SUPPORTING STATEMENT
U.S. Department of Commerce
National Oceanic & Atmospheric Administration
Economic Valuation of Natural and Nature-Based Infrastructure
OMB Control No. 0648-0788

SUPPORTING STATEMENT PART, A

Abstract

Pursuant to H.R. 3684 (Infrastructure Investment and Jobs Act) and the Coastal Zone Management Act (CZMA), this request is for a revision and extension of an information collection. This information collection will focus on a different geographical location (Gulf of Mexico (GoM)). Therefore, this is a request for focus groups to help guide any revisions necessary to the survey instrument. Upon completion of these focus groups, a revision will be submitted for the revised survey instrument. Also, NOAA is revising the title of this collection from *Economic Analysis of Shoreline Treatment Options for Coastal New Hampshire* to *Economic Valuation of Natural and Nature-Based Infrastructure* to better describe this collection."

The National Ocean Service (NOS) proposes to collect data on the opinions, values, and attitudes of GoM residents relative to natural and nature-based infrastructure for the purpose of shoreline stabilization or habitat restoration. Respondents (age 18 years and older) will be randomly sampled from households in GoM coastal counties. This information will be used by NOAA, state and local decision-makers, and others to assess the value, benefits, and perceived efficacy of federal investments in habitat restoration and/or climate adaptation projects that use natural or nature-based infrastructure. NOAA has a vested interest in the potential use of natural and nature-based infrastructure, from many perspectives, including as it relates to the resilience, well-being, and sustainability of coastal communities.

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.

This request is for a revision to modify the final survey instrument of a new data collection to benefit the National Oceanic and Atmospheric Administration (NOAA) and decision-makers on the state and local level in Alabama, Florida, Louisiana, Mississippi, and Texas. NOAA will collect socio-economic and behavioral data pursuant to the Coastal Zone Management Act (CZMA).

NOAA is subject to and supports mandates of the CZMA (16 U.S.C. § 1452 (303)(2)(D)), which encourages the preservation, protection, development, and restoration of coastal resources. The CZMA also encourages the inclusion and participation of the public in carrying out the tenets of the act (16 U.S.C. § 1452 (303)(4)). The act encourages programs that provide assistance to "sensitive preservation and restoration of historic, cultural, and esthetic coastal features" (16 U.S.C. § 1452 (303)(2)). NOAA also supports mandates of the Infrastructure Investment and Jobs Act (Pub. L. 117–58, §2), which directs funds to "restoring marine, estuarine, coastal, or Great Lakes ecosystem habitat, or constructing or protecting ecological features that protect coastal communities from flooding or coastal storms" and champions the need for resilient infrastructure, especially within underserved communities.[1] Finally, NOAA is responding to the September 9, 2015 Executive Order, "Using Behavioral Science Insights to Better Serve the American People." This Executive Order requests federal

1 Infrastructure Investment and Jobs Act. Pub. L. 117–58, §2, Nov. 15, 2021, 135 Stat 1355. Available online at: https://www.congress.gov/117/plaws/publ58/PLAW-117publ58.pdf \

agencies to "identify policies, programs, and operations where applying behavioral science insights may yield substantial improvements in public welfare, program outcomes, and program cost effectiveness," and "develop strategies for applying behavioral science insights to programs and, where possible, rigorously test and evaluate the impact of these insights."[2]

Pursuant to the CZMA, NOAA will collect social, economic, and behavioral data to document perceived effects of weather and climate events and adaptation strategies, to estimate preferences for ecosystem services derived from shoreline treatment options within GoM coastal counties, and to establish a baseline for future monitoring of NOAA's success in meeting its mandates and obligations.

For the final collection, residents will be randomly sampled from households in GoM coastal counties. The final collection will help inform local coastal zone management and planning by providing information on public perceptions of coastal risks and hazards, current and anticipated adaptation practices on private property, and preferences for adaptation practices on public property. This information will help ensure future management and planning practices properly address these public perceptions, take private property adaptation practices into account, and incorporate the public's preferences. This information will also help local managers develop more targeted and meaningful messaging in their communication and outreach efforts.

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.

i. How will this information be used?

Information gathered from the focus groups will be used to revise the survey and ensure results will be useful for local management.

ii. Who will use this information?

NOAA OCM and decision-makers in the GoM will use the data gathered from the final collection.

iii. How frequently will this information be used?

