SUPPORTING STATEMENT

Contingent Valuation/Choice Experiment Surveys for Hurricane Sandy Restoration Efforts in Forsythe National Wildlife Refuge in New Jersey and Jamaica Bay, NY

OMB CONTROL NO. 0648-xxxx

A. JUSTIFICATION

1. Explain the circumstances that make the collection of information necessary.

This information collection request covers two surveys to be implemented in areas affected by Superstorm Sandy. The purpose of the two surveys is to provide information to NOAA, and its stakeholders of policy- and decision-makers, on how residents in or near areas affected by Sandy value trade-offs between different restoration options and storm protection measures. The first survey focuses on salt marsh restoration work being done at Forsythe National Wildlife Refuge (NWR) in New Jersey. The second survey focuses on assessing the trade-offs between shoreline armoring (sea and flood walls) and living shorelines (dunes, salt marshes) for storm protection along the shoreline and within Jamaica Bay in New York City.

Under the Disaster Relief Appropriations Act of 2013, NOAA received funding to provide technical assistance to support State assessments of coastal impacts of Hurricane Sandy. Under its coastal management responsibilities, NOAA is developing a better understanding of the relative benefits of restoration activities taking place in response to Hurricane Sandy.

These surveys are designed to yield information that will provide decision-makers with information on the values that people place on various restoration options and inform restoration decisions in the wake of future disasters. Specifically, both surveys are designed to assess how people value trade-offs between different restoration and/or protection decisions. For the Forsythe survey, NOAA's survey will provide information on how people value trade-offs between levels of ecosystem service restoration in salt marshes. The results will provide NOAA, and ultimately other federal, state/local decision-makers on how people value trade-offs between protection from storm surge, protection from (non-surge) flooding, improved habitats, and recreation opportunities. This information can contribute to decisions on what types of restoration to perform in the future by helping decision-makers understand how people value the trade-offs. The information from Forsythe will be directly useful to the Forsythe NWR by providing them with a value of the work they have performed.

The survey in Jamaica Bay will provide information on how people living in the New York City area value storm protection measures. Specifically, the survey compares protection from built structures (e.g., sea walls) to protection from living shorelines (e.g., dunes). Whereas built structures may provide more immediate and stronger protection in the short term, living shorelines offer protection that may improve over time, require less maintenance, and also offer habitat and recreation benefits. The purpose of the Jamaica Bay survey is assess the value people place on the trade-offs associated with these two general approaches to protection. Storm protection decisions need to be made not only in Jamaica Bay, but in any coastal area subject to

storms. This survey will provide data that can be used to assess the values that people place on different storm protection measures and can be used as one input into decisions for storm protection.

NOAA's overall method is to use choice experiments, a more general form of contingent valuation, to elicit this information from individuals who live in areas affected by Sandy.

Salt Marsh Restoration in Forsythe National Wildlife Refuge

The Forsythe National Wildlife Refuge spans nearly 47,000 acres and extends for 50 miles along the coast of New Jersey from Brick Township southward to five miles north of Atlantic City. The wildlife refuge serves as a regional attraction, with an estimated 100,000 visitors each year. The refuge is protected and managed for its coastal wetland habitat, which includes salt marsh and coastal forest and the wildlife that rely upon the wetland habitat, particularly wintering and migratory birds.

The refuge is considered a site of regional importance in the Western Hemisphere Shorebird Reserve Network, with a minimum of 20,000 shorebirds annually.[1] The refuge is also considered a Wetland of International Importance under the Ramsar Convention, in part for the habitat and variety of wildlife that it hosts.[2]

There were several types of damage to the refuge resulting from Sandy. This damage and alteration to the refuge included:

- Removal of sediment from coastal marshes
- Inundation of the site's freshwater impoundment with highly saline bay water, which caused the elimination of freshwater invertebrates and impacts to migratory birds reliant upon that habitat.
- Flattening of dunes, particularly in the Holgate Unit,[3] that resulted in sand being pushed into salt marshes
- Storm surge resulted in down trees and forest damage
- A 22–mile debris field in the refuge's sensitive coastal marshes and wetlands, including contaminants from boats, fuel oil tanks, chemical drums and other hazardous materials

