

Supporting Statement for a New Collection RE: Research Assessing Current and Potential Effects of Cruise Ships on Visitor Experiences in Glacier Bay National Park and Preserve

OMB Control Number 1024-New

A. Justification

1. Explain the circumstances that make the collection of information necessary. Identify any legal or administrative requirements that necessitate the collection. Attach a copy of the appropriate section of each statute and regulation mandating or authorizing the collection of information.

From the Organic Act of 1916 to enabling legislation for specific parks, the National Park Service (NPS) has received a viable Congressional mandate for collecting information to assist in the management of national parks, monuments, and historic sites. Specifically, 16 U.S.C. 1 through 4 (NPS Organic Act of 1916) provides the authority for the Director of the NPS to manage the parks. Part 245 of the Department of the Interior Manual delegates to the Director of the NPS the Secretary of the Interior's authority to supervise, manage, and operate the National Park System. The National Parks Omnibus Management Act of 1998 (Public Law 105-391, Section 202; 16 U.S.C. 5932) requires that units of the NPS be enhanced by the availability and utilization of a broad program of the highest quality science and information. The *NPS Management Policies 2006*, Section 8.11.1, further states that the NPS will facilitate social science studies that support the NPS mission by providing an understanding of park visitors and human interactions with park resources.

The proposed study would provide information to be used in deciding cruise ship use levels in Glacier Bay proper. Glacier Bay proper is the portion of Glacier Bay National Park that is north of a line drawn from Pt. Carolus to Pt. Gustavus. The purpose of this research is to provide Park managers with information about the current positive and negative effects, if any, of cruise ships on the quality of visitor experiences and to estimate potential effects on the quality of visitor experience of cruise ship use levels specified in the ROD (Record of Decision for Vessel Quotas and Operating Requirements in Glacier Bay National Park and Preserve, 2003).

The Final Environmental Impact Statement for Vessel Quotas and Operating Requirements, and the resulting Record of Decision (ROD; Record of Decision for Vessel Quotas and Operating Requirements in Glacier Bay National Park and Preserve) signed November 21, 2003, currently guide vessel management in Glacier Bay National Park and Preserve (GLBA). The ROD selected an alternative that maintains the current daily maximum of two cruise ships in the park and sets seasonal use days for the June–August season at 139 ships. The ROD also provides for possible increases in cruise ship use. Specifically, use in the June–August season could be increased to two ships per day, every day, for a seasonal use total of 184 ships. The Record of Decision for Vessel Quotas and Operating Requirements in Glacier Bay National Park and Preserve (2003) provided the following direction for the role of research in the process of changing quotas for cruise ships:

The determination of whether to increase seasonal-use day quotas for cruise ships will rely on criteria that define the environmental and social conditions to be met before any additional seasonal-use days are approved. These criteria will be based on the results of and guidance provided through studies that examine the effects of vessels on all park resources and visitor experience. (p.18).

The Record of Decision also specified that the studies examining the effects of cruise ships would be identified with the assistance of a Glacier Bay Vessel Management Science Advisory Board (SAB). The SAB was established and a final report of their findings and recommendations was published in September 2005 (Glacier Bay National Park Science Advisory Board: Final Report, 2005). The SAB recommended a comprehensive research program including social science and natural resource studies. The research program was presented in general terms with no prioritization or cost estimates, and the research program outlined could not be performed within the time and budget limitations facing park managers. Specific studies were prioritized and identified to provide information on a variety of potential effects of cruise ships on park resources (natural and experiential). Park managers will consider the findings of all these studies in making decisions about cruise ship policy in Glacier Bay proper.

For the natural resource research program, park staff prioritized and identified the key studies to be conducted. For the social science research program, the SAB recommended a social research problem analysis be conducted by a social scientist, and park managers agreed to fund it. Upon review of the final Problem Analysis (Vande Kamp and Nelson 2007), park staff decided on a social science research program that would focus primarily on measuring effects of cruise ships, if any, on the quality of visitor experiences and, secondarily, on understanding the context in which cruise ship effects occur and how these effects arise.

Specifically, three information collections are proposed:

- A quantitative mail survey of visitors to Glacier Bay proper asking about their experiences with cruise ships and other motorized craft (Appendices A-G);
- A qualitative interview of visitors about their experience in Glacier Bay proper that complements and aids in interpreting the information obtained in the mail survey (Appendix H);
- A qualitative interview with people who control or influence visitors' experiences (i.e., experience "gatekeepers") about their roles in visitor encounters with cruise ships (Appendix I).

This information about effects of cruise ships on visitors' experiences for each user group (e.g., tour boat, private vessels, cruise ship, etc.) will be part of a larger decision process including findings from studies examining effects on natural resources. No current data exists for rates of effects of cruise ships on visitors' experiences so obtaining baseline data is as important as obtaining information about potential changes.

Relevant documents are contained in the attachments to this statement. **Attachment A** provides a copy of The Organic Act of 1916. **Attachment B** contains the National Parks Omnibus Management Act of 1998. **Attachment C** contains section 8.11.1, "Social Science Studies," of the NPS Management Policies. **Attachment D** contains a copy of the Record of Decision for Vessel Quotas

and Operating Requirements in Glacier Bay National Park and Preserve (2003).

2. Indicate how, by whom, and for what purpose the information is to be used. Except for a new collection, indicate the actual use the agency has made of the information received from the current collection. [Be specific. If this collection is a form or a questionnaire, every question needs to be justified.]

Decisions about vessel use levels in Glacier Bay proper are to be based on science assessing effects, if any, on the quality of visitor experience. This research has been requested by Glacier Bay National Park and Preserve itself and has two components: 1) assessment of cruise ship effects, if any, on the quality of visitor experiences; and 2) the role of experience “gatekeepers” in visitor encounters with cruise ships.

