

1Supporting Statement A

ASSESSMENT OF EFFECTS OF CLIMATE ON WATERFOWL

OMB Control Number 1028-NEW

Terms of Clearance: None

Justification

- 1. Explain the circumstances that make the collection of information necessary. Identify any legal or administrative requirements that necessitate the collection.**

The effects of climate change and other factors on waterfowl demography varies among seasonal ranges, and population trends result from cumulative effects throughout their annual ranges. It is unlikely that the direction or strength of climate and other effects are consistent among ranges. As a result, it is extremely difficult to unravel the most important effects on population size when potentially contrasting positive and negative influences of climate occur within a year at widely separated locations. A large-scale research framework is needed to deal with this complexity and increase the relevance, efficiency and effectiveness of management-related research. To develop a focused and integrated multi-regional and national research program, this data collection of State/Local, and NGO managers and researchers seeks to prioritize climate change information needs and enhance communication between researchers and managers from different seasonal ranges. The data collection will rank research topics based on the direction and magnitude of expected climate effects on waterfowl demography and, thus, population sizes and provide a prioritized list of research topics. The authorizing statute for this work is THE MIGRATORY BIRD TREATY ACT of 1918, 16 USC 703.

- 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.**

The information from this data collection will be used by the USGS Alaska Climate Science Center and by the USGS National Climate Change and Wildlife Science Center to prioritize research topics that may become the focus of USGS funded research. The information may be used by other entities as well (e.g., USFWS Office of Migratory Birds, State waterfowl managers, NGO waterfowl managers). The data collection instrument is in a separate document titled "Instrument-Climate Waterfowl-screen capture.docx".

Question justifications:

Question justifications (in what follows insertions such as [Q5] refer to the answer given to Question number 5, for example; the answer would be carried forward to subsequent questions so the respondent would be reminded of the context of the answer to the current question):

1. *Who is your employer?* **Justification** – Multiple Choice, Classification variable to establish the employer of a respondent.
2. *What is your primary work objective?* **Justification** – Multiple Choice, Classification variable to establish whether primary work objective is research or management
3. *Estimate the proportion of your time in research or management activities that is spent considering climate effects?* **Justification** – Multiple Choice, To gauge how much of current work time is devoted to climate change.
4. *Do you think there should be more, less, or the same amount of emphasis on climate change in your work?* **Justification** – Multiple Choice, To gauge if respondent thinks current amount of work time on climate change is adequate.
5. *Which of the following species or group of species is the greatest priority of your research/management activities?* **Justification** – Multiple Choice, Flow Control, to determine if a species, from a list of 4 candidate species, is the primary focus of respondent activities. If one is chosen then go to a series of questions (e.g., 6-19, below) regarding that species. If none of the 4 is a priority then skip to the closeout questions, 21-24.
6. *Which one of the following factors do you think **currently** has the greatest effect on [Q5] population size?* **Justification** – Multiple Choice, To obtain professional opinion regarding factors most important to population size for a chosen species.
7. *During which **phase** of the annual cycle does this factor have the greatest influence on [Q5] population size?* **Justification** – Multiple Choice, To identify the phase of the annual life cycle in which a factor has the greatest effect on population size.
8. *Which one of the following factors do you think **currently** has the **second** greatest effect on [Q5] population size?* **Justification** – Multiple Choice, To obtain professional opinion regarding factors second most important to population size
9. *During which **phase** of the annual cycle does this factor have the **second** greatest influence on [Q5] population size?* **Justification** – Multiple Choice, To identify the phase of the annual life cycle in which a factor has the second greatest effect on population size.
10. *Enter the **geographic regions** (e.g., Prairie pothole, Pacific flyway) that are relevant to the two factors you identified as the most influential to [Q5] population size. If all geographic regions of the phase (e.g., all breeding grounds) are relevant then write 'ALL'.* **Justification** – Fill in the blank, To identify whether most important factors affecting population size are primarily related to a particular geographic area. Open ended to obtain greatest possible range of geographic regions.
11. *Select the **two demographic rates** that are most affected by '[Q6] during [Q7]'* Note: A factor may influence a demographic parameter 1) directly within the same season/location as the factor (e.g., the number of ponds on a breeding ground may affect breeding season production) or 2) indirectly in a different season/location than the factor (e.g., food availability during spring migration may affect breeding season production). **Justification** – Multiple Choice, To prioritize components of demography most needing research focus.

