

**SUPPORTING STATEMENT
SURVEY OF SHORE-BASED NON-COMMERCIAL FISHING ON ST. CROIX,
U.S. VIRGIN ISLANDS
OMB CONTROL NO. 0648-xxxx**

A. JUSTIFICATION

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

This request is for a new information collection to benefit local fishery managers in the United States (U.S.) Virgin Islands (USVI). The National Ocean Service (NOS) proposes to collect socio-economic data on shore-based, non-commercial fishing.

Up-to-date socio-economic data is needed to support the Agency's conservation and management goals, to strengthen and improve fishery management decision-making, and to satisfy legal mandates under the Reauthorization of the [Magnuson-Stevens Fishery Conservation and Management Act](#) (MSA), the [Regulatory Flexibility Act](#) (RFA), the [Endangered Species Act](#), and the [National Environmental Policy Act](#) (NEPA), [Executive Order 12866](#) (EO 12866), and other pertinent statutes. This data collection also supports the [Coral Reef Conservation Act](#) (CRCA) (16 U.S.C. 6401 et seq).

The purpose of the Coral Reef Conservation Act is to advance conservation of coral reef ecosystems in the United States and Territories. Specifically, the Act requires the federal government to preserve, sustain, and restore coral reef ecosystems, promote the wise management and sustainable use of them, as well as develop sound scientific information on their condition and the nature of threats to them. The NOAA Coral Reef Conservation Program (CRCP) has identified three priority threats to coral reef ecosystems in the United States and Territories, one of which is the impact of fishing on coral reefs and associated resources.¹ The USVI constitutes one coral reef jurisdiction of interest to the CRCP program.

Non-commercial fishing is an important activity on St. Croix, USVI, yet robust data characterizing shore-based, non-commercial fishing is lacking. In 2004, researchers found that approximately 11% of households surveyed on St. Croix had a least one non-commercial, personal use fisher in residence; further, they estimated that St. Croix had about 3,300 non-commercial fishers on the island.² Presently, in the USVI, a fishing license is not required for non-commercial fishing and catch from this fishery is not systematically monitored.

While a diversity of reef species are fished and gathered by inshore fishers in the USVI, including commercially and ecologically important species, robust data characterizing the catch, fishing effort and cultural attributes of such fishing are limited. The only continuous fishery data collection (i.e., local trip-tickets) mainly gathers commercial landings and fishing effort data. At the same time, there is evidence that reef fish assemblages in the jurisdiction have changed over

¹ NOAA Coral Reef Conservation Program. 2009. NOAA Coral Reef Conservation Program Goals & Objectives 2010-2015. Silver Spring, MD: NOAA.

² Mateo, Ivan. 2004. Survey of Resident Participation in Recreational Fisheries Activities in the U.S. Virgin Islands. P.p. 205-222 in the Proceedings of the Fifty-fifth Annual Gulf and Caribbean Fisheries Institute, Xelha, Mexico.

time due in part to fishing pressure.³ Therefore, territorial managers in the USVI have identified non-commercial fishing activity as a priority management concern related to the influence of certain fishing gear (i.e., gillnets, traps,) on fish populations and habitat, as well as, generally, overfishing.⁴ They hope to “reduce fishing impacts on critical stocks that most directly affect the health and resilience of the reef ecosystem.”⁵

Fishery resource managers in the USVI would like to consider options for more effective management of reef fish species to benefit coral reef ecosystems and local communities. However, the paucity of socio-economic data is a significant hurdle for the evaluation of regulatory proposals in the region. Therefore, periodic socio-economic data collections are required to assemble current cultural, economic and social information. The Territory has documented the need to “obtain necessary information on fishing effort in U.S. coral reef ecosystems by measuring fishing intensity, fishing mortality, frequency, area coverage, community dependence, etc. to inform management activities.”⁶ Without these basic data on the non-commercial fishery on St. Croix, it is not possible to develop required fishery management plans. Consequently, this data collection is needed by resource managers so that they may develop strategies for the wise management and sustainable use of coral reef ecosystems.

The data collection described herein was developed in collaboration with resource managers with the USVI Department of Planning and Natural Resources (DPNR). The proposed collection is focused on the island of St. Croix where shore-based fishing is believed by resource managers to be a significant cultural activity, but where data characterizing this mode of the non-commercial fishery is inadequate. This survey will provide to territorial resource managers data on catch and effort, along with demographic and subsistence attributes of shore-based, non-commercial fishers on St. Croix.

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

³ Beets, J. and C. Rogers. Changes in fishery resources and reef fish assemblages in a Marine Protected Area in the US Virgin Islands: the need for a no take marine reserve. Proceedings 9th International Coral Reef Symposium, Bali, Indonesia, 23-27 October 2000.; Rogers C, et al. 2008. Ecology of Coral Reefs in the US Virgin Islands. P.p. 303-373 in Coral Reefs of the World, Volume 1. Springer: Netherlands.

