**Supporting Statement A**

**Economic Contribution of Federal Investments in Restoration of Degraded, Damaged, or Destroyed Ecosystems.**

**OMB Control Number 1028-0107**

**Terms of Clearance:** None

**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 mission of the DOI Natural Resource Damage Assessment and Restoration Program (NRDA Restoration Program) is to restore natural resources injured as a result of oil spills or hazardous substance releases into the environment. As authorized by the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA)[[1]](#footnote-1), Oil Pollution Act of 1990 (OPA)[[2]](#footnote-2), and Federal Water Pollution Control Act or Clean Water Act (CWA)[[3]](#footnote-3), injuries to natural resources that the DOI manages or controls are assessed, and appropriate restoration projects are identified in contemplation of negotiated settlements or legal actions (in rare cases) with potentially responsible parties. Under these authorizing legislations as well as the American Recovery and Reinvestment Act of 2009 (ARRA)[[4]](#footnote-4), the U.S. Department of the Interior (DOI) is implementing restoration projects across the nation to restore injured natural resources and to improve the health and resiliency of terrestrial, freshwater and marine ecosystems.

Under NRDA, settlements for natural resource injuries are usually based on the cost of restoration projects, which are often implemented by third parties with federal, state and/or tribal government oversight. The restoration industry tends to use fixed price contracts, which leaves all levels of government at a disadvantage in understanding restoration costs. The NRDA Restoration Program needs actual unit costs to enhance its ability to ensure settlements sufficiently compensate the public for natural resource damage, and to help ensure that the money spent on assessment is not disproportionate to the expected settlement for restoration. Better information on actual costs is expected to broadly benefit all levels of government through Trustee Councils, which can include state and tribal representatives. From an economic perspective, correcting incomplete information (also called information asymmetry) leads to better decisions and performance.

In addition to increased information on the costs of restoration, there is a need to better understand the relationship between restoration investments and job creation. An emphasis on quantifying the relationship between job creation and investments in ecological restoration is evident in Interior’s annual report on the Department’s economic contribution to the Nation’s economy [[5]](#footnote-5). This need is also illustrated in a recent report by the President's Council of Advisors on Science and Technology, which calls on the federal government to better prioritize the approximately $10 billion it spends each year on ecological restoration and biodiversity preservation [[6]](#footnote-6).

Researchers with the U.S. Geological Survey (USGS) and the DOI Office of Policy Analysis are conducting this information collection at the request of the NRDA Restoration Program. The NRDA Restoration Program is weighing the pros and cons of collecting restoration cost data as part of contractor reporting requirements for restoration projects associated with Natural Resource Damage Assessment and Restoration (NRDAR) cases. The collection described under this request is designed to refine potential expenditure and project summary questions prior to developing contractor reporting requirements.

This is a continuation of collection OMB-1028-0107 that was initiated in 2013.

Case studies and methods developed through this original collection are published in a USGS Open File Report titled “Estimating the Economic Impacts of Ecosystem Restoration—Methods and Case Studies”[[7]](#footnote-7). USGS and the DOI Office of Policy Analysis are modifying the survey instruments and analysis methodologies based on lessons learned from the original effort.

Expenditure data will be collected and economic impacts will be estimated for approximately 10 DOI restoration projects per year for 3 years.

1. **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.**

As indicated in #1 above, information from this data collection will be used to refine potential expenditure and project summary questions and validate the data collection process for estimating the costs of restoration and the resultant economic impacts of DOI restoration projects. Collection of these data is necessary to improve agency decision making on individual restoration projects, to help prioritize spending across restoration projects, and to meet internal guidelines for credible economic analysis. The data collected under this authorization will help the NRDA Restoration Program determine how these data should be collected for future DOI restoration projects in conjunction with contractor reporting requirements. How and for what purpose the information will be used is described below and in the attached surveys.

This collection contains two surveys: (1) a project summary survey, and (2) an expenditure survey. Both surveys will be completed by the project manager for each case study project.

