary goal of the survey is to obtain site-specific data that will **allow reliable identification and characterization of potential exposures of the CCT population from subsistence or tribal cultural practices that involve hunting, fishing, gathering, and utilization of environmental resources from the UCR Site**. These findings will be used by risk managers to help determine whether or not EPA must take action at one or more locations to ensure that risks at the UCR Site do not exceed an acceptable level. Site-specific data on recreational exposures of the CCT population will be obtained separately.

A secondary goal of the study is to help **identify and prioritize potential data needs** with regard to measured concentration values in resources harvested from the UCR Site that are utilized by the CCT. To date, efforts at the site have focused mainly on the collection and analysis of samples of water, sediment, soil, air, and fish. Information from the survey will be used by risk managers to determine whether measures of concentration levels in other types of media (e.g., deer, elk, waterfowl, shellfish, aquatic plants, etc.) will also be needed to reliably quantify exposures to UCR-related media in the baseline HHRA.

2.2.3 Step 3 – Identify Information Inputs

<u>Current Exposure Information</u>

The key data requirement needed to support reliable calculations of current risks to the CCT population from activities associated with hunting, fishing, gathering and utilization of environmental resources from the UCR Site is the current long-term average contact rate for each exposure scenario of potential concern.

Because exposure to environmental media may tend to vary as a function of seasonal patterns, data are needed which span multiple seasons within a year to allow reliable estimation of long-term average contact rates.

Because exposure parameters are expected to vary between different individuals, data are needed from many individuals within the population of interest in order to fully characterize the distribution of exposures. This allows estimation of exposure and risk for an individual who has central tendency exposure (CTE) and for an individual who has reasonable maximum exposure (RME) in the baseline HHRA. In addition, because exposure and risk may tend to depend on person-specific variables such as proximity to the site, age, gender, and CCT member status, measures of these potential covariates are also needed for each survey respondent to allow for the calculation of exposure estimates for particular sub-populations, as appropriate. One sub-group of special interest is the set of individuals that practice a more traditional Native American lifestyle that includes obtaining a large portion of their resources from the local environment (including the UCR Site and local off-site resources). This sub-group may have higher exposures and hence higher risks if these resources are contaminated.

Conceptually, data could be obtained for every exposure parameter included in any of the scenario-specific exposure equations described in the UCR HHRA Work Plan (EPA 2009). However, in practice, it is not essential and sometimes not feasible, to obtain site-specific data for every input parameter. For example, collection of site-specific information on the surface area of particular body parts exposed during dermal contact exposure scenarios would require implementation of a research protocol, and is likely to have limited benefit in reducing uncertainties in the overall risk estimates based on default assumptions for this parameter. Therefore, the survey should focus on the collection of the exposure parameters that are feasible to collect in a survey and that will be most effective in reducing uncertainties in the baseline HHRA.

Table 1 lists the specific data items that are judged most likely to be important in supporting reliable site-specific human health risk calculations for the UCR Site. As shown in Table 1, there are two broad categories of exposure data needed: dietary intake data and non-dietary exposure data. Each of these is discussed below.

Dietary Intake Data

For each food type that may be harvested from the UCR[1], data are needed on the long-term average intake rate for each of many members of the survey population. Long-term average intake in turn depends on the long-term average frequency of ingestion and the long-term average amount ingested per meal. Because concentrations of COIs in harvested foods (e.g., fish) may vary as a function of species and tissue type (e.g., whole fish, fillet, organs), data are needed on the species and tissue types of foods that are ingested. In addition, because the concentration of COIs in environmental media may differ depending on location and season, data are also needed on where and when the dietary media were obtained.

Information on where a dietary food item was obtained may be divided into three broad categories:

1. Harvested from the UCR Site (this may be stratified by reach)
2. Harvested from non-UCR locations

[1] For example, rainbow trout may be available locally from many areas, including the UCR; therefore, it is a food item of interest for purposes of the baseline HHRA. However, a food item that may be locally harvested but not available in the UCR (e.g., halibut) or that is not harvested (e.g., margarine) would not be a food item of interest.

3. Not harvested, but purchased from an uncertain geographic source

Information on when a food item was harvested may be stratified into four categories:

1. Spring
2. Summer
3. Fall
4. Winter

Table 2 provides an example of the detailed types of information needed for each survey respondent to evaluate dietary exposures in the baseline HHRA for food items that may be harvested from the UCR Site.

Non-Dietary Exposure Data

For non-dietary exposures to environmental media, data are needed on the frequency (days/year) and duration (hours/day) of each activity where exposure to environmental media may occur. Activities of interest to the HHRA may include sweat lodge use, basket-weaving, subsistence activities (hunting, fishing, gathering), and other cultural practices. Because concentration values in some environmental media may differ depending upon location and season, detail is needed on the location and time where the materials were obtained or the media exposure occurred (e.g., direct contact exposures to surface water or sediment at the UCR Site during cultural or subsistence activities). Similar to the dietary intake data, information on where materials were obtained or where exposures occurred may be divided into UCR Site, non-UCR locations, and store bought.

For dermal exposure pathways, data on the body parts that are exposed to potentially contaminated environmental media would be useful for increasing accuracy of risk calculations in the baseline HHRA; however, the value of collecting these data within the survey, rather than relying on reasonable assumptions must be weighed against the added complexity of the survey and burden imposed on survey respondents. Given that these data are not likely to be critical for the purposes of reducing uncertainties in the risk characterization, such data will not be collected in this survey. This does not preclude the collection of such information by other means (e.g., interviews of key informants identified in the survey).

Other Information

Data on cleaning, preparation, and cooking methods are also needed to provide additional information on the types of tissues that may be ingested (e.g., skin-on vs. skin-off fillets) as well as potential exposures associated with these activities (e.g., dermal contact during butchering). This information will be useful to risk managers in providing recommendations on alternative practices that could be used to reduce potential exposures because contaminants are not equally distributed among different types of tissue.

<u>Evaluating Future Exposure Patterns</u>

Because survey respondents may be aware of the current fish advisories published by the Washington Department of Health and may be concerned about potential risks from ingestion of fish and other resources from the UCR Site, it is possible that survey data collected on current resource use and consumption from the UCR Site may reflect a suppressed rate of use and consumption, and data collected in the survey on current utilization of site resources may underestimate future use (i.e., some individuals

may have switched from consumption of a given UCR Site resource to an alternative source, or reduced their consumption of that resource from all sources).

To address this problem, future use will be addressed by asking respondents if they are currently refraining from using UCR resources for any reason.

The baseline HHRA will qualitatively assess potential future risks. The Uncertainties section of the baseline HHRA will describe how risk estimates based on current use scenarios may change in the future based on responses to survey questions directed at identifying the motivations of respondents who currently refrain from using resources from the UCR Site. To avoid biasing the current use survey, these questions will be asked at the end of the Resource Utilization and Practices (ReUP) questionnaire[2] during the final interview. Examples of the types of questions follow:

> *Do you refrain for any reason from consuming plants, fish, or other animals from the Upper Columbia River or Lake Roosevelt area, or refrain from using them for ceremonial, medicinal, or other traditional uses? (IFASKED "WHAT DO YOU MEAN BY REFRAIN?") By refrain, we mean avoid or stop yourself from consuming or using natural materials.*

If the answer is yes, follow up with:

> *Which types of plants, fish, or other animals from the Upper Columbia River or Lake Roosevelt area do you currently refrain from using?*

And, then:

> *What do you feel is the most important reason your everyday diet and traditional practices do not include more of the resources you just mentioned from the Upper Columbia River/Lake Roosevelt area?*

Responses would be used to:

- Describe the proportion of respondents currently refraining from utilizing resources from UCR Site.
- Summarize the frequency of the reasons for refraining from utilizing resources from UCR Site.
- Evaluate how current resource patterns may change in the future.

2.2.4 Step 4 – Define the Boundaries of the Survey

<u>Spatial Bounds</u>

The UCR Site boundaries have not been formally delineated. For the purposes of evaluating potential human health risks, the UCR HHRA Work Plan (EPA 2009) defined the UCR Site as the interval between minimum and maximum extent of the river channel during the year (i.e., lowest and highest elevation reached by the river during the year), plus other areas that may have been potentially impacted by releases. These other areas include locations that may have been impacted by air emissions from the source or wind-blown dispersion of dust from exposed sediment, historically flooded areas or land irrigated with water from the site.

However, CCT individuals who hunt or gather resources from within or near the UCR Site may live over a wide area that is not necessarily in close proximity to the site (as defined above). Therefore, the spatial boundaries of the survey should include the primary areas in which the CCT population resides. This includes the Colville Indian Reservation, which comprises approximately 1.4 million acres (2,200 square

[2] See Section 4 for a detailed description of the survey instruments that will be used..

miles), including approximately 93 miles of the UCR shoreline, and is the home to members of the CCT, which include the Colville, the Nespelem, the San Poil, the Lakes, the Palus, the Wenatchee, the Chelan, the Entiat, the Methow, the Okanogan, the Moses Columbia, and the Nez Perce (CCT 2008). However, the original northern boundary of the reservation was the Canadian border. This former "North Half" of the Colville Indian Reservation continues to be an important homeland to the CCT. CCT-owned land and individual tribal members reside on the North Half and use the lands, waters, and natural resources for cultural and subsistence uses as they do on the reservation. Because of this, the survey boundaries will include individuals residing on the Colville Indian Reservation and may also include CCT members residing adjacent to the reservation and in the North Half.

Temporal Bounds

The importance of the survey timing depends upon the type of instrument selected. For example, information on dietary ingestion rates collected using a 24-hour recall survey instrument will provide information only for that point in time. Because emphasis is on estimating long-term average exposures, multiple 24-hour recall surveys, spaced out over seasons, are helpful to ensure that the long-term average can be estimated. For data collected using an instrument with a longer recall period (e.g., 12 months) which is focused on long-term average values, survey timing is less important.

2.2.5 Step 5 – Develop the Analytic Approach

The data generated from this survey will be utilized to compute human exposure and risk in basic accord with the approach detailed in the UCR HHRA Work Plan (EPA 2009). This will include estimation of exposure and risk for CTE and RME individuals, for each pathway considered separately and together. If both cancer and non-cancer risks to the RME receptor are within or below EPA's usual risk range, then response actions may not be necessary. If either cancer or non-cancer risks exceed EPA's usual risk range, then EPA will review available alternatives for reducing or eliminating environmental contaminates and/or human contact with environmental media.

Evaluating Site-Related vs. Total Risk

As discussed in the UCR HHRA Work Plan (EPA 2009), EPA has determined that the baseline HHRA will utilize a "total risk" approach. For example, if an individual ingests fish from the UCR, but also ingests fish collected from other non-UCR streams and rivers, as well as fish purchased from a store, the total risk to the individual from a specific chemical in fish is given by:

$$\text{Total Risk} = \text{Risk}_{\text{UCR}} + \text{Risk}_{\text{Non-UCR}} + \text{Risk}_{\text{Store}}$$

This approach is preferred because it provides the most complete and thorough characterization of risks from environmental chemicals in site-related media, allowing risk managers to evaluate the total risk and the incremental risk caused by site-related releases. Therefore, to the extent that adequate data on concentration values in non-UCR[3] and store-bought food items are available, the baseline HHRA will assess risks for both site-related and non-site related sources of the chemicals of interest. Because formal UCR Site boundaries have not yet been established, data should be collected in the survey that supports assessments of risks for alternative (or evolving) definitions of UCR Site boundaries, although priority will be given to the CCT Reservation.

[3] Note that non-UCR component would include, to the extent practicable, food items and materials harvested locally but outside of the UCR (e.g., Okanogan River) and non-locally.

2.2.6 Step 6 – Specify Performance Metrics and Acceptable Levels of Uncertainty

Data on the distribution of long-term average contact rates for each of the various foods and other site media that may be utilized as resources by the survey respondents will be utilized to calculate estimates of exposure and risk from site related contaminants. However, measured long-term average contact rates may contain errors that arise from a number of sources, and these errors may contribute to errors in the calculated levels exposure and risk. Other factors that may contribute to errors in the calculated levels of exposure and risk include errors in the measured concentration values in site media, and errors in the toxicity factors for chemicals of interest. These combined errors in exposure, concentration, and toxicity may lead to two types of decision errors, as follows:

- A false negative decision error would occur if a risk manager decides that exposure is not of significant health concern, when in fact it is of concern.
- A false positive decision error would occur if a risk manager decides that exposure is above a level of concern, when in fact it is not.

EPA is most concerned about guarding against the occurrence of false negative decision errors, since an error of this type may leave humans exposed to unacceptable risks from use of environmental media. However, EPA is also concerned with the probability of making false positive decision errors. Although this type of decision error does not result in unacceptable human exposure, it may result in unnecessary expenditure of resources.

In general, EPA seeks to limit the probability of false negative decision errors to a small value (usually about 5%). In most cases, this goal is achieved by using the 95% upper confidence limit (UCL) on the mean concentration values in site media, and by using conservative toxicity factors. In contrast, exposure parameters used to calculate exposure and risk for CTE and RME receptors are generally based on best estimate values.

Ideally, the survey would be designed to ensure that best-estimate values of long-term average contact rates were within specified limits of accuracy, with the limits depending on whether the estimate risk was close to or far removed (either above or below) from a level of human health concern. However, to do so would require knowledge of the average magnitude and variability of the data, and of the uncertainty in the final CTE and RME exposure parameters. Because none of this information is presently available, it is not possible at present to specify quantitative rules for acceptable uncertainty in the estimated long-term average contact rates.

Because it is known that uncertainty is reduced by increasing the number of observations collected, EPA, in consultation with the CCT, has determined that the goal of this study will be to give all households on the Colville Indian Reservation a chance for survey selection and also to possibly survey enrolled CCT members living adjacent to the reservation and in the North Half. Once data are collected and analyzed, the magnitude of any sampling error may be estimated *post hoc* using Monte Carlo simulation or other appropriate statistical techniques, and the potential impact of the uncertainty of exposure and risk estimates will be presented in the Uncertainties section of the baseline HHRA.

Although reliable quantitative evaluations of uncertainty in dietary intake cannot be specified at present, it is possible to perform initial screening level experiments using Monte Carlo simulation. In this approach, "true" distributions are specified for intake frequency and amount per meal, and these distributions are then used to generate "synthetic" data sets that are intended to be similar to actual survey results that might be obtained by collecting four daily food recalls from each of N individuals. The data are then analyzed using the statistical method detailed in Section 10, and the results (the distribution of long-term average intakes) are compared to the expected ("ideal") distribution. These experiments suggest that the ability to reliably estimate the distribution of long-term average intakes depends on two key variables: (1)

the number of individuals providing daily food recall data and (2) the average frequency of intake. In general, the quality of the results (i.e., agreement with "ideal") tends to decrease as N decreases, and also tends to decrease as the intake frequency decreases. That is, it will likely be more difficult to reliably quantify rarely ingested foods than frequently ingested foods. Based on the conditions selected for these experiments, it appears that a data set of at least 200-300 individuals is likely to be needed, although this conclusion is entirely conditional on the assumptions used in the Monte Carlo simulation and actual numbers needed to generate reliable estimates may be different (more likely higher than lower). However, this will not be known until actual data are analyzed.

2.2.7 Step 7 – Develop the Detailed Plan for Obtaining Data

Detailed information on the approach that will be used for obtaining CCT-specific exposure data which satisfy the goals described in the DQOs above is presented in Sections 3 through 9 below.

3 STUDY PARTICIPANT SELECTION

The eligible population will include all current residents of the Colville Indian Reservation, and possibly CCT members who reside adjacent to the reservation and in the North Half. The process for identifying study participants from these two areas is different, and the steps required for each are described below.

3.1 On-Reservation

There are two steps to identifying eligible study participants on the reservation.

Step 1: Prepare a list of all dwelling units on the reservation to give all persons living on-reservation a chance of selection for the survey. The 911 lists for Ferry and Okanogan Counties have been obtained for this purpose by Environment International (a consultant to the CCT). As a quality control (QC) check on the completeness of these lists, eight segments[4] were selected and staff went to these areas to verify that the list of addresses on the 911 lists was complete. For the majority of segments visited, it was found that the 911 lists were at least 90% complete, although there were some addresses on the lists that could not be verified on the ground. In addition, in the more populated areas within Okanogan County, additional dwelling units were identified on the ground that did not appear on the 911 lists. As Westat reviewed Google Earth maps and other satellite images, it was also determined that dwelling units existed in five segments in Okanogan County that were not reflected on the 911 listings. To resolve the discrepancy prior to beginning the survey, additional reconnaissance in these five segments was completed and a significant number of additional dwelling units were identified. With this additional input, there is confidence that the survey will begin with as complete a list of dwelling units as possible.

However, in order to ensure complete coverage of all dwelling units on the Colville Indian Reservation, additional QC checks will also be implemented in the field. For example, during the Household Screening process, every household will be asked whether there are other living quarters (or "hidden dwelling units") located within the structure. These are dwelling units that may not clearly be identifiable from the outside as separate quarters where people might live. If any hidden dwelling units are identified, they will be added to the database of addresses. In addition, as interviewers are working in their assigned areas and travelling to known addresses, they will be using maps that contain the locations of all dwelling units known to the study from the 911 lists (and from pre-field QC checks). If any additional dwelling units are found that have not been accounted for, they will be added to the database as "missed structures" and will be assigned to a data collector for Household Screening.

Step 2: All dwelling units identified through any of these methods will be visited by study staff to conduct a Household Screening. The main purpose of the Household Screening is to enumerate all persons living in the household. From this list of household members, a random sampling procedure will be applied to determine which individuals are eligible to participate in the survey. This procedure is described in detail in Attachment A. In brief, all individuals in the household will be divided into four age groups (0-6 years, 7-17 years, 18-54 years, 55+ years). The maximum number of participants from each household will be two people from the 0-54 age groups (in accord with the sub-sampling frequencies for each age group specified in Attachment A) plus one person from the 55+ age group. If more than one

[4] Westat divided the reservation into approximately 94 segments to be used for purposes of partitioning and managing the field work.

person is eligible within a specific age group, then the survey participant will be selected based on most recent birth month. It is estimated that approximately 1,800 individuals will be sampled and agree to initially participate in the study (380-550 per age group), with a total of 1,100 randomly selected participants completing all rounds of data collection.

Consistent with the DQOs, individuals practicing a more traditional subsistence lifestyle are an important sub-group of interest because they may have higher exposures and hence higher risks. However, because these individuals may represent a smaller fraction of the total population of interest, the number of these individuals selected randomly may not be adequate to quantify accurate exposure estimates. Therefore, in addition to those individuals randomly selected by applying the sampling algorithm, a limited number of additional individuals who are identified as "heavy consumers" will be invited to participate. That is, during the Household Screening, the interviewer will ask the household reporter to identify any individuals who regularly (more than 3 times per week) eat local foods or take part in traditional Native American practices. Figure 2 shows the "local" area of interest for the purposes of this Household Screening question. This map will be shown to the household reporter to provide a standardized frame of reference when answering these questions. One person from each household who meets these criteria will be selected for participation in the survey. These targeted individuals will be uniquely identified in the survey database, and assigned a weight based on this selection criterion to distinguish them from participants selected at random to avoid bias in subsequent data analyses.

3.2 Off-Reservation (including the North Half)

In the nearby areas that are directly adjacent to the Colville Indian Reservation and in the North Half, Environment International will work with the CCT to obtain names of tribal members from the CCT enrollment list. If feasible, these individuals may be included in the survey sample. Off-reservation, there is no need to enumerate household members, since the individuals to be invited to participate are pre-identified from the tribal enrollment list. Because only mailing addresses (i.e., P.O. boxes) are available for the majority of tribal members on the list, the CCT will mail a letter, along with information about the survey, to tribal members asking them to contact the CCT with their physical location and other contact information. Depending on the outcome of this mail contact, the CCT may also employ additional steps to try and obtain physical locations for the tribal members, and thus establish their eligibility based on the area where they live. As a result of these efforts, there are likely to be four different types of outcomes. These outcomes, and respective eligibility, follow:

- **CCT members who report they do not live on the reservation, but they do live in a nearby area that is adjacent to the reservation**: These individuals will be eligible for the survey.
- **CCT members who report they live on the reservation**: These individuals will have a chance of selection for the survey through the on-reservation procedures described above.
- **CCT members who report they do not live on the reservation, nor do they live in a nearby area that is adjacent to the reservation**: These individuals will <u>not</u> be eligible for the survey.
- **CCT members who do not respond to the mailing and thus their physical location is unknown**: These individuals will <u>not</u> have a chance of selection for the survey unless they live on the reservation (see the on-reservation procedures described above).

4 SURVEY INSTRUMENTS

The Household Screening instrument will be used to enumerate all persons living in households on the Colville Indian Reservation for purposes of selecting household members for study participation (in accord with the procedures presented in Attachment A). General demographic information, such as age, gender, and date of birth, will be recorded for each individual in the household. Attachment B.1 provides a copy of the Household Screening instrument.

There will be three main survey instruments for this study:

- Automated Multiple Pass Method (AMPM) 24-hour recall dietary assessment
- Food Questionnaire (FQ)
- Resource Utilization and Practices (ReUP) Questionnaire

The AMPM and the FQ will collect information on dietary exposures, while the ReUP will collect information on non-dietary exposure scenarios (e.g., sweat lodge use, basket-weaving). The ReUP questionnaire will also include questions about future use. The AMPM and FQ, which focus on what people are currently eating, will not include questions about future use. Each of these instruments is described in more detail below.

4.1 Dietary Exposure Data Collection

Overview

AMPM interviews provide detailed information about the types and amounts of food ingested within the 24-hour recall window. However, because of dietary variation between days, the data from a small number of AMPM surveys can be a poor predictor of long-term average intake (Dodd et al. 2006). In contrast, FQ surveys, which have a longer recall period (e.g., 12 months), may capture information on foods not consumed during the time period used for the AMPM interviews. However, FQs are limited to a finite number of foods (in this case, to foods which may be indigenous to the UCR Site), and are often hampered by the inability of respondents to accurately estimate their true long-term average intake of specific food types. Because of this, the best results are obtained by combining the information from both types of survey.

The AMPM was selected for use in the UCR Tribal Survey because it is a validated instrument that has been used on the National Health and Nutrition Examination Survey (NHANES), as well as other large health surveys. The AMPM instrument automatically assigns unique food identifier codes to recorded responses that allow for linkages to national databases which can provide food-item specific information on nutritional content (e.g., the USDA's Food and Nutrient Database for Dietary Studies [FNDDS] database) and chemical residue levels (e.g., the EPA's Pesticide database, FDA's Total Diet Study database).

While minor additions are planned to the AMPM instrument for the UCR Tribal Survey in order to capture indigenous foods of interest, formal pre-testing of the instrument is not necessary.

The FQ was developed based on a model of a Food Frequency Questionnaire (FFQ) which has been validated and used in numerous large surveys. However, the traditional FFQ was modified for this survey to focus on foods which may be indigenous to the UCR Site in order to obtain detailed information about these foods of interest and to minimize respondent burden. Before finalization, the FQ was pretested during a series of cognitive interviews with tribal members and other residents of the CCT reservation.

Adults and children of all ages are eligible for the AMPM. Participants ages 2 and older are eligible for

the FQ. A parent or guardian will be asked to serve as a proxy for children ages 8 years and under. Beginning at age 9 years, the child will be encouraged to provide his/her own self-report, with assistance from a parent/guardian as necessary.

AMPM

The UCR Tribal Survey AMPM will collect a list of foods and beverages consumed in the previous day (a 24-hour recall period), along with detailed information on the type of food and amount ingested for each food item. Note that the types of foods items captured during the AMPM is not restricted to UCR-harvested foods, but includes all food items ingested in the previous day regardless of source (i.e., UCR harvested, non-UCR harvested, and store bought). The AMPM will also collect information on food cleaning, preparation, and cooking methods. For each survey respondent, attempts will be made to administer the AMPM several times over the course of a year to capture seasonal variability in food consumption patterns. The AMPM is a computer-assisted interview. Attachment B.2 provides several examples of the AMPM input screens.

FQ

For participants ages 2 and older, the UCR Tribal Survey FQ will collect information on the frequency that particular foods and beverages were consumed in the past year, along with detailed information on the type of food, amount ingested, and specific information on where (e.g., UCR locations, non-UCR locations, store bought) and when (e.g., spring, summer, fall, winter) the foods were obtained. The location data will allow assignment of the food into the major geographic domains important in the HHRA (e.g., UCR Site locations, local non-UCR locations). A map will be shown to the participant to provide a standardized frame of reference when reporting where local harvesting occurred. Information on where the food was obtained will be reported as the fraction of food derived from each source (i.e., % of food 'x' from UCR locations, % of food 'x' from non-UCR locations, etc.) which will allow dietary intake estimates to be stratified according to source. The FQ will also collect information on food cleaning, preparation, and cooking methods. The FQ will be administered once for each survey participant following completion of the AMPM interviews.

Attachment B.3 provides a copy of the FQ survey instrument, along with a segmented map of the local area to aid in the systematic recording of UCR and local non-UCR harvesting locations. The FQ will be a hard-copy questionnaire designed as an optical character recognition (OCR) form using Teleform (a software package used to develop and process forms using optical scanning). Teleform documents are formatted to be user-friendly and easy to complete. Although procedures call for the FQ to be administered by interviewers, there may occasionally be the need for an interviewer to leave a questionnaire behind for a respondent to complete on his/her own and mail back to the Field Office. The Teleform questionnaires will be formatted to allow for either mode of administration.

4.2 Non-Dietary Exposure Data Collection

The ReUP questionnaire is a new survey instrument developed by Westat, with content input from the CCT, to capture information about exposure to environmental media from non-dietary uses. The ReUP will be administered once for each survey participant.

The ReUP will collect data on exposure frequency, exposure duration, and contact rates associated with subsistence (e.g., hunting, fishing, gathering) and tribal (e.g., sweat lodge use, basket-weaving, cultural practices) activities performed within the past year. In order to better identify and prioritize resources for future sampling, the ReUP will also collect detailed information on the types of materials (species and

tissue types) that may be utilized as part of these activities and where and when these materials were obtained.

Only participants ages 14 years and older will be eligible to complete the ReUP questionnaire. The CCT has recommended this as the age at which children typically begin taking part in traditional practices.

Similar to the FQ, Westat will prepare the hard-copy ReUP questionnaire as an OCR form using Teleform. Although procedures call for the ReUP to be administered by interviewers, there may occasionally be the need for an interviewer to leave a questionnaire behind for a respondent to complete on his/her own and mail back to the Field Office. The ReUP will be formatted to allow for either mode of administration. A pretest of the ReUP will be conducted with Tribal members and elders before the instrument is utilized in the field. Attachment B.4 provides a copy of the ReUP survey instrument.

.

5 DATA COLLECTION PLAN

The field period for the survey is planned for about a 17-month period, from late October 2009 through March 2011. Attachment D illustrates the data collection timeline for the survey. Following the initial Household Screening, study participants will be contacted a total of up to five times over a period of about 12 months (up to 4 AMPM visits and 1 FQ/ReUP visit).

5.1 Household Identification

Each dwelling unit on the reservation will be assigned a unique Household Identification (ID) number. Individual participants within households who are identified as eligible for the survey will be assigned a Participant ID number that links them to the household.

For off-reservation areas, each tribal member sampled for the survey will be assigned a Participant ID number. These Participant IDs will also contain a link to a Household ID so that multiple participants within the same household can be easily grouped for logistical purposes.

An advance letter, signed by a CCT official, will be mailed to all households on the Colville Indian Reservation and all tribal members living in off-reservation areas about 5-7 days prior to the interviewer's first visit. A study brochure will also be included to provide prospective participants with additional information about the study. Copies of the letter and brochure will be carried by the interviewers and given to persons who do not receive them or do not remember receiving them.

The first in-person contact with households on the Colville Indian Reservation will involve talking to an adult member of the household to obtain information about all household members. If repeated attempts to reach someone at a household are unsuccessful, attempts will be made to obtain a Neighbor Report to determine if any potential survey participants may live in the household. If the neighbor indicates that no eligible participants live at that household, the case will be finalized and no further contacts will be made. If the neighbor indicates that eligible participants live at that household, the interviewer will continue to attempt to reach someone within the household to complete the Household Screening.

5.2 Household Screening

The Household Screening will be conducted using the hard-copy instrument provided as Attachment B.1. In many cases, this instrument will be completed on the doorstep. Once the household enumeration is complete, the interviewer will determine which household members are eligible for the survey (in accord with the procedures described in Attachment A) and ask to speak to them directly. If the selected participants are available at the time of the Household Screening, the interviewer will speak to them to introduce the study and ask if they can complete the first AMPM at that time.

The Household Screening for all dwelling units on the Colville Indian Reservation should be completed within approximately nine months of the study start date. If a dwelling unit is found to be vacant during the screening period, it will receive an interim code of "Vacant". This dwelling unit will then be re-visited before the end of the screening period to determine if it has become occupied. If so, attempts will be made to complete the Household Screening. If not, it will receive a final code of "Vacant" and will not be revisited during the survey period.

Within households sampling rates were estimated based on 2000 Census data and summary information provided by the CCT. After the first 4-6 weeks of household screening activities, Westat will review the observed household compositions and determine if the initial rates need to be modified to achieve the desired sample sizes.

5.3 AMPM Administration

Prior to administering the first AMPM interview, each participant will read and sign the appropriate informed consent documents (see Attachment C). These consist of an Information Sheet and a signature page. For study participants under the age of 18, a parent or guardian will be asked to sign a Parental Permission Form giving consent for their child to be included in the survey. For children ages 8 and younger, the parent or guardian will be asked to act as a proxy for the child. For children ages 9 and above, the child will be asked to respond directly to the survey questions if possible. Children ages 9-17 will be asked to sign an assent form, indicating that they agree to take part in the study. A copy of all consent and assent documents will be left with the participant for his/her records. At the first AMPM visit (Visit 1), participants will provide consent and complete the first AMPM interview.

At the end of each AMPM visit, participants will be asked to estimate semi-quantitatively (e.g., none, little, some, most) the amount of the total diet reported which was harvested from local sources. Figure 3 shows the "local" area of interest for the purposes of this question in the AMPM survey. This map will be shown to the participant to provide a standardized frame of reference when answering this question.

5.4 FQ and ReUP Administration

At the final visit, participants will be asked to complete the FQ and ReUP questionnaires. These questionnaires are hard-copy forms and will be administered by an interviewer in most cases. In rare instances, the questionnaires may be left with the study participant to complete on their own and mail back to the Field Office.

5.5 Incomplete Surveys

If a participant completes at least two of the AMPM interviews, they will remain eligible for subsequent administrations, unless there has been a firm refusal or a request to discontinue participation in the study. The National Cancer Institute (NCI) recommends a minimum of two AMPMs to calculate reliable estimates of long-term average intake (Tooze et al. 2006). The FQ will not be administered unless the participant has completed at least two of the AMPMs.

5.6 Transitory Participants

During each visit, interviewers will collect contact information from all study participants (e.g., cell phone number, names of friends and relatives who are likely to know their whereabouts) for future tracing purposes in the event it is needed. If a study participant moves to an area within previously defined target zip codes, or elsewhere within a 30-minute drive of the Colville Indian Reservation boundary, then they will be retained and attempts will be made to complete their interviews. If a study participant moves out of the area, then no attempts will be made to complete subsequent interviews.

5.7 Participant Reimbursement

Each participant will receive a $30 reimbursement for each of the study visits (up to total of $150 if 5 visits are completed). This reimbursement will be provided and tracked by the CCT, in accordance with their procedures. Checks will be issued to study participants ages 14 and above. For children under the age of 14, checks will be made payable to the parent who responds on behalf of the child.

6 INTERVIEWER TRAINING AND PROCEDURES

CCT plans to hire approximately ten full-time interviewers to conduct the field work for the UCR Tribal Survey. These interviewers will work in areas defined by the four geopolitical districts (Omak, Nespelem, Keller, and Inchelium) and surrounding areas. Westat is responsible for developing a comprehensive training program for the CCT interviewers in the use of the survey instruments, including survey techniques such as methods for converting non-responders. This program will be integrated with the training planned by the CCT for their interviewers.

The Manual of Operating Procedures (MOP) (Westat 2009a, b, c) documents standardized field procedures to be used by interviewers and the Field Supervisor/Field Office. The MOP will serve as the basis for the training programs. Other training materials to be developed include interactive role plays that will provide trainees with practice on the questionnaires and other key skills needed to successfully enroll and engage study participants.

Westat will coordinate the training schedule with the CCT. In preparation for the training, Westat has collaborated with the CCT on the types of individuals to be hired as interviewers and has made suggestions regarding prior experience and desirable skills. Interviewer training will be conducted in Spokane, WA. Hiring and payment of the interviewers and making arrangements for their attendance at training is the responsibility of the CCT.

6.1 Training for the AMPM

The initial training session for interviewers will focus primarily on administering the AMPM. Other topics will include an introduction to the study materials, teaching interviewers how to select participants from the Household Screening, administering consent, gaining the cooperation of respondents, general interviewing techniques, an introduction to the laptop computer and computer-assisted interviewing, as well as detailed training and practice on the AMPM. Home study materials will be provided to the interviewers for completion prior to coming to training. It is expected that the CCT will provide interviewers with training on administrative procedures specific to activities under the control of the CCT that they will need to follow. It is also expected that the CCT will provide the interviewers with relevant information regarding participant incentives.

As part of the initial training, the CCT Field Supervisor will be trained in administrative procedures developed by Westat. This will include procedures for assigning cases to interviewers, use of the automated study management system, holding conferences with interviewers and assessing study progress, reviewing automated reports, data transmission, quality control activities, and other activities that will take place in the Field Office.

Westat trainers will travel to a training location to be arranged by the CCT. Field Supervisor training will occur the first 2 days, followed by interviewer training on the Household Screening and the AMPM (8 days). At the end of training, additional support will be provided by Westat to help assign initial caseloads to the interviewers and ensure a successful launch. Prior to going into the field, interviewers will complete practice interviews and be “certified” to begin work. If any interviewers are not able to demonstrate adequate skills and knowledge after completing training, remedial training may be necessary before that interviewer is permitted to begin work. The decision about interviewer readiness will be made jointly by the CCT and Westat.

It is expected that the CCT will hire a sufficient number of interviewers to attend the initial training, allowing for extra staff in the event that not all interviewers are able to successfully complete training. If attrition occurs and the number of interviewers needed to complete the fieldwork within the scheduled period of time is insufficient, an additional training session will be necessary. However, a repeat training

session will require substantial resources and should be avoided, if at all possible.