⁴ Division of Fish and Wildlife, Department of Planning and Natural Resources. United States Virgin Islands Marine Resources and Fisheries Strategic and Comprehensive Conservation Plan. U.S. Virgin Islands. December 2005.

⁵ The Territory of the United States Virgin Islands and NOAA Coral Reef Conservation Program. 2010. United States Virgin Islands’ Coral Reef Management Priorities. Silver Spring, MD: NOAA, p. 6.

⁶ The Territory of the United States Virgin Islands and NOAA Coral Reef Conservation Program. 2010. United States Virgin Islands’ Coral Reef Management Priorities. Silver Spring, MD: NOAA, p.11.

General Overview

This data collection request involves gathering catch, fishing effort and socioeconomic information from one group: shore-based, non-commercial fishers on St. Croix, USVI. The catch information includes fishing activity, species caught, number of fish or other species caught, and the fisher's (planned) disposition of the catch. The demographic information includes birth year, location of residence and place of birth. Finally, the dependency information includes the fisher's motivation for fishing, fishing activity and fish consumption for the household, as well as employment and income.

Who will use this information?

In general, the purpose of this research project is to inform natural resource managers in the USVI, those responsible for management of coral reef ecosystems as well as fisheries, about shore-based, non-commercial fishing activity on St. Croix. This one-time, voluntary survey will be used to collect information on:

- 1) catch rate;
- 2) number, length and species of fish that fishers are catching;
- 3) demographic profiles of persons who engage in shore-based, non-commercial fishing on the island;
- 4) nature of household dependence on non-commercial fishing by persons who engage in shore-based fishing; and
- 5) fishing effort.

Data for purposes 1-4 will be collected via the present survey using in-person interviews. Data to calculate fishing effort will be collected independently via fisher counts.

How frequently will this information be used?

This one-time collection will last for one twelve-month period. Data and derived products will be provided to territorial resource managers at the conclusion of the project period. It is anticipated that data and derived products will be used by territorial resource managers on an as-needed basis.

For what purpose will the information be used?

Directly, information provided as a result of this data collection will be used by resource managers in the USVI and CRCP to better understand the nature of shore-based, non-commercial fishing on St. Croix. Information could be used by Territorial resource managers or CRCP to inform coral reef ecosystem management plans or programs, outreach/education activities, or Territorial policy related to the management of coral reef ecosystems or fisheries.

Summary of Survey Questions

Site and Observed Information:

Questions 1 to 7 will be completed by the surveyor, but without input from the fisher. The first 5 of these 7 questions will be used for administrative purposes. Questions 6 and 7 will be recorded based on surveyor observation only.

Catch Questions:

Questions 8 to 19 are designed to obtain information on the fishers' fishing activity patterns, as well as to get detailed information on catch. Questions in this section were designed to conform to other intercept surveys being conducted in the U.S. Caribbean and elsewhere in the United States related to recreational fishing. With the exception of questions 8 and 11, all of the questions in the section were modeled from catch-oriented questions included on intercept surveys used by the NOAA NMFS Marine Recreational Information Program (MRIP). The specific survey forms consulted are:

1. 2008 MRFSS INTERCEPT SURVEY – Region 11, Puerto Rico (Macro Int., 2/6/2008) OMB Control No. 0648-0052 (EXP. 9/30/08);
2. 2009 INTERCEPT SURVEY - Atlantic (Macro International 2/9/2009) OMB Control No. 0648-0052 (EXP. 4/30/2011);
3. 2013 ACCESS-POINT ANGLER INTERCEPT SURVEY – Atlantic.

Below is a summary of the purpose of each question or set of questions.

Question 8: Will you be reporting today's catch on a commercial catch report or trip ticket form?

This question is included as a screening question. Persons who answer "yes" to this question will not be interviewed. For this survey, we only want to interview non-commercial fishers because there is presently no program or mechanism in place in the territory to collect information about catch for this group. Conversely, persons who possess a commercial fishing permit in the USVI report their catch on a commercial catch report or trip ticket form⁷. Therefore, collection of catch information for this group would be duplicative of current monitoring activities. On St. Croix, local resource managers indicate that commercial fishers are known to fish from the shoreline, primarily for the collection of bait fish to be used for commercial fishing activity. Thus, there exists the possibility that commercial fishermen could be approached by the surveyor for inclusion in this study. Adding this question as a screening mechanism will allow us to exclude this group of commercial fishers from the study.

Question 9: How long have you been fishing here today? That is, how many hours have you spent with your gear in the water?

Question 10: How many additional hours do you expect to fish from this site today? That is, how many more hours will you have your gear in the water?

This sequence of questions will ascertain the self-reported length of stay for the fisher's incomplete fishing trip. This information will be used to determine average length of fishing trip. This information will be used to characterize the activity patterns of shore-based, non-commercial fishers.

Question 11: Have you fished at any other location today or do you plan to fish at another location today?

