

**Update of Annual Catch Limit Landings for Caribbean Reef Fishes
and Projected Season Lengths
NOAA Fisheries
Southeast Regional Office
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Introduction

The U.S. Caribbean is composed of the Commonwealth of Puerto Rico and the Territory of the U.S. Virgin Islands. Federal waters of this region are managed by the Caribbean Fishery Management Council (Caribbean Council). In January 2012, NOAA Fisheries implemented Annual Catch Limit (ACL) Amendments for federally managed species in the Caribbean. The Caribbean Council established ACLs for all federally managed species included in the Reef Fish, Queen Conch, Spiny Lobster, and Corals and Reef Associated Plants and Invertebrates Fishery Management Plans (FMPs). Accountability measures (AMs) were also established requiring NOAA Fisheries to reduce the length of the fishing season if it has been determined that landings in the prior year(s) exceeded the ACL for that species and/or species group. For purposes of ACL monitoring, a 3-average of landings is used.

AMs apply to all species managed by the Caribbean Council, including prohibited corals and species with harvest moratoria (e.g., goliath grouper and Nassau grouper). Additionally, if NOAA Fisheries determines the ACL for a particular species or species group has been exceeded because data collection and monitoring improved, rather than because catches actually increased, NOAA Fisheries will not reduce the length of the fishing season for the applicable species or species group the following fishing year.

The purpose of this report is to summarize U.S. Caribbean landings from 2012 through 2014 for species/species groups with ACLs. If the ACL was exceeded then projections were conducted to predict when the ACL in the following season would be met.

ACL Landings

On November 4, 2015, the Southeast Fisheries Science Center (SEFSC) provided commercial landings data to the NOAA Fisheries Southeast Regional Office (SERO). The data contained commercial landings of federally managed Caribbean species for the 2012-2014 fishing years. The commercial landings expansion factors for Puerto Rico are complete for 2012-2014, and they were applied to the Puerto Rico commercial landings to address missing landings reports.

The three-year average landings for 13 species or species groups exceeded their ACLs (Table 1). Six of the ACL overages were due to data improvements as declared by the SEFSC. These six species groups are angelfish, squirrelfish, and wrasses for both St. Croix (STX) and St. Thomas/St. John (STT/STJ). The Puerto Rico and STT/STJ queen conch ACLs were also exceeded; however, conch landings are only allowed in state waters and the queen conch ACLs

in federal waters for these two regions are already set equal to zero. The remaining five ACL overages occurred in Puerto Rico and they are parrotfish, snapper unit 2, spiny lobster, triggerfish and filefish, and wrasse species groups.

Table 1. U.S. Caribbean average annual commercial landings for species or species groups with landings that exceeded their ACLs. The average annual landings were calculated with landings from 2012 through 2014. The amount of landings that exceeded each ACL is provided. PR = Puerto Rico, STT/STJ = St. Thomas/St. John, and STX = St. Croix.

Species or Species Group	Average Annual Landings (lbs)	Annual Catch Limit (lbs)	Overage (lbs)
PR Queen Conch	258,536	0	258,536
PR Parrotfish	54,224	52,737	1,487
PR Snapper Unit 2	155,889	145,916	9,973
PR Spiny Lobster	345,997	327,920	18,077
PR Triggerfish & Filefish	70,926	58,475	12,451
PR Wrasse	59,194	54,147	5,047
STT/STJ Queen Conch	380	0	380
STX Angelfish	9,515	305	9,210
STX Squirrelfish	458	121	337
STX Wrasses	9	7	2
STT/STJ Angelfish	17,563	7,897	9,666
STT/STJ Squirrelfish	9,401	4,241	5,160
STT/STJ Wrasses	2,117	585	1,532

Additionally, Puerto Rico recreational landings were summarized by SERO from the SEFSC's recreational ACL database, which was provided on May 28, 2015. Recreational landings for 2012 and 2013 are from the Marine Recreational Fisheries Statistical Survey, which collected recreational landings data in Puerto Rico but not the U.S. Virgin Islands. This survey estimated landings using a combination of dockside intercepts (landings data) and phone surveys (effort data). Landings were estimated in both numbers and whole weight by two-month wave (e.g., Wave 1 = Jan/Feb,..., Wave 6 = Nov/Dec), area fished (inland, state, and federal waters), mode of fishing (charter, private/rental, shore), and territory (Puerto Rico). In some instances, the SEFSC used weight-estimation procedures to fill in missing weights to convert landing estimates in numbers to landing estimates in pounds.