6.2 Training for the FQ and ReUP

Prior to the first FQ/ReUP visits in late 2010, a scheduled training session will occur. This training session will focus on the FQ and the ReUP questionnaire. Both of these questionnaires will be in hard-copy format and training will provide interviewers with the skills and practice needed to successfully administer these interviews. The Field Supervisor and the interviewers will be trained on the procedures for these instruments, as well as on how to administer the survey questions.

6.3 Field Coordination and Logistics

All field activities will be coordinated by the Field Office, located on the Colville Indian Reservation. The Field Office will serve as a base of operations for the survey. The CCT Field Supervisor will be located in the Field Office. Interviewers are expected to go to the Field Office on a regular basis to meet with their supervisor. The Field Office will also be stocked with all survey supplies (e.g., hard copy instruments, etc.). As appropriate, possible satellite locations will be identified for interviewers to use to transmit data from the laptops and/or to replenish their study supplies. All completed hard-copy FQ and ReUP questionnaires will be reviewed at the Field Office for completeness and accuracy before being sent to Westat. Other completed hard-copy documents (e.g., Household Screening surveys) will be securely stored in the Field Office.

The Field Office will also maintain a call-in number for participants to call with questions about the survey or about resources within the UCR Site. Westat will provide a Helpdesk (located in the main Westat office in Rockville, Maryland) to provide support for any technical problems that arise with the field computers. If interviewers encounter a problem, they should first check with their supervisor. If the supervisor cannot solve the problem, then the Helpdesk should be contacted for technical problems.

7 INFORMATION SYSTEMS AND DATA MANAGEMENT

7.1 Survey Management System (SMS)

An automated Survey Management System (SMS) will be developed by Westat to facilitate data collection and monitoring of study progress. The management system will allow the Field Supervisor to assign work to interviewers and track study progress.

The SMS will operate on a computer (to be provided by Westat) located in the Field Office. Field interviewers will be required to use an analog (not digital) telephone line to connect to the SMS on a daily basis in order to transmit their completed work and receive new case assignments.

Below is a list of the types of data items that will be stored and available in the SMS.

- Household and Participant ID numbers
- Household address, participant name, mailing address, telephone numbers, and other current contact information
- Assigned interviewer
- Dates and statuses for all study activities (pending, interim, complete)
- Time interval for next scheduled interview
- Appointment time for next scheduled interview (if available)
- Status of interview validations

The Field Supervisor will be able to utilize the SMS to view reports which track study progress, both overall and by interviewer.

7.2 Interview Management System (IMS)

An Interview Management System (IMS) will be located on each interviewer laptop. This laptop will be used to launch the computerized AMPM instrument and automatically record result codes for this interview. An electronic record of calls (EROC) will also be available on the interviewer laptop to allow interviewers to track their contact with a household and/or a participant and provide both interim and final interview status codes.

Interviewers will connect to secure centralized database servers maintained at Westat to upload results of the AMPM interviews and EROC and to download assignments. The Field Supervisor can access results of data uploads to verify that interviewers have transmitted results of interviews successfully. The study will employ systematic tracking of results of AMPM interviews and FQ/ReUP questionnaires.

Key entry of data from the Household Screening survey, including demographic data for all household members, will be done in the Field Office. Westat will use these data to evaluate sample yield on an ongoing basis, and ensure that individuals are being sampled correctly. At the time of data entry, all forms will be reviewed by the Field Supervisor for completeness.

8 CONFIDENTIALITY AND SECURITY

8.1 Confidentiality

All data collection and informed consent procedures for the survey have been approved by the Institutional Review Boards for both Westat and EPA. A Research Permit application has also been approved by the CCT.

All Westat employees sign a Confidentiality Pledge at the time of their employment, and complete Human Subject training on an annual basis. Westat has provided the CCT with an example of a confidentiality pledge that could be used for the interviewers hired by the CCT, and the CCT will be responsible for obtaining pledges of confidentiality from their employees. The importance of maintaining confidentiality will be part of the training provided to all staff.

Identifying information about survey participants will be protected and available only to CCT and Westat staff for operational purposes necessary to carry out the survey. Identifying information will not be included on the analytic database and will not be linked to survey results. To further protect the confidentiality of study data, EPA has obtained a Certificate of Confidentiality from the National Institutes of Health. With this certificate, researchers cannot be forced to give out any information that may identify study participants, even by a court subpoena, in any federal, state, or local court proceedings. Study participants will be informed of this protection as part of the informed consent process.

8.2 Security

The MOP (Westat 2009a, b, c) provides procedures for securing hard-copy documents containing identifying information as well as procedures to be used in the Field Office. This will require vigilance on the part of the interviewers and the Field Supervisor.

Hard drives on each laptop will be encrypted using strong whole disk and file encryption methods to protect the data on the laptops at all times. Use of whole disk encryption will ensure that even if a laptop is lost or stolen, unauthorized users cannot use the software or read the data stored on the computer. When data are transferred between the laptop and the central server, they will be compressed and encrypted prior to transmission and decrypted after receipt. Redundant storage of data on servers and secure backups and archiving will protect data and maintain confidentiality. Password authentication and functional roles assigned to interviewers and the supervisor will limit access to confidential data and minimize risks of their exposure to unauthorized persons.

In addition to data security measures outlined above, Westat corporate data and system security procedures will apply to data and systems under Westat control. On April 4, 2009, Westat provided information technology specialists from the CCT with a summary of Westat's data and system security procedures. These procedures were determined to be acceptable to the tribe.

9 QUALITY ASSURANCE

Quality assurance steps will include the following:

- Steps conducted by field interviewers;
- Steps conducted by the Field Supervisor;
- Steps taken by Westat as part of an ongoing review of survey data and activities; and
- Steps that are inherent within the design and functioning of automated survey instruments, such as the AMPM.

Quality control procedures to be carried out by field interviewers and the Field Supervisor will be documented in the MOP (Westat 2009a, b, c). QC procedures to be conducted by the Field Supervisor will include verification of a percentage of each interviewer's work. For completed cases, this will require re-contacting the study participant. The verification interview will be brief, and is intended to verify that the interviewer actually visited the home and spoke to the participant. If potential problems are noted with an interviewer's work, the interviewer will be counseled and retrained as soon as possible. On a case-by-case basis, it will be determined whether a re-interview may be necessary. If the verification indicates that the interview was not conducted, or if there are significant discrepancies noted, the interviewer will be told to stop work immediately, and all previous work will be verified. Re-interviews will be initiated as needed.

Westat will review the responses gathered during the first round of interviews for each instrument to determine if there are any patterns of missing data. If so, this information will be used to develop improved guidance to interviewers on actions they could take to improve data quality on subsequent interviews.

In addition to the inherent data quality checks that are incorporated into the AMPM instrument, Westat will also utilize information on total daily caloric intake to identify unexpected dietary responses. The total daily caloric intake will be computed from the 24-hour dietary recall using caloric information from the USDA FNDDS. Responses that are outside expected caloric bounds will be reviewed to ensure that inconsistencies are not a result of data entry errors. Final data reports will provide information on the frequency of unexpected results and how these results were addressed in subsequent data analyses.

10 DATA ANALYSIS AND REPORTING PLAN

10.1 Overview

As discussed in Section 4, the UCR Tribal Survey will consist of a number of survey instruments, including the following:

- Household Screening survey. This instrument will be used to enumerate and record demographic information (e.g., age, gender, and date of birth) for all persons living in dwelling units on the Colville Indian Reservation for purposes of selecting household members for study participation.
- Automated Multiple Pass Method (AMPM) interviews. These surveys will characterize the types and amounts of food ingested by survey respondents on each of up to four different days, each representing a different season of the year.
- Food questionnaire (FQ). This questionnaire will be administered once, at the end of the AMPM survey program. It is intended to collect information of the long-term average intake frequencies of specified food items, as well as the source of the food items (e.g., harvested from the site, obtained from elsewhere).
- Resource Use and Practices (ReUP) questionnaire. This questionnaire will collect information on a wide range of non-dietary exposure pathways to UCR-derived media for a range of activities, including medicinal uses, tribal practices, food preparation, and production of clothing or household items.

This section describes the data evaluation and data reduction steps that are planned in order to utilize the data collected using each of these instruments to support the baseline HHRA for the UCR Site. These planned data reduction steps may be revised and improved as data are gathered and experience is gained during the course of the survey.

10.2 Minimum Data Requirements

The NCI recommends a minimum of two AMPMs to calculate reliable estimates of long-term average intake (Tooze et al. 2006). If a participant does not complete at least two AMPMs, the results for this individual will be excluded from data analyses for dietary exposures. In addition, because detailed information on the food source (i.e., harvested from UCR locations, obtained from non-UCR locations) will only be recorded as part of the FQ and this information is required for the purposes of the baseline HHRA, if a participant does not complete the FQ, the results for this individual will also be excluded from data analyses for dietary exposures.

There is no minimum AMPM or FQ requirement for the purposes of performing data analyses for non-dietary exposures (i.e., the only requirement is the completion of the ReUP).

10.3 Summary Statistics

Summary tables will be prepared both during the study (e.g., at the end of each AMPM round) and at the end of the survey. The purpose of these tables is to provide an overview of the data.

First, a summary of population statistics will be prepared. This will include unweighted estimates of the total number of people who were eligible to participate in the survey, number sampled, and the number of people who provided sufficient information to be included in the data analysis step. These data will be stratified according to several potentially important population variables, including age, gender, and

location of residence. These data allow an evaluation of the degree to which the survey respondents are representative of the population as a whole. Differences in representativeness will be adjusted for by weighting.

Second, at the end of the survey, the AMPM data and the FQ data will be used to produce weighted summary tables showing the types of food ingested, the fraction of the population that ingests each food type, the average frequency of ingestion, and the average amount ingested per day. As above, these data may be stratified according to key variables such as age, gender, or location of residence, as may be appropriate to provide a clear understanding of intake patterns by the population.

Third, data from the FQ will be used to provide summary information on the source of food items ingested by respondents. It is expected that data will be available to group fish species into 1) site-related, 2) non-site related but locally or regionally harvested, and 3) store-bought categories, but data for non-fish species will be less specific. Therefore, data on fish species will include three broad categories:

1. Food items harvested from within the boundaries of the UCR Site
2. Food items harvested from outside the boundaries of the UCR Site
3. Food items purchased

While data on non-fish species will include the following categories:

1. Food items harvested from within the boundaries of the UCR Site
2. Food items obtained from areas outside the boundaries of the UCR Site

For the purposes of the baseline HHRA, the primary focus will be on the level of human exposure from ingestion of aquatic or semi-aquatic food items (e.g., fish, shellfish, aquatic plants, waterfowl, beaver, etc.) that are harvested from within the boundaries of the UCR Site. The data from the survey will be used to determine whether intake of terrestrial food items (e.g., deer, elk, bear, terrestrial plants, etc.) that are harvested from areas close to the UCR Site are sufficiently large to warrant inclusion in the risk assessment.

10.4 Quantification of Exposure via Food Intake

10.4.1 Estimation of the Distribution of Ordinary Intakes

The primary objective of collecting food consumption data is to estimate the long-term average intake ("ordinary intake") of each type of food by each individual participating in the survey, and to use these data to characterize the distribution of ordinary intakes across all of the members of the study population.

Data on frequency and amounts of food ingested per meal will be captured in the AMPM interviews and data on long-term frequency of ingestion will be captured in the FQ. As discussed by Dodd et al. (2006), AMPM surveys provide rich detail about the types and amounts of food ingested on each of the recall days, but because of dietary variation between days, the data from AMPM surveys may be a poor predictor of long term average intake. In contrast, FQ surveys may capture information on foods not consumed during the AMPM surveys time periods, but the surveys are limited to a finite number of foods, and are often hampered by the inability of respondents to accurately estimate their true long-term average intake of specific food types. Because of this, the best results are obtained by combining the information from both types of surveys.

Data on the amount of food items ingested per meal obtained from the AMPM interviews will be applied to the frequency data in the FQ to obtain estimates of FQ-specific food intakes. For items which may have a low frequency of ingestion, AMPM interviews may not capture intake amount information. In

these cases, either data on amounts eaten of similar food items, or summary data (e.g., means or 95th percentiles) of amounts eaten by the population as a whole or sub-populations with similar food intake habits would be applied to the FQ frequency data to estimate FQ-specific food intakes. Collecting portion size in the FQ is unnecessary and presents an unreasonable participant burden.

The simplest way to evaluate the data for a specified food item is to compute the average daily intake of that food item for each person, combining across the multiple AMPM surveys and the FQ for each person. This approach usually yields a reliable estimate of the population average ordinary intake, but tends to overestimate the ordinary intake for individuals at the high end of the population distribution (Dodd et al. 2006). This concept is illustrated in Figure 4 using a "synthetic" data set (i.e., data generated using Monte Carlo random draws from a specified set of "true" intakes).

Because of this tendency for the distribution of the within-person average values to overestimate the high end of the distribution, a more advanced statistical protocol is required to derive unbiased estimates of the true distribution of ordinary intake. Such a protocol has been developed by the NCI, as described by Dodd et al. (2006), Subar et al. (2006) and Tooze et al. (2006), and as detailed on a web site hosted by the NCI[5]. This protocol will be used to evaluate the food intake data generated in this study.

In brief, ordinary intake for a specified food item is modeled as the product of the probability of ingesting that food item on a day and the average amount of that food item ingested per day:

$$\text{Ordinary Intake} = \text{Probability} \cdot \text{Amount}$$

Probability of intake is modeled using the logit function:

$$\text{Probability} = 1 / [1 + \exp(-z)]$$

where z is a linear function of one or more covariates as well as random person-specific effect:

$$z = b0 + b1 \cdot \text{Covariate } 1 + b2 \cdot \text{Covariate } 2 + \ldots + \text{Normal}(0,\sigma 1)$$

The distribution of amount is modeled by using a Box-Cox transformation to transform the amount data to an approximately normal distribution, which is then fit to the following:

$$\text{Transformed Amount} = b0 + b1 \cdot \text{Covariate } 1 + b2 \cdot \text{Covariate } 2 + \ldots + \text{Normal}(0,\sigma 2) + \text{Normal}(0,\sigma 3)$$

where the two normal distributions account for within- and between-person random variations. Covariates may be the same or different between the two different models.

Fitting is accomplished in SAS using the data from replicate AMPM surveys as the primary input, with the reported long-term average intake from the FQ as one key covariate. Other covariates that may be included in the model include age, gender, and distance of the residence from the UCR. Fitting of the probability distribution and the amount distribution are performed simultaneously using the NCI MIXTRAN macro in order to account for correlations between probability and amount. The parameter values from the MIXTRAN fitting are then provided to the NCI DISTRIB macro to generate the distribution of ordinary intakes for the food item and population being evaluated. This NCI approach has been found to yield improved fits compared to other data reduction methods, especially in the tails of the distribution. This is illustrated in Figure 5.

10.4.2 Estimation of the Distribution of Ordinary Dose

Although the NCI method and software were designed for estimating ordinary intake of foods, the method is equally valid if the data on ordinary intake are converted into estimates of ordinary dose of a site-specific chemical of interest (COI), as follows:

[5] http://riskfactor.cancer.gov/diet/usualintakes/method.html

$$\text{Ordinary Dose}_{f,c} = \text{Ordinary Intake}_{f} \cdot \text{Concentration}_{f,c}$$

where the subscript 'f' refers to a food type (e.g., trout) and the subscript 'c' refers to a specific COI (e.g., mercury).

This conversion from food intake to chemical intake allows the data to be stratified and summed in ways that would not otherwise be possible. For example, consider the data for a population of people who ingest three types of food (f_1 = trout, f_2 = bass, and f_3 = duck) that are each derived from up to three sources: s_1 = harvested from UCR, s_2 = harvested outside the UCR, and s_3 = purchased from a store. The FQ for each person provides the long-term average fraction of total intake of each food item from each source.

Given these data, the raw dietary intake data (AMPM surveys and the FQ) for each individual can be stratified into 9 bins (3 food types x 3 sources), and the dose associated with each bin can be calculated from the corresponding food- and source-specific concentration term. Then, the NCI macros can be used to generate the distribution of ordinary doses for any or all of the following:

- any one particular bin (e.g., trout from the UCR)
- the sum of foods within a source (e.g., trout + bass + duck from the UCR)
- the sum of a specific food type across multiple sources (e.g., trout from the UCR + trout from outside the UCR + trout bought at a store)

An example of this procedure generated using synthetic data is provided in Figure 6.

Data on the concentration of site-specific COIs in foods harvested from the UCR Site will be based on measured or modeled values, as may be deemed appropriate. To the extent feasible, concentration data for media harvested from non-UCR Site locations will be obtained from regional, state, and local resource sampling data. Concentration data for store-bought media will be obtained from national studies of contaminant levels in the U.S. food supply (e.g., the FDA's Total Diet Study database).

One important advantage of this data reduction technique is that it automatically accounts for correlations that may exist between the intakes of different food types (e.g., a person who ingests a lot of trout may also tend to ingest a lot of bass) and correlations that may exist between food sources (e.g., a person who harvests and ingests a lot of trout from the UCR Site may also tend to harvest and ingest a lot of duck from the UCR Site). Failure to account for these potential correlations could tend to underestimate exposure and risk to individuals at the high end of the exposure distribution.

Dealing with Non-Consumers

Information from the AMPMs and the FQ will be used to stratify consumers of a particular food item from non-consumers. If an individual never consumes the food item (based on both the AMPM and the FQ results), they will be classified as a "non-consumer". If either the AMPM or the FQ shows that the individual consumes the food item, they will be classified as a "consumer". The FQ will also provide information on where that food is obtained (harvested from the UCR Site, harvested from other non-UCR Site areas, purchased). Thus, consumers will be further stratified into "UCR consumers" and "non-UCR consumers". Figure 7 illustrates this concept. For the purposes of evaluating exposures in the baseline HHRA, it is the "UCR consumers" that are the receptor population of interest. Therefore, when evaluating exposure to a particular food item, all people who indicate they never consume the food item ("non-consumer"), or never consume any of that food item from the UCR ("non-UCR consumer"), will be excluded when characterizing the distribution of intakes or doses for that particular food item.

The same approach may be used for various combinations of food items (e.g., all fish from the UCR, fish or game from the UCR). This is important because it allows for the flexibility of the HHRA to analyze various populations of interest. How the population of interest will be delineated from the survey

participants will depend upon the risk question that is being asked. For example, if the risk assessment wishes to answer the question "What is the risk to people who consume fish from the UCR?", the population of interest is "UCR Fish Consumers". That is, if a person indicates that they never ingest any fish from the UCR, they would be excluded from the data used to generate the distribution of intake or dose from fish, while all individuals who indicate they ingest at least one type of fish from the UCR would be included. Similarly, when assessing risk from all UCR Site exposure pathways, all individuals who indicate consumption of any UCR Site resources would be included in the distribution of intakes or doses. Attachment E provides a hypothetical illustration of how food consumption data from the AMPMs and FQ would be utilized to define various types of consumer populations and to estimate risks in the HHRA.

Selection of Populations

Within the receptor population of interest (i.e., UCR consumers), there are several sub-groupings of individuals that may be evaluated separately in the baseline HHRA. As discussed in the UCR HHRA Work Plan (EPA 2009), because exposures are likely to vary as a function of age, it is likely that exposure estimates will be developed separately for children and adults. As appropriate, the baseline HHRA may also utilize more refined age grouping bins, such as those recommended in EPA's Guidance on Selecting Age Groups (EPA 2005b). It may also be appropriate to stratify based on other respondent attributes, such as gender, CCT member status, and proximity to the site. Individuals identified as "heavy consumers" (i.e., those individuals that have a more traditional Native American lifestyle) may also be evaluated as a special sub-group.

The selection of the grouping bins will depend upon the number of respondents within each grouping bin (uncertainty increases as the number of respondents decreases) and the difference in exposure estimates between grouping bins (i.e., if estimates in two bins are similar, the results would be combined to reduce uncertainty).

In the baseline HHRA, risk calculations will be performed on a by-group basis. If a CCT population-based distribution is also desired, this will be estimated by computing the population-weighted combination of the group-specific distributions.

Estimation of CTE and RME Risks

When evaluating risks, attention is focused on intakes that are "average" or are otherwise near the central portion of the data distribution (e.g., the average or median), and on intakes at the upper end of the distribution (e.g., the 95th percentile). These two exposure estimates are referred to as Central Tendency Exposure (CTE) and Reasonable Maximum Exposure (RME), respectively. Both CTE and RME receptors will be evaluated in the baseline HHRA.

For each specified distribution of ordinary dose (e.g., intake of mercury in trout from the UCR Site, intake of mercury from all UCR-derived foods, intake of mercury from trout from all sources), the average value of the distribution will be used as the CTE dose value and the 95th percentile of the distribution will be used as the RME dose value. These doses will be combined with appropriate chemical-specific toxicity factors to estimate CTE and RME risk values for cancer and non-cancer effects.

Weighting of Individual Observations

The base weights for all sampled people are the product of two terms. The first term is the inverse of the probability that someone from their age group is to be sampled in the house. This adjusts for those houses where no one of that age group is to be selected. The second term is the inverse of the probability of selecting that person from among those of the same age group in the house. Thus, the base weight for person 'j' of age 'a' in house 'h' is given by:

$$W_{jah} = (1/p_a) \cdot (1/p_{ja})$$

where:

P_a	=	1.0	Age 0-6
		0.8	Age 7-17
		0.2	Age 18-54 (in cases where no attempt was made to locate a 7-17)
		0.156	Age 18-54 (in cases where an attempt was made to locate a 7-17)
		0.52	Age 55+
		1.0	Heavy consumers[6], since they can be in any house
P_{ja}	=	1/J	

where J is the number of people in the house in age group 'a' (if included because they are a heavy consumer J=1; if someone else in age group a is included as a heavy consumer, then J excludes the heavy consumer).

Final weights will be the result of multiplying the base weights by an adjustment for sampled people who do not complete at least two AMPMs and the FQ and thus are not considered complete in the database.

Below is a series of examples to demonstrate the base weights:

Example 1: The house has 3 children aged 0-6. The child that is randomly selected has a base weight of $(1/1.0) \cdot (1/(1/3)) = 3.0$.

Example 2: The house has 4 children aged 7-17 and one child in this age group in this house is randomly selected for participation. The weight is $(1/0.8) \cdot (1/(1/4)) = 5.0$. The respondent is representing the 4 children in this house and, since 7-17 year olds are only evaluated in 4 of every 5 households, the weight is inflated by 5/4.

Example 3: The same house as in Example 2, but one of the other 7-17 year olds is included as a targeted heavy consumer. The weight for the randomly selected child is $(1/0.8) \cdot (1/(1/3)) =$

3.75. This child is representing three children from this house, but the weight is inflated to represent those houses where 7-17 year olds were not evaluated. For the heavy consumer child, the weight is $(1/1.0) \cdot (1/(1/1)) = 1.0$. The heavy consumer only represents themselves, and they can volunteer to participate in any household, even the houses where 7-17 year olds were not evaluated.

Following this weighting scheme will produce unbiased estimates whenever the weights are used in the data analyses. It should be noted that the targeting of heavy consumers will provide a larger number of respondents of individuals that are most likely to be at risk, but the assignment of smaller weights to these respondents will ensure that they will not bias the overall dataset.

10.5 Analysis of Non-Food Exposure Data

The ReUP will provide data on non-food exposure pathways to UCR-derived media for a range of activities, including medicinal use, tribal ceremonies, food preparation, and production of clothing or household items. These data will be used to generate tables of summary statistics that provide the

[6] Recall that "heavy consumers" are individuals that who regularly (more than 3 times per week) eat local foods or take part in traditional Native American practices which are targeted for inclusion in the survey.

following information:

- Types of media from the UCR Site to which respondents are exposed
- Nature of the exposure pathway(s) to each medium (i.e., oral, dermal, inhalation)
- Number and percentage of individuals exposed, stratified by age, gender and location of residence
- Frequency and duration of exposures
- Locations in the UCR where the media were gathered

These data tables will serve as the basis for quantification of non-food exposure scenarios in the baseline HHRA. The data from the ReUP will be weighted to reflect the entire population and used to generate an empirical distribution for each exposure parameter of interest (e.g., exposure frequency and duration), and these distributions will be used to select CTE and RME parameters for use in exposure and risk calculations. Estimates of CTE will be based on average values and estimates of RME will be based on 95th percentile values. In cases where the exposure parameter of interest is the product or sum of two or more variables reported in the ReUP, the parameter of interest will be calculated for each individual, and the distribution will be formed using the parameter of interest rather than the input variables themselves. This approach accounts for the possibility that there may be correlations in the underlying parameters (e.g., time of exposure and frequency of exposure, etc.).

10.6 Analysis of Nutritional Information

As noted in the study objectives, the principal goal of the survey is to characterize CCT population exposure to contaminants from foods or other site media from UCR Site for the purposes of supporting the baseline HHRA. However, the food intake data that are collected are also suitable for characterizing the current nutritional status of survey respondents, including information on the fraction of total nutrition that is derived from food harvested from the UCR Site. The instruments selected for use in the study allow for linkages to national databases which can provide food-item specific information on nutritional content (e.g., the USDA's FNDDS database) and chemical residue levels (e.g., the EPA's Pesticide database, FDA's Total Diet Study database). This type of information would allow consumers to make informed dietary decisions, considering the potential health benefits of current and alternative dietary resources and practices in light of potential risks from contamination (Blanton et al., 2006; Institute of Medicine, 2007).

An analysis of nutritional patterns is not anticipated to be a component of the baseline HHRA, but such an analysis may be performed by the CCT as may be deemed appropriate.

10.7 Reports

At the completion of the study, Westat will prepare a Methodology Report that includes a detailed description of the survey instrument development, interviewer training, and procedures used to analyze data. Special features of the study will be described in detail, and any problems encountered either during the design or implementation of the survey will be identified, as well as changes made to the design and/or procedures as a result of those problems. The Methodology Report will include major findings pertaining to the methods used and/or experimented with during the conduct of the study and discuss their implications for future follow-up data collection activities.

In coordination with EPA, Westat will develop a Final Report (including the Methodology Report). The Final Report will be developed based on the Data Analysis Plan and any subsequent modifications. At a

minimum, descriptive analyses will be provided. The report will describe the types of analyses undertaken as well as data reduction methodology and summary of findings. In addition, the Final Report will quantify uncertainties associated with survey estimates. The final reporting phase will include data reduction and analyses to be performed in accord with the Data Analysis Plan described above.

10.8 Third Party Data and Analysis Review

Following completion of the study, all raw data and analyses will be provided to an independent third party (to be selected at a later date by EPA) for review. To avoid compromising data confidentiality, identifying participant characteristics (e.g., name, address, etc.) will not be provided.

11 RECONCILIATION WITH THE SETTLEMENT AGREEMENT OBJECTIVES

As noted above, the completion of the UCR Tribal Survey is part of the Settlement Agreement. In accord with the Settlement Agreement, this survey should seek to accomplish the following objectives:

1. Identify consumption of any foodstuffs that may be harvested from the UCR Site, including vegetation, wild game, and fish/shellfish.
2. Identify exposures from sources other than consumption (e.g., sweat lodges, medicinal uses, basket-weaving, etc).
3. Include survey data relevant to all seasons of harvest over one or more years.
4. Collect information on:
    a. the types of resources (e.g., wild and cultivated plants, wild game, fish/shellfish) harvested within the UCR Site;
    b. the types of resources harvested within areas representing background conditions;
    c. the proportion harvested from each location;
    d. the frequency of consumption annually for each resource consumed;
    e. the average and maximum amounts consumed;
    f. the ages and gender of those in each family unit that consume the resources (and other factors, as appropriate); and
    g. general cleaning, preparation, and cooking methods.

The following table identifies which survey instrument will address each of these objectives.

Objective #	Household Screen	AMPM	FQ	ReUP
1		X	X	
2				X
3		X	X	X
4a			X	X
4b			X?	X?
4c			X	X
4d		X	X	
4e		X	X	
4f	X			
4g		X	X	

As shown, there is only one objective (#4b) that may not be adequately addressed by the current study design. While the survey will collect information on resources (both food and non-food) that are harvested locally but outside of the UCR Site boundaries, these areas may not necessarily include locations that are representative of background conditions. Whether or not the survey meets this objective will depend upon the definition and use of background, which has yet to be determined (EPA, 2002).

Finally, consistent with the Settlement Agreement, the UCR Tribal Survey results and data analyses in support of risk assessment will be provided to an independent third party for review prior to use the in the baseline HHRA for the UCR Site.

12 REFERENCES

Blanton CA, Moshfegh AJ, Baer DJ, Kretsch MJ. 2006. The USDA Automated Multiple-Pass Method Accurately Estimates Group Total Energy and Nutrient Intake. *Journal of Nutrition* 136: 2594-2599. http://jn.nutrition.org/cgi/content/abstract/136/10/2594

CCT (Confederated Tribes of the Colville Reservation). 2008. Facts and Information. http://www.colvilletribes.com/facts.htm

Dodd KW, Guenther PM, Freedman LS, Subar AF, Kipnis V, Midthune D, Tooze JA, Krebs-Smith SM. 2006. Statistical methods for estimating usual intake of nutrients and foods: a review of the theory. *J Am Diet Assoc* 106(10):1640-50. Review.

EPA (U.S. Environmental Protection Agency). 2002. Guidance for comparing background and chemical concentrations in soil for CERCLA sites p 89. Washington, DC: Office of Emergency and Remedial Response, U.S. Environmental Protection Agency http://earth1.epa.gov/oswer/riskassessment/pdf/background.pdf

EPA. 2005a. Midnite Mine Human Health Risk Assessment Report. U.S. Environmental Protection Agency, Region 10, Seattle, WA. September 2005.

EPA. 2005b. Guidance on Selecting Age Groups for Monitoring and Assessing Childhood Exposures to Environmental Contaminants. U.S. Environmental Protection Agency, Risk Assessment Forum, Washington, DC. EPA/630/P-03/003F. November. Available online at: http://www.epa.gov/raf/publications/pdfs/AGEGROUPS.PDF

EPA. 2006. Guidance on Systematic Planning Using the Data Quality Objectives Process – EPA QA/G4. Office of Environmental Information, U.S. Environmental Protection Agency. EPA/240/B06/001. February 2006. http://www.epa.gov/quality/qs-docs/g4-final.pdf

EPA. 2009. Human Health Risk Assessment Work Plan for the Upper Columbia River Site Remedial Investigation and Feasibility Study. Prepared for U.S. Environmental Protection Agency, Region 10 by Syracuse Research Corporation. Final – March 2009.

Harper BL, Flett B, Harris S, Abeyta C, Kirschner F. 2002. The Spokane Tribes' Multipathway Subsistence Exposure Scenario and Screening Level RME. *Risk Analysis* 22(3):513-526.

Institute of Medicine. 2007. *Seafood Choices: Balancing Benefits and Risks* edn. Washington, DC: The National Academies Press. http://www.nap.edu/catalog/11762.html

Subar AF, Dodd KW, Guenther PM, Kipnis V, Midthune D, McDowell M, Tooze JA, Freedman LS, Krebs-Smith SM. 2006. The food propensity questionnaire: concept, development, and validation for use as a covariate in a model to estimate usual food intake. *J Am Diet Assoc* 106(10):1556-63.

Tooze JA, Midthune D, Dodd KW, Freedman LS, Krebs-Smith SM, Subar AF, Guenther PM, Carroll RJ, Kipnis V. 2006. A new statistical method for estimating the usual intake of episodically consumed foods with application to their distribution. *J Am Diet Assoc* 106(10):1575-87.

Westat Inc. 2009a. Field Interviewer Manual of Procedures – Part I: Field Procedures. Prepared for the U. S. Environmental Protection Agency, Region 10, Seattle, Washington. October 2009.

Westat Inc. 2009b. Field Interviewer Manual of Procedures – Part II: Dietary Interview. Prepared for the U. S. Environmental Protection Agency, Region 10, Seattle, Washington. October 2009.

Westat Inc. 2009c. Field Supervisor Manual of Procedures. Prepared for the U. S. Environmental Protection Agency, Region 10, Seattle, Washington. October 2009.

ATTACHMENTS

ATTACHMENT A

Westat | An Employee-Owned Research Corporation

Memo

Date: October 14, 2009

To: Monica Tonel
Marc Stifelman

From: David Marker
Tiandong Li

Subject: Within Household Sampling Plan for On-Reservation Households Version 5

There are two steps in sampling potential respondents within households. Based on the enumeration of household members, interviewers will learn which age categories are present in the household. Using a pre-specified sampling algorithm, the first step will consist of the interviewer determining which age categories are present within the household and comparing these against the sampling specification for that household. To limit respondent burden, no more than two people under age 55 will be selected per household. An elder (55 or older) may also be selected, but since persons in this age group will not typically be providing responses for a young child, this should not produce an undue burden on any one respondent.

The second stage of within household selection will occur if there is more than one household member within a selected age category. Since we want to limit the number of persons selected per household, we will only select a single person from the specified age categories. This second step will be accomplished by the interviewer using the individual's birth date to determine who to select. Specific procedures for this will be described in the interviewer's operations manual developed for the study. The remainder of this memo focuses on the first stage of selection.

Selection of participants based on age

Within each household, persons will be selected with an estimated sampling rate in each of the four age categories (0-6 years old, 7-17, 18-54, and 55+). The rate is estimated based on summary files of the Census 2000 data on "Colville Reservation and Off-Reservation Trust Land." Note that the Census data do not cover most of the off-reservation area that is of interest to this study. However, they do include persons of any race living within the Census defined area.

Given that we will limit sampled participants to one per age category in a household, the sampling rate is estimated at the household level for each age category. In addition, no more than two categories will be selected per household, except if it is an elder. If, in a household, one person is

sampled from each of child age categories (0-6) and (7-17), no person between 19-54 years old can be sampled, but an elder can still be sampled.

Table 1 below shows the estimated number of cooperating households in the population (assuming 70 percent agree to cooperate with the survey), the sub-sampling rate, and number of respondents for the household with people of a certain age present. Note that we assume a 60 percent response rate across the four rounds of data collection.

Table 1.

Age	Estimated # of Cooperating Households in the Population	Sub-sampling Rate	Response Rate	Estimated # of Respondents
0-6	380	100%	60%	228
7-17	682	80%	60%	328
18-54*	215	20%	60%	26
18-54	1,267	33%	60%	254
55+	772	52%	60%	240

*When a household has children in both age categories (0-6) and (7-17), but no child is selected in (7-17), we will take an adult from the age category (18-54). We estimate that there will be 215 households which have both age categories (0-6) and (7-17).