Restoration efforts to address the impacts of Hurricane Sandy at Forsythe are being led by The U.S. Fish and Wildlife Service (FWS), who manages the refuge. FWS is aiming to restore and enhance salt marshes to increase storm protection as well as "associated social, economic, and recreational values" for nearby communities.[4] For marsh restoration, FWS will be raising the

[1] Western Hemisphere Shorebird Reserve Network. http://www.whsrn.org/western-hemisphere-shorebird-reserve-network

[2] See Ramsar Convention Site about Forsythe: http://www.ramsar.org/cda/en/ramsar-documents-list-anno-list-usa/main/ramsar/1-31-218%5E15774_4000_0__

[3] The Holgate Unit is part of the Brigantine Wilderness approximately 11 miles north of Atlantic City. For more on the Brigantine Wilderness see: http://www.fws.gov/refuges/AirQuality/ARIS/BRIG/

[4] http://www.fws.gov/hurricane/sandy/projects/CoastalMarshes.html

elevation of the marshes by placing new sediment on the marsh (also referred to as "thin layer placement"). USACE and New Jersey Department of Transportation (NJDOT) will supply dredged material to FWS to complete this marsh enhancement.

Conducting the thin layer enhancement of the marshes will serve two purposes in additional to raising the marsh elevation: 1) filling in linear mosquito ditches and 2) tidal flow restoration. When the additional sediment is added to the marshes, it will fill in ditches that were originally put in place to help control the breeding of mosquitoes. By filling in these ditches, a more natural flooding regime will be restored in the marsh. Adding sediment to the marsh will also help restore tidal flow, which is essential for carrying nutrients in and out of the marsh.

NOAA's survey for Forsythe will involve asking individuals who live in/near Forsythe to value different benefits associated with salt marsh restoration. Salt marshes provide a number of benefits to society, including:

- Coastal storm protection – sand and thick grass in salt marshes protect coastal buildings and roads from surging storm waters and erosion.
- Flood protection – marshes reduce flooding by slowing and absorbing rainwater.[5]
- Contaminant removal – marshes improve water quality for fish and bird habitats by filtering out contaminants (such as excess nitrogen from fertilizers).
- Habitat – marshes provides an important resting place for migratory birds, home for nesting birds, and space for fish and shellfish to spawn.
- Recreation – marshes provide numerous recreational opportunities such as bird watching, nature/walking trails, canoeing, and kayaking.
- Food web support for fish – biological processes in marshes provide the basis of the food web for recreational and commercial fisheries.
- Carbon storage - salt marshes absorb and store large quantities of carbon dioxide from the atmosphere, reducing the amount of carbon in the atmosphere (which can help to manage climatic change).

Through this survey, NOAA will be eliciting the values that individuals place on four of these benefits:[6] coastal storm protection, flood protection, habitat, and recreation. Furthermore, our use of a choice experiment methodology will allow us to estimate the values of each ecosystem service relative to the other benefits. These relative values can be used in assessing restoration decision trade-offs in the future. The results will provide NOAA, and ultimately other federal, state/local decision-makers how people value trade-offs between protection from storm surge, protection from (non-surge) flooding, improved habitats, and recreation opportunities. This information can contribute to decisions on what types of restoration to perform in the future by helping decision-makers understand how people value the trade-offs. The information from Forsythe will be directly useful to the Forsythe NWR by providing them with a value of the work they have performed.

[5] In pre-tests for the Forsythe survey, most individuals that took the survey could distinguish between the storm surge and non-surge flooding; however, two individual suggested adding in clarifying language for storm surge to more clearly identify what was meant. NOAA revised the survey instrument accordingly.

[6] Our decision to include these four benefits and to exclude contaminant removal and food web support for fish is based on discussions we had with scientists working at Forsythe or who are familiar with the Refuge. Carbon sequestration was excluded since it can be valued using a social cost of carbon approach that does not require collection of data from the public.