This question will be used to ascertain whether fishers generally spend their entire fishing trip in

⁷ USVI Department of Planning and Natural Resources, July 2012. Commercial & Recreational Fisher's Informational Handbook. Division of Fish & Wildlife and Division of Environmental Enforcement. pp. 3-4.

one location (i.e., the location where the fisher was encountered for survey) or if they tend to visit multiple locations in one fishing day. This information will be used to characterize the activity patterns of shore-based, non-commercial fishers.

Question 12: What type of gear did you primarily use today?

This question is included to document the type of gear that the fisher used during the fishing trip. This information will be used to generally characterize the activity patterns of shore-based, non-commercial fishers.

Question 13: Were you fishing for any particular kinds of fish today? If yes, what kinds?

This question is included to document the type of fish that a fisher hoped to catch during his or her fishing trip. This information will be used to characterize the activity patterns of shore-based, non-commercial fishers. Collection of this information will also allow researchers to compare target species to actual species caught.

Question 14: Did you catch any fish while you were fishing that I might be able to look at?

Question 15: Did you catch these fish yourself or did someone else catch some of them?

Question 16: Can you separate out your individual catch?

Question 17: How many fishers, including yourself, have their catch here?

Questions 14 to 17 are screening questions that will be used to determine if the fisher has catch available for inspection by the surveyor. If the fisher responds in the affirmative to Question 14, then the surveyor will continue with questions regarding available catch. If the fisher responds in the negative to Question 14, then the surveyor will proceed to Question 19, which is focused on catch that is not available for inspection. Question 15 will be used to determine if the catch that is available for inspection belongs only to the fisher being surveyed, or if a portion of the catch belongs to other persons in a fishing party. If all of the available catch belongs to the fisher being surveyed, then the surveyor will proceed to Question 18, inspection of the catch. If a portion of the catch belongs to someone other than the fisher being surveyed, then the surveyor will proceed to Question 16.

In the case of catch being consolidated among multiple people in a fishing party, Question 16 will be used to determine if the fisher can, and is willing to, separate out his or her fish for inspection. If the fisher responds that he or she can separate out the fish, then the surveyor will continue to Question 18, inspection of available catch. If the fisher responds that he or she cannot or will not separate out his or her catch, then surveyor will note the number of persons in the fishing party and commence with inspection of the catch for the fishing party. In this case, Question 17 will be used to estimate the average catch per person for the fishing party based on total fish caught by the party.

Other fishers in a party where a fisher refused to separate catch by individual fisher will be surveyed also. However, in such cases, the fishers' catch will not be inspected again. Upon reaching Question 14, the surveyor will record 1) the response option "Yes, but fish are reported on another fisher's form" and 2) the intercept number from the survey where catch was reported for the party.

Question 18: AVAILABLE CATCH. May I look at your fish? What do you plan to do with the MAJORITY of the (species)?

The purpose of Question 18 is to gather information on the fisher's available catch, that is, the catch that the surveyor can inspect during the interview. Species name and code will be used to identify the species caught by the fisher. The number of fish will be used to document the number of any one species inspected per fisher. This information will be used to estimate the total catch for the shore-based, non-commercial fishery on St. Croix. Measurements of length and weight will be used to estimate the size structure of catch on St. Croix. The length and weight of the fish will be obtained following the following sampling protocol:

Question 18: Length and Weight Measurement Protocol

Supplies:

- Sampling Bucket A
- Sampling Bucket B
- Fish Measuring Board
- Handheld Digital Fish Scale

Finfish Procedure & Protocol

Surveyor will begin by moving the fisher's fish to Sampling Bucket A from whatever he or she has used to contain his or her catch.

Scenario 1: No Sub-Sampling---10 Count or Less for Any One Finfish Species

If the number of fish for any one species is less than 10, then all of the fish of that species will be measured for length and weight. For example, if the fisher has 2 white grunt, 3 mutton snapper, and 4 great barracuda, then the surveyor will get a length and weight for all 9 of these fish. For catch categorized using this scenario, the surveyor will measure and record data for each fish as they are moved from Sampling Bucket A back to the fisher's containment unit.

Scenario 2: Sub-Sampling Protocol 1---11 to 20 Count for Any One Finfish Species

If the number of fish for any one species is 11 to 20, then the surveyor will use Sub-Sampling Protocol 1. As the surveyor transfers the fish from Sampling Bucket A back to the fisher's containment unit he or she will count the number of fish for each species. As the fish are returned, the surveyor will record the length and weight for the first 10 fish returned to the fisher's containment unit. For example, if the fisher has 11 white grunt and 2 mutton snapper, length and weight would be recorded for the first 10 white grunts to be counted and returned to the fisher's containment unit. Length and weight would be recorded for both of the mutton snappers.