Note that the households which have an adult in (18-54) are represented by the third to the last and the second to the last rows in Table 1. In total, the estimated number of cooperating households in the population is 1,482 and the estimated number of respondents is 280.

Table 1 implies that every household with a 0-6 year old child will have one of them selected for the survey. In 4 out of 5 households with someone 7-17 years old, one of these school-age children will be selected. In all households with children in both age categories (0-6) and (7-17), but with no 7 to 17 years old child selected, one 18 to 54 years old adult will be taken. In the households with an adult 18 to 54 years old, but not children in both age categories (0-6) and (7-17), 1 in 3 will have an adult 18 to 54 years old selected. Finally, almost half of the homes with someone 55 or older will have one selected.

Selection of participants based on other factors

If there are members of a household who are reported to be regular consumers of local foods or traditional resources and who are not randomly selected by age group (using the procedures described above), the interviewer will select one of them to participate. All household members identified as regular consumers of local foods or traditional resources will be identified on the analytic files and properly weighted to reflect their proportion of the population.

Upper Columbia River Resources Survey

DU Label with Household ID and address
PASSWORD

HOUSEHOLD SCREENER

(DETERMINE RESPONDENT ELIGIBILITY TO ANSWER SCREENER QUESTIONS)

Hello, I'm _____conducting a survey for the Colville Confederated Tribes. Did you receive the letter and brochure that we mailed to your household that explained the survey? SHOW COPY OF LETTER AND BROCHURE. ALLOW TIME TO REVIEW. ANSWER QUESTIONS. We are interested in gathering information about what people eat and drink. There are no right or wrong answers. I just need about 5 minutes of your time to get some information that will help us determine who is eligible to take part in the survey. Participating is voluntary but I hope you will help us with this important survey.

1. ADDRESS CONFIRMATION: First, to make sure that I'm at the correct address. Is this (READ ADDRESS FROM LABEL)? IF YES, CONTINUE. IF MINOR CHANGES, INDICATE ABOVE.

YES 1
NO ..... 2 (END AND CHECK RECORDS)

2. CODE WITHOUT ASKING IF KNOWN: Is this a private residence?

YES ..... 1 (SKIP TO Q3)
NO 2

2A. What type of place is this? _____

2B. ASK TO SPEAK TO A MANAGER OR ADMINISTRATOR. IF NOT AVAILABLE, ASK FOR NAME & PHONE NO. OF MANAGER.

NAME: _____
PHONE: _____(END AND RETURN AT LATER DATE)

2C. (INTRODUCE STUDY AGAIN, IF NECESSARY) Does anyone live here permanently with no other permanent address?

YES…….. 1
NO…… 2 (END)

2D. Including yourself, How many people live here permanently? _____

- IF 5 OR MORE: Okay, thank you for your time. I will need to check with my supervisor and come back at a later time to see if anyone may be eligible for the survey.
- IF LESS THAN 5: CONTINUE TO QUESTION 3.

3. Now I'd like to ask you a few questions about all the people who are living here at the present time. This includes all people who live here now as well as anyone who may be temporarily away on business, vacation, or in a hospital. Please do NOT include anyone who is currently away on military duty or living away at school.

Let's start with the adults who live in the household. Please tell me the first name and age of the oldest person. (RECORD) And what is his/her date of birth? (RECORD) Is (NAME) a male or female? (CODE WITHOUT ASKING IF POSSIBLE) Is this person a member of the Colville Confederated Tribes? (✔ IF YES) Now let's talk about the next oldest person. CONTINUE UNTIL ALL ADULTS AND CHILDREN IN THE HOUSEHOLD HAVE BEEN LISTED.

ENUMERATION GRID

Line #	First Name	Age	DOB (mm/yyyy)	Gender	CCT Member	Local Sources	Traditions	Eligible			
								0-6	7-17	18-54	55+
01											
02											
03											
04											
05											
06											
07											
08											
09											
10											

(USE CONTINUATION PAGE IF NEEDED)

4. Okay, I have listed (READ NAMES IN ORDER FROM OLDEST TO YOUNGEST). Is there anyone else who usually lives here?

YES ..... 1 (ADD PERSON OR PEOPLE)
NO 2

INSTRUCTIONS:

- REFER TO SAMPLING LABEL AND SELECT RESPONDENTS.
- PLACE A ✔ MARK IN THE "ELIGIBLE" COLUMN FOR EACH ELIGIBLE PERSON.
- IF MORE THAN ONE PERSON ELIGIBLE PER AGE GROUP, SELECT THE PERSON WITH THE MOST RECENT BIRTH MONTH.
- CIRCLE THE ENUMERATION LINE NUMBER FOR ALL STUDY PARTICIPANTS SELECTED.

Sampling label here

I only have a few more questions.

5. Does anyone in this household eat food from local sources on a regular basis – that is at least three times a week? By "local" I mean the land, lakes, or rivers in and around the CCT Reservation and the North Half, including the Columbia River upstream of the Grand Coulee Dam. SHOW SCREENING MAP. IF NO, ✔ BOX ☐. IF YES, who in the household would that be? PLACE A ✔ IN THE "LOCAL SOURCES" COLUMN FOR EACH PERSON MENTIONED.

6. Does anyone in this household take part in traditional practices using local natural resources on a regular basis – that is at least three times a week? Local resources would include plants or trees from in and around the CCT Reservation and the North Half, including the Columbia River upstream of the Grand Coulee Dam. This would include anyone who takes part in sweat lodges, smudging, making baskets or mats, or any traditional medicinal practices. SHOW SCREENING MAP. IF NO, ✔ BOX ☐. IF YES, who in the household would that be? PLACE A ✔ IN THE "TRADITIONS" COLUMN FOR EACH PERSON MENTIONED.

IF YES TO EITHER QUESTION 5 OR QUESTION 6

- IF MORE THAN 1 PERSON ANSWERS "YES" TO Q5 AND/OR Q6 AND HAS NOT ALREADY BEEN SELECTED BASED ON THE SAMPLING LABEL, SELECT PERSON WITH THE MOST RECENT BIRTH MONTH.
- SELECT ONE PERSON PER HOUSEHOLD.
- CIRCLE HIS/HER LINE NUMBER.

7. We want to make sure that every household in the area has a chance to participate in our survey. Are there any other separate living quarters **within this structure** such as an attic apartment or other place where people live?

YES ..... 1 (ASK FOR ADDRESS)
NO 2

ADDRESS_____

REPORT ADDRESS INFORMATION TO SUPERVISOR DURING YOUR NEXT REPORT CALL.

8. May I please have your telephone number in case my supervisor wants to confirm that I have been here?

Telephone: _____ Screener Respondent: _____

9. **IF ANYONE IN HOUSEHOLD IS SELECTED, READ:**

- The (person/people) selected to participate in the survey are (READ LIST FROM ENUMERATION GRID. PREPARE TABLE BELOW WITH FIRST NAMES, AGE AND GENDER). Could you please give me the last name for (EACH SELECTED PARTICIPANT)?

Line #	First Name	Last Name	Age	Gender	Prepare Participant Folder (✓)

- IF MORE THAN ONE PERSON SELECTED, START WITH AN ADULT.
- Is _____ _____ available so I may explain the study to him/her? (IF YES, PREPARE PARTICIPANT FOLDER. IF NO, ASK FOR BEST TIME TO RETURN. RECORD DATE AND TIME FOR APPOINTMENT ON THE PARTICIPANT FOLDER RECORD OF CALLS).

10. **IF NO ONE IN HOUSEHOLD IS ELIGIBLE, READ:**

I really appreciate your help today, but no one in this household is selected for the survey. Thank you for your time.

RECORD OF CALLS						
Attempt	**Date**	**Day**	**Time AM/PM**	**Comments**	**Result Code**	**Int ID**
1						
2						
3						
4						
5						
6						
7						

Interim Result Codes:
Not Home = 10
Refusal = 20*
Language Problem = 30*
Illness = 40
Breakoff = 50
Appointment = 60
Broken Appointment = 65
Vacant = 80*
Other (specify) = 95

Final Result Codes:
Complete with SPs = SC
Complete with no SPs = NE
Refusal = RF*
Language Problem = LP*
Vacant = VA*
Ill/Incompetent = IL*
Business/Commercial = BS*
No Eligible SPs/
Neighbor Report = NN
No Dwelling Unit = ND
Other (specify) = OT

* Requires the completion of a Non-Interview Report Form (NIR)

ATTACHMENT B.2

Automated Multiple Pass Method (AMPM) Dietary Assessment

The USDA Automated Multiple Pass Method (AMPM) is a 24-hour dietary recall survey that may be conducted by telephone or in person. There are five steps to the interview:

- **Quick List** - Collect a list of foods and beverages consumed the previous day
- **Forgotten Foods** - Probe for foods forgotten during the Quick List
- **Time & Occasion** - Collect time and eating occasion for each food
- **Detail Cycle** - For each food, collect detailed description, amount, and additions. Review 24-hour day
- **Final Probe** - Final probe for anything else consumed

The AMPM includes a customized user interface programmed in Visual Basic with a Blaise data collection instrument. A Westat-developed AMPM management interface and database supports management and administration of the survey. The AMPM system also uses SurveyNet software to convert food consumed into standardized gram amounts and to determine nutrient values.

Local Consumption Question
The following question will be added to each AMPM visit in order to ascertain information about local consumption for each study participant.

Thinking about all of the food that (you ate/your child ate) yesterday, how much of it would you say came from local sources, that is from this area on the map? (SHOW SCREENER MAP TO PARTICIPANT.) This would include plants or crops that were grown on or near the reservation, fish from local rivers or lakes, or animals that were hunted locally. Would you say that it was:

- **All or almost all of your food,**
- **A lot of your food,**
- **Some of your food,**
- **A little of your food, or**
- **None of your food?**

Indigenous Food List
The following is a list of indigenous food items provided by the CCT to be added to the AMPM.

Bass
Burbot
Lawyer
Eelpout
Crawfish
Crayfish
Crawdads
Lamprey
Panfish
Crappie
Sunfish
Perch
Kokanee Blueback
Landlocked Blueback Salmon
Sockeye Salmon
Red Salmon
Sturgeon
Sucker
Walleye
Whitefish
Bighorn Sheep Mutton
Bobcat
Lynx
Cougar
Fisher
Marten
Weasel
Groundhog
Moose
Otter

ATTACHMENT B.2

River Otter
Porcupine
Rodent
Wild Horse
Mallard Duck
Mud Hen
Hawk
Sage Hen
Wild Turkey
Meat
Skin
Stomach
Fat
Oil
Bone Marrow
Sarvis Berry
Bunchberry
Huckleberry
Blue Elderberry
Hawthorn Berry
Chokecherry
Wild Raspberry
Wild Blackberry
Wild Thimbleberry

Soapberry
Oregon Grape
Sage
Cattail
Spring Beauty Mushrooms
Morel Mushrooms
Puffball Mushrooms
Shaggy Mane Mushrooms
Wild Lilies Onion
Wild Onions
Lomatium Apple
White Camas Yucca
Gray's Biscuitroot Yucca
Cous
Indian Celery
Indian Carrot
Moss Asparagus
Balsamroot Shoots Asparagus
Balsamroot Stems Asparagus
Balsamroot Seeds
Black Camas Asparagus
Bitterroot Apple
Wild Rose
Indian Potato

Upper Columbia River Resources Survey

FOOD QUESTIONNAIRE

IS PARTICIPANT AGE 2 OR OLDER? |___| YES, GO TO NEXT PAGE

|___| NO (STOP, DO NOT COMPLETE INTERVIEW)

Date:|__|__| / |__|__| / |_2|_0_|__|__|
M M D D Y Y Y Y

Staff ID: |___|___|___||___|

Place PID Label Here
|___|___|___||___||___|__|___||___|__|

CONSENT STATEMENT

Before we begin, I would like to remind you of your rights as a participant in this study.

- This interview will take about 30 minutes.
- You may decide to participate or not. That is your choice. If you decide to participate, you may refuse to answer any questions.
- There are no known physical risks to taking part in this survey. There are no known direct benefits, but you will help the CCT to learn more about how local foods and natural resources are used by persons living in the Upper Columbia River area.

Are you ready to begin?

O YES (CONTINUE)
O NO (ADDRESS ANY CONCERNS) → OK TO CONTINUE? O Yes
O No → END

Thank you for the time you've spent over the past year giving information about what you've eaten.

This series of questions is about food (you have/SUBJECT has) eaten over the last 12 months. These questions are about any fish, birds, game, or livestock (you/SUBJECT) may have eaten, as well as different fruits, vegetables, and wild plants. For each food, I will first ask if you have eaten it **at all** in the past 12 months, and then I will ask you how much of what (you/SUBJECT) ate came from the **local area**. (INTERVIEWER POINT TO MAP)

1. Let's start off by talking about what fish or other freshwater animals, such as clams, crawfish, or turtles (you/SUBJECT) may have eaten in the past 12 months. In the past 12 months, did (you/SUBJECT) eat any fish or seafood at all? Please include fish or seafood bought at a store, ordered at a restaurant, or caught by (you/SUBJECT) or someone (you/SUBJECT) know.

   O YES
   O NO (GO TO Q9 ON PAGE 16)
   O DON'T KNOW (GO TO Q9 ON PAGE 16)

2. This question asks about different kinds of fish and freshwater animals. Over the past 12 months, did (you/SUBJECT) eat **any** meat, organs or eggs from (FISH)?

	YES	NO	DK	
a. Smallmouth Bass	O	O	O	
b. Largemouth Bass	O	O	O	
c. Burbot, (BURR-BET) also known as Lingcod (IF NEEDED:) Other names include Lawyer, Eelpout or Eel		O	O	O
d. Lamprey, also known as Eel	O	O	O	
e. Northern Pikeminnow, also known as Squawfish	O	O	O	
f. Small fish known as Panfish, which includes Crappie (CROP-PEA), Sunfish, Perch and Bluegill	O	O	O	
g. Salmon, including Kokanee, (CO-CAN-KNEE) Sockeye, and Chinook	O	O	O	
h. Sturgeon, also known as White Sturgeon	O	O	O	
i. Any type of Sucker, including Longnose Sucker, Bridgelip Sucker, or Largescale Sucker	O	O	O	
j. Trout, including Rainbow, Red-band, Steelhead, Dolly Varden, Brown, or Bull Trout	O	O	O	
k. Walleye, also known as Pickerel (PICK-UR-EL)	O	O	O	
l. Lake Whitefish	O	O	O	
m. Mountain Whitefish	O	O	O	
n. Mussels, also known as Freshwater Clams or Bivalves (BUY-VALVES)	O	O	O	
o. Crawfish, also known as Crayfish or Crawdads	O	O	O	
p. Any other aquatic animals, such as Turtles, Snakes, or Frogs	O	O	O	
q. Any other fish or freshwater animals from the local area	O	O	O	

(SPECIFY:) _____
(SPECIFY:) _____
(SPECIFY:) _____

1. RECORD ONE FISH PER SUBSEQUENT PAGE FOR EACH "YES" RESPONSE ABOVE.
2. RETURN TO EACH SUBSEQUENT MARKED PAGE AND ASK Q3-8b

IF ALL RESPONSES ARE "NO" OR "DON'T KNOW" GO TO Q9 ON PAGE 16.

FISH # 1

O a. Smallmouth Bass	O g. Salmon	O m. Mountain Whitefish
O b. Largemouth Bass	O h. Sturgeon	O n. Mussels
O c. Burbot/Lingcod	O i. Sucker	O o. Crawfish
O d. Lamprey	O j. Trout/Steelhead	O p. Turtles/Snakes/Frogs
O e. Northern Pikeminnow	O k. Walleye/Pickerel	O q. Other fish/freshwater animals
O f. Panfish	O l. Lake Whitefish	(SPECIFY:) _____

3. In the past 12 months, how often did (you/SUBJECT) eat the meat of the (FISH)? Was it: **(USE SHOW CARD FQ1)**	O Every day, O More than once a week, but not every day, O Once a week, O More than once a month, but not every week, O Once a month, O Less than once a month, or, O Never? O DON'T KNOW
4. FOR ALL EXCEPT CRAWFISH, ASK: In the past 12 months, how often did (you/SUBJECT) eat the head, skin, organs, or eggs of the (FISH)? Was it: **(USE SHOW CARD FQ1)** IF CRAWFISH ASK: How often did (you/SUBJECT) eat the Crawfish or Crawdads whole? Was it: **(USE SHOW CARD FQ1)**	O Every day, O More than once a week, but not every day, O Once a week, O More than once a month, but not every week, O Once a month, O Less than once a month, or, O Never? O DON'T KNOW
5. Thinking about the (FISH) (you/SUBJECT) ate in the past 12 months, how much of this fish was purchased at a store or eaten at a restaurant? Was it: **(USE SHOW CARD FQ2)**	O All, (GO TO NEXT FISH OR Q9 ON PAGE 16) O Most, O Half, O Some, O Little, or, O None? O DON'T KNOW
6. How much of the (FISH) was caught outside of the local area by (you/SUBJECT) or someone else? (SHOW MAP) Was it: **(USE SHOW CARD FQ2)**	O All, (GO TO NEXT FISH OR Q9 ON PAGE 16) O Most, O Half, O Some, O Little, or, O None? O DON'T KNOW
7. How much of the (FISH) was caught inside the local area by (you/SUBJECT) or someone else? (SHOW MAP) Was it: **(USE SHOW CARD FQ2)**	O All, O Most, O Half, O Some, O Little, or, O None? } GO TO NEXT FISH OR O DON'T KNOW } Q9a ON PAGE 16.

8a. Please look at this map and mark the areas where (FISH) came from inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

8b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.

IF MORE THAN ONE AREA, ASK: How much of the local (FISH) (you/SUBJECT) ate came from this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some, or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: ☐☐☐ ☐☐☐ ☐☐☐ ☐☐☐ ☐☐☐	O	O	O	O	O
Area 2: ____ _____ _____ _____ _____	O	O	O	O	O
Area 3: ____ _____ _____ _____ _____	O	O	O	O	O
Area 4: ____ _____ _____ _____ _____	O	O	O	O	O
Area 5: ____ _____ _____ _____ _____	O	O	O	O	O

GO TO NEXT FISH OR Q9a ON PAGE 16.

FISH # 2

O a. Smallmouth Bass	O g. Salmon	O m. Mountain Whitefish
O b. Largemouth Bass	O h. Sturgeon	O n. Mussels
O c. Burbot/Lingcod	O i. Sucker	O o. Crawfish
O d. Lamprey	O j. Trout/Steelhead	O p. Turtles/Snakes/Frogs
O e. Northern Pikeminnow	O k. Walleye/Pickerel	O q. Other fish/freshwater animals
O f. Panfish	O l. Lake Whitefish	(SPECIFY:) _____

3. In the past 12 months, how often did (you/SUBJECT) eat the meat of the (FISH)? Was it: **(USE SHOW CARD FQ1)**	O Every day, O More than once a week, but not every day, O Once a week, O More than once a month, but not every week, O Once a month, O Less than once a month, or, O Never? O DON'T KNOW
4. FOR ALL EXCEPT CRAWFISH, ASK: In the past 12 months, how often did (you/SUBJECT) eat the head, skin, organs, or eggs of the (FISH)? Was it: **(USE SHOW CARD FQ1)** IF CRAWFISH ASK: How often did (you/SUBJECT) eat the Crawfish or Crawdads whole? Was it: **(USE SHOW CARD FQ1)**	O Every day, O More than once a week, but not every day, O Once a week, O More than once a month, but not every week, O Once a month, O Less than once a month, or, O Never? O DON'T KNOW
5. Thinking about the (FISH) (you/SUBJECT) ate in the past 12 months, how much of this fish was purchased at a store or eaten at a restaurant? Was it: **(USE SHOW CARD FQ2)**	O All, (GO TO NEXT FISH OR Q9 ON PAGE 16) O Most, O Half, O Some, O Little, or, O None? O DON'T KNOW
6. How much of the (FISH) was caught outside the local area by (you/SUBJECT) or someone else? (SHOW MAP) Was it: **(USE SHOW CARD FQ2)**	O All, (GO TO NEXT FISH OR Q9 ON PAGE 16) O Most, O Half, O Some, O Little, or, O None? O DON'T KNOW
7. How much of the (FISH) was caught inside the local area by (you/SUBJECT) or someone else? (SHOW MAP) Was it: **(USE SHOW CARD FQ2)**	O All, O Most, O Half, O Some, O Little, or, O None? } GO TO NEXT FISH OR O DON'T KNOW } Q9 ON PAGE 16.

8a. Please look at this map and mark the areas where (FISH) came from inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

8b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.

IF MORE THAN ONE AREA, ASK: How much of the local (FISH) (you/SUBJECT) ate came from this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some, or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: ☐☐☐ ☐☐☐ ☐☐☐ ☐☐☐ ☐☐☐	O	O	O	O	O
Area 2: ____ _____ _____ _____ _____	O	O	O	O	O
Area 3: ____ _____ _____ _____ _____	O	O	O	O	O
Area 4: ____ _____ _____ _____ _____	O	O	O	O	O
Area 5: ____ _____ _____ _____ _____	O	O	O	O	O

GO TO NEXT FISH OR Q9a ON PAGE 16.

FISH # 3

O a. Smallmouth Bass	O g. Salmon	O m. Mountain Whitefish
O b. Largemouth Bass	O h. Sturgeon	O n. Mussels
O c. Burbot/Lingcod	O i. Sucker	O o. Crawfish
O d. Lamprey	O j. Trout/Steelhead	O p. Turtles/Snakes/Frogs
O e. Northern Pikeminnow	O k. Walleye/Pickerel	O q. Other fish/freshwater animals
O f. Panfish	O l. Lake Whitefish	(SPECIFY:) _____

3. In the past 12 months, how often did (you/SUBJECT) eat the meat of the (FISH)? Was it: **(USE SHOW CARD FQ1)**	O Every day, O More than once a week, but not every day, O Once a week, O More than once a month, but not every week, O Once a month, O Less than once a month, or, O Never? O DON'T KNOW
4. FOR ALL EXCEPT CRAWFISH, ASK: In the past 12 months, how often did (you/SUBJECT) eat the head, skin, organs, or eggs of the (FISH)? Was it: **(USE SHOW CARD FQ1)** IF CRAWFISH ASK: How often did (you/SUBJECT) eat the Crawfish or Crawdads whole? Was it: **(USE SHOW CARD FQ1)**	O Every day, O More than once a week, but not every day, O Once a week, O More than once a month, but not every week, O Once a month, O Less than once a month, or, O Never? O DON'T KNOW
5. Thinking about the (FISH) (you/SUBJECT) ate in the past 12 months, how much of this fish was purchased at a store or eaten at a restaurant? Was it: **(USE SHOW CARD FQ2)**	O All, (GO TO NEXT FISH OR Q9 ON PAGE 16) O Most, O Half, O Some, O Little, or, O None? O DON'T KNOW
6. How much of the (FISH) was caught outside the local area by (you/SUBJECT) or someone else? (SHOW MAP) Was it: **(USE SHOW CARD FQ2)**	O All, (GO TO NEXT FISH OR Q9 ON PAGE 16) O Most, O Half, O Some, O Little, or, O None? O DON'T KNOW
7. How much of the (FISH) was caught inside the local area by (you/SUBJECT) or someone else? (SHOW MAP) Was it: **(USE SHOW CARD FQ2)**	O All, O Most, O Half, O Some, O Little, or, O None? } GO TO NEXT FISH OR O DON'T KNOW } Q9 ON PAGE 16.

8a. Please look at this map and mark the areas where (FISH) came from inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

8b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.

IF MORE THAN ONE AREA, ASK: How much of the local (FISH) (you/SUBJECT) ate came from this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some, or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: ☐☐☐ ☐☐☐ ☐☐☐ ☐☐☐ ☐☐☐	O	O	O	O	O
Area 2: ____ _____ _____ _____ _____	O	O	O	O	O
Area 3: ____ _____ _____ _____ _____	O	O	O	O	O
Area 4: ____ _____ _____ _____ _____	O	O	O	O	O
Area 5: ____ _____ _____ _____ _____	O	O	O	O	O

GO TO NEXT FISH OR Q9a ON PAGE 16.

FISH # 4

O a. Smallmouth Bass	O g. Salmon	O m. Mountain Whitefish
O b. Largemouth Bass	O h. Sturgeon	O n. Mussels
O c. Burbot/Lingcod	O i. Sucker	O o. Crawfish
O d. Lamprey	O j. Trout/Steelhead	O p. Turtles/Snakes/Frogs
O e. Northern Pikeminnow	O k. Walleye/Pickerel	O q. Other fish/freshwater animals
O f. Panfish	O l. Lake Whitefish	(SPECIFY:) _____

3. In the past 12 months, how often did (you/SUBJECT) eat the meat of the (FISH)? Was it: **(USE SHOW CARD FQ1)**	O Every day, O More than once a week, but not every day, O Once a week, O More than once a month, but not every week, O Once a month, O Less than once a month, or, O Never? O DON'T KNOW
4. FOR ALL EXCEPT CRAWFISH, ASK: In the past 12 months, how often did (you/SUBJECT) eat the head, skin, organs, or eggs of the (FISH)? Was it: **(USE SHOW CARD FQ1)** IF CRAWFISH ASK: How often did (you/SUBJECT) eat the Crawfish or Crawdads whole? Was it: **(USE SHOW CARD FQ1)**	O Every day, O More than once a week, but not every day, O Once a week, O More than once a month, but not every week, O Once a month, O Less than once a month, or, O Never? O DON'T KNOW
5. Thinking about the (FISH) (you/SUBJECT) ate in the past 12 months, how much of this fish was purchased at a store or eaten at a restaurant? Was it: **(USE SHOW CARD FQ2)**	O All, (GO TO NEXT FISH OR Q9 ON PAGE 16) O Most, O Half, O Some, O Little, or, O None? O DON'T KNOW
6. How much of the (FISH) was caught outside the local area by (you/SUBJECT) or someone else? (SHOW MAP) Was it: **(USE SHOW CARD FQ2)**	O All, (GO TO NEXT FISH OR Q9 ON PAGE 16) O Most, O Half, O Some, O Little, or, O None? O DON'T KNOW
7. How much of the (FISH) was caught inside the local area by (you/SUBJECT) or someone else? (SHOW MAP) Was it: **(USE SHOW CARD FQ2)**	O All, O Most, O Half, O Some, O Little, or, O None? } GO TO NEXT FISH OR O DON'T KNOW } Q9 ON PAGE 16.

8a. Please look at this map and mark the areas where (FISH) came from inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

8b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.

IF MORE THAN ONE AREA, ASK: How much of the local (FISH) (you/SUBJECT) ate came from this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some, or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: ☐☐☐ ☐☐☐ ☐☐☐ ☐☐☐ ☐☐☐	O	O	O	O	O
Area 2: ____ _____ _____ _____ _____	O	O	O	O	O
Area 3: ____ _____ _____ _____ _____	O	O	O	O	O
Area 4: ____ _____ _____ _____ _____	O	O	O	O	O
Area 5: ____ _____ _____ _____ _____	O	O	O	O	O

GO TO NEXT FISH OR Q9a ON PAGE 16.

FISH # 5

O a. Smallmouth Bass	O g. Salmon	O m. Mountain Whitefish
O b. Largemouth Bass	O h. Sturgeon	O n. Mussels
O c. Burbot/Lingcod	O i. Sucker	O o. Crawfish
O d. Lamprey	O j. Trout/Steelhead	O p. Turtles/Snakes/Frogs
O e. Northern Pikeminnow	O k. Walleye/Pickerel	O q. Other fish/freshwater animals
O f. Panfish	O l. Lake Whitefish	(SPECIFY:) _____

3. In the past 12 months, how often did (you/SUBJECT) eat the meat of the (FISH)? Was it: **(USE SHOW CARD FQ1)**	O Every day, O More than once a week, but not every day, O Once a week, O More than once a month, but not every week, O Once a month, O Less than once a month, or, O Never? O DON'T KNOW
4. FOR ALL EXCEPT CRAWFISH, ASK: In the past 12 months, how often did (you/SUBJECT) eat the head, skin, organs, or eggs of the (FISH)? Was it: **(USE SHOW CARD FQ1)** IF CRAWFISH ASK: How often did (you/SUBJECT) eat the Crawfish or Crawdads whole? Was it: **(USE SHOW CARD FQ1)**	O Every day, O More than once a week, but not every day, O Once a week, O More than once a month, but not every week, O Once a month, O Less than once a month, or, O Never? O DON'T KNOW
5. Thinking about the (FISH) (you/SUBJECT) ate in the past 12 months, how much of this fish was purchased at a store or eaten at a restaurant? Was it: **(USE SHOW CARD FQ2)**	O All, (GO TO NEXT FISH OR Q9 ON PAGE 16) O Most, O Half, O Some, O Little, or, O None? O DON'T KNOW
6. How much of the (FISH) was caught outside the local area by (you/SUBJECT) or someone else? (SHOW MAP) Was it: **(USE SHOW CARD FQ2)**	O All, (GO TO NEXT FISH OR Q9 ON PAGE 16) O Most, O Half, O Some, O Little, or, O None? O DON'T KNOW
7. How much of the (FISH) was caught inside the local area by (you/SUBJECT) or someone else? (SHOW MAP) Was it: **(USE SHOW CARD FQ2)**	O All, O Most, O Half, O Some, O Little, or, O None? } GO TO NEXT FISH OR O DON'T KNOW } Q9 ON PAGE 16.

8a. Please look at this map and mark the areas where (FISH) came from inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

8b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.

IF MORE THAN ONE AREA, ASK: How much of the local (FISH) (you/SUBJECT) ate came from this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some, or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: ☐☐☐ ☐☐☐ ☐☐☐ ☐☐☐ ☐☐☐	O	O	O	O	O
Area 2: ____ _____ _____ _____ _____	O	O	O	O	O
Area 3: ____ _____ _____ _____ _____	O	O	O	O	O
Area 4: ____ _____ _____ _____ _____	O	O	O	O	O
Area 5: ____ _____ _____ _____ _____	O	O	O	O	O

GO TO NEXT FISH OR Q9a ON PAGE 16.

FISH # 6

O a. Smallmouth Bass	O g. Salmon	O m. Mountain Whitefish
O b. Largemouth Bass	O h. Sturgeon	O n. Mussels
O c. Burbot/Lingcod	O i. Sucker	O o. Crawfish
O d. Lamprey	O j. Trout/Steelhead	O p. Turtles/Snakes/Frogs
O e. Northern Pikeminnow	O k. Walleye/Pickerel	O q. Other fish/freshwater animals
O f. Panfish	O l. Lake Whitefish	(SPECIFY:) _____

3. In the past 12 months, how often did (you/SUBJECT) eat the meat of the (FISH)? Was it: **(USE SHOW CARD FQ1)**	O Every day, O More than once a week, but not every day, O Once a week, O More than once a month, but not every week, O Once a month, O Less than once a month, or, O Never? O DON'T KNOW
4. FOR ALL EXCEPT CRAWFISH, ASK: In the past 12 months, how often did (you/SUBJECT) eat the head, skin, organs, or eggs of the (FISH)? Was it: **(USE SHOW CARD FQ1)** IF CRAWFISH ASK: How often did (you/SUBJECT) eat the Crawfish or Crawdads whole? Was it: **(USE SHOW CARD FQ1)**	O Every day, O More than once a week, but not every day, O Once a week, O More than once a month, but not every week, O Once a month, O Less than once a month, or, O Never? O DON'T KNOW
5. Thinking about the (FISH) (you/SUBJECT) ate in the past 12 months, how much of this fish was purchased at a store or eaten at a restaurant? Was it: **(USE SHOW CARD FQ2)**	O All, (GO TO NEXT FISH OR Q9 ON PAGE 16) O Most, O Half, O Some, O Little, or, O None? O DON'T KNOW
6. How much of the (FISH) was caught outside the local area by (you/SUBJECT) or someone else? (SHOW MAP) Was it: **(USE SHOW CARD FQ2)**	O All, (GO TO NEXT FISH OR Q9 ON PAGE 16) O Most, O Half, O Some, O Little, or, O None? O DON'T KNOW
7. How much of the (FISH) was caught inside the local area by (you/SUBJECT) or someone else? (SHOW MAP) Was it: **(USE SHOW CARD FQ2)**	O All, O Most, O Half, O Some, O Little, or, O None? } GO TO NEXT FISH OR O DON'T KNOW } Q9 ON PAGE 16.

8a. Please look at this map and mark the areas where (FISH) came from inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

8b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.

IF MORE THAN ONE AREA, ASK: How much of the local (FISH) (you/SUBJECT) ate came from this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some, or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: ☐☐☐ ☐☐☐ ☐☐☐ ☐☐☐ ☐☐☐	O	O	O	O	O
Area 2: ____ _____ _____ _____ _____	O	O	O	O	O
Area 3: ____ _____ _____ _____ _____	O	O	O	O	O
Area 4: ____ _____ _____ _____ _____	O	O	O	O	O
Area 5: ____ _____ _____ _____ _____	O	O	O	O	O

GO TO NEXT FISH ON CONTINUATION SHEET
OR Q9a ON PAGE 16.

BIRDS

This series of questions is about any birds (you have/SUBJECT has) eaten over the last 12 months.
…

	YES	NO	DK
9a. Over the past 12 months, did (you/SUBJECT) eat **any** meat, organs, or eggs from any type of waterfowl such as Ducks and Geese?	O	O	O

(IF YES:) Which types of waterfowl did (you/SUBJECT) eat?
Did (you/he/she) eat: (RECORD ALL THAT APPLY)

O Duck
O Goose
O Swan
O Coots or Mudhens
O Some other waterfowl
(SPECIFY:) _____
_____
_____

9b (Over the past 12 months did (you/SUBJECT) eat any meat, organs, or eggs from) any type of upland bird such as WildTurkey, Pheasant, Grouse, Chukar, or Quail?	O	O	O

(IF YES:) Which types of these birds did (you/SUBJECT) eat?
Did (you/he/she) eat: (RECORD ALL THAT APPLY)

O Wild Turkey
O Pheasant
O Grouse
O Chukar (CHUCK-ER)
O Quail
O Some other waterfowl
(SPECIFY:) _____
_____
_____

9c. (Over the past 12 months did (you/SUBJECT) eat any meat, organs or eggs from) any other **wild birds** that we haven't mentioned such as Mergansers (MURR-GAN-SERS), loons, or doves?	O	O	O

(IF YES:) Which types of these wild birds did you eat?
(RECORD ALL THAT APPLY)

Other bird
(SPECIFY:) _____
_____
_____

9d. (Over the past 12 months did (you/SUBJECT) eat any meat, organs or eggs from) any type of domestic poultry such as Chicken, Turkey, Duck, or Goose?	O	O	O

(IF YES:) Which of these did (you/SUBJECT) eat?
Did you eat: (RECORD ALL THAT APPLY)

O Chicken
O Turkey
O Duck
O Goose
O Some other domestic poultry
(SPECIFY:) _____
_____
_____

1. RECORD ONE BIRD PER SUBSEQUENT PAGE FOR EACH "YES" RESPONSE ABOVE.
2. RETURN TO EACH SUBSEQUENT MARKED PAGE AND ASK Q10-18b
IF ALL RESPONSES ARE "NO" OR "DON'T KNOW" GO TO Q16 ON PAGE 23.

