

AMENDMENT 3 DRAFT 1 – SUBJECT TO CHANGE

INCREASED RECREATIONAL ACCESS BY MANAGING SOUTHERN FLOUNDER SEPARATELY FROM OTHER FLOUNDER SPECIES

(Version July 2020)

I. ISSUE

Implement single species or genus level management to increase recreational access to summer and Gulf flounder while maintaining harvest reductions in the southern flounder fishery.

II. ORIGINATION

The adoption of Southern Flounder Fishery Management Plan (FMP) Amendment 2 by the North Carolina Marine Fisheries Commission (MFC) mandated a 72% reduction in pounds starting in 2020 for both the commercial and recreational sectors to achieve sustainability of the stock within 10 years (NCDMF 2019a). To achieve this reduction within the recreational fishery, Marine Recreational Information Program (MRIP) data from 2008-2017 were analyzed relative to the terminal year (2017) landings to determine appropriate bag-limits that operate in concurrence with seasonal closures. Importantly, Amendment 2 contained acute management measures to achieve sustainable harvest (seasons) and was predicated on the immediate development of Amendment 3 for the purpose of implementing more comprehensive long-term management measures to achieve sustainable harvest.

At the request of the MFC and the Southern Flounder FMP Advisory Committee the North Carolina Division of Marine Fisheries (division) examined alternative management scenarios that incorporate species specific harvest of flounder (i.e. summer, southern, Gulf). When constituent flounder species are given consideration, the potential exists to develop additional scenarios that further extend the seasonal harvest of flounder species.

III. BACKGROUND

Southern flounder, or flounder species in general (*Paralichthys spp.*), are one of the most targeted recreational species in North Carolina. Southern flounder is primarily landed by recreational fishermen using hook-and-line. Additional harvest, albeit to a lesser extent, is accomplished with gigs and recreational use of commercial gears (e.g. anchored large-mesh gill nets). Between 2008 and 2017, North Carolina's total recreational removals (in pounds) were approximately 19% of the total coast-wide removals (North Carolina to the east coast of Florida; NCDMF 2019a). The recreational flounder fishery in North Carolina accounted for 28% of the state's total removals (26% in landings and an additional 2% of dead discards) in 2017 (the terminal year of the assessment; NCDMF 2019a). For additional information on landings see the *Description of the Fisheries* section and *Sustainable Harvest Issue Paper*.

In North Carolina, the recreational flounder fishery is managed as an aggregate consisting of three main species of flounder (southern, summer, and Gulf). Thus, a closure on the southern flounder recreational fishery means the harvest of the other flounder species is prohibited. This is particularly relevant for the closure of the recreational ocean fishery (where summer and Gulf flounder are more likely to be caught) and is acknowledged as an unintended consequence of this aggregate management. Based on MRIP data, the majority of flounder harvest across all species occurs in estuarine waters (Figure 1). From flounder landed in state territorial seas (STS) and the exclusive economic zone (EEZ) (referred to as "ocean" from this point in the document

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forward), approximately 50% of the recreational harvest from the ocean are species other than southern flounder. Specifically, summer flounder is more frequently encountered in the ocean fishery relative to southern flounder. Gulf flounder represents less than 6% of total flounder harvest and is predominately harvested in ocean waters (Figure 1). Pending species-specific management, recreational access to summer and Gulf flounder will not be possible when the southern flounder season is closed.

This issue paper examines the application of single species management within a seasonal framework. The deconstruction of flounder species into discrete management units will provide an opportunity for stakeholders to have continued access to summer and Gulf flounder while simultaneously maintaining the required reduction for southern flounder as defined in Amendment 2.

Educational outreach is key to this issue as species identification lays the groundwork for successful implementation and long-term viability of managing flounder by species or aggregations. The division has developed a [Flounder Identification Guide](#) that is available through the “Hot Topics” portion of the homepage of the division website. This guide describes the main characteristics (presence of ocellated or non-ocellated spots, gill rakers, and fin ray counts) to identify the three main flounder species in North Carolina waters and serves as a good reference to educate anglers.

