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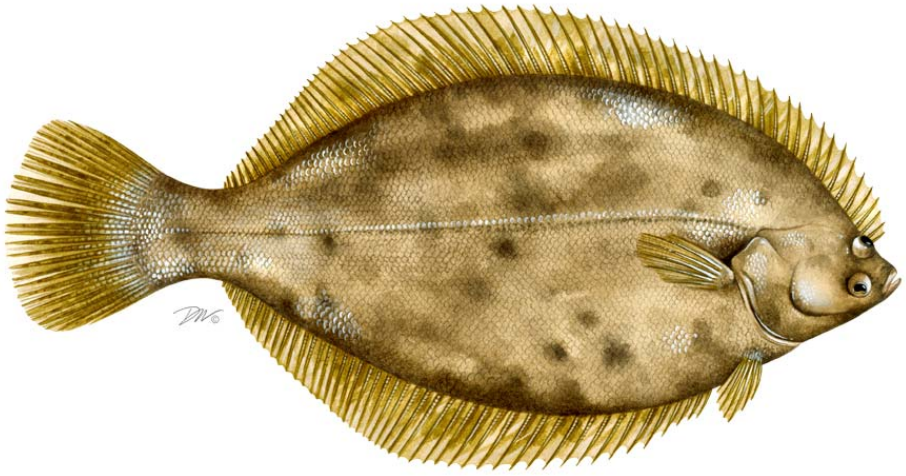
REVIEW OF THE
ATLANTIC STATES MARINE FISHERIES COMMISSION'S
INTERSTATE FISHERY MANAGEMENT PLAN FOR

WINTER FLOUNDER

(Pseudopleuronectes americanus)

2013 FISHING YEAR
(May 1 2013 – April 30, 2014)



For Board Approval

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Interstate Fishery Management Plan for Winter Flounder
2013 Fishing Year

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I. Status of Fishery Management Plan in Fishing Year 2013

Date of FMP Approval	Original FMP (October 1988)
Amendments	Amendment 1 (November 2005)
Addenda	Addendum I (May 1992) Addendum II (February 1998) Addendum I to Amendment 1 (May 2009) Addendum II to Amendment 1 (October 2012) Addendum III to Amendment 1 (May 2013)
Management Units	Three stocks units. Atlantic States Marine Fisheries Commission: two inshore stocks in the Gulf of Maine (GOM) and Southern New England/ Mid-Atlantic (SNE-MA). New England Fisheries Management Council: one stock in offshore waters of Georges Bank (GBK)
States with Declared Interest	Maine New Hampshire Massachusetts Rhode Island Connecticut New York New Jersey Delaware
Active Boards/Committees	Winter Flounder Management Board Advisory Panel Technical Committee Plan Review Team

The Atlantic States Marine Fisheries Commission (Commission) authorized development of the first Fishery Management Plan (FMP) for Winter Flounder (*Pleuronectes americanus*) in October 1988. The purpose of the plan was to: 1) address management of inshore stocks of winter flounder; and 2) prominently consider habitat and environmental quality as factors affecting the condition of the resource. The management unit includes states from Maine through Delaware.

The Commission manages inshore winter flounder as two stocks: the Gulf of Maine stock in waters north of Cape Cod, and the Southern New England/Mid-Atlantic stock in waters south of Cape Cod to the Delaware-Maryland border. The decision to consider only inshore stocks of winter flounder was based upon the Commission's focus on fisheries in state waters, and the differences in biological characteristics from the offshore stock in Georges Bank, which is managed by the New England Fisheries Management Council (Council). Although a large percentage of landings are presently taken from federal waters, this species migrates inshore

every winter to spawn. Increased fishing mortality on spawning populations in state waters will have a direct impact on the entire GOM and SNE/MA stock complexes.

The original FMP and Addendum I called for reductions in fishing mortality on winter flounder. It allowed states the flexibility to achieve those reductions based on the life history characteristics of the particular stocks inhabiting each region. Implementation of the plan required the interaction and cooperation between state fishery management agencies, National Marine Fisheries Service, the Council, and the Commission.

Although all states submitted plans that were approved by the Winter Flounder Management Board (Board), results from a 1995 stock assessment concluded that none of the states achieved a fishing mortality rate corresponding to F_{30}. Subsequent analyses in early January 1997 indicated that fishing mortality on a coastwide basis was slightly higher than the F_{30} target for the SNE/MA stock complex. Fishing mortality in the GOM stock was presumed to be higher and the spawning stock biomass at a low level, indicating that the GOM unit might be in greater need of rebuilding than the SNE/MA unit.