BIRD #1

O a. Waterfowl such as Ducks and Geese
O b. Upland birds such as Wild Turkey, Pheasants, Grouse, Chukar, and Quail
O c. Other wild birds such as (SPECIFY:) _____
O d. Domestic poultry such as Chicken, Turkey, Duck, Goose

10. In the last 12 months, how often did (you/SUBJECT) eat the meat of (BIRD)? Was it: **(USE SHOW CARD FQ1)**	O Every day, O More than once a week, but not every day, O Once a week, O More than once a month, but not every week, O Once a month, O Less than once a month, or, O Never? O DON'T KNOW
11. In the last 12 months, how often did (you/SUBJECT) eat the head, skin, or organs of these birds? Was it: **(USE SHOW CARD FQ1)**	O Every day, O More than once a week, but not every day, O Once a week, O More than once a month, but not every week, O Once a month, O Less than once a month, or, O Never? (GO TO Q13) O DON'T KNOW (GO TO Q13)
12. Which of the following organs did (you/SUBJECT) eat of the (BIRD)? Did (you/he/she) eat the: (RECORD ALL THAT APPLY)	O Head, O Skin, O Heart, O Liver, O Gizzard, O Stomach or Tripe or, O Bone Marrow? O DON'T KNOW
13. In the past 12 months, how often did (you/SUBJECT) eat the eggs of the (BIRD)? Was it: **(USE SHOW CARD FQ1)**	O Every day, O More than once a week, but not every day, O Once a week, O More than once a month, but not every week, O Once a month, O Less than once a month, or, O Never? O DON'T KNOW
14. Thinking about the (meat/organs/eggs) (you/SUBJECT) ate from the (BIRD) in the past 12 months; please tell me how much of it came from the local area? (SHOW MAP) Was it: **(USE SHOW CARD FQ2)**	O All, O Most, O Half, O Some, O Little, or, O None? } GO TO NEXT BIRD OR O DON'T KNOW } Q16 ON PAGE 23.

15a. Please look at this map and mark the areas where the (BIRD) came from inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

15b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.

IF MORE THAN ONE AREA, ASK:
How much of the (BIRD) (you/SUBJECT) ate came from this area? (POINT TO AREA ON THE MAP) Was it most, half, some, or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: ____ _____ _____ _____ _____	O	O	O	O	O
Area 2: ____ _____ _____ _____ _____	O	O	O	O	O
Area 3: ____ _____ _____ _____ _____	O	O	O	O	O
Area 4: ____ _____ _____ _____ _____	O	O	O	O	O
Area 5: ____ _____ _____ _____ _____	O	O	O	O	O

GO TO NEXT BIRD OR Q16 ON PAGE 23

BIRD #2

O a. Waterfowl such as Ducks and Geese
O b. Upland birds such as Wild Turkey, Pheasants, Grouse, Chukar and Quail
O c. Other wild birds such as (SPECIFY:) _____
O d. Domestic poultry such as Chicken, Turkey, Duck, Goose

10. In the last 12 months, how often did (you/SUBJECT) eat the meat of (BIRD)? Was it: **(USE SHOW CARD FQ1)**	O Every day, O More than once a week, but not every day, O Once a week, O More than once a month, but not every week, O Once a month, O Less than once a month, or, O Never? O DON'T KNOW
11. In the last 12 months, how often did (you/SUBJECT) eat the head, skin, or organs of these birds? Was it: **(USE SHOW CARD FQ1)**	O Every day, O More than once a week, but not every day, O Once a week, O More than once a month, but not every week, O Once a month, O Less than once a month, or, O Never? (GO TO Q13) O DON'T KNOW (GO TO Q13)
12. Which of the following organs did (you/SUBJECT) eat of the (BIRD)? Did (you/he/she) eat the: (RECORD ALL THAT APPLY)	O Head, O Skin, O Heart, O Liver, O Gizzard, O Stomach or Tripe or, O Bone Marrow? O DON'T KNOW
13. In the past 12 months, how often did (you/SUBJECT) eat the eggs of the (BIRD)? Was it: **(USE SHOW CARD FQ1)**	O Every day, O More than once a week, but not every day, O Once a week, O More than once a month, but not every week, O Once a month, O Less than once a month, or, O Never? O DON'T KNOW
14. Thinking about the (meat/organs/eggs) (you/SUBJECT) ate from the (BIRD) in the past 12 months; please tell me how much of it came from the local area? (SHOW MAP) Was it: **(USE SHOW CARD FQ2)**	O All, O Most, O Half, O Some, O Little, or, O None? } GO TO NEXT BIRD OR O DON'T KNOW } Q16 ON PAGE 23.

15a. Please look at this map and mark the areas where the (BIRD) came from inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

15b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.

IF MORE THAN ONE AREA, ASK:
How much of the (BIRD) (you/SUBJECT) ate came from this area? (POINT TO AREA ON THE MAP) Was it most, half, some, or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: ____ _____ _____ _____ _____	O	O	O	O	O
Area 2: ____ _____ _____ _____ _____	O	O	O	O	O
Area 3: ____ _____ _____ _____ _____	O	O	O	O	O
Area 4: ____ _____ _____ _____ _____	O	O	O	O	O
Area 5: ____ _____ _____ _____ _____	O	O	O	O	O

GO TO NEXT BIRD OR Q16 ON PAGE 23

BIRD #3

O a. Waterfowl such as Ducks and Geese
O b. Upland birds such as Wild Turkey, Pheasants, Grouse, Chukar and Quail
O c. Other wild birds such as (SPECIFY:) _____
O d. Domestic poultry such as Chicken, Turkey, Duck, Goose

10. In the last 12 months, how often did (you/SUBJECT) eat the meat of (BIRD)? Was it: **(USE SHOW CARD FQ1)**	O Every day, O More than once a week, but not every day, O Once a week, O More than once a month, but not every week, O Once a month, O Less than once a month, or, O Never? O DON'T KNOW
11. In the last 12 months, how often did (you/SUBJECT) eat the head, skin, or organs of these birds? Was it: **(USE SHOW CARD FQ1)**	O Every day, O More than once a week, but not every day, O Once a week, O More than once a month, but not every week, O Once a month, O Less than once a month, or, O Never? (GO TO Q13) O DON'T KNOW (GO TO Q13)
12. Which of the following organs did (you/SUBJECT) eat of the (BIRD)? Did (you/he/she) eat the: (RECORD ALL THAT APPLY)	O Head, O Skin, O Heart, O Liver, O Gizzard, O Stomach or Tripe or, O Bone Marrow? O DON'T KNOW
13. In the past 12 months, how often did (you/SUBJECT) eat the eggs of the (BIRD)? Was it: **(USE SHOW CARD FQ1)**	O Every day, O More than once a week, but not every day, O Once a week, O More than once a month, but not every week, O Once a month, O Less than once a month, or, O Never? O DON'T KNOW
14. Thinking about the (meat/organs/eggs) (you/SUBJECT) ate from the bird in the past 12 months; please tell me how much of it came from the local area? (SHOW MAP) Was it: **(USE SHOW CARD FQ2)**	O All, O Most, O Half, O Some, O Little, or, O None? } GO TO NEXT BIRD OR O DON'T KNOW } Q16 ON PAGE 23.

15a. Please look at this map and mark the areas where the (BIRD) came from inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

15b. IF ONLY ONE AREA, RECORD ALL WITHOUT ASKING.

IF MORE THAN ONE AREA, ASK:
How much of the (BIRD) (you/SUBJECT) ate came from this area? (POINT TO AREA ON THE MAP) Was it most, half, some, or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: ____ _____ _____ _____ _____	O	O	O	O	O
Area 2: ____ _____ _____ _____ _____	O	O	O	O	O
Area 3: ____ _____ _____ _____ _____	O	O	O	O	O
Area 4: ____ _____ _____ _____ _____	O	O	O	O	O
Area 5: ____ _____ _____ _____ _____	O	O	O	O	O

GO TO NEXT BIRD ON CONTINUATION SHEET
OR Q16 ON PAGE 23.

MAMMALS

This series of questions is about different types of wild animals (you have/SUBJECT has) eaten over the last 12 months.

16. Over the past 12 months, did (you/SUBJECT) eat **any** meat or organs from (MAMMAL)?

		YES	NO	DK
a.	Deer?	O	O	O
b.	Elk?	O	O	O
c.	Moose?	O	O	O
d.	Bighorn Sheep?	O	O	O
e.	Bear?	O	O	O
f.	Wild Cats such as Cougar, Bobcat or Lynx (LINKS)?	O	O	O
g.	Beaver?	O	O	O
h.	Any smaller animals such as Groundhog, Squirrel Porcupine or Rabbit?	O	O	O

(IF YES:) Which of these did (you/SUBJECT) eat?
Did (you/he/she) eat: (RECORD ALL THAT APPLY)

O Groundhog
O Squirrel
O Porcupine
O Rabbit
O Some other animal
(SPECIFY:) _____
(SPECIFY:) _____
(SPECIFY:) _____

i.	Any other mammal from the local area, such as a Raccoon, Otter, Weasel or Chipmunk?	O	O	O

(IF YES:) Which types of animals did (you/SUBJECT) eat?
(RECORD ALL THAT APPLY)

Other animal
(SPECIFY:) _____
(SPECIFY:) _____
(SPECIFY:) _____

1. RECORD ONE CATEGORY OF MAMMAL PER SUBSEQUENT PAGE FOR EACH YES" RESPONSE ABOVE.
2. RETURN TO EACH SUBSEQUENT MARKED PAGE AND ASK Q170-22b

IF ALL RESPONSES ARE "NO" OR "DON'T KNOW" GO TO Q23 ON PAGE 32.

MAMMAL # 1

□ a. Deer	□ d. Bighorn Sheep	□ g. Beaver
□ b. Elk	□ e. Bear	□ h. Smaller animals
□ c. Moose	□ f. Cougar/Bobcat/Lynx	□ i. Any other mammal (SPECIFY:)_____

17. Over the past 12 months, how often did (you/SUBJECT) eat the meat of the (MAMMAL)? Was it: **(USE SHOW CARD FQ1)**	O Every day, O More than once a week, but not every day, O Once a week, O More than once a month, but not every week, O Once a month, O Less than once a month, or, O Never? O DON'T KNOW
18. Over the past 12 months, did (you/SUBJECT) eat any of the organs from the (MAMMAL)?	O YES O NO (GO TO Q21) O DON'T KNOW (GO TO Q21)
19. Which of the following (MAMMAL) organs did (you/SUBJECT) eat? Did (you/he/she) eat the: (RECORD ALL THAT APPLY)	O Bone marrow, O Brain, O Eyes, O Glands or Sweetbreads, O Heart, O Kidneys, O Liver, O Lungs, or, O Stomach or Tripe? O DON'T KNOW
20. Over the past 12 months, how often did (you/SUBJECT) eat (MAMMAL) organs? Was it: **(USE SHOW CARD FQ1)**	O Every day, O More than once a week, but not every day, O Once a week, O More than once a month, but not every week, O Once a month, O Less than once a month, or, O Never? O DON'T KNOW
21. Thinking about the (MAMMAL) (you/SUBJECT) ate in the past 12 months; please tell me how much of it was hunted from inside the local area? (SHOW MAP) Was it: **(USE SHOW CARD FQ2)**	O All, O Most, O Half, O Some, O Little, or, O None? } GO TO NEXT MAMMAL OR O DON'T KNOW } GO TO Q23 ON PAGE 32.

22a. Please look at this map and mark the areas where the (MAMMAL) was hunted inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

22b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.

IF MORE THAN ONE AREA, ASK:
How much of the (MAMMAL) (you/SUBJECT) ate came from this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some, or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: ____ _____ _____ _____ _____	O	O	O	O	O
Area 2: ____ _____ _____ _____ _____	O	O	O	O	O
Area 3: ____ _____ _____ _____ _____	O	O	O	O	O
Area 4: ____ _____ _____ _____ _____	O	O	O	O	O
Area 5: ____ _____ _____ _____ _____	O	O	O	O	O

GO TO NEXT MAMMAL OR Q23 ON PAGE 32.

MAMMAL # 2

□ a. Deer	□ d. Bighorn Sheep	□ g. Beaver
□ b. Elk	□ e. Bear	□ h. Smaller animals
□ c. Moose	□ f. Cougar/Bobcat/Lynx	□ i. Any other mammal (SPECIFY:)_____

17. Over the past 12 months, how often did (you/SUBJECT) eat the meat of the (MAMMAL)? Was it: **(USE SHOW CARD FQ1)**	O Every day, O More than once a week, but not every day, O Once a week, O More than once a month, but not every week, O Once a month, O Less than once a month, or, O Never? O DON'T KNOW
18. Over the past 12 months, did (you/SUBJECT) eat any of the organs from the (MAMMAL)?	O YES O NO (GO TO Q21) O DON'T KNOW (GO TO Q21)
19. Which of the following (MAMMAL) organs did (you/SUBJECT) eat? Did (you/he/she) eat the: (RECORD ALL THAT APPLY)	O Bone marrow, O Brain, O Eyes, O Glands or Sweetbreads, O Heart, O Kidneys, O Liver, O Lungs, or, O Stomach or Tripe? O DON'T KNOW
20. Over the past 12 months, how often did (you/SUBJECT) eat (MAMMAL) organs? Was it: **(USE SHOW CARD FQ1)**	O Every day, O More than once a week, but not every day, O Once a week, O More than once a month, but not every week, O Once a month, O Less than once a month, or, O Never? O DON'T KNOW
21. Thinking about the (MAMMAL) (you/SUBJECT) ate in the past 12 months; please tell me how much of it was hunted from inside the local area? (SHOW MAP) Was it: **(USE SHOW CARD FQ2)**	O All, O Most, O Half, O Some, O Little, or, O None? } GO TO NEXT MAMMAL OR O DON'T KNOW } GO TO Q23 ON PAGE 32.

22a. Please look at this map and mark the areas where the (MAMMAL) was hunted inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

22b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.

IF MORE THAN ONE AREA, ASK:
How much of the (MAMMAL) (you/SUBJECT) ate came from this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some, or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: ____ _____ _____ _____ _____	O	O	O	O	O
Area 2: ____ _____ _____ _____ _____	O	O	O	O	O
Area 3: ____ _____ _____ _____ _____	O	O	O	O	O
Area 4: ____ _____ _____ _____ _____	O	O	O	O	O
Area 5: ____ _____ _____ _____ _____	O	O	O	O	O

GO TO NEXT MAMMAL OR Q23 ON PAGE 32.

MAMMAL # 3

□ a. Deer	□ d. Bighorn Sheep	□ g. Beaver
□ b. Elk	□ e. Bear	□ h. Smaller animals
□ c. Moose	□ f. Cougar/Bobcat/Lynx	□ i. Any other mammal (SPECIFY:)_____

17. Over the past 12 months, how often did (you/SUBJECT) eat the meat of the (MAMMAL)? Was it: **(USE SHOW CARD FQ1)**	O Every day, O More than once a week, but not every day, O Once a week, O More than once a month, but not every week, O Once a month, O Less than once a month, or, O Never? O DON'T KNOW
18. Over the past 12 months, did (you/SUBJECT) eat any of the organs from the (MAMMAL)?	O YES O NO (GO TO Q21) O DON'T KNOW (GO TO Q21)
19. Which of the following (MAMMAL) organs did (you/SUBJECT) eat? Did (you/he/she) eat the: (RECORD ALL THAT APPLY)	O Bone marrow, O Brain, O Eyes, O Glands or Sweetbreads, O Heart, O Kidneys, O Liver, O Lungs, or, O Stomach or Tripe? O DON'T KNOW
20. Over the past 12 months, how often did (you/SUBJECT) eat (MAMMAL) organs? Was it: **(USE SHOW CARD FQ1)**	O Every day, O More than once a week, but not every day, O Once a week, O More than once a month, but not every week, O Once a month, O Less than once a month, or, O Never? O DON'T KNOW
21. Thinking about the (MAMMAL) (you/SUBJECT) ate in the past 12 months; please tell me how much of it was hunted from inside the local area? (SHOW MAP) Was it: **(USE SHOW CARD FQ2)**	O All, O Most, O Half, O Some, O Little, or, O None? } GO TO NEXT MAMMAL OR O DON'T KNOW } GO TO Q23 ON PAGE 32.

22a. Please look at this map and mark the areas where the (MAMMAL) was hunted inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

22b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.

IF MORE THAN ONE AREA, ASK:
How much of the (MAMMAL) (you/SUBJECT) ate came from this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some, or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: ____ _____ _____ _____ _____	O	O	O	O	O
Area 2: ____ _____ _____ _____ _____	O	O	O	O	O
Area 3: ____ _____ _____ _____ _____	O	O	O	O	O
Area 4: ____ _____ _____ _____ _____	O	O	O	O	O
Area 5: ____ _____ _____ _____ _____	O	O	O	O	O

GO TO NEXT MAMMAL OR Q23 ON PAGE 32.

MAMMAL # 4

□ a. Deer	□ d. Bighorn Sheep	□ g. Beaver
□ b. Elk	□ e. Bear	□ h. Smaller animals
□ c. Moose	□ f. Cougar/Bobcat/Lynx	□ i. Any other mammal (SPECIFY:)_____

17. Over the past 12 months, how often did (you/SUBJECT) eat the meat of the (MAMMAL)? Was it: **(USE SHOW CARD FQ1)**	O Every day, O More than once a week, but not every day, O Once a week, O More than once a month, but not every week, O Once a month, O Less than once a month, or, O Never? O DON'T KNOW
18. Over the past 12 months, did (you/SUBJECT) eat any of the organs from the (MAMMAL)?	O YES O NO (GO TO Q21) O DON'T KNOW (GO TO Q21)
19. Which of the following (MAMMAL) organs did (you/SUBJECT) eat? Did (you/he/she) eat the: (RECORD ALL THAT APPLY)	O Bone marrow, O Brain, O Eyes, O Glands or Sweetbreads, O Heart, O Kidneys, O Liver, O Lungs, or, O Stomach or Tripe? O DON'T KNOW
20. Over the past 12 months, how often did (you/SUBJECT) eat (MAMMAL) organs? Was it: **(USE SHOW CARD FQ1)**	O Every day, O More than once a week, but not every day, O Once a week, O More than once a month, but not every week, O Once a month, O Less than once a month, or, O Never? O DON'T KNOW
21. Thinking about the (MAMMAL) (you/SUBJECT) ate in the past 12 months; please tell me how much of it was hunted from inside the local area? (SHOW MAP) Was it: **(USE SHOW CARD FQ2)**	O All, O Most, O Half, O Some, O Little, or, O None? } GO TO NEXT MAMMAL OR O DON'T KNOW } GO TO Q23 ON PAGE 32.

22a. Please look at this map and mark the areas where the (MAMMAL) was hunted inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

22b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.

IF MORE THAN ONE AREA, ASK:
How much of the (MAMMAL) (you/SUBJECT) ate came from this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some, or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: ____ _____ _____ _____ _____	O	O	O	O	O
Area 2: ____ _____ _____ _____ _____	O	O	O	O	O
Area 3: ____ _____ _____ _____ _____	O	O	O	O	O
Area 4: ____ _____ _____ _____ _____	O	O	O	O	O
Area 5: ____ _____ _____ _____ _____	O	O	O	O	O

GO TO NEXT MAMMAL ON CONTINUATION SHEET
OR Q23 ON PAGE 32.

FARM ANIMALS

Okay, now let's talk about farm animals.

23. Over the past 12 months, did (you/SUBJECT) eat **any** meat or organs from Beef, Bison, Pork, Lamb or Goat?

O YES
O NO (GO TO Q31)
O DON'T KNOW (GO TO Q31)

24. Which of these did (you/SUBJECT) eat meat or organs from? (RECORD ALL THAT APPLY)

O BEEF/COW
O BISON/BUFFALO
O PORK/PIGS
O LAMB/SHEEP
O GOAT

25. In the past 12 months, how often did (you/SUBJECT) eat the meat of these animals? Was it: **(USE SHOW CARD FQ1)**	O Every day O More than once a week, but not every day O Once a week O More than once a month, but not every week O Once a month O Less than once a month, or, O Never? O DON'T KNOW
26. Over the past 12 months, did (you/SUBJECT) eat any of the organs of these farm animals?	O YES O NO (GO TO Q28) O DON'T KNOW (GO TO Q28)
27. Which of the following organs did (you/SUBJECT) eat? Did (you/he/she) eat the: (RECORD ALL THAT APPLY)	O Bone marrow, O Brain, O Eyes, O Glands or Sweetbreads, O Heart, O Kidneys, O Liver, O Lungs, or, O Stomach or Tripe? O DON'T KNOW
28. Over the past 12 months, how often did (you/SUBJECT) eat the organs from (this animal/these animals)? Was it: **(USE SHOW CARD FQ1)**	O Every day, O More than once a week, but not every day, O Once a week, O More than once a month, but not every week, O Once a month, or O Less than once a month? O DON'T KNOW
29. Thinking about the meat (you/SUBJECT) ate from farm animals in the past 12 months; please tell me how much of it was from animals raised inside the local area? (SHOW MAP) Was it: **(USE SHOW CARD FQ2)**	O All, O Most, O Half, O Some, O Little, or, O None? } GO TO Q31 ON PAGE 34 O DON'T KNOW } GO TO Q31 ON PAGE 34

30a. Please look at this map and mark the areas where these animals were raised inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE ENTER "999".)

30b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.

IF MORE THAN ONE AREA, ASK:
How much of the meat (you/SUBJECT) ate came from animals raised in this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some, or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: _____ _____ _____ _____ _____	O	O	O	O	O
Area 2: _____ _____ _____ _____ _____	O	O	O	O	O
Area 3: _____ _____ _____ _____ _____	O	O	O	O	O
Area 4: _____ _____ _____ _____ _____	O	O	O	O	O
Area 5: _____ _____ _____ _____ _____	O	O	O	O	O

Next I would like you to think about dairy products you may have eaten.

31. Over the past 12 months, did (you/SUBJECT) eat **any** dairy products such as milk, cream, cheese, yogurt or ice cream from Cows, Sheep or Goats?

O YES
O NO (GO TO Q35 ON PAGE 35)
O DON'T KNOW (GO TO Q35 ON PAGE 35)

32. In the past 12 months, how often did (you/SUBJECT) eat dairy products from Cows, Sheep or Goats? Was it: **(USE SHOW CARD FQ1)**	O Every day, O More than once a week, but not every day, O Once a week, O More than once a month, but not every week, O Once a month, O Less than once a month, or, O Never? O DON'T KNOW
33. Thinking about the dairy products (you/SUBJECT) ate in the past 12 months; please tell me how much of it was from animals raised inside the local area? (SHOW MAP) Was it: **(USE SHOW CARD FQ2)**	O All, O Most, O Half, O Some, O Little, or, O None? } GO TO Q35 ON PAGE 35 O DON'T KNOW } GO TO Q35 ON PAGE 35

34a. Please look at this map and mark the areas where the animals used for dairy products were raised from inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

34b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.

IF MORE THAN ONE AREA, ASK:
How much of the dairy products (you/SUBJECT) ate came from animals raised in this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some, or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: _____ _____ _____ _____ _____	O	O	O	O	O
Area 2: _____ _____ _____ _____ _____	O	O	O	O	O
Area 3: _____ _____ _____ _____ _____	O	O	O	O	O
Area 4: _____ _____ _____ _____ _____	O	O	O	O	O
Area 5: _____ _____ _____ _____ _____	O	O	O	O	O

FRUITS AND VEGETABLES

Okay, now let's talk about fruits and vegetables (you have/SUBJECT has) eaten in the past 12 months. This question does not include wild plants or berries gathered by (you/SUBJECT) or someone else.

35. In the past 12 months, how often did (you/SUBJECT) eat **any** fruits OR vegetables? Was it: **(USE SHOW CARD FQ1)**	O Every day, O More than once a week but not every day, O Once a week, O More than once a month but not every week, O Once a month, O Less than once a month, or O Never? (GO TO Q39 ON PAGE 37)
36. Thinking about all the fruits and vegetables (you/SUBJECT) ate in the past 12 months; please tell me how much was grown on farms or gardens inside the local area? (SHOW MAP) Do not include fruits and vegetables (you/he/she) purchased from a grocery store. Was it: **(USE SHOW CARD FQ2)**	O All, O Most, O Half O Some, O Little, or, O None? } GO TO Q39 ON PAGE 37 O DON'T KNOW }
37. Now I would like you to think about the locally grown fruits and vegetables (you have/ SUBJECT has) eaten over the past 12 months, including items purchased at a local fruit or vegetable stand. (SHOW MAP). I'm going to read a list. For each one tell me if (you have/SUBJECT has) eaten that locally grown fruit or vegetable in the last 12 months. The first one is apples. In the last 12 months did (you/SUBJECT) eat any apples grown in the local area? (CONTINUE WITH LIST. RECORD ALL THAT APPLY)	O Apples O Asparagus O Beets O Blueberries O Broccoli O Cabbage, Collards, or Brussel sprouts O Carrots O Cauliflower O Celery O Corn O Cucumber O Eggplant O Garlic O Green beans O Herbs O Kale O Lettuce O Melon O Onions O Peaches, Plums, or Cherries O Pears O Peas O Peppers O Potatoes O Pumpkin O Raspberries or Blackberries O Spinach or Chard O Strawberries O Summer squash O Tomatoes O Zucchini O Any other fruit or vegetable (SPECIFY:)_____ _____ _____

38a. Okay, now I'd like to ask about the locations where all the fruits and vegetables were grown. Please look at this map and mark the areas where the fruits and vegetables were grown inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

38b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.

IF MORE THAN ONE AREA, ASK:
How much of the fruits and vegetables (you/SUBJECT) ate was grown in this area? (POINT TO EACH AREA MAREKD ON THE MAP) Was it all, most, half, some, or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: ____ _____ _____ _____ _____	O	O	O	O	O
Area 2: ____ _____ _____ _____ _____	O	O	O	O	O
Area 3: ____ _____ _____ _____ _____	O	O	O	O	O
Area 4: ____ _____ _____ _____ _____	O	O	O	O	O
Area 5: ____ _____ _____ _____ _____	O	O	O	O	O
Area 6: ____ _____ _____ _____ _____	O	O	O	O	O
Area 7: ____ _____ _____ _____ _____	O	O	O	O	O

GO TO Q39 ON THE NEXT PAGE.

WILD PLANTS

Okay, now let's talk about any wild plants (you/SUBJECT) may have eaten in the past 12 months. These may have been gathered by (you/SUBJECT) or someone else.

39. In the past 12 months, did (you/SUBJECT) eat Balsamroot (BALL-SUM-ROOT), also known as Wild Sunflower or Spring Sunflower or drink tea made from any part of this plant? This includes seeds, shoots or any other part.

O YES
O NO (GO TO Q45 ON PAGE 39)
O NOT SURE (GO TO Q45 ON PAGE 39)

40. Did (you/SUBJECT) eat the Balsamroot, drink tea made from the Balsamroot, or both?	O EAT O DRINK TEA O BOTH O DON'T KNOW
41. Which parts (did you/ did SUBJECT) (eat/(or) use to make tea)? Was it the: (RECORD ALL THAT APPLY)	O Seeds, O Shoots, O Roots, or Some other part? (SPECIFY:)_____ _____ _____ O DON'T KNOW
42. In the past 12 months, how often did (you/SUBJECT) (eat/(or) make tea from) the Balsamroot? Was it: **(USE SHOW CARD FQ1)**	O Every day O More than once a week, but not every day O Once a week O More than once a month, but not every week O Once a month, or O Less than once a month? O DON'T KNOW
43. In the past 12 months, how much of the Balsamroot (you/SUBJECT) (ate/(or) made tea from) was gathered in the local area? (SHOW MAP) Was it: **(USE SHOW CARD FQ2)**	O All, O Most, O Half, O Some, O Little, or, O None? } GO TO Q45 ON PAGE 39 O DON'T KNOW }

44a. Please look at this map and mark the areas where the Balsamroot was gathered inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE ENTER "999".)

44b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.

IF MORE THAN ONE AREA, ASK:
How much of the Balsamroot (you/SUBJECT) (ate/(or) made tea from) was gathered from this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some, or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: ____ _____ _____ _____ _____	O	O	O	O	O
Area 2: ____ _____ _____ _____ _____	O	O	O	O	O
Area 3: ____ _____ _____ _____ _____	O	O	O	O	O
Area 4: ____ _____ _____ _____ _____	O	O	O	O	O
Area 5: ____ _____ _____ _____ _____	O	O	O	O	O

GO TO Q45 ON NEXT PAGE.

45. In the past 12 months, did (you/SUBJECT) eat or drink tea made from any part of the (PLANT)? This includes the roots, bulbs, or any other part.

	YES	NO	DK
a. Bitterroot, also known as Sand Rose, Desert Rose, Rock Rose, Spatlum (SPAT-LUM), or Spitlum (SPIT-LUM)	O	O	O
b. Indian Carrot, also known as Wild Carrot, Wild Caraway (CARE-AH-WAY) False Caraway, or Gairdner's Yampah (GUARD-NERS YAM-PAW)	O	O	O
c. Spring Beauty, also known as Indian Potato	O	O	O
d. Lomatiums (LOW-MAY-SHUMS), which includes White Camas, Canby's Lomatiums, Canby's Biscuitroot, Gray's Lomatium, Gray's Desert Parsley, Gray's Biscuitroot, Indian Celery, Wild Celery, and Barestem (BARE-STEM) Lomatium	O	O	O
e. Any type of Valerian (VA-LARE-EE-AN), such as Edible or Mountain Valerian	O	O	O

1. RECORD ONE PLANT PER SUBSEQUENT PAGE FOR EACH YES" RESPONSE ABOVE.
2. RETURN TO EACH SUBSEQUENT MARKED PAGE BEFORE ASKING QUESTIONS.

IF ALL RESPONSES ARE "NO" OR "DON'T KNOW", GO TO Q51 ON PAGE 43.

PLANT #1

O a. Bitterroot
O b. Indian Carrot
O c. Spring Beauty
O d. Lomatiums
O e. Valerians

46. Did (you/SUBJECT) eat the (PLANT), drink tea made from the (PLANT), or both?	O EAT O DRINK TEA O BOTH O DON'T KNOW
47. Which parts (did you/did SUBJECT) (eat/(or) use to make tea)? Was it the: (RECORD ALL THAT APPLY)	O Roots, or O Some other part? (SPECIFY:)_____ _____ _____ O DON'T KNOW
48. In the past 12 months, how often did (you/SUBJECT) (eat/(or) make tea from) the (PLANT)? Was it: **(USE SHOW CARD FQ1)**	O Every day O More than once a week, but not every day O Once a week O More than once a month, but not every week O Once a month, or O Less than once a month? O DON'T KNOW
49. In the past 12 months, how much of the (PLANT) (you/SUBJECT) (ate/(or) made tea from) was gathered in the local area? (SHOW MAP) Was it: **(USE SHOW CARD FQ2)**	O All, O Most, O Half, O Some, O Little, or, O None? } GO TO NEXT WILD PLANT OR O DON'T KNOW } Q51 ON PAGE 43.

50a. Please look at this map and mark the areas where the (PLANT) was gathered inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE ENTER "999".)

50b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.

IF MORE THAN ONE AREA, ASK:
How much of the (PLANT) (you/SUBJECT) (ate/(or) made tea from) was gathered from this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some, or a little?

Zones:	ALL	MOST	HALF	SOME	LITTLE
Area 1: ____ _____ _____ _____ _____	O	O	O	O	O
Area 2: ____ _____ _____ _____ _____	O	O	O	O	O
Area 3: ____ _____ _____ _____ _____	O	O	O	O	O
Area 4: ____ _____ _____ _____ _____	O	O	O	O	O
Area 5: ____ _____ _____ _____ _____	O	O	O	O	O

GO TO NEXT WILD PLANT OR Q51 ON PAGE 43.

PLANT #2

O a. Bitterroot
O b. Indian Carrot
O c. Spring Beauty
O d. Lomatiums
O e. Valerians

46. Did (you/SUBJECT) eat the (PLANT), drink tea made from the (PLANT), or both?	O EAT O DRINK TEA O BOTH O DON'T KNOW
47. Which parts (did you/did SUBJECT) (eat/(or) use to make tea)? Was it the: (RECORD ALL THAT APPLY)	O Roots, or O Some other part? (SPECIFY:)_____ _____ _____ O DON'T KNOW
48. In the past 12 months, how often did (you/SUBJECT) (eat/(or) make tea from) the (PLANT)? Was it: **(USE SHOW CARD FQ1)**	O Every day O More than once a week, but not every day O Once a week O More than once a month, but not every week O Once a month, or O Less than once a month? O DON'T KNOW
49. In the past 12 months, how much of the (PLANT) (you/SUBJECT) (ate/(or) made tea from) was gathered in the local area? (SHOW MAP) Was it: **(USE SHOW CARD FQ2)**	O All, O Most, O Half, O Some, O Little, or, O None? } GO TO NEXT WILD PLANT OR O DON'T KNOW } Q51 ON PAGE 43.

50a. Please look at this map and mark the areas where the (PLANT) was gathered inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE ENTER "999".)

50b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.

IF MORE THAN ONE AREA, ASK:
How much of the (PLANT) (you/SUBJECT) (ate/(or) made tea from) was gathered from this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some, or a little?

Zones:	ALL	MOST	HALF	SOME	LITTLE
Area 1: ____ _____ _____ _____ _____	O	O	O	O	O
Area 2: ____ _____ _____ _____ _____	O	O	O	O	O
Area 3: ____ _____ _____ _____ _____	O	O	O	O	O
Area 4: ____ _____ _____ _____ _____	O	O	O	O	O
Area 5: ____ _____ _____ _____ _____	O	O	O	O	O

GO TO NEXT WILD PLANT OR Q51 ON PAGE 43.

