

Supporting Statement A

Use of *iNaturalist* by the National Park Service to Record Natural History Observations

OMB Control Number 1024-XXXX

Terms of Clearance. None. This is a new collection.

General Instructions

A completed Supporting Statement A must accompany each request for approval of a collection of information. The Supporting Statement must be prepared in the format described below, and must contain the information specified below. If an item is not applicable, provide a brief explanation. When the question “Does this ICR contain surveys, censuses, or employ statistical methods?” is checked "Yes," then a Supporting Statement B must be completed. OMB reserves the right to require the submission of additional information with respect to any request for approval.

Specific Instructions

Justification

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

The National Park Service (NPS) is requesting approval for a new collection that members of the public and non-federal scientists will use to contribute natural history observations specifically during the NPS Centennial Bioblitz or other NPS sponsored citizen science events. Citizen science events occur when teams of volunteer scientists, families, students, teachers, and other members of the community work together to find and identify as many species of plants, animals, and other organisms as possible in National Parks so that their occurrences can be documented. By using natural history observations collected by the public, it is possible to document the occurrence of many more species than would be possible using only park staff

The NPS is mandated by the Organic Act of 1916 to “conserve... wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.” In order fulfill this mandate, one must know which species occur and where they occur. By allowing citizens and scientists to contribute observations of “wild life” through *iNaturalist*, the NPS can substantially increase its state of knowledge of what species occur in parks.

With the approval to consistently use *iNaturalist* tools, a much wider segment of the general population will be empowered to contribute information to *NPSpecies* (an NPS maintained biodiversity database). Information stored and managed in *NPSpecies* satisfies a fundamental purpose of the NPS to protect and maintain biological diversity in parks. Park managers, interpreters, planners, and scientists use this information about species occurring in parks as a basis for making science-based decisions and for working with the public, other agencies, and the scientific community. By using natural history observations collected by the public, it is possible to document the occurrence of many more species than would be possible using only park staff. These observations will provide information about species of management concern (e.g. threatened species or invasive species), as well as species of scientific significance (e.g. species that are new to a park due to range extension). The participation of scientists and citizen scientists in natural history observation efforts provides expertise that is often not available inside the NPS. Armed with this information, the NPS will possess the necessary information to maintain the components and processes of naturally evolving park ecosystems, including the natural abundance, diversity, and genetic integrity of the plant and animal species native to those ecosystems.

Legal Justification:

- The National Park Service Organic Act of 1916, (38 Stat 535, 16 USC 1a-7, et seq.) *requires that the National Park Service “conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.”*

- 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 (NPS) is requesting approval to use *iNaturalist* as a means to collect information from park visitors during citizen science events. *iNaturalist* is non-NPS third party website that allows the public all over the world to record species observations by including locations, photographs and sounds. The NPS does not currently have this capability and would like to provide our visitors the opportunity to contribute information via *iNaturalist*. A portal and a link will be provided on the NPS Inventory & Monitoring Division’s website that will be enabled to provide access to the *iNaturalist* homepage. The NPS will provide an explanation of why we are using *iNaturalist* to gather information in PRA statement and the OMB Control number will accompany this explanation. The user will not be required to register any information on the NPS website, however the user will have to register to use the *iNaturalist* tool, this registration may require personal information. The user will be required to accept *iNaturalist* terms of agreement requiring the expectation of privacy before they will be allowed to use the tool.

How will the information be used: This information will be used to add natural history observation records that substantiate the presence of species on NPS lands and contribute new species to NPS data systems, which document the occurrence and status of species in National Parks.

By whom the information is used: The information will be used by park managers to make science-based decisions related to park management, by interpretive and education staff for park education programs geared towards park visitors and the public, and by scientists to conduct scientific research in parks, to better understand species occurrence, identify new species, and build substantive lists of organisms in parks.

For what purpose will the information be used: The information will be used to substantiate the occurrence of wildlife and invertebrate species in NPS units. This includes species that are threatened and endangered. This information will enable parks to report accurate numbers to the Fish and Wildlife Service on expenditures by the NPS to improve park habitat and increase protections for those listed species. The information is also used to create species checklists for use by park visitors. The information can also be used to alert park managers about the status of species that may be of local management concern or are categorized as invasive or noxious and require coordinated treatment efforts.

- 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.**

Because the *iNaturalist* program is a completely web-based crowdsourcing tool, all of the information is collected electronically using mobile devices (smart phones or tablets) and web browsers (e.g., Internet Explorer, Firefox, or Chrome). Individuals will use their own mobile devices and computers to upload information into *iNaturalist*, so there are no additional agency information technology investments or management needs associated with this collection.