Although restoration efforts are underway, this survey will assist NOAA in better understanding how people value trade-offs between different outcomes form marsh restoration. This information will assist NOAA and decision-makers in the future to better allocate restoration funding following storms. Additionally, the work currently being performed at Forsythe will be followed by future work to further restore and improve the marsh at the Refuge. This survey will help planners better understand the value placed on different restoration outcomes.

Shoreline Armoring and Living Shoreline Trade-Offs in Jamaica Bay

Superstorm Sandy inflicted significant damage on the Jamaica Bay area of New York City. Jamaica Bay is part of New York City and sits south of Brooklyn and Queens. Much of Jamaica Bay consists of salt marsh, although much of the historical marsh lands in the Bay have been lost to open waters and mud flats. The Bay offers habitat to more than 300 species of birds and over 100 species of fish. The Bay is protected from the Atlantic Ocean by the Rockaway peninsula which contains a number of town and communities.

The Jamaica Bay area suffered significant damage from Superstorm Sandy. The communities along the Rockaway peninsula (Breezy Point, East Rockaway, West Rockaway, and Far Rockaway; all sections of Queens) all suffered significant property damage, as well as significant damage to beaches and dunes along the Atlantic-facing side. The community of Breezy Point was particularly hard hit with a fire that consumed more than 130 homes. Two man-made freshwater ponds in the Bay were breached. Communities inside the Bay were also hard hit with flooding affecting areas such as Broad Channel in the middle of the Bay and Howard Beach on the northern side of the Bay.

Jamaica Bay also offers protection to the much of the New York City area. Jamaica Bay sits just south of the two heavily populated areas: the northern side of Queens and Brooklyn. Additionally, JFK Airport borders the Bay on its northeastern edge.

Over the last decade, there has been an active debate on the best ways to protect areas such as Jamaica Bay from storms. Superstorm Sandy only highlighted the need to provide better information. One possible approach involves building sea walls (or flood walls) and other “gray” structures that will work to stop storm surge and strong waves caused by coastal storms. This is often referred to as “shoreline armoring.” A second approach is to build “green” infrastructure such as dunes and marshes that will also protect coastal areas and also provide habitat as well recreational opportunities for people. The “green” approaches are sometimes referred to as “living shorelines.” The purpose of this survey is to help NOAA better understand how and why people value the different shoreline protection options.

Significant work is underway to restore Jamaica Bay from the impacts of Sandy. The New York Rising Community Reconstruction Program was established to provide rebuilding and revitalization assistance to New York communities severely damaged by Hurricanes Sandy and Irene and Tropical Storm Lee. Under this program, local communities in Jamaica Bay have identified a number of projects to increase their resiliency to coastal storms. Some of these projects involve building sea walls and others involve restoration or establishment of dunes and marshes. In addition to the work being funded by NY State and NYC, the Federal government

(U.S. Army Corps of Engineers, National Parks Service, etc.) are also working to building storm protection and resiliency measures.

Although much work is either underway or planned, there is still much to be done to protect Jamaica Bay and other parts of NYC from future storms and a good deal of thought has been given to what types of protective measures should be used. There are many options being considered, some of which involve shoreline armoring and some of which involve living shorelines. In 2013, NYC released its Special Initiative for Rebuilding and Resiliency (SIRR) report which included recommendations for increasing coastal edge elevations in which NYC would "increase the height of vulnerable coastal edges with bulkheads, beach nourishment, and other measures" and protecting against storm surge by using "flood protection structures such as floodwalls, levees, and local storm surge barriers."[7]

The New York Rising reconstruction plans all contain a set of "Additional Resiliency Recommendations." These additional recommendations are projects that would further enhance the protection of the shoreline in the Jamaica Bay area. Text such as the following can be found in these plans:

> *"The Planning Committee recommends working with relevant government agencies to build up and expand upon existing ocean edge strengthening projects such as additional, stronger dunes, ocean side jetties, and possibly flood walls."*[8]
>
> *"The planning committee recommeds the siting of a Jamaica Bay surge barrier by the City or State that does not exacerbate flooding in Roxbury and Breezy Point."*[9]
>
> *"The Committee recommends that a study be undertaken to determine the feasibility of a Jamaica Bay surge barrier, proposed in the SIRR [Special Initiative for Rebuilding and Resiliency] report, which could protect all communities surrounding Jamaica Bay."*[10]

Reports for other communities in Jamaica Bay contain similar recommendations, as well as more specific recommendations for using gray and green options to protect those communities.