12. Select the expected **population response** to the effects of **increasing temperature and decreasing precipitation** on '[Q6] during [Q7]' Note: for the opposite scenario of increasing precipitation, we will assume that the population response will be opposite of that indicated for the decreasing precipitation scenario. **Justification** – Multiple Choice, To obtain professional opinion on the direction and strength of effect of climate on the most important demographic rate affecting population size.
13. Select the **two demographic rates** that are most affected by '[Q8] during [Q9]' Note: A factor may influence a demographic parameter 1) directly within the same season/location as the factor (e.g., the number of ponds on a breeding ground may affect breeding season production) or 2) indirectly in a different season/location than the factor (e.g., food availability during spring migration may affect breeding season production). **Justification** – Multiple Choice, To identify the second most important component of demography needing research focus.
14. Select the expected **population response** to the effects of **increasing temperature and decreasing precipitation** on '[Q8] during [Q9]' Note: for the opposite scenario of increasing precipitation, we will assume that the population response will be opposite of that indicated for the decreasing precipitation scenario. **Justification** – Multiple Choice, To obtain professional opinion on the direction and strength of effect of climate on population size through the second most important demographic rate affecting population size.
15. If the climate changes in the **future**, would your **identification and/or ranking** of the 2 most important factors affecting scaup population size change? **Justification** – Yes/No, To obtain professional opinion regarding whether climate change would be expected to change the most important demographic rates affecting population size.
16. Indicate whether the following **density-dependent** relationships (Mattsson et al. 2012) have an effect on scaup population dynamics.
 As breeding population increases, **production** decreases
 As mid-winter population increases, **post-harvest survival** decreases
 As mid-winter population increases, the **proportion that flyover** to more northern breeding areas increases. **Justification** –Multiple Choice, To obtain professional opinion regarding potential effects of density dependence (separate from climate effects). Which of the following phases are primary responsibilities of your work with [Q5]? You may choose more than one.
Justification –To identify primary phases of responsibility of the responder for [Q5]. Choices are:
 Breeding
 Fall migration
 Winter
 Spring migration
17. Given what is already known, what is your **highest priority information need** for [Q5] during each **phase**? If a phase is not your primary responsibility, indicate the piece of information, if any, that you would most like to receive from those whose work does focus on this phase. Lastly, **rank order** the phases/information needs based on their relative **influence on population size** with '1' being the most influential. You may need to scroll over to see the rank column. **Justification:** To obtain expert opinion regarding the highest priority information need in each phase of the life cycle of [Q5].
18. Have you completed questions for two species?
 We are asking this question to ensure proper branching either to the next species or to the wrap-up section

of the questionnaire. **Justification** – Yes/No, Flow control, if yes go to Wrap-up section starting with question 21, if not go to question 20.

19. Which of the following species or group of species is the second greatest priority of your research/management activities? **Justification:** Flow control. If a second species is chosen go to a set of questions that duplicate questions 6-19 for the second species. If “None of these species....” is chosen, then go to Wrap-up section starting with question 21.
20. Is there a waterfowl species that breeds in Alaska and winters in the continental United States besides the four addressed here (scaup, canvasback, pintail, mallard) that you think should be a top research priority due to abundance, conservation status, lack of information, or any other reason? For each species listed indicate the reason for prioritization. **Justification** – Fill in the blank. To obtain a list of waterfowl species, beyond the four species addressed in this instrument, that have high research priority
21. Please prioritize the following based on their **feasibility** and your **research/management needs**
Development of effective **guild-based** continental population models
Adaptation of existing **single-species** continental population models (e.g., Mattsson et al. 2012) for additional species of dabblers and divers:
Justification – To assess the feasibility and need for guild or additional single species continental population models.
22. Having completed this questionnaire, do you think there should be more, less, or the same amount of emphasis on climate change in your work? **Justification:** To gauge respondents’ perception of need for additional emphasis on climate change effects on waterfowl.
23. Having completed this questionnaire, do you think your work should involve more, less, or the same amount of cross-seasonal information? **Justification:** To gauge respondents’ perception of need for additional emphasis on cross-seasonal information.

End of Question 2.

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 and specifically how this collection meets GPEA requirements.**

The data collection instrument will be delivered to respondents’ work email addresses via SurveyMonkey, a browser-based web application meeting GPEA requirements. This method was chosen because not all respondents will need to answer all questions and SurveyMonkey provides embedded flow control that will hide questions not needed to be answered from the respondents. The SurveyMonkey survey is much clearer delivery that does not overwhelm respondents as would a large paper survey.

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.

We queried five professional waterfowl biologists asking whether any similar surveys were being, or had been, conducted and received negative replies. There is a great deal of published research and management material on waterfowl ecology, but this information does not *simultaneously* establish, based on professional expert opinion, the most important factors controlling population size, the demographic rates affected, the influence of climate on these relationships or the use and need of cross-seasonal information to better understand the ecology of the complete annual cycle of waterfowl species. A data collection of expert opinion from working professionals is the best way to obtain this simultaneous information and will vest respondents in a research prioritization that is the expected outcome of the data collection.

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

This information does not affect small businesses or other small entities.

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.