In February 1998, the Board approved Addendum II to the FMP. Addendum II adjusted the implementation schedule for management measures by the participating states and called for plans to reach the target fishing mortality goal for rebuilding (F_{40}).

Amendment 1 (2005)

In May 1999, the Board acknowledged that it was necessary to update the Interstate FMP for Inshore Stocks of Winter Flounder through an amendment. The original plan and addenda did not prove successful in rebuilding inshore winter flounder populations. The FMP also needed an update to reflect the goals and objectives of the Atlantic Coastal Fisheries Cooperative Management Act (ACFCMA), which was established in 1993, after the original FMP was approved. The ACFCMA governs preparation and adoption of interstate fishery management plans to provide for the conservation of coastal fishery resources, and requires states to implement and enforce FMPs. The Board further noted that an upcoming stock assessment would likely provide new information on the status of winter flounder stock complexes. After the assessment was completed in late 2002, the Commission began development of Amendment 1 in February 2003.

Amendment 1 to the Interstate FMP for Inshore Stocks of Winter Flounder, approved in November 2005, replaced all previous Commission management plans (see Section V). It focused on joint management of winter flounder between the Commission and Council, and was designed to rebuild and maintain spawning stock biomass at or near target biomass levels. In addition, Amendment 1 prioritized restoration and maintenance of essential winter flounder habitat. Amendment 1 established the following goals and objectives:

Goals

- To promote stock rebuilding and management of the winter flounder fishery in a manner that is biologically, economically, socially, and ecologically sound.

- To promote rebuilding of the inshore and estuarine component of the winter flounder stock.

Objectives

1) Manage the fishing mortality rates for the Gulf of Maine and Southern New England/Mid-Atlantic Stocks to rebuild the stocks and provide adequate spawning potential to sustain long-term abundance of the winter flounder populations.
2) Manage the winter flounder stocks under an ASMFC rebuilding plan designed to rebuild and then maintain the spawning stock biomass at or near the target biomass levels and restrict fishing mortality to rates below the threshold.
3) Establish an interstate management program that complements the management system for federal waters.
4) Foster a management program for restoring and maintaining essential winter flounder habitat.
5) Establish research priorities that will further refine the winter flounder management program to maximize the biological, social, and economic benefits derived from the winter flounder population.
6) Restore the winter flounder fishery so that inshore recreational and commercial fishermen can access it throughout its historical range and at the historic age structure.

Addendum I to Amendment 1 (2009)

Addendum I was approved in May 2009, following the 2008 GARM III stock assessment. GARM III indicated that the SNE/MA spawning stock biomass was only 9% of the target and the GOM stock was likely to be overfished and experiencing overfishing at the time. For the GOM, Addendum I required an 11% reduction in fishing mortality for the recreational sector and a 250 pound possession limit for non-federally permitted commercial fishermen (estimated 31% reduction in harvest). Recreational reductions may be achieved by using possession limits, seasons, or other measures. Commercial measures under the final interim rule were intended to achieve at least an 11% reduction in fishing mortality. For the SNE/MA stock, Addendum I established a two fish recreational bag limit with current size limits and seasons maintained and a 50-pound possession limit for non-federally permitted commercial fishermen. Both measures allow for the consistent application of management measures in state water fisheries and are intended to complement the federal interim rule which prohibits any take of SNE/MA winter flounder from offshore waters (an estimated 62% reduction in fishing mortality). The Board set bag and possession limits that are low enough to discourage directed fishing, but allow fishermen to keep their winter flounder bycatch. The two fish recreational bag limit was estimated to achieve approximately a 50% reduction in harvest, while the 50-pound commercial possession limit is estimated to achieve approximately a 65% reduction in harvest.

Addendum II to Amendment 1 (2012)

In response to updated stock status information and federal action to substantially increase the GOM winter flounder state waters annual catch limit subcomponent, the Board initiated Addendum II to Amendment 1 of the Winter Flounder Interstate FMP. This Addendum changes commercial and recreational management measures for the state waters component of the GOM stock only. Specifically, it increases the maximum possession limit for non-federally permitted commercial vessels to 500 pounds. It also removes the 11% reduction in F for the recreational

fishery and allows states the option to open their recreational fishing season year-round.

