

Monkfish Fishery Management Area Daily Landings and Days-at-Sea Limit Allocation Analysis for FY2014-FY2016

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Introduction

The New England and Mid-Atlantic Fishery Management Councils (Councils) are developing Framework 8 to the Monkfish Fishery Management Plan (FMP) to adjust daily landing and/or trip limit allocations for the NMA and SMA for FY2014 – 2016. The objective of this analysis was to examine daily landing limits and DAS allocations under the existing ACTs and TALs for the NMA and SMA.

In the NMA, three management alternatives were considered: the first alternative (the status quo alternative) maintained status quo daily landing limits and DAS allocations by permit category; the second management alternative adjusted the allocation of DAS in the NMA to a level at which projected landings approximated the FY2014 directed fishery allocation of the northern area TAL; the third alternative adjusted NMA DAS allocations under increased incidental daily landing limits for monkfish permit categories C and D from 300 lbs of monkfish tail weight per DAS (or 25% of the total weight of fish on board, whichever is less) to 600 lbs of tail weight per DAS for permit category C and 500 lbs of tail weight per DAS for permit category D.

For the SMA, four alternative management alternatives were analyzed: 1) status quo daily landing limits and DAS allocations; 2) an adjustment of DAS under increased daily landing limits (610 lbs per DAS for permit category AC, 500 lbs per DAS for permit category BDH); 3) an adjustment of DAS under status quo daily landing limits (550 lbs per DAS for permit category AC, 450 lbs per DAS for permit category BDH); and 4) an adjustment of daily landing limits under status quo DAS allocations (28 DAS).

DAS monitoring allows the use of DAS declarations along with Vessel Trip Reports (VTR) and dealer-reported data to more accurately describe monkfish landings. Prior to detailed DAS declarations, landings by limited access monkfish-permitted boats could not be separated into directed and incidental monkfish trips. Matching DAS declarations to dealer-reported data and VTRs has enabled a description of directed monkfish activity by limited access vessels by area, namely when a vessel has declared it is using a monkfish DAS. Monkfish landings by limited access vessels not on a monkfish DAS were considered to be incidental landings. These incidental landings by limited access vessels can then be subtracted from a management area monkfish allocation by permit category, allowing for a more accurate description of this fishery.

Because the allocated total allowable landings in the both the Northern and Southern Fishery Management areas were not fully harvested in FY2012 (the reference year for this analysis of DAS and daily landing limit allocations for FY2014-2016), the method that has been used to reduce DAS

and/or daily landing limits for previous management actions was not applicable. Basically, this method has historically used fishing vessel trip reports, scaled to dealer-reported landings, to adjust trip-level and vessel-level aggregate data for each management area down incrementally in an effort to identify DAS levels and/or daily landing limits that summed to an allocated TAL for each of two sets of monkfish permit categories (AC and BD(H)) after subtracting estimated incidental landings. Instead, a method that modeled fleet-wide landings by area with an increase in DAS and/or incidental or directed daily landing limits, after subtracting for both limited access monkfish and other vessel incidental landings, was employed. The purpose of this report is to describe the assumptions and methods used to arrive at recommended DAS/daily landing limit combinations for each DAS/daily landing limit option by permit category in the NMA and SMA.

Methods

Data sources

Data from fishing year 2012 were used as our baseline set for this analysis. Several primary data sources were used for this analysis including: dealer weighout reports, the vessel permits database, DAS declarations (which can be transmitted into the database via the Vessel Monitoring System (VMS) or the Interactive Voice Response (IVR) system), and the fishing vessel trip report (FVTR) database. The source for days at sea declarations, dealer-reported landings data, and vessel-reported area fished data is a trip-matching derivative database: the data matching and imputation system (DMIS). Data from fishing year 2012 are the most recent available and can be matched to a very descriptive DAS declaration for monkfish trips. Starting in FY2007, DAS declarations in the directed monkfish fishery include the monkfish management area, which has advanced our ability to characterize and manage the monkfish fishery. Prior to this activity code, FVTRs, which contained no direct indication as to whether a vessel was on an incidental or directed monkfish trip, were matched to dealer information to determine days used and area fished.

DMIS data were matched to monkfish vessel permit category (from the permits database) and days at sea charged information (from the Allocation Management System (AMS) database) to derive a comprehensive picture of fleet activity for this analysis.

Assumptions

- Landings from monkfish permit category E and state-only permitted vessels will be exactly the same, in terms of live pounds landed, in FY2014-FY2016 as they were in FY2012. This assumption enables a reasonable reduction of the FY2014-FY2016 monkfish TALs to account for the landings from monkfish permit category E and state-only permitted vessels.
- Landings and effort on trips in FY2014-FY2016 by limited access vessels on non-directed (incidental) monkfish trips will be the same as they were in FY2012.
- Fishing and landing patterns will be similar in FY2014-FY2016 to those observed in FY2012 as detailed in the text below.

There is no empirical basis for modifying these assumptions going forward. This uncertainty should be understood in the selection of management alternatives.

Estimated discards

The ACT was first reduced by estimated discards, which are based on the most recent discard percentage calculated for that management area in the most recent stock assessment. The most recent discard percentage is 13.4% for the NMA and 26% for the SMA. The resulting figure is the overall total allowable landings (TAL) for each management area.

Procedures for identification of incidental monkfish landings

Incidental landings by open access permit category E and state-only permitted vessels

Incidental landings of monkfish must be subtracted from the TAL before the remainder can be allocated to the limited access monkfish fishery. Monkfish total reported live pounds from the dealer-reported landings database by FY2012 limited access monkfish permitted vessels were subtracted from total monkfish live pounds to determine landings by monkfish non-limited access vessels. These are landings by monkfish permit category E and state-only permitted vessels.

