

Supporting Statement for OMB 0596-NEW
Prince William Sound User Experience Survey
March 2008

B. Collections of Information Employing Statistical Methods

- 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.**

We will be undertaking a sample of visitors in Prince William Sound who intend to engage in dispersed recreation activities, entering the Sound from Whittier, Valdez or Cordova. Based on data from the 2005 study conducted in Prince William Sound by Oregon State University, we estimate the potential universe of respondents to include between 6,000-9,000 parties departing these three harbors. Drawing from the methods and lessons learned from the 2005 effort by Oregon State, surveys will be distributed in person by Forest Service and contract personnel at the three harbors from May through October. Two-person crews will circulate through each harbor, walking the length of the floats and the line of vehicles waiting to launch boats at the boat ramps. Crews identify survey targets (randomly selecting 1 in 3 groups), ask a series of introductory questions and provided the targeted group is willing distribute one survey per recreation group. Groups will be asked if they have completed a survey previously and those reporting yes will be excluded from repeat survey participation. In the previous 2005 study, a return rate of ~30 percent was realized. Due to identified weaknesses and inconsistencies in the prior study, we anticipate a somewhat higher return rate but are using this number as a likely minimum. The proposed study will also sample for a longer amount of time than the reference 2005 study. We will be capturing refusal rates using name and address information collected at distribution compared to those surveys that are returned.

- 2. Describe the procedures for the collection of information including:**
 - **Statistical methodology for stratification and sample selection,**
 - **Estimation procedure,**
 - **Degree of accuracy needed for the purpose described in the justification,**
 - **Unusual problems requiring specialized sampling procedures, and**
 - **Any use of periodic (less frequent than annual) data collection cycles**

to reduce burden.

The collection of information, as described above, will consist of on-site contact of survey targets by Forest Service and contract personnel at three locations. Please see above for details about the procedure followed by the collection crews. The survey instrument will be enclosed in a zip lock plastic bag for protection from water. The instrument package will include a return-addressed, stamped envelope. Survey recipients will be instructed to complete the map and encounter log along the way and complete trip summary experience questions at the end of their trip. An option will be given to either mail the survey or return to identified locations at the collection. Each of the surveys will be coded to the location (Whittier, Valdez or Cordova) with a number associated with this coding. Researchers distributing the surveys will be asked to keep track of the survey number, number in party, mode of travel and time of exit.

Concurrent with survey distribution, survey crews will collect and record several data items from intercepted individuals. In order to determine whether those who decline to participate in the survey are statistically different from those who participate, willing individuals will be asked whether or not they are Alaska residents, primary purpose of trip (cruising, paddling, hunting/fishing, and sight seeing), vessel type, anticipated length of trip and general destination, Whether respondents answer contact questions or agreed to accept a survey will also be tracked on this form. Observed information will be collected and recorded for those who decline to answer these questions or accept a survey. This information will be tracked in the example data form:

Date: <u>02 Aug 2007</u>		Location: <u>WHITTIER</u>				
Day: <u>Wednesday</u>						
Date	Survey Number	Number in Party	Vessel Type	Alaska Resident	Trip Duration (days)	Destination
<u>02 Aug 2008</u>	125	5	K OS OST IN CC MY TC CF FW HE S OT	Y/N		BLACKSTONE BAY
			Trip Purpose: [Hunting/Fishing] [Pleasure Boating] [Kayaking] [Sight seeing]			
<u>02 Aug 2008</u>	NA	4	K OS OST IN <u>CC</u> MY TC CF FW HE S OT	Y/N		PORT WELLS
			Trip Purpose: [Hunting/Fishing] [Pleasure Boating] [Kayaking] [Sight seeing]			
<u>02 Aug 2008</u>	OBS.	2	K OS OST IN <u>CC</u> MY TC CF FW HE S OT	Y/N		
			Trip Purpose: [Hunting/Fishing] [Pleasure Boating] [Kayaking] [Sight seeing]			
<u>02 Aug 2008</u>	126	1	K OS OST <u>IN</u> CC MY TC CF FW HE S OT	Y/N		PIGGOT POINT
			Trip Purpose: [Hunting/Fishing] [Pleasure Boating] [Kayaking] [Sight seeing]			

Collection times will be stratified among three collection points (Whittier, Cordova, and Valdez). Stratification will also occur to capture both weekend and weekdays. Time of day will be incorporated into sampling procedures. One unusual aspect to the study area is that a one-lane tunnel provides access to Whittier harbor. The operating schedule for the tunnel is such that traffic may enter Whittier beginning at 0530 and exit Whittier until 2300. This will directly impact the available sample periods for survey distribution, with the sampling day defined between 0600 and 2230. This 16.5-hour sample-day will be divided into three equal 5.5-hour segments (0600-1130, 1130-1700, and 1700-2230). A rotation of these sample periods will be used at all three locations with sampling occurring during 2 of them on every sample day.

