St. Thomas and St. John Fishery Management Plan: Regulatory Flexibility Act Analysis

1. Introduction

The purpose of the Regulatory Flexibility Act (RFA), as amended by the Small Business Regulatory Enforcement Fairness Act, is to fit regulatory requirements to the scale of the businesses, organizations, and governmental jurisdictions subject to the regulation. To achieve this principle, agencies are required to solicit and consider flexible regulatory proposals and to explain the rationale for their actions to assure that small entities have been given the opportunity to participate in the rulemaking process. The RFA does not contain any decision criteria; instead, the purpose of the RFA is to inform the agency, as well as the public, of the expected economic impacts of the alternatives contained in the fishery management plan (FMP) or amendment (including framework management measures and other regulatory actions) and to ensure that the agency considers alternatives that minimize the expected impacts while meeting the goals and objectives of the FMP and applicable statutes.

With certain exceptions, the RFA requires agencies to conduct a formal regulatory flexibility analysis for each proposed rule. The regulatory flexibility analysis is designed to assess the impacts various regulatory alternatives would have on small entities, including small businesses, and to determine ways to minimize those impacts.1 The following regulatory flexibility analysis was conducted to assess the direct compliance costs and benefits of the proposed rule on small entities, determine if the proposed rule would have a significant economic impact on a substantial number of small entities or not, and explore regulatory alternatives to reduce significant economic impact on a substantial number of such entities, if any.2 Any methods that small businesses may engage in to reduce the adverse impacts of direct compliance costs or enhance the beneficial impacts of direct compliance benefits are discussed at the end of Section 5.

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1 The RFA requires an agency to perform a regulatory flexibility analysis of small entity impacts only when a rule directly regulates small entities. 5 U.S.C. 605(b), 604(b)(3). Under the RFA, agencies evaluate the direct compliance costs and benefits of the proposed rule on the regulated small entities.

2 Direct compliance costs of an action include, but are not limited to, losses of revenues due to the legal inability of small businesses to continue all or part of their operations, such as small commercial fishing businesses having to cease fishing for and landings of a particular stock/stock complex because the fishing season for that stock/stock complex has closed for the remainder of the fishing year. Direct compliance benefits include, but are not limited to, increases in revenues due to the legal ability of small businesses to expand all or part of their operations, such as small fishing businesses increasing fishing for and landings of a particular stock/stock complex because the annual catch limit for that stock/stock complex has been increased.
2. Statement of the need for, objective of, and legal basis for the proposed rule

The Caribbean Fishery Management Council (Council) has managed federal fisheries in the U.S. Caribbean Exclusive Economic Zone (EEZ) under the following four U.S. Caribbean-wide FMPs for decades: the FMP for the Reef Fish Fishery of Puerto Rico and the U.S. Virgin Islands (USVI) (Reef Fish FMP), the FMP for the Spiny Lobster Fishery of Puerto Rico and the USVI (Spiny Lobster FMP), the FMP for the Queen Conch Resources of Puerto Rico and the USVI (Queen Conch FMP), and the FMP for the Corals and Reef Associated Plants and Invertebrates of Puerto Rico and the USVI (Coral FMP). fishermen, fishing community representatives, and local governments of Puerto Rico and the USVI have commented that the Caribbean-wide approaches to federal fisheries management in the EEZ do not adequately consider the natural, economic and social environmental differences among Puerto Rico and the island areas of the USVI, and they have requested an alternative island-based approach that better conserves the unique attributes of the fishery resources and better serves the communities that are dependent on those resources in Puerto Rico and the island areas of USVI. The proposed, “Comprehensive Fishery Management Plan for the St. Thomas/St. John Exclusive Economic Zone” (St. Thomas/St. John FMP), is an island-based approach to federal fisheries management in the EEZ off St. Thomas/St. John, USVI (St. Thomas/St. John EEZ) that responds to those comments and requests by taking better account of St. Thomas/St. John’s unique natural, economic and social environments.

Federal fishery management is conducted under the authority of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act; 16 U.S.C. 1801 et seq.). The Magnuson-Stevens Act claims sovereign rights and exclusive fishery management authority over most fishery resources within the EEZ, an area extending from the seaward boundary of each coastal state to 200 nm from shore, as well as authority over anadromous species that spawn in fresh or estuarine waters of the U.S. and migrate into ocean waters and continental shelf resources that occur beyond the EEZ. Responsibility for federal fishery management decision-making in the St. Thomas/St. John EEZ is divided between the U.S. Secretary of Commerce and the Council, and the Council is responsible for preparing, monitoring, and revising management plans for fisheries needing management within their jurisdiction.

3. Identification of federal rules which may duplicate, overlap or conflict with the proposed rule

No federal rules have been identified that duplicate, overlap or conflict with the proposed rule.
4. Description and estimate of the number of small entities to which the proposed action would apply

The rule concerns recreational and commercial fishing in the St. Thomas/St. John EEZ. Anglers (persons who engage in recreational fishing) are not considered small entities as that term is defined in 5 U.S.C. 601(6), whether fishing from for-hire fishing, private or leased vessels. Therefore, estimates of the number of anglers and any impacts on them are not provided here.3

Businesses that operate in the commercial fishing industry and particularly, those that operate commercial fishing vessels that harvest marine resources in the St. Thomas/St. John EEZ would be directly affected. The most recent Census of Licensed Fishers of the U.S. Virgin Islands, 2016 (Kojis et al. 2017) reported 119 licensed commercial fishermen in St. Thomas/St. John. Not all licensed fishermen are actively fishing in any given year. In 2016, 65 fishermen submitted commercial catch reports, which includes fishing activities in both federal and territorial waters. Kojis et al. (2017) found that approximately 47% of active licensed commercial fishermen fished in the St. Thomas/St. John EEZ, which would result in 31 commercial fishermen fishing in federal waters in 2016 (65 x 0.47 = 31 fishermen).

This analysis assumes that each of these 31 commercial fishermen represent a unique commercial fishing business. Consequently, 31 commercial fishing business would be directly affected by the proposed rule.

A business in the commercial fishing industry (NAICS code 11411) is a small business if it is independently owned and operated, is not dominant in its field of operation (including its affiliates) and its combined annual receipts are no more than $11 million for all of its affiliated operations worldwide. Dockside revenue from all USVI landings have been less than $11 million, and total revenue from all landings by all commercial fishing businesses in St. Thomas/St. John is substantially less than that. In 2016, for example, total revenue from all landings in St. Thomas/St. John, whether from territorial or federal waters, was $2,883,200 (National Marine Fisheries Service [NMFS] Southeast Fisheries Science Center [SEFSC] logbook landings), which when adjusted for inflation would be $3,080,710 at January 2020 prices (Bureau of Labor Statistics [BLS] Consumer Price Index [CPI] Inflation Calculator). Therefore, the average commercial fishing business has an annual revenue of $47,396 (January 2020 prices) ($3,080,710/65 commercial fishing businesses). Therefore, all of the 65 active commercial fishing businesses in St. Thomas/St. John, which includes the 31 small businesses directly affected by the proposed rule, are small.