PLANT #3

O a. Bitterroot
O b. Indian Carrot
O c. Spring Beauty
O d. Lomatiums
O e.Valerian

46. Did (you/SUBJECT) eat the (PLANT), drink tea made from the (PLANT), or both?	O EAT O DRINK TEA O BOTH O DON'T KNOW
47. Which parts (did you/did SUBJECT) (eat/(or) use to make tea)? Was it the: (RECORD ALL THAT APPLY)	O Roots, or O Some other part? (SPECIFY:)_____ _____ _____ O DON'T KNOW
48. In the past 12 months, how often did (you/SUBJECT) (eat/(or) make tea from) the (PLANT)? Was it: **(USE SHOW CARD FQ1)**	O Every day O More than once a week, but not every day O Once a week O More than once a month, but not every week O Once a month, or O Less than once a month? O DON'T KNOW
49. In the past 12 months, how much of the (PLANT) (you/SUBJECT) (ate/(or) made tea from) was gathered in the local area? (SHOW MAP) Was it: **(USE SHOW CARD FQ2)**	O All, O Most, O Half, O Some, O Little, or, O None? } GO TO Q51 ON PAGE 43. O DON'T KNOW } .

50a. Please look at this map and mark the areas where the (PLANT) was gathered inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE ENTER "999".)

50b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.

IF MORE THAN ONE AREA, ASK:
How much of the (PLANT) (you/SUBJECT) (ate/(or) made tea from) was gathered from this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some, or a little?

Zones:	ALL	MOST	HALF	SOME	LITTLE
Area 1: ____ _____ _____ _____ _____	O	O	O	O	O
Area 2: ____ _____ _____ _____ _____	O	O	O	O	O
Area 3: ____ _____ _____ _____ _____	O	O	O	O	O
Area 4: ____ _____ _____ _____ _____	O	O	O	O	O
Area 5: ____ _____ _____ _____ _____	O	O	O	O	O

GO TO NEXT WILD PLANT ON CONTINUATION SHEET
OR Q51 ON NEXT PAGE.

51. In the past 12 months, did (you/SUBJECT) eat **any** Camas (CAM-US), which includes Black Camas, Blue Camas, Common Camas and Sweet Camas, or drink tea from any part of these plants. This includes roots, bulbs, or any other part. Please do not include White Camas.

O YES
O NO (GO TO Q57 ON NEXT PAGE)
O NOT SURE (GO TO Q57 ON NEXT PAGE)

52. Did (you/SUBJECT) eat the camas, drink tea made from the Camas, or both?	O EAT O DRINK TEA O BOTH O DON'T KNOW
53. Which parts (did you/did SUBJECT) (eat/(or) use to make tea)? Was it the: (RECORD ALL THAT APPLY)	O Root or bulb, or O Some other part? (SPECIFY:)_____ _____ _____ O DON'T KNOW
54. Over the past 12 months, how often did (you/SUBJECT) (eat/(or) make tea) from the Camas? Was it: **(USE SHOW CARD FQ1)**	O Every day O More than once a week, but not every day O Once a week O More than once a month, but not every week O Once a month, or O Less than once a month? O DON'T KNOW
55. In the past 12 months, how much of the Camas (you/SUBJECT) (ate/(or) made tea from) was gathered in the local area? (SHOW MAP) Was it: **(USE SHOW CARD FQ2)**	O All, O Most, O Half, O Some, O Little, or, O None? } GO TO Q57 ON NEXT PAGE O DON'T KNOW }

56a. Please look at this map and mark the areas where the Camas was gathered inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE ENTER "999".)

56b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.

IF MORE THAN ONE AREA, ASK:
How much of the Camas (you/SUBJECT) (ate/(or) made tea from) was gathered from this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some, or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: ____ _____ _____ _____ _____	O	O	O	O	O
Area 2: ____ _____ _____ _____ _____	O	O	O	O	O
Area 3: ____ _____ _____ _____ _____	O	O	O	O	O
Area 4: ____ _____ _____ _____ _____	O	O	O	O	O
Area 5: ____ _____ _____ _____ _____	O	O	O	O	O

GO TO Q57 ON NEXT PAGE.

57. In the past 12 months, did (you/SUBJECT) eat Cattail, also known as Bulrush or Flag, or drink tea from any part of this plant? This includes the shoots, flower heads, roots, or any other part.

O YES
O NO (GO TO Q63 ON NEXT PAGE)
O NOT SURE (GO TO Q63 ON NEXT PAGE)

58. In the past 12 months, did (you/SUBJECT) eat the Cattail, drink tea made from Cattail, or both?	O EAT O DRINK TEA O BOTH O DON'T KNOW
59. Which parts did(you/SUBJECT) (eat/(or) us to make tea)? Was it the: (RECORD ALL THAT APPLY)	O Shoots, O Flower heads, O Roots, or O Some other part? (SPECIFY:)_____ _____ _____ O DON'T KNOW
60. In the past 12 months, how often did (you/SUBJECT) (eat/(or) make tea from) the Cattail? Was it: **(USE SHOW CARD FQ1)**	O Every day O More than once a week, but not every day O Once a week O More than once a month, but not every week O Once a month, or O Less than once a month? O DON'T KNOW
61. In the past 12 months, how much of the Cattail (you/SUBJECT) (ate/(or) made tea from) was gathered in the local area? (SHOW MAP) Was it: **(USE SHOW CARD FQ2)**	O All, O Most, O Half, O Some, O Little, or, O None? } GO TO Q63 ON NEXT PAGE. O DON'T KNOW } GO TO Q63 ON NEXT PAGE.

62a. Please look at this map and mark the areas where the Cattails were gathered inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

62b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.

IF MORE THAN ONE AREA, ASK:
How much of the Cattails (you/SUBJECT) (ate/or made tea from) was gathered from this area? (POINT TO AREA ON THE MAP) Was it most, half, some, or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: ____ _____ _____ _____ _____	O	O	O	O	O
Area 2: ____ _____ _____ _____ _____	O	O	O	O	O
Area 3: ____ _____ _____ _____ _____	O	O	O	O	O
Area 4: ____ _____ _____ _____ _____	O	O	O	O	O
Area 5: ____ _____ _____ _____ _____	O	O	O	O	O

GO TO Q63 ON NEXT PAGE.

63. In the past 12 months, did (you/SUBJECT) eat (PLANT) or drink tea made from any part of the plant? This includes eating fresh berries as well as all preparations such as jams, pies or cobblers.

	YES	NO	DK
a. Huckleberries, which include Wild Blueberries and Bilberries	O	O	O
b. Wild Raspberries	O	O	O
c. Wild Blackberries	O	O	O
d. Wild Thimbleberries	O	O	O
e. Chokeberries, also known as Wild Cherry	O	O	O
f. Blue Elderberries	O	O	O
g. Red or Black Hawthorn, also known as Red or Black Thornberries, or Red or Black Haw	O	O	O
h. Buckbrush	O	O	O
i. Sarvisberries, also known as Serviceberry, Juneberry, Saskatoonberry, Wild Plum, Shadberry or Shadbush	O	O	O
j. Bunchberries	O	O	O
k. Oregon Grape, also known as Barberry or Mahonia (MA-HONE-EE-AH)	O	O	O
l. Wild Strawberries	O	O	O

1. RECORD ONE PLANT PER SUBSEQUENT PAGE FOR EACH "YES" RESPONSE ABOVE.
2. RETURN TO EACH SUBSEQUENT MARKED PAGE AND ASK Q65-69b

IF ALL RESPONSES ARE "NO" OR "DON'T KNOW", GO TO Q69 ON PAGE 50.

PLANT #1

O a. Huckleberries	O e. Chokeberries	O i. Sarvisberries
O b. Wild Raspberries	O f. Blue Elderberries	O j. Bunchberries
O c. Wild Blackberries	O g. Red or Black Hawthorn	O k. Oregon Grape
O d. Wild Thimbleberries	O h. Buckbrush	O l. Wild Strawberries

64. Did (you/SUBJECT) eat the (PLANT), drink tea made from the plant, or both?	O EAT O DRINK TEA O BOTH O DON'T KNOW
65. Which parts (did you/did SUBJECT) (eat/(or) use to make tea)? Was it the: (RECORD ALL THAT APPLY)	O Berry or fruit, or O Some other part? (SPECIFY:)_____ _____ _____ O DON'T KNOW
66. In the past 12 months, how often did (you/SUBJECT) (eat/(or) make tea from) the (PLANT)? Was it: **(USE SHOW CARD FQ1)**	O Every day O More than once a week, but not every day O Once a week O More than once a month, but not every week O Once a month, or O Less than once a month? O DON'T KNOW
67. In the past 12 months, how much of the (PLANT) (you/SUBJECT) (ate/(or) made tea from) were gathered in the local area? (SHOW MAP) Was it: **(USE SHOW CARD FQ2)**	O All, O Most, O Half, O Some, O Little, or, O None? } GO TO NEXT PLANT OR O DON'T KNOW } Q69 ON PAGE 50

68a. Please look at this map and mark the areas where the (PLANT) were gathered inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

68b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.

IF MORE THAN ONE AREA, ASK: How much of the (PLANT) (you/SUBJECT) (ate/(or) made tea from) was gathered from this area? (POINT TO AREA ON THE MAP) Was it most, half, some or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: ____ _____ _____ _____ _____	O	O	O	O	O
Area 2: ____ _____ _____ _____ _____	O	O	O	O	O
Area 3: ____ _____ _____ _____ _____	O	O	O	O	O
Area 4: ____ _____ _____ _____ _____	O	O	O	O	O
Area 5: ____ _____ _____ _____ _____	O	O	O	O	O

GO TO NEXT PLANT OR Q69 ON PAGE 50.

PLANT #2

O a. Huckleberries	O e. Chokeberries	O i. Sarvisberries
O b. Wild Raspberries	O f. Blue Elderberries	O j. Bunchberries
O c. Wild Blackberries	O g. Red or Black Hawthorn	O k. Oregon Grape
O d. Wild Thimbleberries	O h. Buckbrush	O l. Wild Strawberries

64. Did (you/SUBJECT) eat the (PLANT), drink tea made from the plant, or both?	O EAT O DRINK TEA O BOTH O DON'T KNOW
65. Which parts (did you/did SUBJECT) (eat/(or) use to make tea)? Was it the: (RECORD ALL THAT APPLY)	O Berry or fruit, or O Some other part? (SPECIFY:)_____ _____ _____ O DON'T KNOW
66. In the past 12 months, how often did (you/SUBJECT) (eat/(or) make tea from) the (PLANT)? Was it: **(USE SHOW CARD FQ1)**	O Every day O More than once a week, but not every day O Once a week O More than once a month, but not every week O Once a month, or O Less than once a month? O DON'T KNOW
67. In the past 12 months, how much of the (PLANT) (you/SUBJECT) (ate/(or) made tea from) were gathered in the local area? (SHOW MAP) Was it: **(USE SHOW CARD FQ2)**	O All, O Most, O Half, O Some, O Little, or, O None? } GO TO NEXT PLANT OR O DON'T KNOW } Q69 ON PAGE 50

68a. Please look at this map and mark the areas where the (PLANT) were gathered inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

68b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.

IF MORE THAN ONE AREA, ASK: How much of the (PLANT) (you/SUBJECT) (ate/(or) made tea from) was gathered from this area? (POINT TO AREA ON THE MAP) Was it most, half, some, or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: ____ _____ _____ _____ _____	O	O	O	O	O
Area 2: ____ _____ _____ _____ _____	O	O	O	O	O
Area 3: ____ _____ _____ _____ _____	O	O	O	O	O
Area 4: ____ _____ _____ _____ _____	O	O	O	O	O
Area 5: ____ _____ _____ _____ _____	O	O	O	O	O

GO TO NEXT PLANT OR Q69 ON PAGE 50.

PLANT #3

O a. Huckleberries	O e. Chokeberries	O i. Sarvisberries
O b. Wild Raspberries	O f. Blue Elderberries	O j. Bunchberries
O c. Wild Blackberries	O g. Red or Black Hawthorn	O k. Oregon Grape
O d. Wild Thimbleberries	O h. Buckbrush	O l. Wild Strawberries

64. Did (you/SUBJECT) eat the (PLANT), drink tea made from the plant, or both?	O EAT O DRINK TEA O BOTH O DON'T KNOW
65. Which parts (did you/did SUBJECT) (eat/(or) use to make tea)? Was it the: (RECORD ALL THAT APPLY)	O Berry or fruit, or O Some other part? (SPECIFY:)_____ _____ _____ O DON'T KNOW
66. In the past 12 months, how often did (you/SUBJECT) (eat/(or) make tea from) the (PLANT)? Was it: **(USE SHOW CARD FQ1)**	O Every day O More than once a week, but not every day O Once a week O More than once a month, but not every week O Once a month, or O Less than once a month? O DON'T KNOW
67. In the past 12 months, how much of the (PLANT) (you/SUBJECT) (ate/(or) made tea from) were gathered in the local area? (SHOW MAP) Was it: **(USE SHOW CARD FQ2)**	O All, O Most, O Half, O Some, O Little, or, O None? } GO TO NEXT PLANT OR O DON'T KNOW } Q69 ON PAGE 50

68a. Please look at this map and mark the areas where the (PLANT) were gathered inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

68b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.

IF MORE THAN ONE AREA, ASK: How much of the (PLANT) (you/SUBJECT) (ate/(or) made tea from) was gathered from this area? (POINT TO AREA ON THE MAP) Was it most, half, some, or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: ____ _____ _____ _____ _____	O	O	O	O	O
Area 2: ____ _____ _____ _____ _____	O	O	O	O	O
Area 3: ____ _____ _____ _____ _____	O	O	O	O	O
Area 4: ____ _____ _____ _____ _____	O	O	O	O	O
Area 5: ____ _____ _____ _____ _____	O	O	O	O	O

GO TO NEXT PLANT OR Q69 ON PAGE 50.

PLANT #4

O a. Huckleberries	O e. Chokeberries	O i. Sarvisberries
O b. Wild Raspberries	O f. Blue Elderberries	O j. Bunchberries
O c. Wild Blackberries	O g. Red or Black Hawthorn	O k. Oregon Grape
O d. Wild Thimbleberries	O h. Buckbrush	O l. Wild Strawberries

64. Did (you/SUBJECT) eat the (PLANT), drink tea made from the plant, or both?	O EAT O DRINK TEA O BOTH O DON'T KNOW
65. Which parts (did you/did SUBJECT) (eat/(or) use to make tea)? Was it the: (RECORD ALL THAT APPLY)	O Berry or fruit, or O Some other part? (SPECIFY:)_____ _____ _____ O DON'T KNOW
66. In the past 12 months, how often did (you/SUBJECT) (eat/(or) make tea from) the (PLANT)? Was it: **(USE SHOW CARD FQ1)**	O Every day O More than once a week, but not every day O Once a week O More than once a month, but not every week O Once a month, or O Less than once a month? O DON'T KNOW
67. In the past 12 months, how much of the (PLANT) (you/SUBJECT) (ate/(or) made tea from) were gathered in the local area? (SHOW MAP) Was it: **(USE SHOW CARD FQ2)**	O All, O Most, O Half, O Some, O Little, or, O None? } GO TO NEXT PLANT OR O DON'T KNOW } Q69 ON PAGE 50

68a. Please look at this map and mark the areas where the (PLANT) were gathered inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

68b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.

IF MORE THAN ONE AREA, ASK: How much of the (PLANT) (you/SUBJECT) (ate/(or) made tea from) was gathered from this area? (POINT TO AREA ON THE MAP) Was it most, half, some, or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: ____ _____ _____ _____ _____	O	O	O	O	O
Area 2: ____ _____ _____ _____ _____	O	O	O	O	O
Area 3: ____ _____ _____ _____ _____	O	O	O	O	O
Area 4: ____ _____ _____ _____ _____	O	O	O	O	O
Area 5: ____ _____ _____ _____ _____	O	O	O	O	O

GO TO NEXT PLANT ON CONTINUATION SHEET
OR Q69 ON PAGE 50.

69. In the past 12 months, did (you/SUBJECT) eat **any** Soapberries or drink tea made from any part of the Soapberry plant also known as Foamberry, Russet Buffalo-Berry or Soopolallie (SUE-PO-LAL-LEE)? This includes fresh berries as well as Indian ice cream, juice, jams, pies or cobblers.

O YES
O NO (GO TO 77 ON PAGE 52)
O NOT SURE (GO TO 77 ON PAGE 52)

70. Did (you/SUBJECT) eat the Soapberries, drink tea made from the plant, or both?	O EAT O DRINK TEA O BOTH O DON'T KNOW
71. In the past 12 months, how often did (you/SUBJECT) eat Indian ice cream made from Soapberries? Was it:	O Every day O More than once a week, but not every day O Once a week O More than once a month, but not every week O Once a month, O Less than once a month, or O Never? O DON'T KNOW
72. How often did (you/SUBJECT) drink juice made from Soapberries? Was it:	O Every day O More than once a week, but not every day O Once a week O More than once a month, but not every week O Once a month, O Less than once a month, or O Never? O DON'T KNOW
73. Which parts (did (you/did SUBJECT) (eat/(or) use to make tea)? Please do not include Indian ice cream or juice that we just talked about. Was it the:	O Berry or fruit, or O Some other part? (SPECIFY:)_____ _____ _____ O DON'T KNOW
74. In the past 12 months, how often did (you/SUBJECT) (eat/(or) make tea from) the Soapberries? Was it: **(USE SHOW CARD FQ1)**	O Every day O More than once a week, but not every day O Once a week O More than once a month, but not every week O Once a month, or O Less than once a month? O DON'T KNOW
75. In the past 12 months, how much of the Soapberries (you/SUBJECT) (ate/(or) made tea from) was gathered in the local area? (SHOW MAP) Was it: **(USE SHOW CARD FQ2)**	O All, O Most, O Half, O Some, O Little, or, O None? (GO TO Q77 ON PAGE 52) O DON'T KNOW

76a. Please look at this map and mark the areas where the Soapberries were gathered from inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

76b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.

IF MORE THAN ONE AREA, ASK:
How much of the Soapberries (you/SUBJECT) (ate/(or) made tea from) was gathered from this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some, or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: ____ _____ _____ _____ _____	O	O	O	O	O
Area 2: ____ _____ _____ _____ _____	O	O	O	O	O
Area 3: ____ _____ _____ _____ _____	O	O	O	O	O
Area 4: ____ _____ _____ _____ _____	O	O	O	O	O
Area 5: ____ _____ _____ _____ _____	O	O	O	O	O

GO TO Q77 ON NEXT PAGE.

77. In the past 12 months, did (you/SUBJECT) eat **any** Wild Rose or drink tea from any part of the Wild Rose on any occasions other than funerals or mourning ceremonies? This includes rose hips or any other part of the plant.

O YES
O NO (GO TO Q83 ON NEXT PAGE)
O NOT SURE (GO TO Q83 ON NEXT PAGE)

78. Did (you/SUBJECT) eat the Wild Rose, drink tea made from the wild rose, or both?	O EAT O DRINK TEA O BOTH O DON'T KNOW
79. Which parts (did you/ did SUBJECT) (eat/(or) use to make tea)? Was it the: (RECORD ALL THAT APPLY)	O Rose hips, or O Some other part? (SPECIFY:)_____ _____ _____ O DON'T KNOW
80. In the past 12 months, how often did (you/SUBJECT) (eat/(or) make tea from) Wild Rose? Was it: **(USE SHOW CARD FQ1)**	O Every day O More than once a week, but not every day O Once a week O More than once a month, but not every week O Once a month, or O Less than once a month? O DON'T KNOW
81. In the past 12 months, how much of the Wild Rose (you/SUBJECT) (ate/(or) made tea from) was gathered in the local area? (SHOW MAP) Was it: **(USE SHOW CARD FQ2)**	O All, O Most, O Half, O Some, O Little, or, O None? } GO TO Q83 ON NEXT PAGE O DON'T KNOW }

82a. Please look at this map and mark the areas where the Wild Rose was gathered from inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

82b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.

IF MORE THAN ONE AREA, ASK: How much of the wild rose (you/SUBJECT) (ate/(or) made from tea) was gathered from this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some, or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: ____ _____ _____ _____ _____	O	O	O	O	O
Area 2: ____ _____ _____ _____ _____	O	O	O	O	O
Area 3: ____ _____ _____ _____ _____	O	O	O	O	O
Area 4: ____ _____ _____ _____ _____	O	O	O	O	O
Area 5: ____ _____ _____ _____ _____	O	O	O	O	O

GO TO Q83 ON NEXT PAGE.

83. In the past 12 months, did (you/SUBJECT) eat **any** type of Sage, such as White Sage or Sagebrush, or drink tea from any part of the Sage plant? This does not include any Sage taken for medicinal reasons.

O YES
O NO (GO TO Q89 ON NEXT PAGE**)**
O NOT SURE (GO TO Q89 ON NEXT PAGE)

84. Did (you/SUBJECT) eat Sage, drink tea made from Sage, or both?	O EAT O DRINK TEA O BOTH O DON'T KNOW
85. Which parts (did you/did SUBJECT) (eat/(or) use to make tea)? Was it the: (RECORD ALL THAT APPLY)	O Leaves, or O Some other part? (SPECIFY:)_____ O DON'T KNOW
86. In the past 12 months, how often did (you/SUBJECT) (eat/(or) make tea from) using Sage? Was it: **(USE SHOW CARD FQ1)**	O Every day O More than once a week, but not every day O Once a week O More than once a month, but not every week O Once a month, or O Less than once a month? O DON'T KNOW
87. In the past 12 months, how much of the Sage (you/SUBJECT) (ate/(or) made tea from) was gathered in the local area? (SHOW MAP) Was it: **(USE SHOW CARD FQ2)**	O All, O Most, O Half, O Some, O Little, or, O None? } GO TO Q89 ON NEXT PAGE O DON'T KNOW }

88a. Please look at this map and mark the areas where the sage was gathered from inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

88b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.

IF MORE THAN ONE AREA, ASK: How much of the sage (you/SUBJECT) (ate/(or) made tea from) was gathered from this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some, or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: ____ _____ _____ _____ _____	O	O	O	O	O
Area 2: ____ _____ _____ _____ _____	O	O	O	O	O
Area 3: ____ _____ _____ _____ _____	O	O	O	O	O
Area 4: ____ _____ _____ _____ _____	O	O	O	O	O
Area 5: ____ _____ _____ _____ _____	O	O	O	O	O

GO TO Q89 ON NEXT PAGE.

89. This question is about the type of moss that is a Lichen **(LI- KIN)** and grows on trees. In the past 12 months, did (you/SUBJECT) eat **any** moss, drink tea from moss, or use moss as a thickener, for example in puddings?

O YES
O NO (GO TO Q95 ON NEXT PAGE)
O NOT SURE (GO TO Q95 ON NEXT PAGE)

90. Did (you/SUBJECT) eat the moss, drink tea made from moss, or both?	O EAT O DRINK TEA O BOTH O DON'T KNOW
91. In the past 12 months, how often did (you/SUBJECT) eat dishes, such as pudding, that were thickened with moss? Was it:	O Every day O More than once a week, but not every day O Once a week O More than once a month, but not every week O Once a month, O Less than once a month, or O Never? O DON'T KNOW
92. Other than as a thickener, in the past 12 months, how often did (you/SUBJECT) (eat/(or) make tea from) moss? Was it:	O Every day O More than once a week, but not every day O Once a week O More than once a month, but not every week O Once a month, O Less than once a month, or O Never? O DON'T KNOW
93. Thinking about the moss (you/SUBJECT) (ate/used as a thickener/(or) made tea from) in the past 12 months, how much of it was gathered in the local area? (SHOW MAP) Was it: **(USE SHOW CARD FQ2)**	O All, O Most, O Half, O Some, O Little, or, O None? } GO TO Q95 ON NEXT PAGE O DON'T KNOW } GO TO Q95 ON NEXT PAGE

94a. Please look at this map and mark the areas where the moss was gathered from inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

94b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.

IF MORE THAN ONE AREA, ASK: How much of the moss (you/SUBJECT) (ate/(or) made tea from) was gathered from this area? (POINT TO AREA ON THE MAP) Was it most, half, some, or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: ____ _____ _____ _____ _____	O	O	O	O	O
Area 2: ____ _____ _____ _____ _____	O	O	O	O	O
Area 3: ____ _____ _____ _____ _____	O	O	O	O	O
Area 4: ____ _____ _____ _____ _____	O	O	O	O	O
Area 5: ____ _____ _____ _____ _____	O	O	O	O	O

GO TO Q95 ON NEXT PAGE.

95. In the past 12 months, did (you/SUBJECT) eat **any** Wild Mushrooms, which include Morels, Puffballs, and Shaggy Manes, or drink tea made from any part of the Wild Mushroom?

O YES
O NO (GO TO Q101 ON NEXT PAGE)
O NOT SURE (GO TO Q101 ON NEXT PAGE)

96. Did (you/SUBJECT) eat the Mushroom, drink tea made from the Mushroom, or both?	O EAT O DRINK TEA O BOTH O DON'T KNOW
97. In the past 12 months, which of these (did you/ did SUBJECT) (eat/(or) use to make tea)? Was it: (RECORD ALL THAT APPLY)	O Morels, O Puffballs, O Shaggy manes, or O Some other wild mushroom? (SPECIFY:)_____ _____ _____ O DON'T KNOW
98. In the past 12 months, how often did (you/SUBJECT) (eat/(or) make tea from) Wild Mushrooms? Was it: **(USE SHOW CARD FQ1)**	O Every day O More than once a week, but not every day O Once a week O More than once a month, but not every week O Once a month, or O Less than once a month? O DON'T KNOW
99. How much of the Wild Mushrooms (you/SUBJECT) (ate/(or) made tea from) were gathered in the local area? (SHOW MAP) Was it: **(USE SHOW CARD FQ2)**	O All, O Most, O Half, O Some, O Little, or, O None? } GO Q101 ON NEXT PAGE O DON'T KNOW }

100a. Please look at this map and mark the areas where the wild mushrooms were gathered from inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

100b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.

IF MORE THAN ONE AREA, ASK: How much of the wild mushrooms (you/SUBJECT) (ate/(or) made tea from) were gathered from this area? (POINT TO AREA ON THE MAP) Was it most, half, some, or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: ____ _____ _____ _____ _____	O	O	O	O	O
Area 2: ____ _____ _____ _____ _____	O	O	O	O	O
Area 3: ____ _____ _____ _____ _____	O	O	O	O	O
Area 4: ____ _____ _____ _____ _____	O	O	O	O	O
Area 5: ____ _____ _____ _____ _____	O	O	O	O	O

GO TO Q101 ON NEXT PAGE.

101. In the past 12 months, did (you/SUBJECT) eat **any** Pine Nuts, also known as Pinyon (PIN-YAWN) nuts or drink tea made from any part of the Pine Nut?

O YES
O NO (GO TO Q106 ON NEXT PAGE)
O NOT SURE (GO TO Q106 ON NEXT PAGE)

102. Did (you/SUBJECT) eat the Pine Nuts, drink tea made from the pine nuts, or both?	O EAT O DRINK TEA O BOTH O DON'T KNOW
103. In the past 12 months, how often did (you/SUBJECT) (eat/(or) make tea) from the Pine Nuts? Was it: **(USE SHOW CARD FQ1)**	O Every day O More than once a week, but not every day O Once a week O More than once a month, but not every week O Once a month, or O Less than once a month? O DON'T KNOW
104. In the past 12 months, how much of the Pine Nut (you/SUBJECT) (ate/(or) made tea from) was gathered in the local area? (SHOW MAP) Was it: **(USE SHOW CARD FQ2)**	O All, O Most, O Half, O Some, O Little, or, O None? } GO TO O DON'T KNOW } Q106 ON NEXT PAGE

105a. Please look at this map and mark the areas where the Pine Nuts were gathered from inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

105b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.

IF MORE THAN ONE AREA, ASK: How much of the Pine Nuts (you/SUBJECT) (ate/(or) made tea from) was gathered from this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some, or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: ____ _____ _____ _____ _____	O	O	O	O	O
Area 2: ____ _____ _____ _____ _____	O	O	O	O	O
Area 3: ____ _____ _____ _____ _____	O	O	O	O	O
Area 4: ____ _____ _____ _____ _____	O	O	O	O	O
Area 5: ____ _____ _____ _____ _____	O	O	O	O	O

106. In the past 12 months, did (you/SUBJECT) eat **any** Hazelnuts, also known as filberts (FILL-BERTS) or drink tea made from any part of the Hazelnut?

O YES
O NO (GO TO Q111 ON NEXT PAGE)
O NOT SURE (GO TO Q111 ON NEXT PAGE)

107. Did (you/SUBJECT) eat the hazelnuts, drink tea made from the Hazelnuts, or both?	O EAT O DRINK TEA O BOTH O DON'T KNOW
108. In the past 12 months, how often did (you/SUBJECT) (eat/(or) make tea) from the Hazelnuts? Was it: **(USE SHOW CARD FQ1)**	O Every day O More than once a week, but not every day O Once a week O More than once a month, but not every week O Once a month, or O Less than once a month? O DON'T KNOW
109. In the past 12 months, how much of the Hazelnuts (you/SUBJECT) (ate/(or) made tea from) was gathered in the local area? (SHOW MAP) Was it: **(USE SHOW CARD FQ2)**	O All, O Most, O Half, O Some, O Little, or, O None? } GO TO O DON'T KNOW } Q111 ON NEXT PAGE

110a. Please look at this map and mark the areas where the Hazelnuts were gathered from inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

110b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.

IF MORE THAN ONE AREA, ASK: How much of the Hazelnuts (you/SUBJECT) (ate/(or) made tea from) were gathered from this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some, or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: ____ _____ _____ _____ _____	O	O	O	O	O
Area 2: ____ _____ _____ _____ _____	O	O	O	O	O
Area 3: ____ _____ _____ _____ _____	O	O	O	O	O
Area 4: ____ _____ _____ _____ _____	O	O	O	O	O
Area 5: ____ _____ _____ _____ _____	O	O	O	O	O

ANY OTHER PLANTS

111. Not including anything we have already talked about, in the past 12 months, did (you/SUBJECT) eat **any** other plants or drink tea made from any plants that were gathered in the local area?

O YES
O NO (GO TO Q118 ON PAGE 62)
O NOT SURE (GO TO Q118 ON PAGE 62)

112. What are the names of these other plants? (SPECIFY:)

1) _____

2) _____

3) _____

4) _____

5) _____

6) _____

FIRST OTHER PLANT

O (SPECIFY:) _____

113. Did (you/SUBJECT) eat the (PLANT), drink tea made from the (PLANT), or both?	O EAT O DRINK TEA O BOTH O DON'T KNOW
114. Which parts did (you/SUBJECT) (eat/(or) use to make tea)? Was it the: (RECORD ALL THAT APPLY)	O Whole plant, (GO TO Q115) O Bulb, O Berry or Fruit, O Leaves, O Seeds or nuts, O Shoots, O Stems, O Buds or flowers, or O Some other part? (SPECIFY:)_____ _____ _____ O DON'T KNOW
115. In the past 12 months, how often did (you/SUBJECT) (eat/(or) make tea from) from the (PLANT)? Was it: **(USE SHOW CARD FQ1)**	O Every day O More than once a week, but not every day O Once a week O More than once a month, but not every week O Once a month, or O Less than once a month? O DON'T KNOW
116.Thinking about the (PLANT) (you/SUBJECT) (ate/(or) made tea from) in the past 12 months, how much of it was gathered in the local area? (SHOW MAP) Was it: **(USE SHOW CARD FQ2)**	O All, O Most, O Half, O Some, O Little, or, O None? } GO TO NEXT PLANT OR O DON'T KNOW } Q118 ON PAGE 62

117a. Please look at this map and mark the areas where the (PLANT) was gathered from inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

117b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.

IF MORE THAN ONE AREA, ASK: How much of the (PLANT) (you/SUBJECT) (ate/(or) made tea from) was gathered from this area? (POINT TO AREA ON THE MAP) Was it most, half, some, or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: ____ _____ _____ _____ _____	O	O	O	O	O
Area 2: ____ _____ _____ _____ _____	O	O	O	O	O
Area 3: ____ _____ _____ _____ _____	O	O	O	O	O
Area 4: ____ _____ _____ _____ _____	O	O	O	O	O
Area 5: ____ _____ _____ _____ _____	O	O	O	O	O

GO TO NEXT PLANT OR Q118 ON PAGE 62.

SECOND OTHER PLANT

O (SPECIFY:) _____

113. Did (you/SUBJECT) eat the (PLANT), drink tea made from the (PLANT), or both?	O EAT O DRINK TEA O BOTH O DON'T KNOW
114. Which parts did (you/SUBJECT) (eat/(or) use to make tea)? Was it the: (RECORD ALL THAT APPLY)	O Whole plant, (GO TO Q115) O Bulb, O Berry or Fruit, O Leaves, O Seeds or nuts, O Shoots, O Stems, O Buds or flowers, or O Some other part? (SPECIFY:)_____ _____ _____ O DON'T KNOW
115. In the past 12 months, how often did (you/SUBJECT) (eat/(or) make tea from) from the (PLANT)? Was it: **(USE SHOW CARD FQ1)**	O Every day O More than once a week, but not every day O Once a week O More than once a month, but not every week O Once a month, or O Less than once a month? O DON'T KNOW
116. Thinking about the (PLANT) (you/SUBJECT) (ate/(or) made tea from) in the past 12 months, how much of it was gathered in the local area? (SHOW MAP) Was it: **(USE SHOW CARD FQ2)**	O All, O Most, O Half, O Some, O Little, or, O None? } GO TO Q118 ON NEXT PAGE O DON'T KNOW } GO TO Q118 ON NEXT PAGE

117a. Please look at this map and mark the areas where the (PLANT) was gathered from inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

117b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.

IF MORE THAN ONE AREA, ASK: How much of the (PLANT) (you/SUBJECT) (ate/(or) made tea from) was gathered from this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some, or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: ____ _____ _____ _____ _____	O	O	O	O	O
Area 2: ____ _____ _____ _____ _____	O	O	O	O	O
Area 3: ____ _____ _____ _____ _____	O	O	O	O	O
Area 4: ____ _____ _____ _____ _____	O	O	O	O	O
Area 5: ____ _____ _____ _____ _____	O	O	O	O	O

GO TO NEXT OTHER PLANT CONTINUATION SHEET OR GO TO Q113 ON NEXT PAGE.

OK, the last thing I want to ask (you/SUBJECT) about how is your food was prepared over the past 12 months.