Scenario 3: Sub-Sampling Protocol 2---21 Count or Over for Any One Finfish Species

If the number of fish for any one species is 21 or over, then the surveyor will follow Sub-

Sampling Protocol 2, which will be to record measurements for every n^{th} fish. To get an accurate count of the fish, the surveyor will count each fish as he or she transfers them from Sampling Bucket A to Sampling Bucket B. To determine the “n” interval to be used, the surveyor will divide the number of fish by 10 and round to the nearest whole number. For example, if a fisher has 38 white grunts, the equation would be: $38 / 10 = 3.8$, rounded to 4, the nearest whole number. Thus, the sampling interval for the example would be every 4th fish. As the surveyor returns the fish from Sampling Bucket B to the fisher’s containment unit, he or she will record the length and weight for every n^{th} fish until this interval cannot be completed. In the example, every 4th fish would be measured for length and weight, which would mean that 9 fish in total were measured for length and weight.

Scenario 4: Baitfish (Finfish)

For buckets of baitfish, the surveyor will record the species name of any species identified in the fisher’s containment unit. The surveyor will record the total weight of all baitfish by transferring the fisher’s baitfish catch to Sampling Bucket A, weighing the bucket, and then subtracting the weight of Sampling Bucket A from the total weight. The difference of this calculation will be recorded. The surveyor will be certain that the disposition code 3 (“Plan to use for bait”) is recorded for baitfish.

Mollusks Procedure & Protocol

For mollusks, the surveyor will record the species name and code for each species, as well as count and record the total number of each species inspected. Measurement of length and weight will not be collected for mollusks.

Caribbean Spiny Lobster Procedure & Protocol

For Caribbean Spiny Lobster, the surveyor will count and record the total number of lobster. The surveyor will measure the carapace beginning at the forward edge between the rostral horns, excluding and soft tissue, and proceeding along the middle to the rear edge of the carapace. The surveyor will follow Sub-Sampling Protocol 1 or 2 (as described above for finfish) for lobster as warranted. For lobster, the surveyor will record data in all fields except weight.

Finally, a “disposition of catch” will be obtained to determine the intended use of each species by the fisher. This information will be collected for the majority of the catch for any one species, and not for each, individual fish, mollusk or crustacean inspected. This data will be used to ascertain the reported or intended use for non-commercial catch on St. Croix.

Question 19: UNAVAILABLE CATCH. Did you land any fish that are not here for me to look at? Question 19 will be used to collect data on species that have been caught by the fisher, but that are not available for inspection by the surveyor. Species name and code will be used to identify the species of the unavailable catch as reported by the fisher. The number of fish will be used to document the number of unavailable catch for any one species per fisher. This information, in combination with data from Question 18, will be used to estimate the total catch for the shore-based, non-commercial fishery on St. Croix, including releases and discards. The fisher will be asked to estimate the length of unavailable catch. Finally, a disposition of unavailable catch will be obtained to determine the disposition of each species by the fisher. This information will be collected for the majority of the catch for any one species, as opposed to each individual fish,

mollusk or crustacean inspected. This data will be used to ascertain the reported or intended use for non-commercial catch on St. Croix.

Demographic Questions

The questions included in this section of the survey will be used to develop a basic demographic profile of persons engaging in shore-based, non-commercial fishing on St. Croix. This profile is needed by territorial resource managers to better understand the demographic attributes of the shore-based, non-commercial fishing public. These variables will also be used to develop an attribute profile of fishers who are most likely to depend on non-commercial fishing to support their household from a subsistence standpoint.

Question 20: What year were you born?

This question will be used to calculate the age of the fisher interviewed. Natural resource managers in the USVI would like to know the age profile of shore-based, non-commercial fishers on St. Croix.

Question 21: Do you live primarily in the U.S. Virgin Islands? That is, do you live in the U.S. Virgin Islands for 6 or more months out of each year?

This question will be used to determine if the fisher is a resident of the USVI, as opposed to a part-time resident, visitor or tourist. Natural resource managers in the USVI would like to know if persons fishing along the shore on St. Croix are primarily residents. Additionally, by having this information, researchers can look at the fishing activity, demographic attributes and dependency characteristics of only residents of the USVI.

Question 22: What is your island of residence?

This question will be used to determine if a fisher is a resident of St. Croix versus one of the other islands in the territory of the USVI. For the demographic and dependency components of this survey, we are primarily interested in shore-based, non-commercial fishers on St. Croix. Differences in catch, demographic and dependency attribute profiles are expected to vary based on island of residence.

Question 22a: How many years have you lived on St. Croix?

This question will only be asked if the fisher responds that he or she is a resident of the island of St. Croix. This question will be used to determine the average years of residence for shore-based, non-commercial fishers of St. Croix. Patterns in fishing activity and dependency will be examined relative to years of residency. Territorial resource managers would like to know if there are differences in patterns of fishing activity or dependency based on how long a person has lived on the island.

Question 22b: Which estate do you live in on St. Croix?

