

SUPPORTING STATEMENT
ASSESSMENT OF THE SOCIAL AND ECONOMIC IMPACT OF HURRICANES AND
OTHER CLIMATE-RELATED NATURAL DISASTERS ON COMMERCIAL AND
RECREATIONAL FISHING INDUSTRIES IN THE EASTERN, GULF COAST, AND
CARIBBEAN TERRITORIES OF THE UNITED STATES
OMB CONTROL NO. 0648-xxxx

INTRODUCTION

A. JUSTIFICATION

This request is for a new information collection

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

The 2017 hurricane season in the United States began with Hurricane Harvey as it struck Texas and Louisiana on August 25, 2017. Hurricane Irma followed on September 10, 2017 striking Florida and neighboring states, then Hurricane Maria on September 20, 2017 struck U.S. Caribbean territories of Puerto Rico and the U.S. Virgin Islands. These hurricanes caused widespread damage, significantly impacting the fishing industries in these places. Like Hurricane Sandy in 2012, these storms generated so much damage and disruption to coastal fishing communities that the Secretary of Commerce declared a ‘*catastrophic regional fishery disaster*’ citing Magnuson-Stevens Fishery Conservation and Management Act (MSA) Section 315 in Florida, Texas, Puerto Rico and the U.S. Virgin Island. Restoring both the commercial and recreational fishing sectors is critical to rebuilding the economic base in affected communities. Given that coastal disasters from extreme weather events such as major hurricanes are increasing in frequency and severity (Melillo et al. 2014), NOAA Fisheries and federal fishery managers need to be prepared to provide timely and accurate information to address federally mandated reporting requirements.

In order to address mandated assessments, the NOAA Fisheries Office of Science and Technology’s Economics and Social Analysis Division seeks to conduct ***as-needed*** assessments of the immediate and long-term social and economic impacts from hurricanes and other climate-related natural disasters on commercial and recreational fishing industries in the Eastern, Gulf Coast and Caribbean territories of the United States. The surveys will collect data from commercial and recreational for-hire fishermen, bait and tackle stores, seafood dealers, marinas/boat repair/marine supply businesses, and seafood processing and aquaculture facilities. The OMB approved data collection would be a standby facility to be called upon if and when a hurricane or climate related disaster strikes an area. These surveys will be implemented only as needed after one of these events and limited to the disaster area. Due to the unknown location of the next hurricane-disaster event we request approval for the entire area, but most disasters are much more localized. Independent of the requested quantitative data collection, it is standard procedure to send anthropologists/social scientists into the field to conduct non-quantitative, rapid-response, qualitative ethnographic interviews in the disaster areas. The requested data collection aims to supplement the qualitative insights with quantitative economic impact numbers.

The purpose of these assessments is to understand how hurricanes and other climate-related natural disasters affect commercial and recreational fishing industries. The post-impact rapid assessment is intended to identify short-term economic and socio-economic impacts for use in MSA 315 mandated assessments that are due to the Secretary of Commerce within sixty days of a catastrophic regional fishery disaster declaration. The rapid assessment will be followed by a one-year assessment intended to identify long-term impacts and impediments to recovery. These data collections provide essential information on the current conditions of the fishing industries in affected states that can be used both to improve future responses to disasters and in fishery management actions in the United States. They also provide a timely baseline of information to distinguish between the effects of storms and the effects of management regulations, thus improving the usefulness of subsequent fisheries social impact assessments. This information will increase the agency's knowledge of the compounding effects of natural disasters and changes in fisheries regulations in order to improve fisheries management.

Context for catastrophic regional fishery disaster 60-Day assessments

MSA

When a ‘*catastrophic regional fishery disaster*’ is declared under Magnuson-Stevens Fishery Conservation and Management Act (MSA) Section 315, an assessment of the impacts from a disaster is required. More specifically, “Within 2 months after a catastrophic regional fishery disaster the Secretary shall provide the Governor of each State participating in the program a comprehensive economic and socio-economic evaluation of the affected region’s fisheries to assist the Governor in assessing the current and future economic viability of affected fisheries, including the economic impact of foreign fish imports and the direct, indirect, or environmental impact of the disaster on the fishery and coastal communities” (16 U.S.C. 1864 MSA § 315).