118. Over the past 12 months, did (you/SUBJECT) use any natural materials from the local area as fuel to pit cook, smoke, or dry any plants, fish, or meat that you ate?	O YES O NO (GO TO Q120) O DON'T KNOW (GO TO Q120)
119. Which of the following materials were used to cook, smoke or dry the food? Was it: (RECORD ALL THAT APPLY)	O Alder O Apple Wood O Aspen O Cottonwood O Reed Canary Grass O Tule O Willow O Any other material? (SPECIFY): _____ _____ _____ O DON'T KNOW
120. Over the past 12 months, did (you/SUBJECT) use any natural materials from the local area to wrap or stuff food?	O YES O NO (GO TO CLOSING) O DON'T KNOW (GO TO CLOSING)
121. Which of the following materials did (you/SUBJECT) use to wrap or stuff (your/his/her) food? Was it: (RECORD ALL THAT APPLY)	O Cattail, O Ferns, O Fir, O Reed Canary Grass, O Skunk Cabbage, O Sumac, O Tule, or O Any other material? (SPECIFY): _____ _____ _____ O DON'T KNOW

CLOSING: Thank you for your taking the time to answer these questions.

IF RESPONDENT IS AGE 14 AND OVER
CONTINUE TO THE ReUP QUESTIONNAIRE

Upper Columbia River Resources Survey

RESOURCE USE AND PRACTICES (ReUP) QUESTIONNAIRE

IS SUBJECT 14 OR OLDER |___| YES, GO TO Q1

|___| NO (STOP, DO NOT COMPLETE INTERVIEW)

Date:|__|__| / |__|__| / |2|0|__|__|
M M D D Y Y Y Y

Staff ID: |___|___|___||___|

Place Subject ID Label Here

|___|___|___||___||___|__|___||___|__|

This interview includes questions about your use of natural resources and local activities. Together with the other information we're collecting for this survey, your answers will help us learn about how people living in this area make use of their local resources.

First, I am going to ask you about three different types of outdoor activities: those activities that (you do/SUBJECT does) in the water such as swimming, activities on the water such as boating and fishing, and activities on the land such as hunting, gathering and camping.

ACTIVITIES IN THE WATER

First, I would like to ask about (your/SUBJECT's) activities in the water throughout the year.

1. Over the past 12 months, did (you/SUBJECT) take part in any activities in natural bodies of water? This includes swimming, wading, gathering plants, hunting or fishing when standing or wading in streams, creeks, rivers, or lakes. Do not include fishing from a boat, kayaking, canoeing or other activities that are on, but not in, the water.

   O YES
   O NO (GO TO Q7 ON PAGE 5)
   O DON'T KNOW (GO TO Q7 ON PAGE 5)

2. What kinds of activities in the water (have you/has SUBJECT) done in the past 12 months? (RECORD ALL THAT APPLY)

   O SWIMMING
   O WADING
   O GATHERING PLANTS
   O HUNTING
   O FISHING
   O OTHER (SPECIFY)_____

INTERVIEWER: ALL ACTIVITIES LISTED IN Q2 SHOULD BE "IN THE WATER". DO NOT RECORD ACTIVITIES "ON THE WATER" OR "ON THE LAND". IF THE PARTICIPANT OFFERS ACTIVITIES "ON THE WATER" OR "ON THE LAND", REMIND HIM/HER THAT YOU ARE ONLY INTERESTED IN ACTIVITIES "IN THE WATER".

3. Did (you/SUBJECT) take part in these activities in the water anywhere in this area? (SHOW MAP)

   O YES
   O NO (GO TO Q7 ON PAGE 5)
   O DON'T KNOW (GO TO Q7 ON PAGE 5)

Now I'd like to ask you how much time (you/SUBJECT) spent doing these activities in the water in this area during different times of the year. First, let's start with winter.

	a. WINTER/December, January, and February	b. SPRING/March, April, and May
4. During the (SEASON) months of (MONTHS), what is the total number of days that (you/SUBJECT) spent time in the water? Was it: **(USE SHOW CARD RP1)**	O None, (GO TO Q4b) O 1-7 days, O 8-30 days, O 31-60 days, 0 61-90 days, or O Every day? O DON'T KNOW	O None, (GO TO Q4c) O 1-7 days, O 8-30 days, O 31-60 days, 0 61-90 days, or O Every day? O DON'T KNOW
5. On the days (you/SUBJECT) took part in these activities during the (SEASON), how many hours per day did (you/SUBJECT) usually spend doing them? Was it: **(USE SHOW CARD RP2)**	O Less than 1 hour, O 1-3 hours, O 4-7 hours, or O 8 or more hours? O DON'T KNOW	O Less than 1 hour, O 1-3 hours, O 4-7 hours, or O 8 or more hours? O DON'T KNOW
6. OK, now I'd like to ask about where you spent time in the water. Please look at this map and mark the areas where (you/SUBJECT) did these things in the (SEASON). (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE ENTER "999")	1. _____ _____ _____ ____ 2. _____ _____ _____ ____ 3. _____ _____ _____ ____ 4. _____ _____ _____ ____ 5. _____ _____ _____ ____ 6. _____ _____ _____ ____ (GO TO Q4b)	1. _____ _____ _____ ____ 2. _____ _____ _____ ____ 3. _____ _____ _____ ____ 4. _____ _____ _____ ____ 5. _____ _____ _____ ____ 6. _____ _____ _____ ____ (GO TO Q4c)

	c. SUMMER/June, July, and August	d. FALL/September, October, and November
4. During the (SEASON) months of (MONTHS), what is the total number of days that (you/SUBJECT) spent time in the water? Was it: **(USE SHOW CARD RP1)**	O None, (GO TO Q4d) O 1-7 days, O 8-30 days, O 31-60 days, 0 61-90 days, or O Every day? O DON'T KNOW	O None, (GO TO Q7) O 1-7 days, O 8-30 days, O 31-60 days, 0 61-90 days, or O Every day? O DON'T KNOW
5. On those days (you/SUBJECT) took part in these activities during the (SEASON), how many hours per day did (you/SUBJECT) usually spend doing them? **(USE SHOW CARD RP2)**	O Less than 1 hour, O 1-3 hours, O 4-7 hours, or O 8 or more hours? O DON'T KNOW	O Less than 1 hour, O 1-3 hours, O 4-7 hours, or O 8 or more hours? O DON'T KNOW
6. OK, now I would like to ask about where (you/SUBJECT) spent time in the water. Please look at this map and mark the areas where (you/SUBJECT) did these things in the (SEASON). (ENTER ALL ZONES MARKED. IF DON'T KNOW OR REFUSE ENTER "999")	1. _____ _____ _____ ____ 2. _____ _____ _____ ____ 3. _____ _____ _____ ____ 4. _____ _____ _____ ____ 5. _____ _____ _____ ____ 6. _____ _____ _____ ____	1. _____ _____ _____ ____ 2. _____ _____ _____ ____ 3. _____ _____ _____ ____ 4. _____ _____ _____ ____ 5. _____ _____ _____ ____ 6. _____ _____ _____ ____

	(GO TO Q4d)	(GO TO Q7)

ACTIVITIES ON THE WATER

7. Over the past 12 months, did (you/SUBJECT) take part in activities on the water, such as kayaking, canoeing, fishing from a boat, or other activities on the water? Do not include activities in the water.

O YES
O NO (GO TO Q13 ON PAGE 7)
O DON'T KNOW (GO TO Q13 ON PAGE 7)

8. What kinds of activities on the water (have you/has SUBJECT) done in the past 12 months? (RECORD ALL THAT APPLY)

O KAYAKING
O CANOEING
O FISHING FROM A BOAT
O OTHER (SPECIFY)_____

INTERVIEWER: ALL ACTIVITIES LISTED IN Q8 SHOULD BE "ON THE WATER". DO NOT RECORD ACTIVITIES "IN THE WATER" OR "ON THE LAND". IF THE PARTICIPANT OFFERS ACTIVITIES "IN THE WATER" OR "ON THE LAND", REMIND HIM/HER THAT YOU ARE ONLY INTERESTED IN ACTIVITIES "ON THE WATER".

9. Did (you/SUBJECT) take part in these activities on the water anywhere in this area? (SHOW MAP)

O YES
O NO (GO TO Q13 ON PAGE 7)
O DON'T KNOW (GO TO Q13 ON PAGE 7)

Now I'd like to ask about the time (you/SUBJECT) spent doing these activities on the water in this area during different times of the year. First let's start with winter.

	a. WINTER/December, January, and February	b. SPRING/March, April, and May
10. During the (SEASON) months of (MONTHS), what is the total number of days that (you/SUBJECT) spent time doing these things on the water? Was it: **(USE SHOW CARD RP1)**	O None, (GO TO Q10b) O 1-7 days, O 8-30 days, O 31-60 days, 0 61-90 days, or O Every day? O DON'T KNOW	O None, (GO TO Q10c) O 1-7 days, O 8-30 days, O 31-60 days, 0 61-90 days, or O Every day? O DON'T KNOW
11. On the days (you/SUBJECT) took part in these activities during the (SEASON), how many hours per day did (you/SUBJECT) usually spend doing them? **(USE SHOW CARD RP2)**	O Less than 1 hour, O 1-3 hours, O 4-7 hours, or O 8 or more hours? O DON'T KNOW	O Less than 1 hour, O 1-3 hours, O 4-7 hours, or O 8 or more hours? O DON'T KNOW
12. OK, now I'd like to ask about where (you/SUBJECT) spent time on the water. Please look at this map and mark the areas where (you/SUBJECT) did these things in the (SEASON). (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE ENTER "999")	1. _____ _____ _____ ____ 2. _____ _____ _____ ____ 3. _____ _____ _____ ____ 4. _____ _____ _____ ____ 5. _____ _____ _____ ____ 6. _____ _____ _____ ____ (GO TO Q10b)	1. _____ _____ _____ ____ 2. _____ _____ _____ ____ 3. _____ _____ _____ ____ 4. _____ _____ _____ ____ 5. _____ _____ _____ ____ 6. _____ _____ _____ ____ (GO TO Q10c)

	c. SUMMER/June, July, and August	d. FALL/September, October, and November
10. During the (SEASON) months of (MONTHS), what is the total number of days that (you/SUBJECT) spent time doing these things on the water? Was it: **(USE SHOW CARD RP1)**	O None, (GO TO Q10d) O 1-7 days, O 8-30 days, O 31-60 days, 0 61-90 days, or O Every day? O DON'T KNOW	O None, (GO TO Q13) O 1-7 days, O 8-30 days, O 31-60 days, 0 61-90 days, or O Every day? O DON'T KNOW
11. On the days (you/SUBJECT) took part in these activities during the (SEASON), how many hours per day did (you/SUBJECT) usually spend doing them? **(USE SHOW CARD RP2)**	O Less than 1 hour, O 1-3 hours, O 4-7 hours, or O 8 or more hours? O DON'T KNOW	O Less than 1 hour, O 1-3 hours, O 4-7 hours, or O 8 or more hours? O DON'T KNOW
12. OK, now I'd like to ask about where (you/SUBJECT) spent time on the water. Please look at this map and mark the areas where (you/SUBJECT) did these things in the (SEASON). (ENTER ALL ZONES MARKED. IF	1. _____ _____ _____ ____ 2. _____ _____ _____ ____ 3. _____ _____ _____ ____ 4. _____ _____ _____ ____ 5. _____ _____ _____ ____ 6. _____ _____ _____ ____	1. _____ _____ _____ ____ 2. _____ _____ _____ ____ 3. _____ _____ _____ ____ 4. _____ _____ _____ ____ 5. _____ _____ _____ ____ 6. _____ _____ _____ ____

RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE ENTER "999")	(GO TO Q10d)	(GO TO Q13)

ACTIVITIES ON THE LAND

13. Over the past 12 months, did (you/SUBJECT) go hunting, root digging or gathering other natural materials, or take part in any other outdoor activities on the land, such as hiking, gardening or camping? Do not include any swimming or boating activities that we just talked about.

O YES
O NO (GO TO Q19 on Page 9)
O DON'T KNOW (GO TO Q19 on Page 9)

14. What kinds of outdoor activities on the land (have you/has SUBJECT) done in the past 12 months? (RECORD ALL THAT APPLY)

O HUNTING
O ROOT DIGGING
O GATHERING NATURAL MATERIALS
O HIKING
O GARDENING
O CAMPING
O OTHER (SPECIFY)_____

INTERVIEWER: ALL ACTIVITIES LISTED IN Q14 SHOULD BE "ON THE LAND". DO NOT RECORD ACTIVITIES "IN THE WATER" OR "ON THE WATER". IF THE PARTICIPANT OFFERS ACTIVITIES "IN THE WATER" OR "ON THE WATER", REMIND HIM/HER THAT YOU ARE ONLY INTERESTED IN ACTIVITIES "ON THE LAND".

15. Did (you/SUBJECT) take part in these outdoor activities anywhere in this area? (SHOW MAP)

O YES
O NO (GO TO Q19 ON PAGE 9)
O DON'T KNOW (GO TO Q19 ON PAGE 9)

Now I would like to ask about the time (you/SUBJECT) spent doing these outdoor activities in this area during different times of the year. First, let's start with winter.

	a. WINTER/December, January, and February	b. SPRING/March, April, and May
16. During the (SEASON) months of (MONTHS), what is the total number of days that (you/SUBJECT) took part in any of these outdoor activities? Was it: **(USE SHOW CARD RP1)**	O None, (GO TO Q16b) O 1-7 days, O 8-30 days, O 31-60 days, 0 61-90 days, or O Every day? O DON'T KNOW	O None, (GO TO Q16c) O 1-7 days, O 8-30 days, O 31-60 days, 0 61-90 days, or O Every day? O DON'T KNOW
17. On the days (you/SUBJECT) took part in these activities during the (SEASON), how many hours per day did (you/SUBJECT) usually spend doing them? **(USE SHOW CARD RP2)**	O Less than 1 hour, O 1-3 hours, O 4-7 hours, or O 8 or more hours? O DON'T KNOW	O Less than 1 hour, O 1-3 hours, O 4-7 hours, or O 8 or more hours? O DON'T KNOW
18. OK, now I'd like to ask about where (you/SUBJECT) took part in these outdoor activities. Please look at this map and mark the areas where (you/SUBJECT) did these things in the (SEASON). (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE ENTER "999")	1. _____ _____ _____ ____ 2. _____ _____ _____ ____ 3. _____ _____ _____ ____ 4. _____ _____ _____ ____ 5. _____ _____ _____ ____ 6. _____ _____ _____ ____ (GO TO Q16b)	1. _____ _____ _____ ____ 2. _____ _____ _____ ____ 3. _____ _____ _____ ____ 4. _____ _____ _____ ____ 5. _____ _____ _____ ____ 6. _____ _____ _____ ____ (GO TO Q16c)

	c. SUMMER/June, July, and August	d. FALL/September, October, and November
16. During the (SEASON) months of (MONTHS), what is the total number of days that (you/SUBJECT) took part in any of these outdoor activities? Was it: **(USE SHOW CARD RP1)**	O None, (GO TO Q16d) O 1-7 days, O 8-30 days, O 31-60 days, 0 61-90 days, or O Every day? O DON'T KNOW	O None, (GO TO Q19) O 1-7 days, O 8-30 days, O 31-60 days, 0 61-90 days, or O Every day? O DON'T KNOW
17. On the days (you/SUBJECT) took part in these activities during the (SEASON), how many hours per day did (you/SUBJECT) usually spend doing them? **(USE SHOW CARD RP2)**	O Less than 1 hour, O 1-3 hours, O 4-7 hours, or O 8 or more hours? O DON'T KNOW	O Less than 1 hour, O 1-3 hours, O 4-7 hours, or O 8 or more hours? O DON'T KNOW
18. OK, now I'd like to ask about where (you/SUBJECT) did these outdoor activities. Please look at this map and mark the areas where (you/SUBJECT) did these things in the (SEASON). (ENTER ALL ZONES MARKED. IF	1. _____ _____ _____ ____ 2. _____ _____ _____ ____ 3. _____ _____ _____ ____ 4. _____ _____ _____ ____ 5. _____ _____ _____ ____ 6. _____ _____ _____ ____	1. _____ _____ _____ ____ 2. _____ _____ _____ ____ 3. _____ _____ _____ ____ 4. _____ _____ _____ ____ 5. _____ _____ _____ ____ 6. _____ _____ _____ ____

RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE ENTER "999")	(GO TOQ16d)	(GO TO Q19)

MATERIALS USED FOR WEAVING

19. The next questions are about weaving, carving and tool making. Some people carve or shape bone, antler or wood, or use natural resources to weave things like mats, baskets, fish nets, or baby boards. Over the past 12 months, did (you/SUBJECT) prepare or use any natural materials to weave or carve? (IF NEEDED:) By "prepare" we mean to cut, soak, mellow, split, thin, break, smoke or tan the materials prior to using them.

O YES
O NO (GO TO Q33 ON PAGE 19)
O DON'T KNOW (GO TO Q33 ON PAGE 19)

20. What kinds of things (did you/did SUBJECT) weave or carve over the past 12 months? (RECORD ALL THAT APPLY)

O MATS
O BASKETS
O FISH NETS
O BABY BOARDS
O OTHER (SPECIFY)_____

21. Did any of the natural materials that (you/SUBJECT) used come from anywhere in this area? (SHOW MAP)

O YES
O NO (GO TO Q33 ON PAGE 19)
O DON'T KNOW (GO TO Q33 ON PAGE 19)

22.	In the past 12 months, did (you/SUBJECT) prepare or use animal parts to weave or carve things?	O YES O NO (GO TO Q28 ON PAGE 11) O DON'T KNOW (GO TO Q28 ON PAGE 11)
23.	Which parts did (you/SUBJECT) use? Did (you/he/she) use:	
	a. Antlers?	O YES From which animals? _____ O NO O DON'T KNOW
	b. Bones?	O YES From which animals? _____ O NO O DON'T KNOW
	c. Bladders?	O YES From which animals? _____ O NO O DON'T KNOW
	d. Brains?	O YES From which animals? _____ O NO O DON'T KNOW
	e. Feathers?	O YES From which animals? _____ O NO O DON'T KNOW
	f. Hides?	O YES From which animals? _____ O NO O DON'T KNOW
	g. Hooves?	O YES From which animals? _____ O NO O DON'T KNOW
	h. Sinew?	O YES From which animals? _____ O NO O DON'T KNOW
	i. Stomachs?	O YES From which animals? _____ O NO O DON'T KNOW
	j. Teeth?	O YES From which animals? _____ O NO O DON'T KNOW
	k. Any other parts? (SPECIFY) [ ]	O YES From which animals? _____ O NO O DON'T KNOW

24. Did (you/SUBJECT) ever put the (MATERIAL) in (your/his/her) mouth when working with it?	O YES O NO O DON'T KNOW
25. Over the past 12 months, how many days did (you/SUBJECT) prepare or use these animal parts for weaving or carving? Was it: **(USE SHOW CARD RP3)**	O Less than 10 days, O 10-30 days, O 31-60 days, O 61-90 days, or O More than 90 days? O DON'T KNOW
26. On the days (you/SUBJECT) worked with animal parts, how many hours per day did (you/he/she) usually spend working with them? Was it: **(USE SHOW CARD RP2)**	O Less than 1 hour, O 1-3 hours, O 4-7 hours, O 8 or more hours? O DON'T KNOW

27a. Please look at this map and mark the areas where the animal parts came from inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE ENTER "999".)

27b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.
IF MORE THAN ONE AREA, ASK: How much of the animal parts (you/SUBJECT) worked with came from this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: _____ _____ _____ _____ _____	O	O	O	O	O
Area 2: _____ _____ _____ _____ _____	O	O	O	O	O
Area 3: _____ _____ _____ _____ _____	O	O	O	O	O
Area 4: _____ _____ _____ _____ _____	O	O	O	O	O
Area 5: _____ _____ _____ _____ _____	O	O	O	O	O

28. Over the past 12 months, did (you/SUBJECT) prepare or use any of the following materials to weave or carve things? (REPEAT QUESTION EVERY 3RD OR 4TH ITEM)

		YES	NO	DK
a.	Red Willow?	O	O	O
b.	Gray Willow?	O	O	O
c.	Green Willow?	O	O	O
d.	Reed Canary Grass?	O	O	O
e.	Tule? (TWO-LEE)	O	O	O
f.	Bunchgrass?	O	O	O
g.	Cattails?	O	O	O
h.	Birch Bark?	O	O	O
i.	Cedar Bark?	O	O	O
j.	Cedar Root?	O	O	O
k.	Sumac? (SUE-MAC)	O	O	O
l.	Indian Hemp?	O	O	O
m.	Wild Rose?	O	O	O
n.	Syringa? (SIR-IN-GA)	O	O	O
o.	Ocean Spray?	O	O	O
p.	Pine Needles?	O	O	O
q.	Cottonwood?	O	O	O
r.	Fir?	O	O	O
s.	Maple?	O	O	O
t.	Yew? (YOU)	O	O	O
u.	Any other materials?	O	O	O

(SPECIFY) [ ]

(SPECIFY) [ ]

(SPECIFY) [ ]

ASK Q29 –32b FOR EACH "YES" RESPONSE ABOVE.
RECORD ONE MATERIAL USED FOR
EACH OF THE NEXT PAGES.

WEAVING/CARVING MATERIAL # 1

- ☐ a. Red Willow
- ☐ b. Gray Willow
- ☐ c. Green Willow
- ☐ d. Reed Canary Grass
- ☐ e. Tule
- ☐ f. Bunchgrass
- ☐ g. Cattails
- ☐ h. Birch Bark
- ☐ i. Cedar Bark
- ☐ j. Cedar Root
- ☐ k. Sumac
- ☐ l. Indian Hemp
- ☐ m. Wild Rose
- ☐ n. Syringa
- ☐ o. Ocean Spray
- ☐ p. Pine Needles
- ☐ q. Cottonwood
- ☐ r. Fir
- ☐ s. Maple
- ☐ t. Yew
- ☐ u. Any other material (SPECIFY) _____

29. Did (you/SUBJECT) ever put the (MATERIAL) in (your/his/her) mouth when working with it?	O YES O NO O DON'T KNOW
30. Over the past 12 months, how many days did (you/SUBJECT) prepare or use (MATERIAL) for weaving or carving? Was it: **(USE SHOW CARD RP3)**	O Less than 10 days, O 10-30 days, O 31-60 days, O 61-90 days, or O More than 90 days? O DON'T KNOW
31. On the days (you/SUBJECT) worked with (MATERIAL) how many hours per day did (you/he/she) usually spend working with it? Was it: **(USE SHOW CARD RP2)**	O Less than 1 hour, O 1-3 hours, O 4-7 hours, O 8 or more hours? O DON'T KNOW

32a. Please look at this map and mark the areas where the (MATERIAL) came from inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

32b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.
IF MORE THAN ONE AREA, ASK: How much of the (MATERIAL) (you/SUBJECT) worked with came from this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: _____ _____ _____ _____ _____	O	O	O	O	O
Area 2: _____ _____ _____ _____ _____	O	O	O	O	O
Area 3: _____ _____ _____ _____ _____	O	O	O	O	O
Area 4: _____ _____ _____ _____ _____	O	O	O	O	O
Area 5: _____ _____ _____ _____ _____	O	O	O	O	O

WEAVING/CARVING MATERIAL # 2

- ☐ a. Red Willow
- ☐ b. Gray Willow
- ☐ c. Green Willow
- ☐ d. Reed Canary Grass
- ☐ e. Tule
- ☐ f. Bunchgrass
- ☐ g. Cattails
- ☐ h. Birch Bark
- ☐ i. Cedar Bark
- ☐ j. Cedar Root
- ☐ k. Sumac
- ☐ l. Indian Hemp
- ☐ m. Wild Rose
- ☐ n. Syringa
- ☐ o. Ocean Spray
- ☐ p. Pine Needles
- ☐ q. Cottonwood
- ☐ r. Fir
- ☐ s. Maple
- ☐ t. Yew
- ☐ u. Any other material

(SPECIFY) ☐

29. Did (you/SUBJECT) ever put the (MATERIAL) in (your/his/her) mouth when working with it?	O YES O NO O DON'T KNOW
30. Over the past 12 months, how many days did (you/SUBJECT) prepare or use (MATERIAL) for weaving or carving? Was it: **(USE SHOW CARD RP3)**	O Less than 10 days, O 10-30 days, O 31-60 days, O 61-90 days, or O More than 90 days? O DON'T KNOW
31. On the days (you/SUBJECT) worked with (MATERIAL) how many hours per day did (you/he/she) usually spend working with it? Was it: **(USE SHOW CARD RP2)**	O Less than 1 hour, O 1-3 hours, O 4-7 hours, O 8 or more hours? O DON'T KNOW

32a. Please look at this map and mark the areas where the (MATERIAL) came from inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

32b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.
IF MORE THAN ONE AREA, ASK: How much of the (MATERIAL) (you/SUBJECT) worked with came from this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: _____ _____ _____ _____ _____	O	O	O	O	O
Area 2: _____ _____ _____ _____ _____	O	O	O	O	O
Area 3: _____ _____ _____ _____ _____	O	O	O	O	O
Area 4: _____ _____ _____ _____ _____	O	O	O	O	O
Area 5: _____ _____ _____ _____ _____	O	O	O	O	O

WEAVING/CARVING MATERIAL # 3

- ☐ a. Red Willow
- ☐ b. Gray Willow
- ☐ c. Green Willow
- ☐ d. Reed Canary Grass
- ☐ e. Tule
- ☐ f. Bunchgrass
- ☐ g. Cattails
- ☐ h. Birch Bark
- ☐ i. Cedar Bark
- ☐ j. Cedar Root
- ☐ k. Sumac
- ☐ l. Indian Hemp
- ☐ m. Wild Rose
- ☐ n. Syringa
- ☐ o. Ocean Spray
- ☐ p. Pine Needles
- ☐ q. Cottonwood
- ☐ r. Fir
- ☐ s. Maple
- ☐ t. Yew
- ☐ u. Any other material (SPECIFY) ☐

29. Did (you/SUBJECT) ever put the (MATERIAL) in (your/his/her) mouth when working with it?	O YES O NO O DON'T KNOW
30. Over the past 12 months, how many days did (you/SUBJECT) prepare or use (MATERIAL) for weaving or carving? Was it: **(USE SHOW CARD RP3)**	O Less than 10 days, O 10-30 days, O 31-60 days, O 61-90 days, or O More than 90 days? O DON'T KNOW
31. On the days (you/SUBJECT) worked with (MATERIAL) how many hours per day did (you/he/she) usually spend working with it? Was it: **(USE SHOW CARD RP2)**	O Less than 1 hour, O 1-3 hours, O 4-7 hours, O 8 or more hours? O DON'T KNOW

32a. Please look at this map and mark the areas where the (MATERIAL) came from inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

32b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.
IF MORE THAN ONE AREA, ASK: How much of the (MATERIAL) (you/SUBJECT) worked with came from this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: _____ _____ _____ _____ _____	O	O	O	O	O
Area 2: _____ _____ _____ _____ _____	O	O	O	O	O
Area 3: _____ _____ _____ _____ _____	O	O	O	O	O
Area 4: _____ _____ _____ _____ _____	O	O	O	O	O
Area 5: _____ _____ _____ _____ _____	O	O	O	O	O

WEAVING/CARVING MATERIAL # 4

- ☐ a. Red Willow
- ☐ b. Gray Willow
- ☐ c. Green Willow
- ☐ d. Reed Canary Grass
- ☐ e. Tule
- ☐ f. Bunchgrass
- ☐ g. Cattails
- ☐ h. Birch Bark
- ☐ i. Cedar Bark
- ☐ j. Cedar Root
- ☐ k. Sumac
- ☐ l. Indian Hemp
- ☐ m. Wild Rose
- ☐ n. Syringa
- ☐ o. Ocean Spray
- ☐ p. Pine Needles
- ☐ q. Cottonwood
- ☐ r. Fir
- ☐ s. Maple
- ☐ t. Yew
- ☐ u. Any other material (SPECIFY) ☐

29. Did (you/SUBJECT) ever put the (MATERIAL) in (your/his/her) mouth when working with it?	O YES O NO O DON'T KNOW
30. Over the past 12 months, how many days did (you/SUBJECT) prepare or use (MATERIAL) for weaving or carving? Was it: **(USE SHOW CARD RP3)**	O Less than 10 days, O 10-30 days, O 31-60 days, O 61-90 days, or O More than 90 days? O DON'T KNOW
31. On the days (you/SUBJECT) worked with (MATERIAL) how many hours per day did (you/he/she) usually spend working with it? Was it: **(USE SHOW CARD RP2)**	O Less than 1 hour, O 1-3 hours, O 4-7 hours, O 8 or more hours? O DON'T KNOW

32a. Please look at this map and mark the areas where the (MATERIAL) came from inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

32b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.
IF MORE THAN ONE AREA, ASK: How much of the (MATERIAL) (you/SUBJECT) worked with came from this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: _____ _____ _____ _____ _____	O	O	O	O	O
Area 2: _____ _____ _____ _____ _____	O	O	O	O	O
Area 3: _____ _____ _____ _____ _____	O	O	O	O	O
Area 4: _____ _____ _____ _____ _____	O	O	O	O	O
Area 5: _____ _____ _____ _____ _____	O	O	O	O	O

WEAVING/CARVING MATERIAL # 5

- ☐ a. Red Willow
- ☐ b. Gray Willow
- ☐ c. Green Willow
- ☐ d. Reed Canary Grass
- ☐ e. Tule
- ☐ f. Bunchgrass
- ☐ g. Cattails
- ☐ h. Birch Bark
- ☐ i. Cedar Bark
- ☐ j. Cedar Root
- ☐ k. Sumac
- ☐ l. Indian Hemp
- ☐ m. Wild Rose
- ☐ n. Syringa
- ☐ o. Ocean Spray
- ☐ p. Pine Needles
- ☐ q. Cottonwood
- ☐ r. Fir
- ☐ s. Maple
- ☐ t. Yew
- ☐ u. Any other material (SPECIFY) ☐

29. Did (you/SUBJECT) ever put the (MATERIAL) in (your/his/her) mouth when working with it?	O YES O NO O DON'T KNOW
30. Over the past 12 months, how many days did (you/SUBJECT) prepare or use (MATERIAL) for weaving or carving? Was it: **(USE SHOW CARD RP3)**	O Less than 10 days, O 10-30 days, O 31-60 days, O 61-90 days, or O More than 90 days? O DON'T KNOW
31. On the days (you/SUBJECT) worked with (MATERIAL) how many hours per day did (you/he/she) usually spend working with it? Was it: **(USE SHOW CARD RP2)**	O Less than 1 hour, O 1-3 hours, O 4-7 hours, O 8 or more hours? O DON'T KNOW

32a. Please look at this map and mark the areas where the (MATERIAL) came from inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

32b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.
IF MORE THAN ONE AREA, ASK: How much of the (MATERIAL) (you/SUBJECT) worked with came from this area? (POINT TO AREA ON THE MAP) Was it most, half, some or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: _____ _____ _____ _____ _____	O	O	O	O	O
Area 2: _____ _____ _____ _____ _____	O	O	O	O	O
Area 3: _____ _____ _____ _____ _____	O	O	O	O	O
Area 4: _____ _____ _____ _____ _____	O	O	O	O	O
Area 5: _____ _____ _____ _____ _____	O	O	O	O	O

WEAVING/CARVING MATERIAL # 6

IF ADDITIONAL MATERIALS REPORTED, USE CONTINUATION SHEETS.

- ☐ a. Red Willow
- ☐ b. Gray Willow
- ☐ c. Green Willow
- ☐ d. Reed Canary Grass
- ☐ e. Tule
- ☐ f. Bunchgrass
- ☐ g. Cattails
- ☐ h. Birch Bark
- ☐ i. Cedar Bark
- ☐ j. Cedar Root
- ☐ k. Sumac
- ☐ l. Indian Hemp
- ☐ m. Wild Rose
- ☐ n. Syringa
- ☐ o. Ocean Spray
- ☐ p. Pine Needles
- ☐ q. Cottonwood
- ☐ r. Fir
- ☐ s. Maple
- ☐ t. Yew
- ☐ u. Any other material

(SPECIFY) ☐

29. Did (you/SUBJECT) ever put the (MATERIAL) in (your/his/her) mouth when working with it?	O YES O NO O DON'T KNOW
30. Over the past 12 months, how many days did (you/SUBJECT) prepare or use (MATERIAL) for weaving or carving? Was it: **(USE SHOW CARD RP3)**	O Less than 10 days, O 10-30 days, O 31-60 days, O 61-90 days, or O More than 90 days? O DON'T KNOW
31. On the days (you/SUBJECT) worked with (MATERIAL) how many hours per day did (you/he/she) usually spend working with it? Was it: **(USE SHOW CARD RP2)**	O Less than 1 hour, O 1-3 hours, O 4-7 hours, O 8 or more hours? O DON'T KNOW

32a. Please look at this map and mark the areas where the (MATERIAL) came from inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

32b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.
IF MORE THAN ONE AREA, ASK: How much of the (MATERIAL) (you/SUBJECT) worked with came from this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: _____ _____ _____ _____ _____	O	O	O	O	O
Area 2: _____ _____ _____ _____ _____	O	O	O	O	O
Area 3: _____ _____ _____ _____ _____	O	O	O	O	O
Area 4: _____ _____ _____ _____ _____	O	O	O	O	O
Area 5: _____ _____ _____ _____ _____	O	O	O	O	O

MATERIALS USED FOR DYING/COLORING

33. The next questions are about natural materials (you/SUBJECT) may have used for dying. Over the past 12 months, did (you/SUBJECT) use any natural materials to color, dye, or tint fabrics or hides, items for weaving, or other items?

O YES
O NO (GO TO Q41 ON PAGE 23)
O DON'T KNOW (GO TO Q41 ON PAGE 23)

34. What kinds of materials did (you/SUBJECT) dye, color, or tint? (RECORD ALL THAT APPLY)

O FABRICS
O HIDES
O WEAVING MATERIALS
O SOMETHING ELSE (SPECIFY)_____
O DON'T KNOW

35. Did any of the natural materials that (you/SUBJECT) used for dying these items come from anywhere in this area? (SHOW MAP)

O YES
O NO (GO TO Q41 ON PAGE 23)
O DON'T KNOW (GO TO Q41 ON PAGE 23)

36. Over the past 12 months, did (you/SUBJECT) use any of the following when dying, coloring or tinting? (REPEAT QUESTION EVERY FEW ITEMS)

	YES	NO	DK
a. Cedar Bark?	O	O	O
b. Oregon Grape?	O	O	O
c. Black Walnut ?	O	O	O
d. River Birch?	O	O	O
e. Puffball Mushrooms?	O	O	O
f. Any other materials?	O	O	O

(SPECIFY) _____

(SPECIFY) _____

(SPECIFY) _____

ASK Q37 –40b FOR EACH "YES" RESPONSE ABOVE.
RECORD ONE MATERIAL USED FOR
EACH OF THE NEXT PAGES.