The goal of this survey is to collect information on how people living in the Jamaica Bay area value shoreline armoring compared to living shorelines. Given the types of protection options being discussed in the New York area, NOAA expects that this survey will provide decision-makers with information on how different options are valued.

2. 1Explain how, by whom, how frequently, and for what purpose the information will be used. 1If the information collected will be disseminated to the public or used to support information that will be disseminated to the public, then explain how the collection complies with all applicable Information Quality Guidelines.

[7] http://www.nyc.gov/html/sirr/html/report/report.shtml, page 46 of the full report.
[8] http://stormrecovery.ny.gov/sites/default/files/crp/community/documents/rockawaywest_nyrcr_plan_17mb.pdf, page V-1.
[9] http://stormrecovery.ny.gov/sites/default/files/crp/community/documents/breezypoint_nyrcr_plan_20mb.pdf, page V-2.
[10] http://stormrecovery.ny.gov/sites/default/files/crp/community/documents/howardbeach_nyrcr_plan_18mb.pdf, page V-2.

How, By Whom, and Frequency

These data are being collected by NOAA through the use of an online survey. This is a one-time collection. To collect these data, NOAA will obtain an online sample that is both statistically representative of the areas where we are sampling (New Jersey, the New York City area, and selected counties in eastern Pennsylvania). There are a number of sources of these list such as GfK Knowledge Networks, who maintains an online panel of individuals (KnowledgePanel) who form a representative sample of the United States population.[11] NOAA has provided additional details on the sample in Part B.

Purpose

The data being collected under these two surveys can be categorized into two distinct categories:

- Questions that elicit information on the value that individuals place on either marsh restoration options (Forsythe survey) or on coastal protection options (Jamaica Bay survey).
- Questions that are used to provide explanatory variables in the statistical model NOAA will develop to estimate the values individuals place on marsh restoration and coastal protection.

The survey developed for this collection effort supports the development of a choice experiment model to estimate willingness to pay for marsh restoration options and coastal protection measures. In a contingent valuation survey, respondents are provided with information on some environmental project and asked whether they would vote for performing that project at a given cost to them. Choice experiments add complexity to the valuation question and result in significantly more information on values. In a choice experiment, several different "options" are developed by the researcher reflecting different levels of attributes. The respondent is then presented with two or more options, the costs of the options to them, and asked to vote on his/her preferred or to vote for none (e.g., a "status quo" or "no action" option). For example, respondents may be given a choice between:

- Option A – Restore 5,000 acres of marsh which will lead to protecting 1,000 homes from a 5-foot storm surge, protecting 4,000 homes from a 20-year flood, significantly improved habitat for migratory birds, and minor improvements to recreational opportunities. The option would add $50 per year to the respondent's taxes.

- Option B - Restore 5,000 acres of marsh which will lead to protecting 3,000 homes from a 5-foot storm surge, protecting 6,000 homes from a 20-year flood, significantly improved habitat for migratory birds, and significant improvements to recreational opportunities. The option would add $125 per year to the respondent's taxes.

- Do nothing which provide no benefits and add no new amount to property taxes.

Options A and B would be just two of many options constructed for the experiment. For

[11] http://www.gfk.com/Documents/GfK-KnowledgePanel.pdf.

example, different levels of acreage restored, homes protected from storm surge, homes protected from flooding, habitat improvements, and recreational improvements can be defined and varied across options presented to respondents. This can result in a large number potential "options"; specifically, the number of options would equal the product of the number of levels across all attributes (e.g., homes protected, etc.). For example, with four attributes that have three levels each, there are 81 = (3^4) different potential options. Methods exists, such as fractional factorial design, to reduce the number of options to a manageable number without losing information from the resulting data.