Context for fishery management assessments

An understanding of social and economic impacts – achieved in fisheries through the collection of data on fishing communities, and on individuals who fish – is a requirement under multiple federal laws, including the [National Environmental Policy Act of 1969 \(NEPA\) as amended](#) (42 U.S.C. 4371 et seq.) and the [Magnuson-Stevens Fishery Conservation and Management Act of 1976 as amended through 2006](#) (MSA). The collection of these data, therefore, not only complies with legal requirements for existing management actions, but also will inform future management actions requiring equivalent information.

NEPA

NEPA requires federal agencies to consider the interactions of natural and human environments, and the impacts on both systems of any changes due to governmental activities or policies. This consideration is to be done through the use of ‘...a systematic, interdisciplinary approach that will insure the integrated use of the natural and social sciences...in planning and decision-making which may have an impact on man’s environment;’ (NEPA Section 102 (2) (A)). Under NEPA, an Environmental Impact Statement (EIS) or Environmental Assessment (EA) is required

to assess the impacts on the human environment of any federal activity. NEPA specifies “the term ‘human environment’ shall be interpreted comprehensively to include the natural and physical environment and the relationship of people with that environment” (Council on Environmental Quality (CEQ) NEPA Implementing Regulations 40 CFR 1508.14). In addition, under 40 CFR 1508.7, CEQ Implementing Regulations make clear that regulators must consider cumulative impacts. These are defined as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.”

MSA

Under the MSA, there are a variety of requirements related to social, cultural and economic issues for fishermen and their communities.

National Standard 8 (section 301(8)), for instance, requires that: "Conservation and management measures shall, consistent with the conservation requirements of this Act (including the prevention of overfishing and rebuilding of overfished stocks), take into account the importance of fishery resources to fishing communities in order to (A) provide for the sustained participation of such communities, and (B) to the extent practicable, minimize adverse economic impacts on such communities." Section 303(b)(6) on limited entry requires examination of "(A) present participation in the fishery, (B) historical fishing practices in, and dependence on, the fishery, (C) the economics of the fishery, (D) the capability of fishing vessels used in the fishery to engage in other fisheries, (E) the cultural and social framework relevant to the fishery and any affected fishing communities, and (F) any other relevant considerations." Section 303(a)(9) on preparation of Fishery Impact Statements notes they "shall assess, specify, and describe the likely effects, if any, of the conservation and management measures on“(A) participants in the fisheries and fishing communities affected by the plan or amendment, and (B) participants in the fisheries conducted in adjacent areas under the authority of another Council, after consultation with such Council and representatives of those participants."

2. 1 Explain how, by whom, how frequently, and for what purpose the information will be used. 1 If 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.

This will be an *as-needed* information collection using a structured interview administered via telephone, online, mail, and/or in-person by NOAA Fisheries staff and contractors. “As-needed” refers to collecting data in two ways: 1) implementing a rapid assessment survey immediately following hurricanes or other climate-related disasters to assess immediate impacts and 2) implementing a second survey to assess the long-term impacts of a disaster and serves as a one-year follow up to the rapid assessment survey. The survey protocols were developed based upon the results of a Hurricane Sandy long-term assessment survey (OMB Control No. 0648-0686) implemented in 2013-2014 by NOAA Fisheries’ Northeast Fisheries Science Center (See

[Colburn et al. 2015](#); Clay et al. 2016; Seara et al. 2016).

Ultimately, we would like to have responses from the same participants for both the rapid and long-term assessments. This would provide continuity in the data gathered relating to storm impacts and fishing business recovery. However, we will not know if we can get the same respondent twice until they are contacted a second time for the long-term assessment. Given this, we are estimating that approximately half of the people that participated in the rapid assessment will choose to participate in the long-term assessment.

Purpose

In the event of future fishery disasters or regulatory actions, the information will be utilized by NOAA Fisheries to meet mandated reporting requirements described above under Question 1. Information sought will be of practical use, as NOAA Fisheries social scientists will utilize the information for descriptive and analytical purposes, improving our understanding of the impacts of natural disasters and how, how well, and how quickly coastal residents recover. Further, this research and the resultant data may be utilized in efforts that include the development of ecosystem models and community vulnerability and resilience indicators, which incorporate social information. Reports will also be made available to the regional Fishery Management Councils and the public. The exact frequency of the use of the data is unknown at this time and is dependent on the regulatory actions required in the future as well as public use. However, since this information will be specific to a particular disaster event, and therefore not previously available, it is expected to have high utility.