Data will be collected through on-site interviews, on-site and mail surveys, and telephone interviews. This information will assist park staff in understanding the effects, if any, of cruise ships and other motorized craft on the quality of visitor experiences.

Justifications for the interview and survey questions follow, organized by topic and question number.

MAIL SURVEYS (Appendices A – G)

Mail surveys will be administered to visitors to Glacier Bay proper. Visitors will be contacted on-site, and those agreeing to participate will complete a brief on-site contact sheet. A longer mail questionnaire will be sent to them within ten days of being contacted. Because visitors to Glacier Bay proper comprise a number of different user populations with slightly different experiences, multiple versions of the survey instrument were developed. The different visitor groups to be contacted for this research include:

- Cruise ship passengers visiting aboard large vessels that spend one day in the park;
- Other motorized vessel passengers, including:
 - o Tour boat passengers aboard mid-sized vessels;
 - o Charter boat passengers on small vessels that spend one or more days in the park;
 - o Visitors on private vessels who register with the park’s Visitor Information Station prior to or upon entry into Glacier Bay proper.
- Multi-day non-motorized backcountry users (primarily kayakers).

The majority of the questions in the contact sheets and the mail questionnaires are identical across instruments. However, some questions are unique to a particular survey.

This quantitative survey was informed by qualitative research and logistical scoping activities conducted during the summer of 2007 (Swanson and Vande Kamp 2007, OMB control number 1024-0224, NPS 07-035). Additionally, prior research and discussions with park management informed the design and format of specific questions.

Table A1. Justification for Questions in Contact Sheet for Cruise Ship Passengers Contacted at Park (Appendix A)

Item(s)	Justification
1-7	To describe passengers and their groups in order to determine if they differ in

	their reactions and trip experiences and their likelihood to return a completed mail questionnaire (non-response)
8	To collect mailing information so that the mail questionnaire can be sent to participants after their trips

Table A2. Justification for Questions in Contact Sheet for Motorized Visitors in Private Vessels or on the Day-Boat Contacted at VIS (Appendix B)

Item(s)	Justification
1	To describe visitors' length of stay in the park. (Unlike cruise ship passengers, these visitors may stay more than one day in the park.)
2-6	To describe users and their groups in order to determine if they differ in their reactions and trip experiences and their likelihood to return a completed mail questionnaire (non-response)
7	To collect mailing information so that the mail questionnaire can be sent to participants after their trips

Table A3. Justification for Questions in Contact Sheet for Charter and Tour Boat Passengers (Appendix C)

Item(s)	Justification
1-6	To describe passengers and their groups in order to determine if they differ in their reactions and trip experiences and their likelihood to return a completed mail questionnaire (non-response)
7	To collect mailing information so that the mail questionnaire can be sent to participants after their trips

Table A4. Justification for Questions in Contact Sheet for Multi-day Backcountry Visitors (Non-motorized) (Appendix D)

Item(s)	Justification
1- 4, 7	To describe visitors and their groups in order to determine if they differ in their reactions and trip experiences and their likelihood to return a completed mail questionnaire (non-response)
5	To describe backcountry visitors' length of stay in the park. (Unlike cruise ship passengers, these visitors may stay more than one day in the park.)
6	To allow us to identify a sub-sample of backcountry visitors who were on the day-boat to include in the day-boat sample for the mail survey
8	To collect mailing information so that the mail questionnaire can be sent to participants after their trips

Justifications for Questions in Cruise Ship Passenger Mail Questionnaire (Appendix E)

Background Information (Q #20-24): These provide important information for describing the sample of visitors, comparing the different user populations, and analyzing the survey as a whole. They provide important information that may be related to patterns in responses to the dependent variables.

Visitor Trip Characteristics (Q #1-5, 12): These questions are necessary to describe the basic trips that visitors take in Glacier Bay proper. These questions assess visitors' prior experience in GLBA (Q #1), activities engaged in (Q #3 and #12), and how important visiting GLBA was in selecting their cruise (Q #2).

Because weather in Glacier Bay can be quite variable and substantially alter a person's experience of the bay, visitors are asked about the weather during their visits (Q #4). This item will be used to control for effects of weather on the quality of visitor experience.

Seven important dimensions of trip experience (Q #5) were identified in the 2007 qualitative interviews with visitors to Glacier Bay proper. Comparing the identified dimensions of Glacier Bay proper visitors' experiences with those dimensions measured by the list of Recreation Experience Preference (REP) scales (Driver 1983) revealed considerable overlap in content. As prior research suggested that two REP scales are sufficient for measuring a dimension (Manfredo et al. 1996), two REP scales were selected and/or generated for each dimension identified in the qualitative interviews. Parameters for selecting items from the list of REP scales were: 1) the scale was strongly correlated with the dimension, 2) scales measuring the same dimension were strongly correlated with each other, and 3) the scales were face valid. Nine scales were selected, and five new scales were constructed (based on the qualitative interviews) using the REP format. Together these 14 REP scale items will be used in measuring the importance of different dimensions of trip experiences. These items are particularly important for analyses with items asking about effects of motorized craft on visitor experience (Q #8, 10, 11c, 13, 14, 16-19).

Exposure to cruise ships and other motorized craft (Qs #6-7a, 9, 11, 11a, 11b, 16): One key component of the assessment survey is questions measuring exposure to cruise ships and other motorized craft. They assess visitors' exposure to cruise ships at Margerie/Grand Pacific Glaciers (Qs #11, 11a, 11b) and during their stay in Glacier Bay (Qs #6-7a). To provide context, visitors' exposure to other motorized craft is also assessed (Q #9, 11a, 11b). The format of these questions is based on prior research (Johnson, 1990, Littlejohn, 2000, Swanson et al. 2006) and visitors' experiences as reported in the 2007 qualitative interview.