In the USVI, estate is a standard geographical boundary that is recognized and used by residents. The estate system of geographical organization is a remnant of the Territory's colonial history. The U.S. Census Bureau geographically organizes the Territory into island (i.e., a "county equivalent"), sub-district, and estate. Estate can be most effectively understood as an equivalent to a census "block." According to the U.S. Census, census blocks are:

“...statistical areas bounded by visible features, such as streets, roads, streams, and railroad tracks, and by nonvisible boundaries, such as selected property lines and city, township, school district, and county limits and short line-of-sight extensions of streets

and roads. Generally, census blocks are small in area; for example, a block in a city bounded on all sides by streets.”⁸

This question will only be asked if the fisher responds that he or she is a resident of the island of St. Croix. This question will geographically locate the fisher on the island. Patterns in fishing activity and dependency will be examined relative to estate of residence or regions of the island created by aggregating estates. Territorial resource managers would like to know if there are differences in patterns of fishing activity or dependency based on where a person lives on the island. According to our collaborators in the USVI, estate is the smallest geography that can be

collected for the USVI. Additionally, people who live in the USVI think about residency in terms of estate, as opposed to some other geographic boundary, such as town or neighborhood.

Zip codes were deemed inadequate to spatially characterize the residence on St. Croix because out of 9 zip codes on the island, only 3 are geographically oriented. The other 6 zip codes correspond to P.O. Boxes, which are located at two postal facilities on the island. In 2012, approximately 62% of the population on St. Croix used a P.O. Box. Use of estate is advantageous also because in November 2010, the USVI and US Census Bureau signed a memorandum of understanding adopting estate as the “official geographic area” to be used both by the US Census Bureau as well as government agencies in the territory, including the USVI Department of Planning and Natural Resources.⁹ Thus, data from this collection will be complementary, geographically speaking, to 2010 Census data when it is released for the USVI.

Question 23: What is your zip code?

This question will be used primarily to identify the geography of residence for fishers who are not residents of St. Croix. However, this information will be collected for residents of St. Croix as well to verify the ineffectiveness of zip code at spatially orienting fisher residence on the island, as compared with estate of residence.

Question 24: Where you were born?

According to US Census (2000), only 46.2% of St. Croix citizens were born on St. Croix.¹⁰ The majority of resident citizens were born outside of the USVI, coming to St. Croix largely from the mainland United States or other nations/territories within the Caribbean.¹¹ Territorial resource managers would like to know if place of birth is associated with differences in patterns of fishing activity or dependency on St. Croix.

Dependency Questions

To better understand the potential impact of future management decisions related to fisheries, territorial resource managers would like to know if shore-based, non-commercial fishers are dependent upon fishing to support their households, from a subsistence standpoint. That is, do

⁸ U.S. Department of Commerce, U.S. Census Bureau. “2010 Geographic Terms and Concepts”—“Geographic Terms and Concepts – Block.” Online at: http://www.census.gov/geo/reference/gtc/gtc_block.html

⁹ November 17, 2010. Press Release No. 059-10, “Virgin Islands GIS Data to Support U.S. Census.” USVI Office of the Lieutenant Governor, Gregory R. Francis. Available online at: <http://ltg.gov.vi/press-releases/virgin-islands-gis-data-to-support-u.s.-census-5.html>.

¹⁰ US Census Bureau. Census 2000. Table PBG006: Place of Birth by Citizenship Status.

¹¹ US Census Bureau. Census 2000. Table PCT019: Place of Birth

resident, non-commercial fishers on St. Croix support the protein needs of households and, further, are those households economically vulnerable, meaning do those household have lower incomes, fewer providers, and higher numbers of dependents. For purposes of this project, “subsistence fishing” is defined as the non-commercial gathering and use of fish or other marine resources (such as shellfish) for the purpose of consumption by a household. This definition is adapted from the definition of subsistence use of natural resources as set forth by the State of Alaska, which differentiates subsistence harvest from other forms of harvest (i.e., commercial or recreational).¹² Household dependence on fishing will be ascertained with questions 27, 28, 29 and 31. Household economic vulnerability will be ascertained with questions 30, 32, and 33.

Question 25: Have you been interviewed previously by one of our survey staff in the past [# of months study has been underway] months?

This is a screening question that will be used to determine if the fisher has been surveyed previously for our study. We will be administering the survey for a period of 12 months on St. Croix. It is a relatively small island and we anticipate the possibility of a fisher being captured in our sample more than once; previous work indicates that shore-based fishing is generally engaged in by a core group of fishers. We want each fisher to answer this set of dependency questions only once during the course of data collection, regardless of whether he or she is interviewed multiple times about their catch.¹³ Thus, the dependency questions are situated at the end of the survey and we have included this screening question. The screening question was placed immediately previous to the dependency questions to make administration of the survey less cumbersome for the surveyor and to reduce errors that could occur if the surveyor did not recall the answer to this screening question when offered earlier in the survey. The purpose of question 25 is to determine if the fisher has been interviewed at any point previously by a member of our research team. If the fisher responds that he or she has been surveyed previously, the interview will be terminated at this point. If the fisher responds “No,” “Don’t know,” or “Refused,” then the surveyor will proceed with questions 26 through 33.

Question 26: Are you satisfied with the number of access points available for shoreline fishing?