Incidental landings by monkfish limited access permitted vessels

Incidental landings for each permit category by monkfish limited access vessels was estimated by matching dealer-reported trips with a vessel's DAS declaration and to the Fishing Vessel Trip Report in DMIS. The DAS declaration indicated whether the vessel was on a directed or incidental monkfish trip. If the vessel was on an incidental trip (which has a DAS declaration code that lacks the monkfish management area), the FVTR for the trip indicated the management area fished on the trip.

Procedures for calculation of DAS allocation and/or trip limits for each management alternative

As mentioned, trip limits and DAS allocations for each set of permit categories (AC and BD(H)) could not be analyzed according to the method employed in several previous monkfish management actions to adjust DAS and daily landing limits. This method has historically used the most recent and complete set of vessel trip reports, scaled to dealer-reported landings, to adjust trip-level and vessel-level aggregate data **down** incrementally in an effort to identify DAS levels and/or daily landing limits that will sum to the appropriate allocated TAL for each of the two sets of monkfish permit categories, after subtracting for estimated incidental landings. Because we were not scaling down daily landing limits or DAS, but instead were examining a reference year in which the recommended TALs in both management areas were under-harvested, the previously-employed method was no longer applicable.

For the purposes of daily landing limit and DAS-setting to achieve the existing TALs, landings and DAS/ daily landing limits in the NMA and SMA from FY2012 were used as a guide to decisions concerning trip limits and DAS. In FY2012 in the NMA, under a 300 lbs tail weight per DAS incidental daily landing limit and directed daily landing limits of 1,250 lbs and 600 lbs monkfish tail weight per DAS and 40 DAS allocated to AC and BD permit categories, respectively, 67% of the 5,854 mt TAL was landed (Table 1a). In FY2012 in the SMA, under trip limits of 550 lbs and 450 lbs

monkfish tail weight per DAS and 28 DAS allocated to AC and BDH permit categories, respectively, 58% of the 5,854 mt TAL was landed (Table 1b).

Adjustment of allocated DAS for monkfish limited access permitted vessels

To adjust the allocated DAS under status quo trip limits in each management area, frequency distributions of the number of vessels by annual DAS charged were created for each management area. The area under the FY2012 frequency distribution was assumed to be proportional to the directed fishery landings by management area. To project landings under increased DAS allocations, the FY2012 DAS charged frequency distribution was moved iteratively along the horizontal axis until the Riemann sum (the area under the frequency distribution) of the distribution increased proportionally sufficient to account for the directed allocation of the FY2014-2016 management area TAL.

To analyze Alternative 3 for the Northern Fishery Management Area (increased incidental daily landing limits), the frequency distributions of the number of DAS used by tail weight per DAS from incidental trips by permit category C and D vessels in FY2012 in the NMA were used to project incidental landings under increased daily landing limits. The projected increased incidental landings were then deducted from the NMA FY2014-2016 directed fishery allocation. That modified directed fishery allocation was then used to calculate the proportional increase in FY2012 landings that would be necessary to land the FY2014-2016 directed fishery NMA TAL. The allocation of NMA DAS necessary to land the directed portion of the TAL was then calculated using the method described above.

In the SMA, DAS were projected under revised daily landing limits for permit category AC of 610 lbs tail weight per DAS and, for permit category BDH, of 500 lbs tail weight per DAS (Alternative 2) and under status quo daily landing limits (Alternative 3). To analyze Alternative 2, FY2012 directed fishery landings were used initially to project how much total landings would have increased in FY2012 with a higher daily landing limit. These projected landings were then used to increase the DAS frequency distribution according to the methodology described above.

Adjustment of daily landing limits for monkfish limited access permitted vessels in the Southern Management Area by permit category

To adjust the allocated daily landing limits under status quo DAS allocations in the Southern Fishery Management Area, frequency distributions of the number of DAS charged by daily landings from a trip were created for each permit category. The area under these FY2012 frequency distributions is equivalent to the directed landings by permit category. To project landings under increased daily landing limits, the FY2012 daily limit frequency distribution was moved iteratively along the horizontal axis until the Riemann sum under the distribution increased sufficient to account for the directed allocation of the FY2014-2016 management area TAL by permit category.

Table 1a. Target monkfish target TALs, trip limits, DAS allocations, and landings (FY 2000 - FY 2012) for the NMA

Fishing Year	Target TAL (lbs)	Target TAL (mt)	Trip Limits*		DAS Restrictions**	Landings (lbs)	Percent of TAL
			Cat. A & C	Cat. B & D			
2000	12,507,000	5,673	n/a	n/a	40	26,145,000	209%
2001	12,507,000	5,673	n/a	n/a	40	32,745,000	262%
2002	25,737,000	11,674	n/a	n/a	40	31,947,000	124%
2003	39,039,000	17,708	n/a	n/a	40	31,207,000	80%
2004	37,408,000	16,968	n/a	n/a	40	25,905,000	69%
2005	29,012,839	13,160	n/a	n/a	40	21,016,671	72%
2006	17,057,168	7,737	n/a	n/a	40	14,720,268	86%
2007	11,023,100	5,000	1,250	470	31	11,133,346	101%
2008	11,023,100	5,000	1,250	470	31	7,777,910	71%
2009	11,023,100	5,000	1,250	470	31	7,372,259	67%
2010	11,023,100	5,000	1,250	470	31	6,247,901	57%
2011	12,905,845	5,854	1,250	600	40	8,153,433	63%
2012	12,905,845	5,854	1,250	600	40	8,642,121	67%
2013	12,905,845	5,854	1,250	600	40		
2014	12,537,737	5,687					

* Trip limits in pounds tail weight per DAS

** Excluding up to 10 DAS carryover, became 4 DAS carryover in FY2007

Table 1b. Target monkfish target TALs, trip limits, DAS allocations, and landings (FY 2000 - FY 2012) for the SMA