A simple contingent valuation survey would present one option and ask respondents to vote yes or no on that option while varying only the cost to each respondent. The strength of the choice experiment method is that it allows the researcher to obtain the information on how respondents' values change in the attributes (home protected from storm surge, homes protected from flooding, habitat, recreation) *relative to one another*. In other words, the data we obtain from this effort will allow NOAA and decision-makers to better understand how much individuals value improved habitat relative to protection of property, as well as other trade-offs.

Table 1 provides a summary of the choice experiment values to be used in the Forsythe survey. First, NOAA had discussions with the representative at Forsythe who provided information on the scope of the restoration. Forsythe provided the number of acres (approximately 3,000) and the areas of the marsh in which restoration would occur. Second, NOAA based the number of homes protected based on research into the communities surrounding the areas where restoration would take place. For storm surge, there are 34,051 houses in the 5 communities that border the area where the restoration will occur (Eagleswood, Little Egg, Stafford, Tuckerton, and Barnegat). In those five communities, 519 homes sustained "minor" damage (<$8,000), 2,284 sustained "major" damage ($8,000 - $28,800), and 788 sustained "severe" damage (>$28,800).[12] NOAA used the 3,072 with major/severe damage as an approximate mid-point for the value. Since this is a choice experiment, we added what we expect are reasonable values above and below these values. For flooding, FEMA has 7,552 policies in place in the 5 communities. As above, we rounded down to 7,000 and used that as the mid-point and varied it above and below. Habitat and recreation descriptions were developed as simple qualitative descriptions following a "no", "small", and "large" categories. The cost values we used represent values that are typically seen in the literature. For example, in a study on the value of restoring Louisiana wetlands, Petrolia and co-authors used values of $25. $90, $155, $285, $545, and $925 in their choice experiment.[13] The Petrolia study, however, covered a large area of wetlands (all of Louisiana), so we restricted our range to the lower end.

[12] http://www.njspotlight.com/stories/13/03/14/assessing-damage-from-superstorm-sandy/

[13] Petrolia, Daniel, et al., 2104, "America's Wetland? A National Survey of Willingness to Pay for Restoration of Louisiana's Coastal Wetlands," *Marine Resource Economics*, v. 29, no. 1.

Table 1 - Choice Experiment Values for Forsythe Survey

Category	Attributes for options A and B	Status quo text
Amount of the marsh that is restored	• 1,000 acres • 3,000 acres • 5,0000 acres	• None
Storm protection	• Protects 1,000 homes from a 5-foot storm surge • Protects 3,000 homes from a 5-foot storm surge • Protects 6,000 homes from a 5-foot storm surge	• Homes in the coastal area are under increased risk from storm damage.
Flood protection	• Protects 4,000 homes from a 20-year flood • Protects 7,000 homes from a 20-year flood • Protects 10,000 homes from a 20-year flood	• Homes in the coastal areas are under increased risk of suffering flood damage.
Habitat	• Provides no improvements for migratory birds • Provides small/minor improvements in habitat for migratory birds • Provides significant improvements in habitat for migratory birds.	• Habitats for wildlife continue to deteriorate with the marsh
Recreation	• Provides no improvement in recreation • Provides small/minimal improvement in recreation • Provides significantly better recreation	• Recreational opportunities decline as the marsh deteriorates.
Cost	• $25 • $50 • $75 • $100 • $125	• $0