The information from the focus groups will be used once to inform survey revisions. The final data collection will be a one-time information collection with the intention to replicate in other coastal geographies in the future. Data and derived informational products will be provided to OCM and decision-makers in the GoM at the conclusion of the full project period, and they will use the data and derived products on an as-needed basis.

iv. For what purpose will the information be used?

The final collection will support OCM and GoM NERR's long-term management objectives by providing data to assess the benefits associated with marsh restoration, as well as providing information to help inform local coastal zone management and planning. Additionally, the information collected has potential to be used by resource managers for outreach and education purposes.

v. Summary of Focus Group Script

The focus group is designed to understand the following concepts related to coastal and marine habitat restoration:

- Knowledge and experience related to coastal marsh and marsh restoration;
- Ecosystem services of interested provided by marsh, including potential values; and
- Knowledge and experience related to coastal flooding.

Introductions (10 minutes)

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2 Executive Order for Using Behavioral Science Insights to Better Serve the American People. 9 Sept 15. Available online at: https://www.whitehouse.gov/the-press-office/2015/09/15/executive-order-using-behavioral-science- insights-better-serve-american.

a. Introduce NCCOS team and purpose
    i. Who we are and who we represent
    ii. Introduce moderator
    iii. Study sponsored by the National Oceanic and Atmospheric Administration (or NOAA)
b. Why you have been asked to participate
    i. You are a [resident] who may have knowledge or experience with coastal wetlands
    ii. You are here today to help NOAA develop a survey, which is a crucial part of a good study design.
c. How the discussion will work
    i. Session will last about an hour
    ii. We will write a summary report based on the discussion, but no names will be used
    iii. Discussion will be open an informal
    iv. We will hear from everyone in the group
    v. One person talks at a time
    vi. No right or wrong answers or ideas - We want YOUR opinions
    vii. Silence or turn off cell phones
    viii. Although we are talking about topics related to coastal hazards and coastal management, I am not an expert, so I may not be able to answer all of your questions
d. Participant introductions
    i. First name or pseudonym, where you are from, and your knowledge or experience with coastal wetlands

<u>Key questions (45 min) [a or b]</u>

e. ESV related questions
    i. Do you think coastal wetlands are important? If so, how/why? [10 min]
        1. Prompt if people don't mention: wildlife habitat, storm protection, flood protection, fisheries productivity, others??
        2. Of the items mentioned, which is most important to you?
    ii. Are you familiar with the wetland loss issue in [location]? What do you know about it? [10 min]
    iii. Suppose there was a proposed project that would restore coastal wetlands to full functionality, would you be willing to pay some amount of money to fund that program? Why or why not? [15 min]
        1. Prompt: This may turn into a discussion about trusting the project, how the money would be paid (e.g., donation vs taxes vs number of payments), who should pay, etc. Probably also concepts related to different value types (e.g., option, bequest, existence).
    iv. For those of you who would be willing to pay some amount, how much do you think you would be willing to pay? Would this amount change based on [considerations from previous discussion]? [10 min]
f. Flooding related questions
    i. Have you ever experienced a flood event? If so, how long ago was your most recent experience? [10 min]
    ii. What do you think would be most impacted during a future flooding event in your community? [10 min]

iii. Suppose there was a proposed project that could protect your community from flooding, would you be willing to pay some amount of money to fund that program? Why or why not? [15 min]

iv. For those of you who would be willing to pay some amount, how much do you think you would be willing to pay? Would this amount change based on [considerations from previous discussion]? [10 min]

Close out (5 min)

g. Is there anything else you wanted to share today?

h. Thank you for your time

vi. Compliance with Information Quality Guidelines

The information collected will be disseminated to the public or used to support publicly disseminated information. NOAA National Ocean Service, National Centers for Coastal Ocean Science will retain control over information and safeguard it from improper access, modification, and destruction, consistent with NOAA standards for confidentiality, privacy, and electronic information. Final datasets will be archived following the rules and requirements of the NOAA Public Access for Research Results (PARR) plan. See response to Question 10 of this Supporting Statement for more information on confidentiality and privacy. The information collection is designed to yield data that meet all applicable information quality guidelines. Prior to dissemination, the information will be subjected to quality control measures and a pre-dissemination review pursuant to Section 515 of Public Law 106-554.

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.

No automated, electronic, mechanical, or other technological collection techniques or other forms of information technology will be used for the focus groups.

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 Question 2.

