

Projected 2013 Annual Catch Limit Closure Dates for Caribbean Reef Fishes
NOAA Fisheries Service
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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, Annual Catch Limit (ACL) Amendments for federally managed species in the Caribbean were implemented by NOAA Fisheries. 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 (AM) were also established requiring the NOAA Fisheries Assistant Administrator to reduce the length of the fishing season if it has been determined that prior year(s) landings exceeded the ACL for that species and/or species group. For purposes of ACL monitoring, a multi-year average of landings is used.

Accountability measures apply to all species except queen conch, prohibited corals, and species with harvest moratoria (e.g., goliath 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 landings for species with ACL overages in prior fishing years and determine when the 2013 ACL will be met. These projections will then be used to establish a closure date for the fishing season in 2013 by species or species group.

Annual Catch Limit Landings

In December 2012, a report was provided by the NOAA Fisheries' Southeast Fisheries Science Center to the NOAA Fisheries' Southeast Regional Office (SERO) and Caribbean Council. The report provided commercial landings of federally managed Caribbean species for the 2010 and/or 2011 fishing years. The report also provided determinations of whether or not ACLs were exceeded based on multiyear average landings and if ACLs were exceeded due to enhancements in reporting. The report indicated twelve ACLs were exceeded. Six ACLs were exceeded due to data improvements. The St. Thomas/St. John (STT/STJ) queen conch ACL was also exceeded, but no AM is required because the ACL in federal waters is already set equal to zero. Landings of five species (Puerto Rico snapper unit II, STT/STJ grouper, and St. Croix (STX) queen conch, spiny lobster, and triggerfish and filefish) exceeded their respective ACL, requiring

AMs to be implemented in 2013. Table 1 summarizes landings data for species with ACL overages. The table also indicates whether or not AMs are required.

Table 1. Combined state and federal commercial landings of Caribbean species during 2010 and/or 2011 exceeding ACLs and accountability measures required for the 2013 fishing year by species or species group. PR = Puerto Rico, STT/STJ = St. Thomas/St. John, and STX = St. Croix. Source: SEFSC (2012)

Species or Species Group	Landings (lbs ww)			Annual Catch Limit	Average	Accountability measure required?
	2010	2011	Avg 2010-11			
PR snapper unit II	337,104	218,854	277,979	145,916	132,063	Yes, shorten length of next season
STT/STJ groupers	60,806	52,860	56,833	51,849	4,984	Yes, shorten length of next season
STX queen conch	81,917	53,142	67,530	50,000	17,530	Yes, shorten length of next season
STX spiny lobster	n/a	109,708	n/a	107,307	2,401	Yes, shorten length of next season
STX triggerfish and filefish	n/a	26,453	n/a	24,980	1,473	Yes, shorten length of next season
STT/STJ queen conch*	600	12	306	0	306	No, ACL = 0 in federal waters
STT/STJ angelfish	n/a	18,333	n/a	7,897	10,436	No, data improvement
STT/STJ squirrelfish	n/a	6,498	n/a	4,241	2,257	No, data improvement
STT/STJ wrasses	n/a	1,959	n/a	585	1,374	No, data improvement
STX angelfish	n/a	8,501	n/a	305	8,196	No, data improvement
STX squirrelfish	n/a	746	n/a	121	625	No, data improvement
STX wrasses	n/a	49	n/a	7	42	No, data improvement

* STT/STJ queen conch landings reported here are from federal waters only.

Additionally, Puerto Rico recreational landings were summarized by SERO from the SEFSC's recreational ACL database (October 23, 2012) and are provided in Table 2. Recreational landings are from the Marine Recreational Fisheries Statistical Survey and are not collected in the USVI. This survey estimates landings using a combination of dockside intercepts (landings data) and phone surveys (effort data). Landings are estimated in both numbers and whole weight (lbs) 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 state (Puerto Rico). In some instances, the SEFSC uses weight-estimation procedures to fill in missing weights in order to convert landing estimates in numbers to landing estimates in pounds. These landings were provided to the Caribbean Council in December 2012. Only one species group exceeded their ACL – Puerto Rico wrasses.