Exposure to specific features (e.g., haze, engine sound) of cruise ships and other motorized craft are also assessed (Item S). The relevant features were identified in the Science Advisory Board Report (2005) and the Problem Analysis (Vande Kamp and Nelson 2007). The qualitative interviews conducted in 2007 also suggested that these were the features of cruise ships likely to affect visitors' experiences. The exposure component of this question is simply a yes/no response. Analyses will examine the relationship between exposure and reported effects of the different kinds of motorized craft.

Effects of cruise ships and other motorized craft (Items 8, 10, 11c, 13, 14, 16-19): These questions are central to the assessment survey. There are a variety of effects (positive and negative) that may occur, however the limited research on effects of cruise ships on visitors' experiences has not established conventional measures of effects of cruise ships nor suggested a criterion. Thus, a range of measures will be used to examine effects of cruise ships on visitors' experiences. Effects on trip experience will be asked at a relatively general level (e.g., cruise ship effects on enjoyment of Glacier Bay proper) and at a more specific level (e.g., cruise ship effects

on enjoyment of the sounds of nature in Glacier Bay proper). Including items at both levels 1) increases the likelihood that the research will include measures that are both sensitive to effects and relevant to managers and/or visitors, and 2) provides the opportunity to obtain information about specific effects, as well as some indication of the strength and extent of the effects.

Park managers are primarily interested in quantifying effects of cruise ships (whether from seeing and/or hearing them) on different dimensions of visitors experiences and secondarily interested in the effects of different aspects of cruise ships (e.g., PA system, engine noise). Visitors may see and/or hear cruise ships during their visit to Glacier Bay proper, and it is possible that seeing a cruise ship may have different effects than hearing a cruise ship. However, because of survey length constraints, it was not possible to ask separately about the effects of hearing versus seeing cruise ships on visitors' experiences. Thus, the primary effect measures ask visitors about hearing and/or seeing cruise ships and will provide information on overall effects. Questions asking about the effects of specific aspects of cruise ships (e.g., engine sound, public address system) are included to provide some indication of the relative effects of these different aspects of cruise ships on visitor experiences. However, quantifying how specific aspects of cruise ships affect specific aspects of visitor experience would require further research.

General effect measures in the survey ask visitors about their perceptions of the effects of cruise ships and other types of motorized craft on their enjoyment of Glacier Bay (Q #10), their enjoyment of Margerie/Grand Pacific Glaciers (Q #11c), whether they would recommend that a friend or family member visit Glacier Bay on the same kind of vessel they did (Q #17, 18). Measures such as these that ask about the effects of specific setting conditions on general outcomes have been found to be sensitive to differences in setting conditions (Swanson et al. 2006).

More specific measures are also included in the survey. They assess visitors' perceptions of the effects of cruise ships on different important dimensions of trip experience (Q #8), and on their viewing of land animals (Q #13) and marine animals (Q #14). These questions were developed based on the qualitative interviews and discussions with park staff. The specific trip dimensions question (Q #8) uses the same 14 REP items that measure importance of these dimensions (Q #5). Effects of specific features (e.g., haze, engine sound) of cruise ships and motorized craft on visitors experiences are also measured (Q #16). The effect portion of Question 16 is based on prior research.

Because repeat trips to Glacier Bay proper are unlikely for many visitors, visitors will be asked their likelihood of recommending friends or family visit (Q#17). Swanson et. al. (2006) successfully used likelihood of recommendation in park populations that were also unlikely to repeat visit. Visitors' likelihood of recommending friends and family to visit Glacier Bay proper may be influenced by a wide variety of factors such as weather, wildlife sightings, and quality of service. Experiences with different type of water and air craft during their trip in Glacier Bay proper may also affect visitors' likelihood of recommendation and these effects are measured in a second question (Q#18).

Visitors will be asked to rate their overall experience during their time spent in Glacier Bay

proper (Q #19). Including a broad measure such as overall trip satisfaction provides a means to determine if cruise ships are having large-scale effects on visitor experiences. Overall satisfaction ratings among park visitors tend to be highly positively skewed (Swanson and Johnson 2007; Swanson, Vande Kamp, and Johnson 2003). A 6–point scale used in prior research (Swanson, Vande Kamp, Johnson, Manning, and Lawson 2002, Swanson et. al. 2003) has been selected in an effort to increase variability and the likelihood of detecting relationships between this variable and other measures.

These impact data will be used in analyses examining the relationship between exposure levels and observed effects. Furthermore, the data will be used in estimating the increase in effects under the two-cruise-ships-everyday maximum scenario provided for in the ROD (2003).

General attitudes toward cruise ships in Glacier Bay (Q #15): The presence of cruise ships in Glacier Bay proper is a complex issue and qualitative interviews in 2007 indicated that visitors often have a mix of attitudes toward cruise ships. It is possible that cruise ships may affect a visitor’s experience and yet that visitor supports cruise ship use in Glacier Bay proper. Visitors are asked the extent to which they agree/disagree with four statements that were commonly expressed in the 2007 qualitative interviews and capture some of the complexity of the issue. The agree/disagree format is commonly used in applied social survey to measure visitors’ attitudes toward a variety of park related issues.

Justifications for Questions in Motorized Visitor Mail Questionnaire (Appendix F)

This questionnaire will be given to charter boat passengers, tour boat passengers, and visitors in motorized private vessels. As noted above, there is considerable overlap in the questions included in the surveys for the different user groups. The mail questionnaire for Motorized Visitors excludes Q #2 and #6 from the Cruise Ship mail questionnaire. All the remaining questions on the Cruise Ship mail questionnaire are included on the Motorized Visitor mail questionnaire. Three additional questions are included on the Motorized Visitor mail questionnaire (Q #2, 5, 17a, 17b) and the justifications for these questions are below.