This question has been included to ascertain the opinion of fishers about the availability of access points along the shoreline for non-commercial fishing. On St. Croix, there are a limited number of public, deeded points that fishers may use to access the shoreline, particularly in the area of the marine protected area. There are also a number of unofficial access points used by fishers to cross private property in order to gain access to the shoreline. Territorial resources managers would like to know if shore-based fishers are satisfied with the number of access points available to shore-based fishers.

¹² AS 16.05.940[32]

¹³ While we want each fisher to answer the dependency questions only once, we intend to collect catch and demographic information from each fisher regardless of how many times the person has been included in the survey. For calculation of catch and fishing effort, it is not problematic for a fisher to be surveyed multiple times in a study. Having basic demographic information for all cases will make it possible to analyze catch by demographic characteristics for the entire catch dataset. However, to assess the demographic attributes for the shore-based, non-commercial fishing community, only cases with a negative response to Question 25 will be used. In other words, for development of demographic profiles for this mode of fishing, cases having a fisher that was previously surveyed (as determined by the answer to Question 25) will be excluded from the analysis.

Question 27: What is your main reason for fishing?

Variations of this question are frequently asked in recreational fishing surveys to determine why people engage and invest in fishing activities, as well as to understand fisher behavioral patterns and satisfaction levels.¹⁴ The main purpose of this question in the present data collection is to understand if food provisioning is the primary motivation for fishers on St. Croix. For fishers who engage in fishing activity for “subsistence” reasons, food provisioning is generally the primary motivation, although it may not be the sole motivation.¹⁵ Territorial resource managers also hypothesize that shore-based fishing on St. Croix may be highly motivated by a desire to transfer knowledge of fishing across generations. Thus, we have included the response category “To teach younger generations about fishing”, to test this hypothesis.

Question 28: In a typical week, approximately what percentage of your household’s food comes from personal-use fishing or gathering other food from the sea?

Question 31: How many people in your household, including yourself, engaged in fishing for recreation or personal use of fish at least once in the past three months?

The purpose of Questions 28 and 31 are to ascertain to what degree a fisher’s household is dependent on shore-based, non-commercial fishing for food provisioning. Question 28 assesses the degree to which a fisher’s household is provisioned with food gathered from a marine environment, whether fish or other items. Question 31 will provide information on how many persons in the household are contributing to food provisioning in the household by means of non-commercial fishing. Data from these questions will be used to inform territorial managers about the possible household dependence on non-commercial, personal-use fishing and food gathering.

Question 29: How many people presently live in your household, including yourself?

Question 30: How many children, meaning people under the age of 16, presently live in your household?

¹⁴ Duda, M. et al. 1998. South Carolina Fishing License Holders Opinions and Attitudes Toward Fisheries Management and the South Carolina Department of Natural Resources. Final Report to South Carolina Department of Natural Resources Freshwater Fisheries Section. Harrisonburg, VA: Responsive Management.; Fedler A.J. and R.B. Ditton. 1986. A Framework for Understanding the Consumption Orientation of Recreational Fishing. *Environmental Management* 10(2): 221-227.; Henry, G.W. and Lyle, J.M., 2003. The National Recreational and Indigenous Fishing Survey. Final Report to the Fisheries Research & Development Corporation and the Fisheries Action Program. Project No. 1999/158. NSW Fisheries Final Report Series No. 48. ISSN 1440-3544. 188pp.; Schram, H.L., P. Gerard, and D. Gill. 2003. The Importance of Environmental Quality and Catch Potential to Fishing Site Selection by Freshwater Anglers in Mississippi. *North American Journal of Fisheries Management* 23: 512-522;

¹⁵ Craig, Peter, Bonnie Ponwith, Fin1 Aitaoto, and David Hamm. 1993. The Commercial, Subsistence, and Recreational Fisheries of American Samoa. *Marine Fisheries Review* 55(2): 109-116; Kuster C. V.C. Vuki, L.P. Zann. 2005. Long-term Trends in Subsistence Fishing Patterns and Coral Reef Fisheries Yield from a Remote Fijian Island. *Fisheries Research*. 76(2): 221-228.; Macinko S. and S Schumann. 2007. Searching for Subsistence: In the Field in Pursuit of an Elusive Concept in Small-scale Fisheries. *Fisheries* 32(12): 592-600.; Salas, S., Chuenpagdee, R., Charles, A., Seijo, J.C., Eds. Coastal fisheries of Latin America and the Caribbean. *FAO Fisheries and Aquaculture Technical Paper*. No. 544. Rome, FAO. 2011. 430p.

Question 32: What is your current employment status?

Question 33: Could you estimate for me your household's typical monthly income? That is, could you estimate the combined monthly income for everyone who works for pay in your household?