Accountability measures require the NOAA Fisheries' Assistant Administrator to shorten the length of the fishing season in the year following an overage determination by the amount necessary to constrain landings to the ACL.

Projected Closure Dates

Annual catch limits were exceeded for five commercial and one recreational species or species group. Projections were developed to estimate when the ACL in 2013 would be reached. Landings data from the most recent year(s) of landings were used as a proxy for 2013 landings. Two sets of projections were developed. The first used the most recent complete year of annual landings. The second used available landings for 2012, when available. For months or

waves when landings were not available in 2012, landings for the same months or waves in 2011 were used. For Puerto Rico, recreational landings were available through waves 5, 2012. For STX spiny lobster, queen conch, triggerfish, and filefish, and STT/STJ grouper, commercial landings data were available through June 2012 (Source: December 14, 2012 STT/STJ and STX landings by trip). For Puerto Rico snapper unit II, commercial landings data were available only through December 2011 (Source: December 14, 2012 PR landings by trip).

Table 2. Puerto Rico recreational landings by species or species group and accountability measures required for the 2013 fishing season.

Species or Species Group	Landings (lbs ww)			Annual Catch Limit	Overage	Accountability measure required?
	2010	2011	Avg 2010-11			
PR grouper	21503	7,754	14,629	77,213	-62,585	No, ACL was not exceeded
PR queen conch	unknown	unknown	n/a	0	n/a	No, harvest prohibited in EEZ
PR parrotfish	10,529	10,296	10,413	15,263	-4,851	No, ACL was not exceeded
PR snapper unit 1	42,183	34,181	38,182	95,526	-57,344	No, ACL was not exceeded
PR snapper unit 2	10,169	0	5,085	34,810	-29,726	No, ACL was not exceeded
PR snapper unit 3	34,896	20,919	27,908	83,158	-55,251	No, ACL was not exceeded
PR snapper unit 4	10,146	9,343	9,745	28,509	-18,765	No, ACL was not exceeded
PR angelfish	n/a	167	n/a	4,492	-4,325	No, ACL was not exceeded
PR aquarium trade	n/a	1,405	n/a	8,155	-6,750	No, ACL was not exceeded
PR boxfish	n/a	2,477	n/a	4,616	-2,139	No, ACL was not exceeded
PR goatfishes	n/a	280	n/a	362	-82	No, ACL was not exceeded
PR grunts	n/a	2,110	n/a	5,028	-2,918	No, ACL was not exceeded
PR jacks	n/a	31,767	n/a	51,001	-19,234	No, ACL was not exceeded
PR porgies	n/a	1,821	n/a	2,577	-756	No, ACL was not exceeded
PR squirrelfish	n/a	754	n/a	3,891	-3,137	No, ACL was not exceeded
PR surgeonfish	n/a	0	n/a	3,590	-3,590	No, ACL was not exceeded
PR triggerfish and filefish	n/a	1,970	n/a	21,929	-19,959	No, ACL was not exceeded
PR wrasses	n/a	5,539	n/a	5,050	489	Yes, ACL was exceeded

For commercial species or species groups, landings were cumulatively summed by day starting from January 1 for all species except STX queen conch (Tables 3-4). For STX queen conch, landings were cumulatively summed from the start of the fishing season – November 1 (Table 5). The closure date for each species or species group was determined based on when cumulative landings reached the ACL.

Unlike commercial landings, recreational landings are estimated on a two-month wave basis. The Puerto Rico recreational wrasse closure was calculated by cumulatively summing wave landings from January 1 until the ACL was projected to be reached (Table 6). If the closure date occurred within a wave, landings for the wave were divided by the number of days in the wave to determine an average daily catch rate for the wave. The daily catch rate was then multiplied by the number of days the wave would remain open until the ACL was reached.

Results

Table 7 summarizes the projected closure dates for each species or species groups. Using Jan-Jun 2012 landings and July-Dec 2011 landings resulted in no projected closures for any species or species group. Using 2011 landings data only, STX queen conch was projected to close March 24, 2013, Puerto Rico snapper unit II was projected to close September 21, 2013, STX triggerfish and filefish was projected to close November 21, 2013, STX spiny lobster was projected to close December 19, 2013, STT/STJ grouper was projected to close December 20, 2013, and Puerto Rico recreational wrasses were projected to close October 21, 2013.