The purpose of the project summary survey is to gather background information that will be used to classify and describe the restoration projects. The NRDA Restoration Program does not have detailed descriptive information about each restoration project. The descriptive/categorizing questions asked in the project summary survey will also be standardized in the Restoration Program’s project tracking database and will allow the program to search for restoration actions that meet certain criteria. These questions will also be used to write the narratives for the case studies. The descriptive questions include questions about the type of injury to the land, the restoration actions that took place, land ownership and realty changes on restored lands, the type of land cover that was restored, the focus of the restoration, and any cultural or tribal resources that were affected. Individual question justifications for the project summary survey are provided as annotations in the project summary survey.

The purpose of the expenditure survey is to gather project cost data that will be used to estimate the economic impacts to local economies and to the national economy. Sufficient data will be collected to enable cost data to be split by project phase (planning/project management/compliance activities, implementation, monitoring), by restoration actions (e.g., aerial seeding, streambank stabilization, project management, etc.), and by year. Cost data and contractor NAICS codes will be used to develop IMPLAN economic input/output models to estimate the direct and secondary economic impacts of contracted expenditures. Justifications for questions asked in the project expenditure survey are included with the expenditure survey instruction letter.

1. **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 project summary survey will be delivered via the online survey software Survey Monkey. All respondents will receive an email message providing a URL link to the survey.

All instructions and the survey instrument will be available online. The Survey Monkey software will be used to develop, serve, collect, and store the information collected during this study. The primary basis for choosing an online approach for the project summary survey is to simplify the survey for respondents. The project summary survey includes many questions that can be skipped based on respondent’s answers. The use of Survey Monkey will substantially reduce the length of the project summary survey for most respondents and will thus reduce burden. We used a similar online survey based project summary survey for the initial case study effort, and this delivery format was successful.

The expenditure survey will be delivered to respondents as an Excel spreadsheet attachment in an email. Respondents will be asked to return the completed expenditure survey via email. We also used an Excel-based expenditure survey for the initial case study effort. The original expenditure survey was completed by both project managers and by restoration contractors and asked for a high-level of detail. The revised expenditure survey is greatly simplified and only project managers will be asked to complete the expenditure survey. We think that the Excel-based expenditure survey is the most natural way to ask the expenditure questions given the type of data that we are collecting, and we expect that the simplified version of the survey will be easy for project managers to use. If the expenditure survey is successful during the first year of case studies, we may invest in designing a web-based data entry form to replace the Excel spreadsheet.

Data collection for this information collection is designed to be 100% electronic, but paper versions of the surveys will be made available to all respondents who lack the appropriate technology to access the online survey or the Excel-based survey. We are doing a small number of case studies, and we will work directly with each project manager to ensure that they understand the surveys.

1. **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.**

This collection is focused primarily on the collection of restoration expenditure data. The NRDA Restoration Program requires restoration unit cost data, which are currently not readily available. This effort continues an exploration of the best way to collect these data so that expenditure data can be split by project phase (planning/project management/compliance activities, implementation, monitoring) and by restoration actions (e.g., aerial seeding, streambank stabilization, project management, etc.), and so that expenditure data can be used to estimate the economic impacts of restoration projects. The NRDA Restoration Program seeks reliable data for a broad range of restoration activities across the nation. To better understand DOI-related restoration, the USGS previously quantified expenditures and economic impacts for a total of 31 restoration projects supported by DOI bureaus and partners (21 published in Cullinane Thomas et al. 2016, and 10 published in the Department of the Interior’s Economic Contributions for FY2011). The results from these original case studies confirmed that there is a large amount of variation in the economic impacts supported by restoration investments. Because of this substantial variation, it has become clear that applying generic economic impact multipliers from studies that estimate impacts of non-similar restoration projects is likely to result in large errors. The original case-studies represent only a small subset of the broad range of restoration projects supported by DOI.

There is relatively limited information available on the costs and the associated economic impacts of ecosystem restoration projects. Several studies have addressed impacts of specific restoration projects, but these estimates are not generalizable to other restoration projects. Specifically, Laughland and others [[8]](#footnote-8) estimate the economic impacts of the U.S. Fish and Wildlife Service’s Partners for Fish and Wildlife and Coastal Programs; Hjerpe and Kim [[9]](#footnote-9), Kim [[10]](#footnote-10), Southwick Associates and Responsive Management [[11]](#footnote-11), and the U.S. Department of Agriculture [[12]](#footnote-12) estimate the economic impacts of U.S. Forest Service fuels reduction projects and the Collaborative Forest Landscape Restoration Program; and The Nature Conservancy [[13]](#footnote-13) estimates the economic impacts of coastal restoration projects undertaken by the National Oceanic and Atmospheric Administration (NOAA). There are also several studies that estimate the economic impacts of restoration projects within specific States, geographic regions, or the United States [[14]](#footnote-14).

