

**Supporting Statement B  
Recreation Survey Questions  
OMB Control Number 1006-0028  
Bureau of Reclamation**

**Collections of Information Employing Statistical Methods**

**The agency should be prepared to justify its decision not to use statistical methods in any case where such methods might reduce burden or improve accuracy of results. When the question “Does this ICR contain surveys, censuses, or employ statistical methods?” is checked "Yes," the following documentation should be included in Supporting Statement B to the extent that it applies to the methods proposed:**

- 1. Describe (including a numerical estimate) the potential respondent universe and any sampling or other respondent selection method to be used. Data on the number of entities (e.g., establishments, State and local government units, households, or persons) in the universe covered by the collection and in the corresponding sample are to be provided in tabular form for the universe as a whole and for each of the strata in the proposed sample. Indicate expected response rates for the collection as a whole. If the collection had been conducted previously, include the actual response rate achieved during the last collection.**

Bureau of Reclamation (Reclamation) staff will select from the list of survey questions listed in the Recreation Survey Questions to be administered to the members of the public who are directly engaged in recreational activities on Reclamation lands at the location pertaining to the survey question(s). Reclamation staff will then add their selected questions to the Recreation Survey Template to create a customized survey for their particular recreation area.

It is anticipated that 80% of the visitors who are approached will provide responses to the survey question(s) upon being solicited. Those participating in intercept interviews, are likely to be interested in the survey subject matter since they will more than likely be directly involved in the activity/service being provided associated with the question(s). In addition, surveyors will, for the most part, collect completed surveys questionnaires on site which will increase the response rate.

- 2. Describe the procedures for the collection of information including:**

- 2a. Statistical methodology for stratification and sample selection.**

Survey questions will be distributed to visitors at specific recreation areas within a Reclamation Federal water project. The sampling frame is a defined geographic area consisting of a reservoir and its immediate surrounding. Reclamation will adjust the scope of the sampling frame if necessary to respond to each Reclamation office’s specific needs

related to each survey question. Any updates or changes will immediately be made available to all surveyors participating in the survey collection.

The approved survey questions will be administered on site through the use of personal interviewing techniques. Completion of the surveys by respondents is voluntary. Under the supervision of a project leader, employees, contractors, or volunteers will ask the questions verbatim from the pre-approved list of questions (Recreation Survey Questions) and will record responses or hand out survey questionnaires and wait for individual respondents to return them immediately upon completion. For those individuals staying in the area, arrangements may be made for surveyors, camp hosts, or volunteers to pick up completed surveys at a later time or have the individuals deposit them in a predetermined location at a campground, entrance station, visitor center, or survey drop box.

The sampling design that will be used is called Stratified Cluster Sampling (Sample Survey). This technique is used where you do not know in advance who is in the population (e.g., you do not have a list of names from a phone book from which to randomly select from). Stratified Cluster Sampling is especially useful when sampling recreation areas where there is no way to determine who will be visiting. This allows sampling at different field locations based upon time blocks, which include days of the week and hours of the day, that is further based upon an estimate of the percent of visitation at each of the locations. The time blocks are then randomly selected and assigned for survey sampling. Visitors are then surveyed in these locations during these time blocks. Typically, sampling times will include random sampling days between May and September. Note: If the recreation area has a longer recreation season than Memorial Day to Labor Day, then the time period for administering the survey may be established to correlate to the proper length of the recreation season. Appropriate time blocks will be established for those areas. Whatever the length of recreation season, sample time periods will be selected to ensure a balance of weekend and weekday periods and an appropriate distribution across the entire recreation season. In order to get input from a representative sample of all users to individual Reclamation water projects, every fifth group consisting of one or more individuals will be surveyed. For groups of more than one individual, the surveyor will solicit input from the person that will have the next birthday of those that are in the group. In all cases, those individuals surveyed will be 16 years of age or older. For the purposes of this survey collection process, Reclamation has not attempted to differentiate between a personal group and an organized user group. Valuable information can be obtained from both types of groups. Therefore, both types of groups will be surveyed.

On selected sampling days, interviewers will introduce themselves as researchers working for the Bureau of Reclamation. They will alert the potential respondents that participation is voluntary and that their anonymity will be protected. The surveyor will mention the length of time that it will take to fill out the survey and briefly describe what the survey is about. Visitor contacts will occur based on a pre-designed systematic schedule established by the project leader.

Sampling will begin with the first available group during the sample time. Once a surveyor has finished with one group, he/she will move to the next eligible group that arrives at the

survey site. If a group refuses to participate, the surveyor will then contact the next eligible group, adhering to the established sampling schedule of intercepting every fifth group.