Discussion

Projections indicate closure dates are highly variable and contingent on reported landings. The most recent available landings (Jan-Jun 2012 + Jul-Dec 2011) indicate ACLs for STT/STJ and STX species or species groups will not be met in 2013. However, these landings may not be complete or may under represent actual landings. Using 2011 landings, ACLs for five of the six species or species groups are estimated to reach their ACL in 2013. The earliest closure would be for queen conch, which is estimated to reach it's ACL in late March, approximately two months prior to the annual season closure (June 1). For the remaining species, closures are projected to occur in fall or winter 2013.

Projections presented herein rely on historical trends in landings, which may or may not be representative of current trends and reporting patterns. Additionally, for Puerto Rico recreational wrasses, landings are highly variable from wave to wave with many waves estimating no landings of wrasses. Given high variability in recreational landings and uncertainty in how commercial landings trends may change, results presented here may over- or under-estimate projected closure dates for 2013. If available, in-season landings should be used to monitor and validate current trends in commercial and recreational landings.

References

SEFSC. 2012. Evaluation of Caribbean commercial landings data and collection methodologies with respect to ACLs and overages. Fisheries Statistics Division, NOAA Fisheries Southeast Fisheries Science Center. 32 pp.

Table 3. Cumulative sum of St. Thomas/St. John grouper landings, St. Croix triggerfish and filefish, St. Croix spiny lobster, and Puerto Rico snapper unit II landings for 2011.

Mo-Yr	STT/STJ groupers	STX triggerfish and filefish	STX spiny lobster	PR snapper unit II
Jan-11	6,599	2,371	14,912	16,119
Feb-11	10,209	5,056	25,091	23,741
Mar-11	14,583	8,471	38,795	30,831
Apr-11	18,427	11,835	52,234	39,740
May-11	22,419	14,517	61,675	56,725
Jun-11	27,709	16,995	72,005	80,963
Jul-11	31,461	19,149	78,564	106,453
Aug-11	35,592	20,633	85,524	127,623
Sep-11	40,024	22,048	91,273	151,322
Oct-11	44,860	23,912	98,761	178,270
Nov-11	48,749	25,343	103,903	201,182
Dec-11	52,860	26,453	109,708	218,854

Table 4. Cumulative sum of St. Thomas/St. John grouper landings and St. Croix triggerfish and filefish, and spiny lobster landings for Jan-Jun 2012 and Jul-Dec 2011. Landings for Jul-Dec 2012 are currently not available. Landings for Jul-Dec 2011 were used as a proxy for Jul-Dec 2012 landings.

Mo-Yr	STT/STJ Groupers	STX Triggerfish and Filefish	STX spiny lobster
Jan-12	4,342	1,642	5,233
Feb-12	8,442	3,015	12,498
Mar-12	11,810	4,989	21,109
Apr-12	14,340	6,582	28,992
May-12	17,848	9,056	38,907
Jun-12	20,973	10,812	47,001
Jul-11	24,725	12,966	53,560
Aug-11	28,856	14,450	60,520
Sep-11	33,288	15,864	66,269
Oct-11	38,124	17,728	73,757
Nov-11	42,013	19,159	78,899
Dec-11	46,124	20,269	84,704

Table 5. Cumulative sum of St. Croix commercial queen conch landings during Nov 2010-May 2011 and Nov 2011-May 2012.

Month	STX Queen Conch	
	2010-11	2011-12
Nov	14,295	4,385
Dec	25,347	7,269
Jan	36,599	11,906
Feb	43,633	17,111
Mar	51,858	21,929
Apr	62,072	26,386
May	71,048	32,005
Jun-Oct	Season Closed	

Table 6. Cumulative sum of recreational wrasse landings during 2011 and 2012. Landings for Nov-Dec 2012 are not yet available. Landings for Nov-Dec 2011 were used as a proxy for Nov-Dec 2012 landings.