3 Under the RFA, “small entities” include small businesses, small governmental jurisdictions, and small (non-profit) organizations. Persons are not small entities under the RFA.
It is important to note that most of these small businesses not only catch fish, but they also construct and repair their gear, repair their boats, and market their fish. In any given week, the average active licensed fisherman in St. Thomas/St. John spends 17.5 hours fishing, 3.4 hours fixing the boat, 3.7 hours fixing gear, 8.7 hours marketing the catch, and 2.5 hours preparing for fishing (Kojis et al 2017). That is a total of 35.8 (standard deviation of ± 22.0) hours per week, and for each hour of fishing, the average active licensed fisherman spends approximately one hour in those other fishing-related (non-fishing) activities. The data from Kojis et al. presented in this section pertains to all fishing off St. Thomas/St. John, whether in federal or territorial waters, unless otherwise noted. This analysis assumes the results apply equally to fishing in federal waters.

Some St. Thomas/St. John small businesses operate year-round, while others operate seasonally. In 2016, for example, approximately 89% of licensed fishermen fished year-round, while the remaining fished seasonally (Kojis et al. 2017). While approximately 28% of fishermen surveyed derived all of their income from fishing, approximately 46% who sold their catch derived up to 50% of their income from fishing (Kojis et al. 2017). In St. Thomas/St. John, 45% of fishermen engage in commercial fishing to supplement their household income and many have full- and part-time wage jobs (Kojis et al. 2017).

In 2016, the average fishing vessel used by the small commercial fishing businesses in St. Thomas/St. John was 24.6 feet long and the majority had a single outboard motor (Kojis et al. 2017). The most popularly installed fishing equipment on the boat was a winch. A winch is used by small businesses that fish with traps, and 15.8% of the small businesses own lobster traps (plastic and wire) that are used in the St. Thomas/St. John EEZ and 20.5% own fish traps that are used in the St. Thomas/St. John EEZ. The most popular gear is yo-yo (handline) with 39.0% of small businesses owning and using that gear in the EEZ; the second most popular is rod and reel with 28.0% owning and using the gear in the EEZ (Figure 4.1). Note that although skin and SCUBA diving do not rank last, SCUBA is used by only a few small businesses because of the depth of most of the fishing grounds, and skin diving is used primarily for subsistence fishing for conch and lobster.

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4 Pulling traps up by hand or even with a pulley system is strenuous labor. In 2016, the average age of a licensed commercial fisherman was 55 years and the average of one who was actively fishing was 52 (Kojis et al. 2017).
5 This analysis uses the percentages of fishermen who responded to gear-related questions and reported that they own the gear and use it in the EEZ in the 2016 Census. Hence, it assumes those percentages would apply equally to all small businesses.
6 The most hazardous fishing method/gear is fishing with SCUBA for fish, conch and lobster (Quinn and Kojis 2012). However, according to Quinn and Kojis (2012), there were no fatalities or serious injuries related to St. Thomas/St. John SCUBA divers as of 2011, and no more recent information has been discovered to indicate suggests that has changed.
Figure 4.1. Percentage of gear owned by licensed fishermen and used in St. Thomas/St. John EEZ (among those who responded to gear questions). Note: Gear types not listed in the figure were not reported as being used in federal waters.

The average small business that owns plastic lobster traps has 230 of them and the average soak is 13.6 days, while the average small business that owns wire lobster traps has 74 of them and the average soak is 10.6 days (Kojis et al. 2017). The average small business that owns fish traps has 106 of them and the average soak is 7 days. The average small business that owns yo-yo hook-and-line gear has 10 of them, but on average uses only 3 of them per trip and fishing with them for 6.2 hours per trip. The average small business that owns rod-and-reel hook-and-line gear has 7 of them, but uses only 3 per trip for 5.1 hours per trip (Kojis et al. 2017). The ownership of more yo-yo and rod-and-reel hook-and-line gear than small businesses use per trip indicates the possibility that they could have the capacity to use more gear during a trip; however, using more gear is limited by the capacity of the boat; availability of bait; the lengths of time that a small business can be fishing, preparing for a trip, repairing boat and gear, and selling their catch; and other factors, such as number and availability of helpers. The high price of gear in the USVI discourages small businesses from acquiring more.  

The ability of the small businesses to increase fishing effort and their landings is also limited by the number and size of coolers that they can have on board and the amount of landings that they can sell. In St. Thomas/St. John, the most popular method of selling their landings is off the back of a truck. Approximately 43% of small businesses sell their catch along a road from the back of their trucks (Kojis et al. 2017). A private customer, who is usually a friend, family member, neighbor, coworker or acquaintance of the small business, is the second most popular (41.5%), followed by a restaurant (39.0%), government market (36.6%), and other locations.

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7 The cost of living in the USVI is high. St. Thomas/St. John small businesses are challenged by the high prices of fishing gear, e.g., rope and wire for trap construction, and boat/engine maintenance and repair, even when they make their own gear and do their own repairs. While the price of gas is lower than in the past, it is considerably higher than in the mainland US.

8 Iced/frozen fish are kept in coolers and fresh/thawing fish are displayed on ice on plastic sheets in the back of the truck.
Approximately 93% of small businesses target reef fish and 44% target spiny lobster (Kojis et al. 2017). Those percentages are assumed to currently apply and are used in the following analysis. Note that the reef fish category that small businesses target includes a wide variety of species in a variety of families including the grouper, snapper, triggerfish, grunt, parrotfish, wrasse, surgeonfish, squirrelfish, etc., families. The spiny lobster category that small businesses target is largely comprised of *Panulirus argus* (spiny lobster), although it also may include spotted lobsters and shovelnose or slipper lobsters. Not all of these families or species are currently managed under the Reef Fish or Spiny Lobster FMPs or would be managed under the proposed St. Thomas/St. John FMP. Small businesses target the species that they know they can sell at prices they expect.

5. Description and economic impacts of the compliance requirements of the proposed rule

**Action 1, Preferred Alternative 2,** would repeal the U.S. Caribbean-wide Reef Fish FMP, Spiny Lobster FMP, Queen Conch FMP, and Coral FMP as they apply to the St. Thomas/St. John EEZ and replace them with the St. Thomas/St. John FMP to manage fishery resources in the St. Thomas/St. John EEZ. Presently the combined Reef Fish, Spiny Lobster, Queen Conch, and Coral FMPs include 81 species of reef fish, 58 species of aquarium trade fish, spiny lobster, queen conch, 94 species or genera of corals, and 63 species or genera of aquarium trade invertebrates. Under this action, the St. Thomas/St. John FMP would incorporate all of the fishery management measures presently included in the Spiny Lobster, Reef Fish, Queen Conch, and Coral FMPs that are applicable to the St. Thomas/St. John EEZ. **Action 1, Preferred Alternative 2,** which creates the St. Thomas/St. John FMP, would not change any existing regulations and would have no direct compliance cost or benefit.

**Action 2, Preferred Alternative 2,** has five criteria that are used to select the list of species included in the St. Thomas/St. John FMP created by Action 1. From a list of species for which landings data are available, the Council applied a set of criteria to determine whether to manage the species. **First,** it would include those species that are presently classified as overfished, have harvest prohibitions or have associated seasonal closures or size limits (Criterion A). **Second,** excluding those included by Criterion A, it would exclude those species that have been determined to not or infrequently occur in the St. Thomas/St. John EEZ (Criterion B). **Third,** excluding those included by Criterion A or excluded by Criterion B, it would include species that are biologically vulnerable, constrained to a specific habitat that renders them particularly

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9 The U.S. Caribbean-wide FMPs defined a St. Thomas/St. John management area (50 CFR Appendix E to Part 622, Table 3), and that same area is identified as the St. Thomas/St. John EEZ in the St. Thomas/St. John FMP.