Types of information collected and rationale

This research is designed to obtain information from different sectors of the fishing industry involved in the commercial and recreational fisheries in the 19 coastal states (Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Texas) and the U.S. Territories of Puerto Rico and U.S. Virgin Islands, which could be affected by hurricanes and other climate-related natural disasters. These sectors were grouped into six categories: fishermen (commercial and for-hire), seafood dealers, bait & tackle stores, seafood processors, marina/boat repair/marine supply businesses and aquaculture facilities (see Table 4 in Section B, Question 1 for more detail).

The survey forms are organized to ease the collection of the data by clearly identifying the types of data being collected using clearly defined sections. Both the rapid assessment and the long-term assessment surveys will collect information on background demographics and impacts to fishing operations or fishing-related businesses, operating status, and employees or crew. In addition, the long-term assessment will collect information on community recovery and individual well-being. These types of information are unavailable for the fishing industry from other sources.

The survey is presented in four different versions (attached to this document) to better address the specific focus populations (i.e., commercial and recreational (for-hire) fishermen and all

other fishing-related businesses) in both the rapid and long-term assessment formats. The questions are comparable and most differences in questions between surveys are attributed to a) wording, to address each population appropriately, and b) survey type, to address the immediate versus long-term impacts of the disaster. -

Background Information (In both rapid and long-term survey formats)

Basic demographic information, including name and address, will be from the sampling frame. For example, the federal dealers and bait and tackle stores datasets have the addresses and telephone numbers of potential participants. Surveys directed at fishermen include questions such as whether they operate as commercial or for-hire and whether they are full-time or part-time fisherman. Surveys directed at all other fishing-related businesses include questions such as the type of firm they operate, what community the business is located in, and whether they experienced damage or disruptions to their business. This background information will allow us to better understand the unique characteristics of the fishing industry participants from Maine through Texas and U.S. Territories of Puerto Rico and U.S. Virgin Islands. The U.S. Census does not collect or provide information at a level to be able to identify a specific sector of the fishing industry.

Disaster Impacts (In both rapid and long-term survey formats)

This section is related to specifics of how fishermen and fishing related-businesses are affected by hurricanes and other climate-related natural disasters. Surveys directed at commercial and recreational for-hire fishermen include questions specific to fishing activity such as vessel and gear damage, change in target species, impacts to crew, and revenue lost. Surveys directed at all other fishing-related businesses include questions related to operations such as structural or equipment damage, impacts to employees, and revenue lost.

Community Recovery (In the long-term survey only)

This section is related to the specifics of how communities, where vessels or fishing-related business are located, may be affected by hurricanes and other climate related disasters. Questions in this section focus on changes to community since the storm, attribution for these changes, and perceptions of potential changes in the future.

Personal Well-being (In the long-term survey only)

This section is adapted from Marshall and Marshall (2007) and is related to how people feel about their current business situation. Using a Likert scale, questions are intended to capture the ability of the participant to be prepared for and cope with change in general and in relation to natural disasters. This section also includes questions related to lessons learned.

Data use and public dissemination

This research will be used by NOAA Fisheries, Governors from affected states, Congressional staff, and the public to understand the effects of hurricanes and other climate-related natural

disasters on the fishing industry. Aggregate data from the survey instruments will be used to describe the industry and estimate impacts of any future natural disaster or regulations on the industry. The rapid assessment results will be used by NOAA Fisheries to fulfill requirements to complete a 60-Day assessment when a catastrophic regional fishery disaster has been declared (16 U.S.C. 1864 MSA § 315). Further, it will inform the current fisheries management process and provide information relevant to other management issues. The long-term assessment will support legal requirements regarding fishing communities and fisheries social impact assessments. Both the rapid and long-term assessments will also provide data on and questions for important research topics such as ecosystems and community resilience and vulnerability. Lastly, both assessments will increase the utility and quality of other secondary research, completed and ongoing, by providing more accurate, primary data to support secondary data collection efforts.