Wave	PR Wrasses	
	2011	2012
Jan-Feb	198	0
Mar-Apr	2,523	3,591
May-Jun	2,523	3,637
Jul-Aug	2,597	3,637
Sep-Oct	5,538	3,637
Nov-Dec	5,538	

Table 7. Projected 2013 closure dates for Caribbean species with ACL overages.

Species or species group	Sector	Closure Date	
		2011 data	2012 data
STT/STJ groupers	Comm	20-Dec-13	no closure
STX triggerfish and filefish	Comm	21-Nov-13	no closure
STX spiny lobster	Comm	19-Dec-13	no closure
PR snapper unit II	Comm	21-Sep-13	n/a
STX queen conch	Comm	24-Mar-13	no closure
PR wrasses	Rec	21-Oct-13	no closure

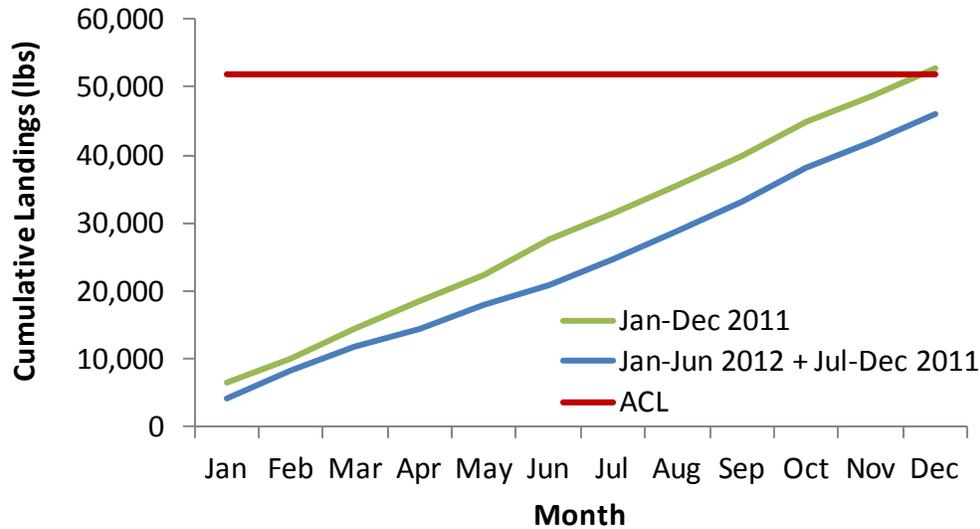


Figure 1. Cumulative 2011 and 2011/2012 combined commercial landings for St. Thomas/St. John groupers compared to the annual catch limit. Landings for 2012 are available through June. Landings for July-December 2011 were used as a proxy for July-December 2012 landings.

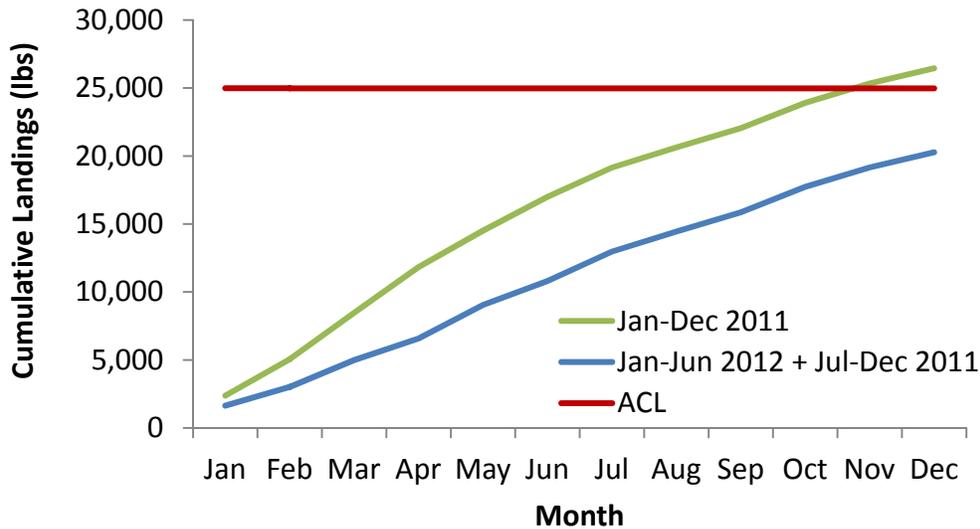


Figure 2. Cumulative 2011 and 2011/2012 combined commercial landings for St. Croix triggerfish and filefish compared to the annual catch limit. Landings for 2012 are available through June. Landings for July-December 2011 were used as a proxy for July-December 2012 landings.