DYING/COLORING MATERIAL # 1

☐ a. Cedar Bark
☐ b. Oregon Grape
☐ c. Black Walnut
☐ d. River Birch
☐ e. Puffball Mushrooms
☐ f. Any other material (SPECIFY)_____

37. Did (you/SUBJECT) ever put the (MATERIAL) in (your/his/her) mouth when working with it?	O YES O NO O DON'T KNOW
38. Over the past 12 months, how many days did (you/SUBJECT) use (MATERIAL) for dying, coloring, or tinting? Was it: **(USE SHOW CARD RP3)**	O Less than 10 days, O 10-30 days, O 31-60 days, O 61-90 days, or, O More than 90 days? O DON'T KNOW
39. On the days (you/SUBJECT) worked with the (MATERIAL) how many hours per day did (you/he/she) usually spend working with it? Was it: **(USE SHOW CARD RP2)**	O Less than 1 hour, O 1-3 hours, O 4-7 hours, or, O 8 or more hours? O DON'T KNOW

40a. Please look at this map and mark the areas where the (MATERIAL) came from inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

40b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.
IF MORE THAN ONE AREA, ASK: How much of the (MATERIAL) (you/SUBJECT) worked with came from this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: _____ _____ _____ _____ _____	O	O	O	O	O
Area 2: _____ _____ _____ _____ _____	O	O	O	O	O
Area 3: _____ _____ _____ _____ _____	O	O	O	O	O
Area 4: _____ _____ _____ _____ _____	O	O	O	O	O
Area 5: _____ _____ _____ _____ _____	O	O	O	O	O

DYING/COLORING MATERIAL # 2

☐ a. Cedar Bark
☐ b. Oregon Grape
☐ c. Black Walnut
☐ d. River Birch
☐ e. Puffball Mushrooms
☐ f. Any other material (SPECIFY)_____

37. Did (you/SUBJECT) ever put the (MATERIAL) in (your/his/her) mouth when working with it?	O YES O NO O DON'T KNOW
38. Over the past 12 months, how many days did (you/SUBJECT) use (MATERIAL) for dying, coloring, or tinting? Was it: **(USE SHOW CARD RP3)**	O Less than 10 days, O 10-30 days, O 31-60 days, O 61-90 days, or, O More than 90 days? O DON'T KNOW
39. On the days (you/SUBJECT) worked with the (MATERIAL) how many hours per day did (you/he/she) usually spend working with it? Was it: **(USE SHOW CARD RP2)**	O Less than 1 hour, O 1-3 hours, O 4-7 hours, or, O 8 or more hours? O DON'T KNOW

40a. Please look at this map and mark the areas where the (MATERIAL) came from inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

40b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.
IF MORE THAN ONE AREA, ASK: How much of the (MATERIAL) (you/SUBJECT) worked with came from this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: _____ _____ _____ _____ _____	O	O	O	O	O
Area 2: _____ _____ _____ _____ _____	O	O	O	O	O
Area 3: _____ _____ _____ _____ _____	O	O	O	O	O
Area 4: _____ _____ _____ _____ _____	O	O	O	O	O
Area 5: _____ _____ _____ _____ _____	O	O	O	O	O

DYING/COLORING MATERIAL # 3

IF ADDITIONAL MATERIALS REPORTED, USE CONTINUATION SHEETS.

☐ a. Cedar Bark
☐ b. Oregon Grape
☐ c. Black Walnut
☐ d. River Birch
☐ e. Puffball Mushrooms
☐ f. Any other material (SPECIFY)_____

37. Did (you/SUBJECT) ever put the (MATERIAL) in (your/his/her) mouth when working with it?	O YES O NO O DON'T KNOW
38. Over the past 12 months, how many days did (you/SUBJECT) use (MATERIAL) for dying, coloring, or tinting? Was it: **(USE SHOW CARD RP3)**	O Less than 10 days, O 10-30 days, O 31-60 days, O 61-90 days, or, O More than 90 days? O DON'T KNOW
39. On the days (you/SUBJECT) worked with the (MATERIAL) how many hours per day did (you/he/she) usually spend working with it? Was it: **(USE SHOW CARD RP2)**	O Less than 1 hour, O 1-3 hours, O 4-7 hours, or, O 8 or more hours? O DON'T KNOW

40a. Please look at this map and mark the areas where the (MATERIAL) came from inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

40b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.
IF MORE THAN ONE AREA, ASK: How much of the (MATERIAL) (you/SUBJECT) worked with came from this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: _____ _____ _____ _____ _____	O	O	O	O	O
Area 2: _____ _____ _____ _____ _____	O	O	O	O	O
Area 3: _____ _____ _____ _____ _____	O	O	O	O	O
Area 4: _____ _____ _____ _____ _____	O	O	O	O	O
Area 5: _____ _____ _____ _____ _____	O	O	O	O	O

MATERIALS USED FOR SHELTERS/LARGE OBJECTS

41. The next questions are about the construction of shelters or other large objects. Over the past 12 months, did (you/SUBJECT) prepare or use any natural materials to construct large structures or objects? This includes shelters, sheds, sweat lodges, pit houses, tipis or large objects such as drying racks.

O YES
O NO (GO TO Q55 ON PAGE 31)
O DON'T KNOW (GO TO Q55 ON PAGE 31)

42. What kinds of large structures or objects did (you/SUBJECT) build? (RECORD ALL THAT APPLY)

O SHELTERS
O SHEDS
O SWEAT LODGES
O PIT HOUSES
O TIPIS
O DRYING RACKS
O SOMETHING ELSE (SPECIFY) _____
O DON'T KNOW

43. Did any of the natural materials that (you/SUBJECT) used come from anywhere in this area? (SHOW MAP)

O YES
O NO (GO TO Q55 ON PAGE 31)
O DON'T KNOW (GO TO Q55 ON PAGE 31)

44. In the past 12 months did (you/SUBJECT) prepare or use animal parts when building any large structures or objects?	O YES O NO (GO TO Q50 ON PAGE 26) O DON'T KNOW (GO TO Q50 ON PAGE 26)
45. Which parts did (you/SUBJECT) use? Did (you/he/she) use: a. Antlers? b. Hides? c. Any other parts? (SPECIFY) _____	 O YES From which animals? _____ O NO O DON'T KNOW O YES From which animals? _____ O NO O DON'T KNOW O YES From which animals? _____ O NO O DON'T KNOW
46. Did (you/SUBJECT) ever put the animal parts in (your/his/her) mouth when working with them?	O YES O NO O DON'T KNOW
47. Over the past 12 months, how many days did (you/SUBJECT) prepare or use animal parts for construction? Was it: **(USE SHOW CARD RP3)**	O Less than 10 days, O 10-30 days, O 31-60 days, O 61-90 days, or. O More than 90 days? O DON'T KNOW
48. On the days (you/SUBJECT) worked with animal parts, how many hours per day did (you/he/she) usually spend working with them? Was it: **(USE SHOW CARD RP2)**	O Less than 1 hour, O 1-3 hours, O 4-7 hours, or, O 8 hours or more? O DON'T KNOW

49a. Please look at this map and mark the areas where the animal parts came from inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

49b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.
IF MORE THAN ONE AREA, ASK: How much of the animal parts came from this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: _____ _____ _____ _____ _____	O	O	O	O	O
Area 2: _____ _____ _____ _____ _____	O	O	O	O	O
Area 3: _____ _____ _____ _____ _____	O	O	O	O	O
Area 4: _____ _____ _____ _____ _____	O	O	O	O	O
Area 5: _____ _____ _____ _____ _____	O	O	O	O	O

50. Over the past 12 months, did (you/SUBJECT) prepare or use any of the following when building large structures or objects? (REPEAT QUESTION EVERY 3RD OR 4TH ITEM)

	YES	NO	DK
a. Red Willow?	O	O	O
b. Gray Willow?	O	O	O
c. Green Willow?	O	O	O
d. Reed Canary Grass?	O	O	O
e. Tule? (TWO-LEE)	O	O	O
f. Bunchgrass?	O	O	O
g. Cattails?	O	O	O
h. Birch Bark?	O	O	O
i. Cedar Bark?	O	O	O
j. Cedar Root?	O	O	O
k. Sumac? (SUE-MAC)	O	O	O
l. Indian Hemp?	O	O	O
m. Wild Rose?	O	O	O
n. Syringa? (SIR-IN-GA)	O	O	O
o. Ocean Spray?	O	O	O
p. Pine Needles?	O	O	O
q. Cottonwood?	O	O	O
r. Fir?	O	O	O
s. Maple?	O	O	O
t. Yew? (YOU)	O	O	O
u. Cedar?	O	O	O
v. Juniper?	O	O	O
w. Lodgepole Pine?	O	O	O
x. Tamarack? (TAM-AH-RACK)	O	O	O
y. Any other materials?	O	O	O

(SPECIFY) _____

(SPECIFY) _____

(SPECIFY) _____

ASK Q51 –54b FOR EACH "YES" RESPONSE ABOVE. RECORD ONE MATERIAL USED FOR EACH OF THE NEXT PAGES.

CONSTRUCTION MATERIAL # 1

- ☐ a. Red Willow
- ☐ b. Gray Willow
- ☐ c. Green Willow
- ☐ d. Reed Canary Grass
- ☐ e. Tule
- ☐ f. Bunchgrass
- ☐ g. Cattails
- ☐ h. Birch Bark
- ☐ i. Cedar Bark
- ☐ j. Cedar Root
- ☐ k. Sumac
- ☐ l. Indian Hemp
- ☐ m. Wild Rose
- ☐ n. Syringa
- ☐ o. Ocean Spray
- ☐ p. Pine Needles
- ☐ q. Cottonwood
- ☐ r. Fir
- ☐ s. Maple
- ☐ t. Yew
- ☐ u. Cedar
- ☐ v. Juniper
- ☐ w. Lodgepole Pine
- ☐ x. Tamarack
- ☐ y. Any other material (SPECIFY)_____

51. Did (you/SUBJECT) ever put the (MATERIAL) in (your/his/her) mouth when working with it?	O YES O NO O DON'T KNOW
52. Over the past 12 months, how many days did (you/SUBJECT) use (MATERIAL) for dying, coloring, or tinting? Was it: **(USE SHOW CARD RP3)**	O Less than 10 days, O 10-30 days, O 31-60 days, O 61-90 days, or, O More than 90 days? O DON'T KNOW
53. On the days (you/SUBJECT) worked with the MATERIAL)how many hours per day did (you/he/she) usually spend working with it? Was it: **(USE SHOW CARD RP2)**	O Less than 1 hour, O 1-3 hours, O 4-7 hours, or, O 8 or more hours? O DON'T KNOW

54a. Please look at this map and mark the areas where the (MATERIAL) came from inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

54b. IF ONLY ONE AREA, RECORD ALL WITHOUT ASKING.
IF MORE THAN ONE AREA, ASK: How much of the (MATERIAL) (you/SUBJECT) worked with came from this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: _____ _____ _____ _____ _____	O	O	O	O	O
Area 2: _____ _____ _____ _____ _____	O	O	O	O	O
Area 3: _____ _____ _____ _____ _____	O	O	O	O	O
Area 4: _____ _____ _____ _____ _____	O	O	O	O	O
Area 5: _____ _____ _____ _____ _____	O	O	O	O	O

CONSTRUCTION MATERIAL # 2

- ☐ a. Red Willow
- ☐ b. Gray Willow
- ☐ c. Green Willow
- ☐ d. Reed Canary Grass
- ☐ e. Tule
- ☐ f. Bunchgrass
- ☐ g. Cattails
- ☐ h. Birch Bark
- ☐ i. Cedar Bark
- ☐ j. Cedar Root
- ☐ k. Sumac
- ☐ l. Indian Hemp
- ☐ m. Wild Rose
- ☐ n. Syringa
- ☐ o. Ocean Spray
- ☐ p. Pine Needles
- ☐ q. Cottonwood
- ☐ r. Fir
- ☐ s. Maple
- ☐ t. Yew
- ☐ u. Cedar
- ☐ v. Juniper
- ☐ w. Lodgepole Pine
- ☐ x. Tamarack
- ☐ y. Any other material (SPECIFY)_____

51. Did (you/SUBJECT) ever put the (MATERIAL) in (your/his/her) mouth when working with it?	O YES O NO O DON'T KNOW
52. Over the past 12 months, how many days did (you/SUBJECT) use (MATERIAL) for dying, coloring, or tinting? Was it: **(USE SHOW CARD RP3)**	O Less than 10 days, O 10-30 days, O 31-60 days, O 61-90 days, or, O More than 90 days? O DON'T KNOW
53. On the days (you/SUBJECT) worked with the MATERIAL)how many hours per day did (you/he/she) usually spend working with it? Was it: **(USE SHOW CARD RP2)**	O Less than 1 hour, O 1-3 hours, O 4-7 hours, or, O 8 or more hours? O DON'T KNOW

54a. Please look at this map and mark the areas where the (MATERIAL) came from inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

54b. IF ONLY ONE AREA, RECORD ALL WITHOUT ASKING.
IF MORE THAN ONE AREA, ASK: How much of the (MATERIAL) (you/SUBJECT) worked with came from this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: _____ _____ _____ _____ _____	O	O	O	O	O
Area 2: _____ _____ _____ _____ _____	O	O	O	O	O
Area 3: _____ _____ _____ _____ _____	O	O	O	O	O
Area 4: _____ _____ _____ _____ _____	O	O	O	O	O
Area 5: _____ _____ _____ _____ _____	O	O	O	O	O

CONSTRUCTION MATERIAL # 3

CHECK ONE PER PAGE. IF MORE THAN ONE IS REPORTED, USE CONTINUATION SHEETS.

- ☐ a. Red Willow
- ☐ b. Gray Willow
- ☐ c. Green Willow
- ☐ d. Reed Canary Grass
- ☐ e. Tule
- ☐ f. Bunchgrass
- ☐ g. Cattails
- ☐ h. Birch Bark
- ☐ i. Cedar Bark
- ☐ j. Cedar Root
- ☐ k. Sumac
- ☐ l. Indian Hemp
- ☐ m. Wild Rose
- ☐ n. Syringa
- ☐ o. Ocean Spray
- ☐ p. Pine Needles
- ☐ q. Cottonwood
- ☐ r. Fir
- ☐ s. Maple
- ☐ t. Yew
- ☐ u. Cedar
- ☐ v. Juniper
- ☐ w. Lodgepole Pine
- ☐ x. Tamarack
- ☐ y. Any other material (SPECIFY)_____

51. Did (you/SUBJECT) ever put the (MATERIAL) in (your/his/her) mouth when working with it?	O YES O NO O DON'T KNOW
52. Over the past 12 months, how many days did (you/SUBJECT) use (MATERIAL) for dying, coloring, or tinting? Was it: **(USE SHOW CARD RP3)**	O Less than 10 days, O 10-30 days, O 31-60 days, O 61-90 days, or, O More than 90 days? O DON'T KNOW
53. On the days (you/SUBJECT) worked with the MATERIAL)how many hours per day did (you/he/she) usually spend working with it? Was it: **(USE SHOW CARD RP2)**	O Less than 1 hour, O 1-3 hours, O 4-7 hours, or, O 8 or more hours? O DON'T KNOW

54a. Please look at this map and mark the areas where the (MATERIAL) came from inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

54b. IF ONLY ONE AREA, RECORD ALL WITHOUT ASKING.
IF MORE THAN ONE AREA, ASK: How much of the (MATERIAL) (you/SUBJECT) worked with came from this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: _____ _____ _____ _____ _____	O	O	O	O	O
Area 2: _____ _____ _____ _____ _____	O	O	O	O	O
Area 3: _____ _____ _____ _____ _____	O	O	O	O	O
Area 4: _____ _____ _____ _____ _____	O	O	O	O	O
Area 5: _____ _____ _____ _____ _____	O	O	O	O	O

CONSTRUCTION MATERIAL # 4

IF ADDITIONAL MATERIALS REPORTED, USE CONTINUATION SHEETS.

- ☐ a. Red Willow
- ☐ b. Gray Willow
- ☐ c. Green Willow
- ☐ d. Reed Canary Grass
- ☐ e. Tule
- ☐ f. Bunchgrass
- ☐ g. Cattails
- ☐ h. Birch Bark
- ☐ i. Cedar Bark
- ☐ j. Cedar Root
- ☐ k. Sumac
- ☐ l. Indian Hemp
- ☐ m. Wild Rose
- ☐ n. Syringa
- ☐ o. Ocean Spray
- ☐ p. Pine Needles
- ☐ q. Cottonwood
- ☐ r. Fir
- ☐ s. Maple
- ☐ t. Yew
- ☐ u. Cedar
- ☐ v. Juniper
- ☐ w. Lodgepole Pine
- ☐ x. Tamarack
- ☐ y. Any other material (SPECIFY)_____

51. Did (you/SUBJECT) ever put the (MATERIAL) in (your/his/her) mouth when working with it?	O YES O NO O DON'T KNOW
52. Over the past 12 months, how many days did (you/SUBJECT) use (MATERIAL) for dying, coloring, or tinting? Was it: **(USE SHOW CARD RP3)**	O Less than 10 days, O 10-30 days, O 31-60 days, O 61-90 days, or, O More than 90 days? O DON'T KNOW
53. On the days (you/SUBJECT) worked with the MATERIAL)how many hours per day did (you/he/she) usually spend working with it? Was it: **(USE SHOW CARD RP2)**	O Less than 1 hour, O 1-3 hours, O 4-7 hours, or, O 8 or more hours? O DON'T KNOW

54a. Please look at this map and mark the areas where the (MATERIAL) came from inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

54b. IF ONLY ONE AREA, RECORD ALL WITHOUT ASKING.
IF MORE THAN ONE AREA, ASK: How much of the (MATERIAL) (you/SUBJECT) worked with came from this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: _____ _____ _____ _____ _____	O	O	O	O	O
Area 2: _____ _____ _____ _____ _____	O	O	O	O	O
Area 3: _____ _____ _____ _____ _____	O	O	O	O	O
Area 4: _____ _____ _____ _____ _____	O	O	O	O	O
Area 5: _____ _____ _____ _____ _____	O	O	O	O	O

MATERIALS FOR SWEAT LODGES

55. The next questions are about (your/SUBJECT's) use of sweat lodges and any materials used during the sweat. (IF NEEDED:) Please do not include any materials we may have already discussed that were used during the construction of the sweat lodge.

Over the past 12 months, did (you/SUBJECT) participate in any sweat lodge ceremonies?

O YES
O NO (GO TO Q61 ON PAGE 36)
O DON'T KNOW (GO TO Q61 ON PAGE 36)

56. Did any of the water or other natural materials that were burned or added to the steam come from anywhere in this area? (SHOW MAP)

O YES
O NO (GO TO Q61 ON PAGE 36)
O DON'T KNOW (GO TO Q61 ON PAGE 36)

57. Now I'm going to ask you about different materials that are sometimes used during a sweat, including natural materials that are added to the steam or burned to breathe the smoke. Over the past 12 months, did (you/SUBJECT) prepare or use any of the following during the sweat? (REPEAT QUESTION EVERY FEW ITEMS)

	YES	NO	DK
a. Water?	O	O	O
b. Bunchgrass?	O	O	O
c. Fir?	O	O	O
d. Cedar?	O	O	O
e. Sages?	O	O	O
f. Lavender?	O	O	O
g. Any other materials?	O	O	O

(SPECIFY) _____
(SPECIFY) _____
(SPECIFY) _____

ASK Q58 –60b FOR EACH "YES" RESPONSE ABOVE. RECORD ONE MATERIAL USED FOR EACH OF THE NEXT PAGES.

SWEAT LODGE MATERIAL #1

☐ a. Water
☐ b. Bunchgrass
☐ c. Fir
☐ d. Cedar
☐ e. Sages
☐ f. Lavender
☐ g. Any other material (SPECIFY)_____

58. Over the past 12 months, how many days did (you/SUBJECT) use (MATERIAL) during sweats? Was it: **(USE SHOW CARD RP3)**	O Less than 10 days, O 10-30 days, O 31-60 days, O 61-90 days, or, O More than 90 days? O DON'T KNOW
59. On the days (you/SUBJECT) used (MATERIAL) during sweats, how many hours did (you/he/she) usually spend in the sweat lodge? Was it: **(USE SHOW CARD RP2)**	O Less than 1 hour, O 1-3 hours, O 4-7 hours, or, O 8 or more hours? O DON'T KNOW

60a. Please look at this map and mark the areas where the (MATERIAL) came from inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

60b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.
IF MORE THAN ONE AREA, ASK: How much of the (MATERIAL) (you/SUBJECT) used during the sweats came from this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: _____ _____ _____ _____ _____	O	O	O	O	O
Area 2: _____ _____ _____ _____ _____	O	O	O	O	O
Area 3: _____ _____ _____ _____ _____	O	O	O	O	O
Area 4: _____ _____ _____ _____ _____	O	O	O	O	O
Area 5: _____ _____ _____ _____ _____	O	O	O	O	O

SWEAT LODGE MATERIAL #2

☐ a. Water
☐ b. Bunchgrass
☐ c. Fir
☐ d. Cedar
☐ e. Sages
☐ f. Lavender
☐ g. Any other material (SPECIFY)_____

58. Over the past 12 months, how many days did (you/SUBJECT) use (MATERIAL) during sweats? Was it: **(USE SHOW CARD RP3)**	O Less than 10 days, O 10-30 days, O 31-60 days, O 61-90 days, or, O More than 90 days? O DON'T KNOW
59. On the days (you/SUBJECT) used (MATERIAL) during sweats, how many hours did (you/he/she) usually spend in the sweat lodge? Was it: **(USE SHOW CARD RP2)**	O Less than 1 hour, O 1-3 hours, O 4-7 hours, or, O 8 or more hours? O DON'T KNOW

60a. Please look at this map and mark the areas where the (MATERIAL) came from inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

60b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.
IF MORE THAN ONE AREA, ASK: How much of the (MATERIAL) (you/SUBJECT) used during the sweats came from this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: _____ _____ _____ _____ _____	O	O	O	O	O
Area 2: _____ _____ _____ _____ _____	O	O	O	O	O
Area 3: _____ _____ _____ _____ _____	O	O	O	O	O
Area 4: _____ _____ _____ _____ _____	O	O	O	O	O
Area 5: _____ _____ _____ _____ _____	O	O	O	O	O

SWEAT LODGE MATERIAL #3

☐ a. Water
☐ b. Bunchgrass
☐ c. Fir
☐ d. Cedar
☐ e. Sages
☐ f. Lavender
☐ g. Any other material (SPECIFY)_____

58. Over the past 12 months, how many days did (you/SUBJECT) use (MATERIAL) during sweats? Was it: **(USE SHOW CARD RP3)**	O Less than 10 days, O 10-30 days, O 31-60 days, O 61-90 days, or, O More than 90 days? O DON'T KNOW
59. On the days (you/SUBJECT) used (MATERIAL) during sweats, how many hours did (you/he/she) usually spend in the sweat lodge? Was it: **(USE SHOW CARD RP2)**	O Less than 1 hour, O 1-3 hours, O 4-7 hours, or, O 8 or more hours? O DON'T KNOW

60a. Please look at this map and mark the areas where the (MATERIAL) came from inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

60b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.
IF MORE THAN ONE AREA, ASK: How much of the (MATERIAL) (you/SUBJECT) used during the sweats came from this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: _____ _____ _____ _____ _____	O	O	O	O	O
Area 2: _____ _____ _____ _____ _____	O	O	O	O	O
Area 3: _____ _____ _____ _____ _____	O	O	O	O	O
Area 4: _____ _____ _____ _____ _____	O	O	O	O	O
Area 5: _____ _____ _____ _____ _____	O	O	O	O	O

SWEAT LODGE MATERIAL #4

IF ADDITIONAL MATERIALS REPORTED, USE CONTINUATION SHEETS.

☐ a. Water
☐ b. Bunchgrass
☐ c. Fir
☐ d. Cedar
☐ e. Sages
☐ f. Lavender
☐ g. Any other material (SPECIFY)_____

58. Over the past 12 months, how many days did (you/SUBJECT) use (MATERIAL) during sweats? Was it: **(USE SHOW CARD RP3)**	O Less than 10 days, O 10-30 days, O 31-60 days, O 61-90 days, or, O More than 90 days? O DON'T KNOW
59. On the days (you/SUBJECT) used (MATERIAL) during sweats, how many hours did (you/he/she) usually spend in the sweat lodge? Was it: **(USE SHOW CARD RP2)**	O Less than 1 hour, O 1-3 hours, O 4-7 hours, or, O 8 or more hours? O DON'T KNOW

60a. Please look at this map and mark the areas where the (MATERIAL) came from inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

60b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.
IF MORE THAN ONE AREA, ASK: How much of the (MATERIAL) (you/SUBJECT) used during the sweats came from this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: _____ _____ _____ _____ _____	O	O	O	O	O
Area 2: _____ _____ _____ _____ _____	O	O	O	O	O
Area 3: _____ _____ _____ _____ _____	O	O	O	O	O
Area 4: _____ _____ _____ _____ _____	O	O	O	O	O
Area 5: _____ _____ _____ _____ _____	O	O	O	O	O

MEDICINAL, SPIRITUAL, OR TRADITIONAL PRACTICES

61. The next questions are about medicinal, spiritual or traditional practices. Over the past 12 months, did (you/SUBJECT) swallow, apply to (your/his/her) skin, smudge or breathe in anything prepared from plants, flowers, berries or other materials to prevent or cure illnesses or disease? This could be as part of a ceremony or for purification, but please do not include the materials we may have already discussed or anything that was eaten as food.

O YES
O NO (GO TO Q71 on page 47)
O DON'T KNOW (GO TO Q71 on page 47)

62. Did any of the natural materials that (you/SUBJECT) used for this purpose come from anywhere in this area? (SHOW MAP)

O YES
O NO (GO TO Q71 on page 47)
O DON'T KNOW (GO TO Q71 on page 47)

63. Now I'm going to ask (you/SUBJECT) about different materials that are sometimes used for medicinal, spiritual or traditional practices. Over the past 12 months, did (you/he/she) prepare or use any of the following for any medicinal, spiritual or traditional purposes? (REPEAT QUESTION EVERY FEW ITEMS)

	YES	NO	DK
a. Red Willow?	O	O	O
b. Sumac? (SUE-MAC)	O	O	O
c. Wild Rose?	O	O	O
d. Cedar?	O	O	O
e. Juniper?	O	O	O
f. Arnica? (ARE-KNEE-CAH)	O	O	O
g. Canby's Lovage? (LOVE-AGE)	O	O	O
h. Frog Leaves?	O	O	O
i. Kinnikinick? (KIN-ICK-A-NICK)	O	O	O
j. Mullen? (MULL-EN)	O	O	O
k. Rattlesnake Plantain? (PLAN-TEN)	O	O	O
l. Sages?	O	O	O
m. Skunk Cabbage?	O	O	O
n. Stinging Nettle?	O	O	O
o. Any other materials? (SPECIFY) _____ (SPECIFY) _____ (SPECIFY) _____	O	O	O

ASK Q64 –70b FOR EACH "YES" RESPONSE ABOVE. RECORD ONE MATERIAL USED FOR EACH OF THE NEXT PAGES.

MEDICINAL/SPIRTUAL/TRADITIONAL PRACTICES MATERIAL # 1

- ☐ a. Red Willow
- ☐ b. Sumac
- ☐ c. Wild Rose
- ☐ d. Cedar
- ☐ e. Juniper
- ☐ f. Arnica
- ☐ g. Canby's Lovage
- ☐ h. Frog Leaves
- ☐ i. Kinnikinick
- ☐ j. Mullen
- ☐ k. Rattlesnake Plantain
- ☐ l. Sages
- ☐ m. Skunk Cabbage
- ☐ n. Stinging Nettle
- ☐ o. Any other material (SPECIFY)_____

64. Did (you/SUBJECT) use the seeds or berries of the (MATERIAL)?	O YES O NO (GO TO Q66) O DON'T KNOW (GO TO Q66)
65. How did (you/he/she) use them? Did (you/he/she): (RECORD ALL THAT APPLY)	O Take them by mouth, O Apply them to the skin, O Inhale them by steam or smoke, O Use them for smudging, O Use them in a tea, or O Use them in some other way? O DON'T KNOW
66. Did (you/SUBJECT) use the flowers, leaves, stem or bark of the (MATERIAL)?	O YES O NO (GO TO Q68) O DON'T KNOW (GO TO Q68)
67. How did (you/he/she) use them? Did (you/he/she): (RECORD ALL THAT APPLY)	O Take them by mouth, O Apply them to the skin, O Inhale them by steam or smoke, O Use them for smudging, O Use them in a tea, or O Use them in some other way? O DON'T KNOW
68. Did (you/SUBJECT) use the roots of the (MATERIAL)?	O YES O NO (GO TO Q70a) O DON'T KNOW (GO TO Q70a)
69. How did (you/he/she) use the roots? Did (you/he/she): (RECORD ALL THAT APPLY)	O Take them by mouth, O Apply them to the skin, O Inhale them by steam or smoke, O Use them for smudging, O Use them in a tea, or O Use them in some other way? O DON'T KNOW

63a. Please look at this map and mark the areas where the (MATERIAL) came from inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

63b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.
IF MORE THAN ONE AREA, ASK: How much of the (MATERIAL) (you/SUBJECT) worked with came from this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: _____ _____ _____ _____ _____	O	O	O	O	O
Area 2: _____ _____ _____ _____ _____	O	O	O	O	O
Area 3: _____ _____ _____ _____ _____	O	O	O	O	O
Area 4: _____ _____ _____ _____ _____	O	O	O	O	O
Area 5: _____ _____ _____ _____ _____	O	O	O	O	O

MEDICINAL/SPIRTUAL/TRADITIONAL PRACTICES MATERIAL # 2

- ☐ a. Red Willow
- ☐ b. Sumac
- ☐ c. Wild Rose
- ☐ d. Cedar
- ☐ e. Juniper
- ☐ f. Arnica
- ☐ g. Canby's Lovage
- ☐ h. Frog Leaves
- ☐ i. Kinnikinick
- ☐ j. Mullen
- ☐ k. Rattlesnake Plantain
- ☐ l. Sages
- ☐ m. Skunk Cabbage
- ☐ n. Stinging Nettle
- ☐ o. Any other material (SPECIFY)_____

64. Did (you/SUBJECT) use the seeds or berries of the (MATERIAL)?	O YES O NO (GO TO Q66) O DON'T KNOW (GO TO Q66)
65. How did (you/he/she) use them? Did (you/he/she): (RECORD ALL THAT APPLY)	O Take them by mouth, O Apply them to the skin, O Inhale them by steam or smoke, O Use them for smudging, O Use them in a tea, or O Use them in some other way? O DON'T KNOW
66. Did (you/SUBJECT) use the flowers, leaves, stem or bark of the (MATERIAL)?	O YES O NO (GO TO Q68) O DON'T KNOW (GO TO Q68)
67. How did (you/he/she) use them? Did (you/he/she): (RECORD ALL THAT APPLY)	O Take them by mouth, O Apply them to the skin, O Inhale them by steam or smoke, O Use them for smudging, O Use them in a tea, or O Use them in some other way? O DON'T KNOW
68. Did (you/SUBJECT) use the roots of the (MATERIAL)?	O YES O NO (GO TO Q70a) O DON'T KNOW (GO TO Q70a)
69. How did (you/he/she) use the roots? Did (you/he/she): (RECORD ALL THAT APPLY)	O Take them by mouth, O Apply them to the skin, O Inhale them by steam or smoke, O Use them for smudging, O Use them in a tea, or O Use them in some other way? O DON'T KNOW

70a. Please look at this map and mark the areas where the (MATERIAL) came from inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

70b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.
IF MORE THAN ONE AREA, ASK: How much of the (MATERIAL) (you/SUBJECT) worked with came from this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: _____ _____ _____ _____ _____	O	O	O	O	O
Area 2: _____ _____ _____ _____ _____	O	O	O	O	O
Area 3: _____ _____ _____ _____ _____	O	O	O	O	O
Area 4: _____ _____ _____ _____ _____	O	O	O	O	O
Area 5: _____ _____ _____ _____ _____	O	O	O	O	O

MEDICINAL/SPIRTUAL/TRADITIONAL PRACTICES MATERIAL # 3

- ☐ a. Red Willow
- ☐ b. Sumac
- ☐ c. Wild Rose
- ☐ d. Cedar
- ☐ e. Juniper
- ☐ f. Arnica
- ☐ g. Canby's Lovage
- ☐ h. Frog Leaves
- ☐ i. Kinnikinick
- ☐ j. Mullen
- ☐ k. Rattlesnake Plantain
- ☐ l. Sages
- ☐ m. Skunk Cabbage
- ☐ n. Stinging Nettle
- ☐ o. Any other material (SPECIFY)_____

64. Did (you/SUBJECT) use the seeds or berries of the (MATERIAL)?	O YES O NO (GO TO Q66) O DON'T KNOW (GO TO Q66)
65. How did (you/he/she) use them? Did (you/he/she): (RECORD ALL THAT APPLY)	O Take them by mouth, O Apply them to the skin, O Inhale them by steam or smoke, O Use them for smudging, O Use them in a tea, or O Use them in some other way? O DON'T KNOW
66. Did (you/SUBJECT) use the flowers, leaves, stem or bark of the (MATERIAL)?	O YES O NO (GO TO Q68) O DON'T KNOW (GO TO Q68)
67. How did (you/he/she) use them? Did (you/he/she): (RECORD ALL THAT APPLY)	O Take them by mouth, O Apply them to the skin, O Inhale them by steam or smoke, O Use them for smudging, O Use them in a tea, or O Use them in some other way? O DON'T KNOW
68. Did (you/SUBJECT) use the roots of the (MATERIAL)?	O YES O NO (GO TO Q70a) O DON'T KNOW (GO TO Q70a)
69. How did (you/he/she) use the roots? Did (you/he/she): (RECORD ALL THAT APPLY)	O Take them by mouth, O Apply them to the skin, O Inhale them by steam or smoke, O Use them for smudging, O Use them in a tea, or O Use them in some other way? O DON'T KNOW

70a. Please look at this map and mark the areas where the (MATERIAL) came from inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

70b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.
IF MORE THAN ONE AREA, ASK: How much of the (MATERIAL) (you/SUBJECT) worked with came from this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: _____ _____ _____ _____ _____	O	O	O	O	O
Area 2: _____ _____ _____ _____ _____	O	O	O	O	O
Area 3: _____ _____ _____ _____ _____	O	O	O	O	O
Area 4: _____ _____ _____ _____ _____	O	O	O	O	O
Area 5: _____ _____ _____ _____ _____	O	O	O	O	O

MEDICINAL/SPIRTUAL/TRADITIONAL PRACTICES MATERIAL # 4

- ☐ a. Red Willow
- ☐ b. Sumac
- ☐ c. Wild Rose
- ☐ d. Cedar
- ☐ e. Juniper
- ☐ f. Arnica
- ☐ g. Canby's Lovage
- ☐ h. Frog Leaves
- ☐ i. Kinnikinick
- ☐ j. Mullen
- ☐ k. Rattlesnake Plantain
- ☐ l. Sages
- ☐ m. Skunk Cabbage
- ☐ n. Stinging Nettle
- ☐ o. Any other material (SPECIFY)_____

64. Did (you/SUBJECT) use the seeds or berries of the (MATERIAL)?	O YES O NO (GO TO Q66) O DON'T KNOW (GO TO Q66)
65. How did (you/he/she) use them? Did (you/he/she): (RECORD ALL THAT APPLY)	O Take them by mouth, O Apply them to the skin, O Inhale them by steam or smoke, O Use them for smudging, O Use them in a tea, or O Use them in some other way? O DON'T KNOW
66. Did (you/SUBJECT) use the flowers, leaves, stem or bark of the (MATERIAL)?	O YES O NO (GO TO Q68) O DON'T KNOW (GO TO Q68)
67. How did (you/he/she) use them? Did (you/he/she): (RECORD ALL THAT APPLY)	O Take them by mouth, O Apply them to the skin, O Inhale them by steam or smoke, O Use them for smudging, O Use them in a tea, or O Use them in some other way? O DON'T KNOW
68. Did (you/SUBJECT) use the roots of the (MATERIAL)?	O YES O NO (GO TO Q70a) O DON'T KNOW (GO TO Q70a)
69. How did (you/he/she) use the roots? Did (you/he/she): (RECORD ALL THAT APPLY)	O Take them by mouth, O Apply them to the skin, O Inhale them by steam or smoke, O Use them for smudging, O Use them in a tea, or O Use them in some other way? O DON'T KNOW

70a. Please look at this map and mark the areas where the (MATERIAL) came from inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

70b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.
IF MORE THAN ONE AREA, ASK: How much of the (MATERIAL) (you/SUBJECT) worked with came from this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: _____ _____ _____ _____ _____	O	O	O	O	O
Area 2: _____ _____ _____ _____ _____	O	O	O	O	O
Area 3: _____ _____ _____ _____ _____	O	O	O	O	O
Area 4: _____ _____ _____ _____ _____	O	O	O	O	O
Area 5: _____ _____ _____ _____ _____	O	O	O	O	O

MEDICINAL/SPIRTUAL/TRADITIONAL PRACTICES MATERIAL # 5

IF ADDITIONAL MATERIALS REPORTED, USE CONTINUATION SHEETS.