It is anticipated that the information collected will be disseminated to the public for use by officials (e.g., Governors, Congressional staff and state fish and wildlife staff) to support publicly disseminated information. As explained in the preceding paragraphs, the information to be gathered has high utility. NOAA Fisheries will retain control over the information and safeguard it from improper access, modification, and destruction, consistent with NOAA standards for privacy and electronic information. See response to Question 10 of this Supporting Statement for more information on privacy. The information collection is designed in accordance with NOAA 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.

We will make the surveys available via 1) telephone administration, 2) a fillable on-line form, 3) mail, and 4) face-to-face intercept administration. However, the exact methods of information collection will depend on the type and extent of devastation, which will be specific to each disaster. For example, if telephone and internet services are functioning, an emphasis will be placed on administering the survey through those means. If these modes are compromised, then an emphasis will be placed on intercept administration. No technology will be used or provided to complete the in-person intercept surveys. In the case of surveys administered over the telephone, interviewers will use a computer or some other technological device to enter the information collected electronically. The fillable on-line survey will require a computer and internet access. The results of the information in the form of a NOAA Fisheries technical memorandum will be made available over the internet. For an example, see [Colburn et al., 2015](#).

4. Describe efforts to identify duplication.

NOAA Fisheries social scientists consulted with regional science centers, regional academics, community-based organizations, industry groups and other parties interested in this type of information. We are not aware of any current research efforts in the Northeast, Southeast, Gulf

Coast or U.S. Territories in the Caribbean regions that are designed to anticipate future hurricane-disaster data collections.

Since the purpose of this study is to assess both the rapid and long-term impacts from hurricanes and other climate-related natural disasters, these surveys will be implemented as needed after one of these disaster events. Due to the unknown location of the next hurricane-disaster event, which could occur anywhere from Maine to Texas, Puerto Rico and/or the U.S. Virgin Islands, it is difficult to predict where duplication of effort might occur. However, NOAA Fisheries will work closely with other federal agencies (e.g., FEMA and SBA), state fish and wild life agencies, and academics (e.g., local Sea Grant Extension agents) to ensure there is no duplication of effort and that both the rapid and long-term assessments will complement other data collection efforts.

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

This request includes the collection of data on individuals and those who may be linked to or represent small businesses. Prior to contacting these respondents, researchers will gather any publicly available answers to the questions. Only those questions that cannot be reliably answered through this manner, and may change with the perspective of the respondent, will be asked. In addition, participation in data collection will be voluntary.

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

This specific collection will be conducted as needed.

Not collecting this information will mean the loss of a vital baseline for information needed to evaluate the impacts of hurricanes and other climate-related natural disasters in the Northeast, Southeast, Gulf Coast and U.S. Territories in the Caribbean regions. In the absence of timely information, NOAA Fisheries will be unable to accurately portray the current conditions of fishing communities in these areas. It will not be possible to separate out the effects of the storm from the effects of management regulations, thus reducing the usefulness of subsequent social impact assessments. Further, loss of a current baseline—while initial recovery is still in progress and details are still recalled—will make it impossible to fully evaluate the social, economic, and cumulative impacts as required under NEPA and the MSA (see response to Question 1).

A significant concern related to the quality of these analyses is the risk of being vulnerable to litigation for not fulfilling the mandates and executive orders described under Question 1. Not collecting this information may lead to incomplete representation of the necessary social and economic data for good science. This could hamper the decision-making process and negatively impact the individuals and communities subject to the decisions.

There is a time constraint to commencing the first long-term assessment survey, which needs to be implemented a year after a hurricane or other climate related natural disaster. In this case, there were three major hurricanes in three weeks that impacted the Southeast, Gulf Coast and U.S. Territories in the Caribbean in 2017. Hurricane Harvey made landfall in Texas on August

26th, followed by Irma hitting Florida on September 10th, and Hurricane Maria slamming into Puerto Rico on September 20th. To capture initial year impacts, this survey must be implemented as quickly as possible and prior to October 1, 2018 in order to maximize respondent recall.

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

The information collection is consistent with OMB Guidelines for Information Collections.

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 January 23, 2018 (Vol. 83, No. 15, p. 3132) solicited public comments. There were no comments on the information collection itself.