There are also a number of studies that address the economic value of restoration. These studies were summarized by a Blue Ribbon Panel for estuary economics organized by the National Oceanic and Atmospheric Administration[[15]](#footnote-15). The NOAA panel set forward guidelines on how to measure the economic value of ecosystem restoration, with a specific focus on the economic value of restoring degraded marine and coastal habitat. These values include values associated with commercial and recreational fisheries, wildlife viewing and other recreation, increases in property values, and the non-market values associated with ecosystem services such as shoreline protection and flood control. The NOAA report excludes economic impacts because economic impacts are not a measure of economic value; rather, economic impacts measure how spending in local economies generates jobs and income.

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

This collection will not impact small business or small entities. Only DOI restoration project managers will be surveyed. Our previous efforts found that the majority of DOI restoration projects are managed by government or non-profit non-governmental organizations. A small portion of restoration projects are managed by private environmental consulting firms.

The original collection also surveyed restoration contractors. This revision of the collection omits the need to survey restoration contractors which reduces any burden on small businesses.

1. **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.**

Without the information from this data collection and future collection efforts, the NRDA Restoration Program will not have the necessary cost data to ensure settlements sufficiently compensate the public for natural resource damage, and to help ensure that the money spent on assessment is not disproportionate to the expected settlement for restoration. Furthermore, Federal agencies who invest in ecosystem restoration projects will not have the necessary data to meet internal guidelines for credible economic analysis of the impacts of project alternatives. Previous research indicates that there is a large amount of variation in the economic impacts supported by restoration investments. Because of this substantial variation, it has become clear that applications of generic economic impact multipliers to estimate the economic impacts of restoration projects are likely to result in large errors. As a consequence, without additional information to develop accurate and reliable estimates, the economic contributions of such activities may be ignored which may result in sub-optimal policy suggestions and management implications for DOI agencies.

1. **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 the information in a manner inconsistent with OMB guidelines

1. **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.**

On July 1, 2016, we published a 60-day Federal Register notice, 81 FRN43224, announcing that we would submit this information request to OMB for approval. In that notice we solicited public comments for 60 days, ending August 30, 2016.

In addition to our Federal Register notice, we solicited two reviewers for the revised survey instruments (see Table 1). The revised survey instruments incorporate suggestions made in “Estimating the Economic Impacts of Ecosystem Restoration—Methods and Case Studies” based on lessons learned from the initial data collection and analysis.

Table 1. Individuals Contacted

|  |  |
| --- | --- |
| **Contact #1**  Research Social Scientist  U.S. Forest Service  360-753-7684 | **Contact #2**  Restoration Project Manager  National Park Service  970-225-3507 |

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

There are no payments or gift giving associated with this collection.

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

We are not collecting confidential information or personally identifiable information.

1. **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.**

This collection does not ask for information of a sensitive nature.

1. **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.**

We estimate that we will complete approximately 10 case studies per year. For each case study, project managers will be contacted via phone for an initial conversation; these initial conversations are estimated to take about 30 minutes. Following the initial conversations, project managers will be sent the project summary and expenditure surveys. We expect that the project summary survey should take respondents about 30 minutes to complete. The length of time required for the project expenditure survey could vary by respondent. We expect that most project managers will be able to complete the expenditure survey in about 2 hours (120 minutes). We expect to have follow-up conversations with each respondent to check on their progress and to answer questions about the surveys. We have estimated that these follow-up conversations will take about 30 minutes per case study. Combined, we expect that this collection will take about 3.5 hours (210 minutes) per respondent. Table 2 summarizes estimated time requirements for each survey respondent.