The absence of ocellated spots in southern flounder relative to Gulf and summer flounder makes a good argument for this characteristic to be used as the primary metric to differentiate between flounder species. Additionally, between 2008 and 2017 southern flounder contributed 73% of total flounder landings with summer contributing 22% and Gulf contributing 5%. Since the primary characteristic for identification (i.e. ocellated spots) is shared between summer and Gulf flounder and with the latter comprising only a small proportion of total harvest, there is support for aggregating summer and Gulf flounder into a single ocellated flounder category.

In North Carolina the management of flounder species has undergone several regulatory iterations to promote the sustainability of the stock. The first implementation of a minimum size limit occurred in 1979 at 11” for both estuarine and ocean waters. In 2005, the first bag limit was implemented for estuarine waters at eight fish. Subsequent minimum size limits have been implemented through the original North Carolina Southern Flounder FMP (NCDMF 2005), Amendment 1 (NCDMF 2013), Supplement A to Amendment 1 (NCDMF 2017a), revisions to the joint Atlantic States Marine Fisheries Commission (ASMFC) and Mid-Atlantic Fishery Management Council Summer Flounder, Scup, and Black Sea Bass FMP (ASMFC 2017; MAFMC 2019). Despite changes in regulations through time the overall trend for southern flounder harvest has declined. This was underscored by the coast wide stock assessment. As such, the acceptance of Amendment 2 to the Southern Flounder FMP mandated a 72% reduction in pounds beginning in 2020 to promote the recovery of the stock within 10 years. This extreme reduction could best be accomplished through a 45-day southern flounder season spanning Aug. 16 through Sept. 30 as discussed in the *Sustainable Harvest Issue Paper*.

IV. AUTHORITY

North Carolina General Statutes
G.S. 113-134 RULES

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G.S. 113-182 REGULATION OF FISHING AND FISHERIES

G.S. 113-182.1 FISHERY MANAGEMENT PLANS

G.S. 113-221.1 PROCLAMATIONS; EMERGENCY REVIEW

G.S. 143B-289.52 MARINE FISHERIES COMMISSION – POWERS AND DUTIES

North Carolina Marine Fisheries Commission Rules

15A NCAC 03H .0103 PROCLAMATIONS, GENERAL

15A NCAC 03I .0120 POSSESSION OR TRANSPORTATION LIMITS THROUGH STATE WATERS; SALE OF NATIVE SPECIES

15A NCAC 03M .0503 FLOUNDER

V. DISCUSSION

MRIP data from 2008 through 2017 were analyzed to determine seasons that would allow harvest of ocellated flounder and not jeopardize rebuilding of the southern flounder stock. Seasons for additional access to ocellated flounder will be identified, in addition to the Aug. 16 to Sept. 30 season for southern flounder. Seasons identified will be selected so as not to exceed the total allowable landings for the recreational fishery for southern flounder while minimizing the potential of additional discards, to not exceed the total removals. See *Sustainable Harvest Issue Paper* for further explanation.

Importantly, the increases in minimum size limits for flounder species have caused an inversion of harvest between summer and southern flounder such that the latter has accounted for most flounder harvest since 2001 (see *Description of the Fishery* section; Figure 2). The ASMFC has implemented state and/or regional level conservation equivalencies for the management of summer flounder since 2001 (ASMFC 2017). The 2017 summer flounder landings were 33.2% lower than the 10-year average and 57.7% lower than the 20-year average. ASMFC must be notified of any changes to the summer flounder fishery in North Carolina state waters. However, approval of changes by ASMFC is not required if the changes are expected to be more restrictive than the management measures already approved by ASMFC. Changes to the summer flounder fishery in EEZ waters off North Carolina may be impacted by the Mid-Atlantic Fishery Management Council and National Marine Fisheries Service (NMFS). Until conservation equivalencies are approved by NMFS, coast wide measures for summer flounder in the EEZ include a 4-fish possession limit, a 19-inch total length minimum size limit, and an open season of May 15 – Sep 15 (MAFMC 2019). These measures serve as a default each year, until annual conservation equivalencies are approved by NMFS, which allow state regulations to be applied to EEZ waters. The impacts to the proposed ocellated flounder fishery in the early season are that these conservation equivalencies are not usually approved until May or June, which is after this proposed season. The timing of NMFS approving conservation equivalency management measures in EEZ waters would potentially limit the ocellated flounder season to state territorial waters only. These federal regulations impact the North Carolina fishery differently as state management of flounder is collective and not by individual species.