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

No payments or gifts will be provided to respondents.

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

Name, address and phone number of potential respondents will be assembled for the rapid assessment from existing sources including federal and state agencies, fishing businesses, and fishing organization membership lists. The contact lists used in the rapid assessment will be stored for use in the long-term assessment. This information will be used to select the sample population. Information collected is protected under the Privacy Act of 1974 (5 USC 552a), which prohibits disclosing information without the written consent of the subject individual, unless disclose is pursuant to one of twelve statutory exceptions. As stated on the survey instruments, the data collected will be kept anonymous and will not be released for public use except in aggregate statistical form. If the individual data are requested, it will be provided without identification as to its source. Because no proprietary regular business data are collected (i.e., landings or value, fishing grounds), there are no issues of confidentiality with regard to business information.

The information in the contact lists is covered under the Privacy Act System of Records COMMERCE/NOAA-11, Contact Information for Members of the Public Requesting and Providing Information Related to NOAA's Mission.

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.

None of the questions being asked in the survey deal with matters that are considered private.

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

Table 1a provides estimates for the annual number of respondents, annualized time for responding (burden hours), and costs associated with burden hours per state or territory. We cannot anticipate where the next hurricane or other natural disaster will occur though, historically, such disasters tend to be geographically localized. Therefore, it is highly unlikely that all states from Maine to Texas and Puerto Rico and the U.S. Virgin Islands would be affected at the same time. This collection will occur as needed and it will involve an estimated number of respondents per state and sector (Table 1b). Each respondent will provide a minimum of one response and we expect each response will take between 15 and 20 minutes for the rapid assessment and 15 to 20 minutes for the long-term assessment. Ultimately, we would like to have responses from the same participants for both the rapid and long-term assessments. However, we will not know if that is a possibility until they are contacted a second time for the long-term assessment. Given this, we are estimating that approximately half of the people that participated in the rapid assessment will choose to participate in the long-term assessment. Therefore, burden hours were calculated based on 1.5 responses per participant. To calculate the labor costs per response we used estimates from the Bureau of Labor Statistics. Labor costs per hour are estimated at \$64.61 for commercial and recreational (for-hire) fishermen¹, \$90.00 for seafood processors², and \$100.00 for dealers, bait and tackle shops, marinas/boat repairs yards/marine supply, and aquaculture facilities³.

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Table 1a. Estimates for the total number of annual responses annualized, total annualized time for responding (burden hours), and total labor cost for responding per state or territory.

| | annual responses, annualized | time for responding (burden hours) | Grand Total labor cost for responding |
|-----------|------------------------------|------------------------------------|---------------------------------------|
| ME | 1580 | 527 | \$42,104 |
| NH | 817 | 272 | \$20,661 |
| MA | 2043 | 681 | \$54,007 |
| RI | 1186 | 395 | \$29,788 |
| CT | 1057 | 352 | \$28,386 |
| NY | 1471 | 490 | \$38,034 |
| NJ | 1555 | 518 | \$42,753 |
| PA | 56 | 19 | \$1,593 |

¹ Labor costs calculated based on estimates from the Bureau of Labor Statistics (BLS) for 45-5021 Captains, Mates and Pilots of Water Vessels <http://www.bls.gov/oes/current/oes453011.htm>. The value for fishermen (boat owners) is the 90th percentile (\$64.61).

² Labor costs calculated based on estimates from the Bureau of Labor Statistics (BLS) for 11-1021 General and Operations Managers 90th percentile (\$90.00 or higher). Founder under NAICS 311700 - Seafood Product Preparation and Packaging.

³ Labor costs calculated based on estimates from the BLS for 11-0000 Management Occupations (Major Group) <http://www.bls.gov/oes/current/oes110000.htm>. The value for all owner/managers is the 90th percentile (\$100.00 or higher).

| | | | |
|--------------------|--------------|-------------|------------------|
| DE | 549 | 183 | \$13,962 |
| MD | 1690 | 563 | \$43,573 |
| VA | 1361 | 454 | \$35,703 |
| NC | 2196 | 732 | \$59,896 |
| SC | 1543 | 514 | \$41,046 |
| GA | 1015 | 338 | \$26,687 |
| FL | 2959 | 986 | \$83,135 |
| AL | 1202 | 401 | \$30,524 |
| MS | 578 | 193 | \$14,487 |
| LA | 1980 | 660 | \$54,688 |
| TX | 2065 | 688 | \$54,764 |
| Puerto Rico | 760 | 253 | \$18,164 |
| USVI | 457 | 152 | \$10,420 |
| Totals | 28120 | 9373 | \$744,376 |