The purpose of questions 29, 30, 32 and 33 is to determine the economic status and/or vulnerability of the shore-based, non-commercial fishing public. Territorial resource managers speculate that residents of St. Croix are likely to be reliant on non-commercial fishing to support their household. Figures from the 2010 Decennial Census are not yet available. However, according to the US Census Bureau (2000), in 1999 the median household income for St. Croix was \$21,401 with approximately 30% of the population having a household income of less than \$10,000. The 2012 federal poverty guideline for a family of 4 was \$23,550¹⁶. According to the USVI Bureau of Economic Research, in 2012 the unemployment rate on St. Croix averaged approximately 14%¹⁷. In 2012, an oil refinery employing approximately 1,000 persons shut down its operations on the island. We hypothesize that fishers with high economic vulnerability will be more dependent on fishing for household food provisioning.

Compliance with Information Quality Guidelines

It is anticipated that 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 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 met 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.

No automated, electronic, mechanical, or other technological techniques or other forms of information technology will be used for this data collection. Surveys will be administered in-person. We do not anticipate using online questionnaires because of the limited access to internet in some parts of the US Caribbean. Responses will be recorded on paper forms.

4. Describe efforts to identify duplication.

This project was developed in close collaboration with local partners in the USVI, specifically, the USVI DPNR Division of Fish and Wildlife and the Division of Coastal Zone Management. This project was proposed specifically to meet a gap in data related to shore-based, non-commercial fishing in the USVI. To our knowledge, it does not duplicate research proposed or underway in the USVI by the territorial government agencies. This project complements a second data collection project proposed for St. Croix, and selected for funding by the NOAA Coral Program in FY2013. This complementary project, titled "A Creel Survey of the

¹⁶ U.S. Department of Health & Human Services, 2012. 2012 Poverty Guidelines: Federal Register Notice. Accessed 3/7/2013 from <http://aspe.hhs.gov/poverty/12fedreg.shtml>

¹⁷ USVI Bureau of Economic Research, 2012. Unemployment Rates – U.S. Virgin Islands. Accessed 3/7/2013 from <http://www.usviber.org/UN12.pdf> .

Recreational Non-commercial, Boatramp-Based, Hook and Line Fishery in St. Croix," is led by Dr. Jim Berkson, who is Director of the NMFS Recruiting, Training and Research (RTR) Program at the University of Florida in Gainesville, FL. The principal investigators of each project are coordinating the two projects so as to eliminate duplication of effort and data collection, as well as to maximize resources and the value of data collected.

This data collection is being coordinated with NMFS Science & Technology Division's Marine Recreational Information Program (MRIP). NMFS MRIP does not presently conduct surveys of recreational fishers in the USVI. However, MRIP sponsored a workshop in September 2012 to review and recommend research approaches for the collection of data on recreational fishing in the USVI. The final report, released March 2013, offered the development and execution of pilot projects to assess the efficacy of different research approaches.¹⁸ The purpose of this workshop was to assist the jurisdiction with development of a plan to collect data on non-commercial fisheries. MRIP does receive and fund proposals to conduct data collections on recreational fishing in the United States and Territories. It is possible that MRIP has received proposals for data collections in the USVI or US Caribbean since the development to the present project. Through coordination with MRIP, duplication of effort as a result of this granting program will be avoided. MRIP researchers have reviewed our survey instrument, as well as the sampling and statistical design.

During project development we contacted the Caribbean Fishery Management Council (CFMC) and the St. Croix Fishing Advisory Committee to inform them of our intention to collect socio-economic data and to inquire about other on-going or prospective data collections in the area. The CFMC alerted us to the project planned by Dr. Jim Berkson. As stated previously, we are coordinating closely this collection with Dr. Berkson and his team. We are in regular contact with representatives of both the St. Croix Fishing Advisory Committee as well as the CFMC.

During development of this project, we also contacted Dr. Juan Agar at the NMFS Southeast Fisheries Sciences Center to learn if he or others in his office were conducting or planning any data collections related to commercial or non-commercial fisheries in the USVI. In an effort to coordinate with our research team and Dr. Berkson's, Dr. Agar and his colleagues will begin a proposed collection on small-scale commercial fisheries in the U.S. Caribbean in Puerto Rico, and follow with the USVI part of the survey, in order to minimize the burden on the inhabitants of St. Croix during the coming fiscal year.

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

This collection will not involve small businesses or other small entities.

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

If the proposed information were not collected, then NOAA and the CFMC would not be able to adequately satisfy the legal requirements put forth by the CRCA, MSA, NEPA, and EO 12898. The latter three mandates require regional fishery management councils to establish conservation

¹⁸ Munoz, Breda, et al. 2013. Statistical Consultants' Report: Review of Virgin Islands Sampling Needs. Final Report to the NMFS Marine Recreational Information Program, March 2013.

and management measures, which take into account the importance of fishery resources to fishing communities in order to provide sustained fishing community participation and to minimize, to the extent possible, adverse economic impacts on such communities. Furthermore, all of these requirements mandate that CRCP and the regional fishery management councils establish conservation and management measures using the best available information.