Table A4. Justification for Additional Questions in Motorized Visitor Mail Questionnaire

Question(s)	Justification
2, 5	To describe the basic trips that motorized visitors take in Glacier Bay proper in order to determine differences in visitors’ reactions and trip experiences related to the trip.
17a, 17b	This question arose from logistical scoping activities, including discussion with park staff that indicated some visitors make efforts to avoid other vessels. Understanding the prevalence and nature of these activities is important when estimating effects under future conditions, as some of these activities may not be feasible under those conditions.

Justifications for Questions in Non-Motorized Visitor Mail Questionnaire (Appendix G)

As noted above there is considerable overlap in the questions included in the surveys for the different user groups. The mail questionnaire for Non-Motorized Visitors excludes Q #2 and #6

from the Cruise Ship mail questionnaire. All the remaining questions on the Cruise Ship mail questionnaire are included on the Non-Motorized Visitor mail questionnaire (although with different question numbers). Four additional questions are included on the Non-Motorized Visitor mail questionnaire: three of these questions (Q #2, 6, 18a, 18b) are identical to questions in the Motorized Visitor mail questionnaire, and one question is unique to this mail questionnaire (#3). The justifications for these questions are below.

Table A5. Justification for Additional Questions in Non-Motorized Visitor Mail Questionnaire

Question(s)	Justification
2, 3, 6	To describe the basic trips that visitors take in Glacier Bay proper in order to determine differences in visitors' reactions and trip experiences related to aspects of the trip.
18a, 18b	This question arose from logistical scoping activities, including discussion with park staff that indicated some visitors make efforts to avoid other vessels. Understanding the prevalence and nature of these activities is important when estimating effects under future conditions, as some of these activities may not be feasible under those conditions.

QUALITATIVE VISITOR INTERVIEW (Appendix H)

There are two qualitative components to be conducted in 2008: 1) qualitative interviews with visitors and 2) qualitative interviews with gatekeepers. Both of these interviews are being conducted to aid in the interpretation and understanding of the findings from the quantitative mail survey. The gatekeeper interviews will provide information about whether there are mitigating efforts currently occurring that will change under the two-cruise ships every day scenario. If so, estimates of effects of cruise ships for the two-cruise ships every day scenario will be adjusted accordingly from those derived based on the mail survey (see next section for detailed discussion of gatekeeper interviews).

The qualitative interviews of visitors are being conducted to aid in interpreting and/or understanding some findings from the mail questionnaire. Most of these issues arise from length limits of the mail survey so comparable questions cannot be asked about different aspects of cruise ships and/or different types of motorized craft. Thus, qualitative interviews provide a means to obtain information on how visitors compare these different experiences. Additionally, some of the mail survey questions when taken together reflect complex trade-offs that may produce responses that appear to be in conflict. The qualitative interviews will provide insight about these trade-offs that cannot be obtained from the mail survey.

Review of the draft mail questionnaires revealed the following areas where qualitative interviews with visitors can provide useful insights.

1. Due to practical limits on the length of the quantitative surveys, questions about reactions to features of cruise ships (and other craft) only address broad categories of response (negative effect, no effect, positive effect). More detailed information about the relative

effects of different features of cruise ships and of other vessels can be obtained from the qualitative interviews (e.g., whether sounds from PA systems affected visitor experiences more than engine noise from other boats).

2. Limits on mail survey length preclude asking in-depth questions about the effects of vessels other than large cruise ships on specific dimensions of visitor experiences. Thus, qualitative interviews will enhance understanding of which dimensions of visitor experiences are affected by these other craft and whether they are the same dimensions affected by cruise ships.
3. The quantitative surveys ask whether visitors experienced effects of different motorized vessels on their trip experiences. However, specific questions about persistence or changes in intensity could not be included because of practical restrictions on survey length. The qualitative interviews will allow exploration of these effects.
4. Cruise ships in Glacier Bay are a complex issue. They represent an efficient, minimal footprint on the environment, a means for many people to visit the park in a controlled fashion, and yet they potentially affect other visitors' experiences. It is possible that some visitors believe cruise ships have a place in Glacier Bay proper, while also reporting that their personal experiences were affected negatively by cruise ships. Obtaining additional information about how visitors view these trade-offs will provide insight that cannot be gained from the mail surveys alone.
5. The qualitative study done in 2007 indicated that many visitors experience Glacier Bay as points of interest (nodes) linked by pathways. The mail survey asks about cruise ship effects overall (nodes and pathways combined) and at Margerie/Grand Pacific Glacier (a primary node). Understanding more about the relative importance of the nodes versus the pathways will provide a context for interpreting effects reported in the mail survey.

The assessment interview guide (see Appendix H) was developed to provide information that addresses the above information needs.

Visitor Characteristics (Questions #1 - #3): provide information about the respondent, which is necessary for contextualizing the data collected from the entire interview.

Perceptions of Visitor Exposure to Different Kinds of Craft in Glacier Bay Proper (Question #4): Question #4 is necessary for assessing visitors' encounters with different kinds of craft in Glacier Bay proper.

Perceptions of Effects of Different Crafts on Quality of Visitor Experience (Questions #5 - #8): Question #5 assesses any effects experienced as a result of exposure to different types of craft and whether those effects changed over time. Questions #6-#8 ask about the relative effects on experiences of the craft visitors saw or heard, on specific dimensions of their experience, and what specific aspects of the different craft have an effect.

Perceptions of Nature of Trip and Effect of Encounters (Questions #9, #10): The qualitative interviews in 2007 suggested that visitors tend to view their trips as a series of discreet

experiences. Thus, cruise ships and other craft may have more effects at the key attractions than during travel between attractions. Questions #9 assesses whether there are particular places or times that other craft have the most or least effect on visitor experiences. Question #10 assesses the extent to which visitors experience their trip as a continual flow versus a series of more discreet experiences.