Fishing Year	Target TAL (lbs)	Target TAL (mt)	Trip Limits*		DAS Restrictions**	Landings (lbs)	Percent of TAL
			Cat. A & C	Cat. B & D			
2000	13,281,000	6,024	1,500	1,000	40	17,549,000	132%
2001	13,281,000	6,024	1,500	1,000	40	24,404,000	184%
2002	17,463,000	7,921	550	450	40	16,487,000	94%
2003	22,511,000	10,211	1,250	1,000	40	26,891,000	119%
2004	14,929,704	6,772	550	450	28	13,719,000	92%
2005	21,325,315	9,673	700	600	39.3	21,287,811	100%
2006	8,084,351	3,667	550	450	12	13,027,100	161%
2007	11,243,562	5,100	550	450	23	15,829,172	141%
2008	11,243,562	5,100	550	450	23	14,883,407	132%
2009	11,243,562	5,100	550	450	23	10,582,189	94%
2010	11,243,562	5,100	550	450	23	9,885,528	88%
2011	19,676,234	8,925	550	450	28	12,789,016	65%
2012	19,676,234	8,925	550	450	28	11,428,764	58%
2013	19,676,234	8,925	550	450	28		
2014	18,727,739	8,520					

* Trip limits in pounds tail weight per DAS

** Excluding up to 10 DAS carryover, became 4 DAS carryover in FY2007

Results and Discussion

Results for identification of incidental monkfish landings

Incidental landings by open access permit category E and state-only permitted vessels

The dealer and vessel permits databases allowed for the categorization of landings of monkfish in FY2012 by permit or permit category (Table 2). Matching these records to FVTRs enabled the allocation of dealer-reported landings to each of the two management areas (Table 3). For FY2012, landings by permit category E and state-permitted-only vessels totaled 2,344,392 live pounds.

Table 2: Summary statistics for monkfish in FY2012

	Live pounds
FY2012 monkfish landings by permit category E and state-only-permitted vessels	2,344,392
FY2012 monkfish landings by limited access permit category vessels	17,824,407
Total FY2012 monkfish landings	20,168,799

Source: NMFS NERO Permits, dealer, and DMIS (Data Matching and Imputation System) Databases.

Table 3: FY2012 monkfish landings by permit category E and state-permitted-only vessels by management area.

Management area	Live pounds
NMA	956,918
SMA	1,387,474
Total	2,344,392

Source: NMFS NERO Permits, dealer and DMIS (Data Matching and Imputation System) Databases.

Incidental landings by monkfish limited access permitted vessels

Incidental and directed monkfish landings for each limited access permit category and management area were estimated by matching dealer-reported landings data with vessel-reported DAS declarations and fishing vessel trip reports in the Data Matching and Imputation System (DMIS). In the NMA, incidental landings of monkfish by limited access monkfish vessels were approximately three times higher than landings on directed trips for both permit categories (Table 4). The pattern was reversed in the SMA, with over three times more landings on directed trips than on incidental trips by limited access monkfish vessels (Table 4).

Table 4. FY2012 monkfish directed and incidental landings by permit category and management area.

Management Area	Permit Category	Incidental or Directed Landings	Prorated Total Live lbs	Percentage of directed fishery by permit category
NMA	AC	D	1,289,888	63%
		I	3,899,598	
	BD	D	761,726	37%
		I	2,334,427	
SMA	AC	D	2,505,224	36%
		I	1,380,396	
		BDH	D	4,499,649
		I	871,663	

Source: NMFS NERO Permits and DMIS (Data Matching and Imputation System) Databases.

After subtracting estimated discards and incidental landings by both limited and non-limited access vessels, the portion of the TAL to be allocated to the directed monkfish area by permit category could be calculated. The allocations of monkfish for the directed limited access fishery were further apportioned by the percentage of directed fishery landings by permit category (Tables 4 and 5)

Table 5. ACT options for FY2014-FY2016 by Monkfish Fishery Management Areas with corresponding estimated discards, incidental landings and directed fishery allocations by monkfish permit category.

Management Area	ACT (mt) (1)	Discard rate (2)	Discards (mt) (3)	TAL (mt)* (1)-(3) =(4)	TAL (live lbs) ((4)* 2204.623 lb/t)	TAL (live lbs) incidental landings subtracted (5)	AC incidental landings (6)	BD(H) incidental landings (7)	AC proportion of directed landings (8)	BD(H) proportion of directed landings (9)	AC allocation of TAL ((5)- (6)+(7)) (8)	BD(H) allocation of TAL ((5)- (6)+(7)) (9)
NMA	6,567	13.4%	880	5,687	12,537,737	11,580,819	3,899,598	2,334,427	63%	37%	3,368,480	1,978,314
SMA	11,513	26.0%	2,993	8,520	18,782,547	17,395,073	1,380,396	871,663	36%	64%	5,451,485	9,691,529

*TAL numbers in the two management areas differ from FY2011-2013 due to an adjustment of the assumed discard rate in the most recent stock assessment.

Table 6. Directed allocations of the monkfish area TAL by permit category for FY2014-FY2016, actual and modeled FY2012 landings by Monkfish Fishery Management Area with corresponding proportional increase in landings necessary to harvest the directed allocation of the FY2014-2016 monkfish TAL.