*Note: The grand total # of annual responses, annualized is the sum of the total # of annual responses annualized for each industry sector (See Table 1b).

| | Commercial Permits | | | For-Hire Permits | | | Bait & Tackle Stores | | | Merchandise Supply | | |
|--------------------|---|---|---------------------------------|---|---|---------------------------------|---|---|---------------------------------|---|---|---------------------------------|
| | Total # of annual responses, annualized | Total annualized time for responding (burden hours) | Total labor cost for responding | Total # of annual responses, annualized | Total annualized time for responding (burden hours) | Total labor cost for responding | Total # of annual responses, annualized | Total annualized time for responding (burden hours) | Total labor cost for responding | Total # of annual responses, annualized | Total annualized time for responding (burden hours) | Total labor cost for responding |
| ME | 652 | 217 | \$14,033 | 232 | 77 | \$5,001 | 162 | 54 | \$5,400 | 229 | 76 | \$7,620 |
| NH | 347 | 116 | \$7,482 | 209 | 70 | \$4,497 | 198 | 66 | \$6,600 | 34 | 11 | \$1,140 |
| MA | 630 | 210 | \$13,568 | 538 | 179 | \$11,591 | 221 | 74 | \$7,380 | 310 | 103 | \$10,320 |
| RI | 535 | 178 | \$11,514 | 288 | 96 | \$6,203 | 92 | 31 | \$3,060 | 180 | 60 | \$6,000 |
| CT | 322 | 107 | \$6,939 | 256 | 85 | \$5,505 | 196 | 65 | \$6,540 | 250 | 83 | \$8,340 |
| NY | 473 | 158 | \$10,195 | 452 | 151 | \$9,730 | 238 | 79 | \$7,920 | 149 | 50 | \$4,980 |
| NJ | 293 | 98 | \$6,319 | 470 | 157 | \$10,118 | 299 | 100 | \$9,960 | 319 | 106 | \$10,620 |
| PA | 16 | 5 | \$349 | 5 | 2 | \$116 | 9 | 3 | \$300 | 14 | 5 | \$480 |
| DE | 160 | 53 | \$3,450 | 207 | 69 | \$4,458 | 106 | 35 | \$3,540 | 54 | 18 | \$1,800 |
| MD | 632 | 211 | \$13,607 | 443 | 148 | \$9,536 | 214 | 71 | \$7,140 | 344 | 115 | \$11,460 |
| VA | 585 | 195 | \$12,599 | 225 | 75 | \$4,846 | 230 | 77 | \$7,680 | 239 | 80 | \$7,980 |
| NC | 626 | 209 | \$13,491 | 493 | 164 | \$10,622 | 358 | 119 | \$11,940 | 263 | 88 | \$8,760 |
| SC | 468 | 156 | \$10,079 | 410 | 137 | \$8,839 | 230 | 77 | \$7,680 | 191 | 64 | \$6,360 |
| GA | 338 | 113 | \$7,288 | 266 | 89 | \$5,737 | 119 | 40 | \$3,960 | 72 | 24 | \$2,400 |
| FL | 655 | 218 | \$14,111 | 625 | 208 | \$13,452 | 488 | 163 | \$16,260 | 506 | 169 | \$16,860 |
| AL | 427 | 142 | \$9,188 | 364 | 121 | \$7,831 | 104 | 35 | \$3,480 | 115 | 38 | \$3,840 |
| MS | 259 | 86 | \$5,582 | 137 | 46 | \$2,946 | 47 | 16 | \$1,560 | 54 | 18 | \$1,800 |
| LA | 547 | 182 | \$11,785 | 389 | 130 | \$8,373 | 277 | 92 | \$9,240 | 176 | 59 | \$5,880 |
| TX | 621 | 207 | \$13,374 | 560 | 187 | \$12,056 | 272 | 91 | \$9,060 | 274 | 91 | \$9,120 |
| Puerto Rico | 531 | 177 | \$11,436 | 76 | 25 | \$1,628 | 0 | 0 | \$0 | 67 | 22 | \$2,220 |
| USVI | 342 | 114 | \$7,366 | 67 | 22 | \$1,434 | 4 | 1 | \$120 | 45 | 15 | \$1,500 |
| Totals | 9461 | 3154 | \$203,754 | 6710 | 2237 | \$144,520 | 3865 | 1288 | \$128,820 | 3884 | 1295 | \$129,480 |