10 This Criterion retains all corals in the Coral FMP. However, the Council agreed to also add any new species of coral found to occur in the St. Thomas/St. John EEZ, so this Criterion would bring all species of coral under management.
vulnerable, or have an essential ecological value (Criterion C). Fourth, excluding those included by Criteria A and C or excluded by Criterion B, it would include species that are economically important to the national or St. Thomas/St. John economy and those representing an important component of bycatch (Criterion D). Fifth, from the remaining species, it would include any other species that the Council determines are in need of conservation and management.

After the application of the five criteria of Action 2, Preferred Alternative 2, the St. Thomas/St. John FMP would include a total of two species of shellfish (spiny lobster and queen conch), 47 species of finfish, and all species of sea cucumbers, sea urchins, and corals that are found in the St. Thomas/St. John EEZ. Stocks new to management would include yellowmouth grouper (*Mycteroperca interstitialis*), dolphin (*Coryphaena hippurus*), wahoo (*Acanthocybium solandri*), and any species of sea cucumber, sea urchin and coral found in the St. Thomas/St. John EEZ that are not managed under the Coral FMP.

Neither the inclusion of species currently managed under the Reef Fish, Spiny Lobster, Queen Conch and Coral FMPs nor the inclusion of species new to federal management would have a direct impact on small businesses; however, the addition of species not currently managed under those FMPs would prompt additional actions that could directly affect small commercial fishing businesses, such as establishing annual catch limits (ACL) (Action 4) and accountability measures (AM) (Action 5) to ensure compliance with the ACLs. Similarly, any modification to the ACLs (Action 4) and AMs (Action 5) for stocks currently managed could have direct impacts on small businesses that target these stocks.

Federal regulations have very little to no impact on small businesses that harvest species that infrequently or do not occur in federal waters. Therefore, excluding some species currently managed under the Reef Fish and Coral FMPs that are not found or infrequently occur in the St. Thomas/St. John EEZ (Criterion B) would have very little to no direct compliance benefits. All species removed from federal management under the St. Thomas/St. John FMP met this criterion except for longspine squirrelfish. During their 153rd regular meeting in August 2015, the Council determined that longspine squirrelfish did not require conservation and management because it was not targeted, was not highly susceptible to fishing pressure, and was not at risk of overfishing. Removing a non-targeted species from the list of stocks to be managed would have very little to no direct compliance benefits.

**Action 3, Preferred Alternative 3,** would establish stocks/stock complexes for those species selected for management under Action 2, Preferred Alternative 2. Compared to the baseline stocks/stock complexes (those included in the Reef Fish, Spiny Lobster, Queen Conch and Coral FMPs), Preferred Alternative 3 would result in some of the same stock/stock complexes, with

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11 The Spiny Lobster and the Queen Conch FMPs only managed the respective single species, which were both included for management under Criterion A.
the same species composition, as those under the Caribbean-wide FMPs (e.g., Snapper 4 of the
St. Thomas/St. John FMP is the same as Snapper Unit 4 of the Reef Fish FMP), but would result
in a different species composition for others (e.g., Snapper 1 of the St. Thomas/St. John FMP is
different than Snapper Unit 1 of the Reef Fish FMP). Where applicable, Preferred Alternative
3 also would create new stock/stock complexes for species new to management (e.g., dolphin).
It would have no direct impact on small businesses; however, it would prompt additional actions
that change existing and add new regulations, such as the establishment of new ACLs and AMs
to ensure compliance with those ACLs.

**Action 3, Preferred Sub-alternative 4a,** would assign and **Preferred Sub-alternative 4b**
would not assign an indicator stock to a stock complex based on scientific analyses. An
indicator stock is one that can be used to help manage and evaluate more poorly known stocks
that are in a stock complex. Under **Preferred Sub-alternative 4a,** for stock complexes for
which harvest is allowed and for which one or more indicator stocks is or are assigned, landings
for the indicator stock(s) would be monitored and stocks in the stock complex would be subject
to an AM as a group based on the ACL established for the stock complex based on information
about the indicator stock(s). Under **Sub-alternative 4b,** for stock complexes for which harvest
is allowed, stocks in the stock complex would be subject to an AM as a group based on the ACL
for the stock complex established based on information about all of the stocks in the stock
complex.\(^{12}\) There would be no direct impact on small businesses; however, **Action 3, Preferred
Sub-alternatives 4a** and **4b** would have an indirect impact by affecting how ACLs for each
stock complex are established (Action 4) and how landings of a stock complex are evaluated
relative to its ACL, which affects if landings of the stock complex triggers its AM or not (Action
5).

**Action 4** would specify the status determination criteria and management reference points, such
as the acceptable biological catch (ABC) and ACL, for each of the proposed stocks and stock
complexes. **Action 5** would specify the AMs and triggers of the AMs for each stock/stock
complex for which management is continued, and establish AMs and AM triggers for stock/stock
complexes new to management. An AM is an action taken to prevent landings from exceeding
the ACL, and if triggered, it can mitigate or correct an overage of landings.

**Direct compliance costs and benefits of Actions 4 and 5: Stocks/stock complexes for which
proposed management is comparable to current management**

Four stocks (Queen Conch, Spiny Lobster, Grouper 1 [Nassau grouper], and Grouper 2 [goliath
grouper]) and one stock complex (Parrotfish 1) resulting from **Action 3, Preferred Alternative
3** would have the same species composition as stocks/stock complexes under current regulation
(in the U.S. Caribbean-wide FMPs). In addition, these stocks and this stock complex are

\(^{12}\) The following eight stock complexes would have one or more indicator stocks: Snapper 1, Snapper 3, Grouper 3,
Parrotfish 2, Grunts 1, Porgies, Surgeonfish, and Angelfish.
managed with ACLs under the current Caribbean-wide FMPs and would continue to be managed as such, without an indicator stock, under the St. Thomas/St. John FMP. With no change in their respective ACLs from Action 4, there would be no added impact to management of those stocks/stock complexes.

Only commercial landings data are collected for Council-managed stocks/stock complexes in the USVI, therefore the following ACLs and landings relative to those ACLs are based on commercial landings data only. Throughout this RFA, management reference points (ACLs and ACTs) and landings data are reported in pounds whole weight (lbs).

For Queen Conch, Spiny Lobster, Grouper 1, and Grouper 2, Action 4, Preferred Sub-alternative 2e would set the ACLs at 95% of their respective ABCs, and for the Parrotfish 1 stock complex Preferred Sub-alternative 2g would set the ACL at 85% of the ABC (Table 5.1). The proposed ABCs for Queen Conch, Grouper 1, Grouper 2, and Parrotfish 1 were set equal to zero by the SSC, thus the proposed ACLs for those stocks and stock complex would be zero. Under the 2010 Caribbean ACL Amendment, the ACLs for Queen Conch, Nassau grouper (Grouper 1), goliath grouper (Grouper 2), and midnight, blue, and rainbow parrotfish (Parrotfish 1) in St. Thomas/St. John were also set equal to zero.

Under Action 5, Preferred Alternative 5, the harvest prohibition for Queen Conch, Grouper 1, Grouper 2, and Parrotfish 1 would serve as the AM consistent with the approach under current management. Therefore, the ACLs and AMs that would be specified by Actions 4 and 5, respectively, for Queen Conch, Grouper 1, Grouper 2, and Parrotfish 1 are consistent with ACLs, AMs and prohibitions established under the Reef Fish and Queen Conch FMPs and would have no direct compliance costs or benefits.