	AC directed allocation of FY2014-2016 TAL (1)	BDH directed allocation of FY2014-2016 TAL (2)	Area directed fishery allocation FY2014-2016 (lbs) (3)	Total directed FY2012 landings (4)	Proportional increase in FY2012 landings to land FY2014-2016 directed allocation of TAL (3)/(4)
NMA	3,368,480	1,978,314	5,346,794	1,987,153	2.69
NMA under increased incidental landing limits	2,353,386	1,382,147	3,735,534	1,987,153	1.88
SMA	5,451,485	9,691,529	15,143,014	6,895,939	2.20
SMA landings projected with increased trip limit	5,451,485	9,691,529	15,143,014	7,822,020	1.94

Procedures for calculation of DAS allocation and/or trip limits for each management alternative

Adjustment of allocated Northern Management Area DAS for monkfish limited access permitted vessels

To project the allocation of days at sea necessary to land the directed fishery allocation of the FY2014-2016 NMA TAL, the frequency distribution of DAS charged by number of vessels was iteratively increased until the Riemann sum under the distribution increased proportionally to the FY2014-2016 directed NMA allocation divided by the FY2012 directed NMA landings (Figure 1, Table 6). Days at sea usage was increased by 24 days at sea in the NMA (from 40 to 64) to land the directed allocation of the FY2014-2016 NMA monkfish TAL (Figure 1, Table 7).

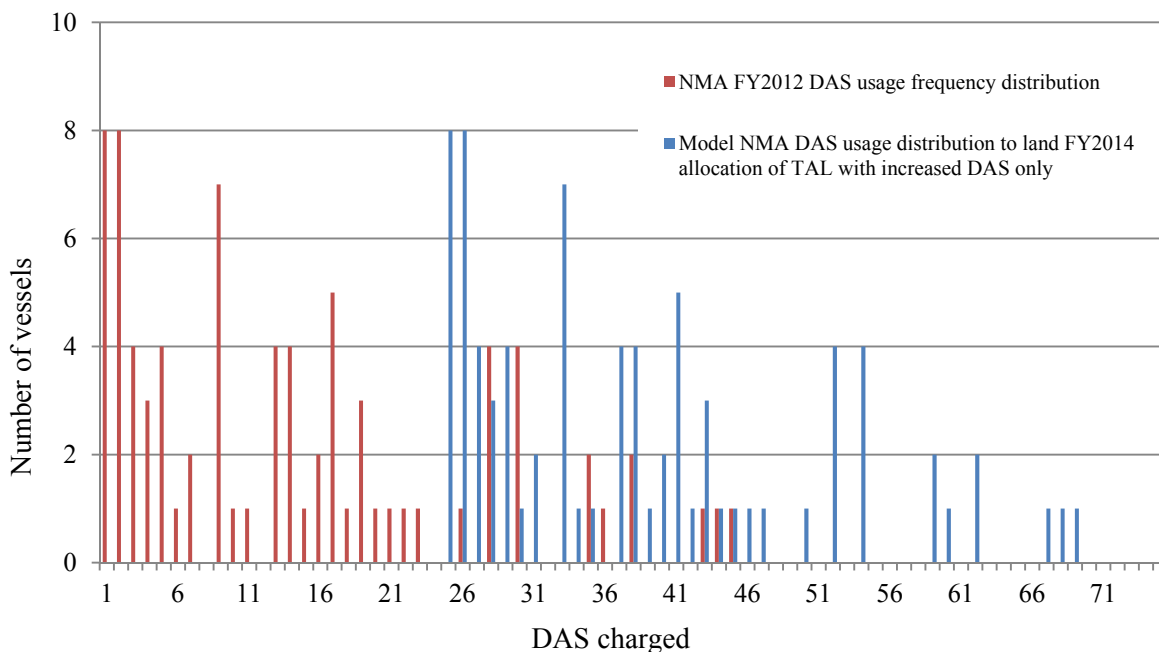


Figure 1. Monkfish Northern Management Area, FY2012 actual and modeled DAS usage frequency distribution

Adjustment of allocated Northern Management Area DAS for monkfish limited access permitted vessels under increased incidental daily landing limits

To project the allocation of days at sea necessary to land the directed fishery allocation of the FY2014-2016 NMA TAL under increased incidental landing limits, incidental landings under the prescribed incidental limits (600 lbs tail weight per DAS for permit category vessels, 500 lbs per DAS for permit category D vessels) were modeled using FY2012 frequency distributions (Figures 2 and 3). These projected increased incidental landings were then deducted from the directed fishery allocation for FY2014-2016 facilitating the calculation of the proportional increase over FY2012 levels of directed fishery landings necessary to land the directed fishery allocation of the NMA TAL (Table 6). The frequency distribution of incidental DAS charged by number of vessels was then iteratively increased until the Riemann sum under the distribution increased proportionally to the FY2014-2016 directed NMA allocation divided by the FY2012 directed NMA landings (Figure 4, Table 6). Days at sea usage was increased by 13 days at sea in the NMA (from 40 to 53) to land the

directed allocation of the FY2014-2016 NMA monkfish TAL under increased incidental daily landing limits (Figure 4, Table 7).