Table 2. Estimated time requirements per survey respondent.

|  |  |  |
| --- | --- | --- |
|  | **Estimated Time per Respondent (minutes)** | **Estimated Time per Respondent (hours)** |
| Initial phone call | 30 | 0.5 |
| Project summary survey | 30 | 0.5 |
| Project expenditure survey | 120 | 2 |
| Follow-up phone calls | 30 | 0.5 |
| Total | 210 | 3.5 |

We expect that respondents will be from federal government, state and local government, and from non-profit and private industry. Table 3 gives anticipated survey respondents by type of organization.

Table 3. Anticipated survey respondents by type of organization.

|  |  |
| --- | --- |
|  | **Estimated number of respondents** |
| Federal Government | 4 |
| State/Local Government | 1 |
| Non-Profit and Private Industry | 5 |
| Total Annual Number of Respondents | 10 |

To estimate the annual dollar value of the burden for non-federal respondents (i.e., state and local government respondents and non-profit and private industry respondents), we used the total employer compensation costs for nonprofit and private industry of $32.29 per hour worked and total employer compensation costs for state and local government workers of $45.14 per hour worked. We used the Bureau of Labor Statistics news release USDL-16-1808 to determine these annual rates[[16]](#footnote-16). This gives an estimated total dollar value of burden for non-federal respondents of $723. Table 4 gives a summary of total burden estimates for non-federal respondents.

Table 4. Burden estimates for non-federal respondents.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Total Burden (Hours)** | **Dollar Value of Burden**  **(per hour)** | **Total Dollar Value of Burden** |
| State/Local Government | 3.5 | $45.14 | $158 |
| Non-Profit and Private Industry | 17.5 | $32.29 | $565 |
| Total | 21 |  | $723 |

1. **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 is no non-hour cost burden to applicants under this collection.

1. **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 annual estimated cost to the Federal government for reviewing information received as a result of this collection is $21,773 (Table 5). This total includes Federal employee salaries and benefits. The table below shows tasks and Federal staffing requirements associated with this information collection. We used the Office of Personnel Management Salary Table 2016-DEN to determine the hourly rates [[17]](#footnote-17). We multiplied the hourly rates by 1.6 to account for benefits (as implied by the previously referenced BLS news release).

Table 5. Federal Employee Salaries and Benefits

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Task** | **Position** | **Grade/Step** | **Estimated Time per task (hours)** | **Hourly Pay Rate** | **Hourly Rate including Benefits (1.6 x hourly pay rate)** | **Annual Cost** |
| Project Management | Economist | GS-12/2 | 160 | $37.80 | $60.48 | $9,677 |
| Survey Administration | Economist | GS-12/2 | 40 | $37.80 | $60.48 | $2,419 |
| Data Analysis | Economist | GS-12/2 | 160 | $37.80 | $60.48 | $9,677 |
| Total |  |  | 360 |  |  | $21,773 |

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

This revised collection is estimated to have a substantially lower burden than the previous collection because we will only collect information from project managers and we will not collect information directly from project contractors.

1. **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.**

Case studies will be reviewed and approved by USGS. New case studies will be published online at <https://www.fort.usgs.gov/economic-impacts-restoration> as they are completed. A description of analysis methods is provided in Supporting Statement B. Updated methods, survey instruments, and further recommendations for future efforts will be published in a supporting document.

1. **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 expiration date.

1. **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.