Under Action 5, Preferred Alternative 2, the AM and trigger for the AM for Spiny Lobster is the same as the AM and AM trigger under current regulation (i.e., Spiny Lobster FMP), with the exception of the specification of years of landings data used to evaluate whether the AM is triggered. Under both the current and proposed AM for this stock, the AM would be triggered if landings exceed the ACL, unless NMFS’ SEFSC determines the overage occurred because data collection or monitoring improved rather than because catch increased.

Under current regulation (Spiny Lobster FMP), a three-year moving average of baseline landings is used to evaluate spiny lobster landings relative to their respective ACLs. Under Action 5, Preferred Sub-alternative 2d, the estimate of landings compared with the ACL for Spiny Lobster would be a single year of applicable landings, using landings from 2018; then a single year of applicable landings, using landings from 2019; then a two-year average of applicable landings from 2019 and the subsequent year (2019-2020); then a three-year average of applicable landings from those two years and the subsequent year (2019-2021); and thereafter a progressive...
running three-year average (2020-2022, etc.). The Regional Administrator (RA) in consultation with the Council could deviate from the specific time sequences based on data availability. Under both the current regulation and the proposed FMP, once triggered, NMFS would reduce the length of the fishing season for the applicable stock/stock complex the year following the overage determination by the amount necessary to ensure (to the greatest practicable extent) landings do not again exceed the ACL in the year of application.

For the purpose of this analysis, to determine whether there would be an AM-based fishing season reduction under the proposed action, the average landings of spiny lobster from 2014 through 2016 is used to compare landings to the current and proposed ACLs (Table 5.1).

**Table 5.1.** Current and proposed ACLs and resultant AMs triggered for spiny lobster in St. Thomas/St. John.

<table>
<thead>
<tr>
<th>Stock</th>
<th>Current ACL (lbs)</th>
<th>Proposed ACL (lbs)</th>
<th>Average Landings (2014-2016)</th>
<th>AM Triggered under Current ACL (overage)</th>
<th>AM Triggered under Proposed ACL (overage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spiny lobster</td>
<td>104,199</td>
<td>209,210</td>
<td>108,040</td>
<td>Yes (3,841)</td>
<td>No (0)</td>
</tr>
</tbody>
</table>

1 No AM was applied in 2018 because fishing effort was considered to be substantially reduced due to impacts of the 2017 hurricanes on fishing activity in the region, therefore a reduction to the 2018 fishing season was not necessary to avoid an ACL overage.

Under current management, the 2014-2016 average landings of spiny lobster in St. Thomas/St. John exceeded the ACL by 3,841 lbs, triggering an AM. However, fishing activities in the U.S. Caribbean were severely curtailed in 2017 due to impacts of Hurricanes Irma and Maria, the effects of which continued into the 2018 fishing season. Thus, when evaluating whether to implement an AM in the 2018 fishing season based on these 2014-2016 landings, the RA determined that an AM-based reduction to the spiny lobster fishing season in St. Thomas/St. John was not necessary to prevent a future overage. Under proposed management, the 2014-2016 average landings of spiny lobster in St. Thomas/St. John would not exceed the proposed ACL. Therefore, at those landings levels an AM would not be triggered and the length of the spiny lobster fishing season in St. Thomas/St. John would not be reduced.

Since the length of the spiny lobster fishing season was not reduced under current management and would also not be reduced under the proposed management, there would be no change in the effect of fishery management and no direct impact to small businesses that harvest spiny lobster in St. Thomas/St. John. However, in the future, it is possible that spiny lobster landings in St. Thomas/St. John could recover to the average level of landings during 2014-2016, and an AM could become necessary under current management. The impact of the proposed increase in the ACL for spiny lobster under the St. Thomas/St. John FMP is dependent on the extent to which landings recover from the 2017 hurricane season and the extent to which AMs are needed to
prevent future overages of the current and proposed ACLs. Commercial landings of Spiny Lobster in 2018 are still depressed following the 2017 hurricane season (NMFS unpublished data), and thus AMs have not been applied.

**Direct compliance costs and benefits of Actions 4 and 5: Stocks/stock complexes new to management**

Based on proposed **Action 2**, three finfish species would be new to management under the St. Thomas/St. John FMP (yellowmouth grouper, dolphin, wahoo), along with multiple sea urchins, sea cucumbers, and corals that are not managed under the Coral FMP. Following **Action 3**, dolphin and wahoo would each be managed as individual stocks; yellowmouth grouper would be managed in the Grouper 5 stock complex with misty and yellowedge grouper; all sea urchin species and sea cucumber species in St. Thomas/St. John federal waters would be managed in new Sea Urchin stock complex and Sea Cucumber stock complex; and all coral species in St. Thomas/St. John federal waters would be managed in the Corals stock complex.

As unmanaged species, there are currently no regulations in place under the Reef Fish FMP or the Coral FMP that directly limit fishing for and landings of yellowmouth grouper, dolphin, and wahoo, and the species of sea urchins, sea cucumbers, and corals new to management.

**Action 4, Preferred Sub-alternative 2e**, would set the ACLs at 95% of their respective ABCs for the stocks/stock complexes new to federal management (Table 5.2). Because yellowmouth grouper is proposed to be managed in the Grouper 5 stock complex with misty and yellowedge grouper, the proposed St. Thomas/St. John FMP would not establish an individual ACL for yellowmouth grouper. Instead, the proposed FMP under **Action 4, Preferred Sub-alternative 2e** would establish an ACL for the Grouper 5 stock complex. The ABC recommendations for the Sea Urchins, Sea Cucumbers, and Corals stock complexes were set equal to zero by the SSC, thus the ACLs for those stock complexes would be zero.

**Action 5, Preferred Alternative 2 and Preferred Sub-alternative 2d** would set the AM and AM trigger for yellowmouth grouper. For yellowmouth grouper, the AM would be triggered if landings of all stocks in the Grouper 5 stock complex (misty, yellowedge, yellowmouth grouper) exceed the Grouper 5 ACL, unless NMFS’ SEFSC determines the overage occurred because data collection or monitoring improved rather than because catch increased. Once triggered, NMFS would reduce the length of the fishing season for the Grouper 5 stock complex the year following the overage determination by the amount necessary to ensure (to the greatest practicable extent)
landings do not again exceed the ACL in the year of application. For yellowmouth grouper (i.e., Grouper 5), Action 5, Preferred Sub-alternative 2d would use the same years of landings data listed previously for spiny lobster and in Action 5, Preferred Sub-alternative 3g listed below for the pelagic stocks.

Action 5, Preferred Sub-alternative 3a, would establish a commercial annual catch target (ACT) for the two pelagic stocks (dolphin and wahoo) at 90% of their respective ACLs (Table 5.2). The ACTs under Preferred Alternative 3 would serve as the AM trigger. If landings exceed the ACT, the Council in consultation with the SEFSC would determine if corrective action is necessary. The potential corrective action is not prescribed and would be developed when the AM was implemented. Action 5, Preferred Sub-alternative 3g, would estimate landings relative to the ACT using a single year of landings data from 2018, followed by a second single year of landings data from 2019, followed by a 2-year average of 2019-2020 landings data, then a progressive running 3-year average of landings data beginning with 2019-2021. However, the RA in consultation with the Council could deviate from the specific time sequences based on data availability.