Perceptions of Appropriateness of Cruise Ships in Glacier Bay proper (Question #11): The 2007 qualitative interviews indicated that the issue of cruise ships in Glacier Bay is complex for visitors. Question #11 assesses visitors thinking on the appropriateness of cruise ships in the bay. Visitors with experiences incongruent with their beliefs about appropriateness will be asked to tell us more about this apparent inconsistency.

“GATEKEEPER” INTERVIEW (Appendix I):

Vande Kamp and Nelson (2007) reported that during their site visit a number of GLBA VIS staff, charter boat operators, and the owners of Glacier Bay Sea Kayaks described a variety of ways in which they directly or indirectly limit visitors’ exposure to cruise ships and other motorized vessels. These interviews with “gatekeepers” will assess the prevalence and nature of efforts to reduce visitors’ exposure to other motorized vessels and indicate whether any adjustments are needed when generating estimates under the maximum two-cruise ship every day scenario. Interviews will be conducted on-site (i.e., Gustavus, Juneau, or Auke Bay) and are estimated to last approximately 15 minutes.

Modified Itineraries to Minimize Encounters with Other Craft (Question #1): Question #1 assesses whether the gatekeeper has modified an itinerary to minimize a client’s exposure to other craft. This question assess prevalence of adjusting itineraries due to other craft.

Frequency of and Reasons for Modifying Itineraries (Questions a-e): For gatekeepers who have modified itineraries, questions assess whether it is currently happening (Question a), why they have modified itineraries (Question b), types of craft that concern them and ways they adjust their itinerary (Question c), frequency per season (Question d), number of seasons they have adjusted their itinerary (Question e), and whether their strategies have changed over time (Question f). These questions assess the prevalence of itinerary modification due to other craft. Additionally, the historical data provide some insight into how, if at all, itineraries were adjusted with the most recent increase in two-cruise ship days occurring in June 2007.

Reasons Don’t Modify Itineraries (Question f): For gatekeepers who have not modified their itineraries, Question f assesses why they do not. If they have problems with other craft but do not modify their itineraries, questions assess type of craft that are perceived as problematic (Question g), frequency per season in which they have problems with other craft (Question h), and number of seasons have existed problems (Question i). These questions provide information about whether other craft have effects, although the gatekeeper does not adjust his/her itinerary for them.

Perceptions of Effects of Two Cruise Ships Entering the Bay Everyday (Question #2). Question 2 assesses gatekeepers’ perceptions of how having 2 cruise ships entering the bay

everyday will affect them. It is possible that under the maximum proposed increase of two cruise ships per day entering Glacier Bay proper that current strategies will no longer be effective. If so, the estimates derived from the survey data will need to take into consideration changes in strategies and be adjusted.

3. Describe whether, and to what extent, the collection of information involves the use of automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses, and the basis for the decision for adopting this means of collection. Also describe any consideration of using information technology to reduce burden.

This information will be collected via on-site and mail surveys and on-site and phone interviews. No automated data collection will take place.

Data collected manually on visitor contact sheets will be entered by field staff in Alaska and sent electronically to mailing staff at the University of Washington, Seattle.

4. Describe efforts to identify duplication. Show specifically why any similar information already available cannot be used or modified for use for the purposes described in Item 2 above.

The questions in the interview and survey instruments address specific knowledge needs related to effects of cruise ships and other craft on the quality of visitor experiences in Glacier Bay proper. The Glacier Bay Science Advisory Board conducted a thorough review of previous research and recommended research to address these knowledge gaps in their report (2005). Research by Littlejohn (2000) and Johnson (1990) provide some information, although considerably more limited in scope, and vessel use levels have changed since those studies were conducted. Additionally, those studies only included some user groups of Glacier Bay proper. No recent data exists that can be used to provide estimates under current and potential future vessel use levels.

The qualitative interviews conducted in 2007 focused on identifying key dimensions of visitors' experiences and those that may be affected by motorized craft. This information was used in developing the mail questionnaires. The qualitative interviews planned for 2008 focus on obtaining information to address specific limitations of the mail questionnaire to facilitate interpretation of the quantitative findings (see above for detailed discussion).

5. If the collection of information impacts small businesses or other small entities, describe any methods used to minimize burden.

Two aspects of the data collection involve small entities or small businesses. The first is the gatekeeper experience interviews. Other than the VIS staff, the remaining gatekeepers are small charter operators and small guide operations. To minimize burden on these people, the interviewer will arrange to conduct the interview at a mutually agreed upon time that does not impinge on business operations. Furthermore, the objective of the interview is to obtain specific information that can not be obtained from other sources and thus, consists of focused questions.

The second aspect of the data collection that may affect charter operators is the need to present information about the visitor mail survey to clients when the survey worker is unable

to meet the charter boat. It is expected to be an unusual and infrequent occurrence when this may happen. In those cases, the charter operator will be provided the materials for recruiting visitors to participate including a detailed information sheet describing the survey and a script for introducing the study.

6. Describe the consequence to Federal program or policy activities if the collection is not conducted or is conducted less frequently, as well as any technical or legal obstacles to reducing burden.

Should these data not be collected, management policy evaluations would be made without empirical evidence about actual visitor experiences in the park. Any increases in cruise ship use in Glacier Bay without considering empirical evidence would be inconsistent with the Record of Decision (2003), potentially resulting in legal action against the park.

The sampling schedule and target sample sizes efficiently collect the data needed for providing the range and complexity of experiences from the interviews and for providing a robust estimation of survey data. Further restriction of the sample size and schedule would risk compromising the significance and reliability of the resulting information.