| | Seafood Dealers | | | Seafood Processors | | | Aquaculture Facilities | | |
|---------------|---|---|---------------------------------|---|---|---------------------------------|---|---|---------------------------------|
| | Total # of annual responses, annualized | Total annualized time for responding (burden hours) | Total labor cost for responding | Total # of annual responses, annualized | Total annualized time for responding (burden hours) | Total labor cost for responding | Total # of annual responses, annualized | Total annualized time for responding (burden hours) | Total labor cost for responding |
| ME | 225 | 75 | \$7,500 | 45 | 15 | \$1,350 | 36 | 12 | \$1,200 |
| NH | 23 | 8 | \$780 | 5 | 2 | \$162 | 0 | 0 | \$0 |
| MA | 216 | 72 | \$7,200 | 94 | 31 | \$2,808 | 34 | 11 | \$1,140 |
| RI | 65 | 22 | \$2,160 | 14 | 5 | \$432 | 13 | 4 | \$420 |
| CT | 16 | 5 | \$540 | 5 | 2 | \$162 | 11 | 4 | \$360 |
| NY | 124 | 41 | \$4,140 | 22 | 7 | \$648 | 13 | 4 | \$420 |
| NJ | 110 | 37 | \$3,660 | 25 | 8 | \$756 | 40 | 13 | \$1,320 |
| PA | 5 | 2 | \$180 | 4 | 1 | \$108 | 2 | 1 | \$60 |
| DE | 18 | 6 | \$600 | 2 | 1 | \$54 | 2 | 1 | \$60 |
| MD | 18 | 6 | \$600 | 27 | 9 | \$810 | 13 | 4 | \$420 |
| VA | 36 | 12 | \$1,200 | 31 | 10 | \$918 | 14 | 5 | \$480 |
| NC | 416 | 139 | \$13,860 | 29 | 10 | \$864 | 11 | 4 | \$360 |
| SC | 234 | 78 | \$7,800 | 4 | 1 | \$108 | 5 | 2 | \$180 |
| GA | 214 | 71 | \$7,140 | 5 | 2 | \$162 | 0 | 0 | \$0 |
| FL | 499 | 166 | \$16,620 | 122 | 41 | \$3,672 | 65 | 22 | \$2,160 |
| AL | 122 | 41 | \$4,080 | 70 | 23 | \$2,106 | 0 | 0 | \$0 |
| MS | 47 | 16 | \$1,560 | 31 | 10 | \$918 | 4 | 1 | \$120 |
| LA | 504 | 168 | \$16,800 | 81 | 27 | \$2,430 | 5 | 2 | \$180 |
| TX | 284 | 95 | \$9,480 | 38 | 13 | \$1,134 | 16 | 5 | \$540 |
| Puerto Rico | 86 | 29 | \$2,880 | 0 | 0 | \$0 | 0 | 0 | \$0 |
| USVI | 0 | 0 | \$0 | 0 | 0 | \$0 | 0 | 0 | \$0 |
| Totals | 3263 | 1088 | \$108,780 | 653 | 218 | \$19,602 | 283 | 94 | \$9,420 |

*Note: The total # of annual responses, annualized for each industry sector is based on a minimum sample size, which was inflated to include a 20% non-response rate and 1.5 responses per respondent.