Researchers reviewed scholarship and consulted with local partners to identify any duplication of effort. There have been several ecosystem service related projects within this region in the last ten years. Many of these studies focused on the impacts of the Deepwater Horizon oil spill and major hurricanes, with key study areas commonly falling within the northern Gulf of Mexico (e.g., Louisiana, Mississippi, and Texas). Throughout the past decade, many of these studies employed a benefits/value transfer approach due to the cost and time required to implement primary data collections for specific sites (Batker et al., 2010; Beever, 2014; Pollack et al., 2013; Rutherford et al., 2018; Yoskowitz et al., 2017). Rutherford et al. (2018) performed a benefit-cost analysis using an ecosystem service valuation, employing a value transfer approach, to determine the benefits of a wetland restoration in relation to a large river sediment diversion in the Maurepas swamp. Similarly, Yoskowitz et al. (2017) applied a value transfer method to determine the potential changes in ecosystem service values of wetlands across various sea level rise modeled scenarios. Between 2009 and 2014, a small handful of studies included non-market valuation methods that incorporated primary data collection. Most of these incorporated a contingent valuation approach, including stated preference or choice experiments to assess respondents' willingness-to-pay or willingness-to-accept for services such as hurricane or storm surge protection (Kim & Petrolia, 2013; Petrolia et al., 2014; Petrolia & Kim, 2009, 2011). Feagin et al. (2014) similarly used stated preference and replacement cost approaches to determine the recreational value of beaches in Texas. Primary data collections have also been used in the application of travel cost methods in the region. Whitehead et al.

(2018), for example, administered a survey in 2011 to estimate the losses in recreational value (focused on recreational fishing) from the Deepwater Horizon Oil Spill. Each of these studies have been used to inform the development of the proposed survey instrument, including ecosystem service selection and scenario development.

According to our literature review and discussions with local partners, our survey is not a duplication of effort. Specifically, site-specific valuations incorporating primary data collection have been a noticeable gap in recent years. As such, many of the referenced studies above included primary data collected prior to 2012. Snyder et al. (2020) provided a meta-analysis and review of valuation studies in the Gulf of Mexico region, and noted a decline in valuation studies in 2013. They attributed this to a growing interest in the synthesis of existing studies rather than implementing new valuations. No previous studies have examined the value of natural and nature-based features in restoration efforts in the Gulf of Mexico region.

We have also formed partnerships with ongoing and planned research efforts so that we can leverage resources and provide complementary information about ecosystem services related to restoration options in the GoM.

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

This collection involves residents. It does not involve 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.

The final collection will support restoration efforts within GoM NERRs by providing information on how the public values ecosystem services derived from coastal and marine habitats. This information will also help local managers develop more targeted and meaningful messaging in their communication and outreach efforts.

These NERRs do not have the technical expertise nor the budget to perform this work. Therefore, if this collection is not conducted by NOAA, relevant agencies will have reduced data and information to meet evaluative requirements set forth by the CZMA relative to the National Estuarine Research Reserve.

7. Explain any special circumstances that would cause an information collection to be conducted in a manner inconsistent with OMB guidelines.

Data collection will be consistent with OMB guidelines.

8. If applicable, provide a copy and identify the date and page number of publications 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 describe actions taken by the agency in response to these comments. Specifically address comments received on cost and hour burden.

A Federal Register Notice published on September 22, 2022 (87 FR 57868) solicited public comments.

i. Summary of Comments Received

We received a public comment on behalf of the American Economic Association and the Industry Studies Association, requesting a copy of the draft data collection instrument and supporting statement. As this is a

request for focus groups to help guide any revisions necessary to the survey instrument, the research team provided the materials from the previous ICR and will share the Supporting Statement Part A after it has completed its internal review.

ii. Consultation

During the project scoping period, partners from the following organizations were consulted on the need for the collection as well as regarding important contextual or site considerations: NOAA OCM, NOAA CRP, and NOAA NMFS. Feedback from these consultations was used to better understand public sentiment, the type of data already available on relevant topics, and data needs from the perspective of local and regional agencies. Information from these consultations was used during project scoping and development.

NOAA reached out to several respondents from the previous information collection 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. No comments were received.

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 given to focus group or stakeholder workshop participants.

10. Describe any assurance of confidentiality provided to respondents and the basis for the assurance in statute, regulation, or agency policy. If the collection requires a systems of records notice (SORN) or privacy impact assessment (PIA), those should be cited and described here.

Information gathered from respondents will remain confidential. Access to any raw data collected will be restricted to project managers and lead analysts. In final datasets and products that are released, data provided by individual respondents will remain confidential and will be aggregated where appropriate to ensure confidentiality. This collection does not require a SORN.