There may be visitors that refuse to participate in the survey collection (e.g., a day use visitor that arrives late in the day and wishes to immediately participate in his or her activity then return home shortly after arrival). All surveyors will keep a log and record the disposition of every contact, including refusals and observable characteristics of both the non-participants and the participants for use in a non-response bias analysis. Some of the items or characteristics that can be entered in the log for both respondents and non-respondents are the date, time, and place where the survey was handed out; group size; activity that the respondent was participating in; approximate age of respondent; and whether the respondent was a male or female or an adult or child.

Private contractors, managing partners, or universities will also use the survey instruments to collect data for Reclamation. This will typically be completed under the terms of an acquisition document. The collected information will be used to supplement studies and analyses of Reclamation sites or resources. Contractual requirements will limit the use of the data to only support Reclamation programs and research efforts.

All individuals administering the approved survey questionnaires will receive orientation and training in the use of survey techniques by the project leader. In this manner, they will be sensitized of the need to assist respondents, ensure accuracy of the information being solicited, the need to reduce the burden on respondents, and the value of following the sampling plan.

More detailed instructions for administering surveys and a summary of the information collection process can be found in the Code of Conduct and Instruction for Surveyors document contained in this OMB package.

## **2b. Estimation procedure.**

The sample size will be determined by the project leader. Below is the sample size methodology used to establish the confidence levels:

In most cases there will be a need to employ a statistical methodology to identify the actual sample size once a survey is determined to be necessary. For the purpose of this information collection, a statistical methodology has been applied to determine the sample size based on a number of parameters. The average sample size for the survey categories is 278, as determined by statistical formula. This sample sizes will achieve the desired confidence level of at least 80 percent with a sampling error of  $\pm 5$  percentage points.

### **Sample Size Methodology Used**

(1) Selected a desired confidence level (i.e., probability that the results will be for a given level of precision):

<u>Confidence Level</u>	<u>Standard Deviations from the Mean</u>
80%	1.28
90%	1.64
95%	1.96

(2) Determined an acceptable level of accuracy for results in terms of standard errors (e.g., Reclamation wanted to be accurate within 5% at the 95% confidence level):

$$\begin{aligned} \text{Standard Error} &= \frac{\text{Accuracy}}{\text{Standard Deviation with Confidence Level of Interest}} \\ &= \frac{0.05}{1.96} = 0.025 \text{ (or 2.5\%)} \end{aligned}$$

(3) Approximated the variance in the population: Because the variance was unknown, Reclamation assumed the highest possible proportional variance that occurs when 50% of the sample possesses the characteristic of interest and 50% do not.

(4) Calculated sample size with a 95% confidence level:  $n$  = sample size and  $p$  = proportion of population having characteristic of interest (i.e., 50%/50% from #3 above). When surveying people, the approximate size of the population must be determined that in most instances is over 1,000 people. The sample size rarely exceeds 400 respondents; therefore, the following formula was used because the population (i.e., number of visitors to the area) being sampled is equal to or greater than 1,000.

$$(a) \ n = \frac{p(1-p)}{(\text{Standard error})^2}$$

$$n = \frac{0.5(0.5)}{(0.025)^2} = \frac{0.25}{.000625} = 400$$

The example above only includes the calculations for a 95% level with a  $\pm 5$  percentage points sampling error. The calculations for a 90% confidence level were determined the same way.

Despite the disparities in number of respondents between these 2 years, the sample size was sufficient to meet the minimum requirement of at least 400 respondents needed to achieve a 95% confidence level with a  $\pm 5$  percentage points sampling error.

## **Overview of Proposal**

The purpose of this proposal is to submit a request to the Office of Management and Budget (OMB) to authorize survey questions for the collection of recreation data from users of Reclamation lands, facilities, and waterbodies, ensuring compliance with the requirements of

the Paperwork Reduction Act. These data collections would be pursued on an as needed basis over a 3-year period to aide in proposed project evaluations and would be paid for using project funds. To meet its needs for the collection of visitor use data, Reclamation is requesting OMB to authorize the questions listed in the Recreation Survey Questions.

The approved survey questions will be administered on site through the use of personal interviewing techniques. Completion of the surveys by respondents is voluntary. Under the supervision of a Project Leader, employees, contractors, or volunteers will ask the questions verbatim from the pre-approved questionnaires and will record responses or hand out questionnaires and wait for individual respondents to return them immediately upon completion. For those individuals staying in the area, arrangements may be made for surveyors, camp hosts, or volunteers to pick up completed surveys at a later time or have the individuals deposit them in a predetermined location at a campground, entrance station, visitor center, or survey drop box.