In 2014, the Puerto Rico MRFSS survey was phased out and replaced by the Marine Recreational Information Program (MRIP). MRIP is a more scientifically sound methodology for estimating catch because it removes the potential for biases when gathering data, resulting in more accurate catch estimates. At the present time there are no conversion factors available by the SEFSC to adjust 2014 MRIP landings to MRFSS landings to ensure landings were comparable to how the ACL was set.

A summary of the three-year average of Puerto Rico recreational landings are provided in Table 2. The jacks species group is the only species group that exceeded the ACL.

Table 2. Puerto Rico recreational average annual landings by species or species group compared to their ACLs. The average annual landings were calculated with landings from 2012 through 2014. The amount of landings over or under the ACL is provided.

Species or Species Group	Average Annual Landings (lbs)	Annual Catch Limit (lbs)	Overage/Underage (lbs)
PR Grouper	19,006	77,213	-58,207
PR Queen Conch	unknown	0	n/a
PR Parrotfish	14,795	15,263	-468
PR Snapper Unit 1	29,764	95,526	-65,762
PR Snapper Unit 2	2,460	34,810	-32,350
PR Snapper Unit 3	65,557	83,158	-17,601
PR Snapper Unit 4	10,196	28,509	-18,313
PR Angelfish	126	4,492	-4,366
PR Aquarium Trade	773	8,155	-7,382
PR Boxfish	1,297	4,616	-3,319
PR Goatfish	46	362	-316
PR Grunts	2,493	5,028	-2,535
PR Jacks	62,537	51,001	11,536
PR Porgies	2,112	2,577	-465
PR Squirrelfish	272	3,891	-3,619
PR Surgeonfish	0	3,590	-3,590
PR Tilefish	139	14,642	-14,503
PR Triggerfish and Filefish	13,463	21,929	-8,466
PR Wrasse	4,206	5,050	-844

Projected Season Lengths

Commercial sector ACLs for six species groups were exceeded due to changes in data reporting as determined by the SEFSC; therefore, closure dates were not determined for these species groups. The Puerto Rico and STT/STJ queen conch ACLs were also exceeded; however, queen conch landings are only allowed in state waters and the queen conch ACLs in federal waters for these two regions are already set equal to zero. Therefore, no closure dates were determined for Puerto Rico and STT/STJ queen conch. Closure dates were predicted for the commercial sectors of Puerto Rico parrotfish, snapper unit 2, spiny lobster, triggerfish and filefish, and wrasses species groups. The recreational sector exceeded the ACL for the jacks species group, and closure dates were predicted for this stock. Closure dates were determined using monthly

landings for each year used to calculate the average annual landings for ACL monitoring (2012, 2013, and 2014), and also the monthly average across years (2012 through 2014). Table 3 summarizes the predicted closure dates. These closure dates will be applied to future landings to prevent the landings from exceeding the ACL in the future.

Table 3. Predicted commercial and recreational closure dates for six of the Puerto Rico species groups. For some of the stocks, there was no closure date predicted for 2013 (e.g. Puerto Rico parrotfish) because the landings in that year were below the ACL.

Species or Species Group	Year of Data Used			
	2012	2013	2014	Average 2012-2014
PR Parrotfish	27-Oct	No Closure	18-Dec	19-Dec
PR Snapper Unit 2	19-Sep	No Closure	24-Oct	26-Nov
PR Spiny Lobster	31-Oct	No Closure	12-Nov	10-Dec
PR Triggerfish & Filefish	25-Sep	22-Nov	2-Oct	16-Oct
PR Wrasse	12-Oct	No Closure	27-Oct	16-Nov
PR Recreational Jacks	16-Oct	No Closure	14-Jun	4-Nov

Discussion

Results presented herein indicate six Caribbean ACLs that were exceeded, require closures to prevent future ACL overages. Closure dates are contingent on historical landings being representative of future landings. If catch rates are higher in the 2015 fishing year, then projected closure dates may be too late and result in an ACL overage, or if 2015 catch rates are lower than the projected closure dates may be too early and result in an ACL underage.

This analysis predicted a possible range of closure dates. Uncertainty exists in these projections, as economic conditions, weather events, changes in catch-per-unit effort, fisher response to management regulations, and a variety of other factors may cause departures from the predictions.