Table 2 summarizes the values to be used in the Jamaica Bay survey. The numbers used in the survey are meant to provide respondents with distinct choices (low, medium, high) on levels of protection to allow analysis of trade-offs. However, the mid-points are based on some background research NOAA performed. There are five communities in the Jamaica Bay area that are most susceptible to storm impacts (as evidenced by Sandy): Breezy Point, Howard Beach, East Rockaway, West Rockaway, and Broad Channel. All but Howard Beach are in Queens District #14 (QD14). According to NYC, QD14 has 12,145 1-, 2-, and multifamily lots.[14] Howard Beach is part of QD10 which has 22,261 1-, 2-, and multifamily lots. As noted, Howard Beach is only part of QD10. NOAA assumed that Howard Beach represented 20% of those lots (roughly based on area Howard Beach represents in that District) or 4,452 lots. Adding this to the QD14 total yields 16,597 lots. We then assumed that one quarter of these would be reasonable to use as a mid-point for the protection mid-point, or approximately 4,150 which we rounded to 4,000. Next, we chose a "lower" level of protection as half the mid-point (2,000) and we decided to be symmetric around the mid-point to get the "higher" protection amount of 6,000. The levels for habitat and recreation are phrased as "none," "small," and "large" to categories. The cost values follow those we used for Forsythe, however, we used a higher range to since the Jamaica Bay survey deals with storm protection.

[14] All data in this paragraph are based on http://www.nyc.gov/html/dcp/html/neigh_info/nhmap.shtml.

Table 2 - Choice Experiment Values for Jamaica Bay Survey

Category	Attribute values for options	Status quo text
Shoreline armoring	• Do not install seas, protecting no additional homes from storm surge. • Install sea walls to protect 2,000 homes from storm surge. • Install sea walls to protect 4,000 homes from storm surge. • Install sea walls to protect 6,000 homes from storm surge.	• Do not install seas, protecting no additional homes from storm surge.
Living shorelines	• Do not install living shorelines, protecting no additional homes from storm surge. • Install living shorelines to protect 2,000 homes from storm surge. • Install living shorelines to protect 4,000 homes from storm surge. • Install living shorelines to protect 6,000 homes from storm surge.	• Do not install living shorelines, protecting no additional homes from storm surge.
Habitat	• No improvement to habitat; habitats for wildlife continue to deteriorate with the marsh. [a] • Small/minimal improvements to habitat. • Significant improvements to habitat.	• Habitats for wildlife continue to deteriorate with the marsh.
Recreation	• No improvement to recreation; recreational opportunities decline as the marsh deteriorates. [a] • Small/minimal improvements to recreation. • Significant improvements to recreation.	• Recreational opportunities decline as the marsh deteriorates.
Cost	• $75 • $125 • $175 • $225	• $0

Information Quality Guidelines

NOAA will retain control over the information and safeguard it from improper access, modification, and destruction, consistent with NOAA standards for confidentiality, privacy, and electronic information. 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 techniques or other forms of information technology.

All data being collected by NOAA under this effort will be collected through electronic means.

NOAA's subcontractor (Eastern Research Group, Inc. (ERG)) will handle implementing the survey using an online survey software.

4. Describe efforts to identify duplication.

NOAA has been in contact with its partners and stakeholders in the New York and New Jersey area and has been monitoring economic valuation projects related to Sandy-related restoration. Although work is being done related to Sandy, NOAA is not aware of any studies that are substantially similar to this. The closest study is one being done by The Nature Conservancy (TNC) on valuing ecosystem service associated with Sandy restoration in National Wildlife Refuges in New Jersey, including Forsythe. NOAA has been in regular contact with the primary researchers at TNC to ensure we are not duplicating their efforts. The TNC work is focused on developing environmental indicators at this point and then eventually apply economic values to changes in the indicators in the future. NOAA's work under this project is focused on developing willingness to pay measures based on primary data collection in the near term. In that sense, NOAA's work and TNC's work will act as complements to one another in the longer term.

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

Data are not being collected from small businesses or small entities.

6. Describe the consequences to the Federal program or policy activities if the collection is not conducted or is conducted less frequently.

The information is being collected only once. If the data are not collected, NOAA will not be able to develop a statistical model that values different restoration options for salt marshes and different coastal protection measures. As noted under Question #1, the purpose of the information being collected is to provide information to decision-makers. This will assist decision-makers in determining what actions to take in the future by providing them with information on the relative values that individuals place on different marsh restoration options and on different coastal protection measures.