Discussed below is the option that meets the required reductions for southern flounder and increases access to the summer and Gulf flounder fisheries. Some seasons are more conservative than others and may be more prudent to select to evaluate success of species identification and other factors that could impact the recovery of southern flounder. Any southern flounder harvest during the additional season will need to be accounted for in the recreational fishery quota so the

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required reductions are not compromised. In addition, harvest of flounder will only be allowed in the ocean when the southern flounder season is closed and will be with hook-and-line only; no gigging will be allowed as anglers cannot positively identify species prior to harvest. All explored seasons presented assume that all anglers positively identify all southern flounder and release them.

As stated above, flounder fishing will be limited to the ocean during the ocellated season and is allowed by the transportation limits rule, 15A NCAC 03I .0120. This rule allows summer and Gulf flounder to be transported during the open ocellated season through closed waters, provided anglers do not stop and fish in estuarine waters with flounder on board.

The division recommendation in the sustainable harvest issue paper is that southern flounder harvest be constrained to the season selected in Amendment 2; this is a 45-day season spanning Aug. 16 through Sept. 30 with a one-fish bag limit. The most conservative option (besides *status quo*) is allowing stakeholders access to ocellated stocks from March 1 through April 15 with a one-fish bag limit and also a one-fish bag limit during the southern flounder season. This satisfies the target southern flounder reduction of 72% while allowing an estimated harvest of an additional 1,477 pounds of ocellated flounder (Table 1). Though the additional estimated harvest of ocellated flounder during this time is low, this does not account for potential changes in angler behavior wherein additional ocellated landings may occur within this short season. The March 1 through April 15 season also protects the southern flounder stock as compared to other potential seasons. This additional season, however, has the potential to increase the harvest of southern flounder an estimated 3,244 pounds or approximately 2.7% of the annual harvest allocation.

Importantly, as the southern flounder stock recovers there will be increased access to the resource. Analysis of MRIP data during the development of Amendment 2 reveals that recreational anglers very rarely achieve the four-fish bag limit and catch rates are typically one fish. From approximately 17,000 in-person angler intercepts conducted in 2017 only one angler achieved the four-fish bag limit and only 2% of trips harvested more than one fish. To buffer against increased harvest compromising targeted reductions it will be beneficial to constrain the bag limit to one fish in any flounder season. For additional discussion on bag limits and angler success see the *Sustainable Harvest Issue Paper*.

Additional analysis of ocellated flounder seasons was undertaken to provide examples of the potential for excessive southern flounder harvest during additional seasons relative to a year-round ocellated season. These included a three-month ocellated season from April 1 through June 30 and a six-month ocellated season from April 1 through Sept. 30, with a one fish bag limit with harvest allowed in ocean waters. These truncated seasons provide a means to further reduced incidental harvest of non-ocellated (southern) flounder while allowing an estimated 45,836 and 109,263 pounds of ocellated harvest respectively (Table 1). Conversely, the potential southern flounder harvest during these truncated seasons will negatively impact management actions necessary to accomplish the 72% reduction. These longer (three and six-month) ocellated seasons are expected to have impacts on the southern flounder fishery by 102,153 – 170,758 additional pounds of southern flounder harvest if anglers misidentify southern flounder (Table 1; Figure 3). These estimates are the least conservative but provide contrast to show the potential

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problems when attempting to allow additional ocellated harvest. The magnitude of potential southern flounder harvest precludes these additional seasons from being developed as options.

The most important caveat of single species management is the evaluation of the recreational angler's ability to distinguish among North Carolina's constituent flounder species. The Coastal Angling Program (CAP) is currently developing a mobile phone application to empirically investigate the recreational angler's ability to correctly identify flounder. The results of this investigation will be necessary for any implementation of single species management. Analysis of potential ocellated flounder seasons assumed accurate species identification does not occur to show the worst-case scenario projected. If anglers adapt and learn identification of flounder species, impacts presented will be lower and subsequently the southern flounder season during the fall may not be as impacted.