- ☐ a. Red Willow
- ☐ b. Sumac
- ☐ c. Wild Rose
- ☐ d. Cedar
- ☐ e. Juniper
- ☐ f. Arnica
- ☐ g. Canby's Lovage
- ☐ h. Frog Leaves
- ☐ i. Kinnikinick
- ☐ j. Mullen
- ☐ k. Rattlesnake Plantain
- ☐ l. Sages
- ☐ m. Skunk Cabbage
- ☐ n. Stinging Nettle
- ☐ o. Any other material (SPECIFY)_____

64. Did (you/SUBJECT) use the seeds or berries of the (MATERIAL)?	O YES O NO (GO TO Q66) O DON'T KNOW (GO TO Q66)
65. How did (you/he/she) use them? Did (you/he/she): (RECORD ALL THAT APPLY)	O Take them by mouth, O Apply them to the skin, O Inhale them by steam or smoke, O Use them for smudging, O Use them in a tea, or O Use them in some other way? O DON'T KNOW
66. Did (you/SUBJECT) use the flowers, leaves, stem or bark of the (MATERIAL)?	O YES O NO (GO TO Q68) O DON'T KNOW (GO TO Q68)
67. How did (you/he/she) use them? Did (you/he/she): (RECORD ALL THAT APPLY)	O Take them by mouth, O Apply them to the skin, O Inhale them by steam or smoke, O Use them for smudging, O Use them in a tea, or O Use them in some other way? O DON'T KNOW
68. Did (you/SUBJECT) use the roots of the (MATERIAL)?	O YES O NO (GO TO Q70a) O DON'T KNOW (GO TO Q70a)
69. How did (you/he/she) use the roots? Did (you/he/she): (RECORD ALL THAT APPLY)	O Take them by mouth, O Apply them to the skin, O Inhale them by steam or smoke, O Use them for smudging, O Use them in a tea, or O Use them in some other way? O DON'T KNOW

70a. Please look at this map and mark the areas where the (MATERIAL) came from inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

70b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.
IF MORE THAN ONE AREA, ASK: How much of the (MATERIAL) (you/SUBJECT) worked with came from this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: _____ _____ _____ _____ _____	O	O	O	O	O
Area 2: _____ _____ _____ _____ _____	O	O	O	O	O
Area 3: _____ _____ _____ _____ _____	O	O	O	O	O
Area 4: _____ _____ _____ _____ _____	O	O	O	O	O
Area 5: _____ _____ _____ _____ _____	O	O	O	O	O

FACE AND BODY PAINT

71. The next questions are about face and body paint, such as you might apply to your skin for a Powwow. Over the past 12 months, did (you/SUBJECT) use any natural materials for face or body painting? For example, did (you/SUBJECT) apply any paint to (your/his/her) skin that was made from plants, animal parts, minerals or clay?

O YES
O NO (GO TO Q79 ON PAGE 51)
O DON'T KNOW (GO TO Q79 ON PAGE 51)

72a. Did any of the natural materials that (you/SUBJECT) used come from anywhere in this area? (SHOW MAP)

O YES
O NO (GO TO Q79 ON PAGE 51)
O DON'T KNOW (GO TO Q79 ON PAGE 51)

72b. Which parts of the body were painted? (RECORD ALL THAT APPLY)

O FACE
O ARMS
O HANDS
O CHEST/TORSO/BACK
O LEGS
O SOMEWHERE ELSE (SPECIFY) _____
O DON'T KNOW

73. Over the past 12 months, how many days did (you/SUBJECT) use materials from the local area for face or body painting? Was it:

O Less than 5 days,
O 5-10 days,
O 11-20 days,
O 21-30 days, or
O More than 30 days?
O DON'T KNOW

74. On the days (you/SUBJECT) used face or body paint, how many hours per day did (you/SUBJECT) usually spend with the paint on (your/his/her) skin? Was it: **(USE SHOW CARD RP3)**

O Less than 1 hour,
O 1-3 hours,
O 4-5 hours,
O 6-7 hours, or
O 8 or more hours?
O DON'T KNOW

75. Now I'm going to ask about different materials that are sometimes used for face or body painting. Over the past 12 months, did (you/he/she) prepare or use any of the following for face or body painting?

	YES	NO	DK
a. Animal Fat?	O	O	O
b. Minerals or Clay?	O	O	O
c. Plants?	O	O	O
d. Any other materials? (SPECIFY) _____ (SPECIFY) _____ (SPECIFY) _____	O	O	O

ASK Q76 –78b FOR EACH "YES" RESPONSE ABOVE.
RECORD ONE MATERIAL USED FOR
EACH OF THE NEXT PAGES.

BODY PAINTING MATERIAL #1

☐ a. Animal Fat ☐ b. Minerals or Clay ☐ c. Any other material (SPECIFY)_____

76. (ASK ONLY IF ANIMAL FAT, OTHERWISE GO TO NEXT QUESTION). Which animals did the fat come from? (RECORD ALL THAT ARE MENTIONED)

_____

77. Over the past 12 months, how many days did (you/SUBJECT) use (MATERIAL) for body painting? Was it:
(USE SHOW CARD RP3)

O Less than 10 days,
O 10-30 days,
O 31-60 days,
O 61-90 days, or
O More than 90 days?
O DON'T KNOW

78a. Please look at this map and mark the areas where the (MATERIAL) came from inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE ENTER "999".)

78b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.
IF MORE THAN ONE AREA, ASK: How much of the (MATERIAL) (you/SUBJECT) worked with came from this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: _____ _____ _____ _____ _____	O	O	O	O	O
Area 2: _____ _____ _____ _____ _____	O	O	O	O	O
Area 3: _____ _____ _____ _____ _____	O	O	O	O	O
Area 4: _____ _____ _____ _____ _____	O	O	O	O	O
Area 5: _____ _____ _____ _____ _____	O	O	O	O	O

BODY PAINTING MATERIAL #2

☐ a. Animal Fat ☐ b. Minerals or Clay ☐ c. Any other material

(SPECIFY)_____

76. (ASK ONLY IF ANIMAL FAT, OTHERWISE GO TO NEXT QUESTION). Which animals did the fat come from? (RECORD ALL THAT ARE MENTIONED)

_____

77. Over the past 12 months, how many days did (you/SUBJECT) use (MATERIAL) for body painting? Was it:
(USE SHOW CARD RP3)

O Less than 10 days,
O 10-30 days,
O 31-60 days,
O 61-90 days, or
O More than 90 days?
O DON'T KNOW

78a. Please look at this map and mark the areas where the (MATERIAL) came from inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

78b. IF ONLY ONE AREA, RECORD ALL WITHOUT ASKING. IF MORE THAN ONE AREA, ASK:
How much of the (MATERIAL) (you/SUBJECT) worked with came from this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: _____ _____ _____ _____ _____	O	O	O	O	O
Area 2: _____ _____ _____ _____ _____	O	O	O	O	O
Area 3: _____ _____ _____ _____ _____	O	O	O	O	O
Area 4: _____ _____ _____ _____ _____	O	O	O	O	O
Area 5: _____ _____ _____ _____ _____	O	O	O	O	O

BODY PAINTING MATERIAL #3

IF ADDITIONAL MATERIALS REPORTED, USE CONTINUATION SHEETS.

☐ a. Animal Fat ☐ b. Minerals or Clay ☐ c. Any other material (SPECIFY)_____

76. (ASK ONLY IF ANIMAL FAT, OTHERWISE GO NEXT QUESTION). Which animals did the fat come from? (RECORD ALL THAT ARE MENTIONED)

_____

77. Over the past 12 months, how many days did (you/SUBJECT) use (MATERIAL) for body painting? Was it:
(USE SHOW CARD RP3)

O Less than 10 days,
O 10-30 days,
O 31-60 days,
O 61-90 days, or
O More than 90 days?
O DON'T KNOW

78a. Please look at this map and mark the areas where the (MATERIAL) came from inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE, ENTER "999".)

78b. IF ONLY ONE AREA, RECORD ALL WITHOUT ASKING. IF MORE THAN ONE AREA, ASK:
How much of the (MATERIAL) (you/SUBJECT) worked with came from this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: _____ _____ _____ _____ _____	O	O	O	O	O
Area 2: _____ _____ _____ _____ _____	O	O	O	O	O
Area 3: _____ _____ _____ _____ _____	O	O	O	O	O
Area 4: _____ _____ _____ _____ _____	O	O	O	O	O
Area 5: _____ _____ _____ _____ _____	O	O	O	O	O

Now I have just a few more questions.

79. Over the past 12 months, did (you/SUBJECT) use any other natural resources or materials for non-food purposes that we have not discussed?

O YES
O NO (GO TO Q87 ON PAGE 55)
O DON'T KNOW (GO TO Q87 ON PAGE 55)

80. Did any of these natural resources come from anywhere in this area? (SHOW MAP)

O YES
O NO (GO TO Q87 ON PAGE 55)
O DON'T KNOW (GO TO Q87 ON PAGE 55)

OTHER MATERIAL #1

81. What is the name of the material?

_____

82. How was the material used?

_____

83. Over the past 12 months, how many days did (you/SUBJECT) prepare or use (MATERIAL)? Was it: **(USE SHOW CARD RP3)**	O Less than 10 days, O 10-30 days, O 31-60 days, O 61-90 days, or, O More than 90 days? O DON'T KNOW
84. On the days (you/SUBJECT) worked with (MATERIAL), how many hours per day did (you/he/she) usually spend working with it? Was it: **(USE SHOW CARD RP2)**	O Less than 1 hour, O 1-3 hours, O 4-7 hours, or, O 8 or more hours? O DON'T KNOW

85a. Please look at this map and mark the areas where the (MATERIAL) came from inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE ENTER "999".)

85b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.
IF MORE THAN ONE AREA, ASK: How much of the (MATERIAL) (you/SUBJECT) worked with came from this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: _____ _____ _____ _____ _____	O	O	O	O	O
Area 2: _____ _____ _____ _____ _____	O	O	O	O	O
Area 3: _____ _____ _____ _____ _____	O	O	O	O	O
Area 4: _____ _____ _____ _____ _____	O	O	O	O	O
Area 5: _____ _____ _____ _____ _____	O	O	O	O	O

86. Are there any other materials that (you/SUBJECT) have used that we have not already discussed?

O YES
O NO (GO TO Q87 ON PAGE 56)
O DON'T KNOW (GO TO Q87 ON PAGE 56)

OTHER MATERIAL #2

81. What is the name of the material?

_____

82. How was the material used?

_____

83. Over the past 12 months, how many days did (you/SUBJECT) prepare or use (MATERIAL)? Was it: **(USE SHOW CARD RP3)**	O Less than 10 days, O 10-30 days, O 31-60 days, O 61-90 days, or, O More than 90 days? O DON'T KNOW
84. On the days (you/SUBJECT) worked with (MATERIAL), how many hours per day did (you/he/she) usually spend working with it? Was it: **(USE SHOW CARD RP2)**	O Less than 1 hour, O 1-3 hours, O 4-7 hours, or, O 8 or more hours? O DON'T KNOW

85a. Please look at this map and mark the areas where the (MATERIAL) came from inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE ENTER "999".)

85b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.
IF MORE THAN ONE AREA, ASK: How much of the (MATERIAL) (you/SUBJECT) worked with came from this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: _____ _____ _____ _____ _____	O	O	O	O	O
Area 2: _____ _____ _____ _____ _____	O	O	O	O	O
Area 3: _____ _____ _____ _____ _____	O	O	O	O	O
Area 4: _____ _____ _____ _____ _____	O	O	O	O	O
Area 5: _____ _____ _____ _____ _____	O	O	O	O	O

86. Are there any other materials that (you/SUBJECT) have used that we have not already discussed?

O YES
O NO (GO TO Q87 ON PAGE 56**)**
O DON'T KNOW (GO TO Q87 ON PAGE 56**)**

OTHER MATERIAL #3

IF ADDITIONAL MATERIALS REPORTED, USE CONTINUATION SHEETS.

81. What is the name of the material?
_____

82. How was the material used?
_____

83. Over the past 12 months, how many days did (you/SUBJECT) prepare or use (MATERIAL)? Was it: **(USE SHOW CARD RP3)**	O Less than 10 days, O 10-30 days, O 31-60 days, O 61-90 days, or, O More than 90 days? O DON'T KNOW
84. On the days (you/SUBJECT) worked with (MATERIAL), how many hours per day did (you/he/she) usually spend working with it? Was it: **(USE SHOW CARD RP2)**	O Less than 1 hour, O 1-3 hours, O 4-7 hours, or, O 8 or more hours? O DON'T KNOW

85a. Please look at this map and mark the areas where the (MATERIAL) came from inside the local area. (ENTER ALL ZONES MARKED. IF RESPONDENT DOES NOT KNOW OR REFUSES TO PROVIDE SPECIFIC ZONE ENTER "999".)

86b. IF ONLY ONE AREA, RECORD "ALL" WITHOUT ASKING.
IF MORE THAN ONE AREA, ASK: How much of the (MATERIAL) (you/SUBJECT) worked with came from this area? (POINT TO EACH AREA MARKED ON THE MAP) Was it most, half, some or a little?

Zones:	**ALL**	**MOST**	**HALF**	**SOME**	**LITTLE**
Area 1: _____ _____ _____ _____ _____	O	O	O	O	O
Area 2: _____ _____ _____ _____ _____	O	O	O	O	O
Area 3: _____ _____ _____ _____ _____	O	O	O	O	O
Area 4: _____ _____ _____ _____ _____	O	O	O	O	O
Area 5: _____ _____ _____ _____ _____	O	O	O	O	O

87. Now, just a few more questions and we will be finished. (Do you/Does SUBJECT) refrain, for any reason, from consuming plants, fish, or other animals from the Upper Columbia River or Lake Roosevelt area, or refrain from using them for ceremonial, medicinal, or other traditional uses? (IF ASKED "WHAT DO YOU MEAN BY REFRAIN":) By refrain we mean avoid or stop yourself from consuming or using natural resources.

YES 1
NO ..... 2 (GO TO CLOSING)

88. Which types of plants, fish or other animals from the Upper Columbia River or Lake Roosevelt area (do you/does SUBJECT) currently refrain from using?

_____
_____
_____
_____

89. What do you feel is the most important reason (your/SUBJECT'S) everyday diet and traditional practices do not include more of the resources just mentioned from the Upper Columbia River or Lake Roosevelt area?

_____
_____
_____
_____
_____
_____
_____

CLOSING: Thank you for your time completing this questionnaire.

Upper Columbia River Resources Survey

INFORMATION ABOUT PARTICIPATION FOR AGES 18 AND OLDER

What is the Upper Columbia River Resources Survey? The purpose of the survey is to learn about what foods are eaten and how plants and other local resources are used in the Upper Columbia River area. The survey is being conducted by the Colville Confederated Tribes (CCT) and the U.S. Environmental Protection Agency (EPA) under a legal settlement with Teck Cominco.

How was I chosen? On the CCT Reservation, every home will be visited by a study interviewer to obtain a list of persons living there. In many households, one or more persons will be asked to take part in the survey based on their age and other factors such as where they usually get their food. For areas close to the reservation, CCT tribal members were selected from the tribal enrollment list based on their age and the area in which they live. Adults and children of all ages are eligible to participate.

What will I be asked to do? If you decide to join the study, a study interviewer will visit you at your home and ask you to complete a series of interviews. There will be a visit about every 3 months for the next year or so, for a total of 5 visits. The interviews will include questions about foods you eat and about local resources you may use for purposes other than food (such as plants or trees). For some items, you will be asked about where you usually get the item. You will also be asked some background questions, such as how long you've lived in the area.

If your child is selected to participate, you will be asked to give your permission for us to interview him/her or, if your child is 8 years of age or younger, you will be asked to complete the interview for your child.

After you complete each visit, and the necessary paperwork is processed for payment, we will mail you a check for $30 as our thanks for helping ($150 for a total of 5 visits). Checks will be issued to adults and children ages 14 and above. For children under the age of 14, checks will be made payable to the child's parent or the person who completed the interview.

How long will it take? Each visit will take about one hour. After each visit, study staff may contact you by phone to check the work of the interviewer.

What if I move? If you move during the year, we may contact your neighbors, other persons you have told us about, or the Post Office to update your address or phone number so that you can continue to participate in the study. If you move off the reservation or away from the nearby area, you may no longer be eligible for the survey and will not be asked to complete any further interviews.

What are the risks and benefits to me? There are no known physical risks to taking part in the survey. There are no known direct benefits, but you will help the CCT to learn more about how local foods and natural resources are used by persons living in the Upper Columbia River area.

Do I have to participate? You may decide to participate or not. That is your choice. However, we hope you will join this important study. If you decide to participate, you may refuse to answer any question. You may stop participating at any time by contacting the CCT Study Office at 1-888-710-6940. If you choose not to participate, this will not affect any benefits that you or your family may receive now or in the future.

What if I have questions? If you have any questions about the survey or any other questions about the Upper Columbia River area, you may contact the CCT representative at 1-888-710-6940. If you have questions about your rights as a research participant, you may contact the EPA Human Subjects representative, Dr. Warren Lux, at 202-564-2677.

Upper Columbia River Resources Survey

Mini label – Affix to top copy only

CONSENT FORM FOR ADULTS 18 AND OLDER

You have been asked to take part in the Upper Columbia River Resources Survey. Please read the attached Information about Participation page for important facts about this survey.

You are being asked to complete a series of interviews about foods you eat and local resources you may use. Each interview will take about an hour to complete, and you will be sent a check for $30 each time you complete an interview (a total of 5 times over the next year, for a total of $150).

The information you provide will be kept private and used for research purposes only. Your name and other identifying information will be used only by study staff for purposes of contacting you. To help us protect your confidentiality, the study has obtained a Certificate of Confidentiality from the National Institutes of Health. With this certificate, the researchers cannot be forced to give out any information that may identify you, even by a court order, in any federal, state, or local court proceedings. There is one exception. If we conclude from information you provide us that there is a serious threat of harm to you or others, we will be required to report this to the authorities.

I have read the information on this Consent Form and on the attached Information about Participation page, and freely choose to take part in the Upper Columbia River Resources Survey.

Print Name _____

Signature _____ Date _____

Signature of Witness (if needed) _____ Date _____

Signature of Staff Member _____Date _____

Upper Columbia River Resources Survey

INFORMATION ABOUT PARTICIPATION FOR AGES 9-13

- The Upper Columbia River Resources Survey will collect information about the types of food you eat.

- **If you live on the reservation**: We're visiting all the homes on the reservation to get information about people who live there so that we can ask people to take part in the survey. We talked to an adult about all the people who live in your house. From this information, you were chosen for the survey.

- **If you live near the reservation**: You were chosen for the survey from the Colville Tribes enrollment list.

- You can decide whether or not you want to take part in this survey. It's your choice. If you decide not to take part, this will not make a difference in any benefits you or your family may be receiving from the government or elsewhere.

- If you agree to help us with the survey, we will talk to you about what you eat and drink. We will visit you a total of five times over the next year. Your parent or guardian can help you answer the questions, if needed. After each visit, your parent or guardian will receive a check for $30 (a total of $150).

- This is not a test. There are no right or wrong answers. If you don't know the answer to a question, we can skip it and move to the next question.

- Our staff will answer any questions you have.

Upper Columbia River Resources Survey

INFORMATION ABOUT PARTICIPATION FOR AGES 14-17

- The Upper Columbia River Resources Survey will collect information about the types of food you eat. The survey will also collect information about the ways in which you use natural resources such as plants and trees from the area around where you live.

- **If you live on the reservation**: We're visiting all the homes on the reservation to get information about people who live there so that we can ask people to take part in the survey. We talked to an adult about all the people who live in your home. From this information, you were chosen for the survey.

- **If you live near the reservation**: You were chosen for the survey from the Colville Tribes enrollment list.

- You can decide whether or not you want to take part in this survey. It's your choice. If you decide not to take part, this will not make a difference in any of the benefits you or your family may be receiving from the government or elsewhere.

- If you agree to help us with the survey, we will talk to you about what you eat and drink. We will visit you a total of five times over the next year. During the final visit, we will also ask you about any plants or other natural resources you may use for purposes other than food. Your parent or guardian can help you answer the questions, if needed. After you complete each visit, you will receive a check for $30 (a total of $150).

- This is not a test. There are no right or wrong answers. If you don't know the answer to a question, we can skip it and move to the next question.

- Our staff will answer any questions you have.

Upper Columbia River Resources Survey

Mini label – Affix to top copy only

PARENTAL PERMISSION AND ASSENT FORM

Print name of survey participant under age 18 _____

Dear Parent/Guardian:

Your child has been selected to take part in the Upper Columbia River Resources Survey. Please read the attached Information about Participation page for important facts about this survey.

You are being asked for your permission to allow us to complete an interview about your child.

- If your child is 8 years old or younger, you will be asked to complete the interview for your child.
- If your child is 9 to 17 years old, we will ask him/her to read the attached Information about Participation page (for ages 9-17) and tell us if he/she agrees to participate by signing an Assent Form (below), Your child will be asked to provide his/her answers directly to the interviewer, with your assistance as needed.

We will visit you and your child at your home a total of five times over the next year. Each interview will take about an hour to complete, and you or your child will receive a check for $30 each time an interview is completed (a total of 5 times over the next year). If your child is age 14 or older at the time of the interview, the checks will be made payable directly to him/her.

The information provided by you or your child will be kept private and used for research purposes only. Your name, your child's name, and other identifying information will be used only by study staff for purposes of contacting you for the survey. To help us protect confidentiality, the study has obtained a Certificate of Confidentiality from the National Institutes of Health. With this certificate, the researchers cannot be forced to give out any information that may identify you or your child, even by a court order, in any federal, state, or local court proceedings. There is one exception. If we conclude from information that you or your child provides that there is a serious threat of harm to your child or others, we will be required to report this to the authorities.

I/We have read the information on this Parental Permission Form and on the attached Information about Participation page. I/We freely give my permission for my/our child to take part in the Upper Columbia River Resources Survey.

Print Parent/Guardian name _____

Signature of Parent/Guardian _____

Relationship to Survey Participant _____

Date _____

Print Parent/Guardian name _____

Signature of Parent/Guardian _____

Relationship to Survey Participant _____

Date _____

Signature of Staff Member _____ Date _____

ASSENT FORM IF SURVEY PARTICIPANT IS 9 TO 17 YEARS OLD:

I have read the attached Information about Participation page and freely choose to take part in the Upper Columbia River Resources Survey.

Signature of Study Participant age 9 to 17 _____ Date _____

Signature of Staff Member _____ Date _____

Upper Columbia River Tribal Consumption and Resource Use Survey Data Collection

(8/24/10)

'09			'10												'11		
Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
#	**Household Screening (11/1/09 - 8/16/10)**																
	AMPM 1 (11/1/09 - 9/7/10)																
				AMPM 2 (2/1/10 - 11/30/10)													
														X FQ/ReUP (12/1/10 - 3/30/11)			
							AMPM 3 (5/1/10-3/30/10)										

= Household Screening and AMPM training

X = FQ/ReUP Training on 12/1/10-12/3/10

ATTACHMENT E

Hypothetical Example of Data Analysis Plan Implementation for Food Intake

Table 1 provides a hypothetical example of the types of survey information on food consumption that are expected will be available for each individual surveyed. For the purposes of this illustration, the example is restricted to 3 fish species and 2 game species that may be locally harvested. As illustrated in Table 1, information from the 4 AMPMs and the FFQ will be used to determine if a species- and source-specific intake is reported. (Note that, for this individual, even though all 4 AMPMs are zero for deer ingestion, because the FFQ is non-zero, this is reported as "YES" in the "Intake Reported?" column.) Information on whether a species- and source-specific intake is reported will be compiled for all survey participants (regardless of consumer status). **Table 2** illustrates a hypothetical summary for 30 individuals. As seen, this table includes various types of consumers and non-consumers (e.g., see Person #10).

How the consumer population of interest will be delineated from the survey participants will depend upon the risk question that is being asked in the HHRA. For example, if the risk assessment wishes to answer the question "What is the risk to people who consume bass from the UCR?", the population of interest is "UCR Bass Consumers". In Table 2, the column titled "UCR Bass" designates which individuals would be included in this population. Notice that only those individuals that report non-zero bass consumption from the UCR are included. If the risk assessment wishes to answer the question "What is the risk to people who consume fish from the UCR?", the population of interest is "UCR Fish Consumers". In this case, all individuals that report non-zero consumption for <u>either</u> kokanee, burbot, or bass from the UCR are included in the population of interest. If the risk assessment wishes to answer the question "What is the risk to people who consume fish or game from the UCR?", all individuals that report non-zero consumption for <u>either</u> kokanee, burbot, bass, duck, or deer from the UCR are included the population of interest (i.e., "UCR Fish/Game Consumers").

Once the population of interest has been defined, the survey information for all individuals meeting the population definition will be input into the NCI macros. As noted previously in Section 10.4.2, although the NCI method was developed to support the estimation of ordinary intake (OI), NCI inputs will be converted to ordinary dose (OD) to allow the data to be stratified and summed under a variety of conditions. **Table 3** provides a hypothetical example of the types of information that will be provided to the NCI macro.

As shown in Table 3, the NCI method utilizes the dose estimates as computed from the AMPM (using the source attribution information from the FFQ) to yield an output of the distribution of ODs for the population of interest. The FFQ is utilized in the NCI method only as a covariate in the model predictions. The NCI macros can be used to generate the distribution of ODs for any individual food from a particular source, for any individual food across multiple sources, for multiple foods from a particular source, or from multiple foods across multiple sources. Notice that this approach allows for the summation both within a food category (e.g., kokanee + burbot + bass) and across food categories (e.g., fish + game).

From the NCI output distribution of ODs (see example provided in Figure 6 in the main text), it is possible to determine the mean (CTE) and 95th percentile (RME) of the distribution. These CTE and RME values can then be used in the HHRA to calculate non-cancer HQs and cancer risk estimates. Because it is also possible to disaggregate the OD by source, the risk assessment is able to provide results based on both total risk and incremental risk from the UCR Site.

TABLE 1

HYPOTHETICAL EXAMPLE OF SURVEY RESULTS FOR PERSON #1

Species	AMPM				FFQ			Intake Reported?
	grams ingested in previous day				Est. Avg Annual Intake (g/d)	Source	% from source	
	AMPM1	AMPM2	AMPM3	AMPM4				
Kokanee	120	0	0	100	1.73	UCR	70%	YES
						non-UCR	20%	YES
						Store	10%	YES
Burbot	0	0	0	0	0	UCR	0%	no
						non-UCR	0%	no
						Store	0%	no
Bass	80	150	0	100	2.87	UCR	96%	YES
						non-UCR	4%	YES
						Store	0%	no
Duck	0	0	0	0	0	UCR	0%	no
						non-UCR	0%	no
						Store	0%	no
Deer	0	0	0	0	0.15	UCR	5%	YES
						non-UCR	95%	YES
						Store	0%	no

TABLE 2

ILLUSTRATION OF VARIOUS CONSUMER POPULATIONS

Person	Fish Intake Reported?									Game Intake Reported?						Consumer Population			
	Kokanee			Burbot			Bass			Duck			Deer			UCR Bass	UCR Fish	UCR Game	UCR Fish/ Game
	UCR	non-UCR	store	UCR	non-UCR	store	UCR	non-UCR	store	UCR	non-UCR	store	UCR	non-UCR	store				
1	YES	YES	YES	no	no	no	YES	YES	no	no	no	no	YES	YES	no	X	X	X	X
2	YES	no	no	no	no	no	no	YES	no	no	no	no	YES	no	no		X	X	X
3	no	no	YES	YES	YES	no	no	YES	no	no	no	no	no	no	YES		X		X
4	no	no	no	YES	YES	no	no	no	no	no	no	no	YES	no	no		X	X	X
5	no	no	no	no	no	no	no	no	YES	no	no	no	no	no	no				
6	no	YES	no	no	no	no	YES	no	no	no	no	no	no	no	no	X	X		X
7	no	no	no	no	no	YES	no	no	no	no	no	no	no	no	YES				
8	no	no	no	YES	YES	no	no	no	no	no	no	no	no	no	no		X		X
9	no	YES	no	no	no	no	no	no	no	no	YES	no	YES	no	YES			X	X
10	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no				
11	no	no	YES	no	no	YES	no	YES	no	no	no	no	YES	no	no			X	X
12	YES	YES	no	no	no	no	YES	no	no	no	no	YES	YES	no	no	X	X	X	X
13	YES	YES	no	no	no	YES	no	no	no	no	no	no	no	no	no		X		X
14	no	no	no	no	no	no	no	no	no	no	YES	no	no	YES	no				
15	YES	no	no	YES	no	YES	YES	no	no	no	no	YES	no	no	no	X	X		X
16	no	YES	no	no	no	no	no	YES	YES	no	YES	no	no	no	no				
17	no	no	no	no	no	no	no	YES	YES	no	YES	no	no	no	no				
18	no	no	YES	no	no	YES	YES	no	no	no	no	no	no	no	no	X	X		X
19	YES	no	no	no	no	no	no	no	no	YES	no	no	no	no	no		X	X	X
20	no	no	no	no	no	no	no	no	no	no	no	no	no	YES	no				
21	no	no	no	no	YES	no	no	no	no	no	no	YES	no	no	no				
22	no	no	no	YES	no	no	no	no	YES	no	no	YES	no	YES	YES		X		X
23	no	YES	no	YES	no	no	YES	YES	no	no	YES	YES	no	YES	no	X	X		X
24	no	no	YES	no	no	no	YES	no	YES	no	no	no	no	no	no	X	X		X
25	no	no	no	no	no	no	no	no	no	no	YES	no	no	no	no				
26	no	no	no	no	YES	no	no	no	no	no	YES	no	no	YES	no				
27	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no				
28	YES	no	YES	no	no	no	no	no	no	no	YES	no	no	YES	no		X		X
29	no	no	no	no	no	YES	no	no	no	no	no	no	no	YES	no				
30	no	no	no	no	YES	no	no	no	no	no	no	no	no	no	no				
…	…			…			…			…			…			…	…	…	…

TABLE 3

HYPOTHETICAL EXAMPLE OF NCI METHOD INPUT FOR PERSON #1

Species	AMPM grams ingested in previous day				FFQ		Est. Avg Annual Intake by Source (g/d)	EPC for COI 'x' (ug/g)	Dose (ug/d)
	AMPM1	AMPM2	AMPM3	AMPM4	Source	% from source			
Kokanee	120	0	0	100	UCR	70%	0.11	100.0	10.6
					non-UCR	20%	0.03	10.0	0.30
					Store	10%	0.02	0.1	0.002
Burbot	0	0	0	0	UCR	0%	0	20	0
					non-UCR	0%	0	21	0
					Store	0%	0	18	0
Bass	80	150	0	100	UCR	96%	0.22	20.0	4.3
					non-UCR	4%	0.01	15.0	0.14
					Store	0%	0	2.0	0
Duck	0	0	0	0	UCR	0%	0	1.2	0
					non-UCR	0%	0	1.1	0
					Store	0%	0	1.0	0
Deer	0	0	0	0	UCR	5%	0	20	0
					non-UCR	95%	0	2.0	0
					Store	0%	0	0.2	0

Species	FFQ Est. Avg Annual Intake (g/d)
Kokanee	1.73
Burbot	0
Bass	2.87
Duck	0
Deer	0.15

NCI Method

as covariate