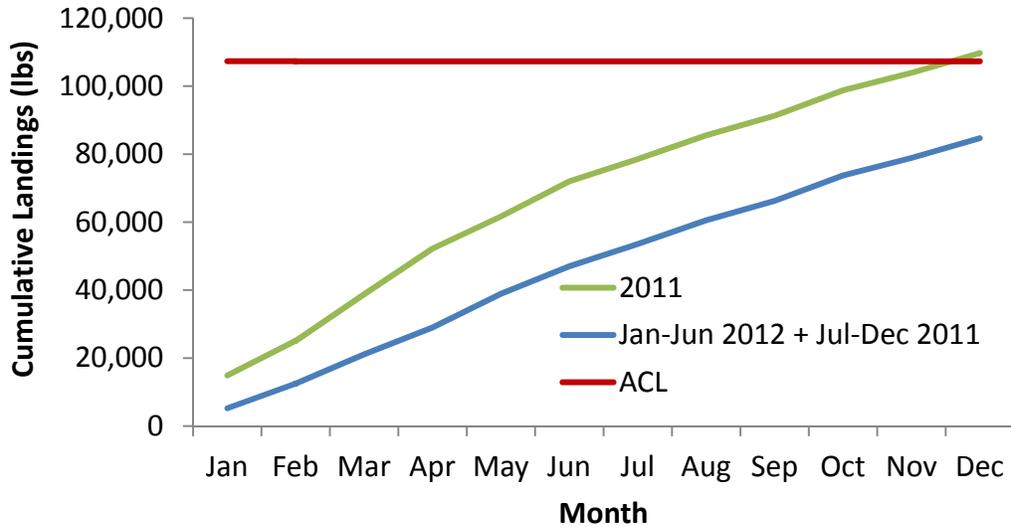


Figure 3. Cumulative 2011 and 2011/2012 combined commercial landings of St. Croix spiny lobster compared to the annual catch limit. Landings for 2012 are available through June. Landings for July-December 2011 were used as a proxy for July-December 2012 landings.

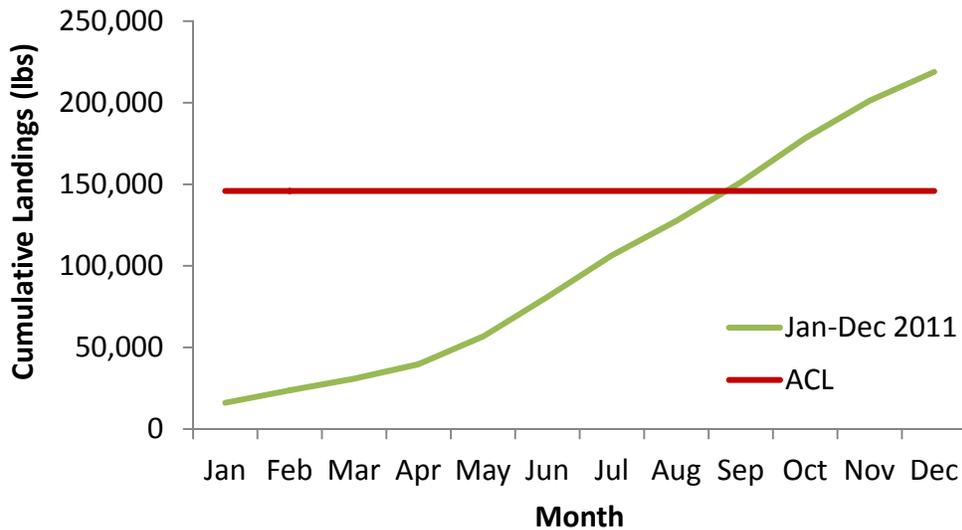


Figure 4. Cumulative 2011 commercial landings of Puerto Rico snapper unit II species compared to the annual catch limit.