- 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.**

Currently natural history observations in parks are submitted by using one of the two following methods:

- observation cards that visitors must fill in by hand and which have no capacity to include photos and sounds, or
- anecdotal information that cannot verify because there are no formal mechanisms to contribute natural history observations

We acknowledge that there are a variety of natural history recording systems available. However they do not provide either the all-taxa flexibility or robust, and easy-to-use field-based observation tools of iNaturalist. Several alternative systems include:

Symbiota is a software package specifically designed for the establishment of specimen-based virtual flora/fauna web portals that foster a bio-collaborative environment within a given region. These expert-reviewed specimens serve as one component of a data backbone that allows users to dynamically generate maps, species lists, and identification keys for any well-collected area. The NPS made the decision to use iNaturalist instead of this system because Symbiota only deals with museum collections and does not have a mobile application for field observations.

VertNet is a collaborative project funded by the National Science Foundation that aims to make biodiversity data free and openly accessible on the web from publishers worldwide. Data are contributed through the collaboration with over 165 publishers representing 388 natural history and paleontological collections. The technical architecture is built on a scalable cloud-based platform. Information maintained in this system only reflects a subset of all taxonomic groups. The NPS made the decision to use iNaturalist instead of this system because the system only supports collection of information on vertebrate species and not the range of taxonomic categories needed to understand the complete biodiversity of park units. Relying on VertNet would necessitate the use of multiple systems that would increase the burden on the public to learn provide information.

BISON (Biodiversity Information Serving Our Nation) provides access to georeferenced and non-georeferenced data describing the occurrence or presence of terrestrial and aquatic species recorded or collected by a person (or instrument) at a specific time in the United States and its Territories. The species occurrence data that are available through BISON have been contributed by various Federal and State agencies, universities, and non-profit organizations either directly to BISON or indirectly through their participation in the Global Biodiversity Information Facility (GBIF). Each record in a species occurrence dataset available in BISON will typically consist of a scientific name (genus and specific epithet), a date, and one or more geographic references such as a state name, county name, and/or decimal latitude and longitude coordinates. In addition to these typical data fields, species occurrence datasets often include many other data fields that describe each species occurrence event in more detail. The NPS made the decision to use iNaturalist instead of this system because the portal content does not have a field component needed to record natural history observations. This system also requires extensive validation to confirm each siting.

eBird is an online program that provides tools for the birding community to report presence or absence of species and obtain information about birds. Observations can be collected as part of point counts, transects, and area searches. Data quality filters are in place and submissions are reviewed before they are committed to the database. Portals are generally managed and maintained at local levels so local

expertise and project ownership are facilitated. Resulting data are accessible to the larger biodiversity information community through GBIF and other repositories. The NPS made the decision to use iNaturalist instead of this system because the system only contains information on bird species and not the range of taxonomic categories required to determine complete biodiversity of park units. Relying on eBird would necessitate the use of multiple systems that would increase the burden on the public to provide the similar but limited information.

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

This data collection will not impact 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.

These methods typically do not contribute significantly to the knowledge of a park's biodiversity because they lack reliability and often cannot be validated. They also have extremely limited accessibility to a wider audience.

Without this information collection, the NPS would continue to rely on limited staff to contribute species observations without the added benefit of a larger public contribution, resulting in a status quo situation that does not leverage a potentially sizable volume of scientist and citizen scientist observations.

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 special circumstances.

- 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.

A notice was published in the *Federal Register* (Vol. 80, No. 68, p. 19092) on April 9, 2015 stating that we intended to request OMB approval of our information collection associated with the *iNaturalist* project managed by the California Academy of Sciences. In this notice, we solicited public comment for 60 days ending June 8, 2015. We did not receive any comments as a result of the Federal Register notice.

Prior to the Federal Register Notice, there was a review of relevant usage of *iNaturalist* by other governmental and biodiversity-related organizations. The program is used by a community of nearly 80,000 naturalists, scientists, managers, and members of the public. This is a clear example of how the benefits of crowdsourcing behoove the scientific community. Over 1,180,000 wildlife observations from around the world representing over 60,000 distinct taxa are being shared and, to date, over 610,000 *iNaturalist* 'research quality' observations have been archived by the Global Biodiversity Information Facility. The NPS Inventory & Monitoring Division thoroughly reviewed this program and determined that the benefits of using a well-developed, well-designed and highly accepted mode of data collection

would outweigh the cost of developing a standalone NPS system that would be delayed by design, development, and implementation.

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.

We do not provide any assurances of confidentiality, however, the Department of the Interior is required under Section 208 of the E-Government Act of 2002 (Public Law 107-347, 44 U.S.C. Chapter 36) to conduct a Privacy Impact Assessment (PIA) before developing or initiating new information collections that use information technology (IT), that collects, maintains or disseminates personally identifiable information (PII).