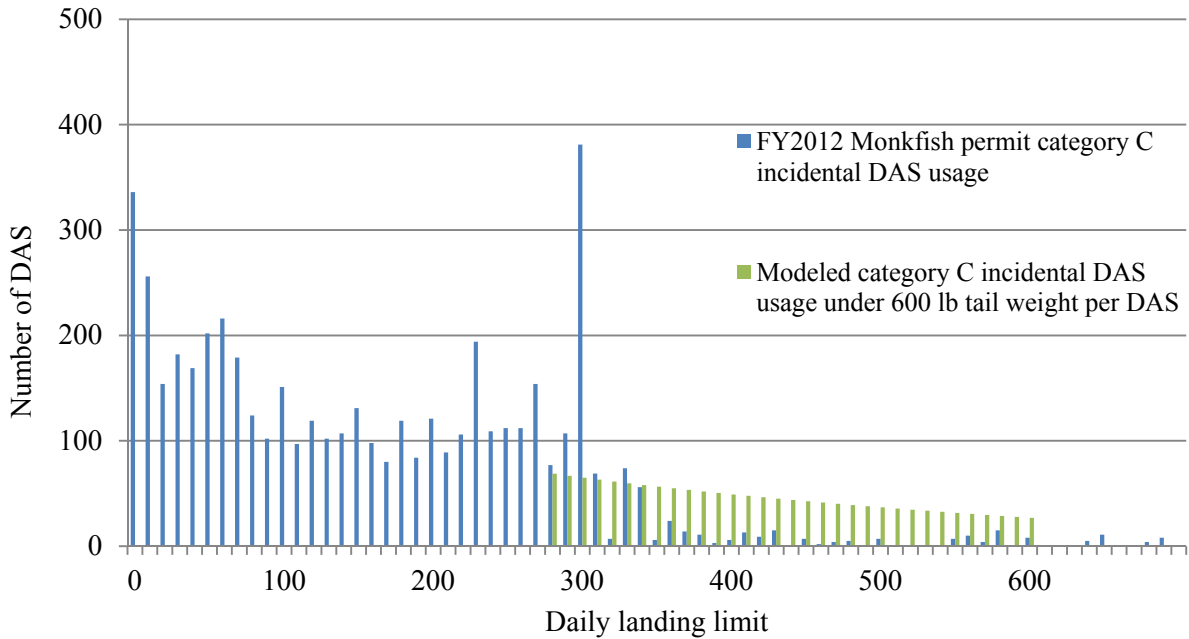


Figure 2. Monkfish Northern Management Area, FY2012 actual and modeled incidental monkfish permit category C DAS usage frequency distribution under increased incidental landing limits.

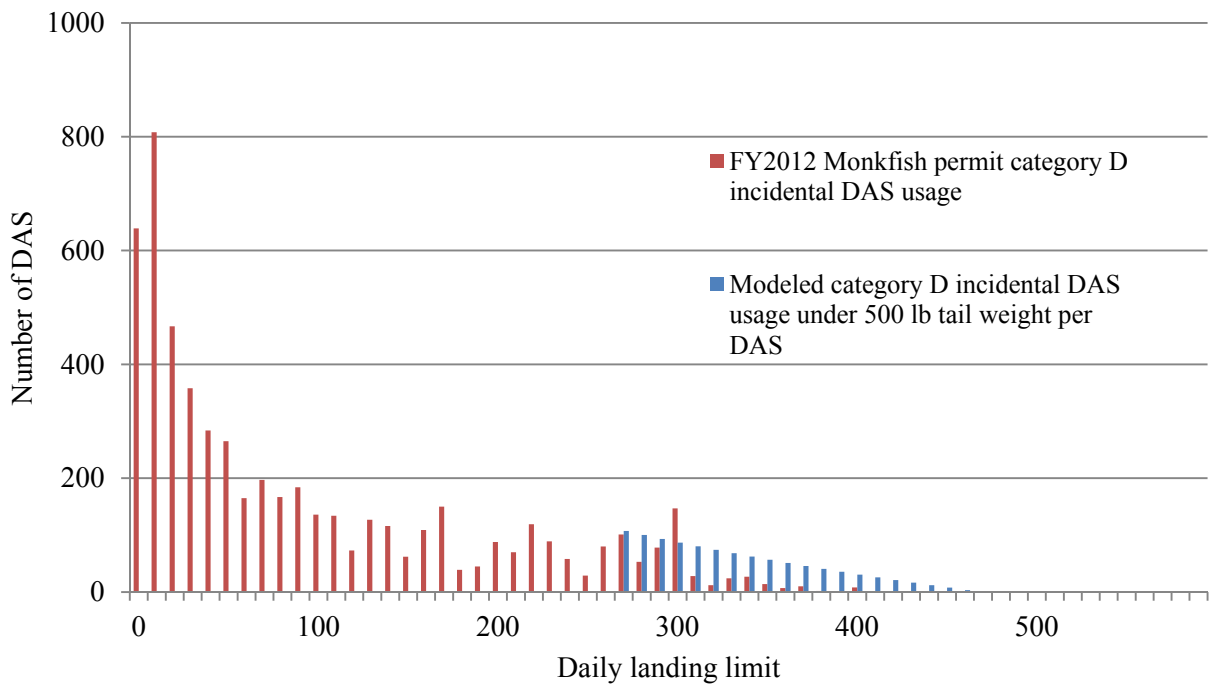


Figure 3. Monkfish Northern Management Area, FY2012 actual and modeled incidental monkfish permit category D DAS usage frequency distribution under increased incidental landing limits.