7. Explain any special circumstances that require the collection to be conducted in a manner inconsistent with OMB guidelines.

This data collection is consistent with OMB guidelines.

8. Provide information on the PRA Federal Register Notice that solicited public comments on the information collection prior to this submission. Summarize the public comments received in response to that notice and describe the actions taken by the agency in response to those comments. Describe the 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.

A Federal Register Notice published on October 22, 2014 (70 FR 63086) solicited public comments. No comments were received.

9. Explain any decisions to provide payments or gifts to respondents, other than remuneration of contractors or grantees.

Respondents are not being offered any payments or gifts for their response by NOAA.

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

No statutory assurance of confidentiality can be made for this collection. Nevertheless, NOAA will assure participants that the data they supply will be kept anonymous. NOAA will not be able to associate data being provided with any specific individual. The data will be collected by NOAA's subcontractor, ERG, and ERG will purge the final data of any link between email addresses the data provided by the individual.

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.

There are no questions of a sensitive nature being asked in the survey.

12. Provide an estimate in hours of the burden of the collection of information.

Table A-3 provides an estimate of the time and cost to respondents for this data collection effort. Section B of this package contains our reasoning for the sample size estimates. NOAA expects a total of 1,001 responses. We have assumed that the Forsythe Salt Marsh Restoration survey will require 20 minutes to complete and that the Jamaica Bay Coastal Protection Survey will take 25 minutes. Across both surveys, NOAA estimates that respondents will spend 375 hours. NOAA used an hourly cost of $24.66 to estimate a total cost of $9,247 to respondents for answering the survey questions.[15]

Table A-3 - Total Response Time and Cost

Survey	Total number of expected responses	Average time per response (minutes)	Total time for responses (hours)	Total cost [a]
Forsythe Salt Marsh Restoration Survey	501	20	167	4118.22
Jamaica Bay Coastal Protection Survey	500	25	208	$5,129
TOTALS	**1,001**	**-**	**375**	**9247.22**

Note: This is a one-time collection, thus all estimates can be considered annual. Additionally, only one response per respondent is being requested.
[a] Calculated by multiplying the total time by an average hourly wage of $24.66 taken from the Bureau of Labor Statistics' December 17, 2014 press release (http://www.bls.gov/news.release/realer.nr0.htm, Table A-1, "Average Hourly Earnings," November 2014).

[15] The cost per hour is taken from the Bureau of Labor Statistics, see note [a] of Table 1 for details.

13. Provide an estimate of the total annual cost burden to the respondents or record-keepers resulting from the collection (excluding the value of the burden hours in Question 12 above).

This information collection does not involve any recordkeeping or reporting costs.

14. Provide estimates of annualized cost to the Federal government.

NOAA has provided ERG with a contract for $290,804 to perform this work over a two-year period. NOAA and ERG estimate that approximately 75 percent of this funding is being allocated with this information collection effort and the associated analysis and report writing. Thus, the annualized cost to the Federal government is $109,052 (= [$290,804x75%]/2). These funds cover survey development, implementation, statistical analysis, and report writing.

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

This is a new data collection.

16. For collections whose results will be published, outline the plans for tabulation and publication.

The data collected through this effort will be analyzed using complex statistical analysis. The standard technique for choice experiment data such as this survey effort is to use a multinomial logistic (MNL) nonlinear regression model.[16] The MNL model is used for modeling data where the response (dependent) variable reflects a choice of one among multiple choices. NOAA's subcontractor, Eastern Research Group, Inc. (ERG) has access to software and expertise in estimating MNL models.

Following statistical analysis, NOAA will develop a report and make the report available on Office for Coastal Management's website.

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

NOAA will display the expiration date for the OMB approval.

18. Explain each exception to the certification statement.

There are no exceptions to the certification statement.

[16] The choice experiment structure of this effort is detailed in Question #2 above.