Addendum III to Amendment 1 (2013)
Addendum III to Amendment 1 to the Interstate Fishery Management Plan for the Inshore Stocks of Winter Flounder. The Addendum establishes an annual specification process to set commercial and recreational management measures for the Gulf of Maine (GOM) and Southern New England/Mid-Atlantic (SNE/MA) fisheries. Each year, with advice from the Winter Flounder Technical Committee, the Board can adjust trip limits, size limits, and seasons for the commercial fishery; and size limits, bag limits, and seasons for the recreational fishery.
The Addendum will enable the Commission to respond more quickly to federal actions and changes in the winter flounder fishery. The Commission manages the two inshore stocks of winter flounder in the GOM and SNE/MA (0 – 3 miles from shore), while the New England Fishery Management Council (NEFMC) manages winter flounder in offshore waters (3 – 200 miles). NEFMC establishes specifications for winter flounder stocks, including catch limits (ACL), the allocation of the ACL by sub-component (including state water set-aside), and accountability measures (AMs). These specifications are forwarded to NOAA Fisheries Northeast Region for final approval. The state water set-aside is not subject to federal accountability measures.

II. Status of Stocks

The most recent peer reviewed benchmark stock assessment for all three winter flounder stocks was conducted by the Northeast Fisheries Science Center at the 52nd Northeast Regional Stock Assessment Workshop (SAW52), which convened in Woods Hole, MA in June 2011. It included data through 2010. The Stock Assessment Review Committee (SARC) determined that the SNE/MA stock, with a scientifically sound assessment, was overfished and not experiencing overfishing in 2010. The GOM stock was not experiencing overfishing in 2010; however, the overfished status remained unknown. The offshore Georges Bank (GBK) stock was found to be not overfished and not undergoing overfishing in 2010. The previous stock assessment for winter flounder was the Groundfish Assessment Review Meeting (GARM) III in 2008, which was not accepted.

Gulf of Maine

The 2011 stock assessment determined that **GOM winter flounder was not experiencing overfishing, while the overfished status remained unknown**. The overfishing definition was determined by comparing the 2010 catch (195 mt) to a survey-based swept area estimate of biomass for winter flounder larger than 30 cm in length (6,341 mt). The exploitation rate was estimated to be 0.03 in 2010, which is lower than the threshold exploitation rate of 0.23. This $F_{Threshold}$ was derived by using $F_{40\%}$ (0.31) as a proxy for F_{MSY}.

It was not possible to estimate the stock biomass and overfished status for GOM winter flounder. Since GARM III was not accepted, the most recent biological reference points came from the SARC36 stock assessment in 2003. It was not appropriate to compare the 2010 exploitation rate

and stock size estimates to these biological reference points. The 2011 stock assessment used new population models developed in ADAPT VPA, SCALE, and Age-structured Assessment Program (ASAP). These models had difficulty with the conflicting data trends within the assessment, specifically, the large decrease in catch over the time series with very little change in the indices or age structure in catch and surveys. Consequently, an analytical assessment model was not accepted, and biomass-based reference points or proxies could not be estimated.

Southern New England/Mid-Atlantic

The 2011 stock assessment (SAW52) conducted by the Northeast Fisheries Science Center determined that the SNE/MA winter flounder stock was overfished, but not experiencing overfishing. Biological reference points were estimated from an external stock-recruitment model and proxy BRPs are based on 40% MSY.

$SSB_{Target} = B_{MSY}$	43,661 mt (96,256,028 lbs)
$SSB_{Threshold} = ½\ SSB_{MSY}$	21,831 mt (48,129,116 lbs)
MSY	11,728 mt (25,855,814 lbs)
$MSY_{40\%}$	8,903 mt (19,628,000 lbs)
$F_{MSY} = F_{Threshold}$	0.290

The 2010 spawning stock biomass was estimated to be 15,599,891 lbs (7,076 mt), which equates to 16% of B_{Target} and 32% of $B_{Threshold}$. Fishing mortality (F) for fully recruited fish at ages 4-5 was estimated to be 0.051, or 18% of $F_{Threshold}$. The SARC predicted that even with a fishing mortality of 0.000 from 2012-2014, there is less than 1% chance for SSB to rebuild to SSB_{MSY} of 43,661 mt (96.26 million lbs).