Allowing increased access to the recreational fishery through species specific management by allowing the division to implement seasons through the adaptive management framework would be the most risk averse approach while still allowing harvest of other flounder species. It allows access to summer and Gulf flounder during a trial six-week season during March 1 through April 15 for the hook-and-line fishery in ocean waters only. Gigs would not be allowed during the ocellated flounder season, as anglers cannot positively identify species prior to harvest.

Anticipated harvest of southern flounder during the ocellated season will be accounted for through MRIP sampling. Though southern flounder are not allowed to be harvested during this time, if angler identification is not accurate, landings of southern flounder have the potential to be higher than currently estimated. If the preliminary estimates of southern flounder harvest are higher in the early season than anticipated, the fall fishery will be shortened. The volume of southern flounder harvest from both seasons totaled will comprise the estimates of harvest to compare to the annual quota. Any overages will be applied to the subsequent year's quota and the seasons will be adjusted as necessary. This change in seasons to account for southern flounder harvest is necessary to maintain required reductions in the recreational southern flounder fishery.

Allowing harvest of summer and Gulf flounder when the southern flounder season is closed increases the possibility that southern flounder will be harvested to a greater extent than allowed under the sustainable harvest requirements. The potential for increased harvest may negate reductions achieved through the southern flounder season and limit rebuilding of the stock. Development of adaptive management measures to manage increased access to summer and Gulf flounder can be found in the *Adaptive Management Issue Paper*.

VI. PROPOSED MANAGEMENT OPTIONS

(+ potential positive impact of action)

(- potential negative impact of action)

1: Status Quo, do not allow species specific management to increase access to the recreational fishery

- + Maintains stringent management measure to ensure best chance of rebuilding
- Does not allow for access to more abundant flounder stocks

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2: 1-fish ocellated bag limit from March 1 through April 15 in ocean waters only and 1-fish bag limit consisting of any species of flounder during the southern flounder season

- + Allows for harvest of summer and Gulf flounder outside of identified southern flounder season
- + Complements recommended sustainable harvest bag limit
- + Minimizes potential impacts of misidentification by limiting seasons
- + Harvest of all southern flounder accounted for to meet required reductions
- +/- Ocean harvest only during early season
- Increased chance of southern flounder harvest due to species misidentification concerns
- Unequal access among recreational fishing gears during the early season
- Potential impacts to fall season due to excess southern flounder harvest in the early season

VII. RECOMMENDATION

NCDMF PDT/AC Recommendation

NCDMF initial recommendation is to allow a 1-fish ocellated bag limit in an early season from March 1- April 15 and a 1-fish flounder bag limit during the fall season from Aug. 16 – Sept. 30, with the understanding that the fall season may be truncated due to excessive southern flounder harvest during the early season.

NCDMF Management Review Team Recommendation *NCDMF Recommendation*

VIII. LITERATURE CITED

- ASMFC. 2017. Addendum XXVIII to the summer flounder, scup, and black sea bass fishery management plan: summer flounder recreational management in 2017. Arlington, VA. 13 p.
- MAFMC. 2019. Framework adjustment 14 to the summer flounder, scup, and black sea bass fishery management plan. Dover, DE. 161 p.
- NCDMF (North Carolina Division of Marine Fisheries). 2005. North Carolina Southern Flounder (*Paralichthys lethostigma*) Fishery Management Plan. North Carolina Division of Marine Fisheries, Morehead City, NC. 260 p.
- NCDMF. 2013. North Carolina Southern Flounder (*Paralichthys lethostigma*) Fishery Management Plan: Amendment 1. North Carolina Department of Environment and Natural Resources, Division of Marine Fisheries, Morehead City, NC. 380 p.
- NCDMF. 2017a. North Carolina southern flounder (*Paralichthys lethostigma*) fishery management plan: Supplement A to Amendment 1. North Carolina Division of Marine Fisheries, Morehead City, NC. 83 p.
- NCDMF. 2019a. North Carolina Southern Flounder (*Paralichthys lethostigma*) Fishery Management Plan Amendment 2. North Carolina Department of Environmental Quality, Division of Marine Fisheries, Morehead City, NC. 62 p.

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Table 1. Percent reductions in pounds of ocellated flounder and anticipated southern flounder landings under various options for the hook-and-line fishery.