A stratified-cluster sampling technique will be used to both identify potential respondents and obtain survey information. The stratified cluster sampling technique allows sampling at different field locations, days of the week, and hours of the day based upon the percent of use at each of the locations and times. All people are then surveyed at these locations during these times.

Private contractors, managing partners, or universities may also use the survey instruments to collect data for Reclamation. This will typically be completed under the terms of an acquisition document or agreement and the collected information will be used to assist with the development or revision of planning documents. Contractual requirements and agreements will limit the use of the data to only support Reclamation programs and research efforts.

All individuals administering the approved survey questionnaires will receive orientation and training in the use of survey techniques. In this manner, they will be sensitized of the need to assist respondents, ensure accuracy of the information being solicited, and of the need to reduce the burden on respondents.

**2c. Degree of accuracy needed for the purpose described in the justification.**

The survey questions require a 90 percent confidence level. All surveys have a sampling error of  $\pm 5$  percentage points with an anticipated response rate of at least 80 percent.

**2d. Unusual problems requiring specialized sampling procedures.**

There are no unusual problems requiring specialized sampling procedures.

**2e. Any use of periodic (less frequent than annual) data collection cycles to reduce burden.**

The survey questionnaires will be used by different Reclamation offices throughout the 17 Western States. However, the surveys will not be conducted annually at the same location but periodically used at different locations on an as needed basis.

- 3. Describe methods to maximize response rates and to deal with issues of non-response. The accuracy and reliability of information collected must be shown to be adequate for intended uses. For collections based on sampling, a special justification must be provided for any collection that will not yield "reliable" data that can be generalized to the universe studied.**

Responses from survey questions by visitors are always voluntary. Visitors who are directly engaged in the experience for which information is being solicited are generally enthusiastic about the opportunity to render opinions affecting future management, custodial responsibilities, and care of the area. Therefore, voluntary compliance is most often high while non-response rates are low.

Response rates will be maximized through careful consideration to detail in the selection of the survey question(s) process.

In general, our experience with surveying recreationists has shown non-responsiveness to be a minor issue. However, if a respondent is not willing to participate in filling out a survey, Reclamation will not assume a zero value for those respondents to prevent a non-response bias to be integrated into the survey results. Instead, Reclamation will track the total number of surveys distributed against the number of completed surveys. The final report will describe the nonresponse bias as the number of surveys that were not completed or returned. If certain questions within a survey instrument are not answered, professional judgment will be used to explain why an answer to a specific question was left blank. In addition to tracking the number of surveys that were not completed or returned by respondents, the surveyor will also attempt to ask the respondent why he/she refused to participate. If the respondent provides a reason for not participating in the information collection, Reclamation will record the responses in a log to be kept by the surveyors.

- 4. Describe any tests of procedures or methods to be undertaken. Testing is encouraged as an effective means of refining collections of information to minimize burden and improve utility. Tests must be approved if they call for answers to identical questions from 10 or more respondents. A proposed test or set of tests may be submitted for approval separately or in combination with the main collection of information.**

Tests of procedures will not be used since the process for soliciting survey questions is not likely to cause confusion, waste, inefficient use of time, or an undue burden upon the public.

- 5. Provide the names and telephone numbers of individuals consulted on statistical aspects of the design and the name of the agency unit, contractor(s), grantee(s), or other person(s) who will actually collect and/or analyze the information for the agency.**

The survey questions will be available for use by the Region, Area, and Field Offices throughout Reclamation. The Policy and Administration Office, Asset Management Division, will receive results of the survey question(s) as needed, from the Regional Recreation Coordinators listed in the locations below:

Pacific Northwest Regional Office  
Eve Skillman  
(208) 378-5357  
eskillman@usbr.gov

Lower Colorado Regional Office  
Bill Martin  
(702) 293-8375  
bmartin@usbr.gov

Mid-Pacific Regional Office  
Andrew Burrows  
(707) 966-2111  
aburrows@usbr.gov

Upper Colorado Regional Office  
Valerie Heath-Harrison  
(801)524-3664  
vheathharrison@usbr.gov

Great Plains Regional Office  
John Arkins  
(406) 247-7702  
jarkins@usbr.gov

For further information regarding the development or re-approval of the survey questions or survey template, please contact Ronnie Baca at 303-445-3257, or by email at rbaca@usbr.gov.