The SNE/MA stock's spawning stock biomass peaked in recent history at 20,108 mt (44.3 million lbs) in 1982. Since then, SSB declined to a record low of 3,941 mt (8.7 million lbs) in 1993, but increased to 8,941 mt (19.7 million lbs) in 2000. SSB dropped again in 2005 to 4,505 mt (9.9 million lbs). That year, Amendment 1 was approved. SSB has increased to nearly 7,076 mt (15.6 million lbs) in 2010 (Figure 1).

Recruitment and low reproductive rate are key sources of vulnerability for winter flounder in the SNE/MA complex. Stock-recruit modeling suggests that warm winter temperatures can negatively impact recruitment of SNE/MA winter flounder. Since 1981, the estimated number of age-1 fish has declined from 71.6 million in the 1980 year class to a record low of 7.5 million in the 2001 year class. Estimates for the last decade have been lower than predicted, averaging at 10.6 million fish each year from 2001-2010. Recruitment for the 2009 year class was estimated to be 8.7 million (Figure 2).

III. Status of Assessment Advice

The stock assessment completed at SAW52 for the SNE/MA stock complex was accepted as scientifically sound. For the GOM stock unit, however, biological reference points or proxies could not be estimated by SAW52 or the previous stock assessment at GARM III.

IV. Status of the Fishery

Stockwide

Across all stocks (GOM, SNE/MA, and GBK), the winter flounder fisheries are a fraction of their historic productivity. For the time series beginning in 1981, when recreational fisheries data is available, both commercial and recreational landings have declined since the early 1980s (Table 1, Figure 3).

Commercial landings peaked at 18,279 mt (40.3 million lbs) in 1981, the highest since 1950, but amounted to 2,674 mt (5.8 million lbs) in 2013. This amount is 14.6% of the level caught in 1981. A majority of the landings were taken in Massachusetts waters (72.6%) (Table 2). In the recent years, commercial landings increased due to a doubling of annual catch limits in 2011 and again in 2012 for the GOM stock, allowed by the federal and interstate FMPs through emergency action. In addition, the moratorium for the SNE/MA stock effective since 2009 was lifted in 2013 and the fishery resumed.

The primary commercial gear used to harvest winter flounder is the otter trawl, followed by dredge and gill nets. Although taken year-round, winter flounder were most commonly harvested from June through October in 2013.

Recreational harvest was 34.9 mt (76,837 lbs) in 2013, a decrease from 94.9 mt (209,318 lbs) in 2012. The 2013 recreational catch was 0.4% of the amount caught by anglers in 1982 (16.4 million lbs). In 2013, Massachusetts and New Jersey accounted for the majority of the coastwide recreational winter flounder landings, at 82% and 10%, respectively (Table 3).

Gulf of Maine

Commercial landings of Gulf of Maine winter flounder have substantially declined since the early 1980s, with recent landings being roughly 5% of harvest levels in the 1980s. From 1964 through the mid-1970s, commercial landings were near 1,000 mt (2.2 million lbs). Productivity peaked at nearly 2,793 mt (6.2 million lbs) in 1982, and has steadily decreased to a record low of 140 mt (308,647 lbs) in 2010. In 2013, 167.4 mt (368,965 lbs) of winter flounder was landed in GOM (excluding confidential data).

Recreational landings also peaked in 1982, at 3,024 mt (6.7 million lbs). Landings have generally declined; since 1994, annual totals are typically less than 100 mt (220,462 lbs). Recreational releases make up a small portion of catch. Over the time series, about 3% of GOM winter flounder have been released by anglers.

Southern New England/Mid-Atlantic

Commercial landings of SNE/MA winter flounder generally declined throughout the time series from 1964 to 2010, with periodic peaks and dips. After reaching a historical peak of 11,977 mt (26.4 million pounds) in 1966 and then declining through the 1970s, total U.S. commercial landings again peaked at 11,176 mt (24.6 million pounds) in 1981. After 1981, SNE/MA commercial landings declined to 2,159 mt (4.7 million pounds) in 1994 and then increased to 4,672 mt (10.3 million pounds) in 2001. Commercial landings have generally decreased since the 2001 peak, never exceeding 7 million pounds. Harvest levels fell to the lowest ever in 2010 with 174 mt (383,604 pounds). In 2013, a total of 691.8 mt (1,525,257 lbs) of winter flounder was commercially caught in SNE/MA.