Under Action 5, Preferred Alternative 5, the harvest prohibition for the Sea Urchins, Sea Cucumbers, and Corals stock complexes would serve as the AM.

Table 5.2. Current and proposed ACLs and ACTs (where applicable) and resultant AMs triggered based on average landings reported for stocks/stock complexes new to management in St. Thomas/St. John.

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<tbody>
<tr>
<td>Dolphin</td>
<td>N/A</td>
<td>9,788</td>
<td>8,800</td>
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<td>N/A</td>
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$^1$Based on the Grouper 5 aggregate (misty, yellowedge and yellowmouth grouper).

Under Action 5, Preferred Alternative 5, the harvest prohibition for the Sea Urchins, Sea Cucumbers, and Corals stock complexes would serve as the AM.
For the three finfish new to federal management (dolphin, wahoo, and yellowmouth grouper), landings by small businesses that target these species would be accountable to ACLs or ACTs under the St. Thomas/St. John FMP where there are no landings limits in place under current management. As seen in Table 5.2, when using the 3-year average landings during the 2014-2016 period, no AMs would be triggered, and thus applied, for yellowmouth grouper (Grouper 5) or wahoo. Thus, the proposed management scheme would not alter fishing for yellowmouth grouper or wahoo and there would be no direct compliance cost or benefit to small businesses that harvest yellowmouth grouper or wahoo as a result of Actions 4 and 5. The future impact on small businesses of managing these species depends on the extent to which landings increase and future AMs are triggered and applied.

However, using the 3-year average landings during the 2014-2016 period, the AM for Dolphin would be triggered, as landings would exceed the ACT. For this pelagic species new to management, once the AM is triggered, the Council in consultation with the SEFSC would determine what corrective action, if any, to take. If the Council determined a corrective action was necessary to account for the overage of the ACT, that corrective action could have economic consequences for small businesses that harvest Dolphin, depending on the action taken. Any future economic impact stems from the AM when it is applied and that impact is not known at this time.

For species new to federal management in the Sea Urchins, Sea Cucumbers, and Corals stock complexes, harvest would be prohibited, whereas currently harvest of these species is not federally managed. As seen in Table 5.2, no landings were reported for species in these three stock complexes. Thus, no AMs for the species new to management would be triggered and applied under the proposed management. If there were landings, and AMs were triggered and applied, this could have economic consequences that are not occurring under current management. However, no information has been uncovered to date to indicate there is or has been local demand for or commercial harvest of either sea urchins (or their roe) or sea cucumbers from the St. Thomas/St. John EEZ. Similarly, no information has been uncovered to date to indicate that there was or is commercial harvest of coral from the St. Thomas/St. John EEZ. Therefore, it is expected that Actions 4 and 5 would have no direct compliance cost or benefit for small businesses as a result of managing additional species of sea urchins, sea cucumbers, or corals.

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2 Species of sea urchins, sea cucumbers, and corals managed under the Coral FMP for which management would continue under the St. Thomas/St. John FMP are discussed in the next section. This section discusses only those species new to management. All species of sea urchins, sea cucumbers, and corals, whether currently managed or new to management, would be grouped together into one stock complex per family (i.e., Sea Urchins stock complex, Sea Cucumber stock complex, Corals stock complex).

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14 Global consumers of sea urchin and sea urchin roe prefer those found in colder waters, not the species present in the U.S. Caribbean and for which harvest would be prohibited under the St. Thomas/St. John FMP.
Direct compliance costs and benefits of Actions 4 and 5: Stocks/stock complexes for which proposed management is not directly comparable to current management

For the remaining stocks/stock complexes proposed for management under the St. Thomas/St. John FMP, comparing the effects of the proposed and current regulations is complicated by how management would change under the proposed regulations. Current management of reef fish species in St. Thomas/St. John is based on ACLs that were established at the family level (e.g., Snappers). For some of those species that would continue to be managed under the St. Thomas/St. John FMP (e.g., yellowtail snapper and black grouper), the proposed ACLs specified in Action 4 would not be specified at the family level (e.g., Snappers, Groupers, as under current management) but rather at multiple sub-levels (e.g., yellowtail snapper would be managed as a single stock under the Snapper 4 ACL; black grouper would be managed with three other groupers under the Grouper 4 ACL) under the proposed St. Thomas/St. John FMP, preventing a direct comparison of ACLs and AMs governing harvest of these species. Additionally, management under the St. Thomas/St. John FMP proposes to use indicator stocks to govern some of the reef fish families (e.g., Parrotfish 2, Angelfish, Surgeonfish, Porgies). For stock complexes where an indicator stock was selected, the proposed ACL for the stock complex specified under Action 4 would be based on and evaluated with respect to the indicator stock(s) only, rather than on all the stocks within the stock complex. Thus, ACLs and AMs applicable to those stock complexes would not be comparable even if the stock complex composition remained unchanged. Lastly, even where management would continue at the family level without an indicator stock (e.g., Triggerfish, Wrasses), following Action 2, some currently managed reef fish species would not be managed under the St. Thomas/St. John FMP, and so those family-level ACLs would not be comparable.

For the proposed Snappers (1-4), Groupers (3-5),15 Grunts (1-2), Triggerfish, Wrasses, Jacks, Porgies, Sea Urchins, Sea Cucumbers, and Corals stocks/stock complexes, Preferred Sub-alternative 2e would specify ACLs as 95% of their respective ABCs. For Parrotfish 216, Angelfish, and Surgeonfish stock complexes, Action 4, Preferred Sub-alternative 2g would specify ACLs as 85% of their respective ABCs. Table 5.3 below shows current management (e.g., ACLs) of reef fish species under the Reef Fish FMP and coral reef resources under the Coral FMP compared to proposed management under the St. Thomas/St. John FMP.

**Action 5, Preferred Alternative 2 and Preferred Sub-alternative 2d**, would establish an AM and AM trigger. For stock complexes managed with an indicator stock, landings of the indicator stock(s) would be monitored, and an AM would be triggered for all stocks in the stock complex if landings of the indicator stock(s) exceed the ACL. For stock complexes managed without an

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15 Grouper 1 (Nassau grouper) and Grouper 2 (goliath grouper) stocks were described in the previous section, as current and proposed management for those species would be the same (i.e., harvest is prohibited).

16 The Parrotfish 1 (midnight, blue, and rainbow parrotfish) stock complex was described in the previous section, as current and proposed management for these species would be the same (i.e., harvest is prohibited).
indicator stock, an AM would be triggered if the aggregate landings of stocks within the stock complex exceed the ACL. In either case, the AM would be applied to all stocks in the stock complex, unless NMFS’ SEFSC determines the overage occurred because data collection or monitoring improved rather than because catch increased. Once triggered, NMFS would reduce the length of the fishing season for the applicable stock/stock complex the year following the overage determination by the amount necessary to ensure (to the greatest practicable extent) landings do not again exceed the ACL in the year of application.

Under **Action 5, Preferred Sub-alternative 2d**, the estimate of landings compared with the ACL(s) for these stocks/stock complexes would be a single year of applicable landings, using landings from 2018; then a single year of applicable landings, using landings from 2019; then a two-year average of applicable landings from 2019 and the subsequent year (2019-2020); then a three-year average of applicable landings from those two years and the subsequent year (2019-2021); and thereafter a progressive running three-year average (2020-2022, etc.).