7. Explain any special circumstances that would cause an information collection to be conducted in a manner:
 - *requiring respondents to report information to the agency more often than quarterly;
 - *requiring respondents to prepare a written response to a collection of information in fewer than 30 days after receipt of it;
 - *requiring respondents to submit more than an original and two copies of any document;
 - *requiring respondents to retain records, other than health, medical, government contract, grant-in-aid, or tax records, for more than three years;
 - *in connection with a statistical survey, that is not designed to produce valid and reliable results that can be generalized to the universe of study;
 - *requiring the use of a statistical data classification that has not been reviewed and approved by OMB;
 - *that includes a pledge of confidentiality that is not supported by authority established in statute or regulation, that is not supported by disclosure and data security policies that are consistent with the pledge, or which unnecessarily impedes sharing of data with other agencies for compatible confidential use; or
 - *requiring respondents to submit proprietary trade secrets, or other confidential information unless the agency can demonstrate that it has instituted procedures to protect the information's confidentiality to the extent permitted by law.

These circumstances are not applicable to our collection of data. Ours consists of one-time, on-site and mail surveys and phone interviews, so frequency of reporting, preparation or submission of documents, retaining of records, and revealing of trade secrets do not apply in any way.

This research includes exploratory interviews designed to inform park management on the effects of motorized craft on the quality of visitors' experience and statistical surveys that are designed to produce valid and reliable results that can be generalized. These instruments only use data classifications to be reviewed and approved by OMB. The introductory statements read by researchers at the beginning of the interview and surveys offers a pledge of anonymity, but not confidentiality.

8. If applicable, provide a copy and identify the date and page number of publication in the Federal Register of the agency's notice, required by 5 CFR 1320.8(d), soliciting comments on the information collection prior to submission to OMB. Summarize public comments received in response to that notice [and in response to the PRA statement associated with the collection over the past three years] and describe actions taken by the agency

in response to these comments. Specifically address comments received on cost and hour burden.

Describe efforts to consult with persons outside the agency to obtain their views on the availability of data, frequency of collection, the clarity of instructions and recordkeeping, disclosure, or reporting format (if any), and on the data elements to be recorded, disclosed, or reported.

Consultation with representatives of those from whom information is to be obtained or those who must compile records should occur at least once every 3 years — even if the collection of information activity is the same as in prior periods. There may be circumstances that may preclude consultation in a specific situation. These circumstances should be explained.

The NPS published a 60-day notice to solicit public comments on this ICR in the Federal Register on November 5, 2007 (Vol. 72, No. 213, Page 62489 – 62490). The comment period closed on January 4, 2007. **Attachment E** contains a copy of the 60-day Federal Register notice. After multiple notifications to stakeholders requesting comments, the NPS received four comments as a result of the publication of this 60-day Federal Register notice.

We received four public comments on the proposed visitor study in Glacier Bay National Park and Preserve. All of these comments were based on the information included in the 60-day notice. Two comments were from charter operators who have agreements with GLBA. The first of these comments indicated that interviewing charter operators and other gatekeepers is critical in order to get a complete picture, as many of their clients are unaware of actions the operators take to avoid cruise ships at critical points in the itinerary. The comment further stated that the operator was not opposed to cruise ships, appreciated the balance the park was working to achieve, and appreciated the opportunity to have the operators' voice heard. The comment was addressed in a reply email acknowledging her understanding of the gatekeeper interview component of the proposed research, attaching the proposed interview guide, and offering to send the complete work plan and questionnaires if she desired.

The second comment was received from another charter operator who indicated feeling overwhelmed by cruise ships, not in GLBA, but everywhere else in southeast Alaska. This operator believes the park does a good job managing vessels within park waters. His concern was with other areas of development in Hobart Bay and Tracy Arm. He sent a description of the development planned for Hobart Bay. The comment was addressed in a reply email thanking him for sharing his experience and concerns with cruise ships in Southeast Alaska, as it helps project staff understand the broader context of the proposed project. An offer to send the complete work plan and questionnaires was accepted, the information was sent, and no further comment has been received.

The other two comments were on behalf of cruise ship companies. The first of these comments was sent from John Shively, Vice President—Government and Community Relations, Holland America Line. The comment indicated a need for more information regarding the survey methods and a desire to review them and the survey instruments. Additionally, the comment noted that the company was unaware that cruise ship size was an issue the NPS desired to study. The comment was addressed in a reply email thanking him for his comments and interest in the project and included the complete work plan and survey

instruments for review. A return email indicated that he would review the documents upon his return from a 10-day trip. No further correspondence has been received from this person.

The second cruise ship company comment was from Charlie Bell, President, Princess Cruises and primarily indicated concerns about survey methods because of the limited scope of the summary included in the 60-day notice. The comment was addressed by an email reply that thanked him for his comments and interest in the research and included the complete work plan and survey instruments. No further comment has been received.

Discussions with park staff and charter and tour boat operators contributed to the design of the survey and interviews described above. A draft work plan and surveys were subsequently reviewed by Glacier Bay National Park and Preserve staff, four independent peer reviewers, and the NPS Social Science Program, and wording changes were incorporated.

9. Explain any decision to provide any payment or gift to respondents, other than remuneration of contractors or grantees.

No payments or gifts will be provided to respondents.

10. Describe any assurance of confidentiality provided to respondents and the basis for the assurance in statute, regulation, or agency policy.

No assurance of confidentiality will be provided to respondents, since the Department of the Interior does not have the statutory authority to protect confidentiality or to exempt the survey from a request under the Freedom of Information Act. Instead, those who inquire about this issue will be told that reports prepared from this study will summarize findings across the sample so that responses will not be associated with any specific, identifiable individuals.

Participants' names and addresses are recorded. Obtaining participants' names and addresses are necessary in order to send out mail-back questionnaires and follow-up mailings. Mail-back questionnaires are used when the survey exceeds five minutes to complete, thus reducing the burden on participants when visiting. Follow-up mailings significantly increase response rates, reducing the likelihood of non-response bias. In past experience, follow-up mailings have increased response rates from around 35%-40% to 70% or more.