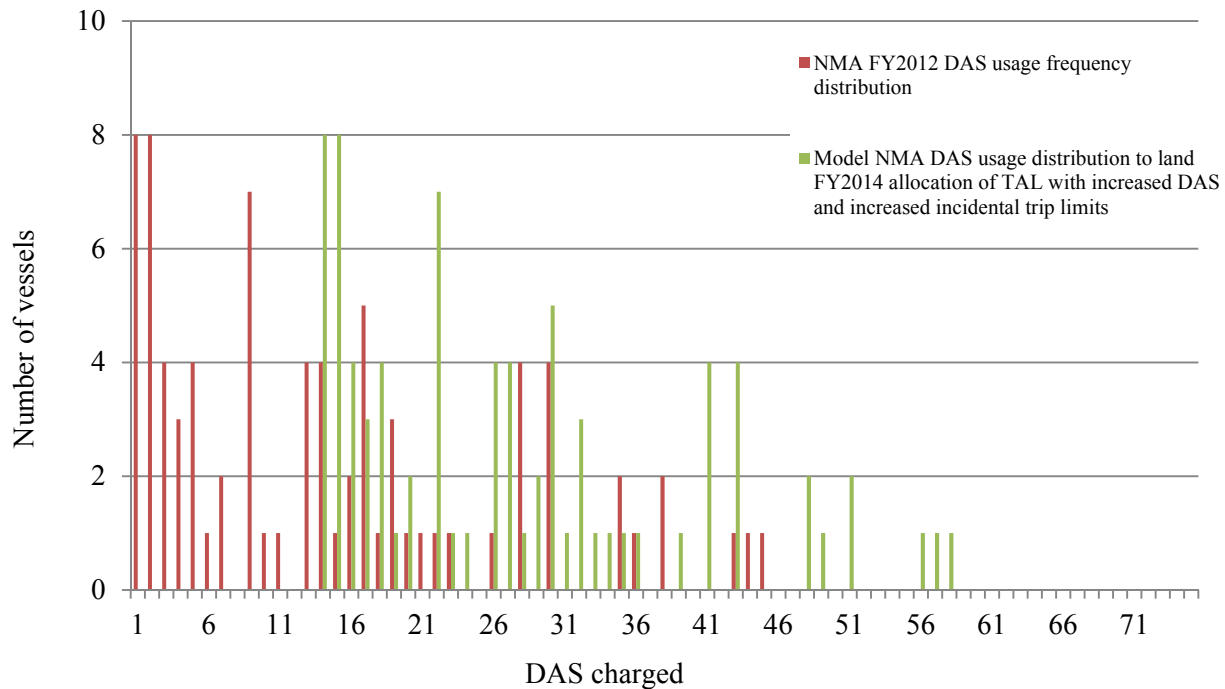


Figure 4. Monkfish Northern Management Area, FY2012 actual and modeled DAS usage frequency distribution under increased incidental landing limits

Adjustment of allocated Southern Management Area DAS for monkfish limited access permitted vessels

The same method as described above for the NMA was applied to the DAS charged by number of vessels frequency distribution in the SMA. Under the increased daily landing limits laid out in Alternative 2, days at sea usage was projected to increase by 18 days at sea in the SMA (from 28 to 46) to land the directed allocation of the FY2014-2016 SMA monkfish TAL (Figure 5, Table 7). Under the status quo daily landing limits of Alternative 3, days-at-sea usage was projected to increase by 23 days at sea in the SMA (from 28 to 51) to land the directed allocation of the FY2014-2016 SMA monkfish TAL (Figure 5, Table 7).

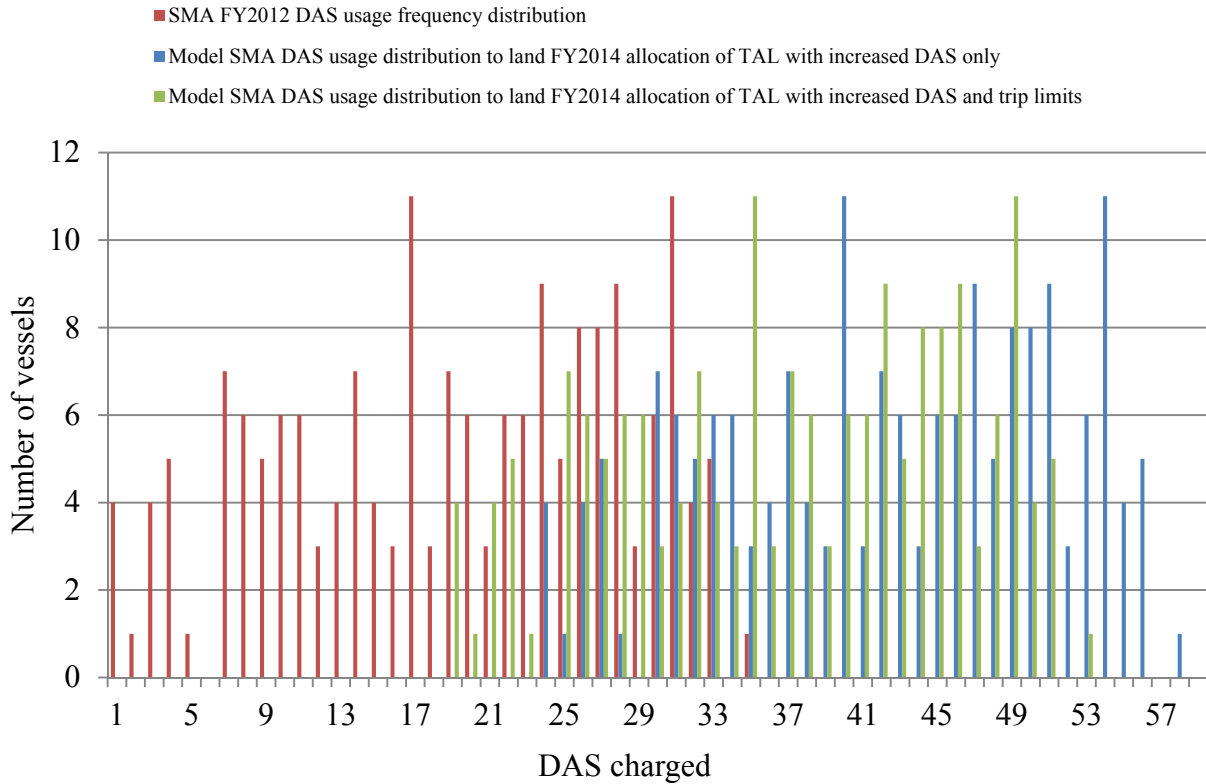


Figure 5. Monkfish Southern Management Area, FY2012 actual and modeled DAS usage frequency distribution

Adjustment of daily landing limits for monkfish limited access permitted vessels in the Southern Management Area by permit category

To adjust daily landing limits in the Southern Management Area, frequency distributions of DAS charged by daily landings (tail weight lbs) by permit category were created. To project the increase in the daily landing limits necessary to harvest the allocated portion of the TAL on directed monkfish trips, the distribution observed in FY2012 was moved along the horizontal axis until the Riemann sum of the distribution equaled the directed allocation of the FY2014-2016 TAL for each permit category (Figures 6 and 7). For permit category AC, the daily landing limit increased to 1000 lbs tail weight per DAS to harvest the directed portion of the FY2014-2016 TAL in the SMA (Figure 6, Table 7). For permit category BDH, the daily landing limit increased to 860 lbs tail weight per DAS to harvest the directed portion of the FY2014-2016 TAL in the SMA (Figure 7, Table 7).