Where allowable, the following analysis will estimate costs and benefits of **Actions 4 and 5** for the stocks/stock complexes listed in Table 5.3. For the purpose of this analysis, to determine whether there would be an AM-based fishing season reduction triggered, the average landings from 2014 through 2016 are compared to the current and proposed ACLs (Table 5.3).
Table 5.3. Comparison of current management (species managed, species groupings, ACLs) under the Reef Fish and Coral FMPs to proposed management under the St. Thomas/St. John FMP. For stock complexes that would be managed with an indicator stock under the proposed St. Thomas/St. John FMP, the proposed indicator stock and the proposed ACLs and average landings are marked with an asterisk (*) to indicate that the values are based on indicator stock information. Shaded landings values exceeded the corresponding ACL for the managed stocks, and would trigger an AM. Note: this list does not reflect the entirety of species managed under the Reef Fish and Coral FMPs or the St. Thomas/St. John FMP. All other species proposed for management under the St. Thomas/St. John FMP are analyzed above.

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St. Thomas/St. John FMP/EA Regulatory Flexibility Analysis
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1 Along with misty and yellowedge grouper, the proposed Grouper 5 stock complex includes yellownmouth grouper, a species new to management.
2 Prior to 2011, most landings of Scups & Porgies were reported as pluma porgy. Following the changes to USVI reporting forms in 2011, landings were recorded as saucereye. Though pluma porgy and saucereye porgy are different species, it was assumed that fishers were landing the same species but reporting them under the two different names.
3 The Aquarium Trade ACL applies to all reef fish and coral resource species included in the management unit across the entire U.S. Caribbean EEZ.
**Snappers, Groupers, Grunts**

Under the Reef Fish FMP, Snappers, Groupers, and Grunts in St. Thomas/St. John are currently managed under an ACL set for each family of fish (i.e., s, Groupers). Under the proposed St. Thomas/St. John FMP, some snapper, grouper, and grunt species currently managed would be excluded, and one new grouper species would be included (yellowmouth grouper). For each family of fish, the stocks included for management would be split into a combination of two or more stocks/stock complexes. Each proposed stock/stock complex would be managed with an ACL. Indicator stocks were selected for two Snapper stock complexes (Snapper 1 and 3), one Grouper stock complex (Grouper 3), and one Grunts stock complex (Grunts 1). Thus, the ACLs for those stock complexes were specified based on landings of the indicator stock(s) only, rather than on landings of all stocks within the stock complex.

These management modifications prevent a direct comparison of the current ACL for each family and the proposed ACL for each proposed stock complex. Therefore, the analysis of potential direct costs and benefits to small businesses focuses on the species within these families and proposed stock complexes to determine whether an AM would be triggered and applied under current versus proposed management. The AM for the proposed stock/stock complex would work in the same manner under current and proposed management: comparing recent landings to the ACLs and if triggered, preventing overages through future fishing season reductions. In addition, where appropriate, the analysis considers whether the proposed ACL could allow for expansion of landings or could require its contraction, noting any potential direct impacts to small businesses.

Small businesses fishing for black, blackfin, silk, vermillion, queen, lane, mutton, and yellowtail snappers or white, bluestriped, and margate grunts (Table 5.3) would not be subject to an AM, which would reduce the length of the fishing season, under either the current or proposed management. This is because average landings (2014-2016) of these snapper and grunt species do not exceed either their respective current ACL or proposed ACL. Therefore, no direct costs or benefits would be expected for small businesses that harvest these snapper and grunt species. Note that Table 5.3 includes for comparative purposes the species (i.e., wenchman, cardinal, gray, dog, schoolmaster, and mahogany snappers and tomtate, French grunt, and porkfish) that would be excluded from the St. Thomas/St. John FMP and were discussed above in Action 2.

The proposed changes to the ACLs applicable to those fishing for black, blackfin, silk, vermillion (Snapper 1), queen (Snapper 2), lane, mutton (Snapper 3), and yellowtail snapper (Snapper 4), could potentially allow for additional commercial landings of these eight species,

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17 The direct impact of the addition of yellowmouth grouper to management was discussed earlier. See pages 12-13.

18 Average landings would be compared to the ACL and the AM would be triggered if the ACL is exceeded and the length of the following fishing season would be reduced by the amount necessary to prevent the ACL from being exceeded. No action would be taken if NMFS’ SEFSC determines the overage occurred because data collection or monitoring improved rather than because catch increased.
which could potentially benefit small business that target these species, though that benefit is not quantifiable. The combined total of the proposed ACLs for these eight snapper species for which management would be continued would be greater than the current Snappers ACL, which applies to 14 snapper species. These increases would allow for future increases in landings of these snappers in the St. Thomas/St. John fishery.

As shown in Table 5.3, the combined proposed ACLs for Grunts 1 (white and bluestriped) and Grunts 2 (margate) under the proposed St. Thomas/St. John FMP are less than the current ACL for the Grunts family (white, bluestriped, margate, tomtate, French grunt, and porkfish) that is based on landings of all six species. The AM for the Grunts family would not be triggered under current management, and average landings of Grunts 1 and 2 (2014-2016) are less than their proposed ACLs, which indicates that the AMs for Grunts 1 and Grunts 2 would not be triggered. There would be no direct impact on small businesses that target Grunts 1 and 2.

For small businesses that target groupers, under current management the 2014-2016 average landings for the managed grouper species (Table 5.3) would not exceed the current Grouper ACL and no AM would be triggered. Likewise, under proposed management, the 2014-2016 average landings for species in the Grouper 3 and Grouper 5 stock complexes do not exceed the proposed ACLs for those stock complexes, and no AM would be triggered. Therefore, no costs or benefits to small businesses that harvest the species in the proposed Grouper 3 and Grouper 5 stock complexes would be expected. However, average landings of red, black, tiger and yellowfin groupers (Grouper 4) during 2014-2016 would exceed the proposed Grouper 4 ACL specified for those stocks by 318 lbs, thereby triggering an AM. If NMFS determined the overage of the proposed ACL was due to increased catch rather than enhanced reporting, the AM would be applied. If the AM was applied, fishermen targeting these grouper species (proposed Grouper 4) would be directly affected by a reduction of the fishing season to ensure against a future overage of 318 lbs.

Black, red, tiger, and yellowfin groupers (Grouper 4 stock complex), like most grouper, are higher priced than many other species of reef fish. In 2016, the average price of these groupers was approximately $6 per pound, which would be $6.41 per pound in January 2020 (BLS CPI Inflation Calculator). Under Actions 4 and 5, a reduction of the Grouper 4 season to eliminate an overage of 318 lbs would reduce annual revenue by $2,038 (at January 2020 price). That would generate an average direct compliance cost of approximately $70 for the 29 small businesses operating in federal waters that target reef fish (93% of 31 small businesses; Kojis et al. 2017). That direct compliance cost represents about a tenth of a percentage (0.148%) of annual revenue for the average small commercial fishing businesses in St. Thomas/St. John. However, the actual magnitude of the direct compliance cost is dependent on the extent that landings recover from the 2017 hurricane season and the extent to which the proposed AM is needed to prevent a future ACL overage.
The St. Thomas/St. John fishery is multi-species in nature because commercial fishermen target a wide variety of species (Kojis et al. 2017). Therefore, small businesses could mitigate for that loss of revenue by substituting fishing effort for Grouper 4 to other species for which harvest is allowed, including other groupers or other reef fish species not subject to a fishing season reduction or those not federally managed and are of similar market value. That substitution of effort may or may not require an increase in fishing time and/or increase in amount of gear to offset a loss of revenue from Grouper 4 landings. As explained in Section 4, small businesses in St. Thomas/St. John are challenged by high prices of gear and fuel, the small size of their fishing vessels, and other factors that affect their abilities to increase fishing time and the amount of gear they use.