1. *Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as Amended (42 U.S.C. §§ 9601, et Seq.), Including but Not Limited to Sections 104, 107, 111(i), and 122*, 1980. [↑](#footnote-ref-1)
2. *Oil Pollution Act of 1990 (OPA) (33 U.S.C. §§ 2701, et Seq.), Including but Not Limited to Sections 1006 and 1012*, 1990. [↑](#footnote-ref-2)
3. *Federal Water Pollution Control Act or Clean Water Act (CWA), as Amended (33 U.S.C. §§ 1251, et Seq.), Including but Not Limited to Section 311(f)*, 1972. [↑](#footnote-ref-3)
4. *American Recovery and Reinvestment Act of 2009 (ARRA), Public Law 111-5*, 2009. [↑](#footnote-ref-4)
5. Department of Interior, “The Department of the Interior’s Economic Contributions, FY 2011,” July 2012. [↑](#footnote-ref-5)
6. Executive Office of the President, President’s Council of Advisors on Science and Technology, “Report to the President - Sustaining Environmental Capital: Protecting Society and the Economy,” 2011, http://www.whitehouse.gov/sites/default/files/microsites/ostp/pcast\_sustaining\_environmental\_capital\_report.pdf. [↑](#footnote-ref-6)
7. Catherine Cullinane Thomas et al., “Estimating the Economic Impacts of Ecosystem Restoration—Methods and Case Studies,” U.S. Geological Survey Open-File Report, 2016, http://dx.doi.org/10.3133/ofr20161016. [↑](#footnote-ref-7)
8. “Restoration Returns: The Contribution of Partners for Fish and Wildlife Program and Coastal Program Restoration Projects to Local U.S. Economies” (U.S. Fish & Wildlife Service, February 2014), http://www.fws.gov/home/pdfs/restoration-returns.pdf. [↑](#footnote-ref-8)
9. “Economic Impacts of Southwestern National Forest Fuels Reductions,” *Journal of Forestry* 106, no. 6 (2008): 311–16. [↑](#footnote-ref-9)
10. “Ecological Restoration as Economic Stimulus: A Regional Analysis” (Northern Arizona University Ecological Restoration Institute, April 2010). [↑](#footnote-ref-10)
11. “Economic Impact Analysis of the Collaborative Forest Landscape Restoration Program” (Florida, 2013). [↑](#footnote-ref-11)
12. “Collaborative Forest Landscape Restoration Program 5-Year Report, FY 2010-2014” (Forest Service, April 2015), http://www.fs.fed.us/restoration/documents/cflrp/CFLRP\_5-YearReport.pdf. [↑](#footnote-ref-12)
13. “Investing in Nature: Creating Jobs and Restoring Coastal Habitats” (National Oceanic and Atmospheric Administration, April 2010), http://www.habitat.noaa.gov/pdf/tnc\_noaa\_arra\_restoration\_summary.pdf. [↑](#footnote-ref-13)
14. Barbara Wagner and Robin Shropshire, “As Estimation of Montana’s Restoration Economy” (Montana Department of Labor and Industry, June 2009), http://www.ourfactsyourfuture.org/media/9321/restoration.pdf; Headwaters Economics, “The Economic Impacts of Restoration: Custer and Lemhi Counties, Idaho,” April 2014, http://headwaterseconomics.org/wphw/wp-content/uploads/Idaho\_Restoration\_Report.pdf; Industrial Economics, “Economic Impacts of Ecological Restoration in Massachusetts” (Massachusetts Department of Fish and Game, March 2012), http://www.mass.gov/eea/docs/dfg/der/pdf/economic-impacts-ma-der.pdf; Max Nielsen-Pincus and Cassandra Moseley, *Economic and Employment Impacts of Forest and Watershed Restoration in Oregon* (Ecosystem Workforce Program, Institute for a Sustainable Environment, University of Oregon, 2010), http://www.oregoncoastalliance.org/documents\_13/Restoration\_Economy\_Study\_2010.pdf; Todd BenDor et al., “Estimating the Size and Impact of the Ecological Restoration Economy,” *PLoS ONE* 10, no. 6 (June 17, 2015): e0128339, doi:10.1371/journal.pone.0128339. [↑](#footnote-ref-14)
15. Linwood Pendleton, “Measuring and Monitoring the Economic Effects of Habitat restoration—A Summary of a NOAA Blue Ribbon Panel” (Duke University, Nicholas Institute for Environmental Policy Solutions, 2010), http://www.era.noaa.gov/pdfs/NOAA%20RAE%20BRP%20Estuary%20Economics\_FINAL.pdf. [↑](#footnote-ref-15)
16. Bureau of Labor Statistics, “Employer Costs for Employee Compensation - June 2016,” News Release USDL-16-1808, 2016. [↑](#footnote-ref-16)
17. Office of Personnel Management, “Salary Table 2016-DEN,” 2016, https://www.opm.gov/policy-data-oversight/pay-leave/salaries-wages/salary-tables/pdf/2016/DEN\_h.pdf. [↑](#footnote-ref-17)