Not collecting this information would impede the development of an informed research prioritization plan and reduce the efficiency of Federal research funding. In addition, research focuses would remain the in the domain of individual biases and would not vest the professional community in a national prioritization effort. If vested, the professional community is much more likely to support a national prioritization plan.

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.**

There are no circumstances that require us to collect information in a manner inconsistent with OMB guidelines.

- 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 three 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 60-day FRN was published on 10/30/20105 in Federal Register 80 FR 66931.

USGS received one public comment regarding the general hardship of birdlife and a statement that no information needed to be collected because the information was already collected by every state. This latter statement was not correct as we found when we queried five professional waterfowl biologists asking whether any similar surveys to ours were being, or had been, conducted and all said they knew of none and that our survey work would be useful.

We consulted with the agencies and NGO's listed in the table to obtain their views on the information presented in our instrument. Several modifications to the format and design of the application were suggested during the testing period and these have been incorporated. For example we

- 1) Substantially reduced the number of questions in the data collection instrument to enhance response rates and reduce burden, and
- 2) Reduced the maximum number of species (from 4 to 2) that a respondent would be asked to provide data for to enhance response rates and reduce burden.

Table 1: Reviewers

Alaska Department of Fish and Game, Juneau, Alaska
Ducks Unlimited, Memphis, Tennessee
The Wildlife Society, Bethesda, Maryland
Migratory Bird Joint Ventures, US Fish and Wildlife Service, Washington, DC.

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 the 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 is given to respondents.

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.

The collection does not include sensitive or private questions.

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.

The information used to calculate Burden Dollar Value comes from Bureau of Labor Statistics, Employer Costs for Employee Compensation, published 6/9/2016. The compensation for private industry was determined to be \$32.06 and for State and Local government employees the compensation is \$45.23 (http://www.bls.gov/schedule/archives/ecec_nr.htm)

Table 2: Private Individual Responders

Private Individuals					
Activity	Annual Responses	Completion Minutes	Dollar Value of B Hrs	Burden Hrs	Total Value
Private individual reads instructions and completes survey for one species.	125	20	\$32.06	42	\$1347
Some private individual respondents complete survey for one additional species.	63	10	\$32.06	11	\$353
Total for Private Individuals					\$1,700

Table 3: State, Local, and Tribal government responders

State and Local Govt					
Activity	Annual Responses	Completion Minutes	Dollar Value of B Hrs	Burden Hrs	Total Value
State and Local government reads instructions and completes survey for one species	125	20	\$ 45.23	42	\$ 1885
Some State and Local government respondents complete survey for one additional species.	63	10	\$ 45.23	11	\$ 475
Total for State and Local Govt					\$2,360

13. Provide an estimate of the total annual non-hour cost burden to respondents or recordkeepers resulting from the collection of information. (Do not include the cost of any hour burden already reflected in item 12.)

- * 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 for form processing). 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.**

There are neither capital and start-up costs nor total operation and maintenance costs to respondents solely as a result of this survey. They may use existing computers and internet connections that are routinely found in State, Federal and NGO offices but would not be expected to buy and maintain a computer and internet to complete this survey.

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.

The total cost to the Federal Government is estimated to be \$12,692. This includes Federal labor effort and contracted services. Federal employee rates are taken from Office of Personnel Management, Salary Table 2016 State of Alaska, for hourly rates.

Table 4: Federal government expenses

Federal Govt cost - Management				120	\$103.26	\$12,392
Position	Grade / Step	Hourly Rate	Annu Hrs by Fed	Fully Loaded Hr Rate	Total Labor Value	
Project Lead, Research Wildlife Biologist	14/8	\$64.54	120	\$103.26	\$12,392	

Other expenses to Federal Government:

Survey Monkey license	1 license for one year. Includes hosting the form.	\$300
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15. Explain the reasons for any program changes or adjustments in hour or cost burden.

This is a new collection focused on understanding the effect of climate change on waterfowl in the North America. This new collection is consistent with DOI and USGS mandates to understand natural phenomena and its impact on wildlife.

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.

Results will be summarized overall and by type of employing agency, research/management focus, and waterfowl species as provided in standard summary output by Survey Monkey. There will be no statistical tests of significance, no hypotheses will be tested and there is no “dependent variable” to model. Because respondents will be providing opinions rather than “facts”, complex statistical analyses are not warranted. The summarizations will be tabulated solely as frequencies of various responses to individual questions (e.g., 50% of respondents were State/Local employees, 15% of all respondents focused their work on canvasback ducks, 30% of those who focused on canvasback ducks thought that the number of ponds/wetlands had the greatest effect on canvas duck population size and 50% of these thought that a warmer climate effect on the number of ponds/wetlands would have a negative effect on population size, etc.).

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.

The OMB control number and expiration date will be displayed.

18. Explain each exception to the topics of the certification statement identified in "Certification for Paperwork Reduction Act Submissions."

There are no exceptions to the certification statement.