For red hind and coney grouper (Grouper 3 stock complex), the proposed Grouper 3 ACL, which is based on red hind as an indicator stock, would be greater than the Groupers ACL under current management, which was established for 10 grouper species that includes red hind and coney grouper. This change in management could allow for additional landings of red hind and coney grouper, which could potentially benefit small businesses that target these species. The impact of the increase in the ACL is dependent on the extent that landings may increase in the future and the extent to which AMs are needed to prevent future overages.

Costs and benefits to small businesses that harvest the grouper species in Table 5.3 that would not be managed under the St. Thomas/St. John FMP (i.e., graysby and rock hind) were discussed above in Action 2.

**Parrotfish, Angelfish, Surgeonfish, Porgies**

The composition and organization of parrotfish, angelfish, surgeonfish, and porgies stocks are the same under both the Reef Fish FMP and the proposed St. Thomas/St. John FMP. However, under the proposed St. Thomas/St. John FMP, one or more indicator stocks were selected for each of the proposed stock complexes under Action 3, which changes how the ACLs are established and how the AMs would be triggered under the St. Thomas/St. John FMP. Establishing an ACL based on indicator stocks would prevent a direct comparison of the current and proposed ACLs for these fish families. Therefore, the analysis of potential costs and benefits looks at whether an AM would be triggered and applied under current versus proposed management. As described above, the AM for the proposed stock complexes would work in the same manner under current and proposed management.\(^20\)

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19 Management of the prohibited parrotfish species (blue, midnight, and rainbow parrotfish), which would continue to be prohibited under the St. Thomas/St. John FMP, was discussed above. The species for which harvest is allowed under current management, under the Parrotfish ACL, would be grouped together in the Parrotfish 2 stock complex under the St. Thomas/St. John FMP.

20 Average landings would be compared to the ACL and AM would be triggered if the ACL is exceeded and the length of the following fishing season would be reduced by the amount necessary to prevent the ACL from being
Small businesses fishing for princess, queen, redfin, redtail, stoplight, redband, and striped parrotfish (proposed Parrotfish 2), blue tang, ocean surgeonfish, doctorfish (proposed Surgeonfish), jolthead porgy, sea bream, sheepshead porgy, and saucereye porgy (proposed Porgy) (Table 5.3) would not be subject to an AM under either the current or proposed management. This is because average landings (2014-2016) of these species do not exceed the Parrotfish, Surgeonfish, and Scups & Porgies ACLs under current management, and because average landings (2014-2016) of the indicator stocks (redtail and stoplight parrotfish, doctorfish, and saucereye porgy) do not exceed the Parrotfish 2, Surgeonfish, and Porgies ACLs under proposed management. Therefore, no direct costs or benefits to small businesses that harvest these species would be expected.

For the Parrotfish 2 and Porgies stock complexes, the proposed ACLs, which are based on and would be evaluated with landings of the indicator stocks only (stoplight and redtail parrotfish for Parrotfish 2 and saucereye porgy for Porgies), would be greater than the current Parrotfish and Scups & Porgies ACLs, which were established for and are evaluated with landings of all species within each complex. This change in management could allow for additional landings of the parrotfish and porgies species that make up Parrotfish 2 and Porgies, which could benefit small businesses that target these species; however, that benefit is dependent on the extent that landings increase in the future and the extent to which AMs are needed to prevent future ACL overages.

For the Surgeonfish stock complex, the proposed ACL, which is based on and would be evaluated with landings of the indicator stock only (doctorfish), would be less than the current Surgeonfish ACL, which was established for and are evaluated with landings of all species within the complex. The current Surgeonfish ACL is greater than average landings (2014-2016) of the combined species, so the AM would not be applied under current management. The proposed Surgeonfish ACL is greater than average landings (2014-2016) of the indicator stock, so the proposed AM would not be applied. Therefore, there is expected to be no direct impact on small businesses that target Surgeonfish. Nonetheless, establishing doctorfish as an indicator stock could benefit small businesses that target the other two stocks in the future as landings of those two stocks would not be counted against the proposed ACL, so combined landings of the three could increase beyond the level of the current ACL. However, that is dependent on the extent that landings increase in the future and the extent to which AMs are needed to prevent future ACL overages.

Regarding effects to small businesses targeting queen, gray, and French angelfish, under current management, the 2014-2016 average landings of those combined Angelfish in St. Thomas/St.

exceeded. No action would be taken if NMFS’ SEFSC determines the overage occurred because data collection or monitoring improved rather than because catch increased.
John exceed the ACL by 12,829 lbs, which would trigger the AM in 2018 (Table 5.3). However, 
fishing activities in St. Thomas/St. John were severely curtailed in 2017 due to impacts of 
Hurricanes Irma and Maria and the effects continued into the 2018 fishing season. Thus, when 
evaluating whether to implement an AM in the 2018 fishing season based on the 2014-2016 
landings, the RA determined that an AM-based reduction to the Angelfish fishing season in St. 
Thomas/St. John in 2018 was not necessary to prevent a future ACL overage. Moreover, for 
Angelfish in St. Thomas/St. John, in the past, NMFS’ SEFSC has determined that previous 
overages of the current Angelfish ACL occurred because data collection or monitoring improved 
rather than because catch increased, and thus no AMs were applied, and under current 
management such determinations are likely to continue in the future. However, in the future, it 
is possible that Angelfish landings in St. Thomas/St. John could recover to the average level of 
landings during 2014-2016, and a reduction of the Angelfish season could become necessary 
under current management.

Under proposed management, the 2014-2016 average landings of the indicator stock selected for 
the Angelfish stock complex (gray angelfish) in St. Thomas/St. John would not exceed the 
proposed ACL. Therefore, at that average landings level, an AM would not be triggered and the 
length of the Angelfish fishing season in St. Thomas/St. John would not be reduced.

Since the length of the Angelfish fishing season has not been reduced under current management 
and would also not be reduced under the proposed management, there would be no direct impact 
on small businesses that harvest Angelfish in St. Thomas/St. John. Nonetheless, the future 
impact of the proposed ACL that is based on landings of the indicator stock only is dependent on 
the extent to which landings of Angelfish recover from the 2017 hurricane season and the extent 
to which landings compare to the current versus proposed ACL and if a reduction of an 
Angelfish season is necessary or not under current versus proposed management.