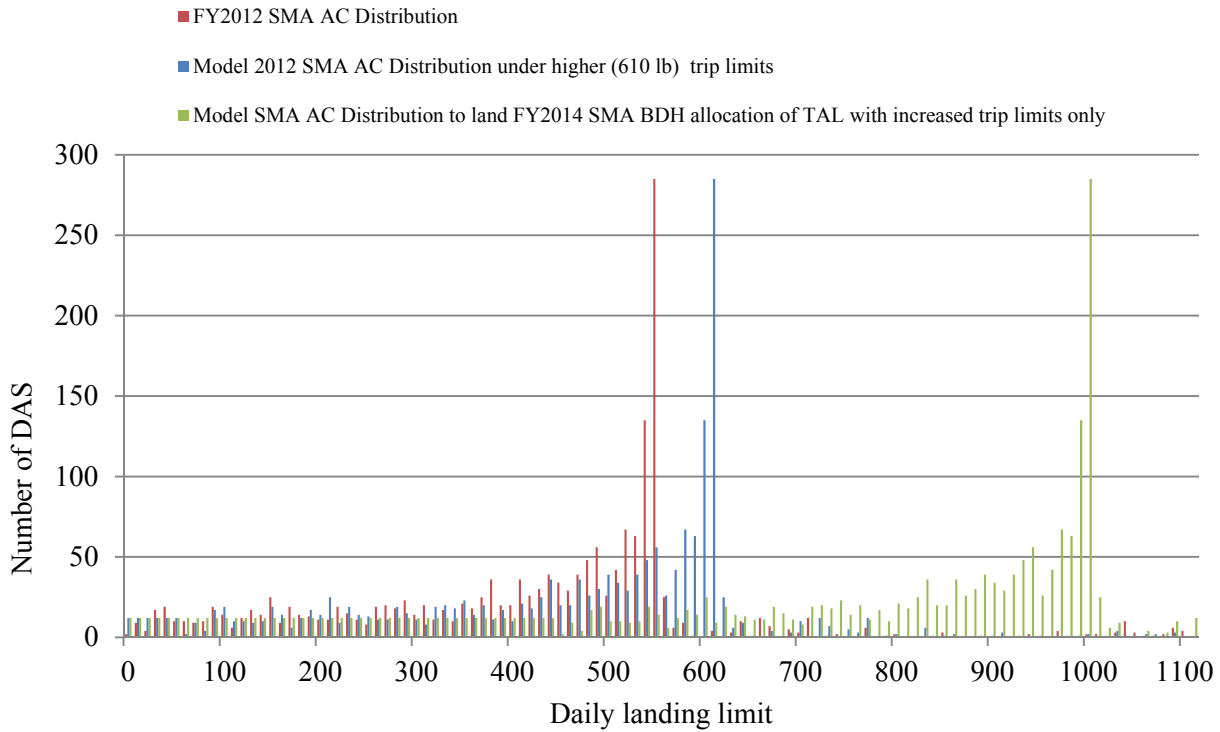


Figure 6. Southern Management Area, Monkfish permit category AC FY2012 actual and modeled daily landing limit frequency distribution

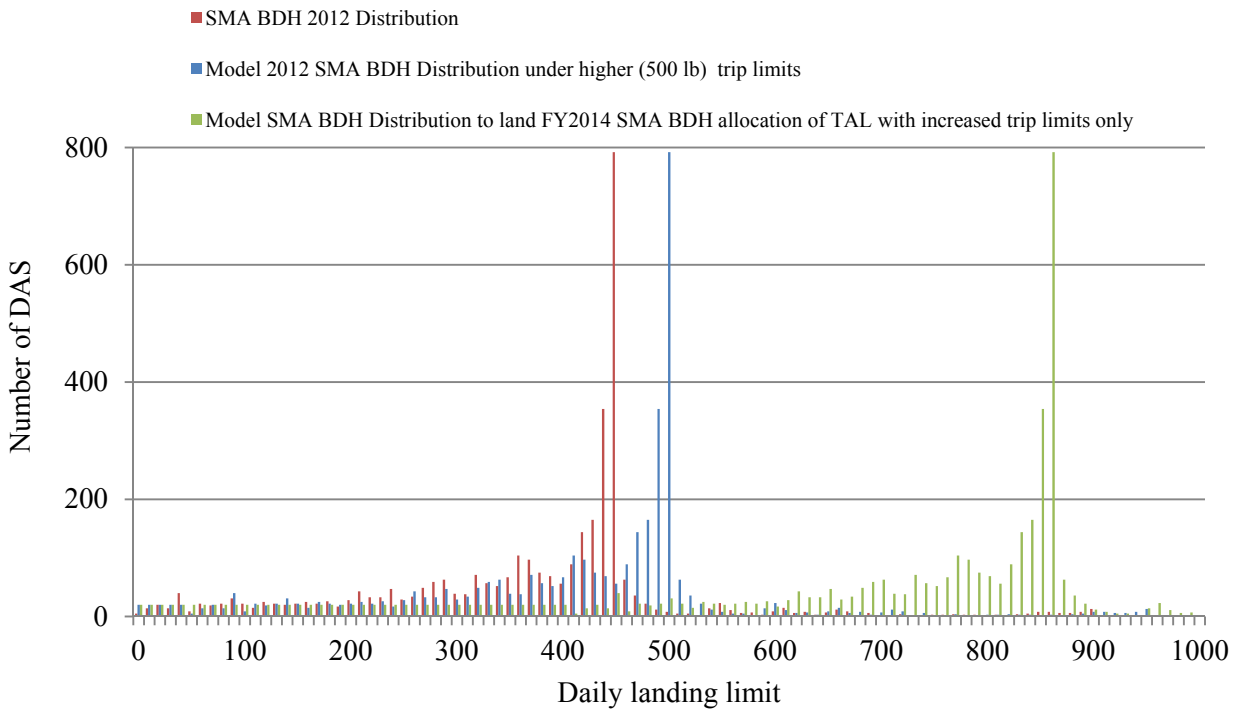


Figure 7. Southern Management Area, Monkfish permit category BDH FY2012 actual and modeled daily landing limit frequency distribution