Participants' names and addresses are assigned an arbitrary number that becomes the subject number. The subject number is placed on the questionnaire and respondents are told not to place their name on the questionnaire. Thus, when a questionnaire is returned, the subject number can be used to record the return of the questionnaire and end the mailing out of any further reminders. The subject number is entered with the responses to the questionnaire in a separate data file. Once data collection is complete, the link between names/addresses and data will be destroyed. Data are kept on the project manager's password-protected computer. No one other than members of the research team will have access to the names and addresses.

11. Provide additional justification for any questions of a sensitive nature, such as sexual behavior and attitudes,

religious beliefs, and other matters that are commonly considered private. This justification should include the reasons why the agency considers the questions necessary, the specific uses to be made of the information, the explanation to be given to persons from whom the information is requested, and any steps to be taken to obtain their consent.

No questions of a sensitive nature will be asked. In addition, respondents are advised that their answers are voluntary.

12. Provide estimates of the hour burden of the collection of information. The statement should:

*Indicate the number of respondents, frequency of response, annual hour burden, and an explanation of how the burden was estimated. Unless directed to do so, agencies should not conduct special surveys to obtain information on which to base hour burden estimates. Consultation with a sample (fewer than 10) of potential respondents is desirable. If the hour burden on respondents is expected to vary widely because of differences in activity, size, or complexity, show the range of estimated hour burden, and explain the reasons for the variance. Generally, estimates should not include burden hours for customary and usual business practices.

*If this request for approval covers more than one form, provide separate hour burden estimates for each form and aggregate the hour burdens.

*Provide estimates of annualized cost to respondents for the hour burdens for collections of information, identifying and using appropriate wage rate categories. The cost of contracting out or paying outside parties for information collection activities should not be included here. Instead, this cost should be included in Item 14.

Instrument	# of Respondents	Frequency of Response	Completion Time	Burden Hours
On-site Visitor Contact	2800	1	3 minutes	140
Mail Survey to Visitors	1960	1	25 minutes	817
Qualitative Visitor Interview	100	1	30 minutes	50
Qualitative Gatekeeper Interview	27	1	15 minutes	7
Non-respondents to initial contact (survey & interview)	463	1	1 minute	8
Non-respondents to mail contact (mail-back survey)	842	1	3 minutes	42
TOTAL				1,064 hours

As shown in the table, in addition to the burden for the respondents, there is minimal burden associated with contacting non-respondents. For the initial on-site visitor contact, refusals rates are estimated at 10% for passengers aboard tour, charter, and private boats and at 20% for cruise ship passengers and non-motorized backcountry users. Cruise ship passengers will be contacted at disembarkation points in Juneau, and many are eager to proceed with their land tours. Backcountry visitors will be contacted primarily at the Visitor Information Station (VIS) and because the VIS staff will make some of these contacts, the response rate may be lower. A 90% response rate is expected for the qualitative interviews of visitors and experience gatekeepers.

We estimate that there will be a total of 463 individuals (449 for the survey and 14 for the interviews) who are initially contacted, but decline to respond to the initial contact. These

contacts will last one minute. Thus, there will be an additional burden of 8 hours for onsite non-respondents. Further, there will be those individuals who fill out the onsite survey, but fail to fill out the mail survey. Assuming an overall response rate of 70% to the mail surveys, there will be a total of 842 of these non-respondents. Reading materials included in the initial and follow-up mailings will take approximately 3 minutes. This produces an additional burden of 42 hours for those who do not respond to the mail survey. The total burden associated with this study is 1,064 hours. Using the Bureau of Labor Statistics national wage information, the most recent published report (June 2006) lists an average hourly wage of \$19.29 (<http://www.bls.gov/ncs/ocs/compub.htm#National>). Thus, the estimated annualized cost to respondents for the hour burden is \$20,524.56.

- 13.** Provide an estimate of the total annual [non-hour] cost burden to respondents or record keepers resulting from the collection of information. (Do not include the cost of any hour burden shown in Items 12 and 14).
- * The cost estimate should be split into two components: (a) a total capital and start-up cost component (annualized over its expected useful life) and (b) a total operation and maintenance and purchase of services component. The estimates should take into account costs associated with generating, maintaining, and disclosing or providing the information [including filing fees paid]. Include descriptions of methods used to estimate major cost factors including system and technology acquisition, expected useful life of capital equipment, the discount rate(s), and the time period over which costs will be incurred. Capital and start-up costs include, among other items, preparations for collecting information such as purchasing computers and software; monitoring, sampling, drilling and testing equipment; and record storage facilities.
 - * If cost estimates are expected to vary widely, agencies should present ranges of cost burdens and explain the reasons for the variance. The cost of purchasing or contracting out information collection services should be a part of this cost burden estimate. In developing cost burden estimates, agencies may consult with a sample of respondents (fewer than 10), utilize the 60-day pre-OMB submission public comment process and use existing economic or regulatory impact analysis associated with the rulemaking containing the information collection, as appropriate.
 - * Generally, estimates should not include purchases of equipment or services, or portions thereof, made: (1) prior to October 1, 1995, (2) to achieve regulatory compliance with requirements not associated with the information collection, (3) for reasons other than to provide information or keep records for the government, or (4) as part of customary and usual business or private practices.

The cost burden on respondents and record-keepers, other than hour burden, is zero.

- 14.** Provide estimates of annualized cost to the Federal government. Also, provide a description of the method used to estimate cost, which should include quantification of hours, operational expenses (such as equipment, overhead, printing, and support staff), and any other expense that would not have been incurred without this collection of information. Agencies also may aggregate cost estimates from Items 12, 13, and 14 in a single table.