Wrasses, Triggerfish, Jacks
Several species of wrasses, triggerfish, and jacks are currently managed under the Reef Fish 
FMP, but under the St. Thomas/St. John FMP, only a single species of each of those groups 
would be managed (hogfish, queen triggerfish, and blue runner). Therefore, the current ACLs 
applicable to multiple species would not be directly comparable to the proposed ACLs set for a 
single species. The following analysis of potential direct costs and benefits looks at whether an 
AM would be triggered and applied under current versus proposed management. The AM for 
the managed wrasses, triggerfish, and jacks species would work in the same manner under 
current and proposed management.21

21 Average landings would be compared to the ACL and AM would be triggered if the ACL is exceeded and the 
length of the following fishing season would be reduced by the amount necessary to prevent the ACL from being 
exceeded. No action would be taken if NMFS’ SEFSC determines the overage occurred because data collection or 
monitoring improved rather than because catch increased.
Small businesses that harvest queen triggerfish and blue runner would not be subject to an AM under either proposed or current management. Under current management, average landings (2014-2016) of all managed triggerfish and jack species do not exceed the applicable ACLs for Triggerfish & Filefish or Jacks. Under proposed management, average landings (2014-2016) of queen triggerfish and blue runner do not exceed the proposed ACLs for Triggerfish and Jacks (Table 5.3). Therefore, under both current and proposed management, no AMs would be triggered and no direct costs or benefits to small businesses that harvest queen triggerfish and blue runner would be expected. Any direct costs and benefits to small businesses that harvest the triggerfish and jacks species in Table 5.3 that would not be managed under the St. Thomas/St. John FMP (i.e., ocean triggerfish, sargassum triggerfish, scrawled filefish, whitespotted filefish, black durgon, horse-eye jack, black jack, Almaco jack, bar jack, greater amberjack, and yellow jack) were discussed above in Action 2.

For Triggerfish, the proposed ACL for the single species to be managed (queen triggerfish) would be greater than the current Triggerfish & Filefish ACL, which was established for and was evaluated with respect to the combined landings of six triggerfish species that includes queen triggerfish. This increase would allow for future expansion of queen triggerfish landings in St. Thomas/St. John beyond the current ACL; however, such expansion cannot be reasonably predicted. For Jacks, the proposed ACL for the single species to be managed (blue runner) would be less than the current Jacks ACL, which was established for and based on the combined landings of seven jacks that includes blue runner; however, contraction of landings of blue runner would likely not occur because historical landings of it have been substantially below the proposed ACL. Therefore, no direct costs or benefits to small businesses that harvest blue runner are expected.

For small businesses fishing for hogfish, under current management, the 2014-2016 average landings of Wrasses in St. Thomas/St. John exceeded the Wrasses ACL by 1,904 lbs (Table 5.3). That could trigger the AM, however, fishing activities in St. Thomas/St. John were severely curtailed in 2017 due to impacts of Hurricanes Irma and Maria and those effects continued into the 2018 fishing season. Thus, when evaluating whether to implement an AM in the 2018 fishing season based on these 2014-2016 landings, the RA determined that an AM-based reduction to the Wrasses fishing season in St. Thomas/St. John in 2018 was not necessary to prevent a future ACL overage. Moreover, in the past, NMFS’ SEFSC has determined that previous overages of the current Wrasses ACL occurred because data collection or monitoring improved rather than because catch increased, and thus no AMs were applied, and such determinations are likely to continue in the future. Nonetheless, in the future, it is possible that Wrasses landings could recover to the average level of landings during 2014-2016, and an AM

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22 Under current management, triggerfish are included in the Triggerfish & Filefish stock complex.
could become necessary under current management, which would require contraction of hogfish landings.

Under proposed management, the 2014-2016 average landings of hogfish (managed as a single Wrasses stock) would not exceed the proposed Wrasses ACL. Therefore, at those landings levels, an AM would not be triggered and the length of the Wrasses fishing season in St. Thomas/St. John would not be reduced.

The proposed ACL for the single wrasses species to be managed (hogfish) under the St. Thomas/St. John FMP would be greater than the current Wrasses ACL under the Reef Fish FMP, which was established for and was based on combined landings of three wrasses species that includes hogfish. This increase would allow for future expansion of hogfish landings in St. Thomas/St. John beyond the current ACL; however, such expansion cannot be reasonably predicted. Therefore, no direct costs or benefits to small businesses that harvest hogfish are expected.

**Corals, Sea Urchins, Sea Cucumbers**

Under current management, the managed coral species are defined as “Caribbean prohibited coral” and harvest and possession of those species is prohibited (50 CFR 622.472(b)). The prohibition on harvest and possession of those coral species would continue under the St. Thomas/St. John FMP and no direct compliance costs or benefits would be expected. Under Action 2, the St. Thomas/St. John FMP would manage additional species of coral. The impacts of adding coral species new to management are discussed in pages 12-13.

Under current management, a select number of sea urchin and sea cucumber species are managed with other invertebrate (e.g., sponges, worms, molluscs) and reef fish (e.g., butterflyfish, gobies, sea horses) species in the Aquarium Trade management unit. The ACL for Aquarium Trade species is 8,155 lbs and it applies for the entire U.S. Caribbean EEZ. Under the St. Thomas/St. John FMP, the species of sea urchins and sea cucumbers that are currently managed under the Aquarium Trade unit would be managed in the Sea Urchins and Sea Cucumbers stock complexes, respectively. Under Action 2, the St. Thomas/St. John FMP would manage additional species of sea urchins and sea cucumbers. The impacts of adding sea urchin and sea cucumber species new to management are discussed in pages 12-13.

**Action 6, Preferred Alternative 2** would describe and identify essential fish habitat (EFH) for the species that would be new to management: yellowmouth grouper, dolphin, wahoo and any
species of sea cucumbers, sea urchins, and corals found in the St. Thomas/St. John EEZ that are not currently managed under the Coral FMP. The Magnuson-Stevens Act requires the proposed St. Thomas/St. John FMP to describe and identify EFH for managed fish species, to minimize to the extent practicable adverse effects on such habitat caused by fishing, and to identify other actions to encourage the conservation and enhancement of such habitat. The designation, in and of itself, does not have a direct compliance cost or benefit on small businesses. Therefore, **Action 6** would have no beneficial or adverse impact on small businesses and any indirect impacts would be dependent on future actions.

**Action 7, Preferred Alternative 2** would expand the range of management measures that can be implemented by the Council without going through a full plan amendment process. As such, it is an administrative action and has no direct impact on any small businesses.

**Summary of total direct compliance costs and benefits and associated impacts**

No direct compliance costs or benefits would be expected from **Action 1**, **Action 2**, **Action 3**, **Action 6**, or **Action 7**. **Action 4** and **Action 5** could have direct compliance costs on the small businesses that harvest red, black, tiger and yellowfin groupers (Grouper 4 stock complex).

In St. Thomas/St. John, the average small business operating in federal waters that targets reef fish (93% of 31 small businesses) would have a direct compliance cost of approximately $70 as a result of changes to management for black, red, tiger, and yellowfin groupers (Grouper 4). That direct compliance cost represents about a tenth of a percentage of annual revenue for the average small commercial fishing business in St. Thomas/St. John, which is $47,396. However, the actual magnitude of the direct compliance cost is dependent on the extent that landings recover from the 2017 hurricane season and the extent to which the AM for Grouper 4 is needed to prevent any future ACL overage.

**6. Significance of economic impacts on a substantial number of small entities**

From the above, it is concluded that this proposed rule would not have a significant economic impact on a substantial number of small businesses.

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25 Federal action agencies which fund, permit, or carry out activities that may adversely impact EFH are required to consult with NMFS regarding the potential effects of their actions on EFH, and respond in writing to NMFS or Council recommendations. Likewise, every fishery management plan shall minimize to the extent practicable adverse effects on EFH. Measures taken to avoid impacts to EFH could potentially affect small entities, however, no such measures are proposed at this time.
7. References