We will be sampling four days a week with a random selection made of weekdays (Monday - Friday) and all weekends being sampled. This will ensure that we capture the variation of weekday use while simultaneously maximizing the number of potential respondents. Sampling will be randomized by attempting to intercept every 3rd party. This of course will depend on the number of visitors at the boat launches at one time which is likely to vary throughout the sampling season. The every 3rd party rule will also be applied in those cases where more than one distinct group is on the same trip (i.e. aboard the same vessel).

We intend to use a combination of analytical procedures to define simulation parameters and probabilistic ranges of recreation behavior. Depending on the data returned these will generally include: defining ranges of behavior based on means and standard errors relative to continuous data collected (e.g., like mean # of encounters +/- 1 SD that trigger some action) and defining ranked preferences for types of land feature or opportunities based on proportions of responses within a given category or categories. Many of the questions in this survey will be used to investigate behavioral variation across different categories of user (e.g., by vessel type or party objectives). The trip logs themselves (relative to paths chosen, locations used, durations reported), will be summarized in terms of spatial and temporal variability exactly as they are reported; returning a baseline characterization of recreation activity. Depending on their richness (relative to response rates from similar studies like Itami, et al, 2008; Gimblett and Skov-Petersen 2008a, 2008b) they will be assumed to represent different groups of recreationists and taken into the predictive simulation environment to investigate use patterns at different levels of total recreation activity.

Previous efforts dependent on the use of simulation software (Recreation Behavior Simulator, RBSim) to define patterns of use by dispersed recreationists were successful with a sample of ~ 5-12 percent of all users entering a region through a limited number of access points (Itami, et al, 2008; Gimblett & Skov-Petersen 2008a, 2008b). We have found in other studies in landscapes with remote access and low numbers of visitors that a return rate of 30% is more the norm than not. While this does not usually meet social science standards for sampling, this is sometimes the reality of working in these environments. In order to achieve a 95 percent confidence interval during simulation operations aimed at predicting recreation use patterns (assuming a return rate of ~30 percent, which we hope will be much higher), we estimate that approximately 2000 survey instruments should be distributed to our potential respondent universe of 6,000-9,000 recreation parties; based on the number of users to the region estimated by Wolfe, et al (2008). This would ensure that we receive data from a sample of at least 667 respondents which would result in a sample of 8.8% of the population of recreation groups departing into PWS.

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.

An evaluation of non-response rates will be useful for understanding overall survey return rates, and also response rate by categories of users. We intend to complete a categorical analysis of non-response for parties who at least agreed to answer contact questions with respect to: 1) Alaska resident; 2) trip purpose; 3) vessel type; 4) estimated length of trip; 5) general destination 6) Survey was accepted but not returned; and 7) survey was returned incomplete. For those offering no response to contact questions, we will evaluate non-response using observed data relative to: 1) observed vessel type; and 2) group size.

We will maximize response rates using standard procedures for follow up contacts to survey participants. Survey participants will have been asked for a name and address to be used for follow up contacts. Follow up contacts include submission reminder postcards, which are sent out within two weeks of survey distribution, and in the event of reduced response rates resulting from individual surveys in which minimal exchange (e.g., clarification or completion of a few items) can produce a viable response.

We will be acquiring the most statistically valid and spatially and temporally representative sample possible. We have already contacted some of the local fishing, hunting, and subsistence groups to seek input into the survey process, inform them about our intentions of sampling in 2008, with the intention of building awareness of, and support for the project and boosting return rates. We are seeking information at the bay or island group level to provide essential information in developing appropriate capacities. It is for this reason that the questions in the survey are quite specific and we are using a diary approach to map out trip responses. Geographic and temporal definition of the study universe, along with ability to sample from the specific access locations (e.g., harbors) during the seasons of interest (spring, summer, and fall), ensures our results should be highly representative of the intended population.

- 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.**

External reviewers have tested the quality and accuracy of the questions in addressing the research objectives. We received feedback and incorporated changes into the current version. Seven recreational users of Prince William Sound and an experienced professional manager who manages the Alaska State Parks in the Sound have reviewed the survey.

Wolfe et al. (2006) in Prince William Sound used a survey instrument similar to that proposed for this study. The study contained a similar map-document trip-diary well received by respondents entering the region. Additionally, questions similar to those in the proposed survey have been refined over several years of study by Dr. Randy Gimblett and his students at the University of Arizona. As part of his previous research efforts, questions of the type in the proposed survey have been given to classes of graduate and undergraduate outdoor recreation students to identify questions needing clarification. The format and questions within our survey gain from the insights collected by Dr. Gimblett and his students over the past several years.

- 5. Provide the name and telephone number 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.**

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