Ocellated Flounder Season	Bag Limit Ocellated Season	Bag Limit Southern Flounder Season	Estimated Ocellated Flounder Landings	Southern Flounder Season	Southern Flounder Landings Early Season	Southern Flounder Landings Late Season	Total Southern Flounder Landing	Total Allowable Southern Flounder Landings
None	0	1	0	Aug 16 – Sept 30	0	118,128	118,128	126,315
Mar 1 – Apr 15	1	1	1,477	Aug 16 – Sept 30	3,244	118,128	121,371	126,315
Apr 1 – June 30	1	1	45,836	Aug 16 – Sept 30	102,153	118,128	220,281	126,315
Apr 1 – Sep 30	1	1	109,263				288,886	126,315

Note: Recreational gig fishery would not be allowed to operate during the ocellated season.

Note: None of the southern flounder seasons would allow harvest of more than one southern flounder in the aggregate.

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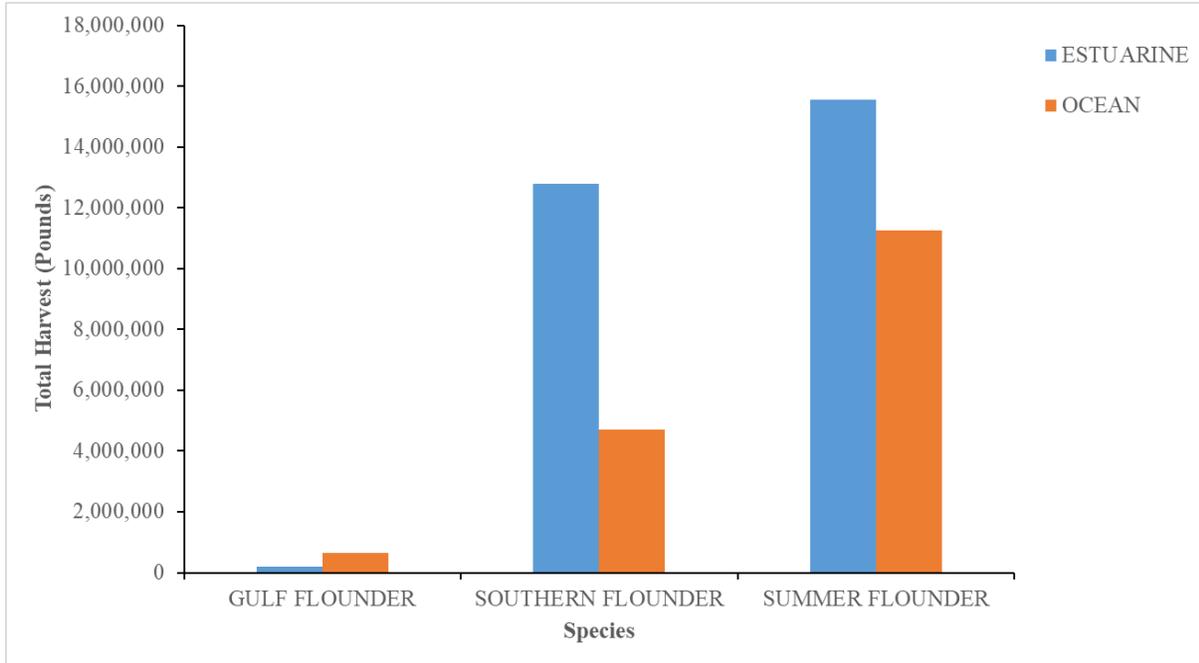


Figure 1. Pounds of harvest by flounder species from the ocean and estuarine waters, 1981-2019.