Table 7. DAS, directed fishery daily landing limits, and incidental landing limits (lbs tail weight per DAS) alternatives for both Monkfish Fishery Management Areas for FY2014-2016. Shaded grey cells indicate the variables that were solved for in this analysis.

Management Area	Alternative	Incidental landing limit	AC daily landing limit	BD daily landing limit	DAS
NMA	1 (No Action)	25% of landings onboard, not to exceed 300	1250	600	40
	2	25% of landings onboard, not to exceed 300	1250	600	64
	3	600 for A&C permit; 500 for B&D permits	1250	600	53
SMA	1 (No Action)	300	550	450	28
	2	300	610	500	46
	3	300	550	450	51
	4	300	1000	860	28

**ADDENDUM TO
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Analysis for FY2014-FY2016**

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January 12, 2014

The Monkfish Committee met on Friday, January 10, 2014 to discuss proposed management measures in Monkfish Framework 8. The Committee has requested projected landings of monkfish under a set of updated management alternatives to those laid out in Table 7 of the monkfish days at sea and daily landing limit allocation analysis and copied below Table 1). The updated alternatives include: NMA modified Alternative 3: 40 DAS and increased incidental landing limits (600 for A,C permit and 500 for B,D permit when fishing under a groundfish DAS (implied elimination of 25% landings threshold); status quo for others; SMA modified Alternative 2: Increased daily landing limits with 32 allocated DAS; SMA modified Alternative 4: status quo DAS allocations with daily landing limits of 610 lb tail weight per DAS for permit category A,C vessels and 500 lb tail weight per DAS for permit category B,D ,H vessels.

Original Alternatives Table

Table 1. DAS, directed fishery daily landing limits, and incidental landing limits (lbs tail weight per DAS) alternatives for both Monkfish Fishery Management Areas for FY2014-2016. Shaded grey cells indicate the variables that were solved for in the original analysis.

Management Area	Alternative	Incidental landing limit	AC daily landing limit	BD daily landing limit	DAS
NMA	1 (No Action)	25% of landings onboard, not to exceed 300	1250	600	40
	2	25% of landings onboard, not to exceed 300	1250	600	64
	3	600 for A&C permit; 500 for B&D permits	1250	600	53
SMA	1 (No Action)	300	550	450	28
	2	300	610	500	46
	3	300	550	450	51
	4	300	1000	860	28

Updated Trip Limits/DAS Allocation Alternatives and Projected Monkfish Landings

Projected Landings under NMA modified Alternative 3

To project landings under a modified Alternative 3 in the NMA, actual NMA FY2012 directed landings were added to projected incidental landings from the original analysis of NMA Alternative 3. NMA FY2012 directed landings were used because the allocated number of DAS in Alternative 3 were the same as the allocated directed DAS in FY2012 (40). Total incidental monkfish fishery landings in the NMA were projected to increase under increased incidental landing limits of 600 lb tail weight for permit category A,C vessels and 500 lb tail weight per DAS for B,D vessels. The method used to project this increase was laid out in the original analysis.

Projected Landings under SMA modified Alternative 2

Landings under SMA Alternative 2, increased directed landing limits of 610 for permit category A,C vessels and 500 for permit category B,D,H vessels under 32 DAS, were projected according to the method described in the original analysis. That method used an iterative approach to locate the increase in allocated DAS that would result in a desired increase of the directed fishery TAL. Under 32 DAS, an increase of 4 DAS over the status quo 28 DAS allocation, directed fishery landings were projected to increase by 21% to yield a total projected landings in the SMA by limited access monkfish vessels of 11,710,117 lb (Table 2).

Projected Landings under SMA modified Alternative 4

The SMA Management Alternative 4 was modified to include increased directed landing limits of 610 for permit category A,C vessels and 500 for permit category B,D,H vessels under status quo 28 DAS. The projected landings from the original analysis under these trip limits, which were used for the analysis of the original Alternative 2, were examined under the status quo 28 DAS allocation. Projected increases in landings were due solely to the increase of the daily landing limit. Landings were projected to increase by 817,147 with an increase over status quo daily landing limits (Table 2).

Table 2. Framework 8 Updated Monkfish Management Alternatives with Projected Limited Access Monkfish Fishery Landings

Management Area	Alternative	Incidental Landing Limit (lb/DAS)	A,C daily landing limit (lb/DAS)	B,D (H – SFMA only) daily landing limit (lb/DAS)	DAS	Projected Limited Access Monkfish Fishery Landings for FY2014-2016
NFMA	1 - No Action	25% of landings onboard, not to exceed 300	1250	600	40	8,285,639
	2	25% of landings onboard, not to exceed 300	1250	600	64	11,553,347
	3 (preferred)	600 for A,C permit and 500 for B,D permit when fishing under a groundfish DAS (implied elimination of 25% landings threshold); status quo for others	1250	600	40	9,896,900
SFMA	1 - No Action	Status quo	550	450	28	9,256,932
	2 (preferred)	Status quo	610	500	32	11,710,117
	3	Status quo	550	450	51	17,441,459
	4 (revised)	Status quo	610	500	28	10,074,079