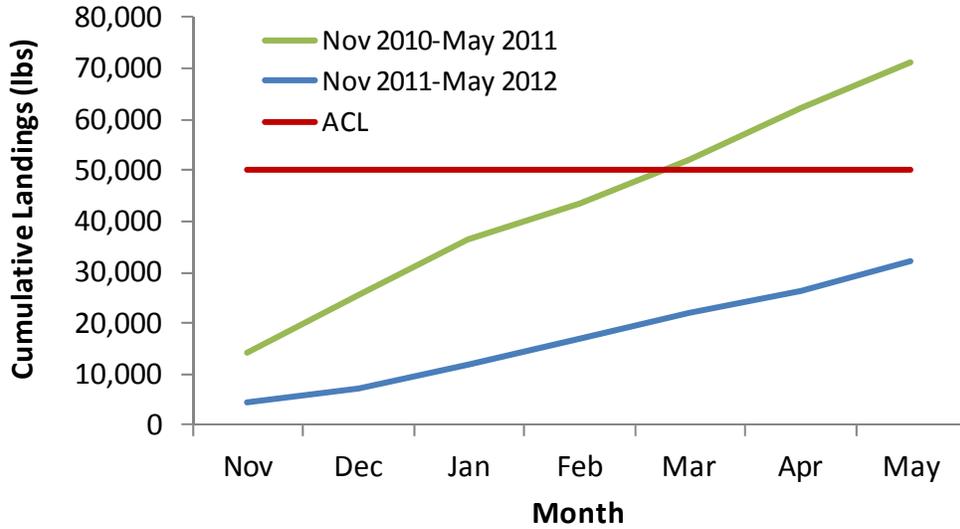


Figure 5. Cumulative 2010/2011 and 2011/2012 commercial landings for St. Croix queen conch compared to the annual catch limit.

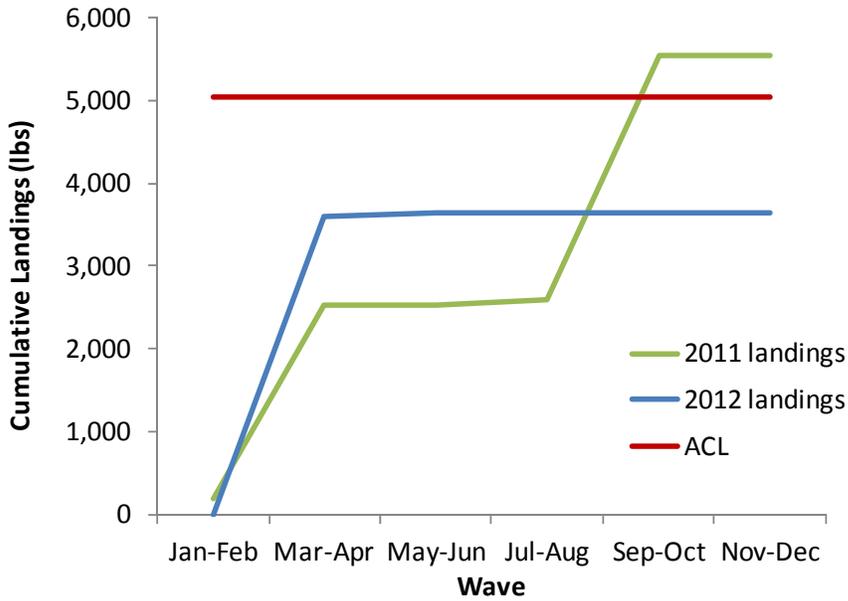


Figure 6. Cumulative 2011 and 2012 recreational landings of Puerto Rico wrasses compared to the annual catch limit. Landings for 2012 are available through October. Landings for November-December 2011 were used as a proxy for November-December 2012 landings.