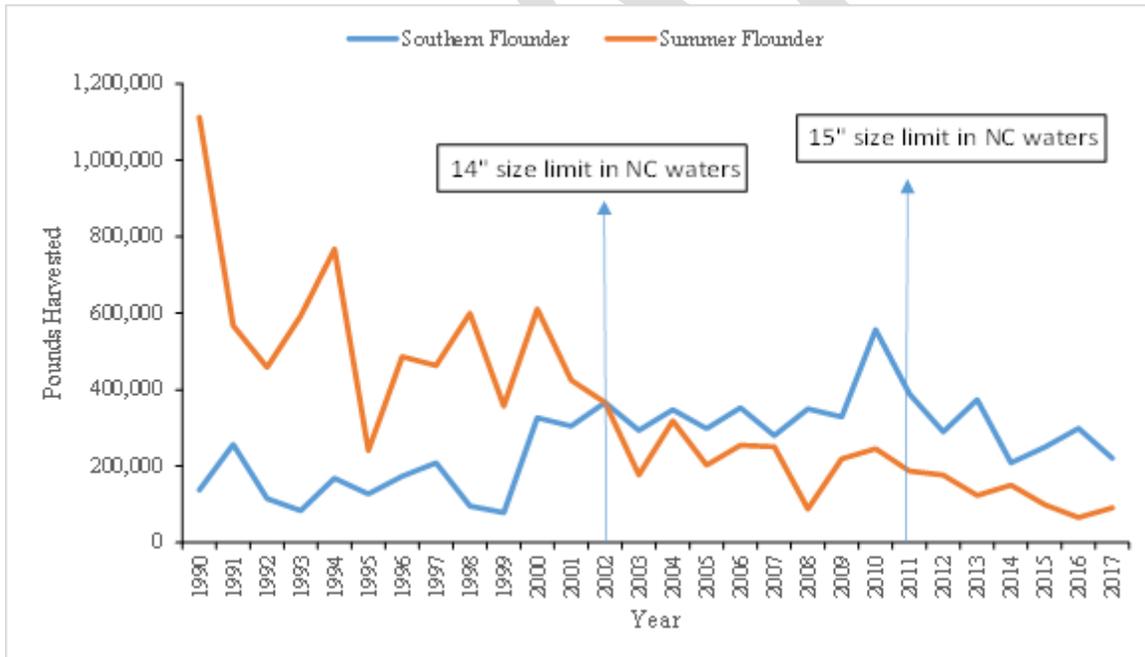


Figure 2. Southern and Summer Flounder pounds harvested (1990-2017).

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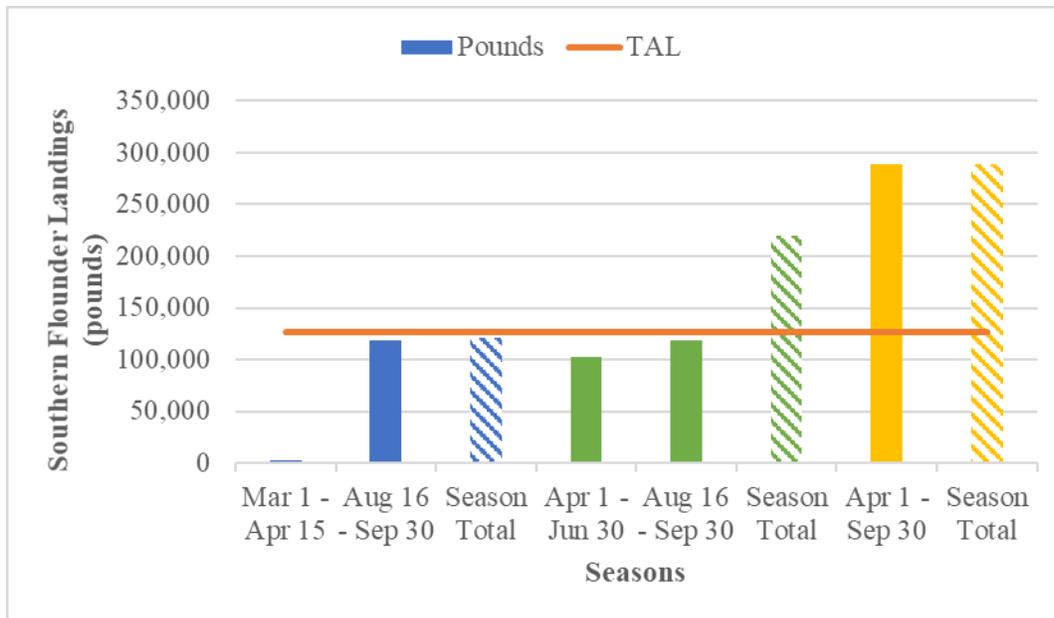


Figure 3. Southern flounder landings (in pounds) for seasons in reference to total allowable landings. All scenarios are based on a one fish bag limit.