The NPS estimates that the agency contribution to the study will total \$321,985. The costs include researcher salaries and benefits, contract services, supplies and printing, communications, travel, and indirect costs.

Budget

Salaries

Project manager -- Problem analysis, advisor	9,684
Project manager -- Data collection and reporting	79,172
Qualitative Researcher--2007 Study	16,156
Qualitative Researcher--2008 Assessment Study	18,464

Administrative assistant	3,500
Field workers	22,440
Qualitative Researcher--Experience gatekeeper study	5,040
Mailings, Data entry, and data analysis assistance	17,200
Benefits	44,529
Travel	
Airfare	8,906
Per diem	9,908
Field staff housing	4,630
Other travel expense	500
Car rental	2,444
Reviewer Honorarium	1,800
Other expenses	
Computer	3,400
Telephone	1,500
Supplies	1,955
Copying	7,503
OMB charge	1,000
Other direct costs	600
Postage	13,698
Total direct costs	274,030
Indirect costs at 17.5%	47,955
Total Costs	321,985

15. Explain the reasons for any program changes or adjustments.

This is a new one-time collection. No adjustments are involved.

16. For collections of information whose results will be published, outline plans for tabulation and publication. Address any complex analytical techniques that will be used. Provide the time schedule for the entire project, including beginning and ending dates of the collection of information, completion of report, publication dates, and other actions.

Park managers indicated a preference for having reliable data for the different user groups of Glacier Bay proper to facilitate their ability to manage the bay for these different user groups. Thus, survey findings will be presented by user group. There was little indication from park managers that an aggregated estimate of the different park user groups would be helpful in their management decisions. However, if such an estimate is desired, the data from the individual user populations will be weighted based on the population sizes.

Park managers are interested in: 1) measuring the effects of cruise ships on visitors' experiences under current conditions (e.g., baseline data); and 2) estimating the effects of cruise ships on visitors' experiences under future conditions. Currently, approximately two-thirds of the days (61 out of 92) during the peak season are "two-cruise-ship" days. Under the maximum potential future condition, all 92 days would be two-cruise-ship days.

As no current data exists for rates of effects of cruise ships on visitors' experiences obtaining baseline data is as important as obtaining information about potential changes. Descriptive statistics of each sample corresponds to estimates for current conditions (e.g., baseline data).

The primary measure of effects on different dimensions of visitors' experiences consists of 14 Recreational Experience Preference (REP) scale items. These items were selected so that each dimension was represented by two items. A factor analysis of these items will be done to determine whether visitor responses to the items load onto the factors as expected or in broader or different factors. In addition to the results of the factor analysis, findings from the REP scales will be presented individually to allow comparison across user groups should different results for the factor analyses arise across the different groups. For each user group, the resulting factor scores from the REP scale factor analysis will also be included in the measures tested in the primary hypotheses.

Although reliable estimates of effects of cruise ships on visitors' experiences can be obtained for current conditions, and estimates of effects under maximum potential future conditions can be derived, it is not possible to statistically test whether these values differ. However, statistical comparisons between one- and two-cruise-ship days on a number of measures provides information regarding whether an increase of one cruise ship entry per day into Glacier Bay results in different visitor experiences. If no differences are found, then it can be concluded that effects under future conditions will not differ statistically from current conditions (assuming no other changes in the system). However, if statistical differences are found between one- and two-cruise-ship days, it cannot be concluded that future conditions will result in significantly higher levels of impacts over current conditions. The reason is because only one-third of the days during the peak season will experience an increase in cruise ship entries as two-thirds of the days are currently two-cruise-ship days. Thus, park managers will need to assess whether predicted increases in rates of negative effects of cruise ships on visitors' experiences are: 1) practically meaningful; and 2) acceptable.

The primary hypotheses to be tested for comparing one- and two-cruise-ship days include:

- Effects of cruise ships on visitors' experiences do not differ between one- and two-cruise-ship days;
- Self-reported exposure to cruise ships does not differ between one- and two-cruise-ship days;
- Effects of other types of motorized craft on visitors' experiences do not differ between one- and two-cruise-ship days;
- Self-reported exposure to other types of motorized craft does not differ between one- and two-cruise-ship days.

For the two qualitative interviews (visitor and gatekeeper interviews), sessions will be audio-recorded (with permission of the user). The content of the interviews will be analyzed for common themes, and a report describing those findings will be produced. Furthermore, information obtained in the qualitative interviews will be used to provide insight into the results from the quantitative survey. This will enhance the understanding of current circumstances at GLBA.

The target date to begin the surveys and qualitative interviews is June 1, 2008. On-site data collection will be completed by August 31, 2008, and the mail survey follow-up mailings will be completed during the fall of 2008. Data analysis and preparation of the draft report will continue until June 1, 2009. Following feedback on the draft from the sponsoring agencies, the final report will be submitted by August 1, 2009.

The time schedule for the larger project, including the survey component covered here, is summarized below.

Task	2007			2008			2009
	Spr (Mar – May)	Sum (Jun- Aug)	Fall (Sep- Dec)	Spr (Jan- May)	Sum (Jun- Aug)	Fall (Sep- Dec)	Win/Spr (Jan-Jun)
1. Design 2007 qualitative interviews (completed)	X						
2. 2007 Qualitative Interviews & Logistical Scoping (completed)		X					
2. Interview analysis and report writing (completed)		X	X				
3. Survey and Interview Design	X	X	X	X			
4. Conduct Qualitative Interviews					X	X	
5. Conduct and Analyze Mail Surveys					X	X	X
6. Transcribe and Analyze Qualitative Interviews						X	X
7. Final Report							X

17. If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons that display would be inappropriate.

We are not seeking such approval.

18. Explain each exception to the certification statement.

There are no exceptions to the certification statement.

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