11. Provide additional justification for any questions of a sensitive nature, such as sexual behavior or 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 during this data collection.

12. Provide estimates of the hour burden of the collection of information.

The table below provides an estimate of burden hours by data collection phase. We estimate a maximum of 48 focus group participants and for each focus group session to take up to 60 minutes. We estimate a maximum of 1,100 respondents for the pre-test and 5,400 respondents for the full survey implementation, and for each survey to take approximately 20 minutes, including time for reading the instructions, reviewing the questions, and completing the survey instrument. A range of hourly wage rate estimates is provided to capture different wage rates from GoM states.

Information Collection	Type of Respondent (e.g., Occupational Title)	# of Respondents/year (a)	Annual # of Responses / Respondent (b)	Total # of Annual Responses (c) = (a) x (b)	Burden Hrs / Response (d)	Total Annual Burden Hrs (e) = (c) x (d)	Hourly Wage Rate (for Type of Respondent) (f)	Total Annual Wage Burden Costs (g) = (e) x (f)
Focus groups	Individuals	48	1	48	1.00	48	20.53-26.07	985.44-1,251.36
Pretest (FUTURE IC)	Individuals	1100	1	1,100	0.33	366.67	20.53-26.07	7,527.74-9,559.09
Full Implementation (FUTURE IC)	Individuals	5400	1	5,400	0.33	1,800	20.53-26.07	36,954-46,926
Totals				**6500**		**2,214.67**		**$45,467.18-57,736.45**

***The mean average for All Professions on the BLS 2021 National Occupational Employment and Wage Estimates was used in order to encompass the broad range of occupations in the respondent pool. https://www.bls.gov/oes/current/oes_nat.htm#00-0000**

13. Provide an estimate for the total annual cost burden to respondents or record keepers resulting from the collection of information. (Do not include the cost of any hour burden already reflected on the burden worksheet).

There are no capital costs or operating and maintenance costs associated with this information collection. No additional cost burden will be incurred by respondents beyond response time.

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.

Cost Descriptions	Grade/Step	Loaded Salary /Cost	% of Effort	Fringe (if Applicable)	Total Cost to Government
Federal Oversight					
Federal Positions	ZP3/3	110,000	25		27,500
Contractor Cost					
Survey Vendor		400,000	N/A		400,000
Contractor Positions		50,000	N/A		50,000
Travel					
Other Costs:					
TOTAL					532,000

15. Explain the reasons for any program changes or adjustments reported in ROCIS.

This is a request or a revision of an information collection with change. This information collection will focus on a different geographical location (GoM) and include focus groups, which will help guide any revisions necessary to the survey instrument. Also, NOAA is revising the title of this collection from *Economic Analysis of Shoreline Treatment Options for Coastal New Hampshire* to *Economic Valuation of Natural and Nature-Based Infrastructure* to better describe this 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.

Information collected during focus groups will not be published or analyzed with complex analytical techniques.

The anticipated schedule for the entire project is as follows:

- Spring 2023: Focus groups
- Fall 2024 - Winter 2025: Pre-test
- Summer - Fall 2025: Full data collection
- Winter 2025 - Winter 2026: Data analysis and product development

Findings will be presented in a variety of formats, including tables, graphs, and maps. A final report will be produced and research findings may be presented at professional conferences and published in peer reviewed journals.

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 agency plans to display the expiration date for OMB approval of the information collection on all instruments.

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

The agency certifies compliance with 5 CFR 1320.9 and the related provisions of 5 CFR 1320.8(b)(3).

REFERENCES

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[3] Feagin, R. A., Williams, A. M., Martínez, M. L., & Pérez-Maqueo, O. (2014). How does the social benefit and economic expenditures generated by a rural beach compare with its sediment replacement cost? Ocean & Coastal Management, 89, 79-87.

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[11] Whitehead, J. C., Haab, T., Larkin, S. L., Loomis, J. B., Alvarez, S., & Ropicki, A. (2018). Estimating lost recreational use values of visitors to northwest Florida due to the deep-water horizon oil spill using cancelled trip data. Marine Resource Economics, 33(2), 119-132.

[12]Yoskowitz, D., Carollo, C., Pollack, J. B., Santos, C., & Welder, K. (2017). Integrated ecosystem services assessment: Valuation of changes due to sea level rise in Galveston Bay, Texas, USA. Integrated Environmental Assessment and Management, 13(2), 431-443.