The absence of up-to-date socio-economic information would limit the Agency's ability to estimate the economic impacts of management proposals and examine the performance of existing regulations. Hence, the merits of management proposals would continue to be debated without sound information. Current information would also minimize the likelihood of unforeseen impacts of existing regulations. In addition, the availability of current information would minimize the likelihood of unforeseen impacts of existing regulations and court challenges on the grounds of deficient analysis. Last, the collection of detailed socioeconomic data will allow fishery managers to make timely and better-informed decisions by having the best scientific information available.

Finally, if this data collection is not carried out, gaps in data relative to non-commercial fishing in the USVI will persist and territorial managers in the USVI will not have the information to understand the nature of the shore-based, non-commercial fishing public.

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

Data collection will be 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 was published on Monday, December 10, 2012 (77 FR 247 (73432-73433)) to solicit public comments. No comments were received.

This project was developed in close collaboration with local partners in the USVI, specifically, the USVI Division of Fish and Wildlife and the Division of Coastal Zone Management. Principal investigators developed this data collection in consultation with staff from both territorial agencies. Additionally, principal investigators made substantial efforts to consult with local experts on fishing in the USVI, as well experts on survey and fishery research external to the National Ocean Service, including research staff with NOAA National Marine Fisheries Service and RTI International. Below is a list of individuals who provided comments on some aspect of this data collection, including the survey and/or sampling designs:

Rob Andrews
Office of Science and Technology
NOAA NMFS

Jim Berkson, PhD
NMFS RTR Program at the University of
Florida
NMFS Southeast Fisheries Science Center
NOAA National Marine Fisheries Service

Jonathan E. Brown
St. Croix District Office Division of Fish
and Wildlife
Department of Planning and Natural
Resources
US Virgin Islands

William C. Coles, PhD
St. Croix District Office Division of Fish
and Wildlife
Department of Planning and Natural
Resources
US Virgin Islands

John Farchette III, CIG
St. Croix East End Marine Park
Coastal Zone Management
Department of Planning and Natural
Resources
US Virgin Islands

Marlon Hibbert
USVI Management Liaison
NOAA Coral Reef Conservation Program
NOAA National Ocean Service

Barbara Kojis, PhD
Private Consultant, St. Thomas, USVI

Sabrina J. Lovell
Economist
Office of Science and Technology
NOAA National Marine Fisheries Service

Breda Munoz, PhD
Social, Statistical & Environmental Sciences
RTI International

Lia A. Ortiz
USVI Fishery Liaison
NOAA Coral Reef Conservation Program
NOAA National Marine Fisheries Service

Roy A. Pemberton Jr.
Division of Fish and Wildlife
Department of Planning and Natural
Resources
US Virgin Islands

Jose E. Sanchez
St. Croix East End Marine Park
Division of Coastal Zone Management
Department of Planning and Natural
Resources
US Virgin Islands

Tom Sminkey, PhD
Fisheries Statistics Division
NOAA National Marine Fisheries Service

William Tobias
Private Consultant, St. Croix, USVI

Steve Turner, PhD
Fisheries Statistics Division
Southeast Fisheries Science Center
NOAA National Marine Fisheries Service

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

No payments or gifts will be given to respondents.

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

Foremost, it is important to note that no personally identifiable information will be collected in the course of this project. Nevertheless, as stated on the survey instruments, respondents will be advised that any information provided will be considered private and will be treated as confidential in accordance with [NOAA Administrative Order 216-100](#), Confidential Fisheries Statistics and section 402(b) of the MSA (16 U.S.C. 1881, et seq.). Respondents will be informed that data will be reported only in aggregate at the conclusion of the study. Whenever data are requested, the Agency will ensure that information identifying the pecuniary business activity of a particular individual is not identified. Only group averages or group totals will be presented in any reports, publications, or oral presentations of the study's results.

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.

No questions of a sensitive nature will be asked.

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

We estimate that the number of respondents will be 915 and the time per response will be about 10 minutes. Hence, we are requesting 153 burden hours. This estimate is based on the type of questions asked, length of the survey instrument, and MRFSS experience conducting similar surveys.

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 burden will be incurred by respondents beyond response time.

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

The annual cost to the Federal government for contract services, supplies, equipment, travel, etcetera, is approximately \$141,500 per year for FY2012 and FY2013. The total annual cost for Federal labor on the project is approximately \$148,000 for FY2012 and FY2013. Totals are \$289,500 per year.

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.

Data will be collected and analyzed by the research team. Findings will be presented in a variety of formats, including tables, graphs, and maps. Upon completion of the project, the research team will produce a NOAA Technical Memorandum report of findings that will be made

available to our collaborating territorial agencies and the public in PDF format. Additionally, we will engage the assistance of a science writer to develop non-technical briefing materials that can be used by managers for outreach to their own constituents and focal audiences. Project principal investigators will provide at least one 'end-of-project' presentation to interested managers and, additionally, one presentation to the non-commercial fishing community in St. Croix. The latter presentation is planned as a form of reciprocity to thank the community for participating in the study and to proactively inform them of study findings. Finally, research findings may be presented at professional conferences and will be published in peer reviewed social science or fisheries journals.

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.