Given that coastal disasters from extreme weather events such as major hurricanes are increasing in frequency and severity (Melillo et al. 2014), it is difficult to estimate where the next disaster might strike. An estimate of the annualized burden was calculated for each state regardless of the past frequency of such events. Nevertheless, Table 6 in Appendix A provides an example of the frequency of hurricanes by state between 1851 and 2017. The “all” category reflects all hurricanes that were a category 1-5 for that location. The “major hurricanes” category refers to only those hurricanes that were a category 3-5. Note that Table 6 does not include direct hits by non-hurricane extreme weather events such as cyclones that can have considerable impacts. For example, Hurricane Sandy was initially classified as a hurricane however by the time it made landfall in New Jersey it was classified as a post tropical cyclone yet resulted in considerable loss of life and damage.

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).

No additional cost to the public other than labor cost is expected.

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

Total estimated annual cost to the federal government will depend on the unique geographic range of impact of each storm. The survey will be conducted by the contractors with assistance from NOAA Fisheries federal staff. In addition to contractor costs, travel costs will be incurred to various field sites, and there will be costs for printing of surveys and for supplies. Data collection and processing, and report development will be conducted by both the contractor and NOAA Fisheries federal employees. The contractor costs for the rapid assessment and long-term assessment (Table 2) are included below. Please see table below for itemized costs. In addition, one FTE (ZP-4) is expected to spend 312 hours overseeing each assessment. Approximately 4 additional ZP-4 staff will participate in fieldwork during the rapid assessment for a total of 320 hours. Total staff time costs are \$39,816 for the rapid assessment and \$19,656 for the long-term assessment.

Table 2. Estimates of annualized costs to the Federal Government per rapid assessment and long-term assessment implementation.

| Rapid assessment | Cost | Long-term assessment | Cost |
|--|-----------------|--|------------------|
| Contractor wages | \$60,000 | Contractor wages | \$120,000 |
| Contractor travel (lodging/per diem) | \$12,000 | Contractor travel (lodging and per diem) | \$5,000 |
| NOAA Fisheries Travel (lodging/per diem) | \$10,000 | NOAA Fisheries Travel (lodging/per diem) | \$5,000 |
| Printing | \$500 | Printing | \$500 |
| TOTAL | \$82,500 | TOTAL | \$130,500 |

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

This is a new collection.

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

Survey numerical and textual information will be a product of this study. Textual information will be numerically coded and used for categorical analysis. Survey data will be analyzed using standard social science quantitative data analysis methods. Where possible and relevant, final reports and other relevant portions of the research process will be posted on <http://www.nefsc.noaa.gov>, <http://www.sefsc.noaa.gov/>, and <http://www.st.nmfs.noaa.gov/index>. Where relevant, studies in their entirety will be published as internal reports and in part will be submitted for publication in peer-reviewed journals to encourage additional analysis and review

of data collected through this process, as well as to disseminate findings. For example, the results of the long-term Hurricane Sandy assessment were published as NOAA Technical Memorandum NMFS-F/SPO-157 (Colburn et al. 2015) and as two peer-reviewed articles in Marine Policy and Global Environmental Change (Clay et al. 2016; Seara et al. 2016).

Table 3a. Data collection, sampling, analyses, and reporting timeline for **rapid** assessment

| ACTIVITY | WEEKS | | | | | | | | | | | |
|-----------------------|-------|---|---|---|---|---|---|---|---|----|----|----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| Prepare Instruments | █ | | | | | | | | | | | |
| Review Secondary Data | █ | █ | | | | | | | | | | |
| Select Sample | █ | █ | █ | █ | █ | | | | | | | |
| Survey | | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ |
| Data Analyses | | | | | | █ | █ | █ | █ | █ | █ | █ |
| Report Preparation | | | | | | | | | | █ | █ | █ |
| Final 60-Day Report | | | | | | | | | | | | █ |

Table 3b. Data collection, sampling, analyses, and reporting timeline for **long-term** assessment

| ACTIVITY | MONTHS | | | | | | | | | | | |
|------------------------|--------|---|---|---|---|---|---|---|---|----|----|----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| Prepare Instruments | █ | | | | | | | | | | | |
| Review Secondary Data | █ | █ | | | | | | | | | | |
| Select Sample | █ | | | | | | | | | | | |
| Survey | | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ |
| Data Analyses | | | | | | █ | █ | █ | █ | █ | █ | █ |
| Report Preparation | | | | | | | | | | █ | █ | █ |
| Final Long-Term Report | | | | | | | | | | | | █ |

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.

NA.

18. Explain each exception to the certification statement.

NA.