A PIA was conducted and approved on December 28, 2015. This PIA confirmed that the privacy risks associated with this collection were evaluated it was determined that the agency has significant safeguards in place for the protection of any personally identifiable information (PII). In the event that any PII is collected the agency will maintain it during the information life cycle in accordance with Federal privacy laws, regulations, policies and guidelines. A copy of the completed PIA has been entered into the Cyber Security Assessment and Management (CSAM) and attached in ROCIS as a supplementary document.

When a person visits this web site sends information (i.e., photos, locations, narrative description, etc.), that information will be posted in a knowledge base with other postings. We will exclude personally identifiable information from the knowledge base. However, if personally identifiable information is provided, we will never use individual profiles for commercial marketing or any other purposes.

The following information may be stored from some or all of the following: the Internet address from used to access the web site; date and time; the Internet address of the web site used to link to iNaturalist the name of the file or words you searched; items clicked on a page; and the browser and operating

system used. This information may be used by iNaturalist to measure the number of visitors to the various sections of the site and identify system performance or problem areas. This information will also be used to help expand the coverage of the site, to analyze patterns of usage, and to make the site more useful. However, this information will not be used for associating search terms or patterns of site navigation with individual users.

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.

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 under “Annual Cost to Federal Government.”**

We estimate the total annual number of respondents to be 4,850 and the average time it would take to complete an observation to be five minutes per respondent. In addition, we estimate that over the course of an event, members of the general public will average 10 observations and non-federal scientists will average 25 observations. Estimates are based on earlier experiences with *iNaturalist* tools that required an average of five minutes per observation and an extrapolation of the number of respondents per year based on previous Bioblitz events. As a result, the total annual estimated burden for this collection will be 5,104 hours.

We anticipate that the five minutes will be spent recording observations, including collection of relevant details about the species and location of the observation and taking photos of the observed species and surroundings. There are two types of respondents:

- Public observer - these include all members of the general public who have registered to attend a Bioblitz event. We anticipate that there will be a total of 4,000 participants at the following events:
 - one large Bioblitz (n = 500 respondents) per year
 - two medium Bioblitzes (n = 250 respondents per event) per year
 - 10 small (n = 50 respondents per event) Bioblitzes per year
 - NPS Citizen Science Events: 2,500 respondents per year
- Non-federal scientist - these include invited scientists at Bioblitz events. We anticipate that there will be a total of 850 participants at the following:
 - one large Bioblitz (n = 150 respondents) per year
 - two medium Bioblitzes (n = 50 respondents per event) per year
 - 10 small (n = 10 respondents per event) Bioblitzes per year
 - NPS Citizen Science Events: 500 respondents per year

Type of Respondent	Annual Number of Respondents	Average Number of observations/ Respondent	Average Time per observation (min.)	Total Annual Burden (hrs.)
General Public	4,000	10	5	3,333
Non-federal scientist	850	25	5	1,771
TOTAL	4,850			0

To estimate the total dollar value of the burden hours, we multiplied the estimated burden hours by \$33.49 (the general public) and \$34.73 (non-federal scientists). This wage figure includes a benefits multiplier and is based on the National Compensation Survey: Occupational Wages in the United States

published by the Bureau of Labor Statistics Occupation and Wages, (BLS news release USDL-15-1132 for Employer Costs for Employee Compensation— March 2015 at - <http://www.bls.gov/news.release/pdf/ecec.pdf>, dated June 10, 2015).

Type of Respondent	Number of Observations	Total Annual Burden Hours	Dollar Value of Burden Hour Including Benefits	Total Dollar Value of Annual Burden Hours
General Public	40,000	3,333	\$33.49	\$111,622
Non-federal scientist	21,250	1,771	\$34.73	\$61,507
TOTAL	61,250	5,104		\$173,129

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 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 no non-hour burden costs resulting from the collection of this information.

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.

There are no non-Federal employee costs associated with this collection. All employee costs are Federal employee costs. The estimates below include hourly salary and benefits expenses associated with this collection totaling \$18,160--there are no operational expenses.

Federal Employee Expenses

Federal Employee Costs			
Position	Hourly Cost	Hours	Total Cost
Data Manager (GS-11)	41.80	200	8,360
Data Entry Technician (GS-5)	24.50	400	9,800
Total			\$18,160

15. Explain the reasons for any program changes or adjustments in hour or cost burden.

This is a new collection.

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.

The information will not be used for statistical purposes; therefore there will be no results that can be tabulated. Data from this collection will only include natural history observations and photographs taken during Bioblitz events. Information will potentially result in a variety of derivative applications. For example, park staff will be able to use these data in interpretative and education materials; park visitors may reference these data for planning trips; and researchers could reference these data in ecological studies or reports.

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 will display the OMB control number and expiration date on the NPS web site that directs visitors to *iNaturalist* (see mockup attached as a supplementary document in ROCIS).

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.