Recreational landings of SNE/MA winter flounder peaked in 1984 with 5,510 mt (12.1 million lbs) and substantially declined until reaching an all-time low of 28 mt (61,729 lbs) in 2010. The principal mode of fishing is private/rental boats, with most recreational landings occurring during May to June.

V. Status of Research and Monitoring

Amendment 1 to the Interstate Fishery Management Plan for Winter Flounder requires the following research and monitoring activities by certain states (Table 5):

- Massachusetts, Rhode Island, New York, and Delaware are required to conduct annual surveys of juvenile recruitment to develop an annual juvenile abundance index.
- Massachusetts, Rhode Island, Connecticut, and New Jersey are required to conduct annual surveys to develop an index of spawning stock biomass.

In 2013, states with interest in the winter flounder FMP conducted the fisheries-independent surveys and fishery-dependent monitoring programs summarized below.

Maine

The MEDMR conducts spring and fall bottom trawl surveys in cooperation with the New Hampshire Fish and Game Division. The Maine-New Hampshire (MENH) Inshore Trawl Survey collects length, weight, maturity stage, and age samples for winter flounder. In 2013, trawl survey indices indicate a biomass of 2.5 kg/tow (stratified mean weight) in the spring (same as 2012) and 3.5 kg/tow in the fall (an increase from 3.0 kg/tow in 2012). Both indices varied from year to year, with overall flat trends since 2001 and 2000, respectively. Abundance indices show an overall slight positive trend since 2000 in both seasons, but stratified mean numbers have decreased in the past three years. Numbers at length are also collected for spring and fall surveys (see indices in the Maine state compliance report for the 2013 fishing year).

Maine does not conduct fishery-dependent monitoring for winter flounder, but monitors the recreational fishery via MRIP and commercial fishery via NMFS commercial landings data.

New Hampshire

The New Hampshire Fish and Game Department (NHFG) conducts an annual seine survey of juvenile fish in its estuaries from June through November. The survey produces an index of relative abundance for each species encountered using a geometric mean catch per seine haul. The index value (0.38) is a decrease from 2012 (0.57) and remains below the average of 1.26 since 2001; the index has been highly variable. In addition, NHFG has worked with Maine Department of Marine Resources (MEDMR) since the fall of 2000 to conduct an inshore trawl survey off of Maine and New Hampshire (see Maine's monitoring summary).

NHFG monitors the recreational fishery via MRIP and the commercial fishery via NMFS commercial landings data.

Massachusetts

The Massachusetts Division of Marine Fisheries (MADMF) completed spring and fall bottom trawl surveys covering its state waters. In 2013, the GOM winter flounder biomass was about 7 kg/tow in the spring, lowest in the time series as of 2013. The index has a decreasing trend since 1980, from series highs of about 22 kg/tow in 2001 and well below the median stratified mean weight (kg) per tow. In 2013, the SNE/MA winter flounder biomass was about 2 kg/tow in the spring, the lowest in the time series as of 2013. The index has a decreasing trend since 1980, from series highs of 18 kg/tow, and is below the median. MADMF also completed its annual young of the year (YOY) winter flounder survey in June 2013 to provide an index for recruitment of the SNE/MA stock. In 2013, the density of young-of-the-year (YOY) winter flounder was about 0.24 (numbers per square meter, stratified mean). Although the YOY index in 2013 was very slightly above the time series median, the time series trend since 1976 is declining with a slight increase since the early 2000s.

MADMF monitors the recreational fishery via MRIP. State biologists collect recreational fishing data from shore-based private anglers, those with boats, and headboat trips, as prescribed (by wave), and submit data to the federal database. Commercial vessels without federal permits for groundfish are required to report all landings at trip level.

Rhode Island

Except for the ichthyoplankton survey, which was discontinued in July of 2008, Rhode Island's Division of Fish & Wildlife conducted five studies to monitor juvenile and adult winter flounder in its state waters. The seasonal trawl survey samples 42 fixed and random stations in the spring and fall. The monthly survey samples 13 fixed stations each month. The Narragansett Bay Juvenile Finfish Survey samples 18 stations once a month from June through October. The coastal pond seine survey samples 24 stations in 8 coastal ponds from May through October. During 2012, RIDFW continued working with with staff from the EPA Atlantic Ecology Division in Narragansett, RI to sample 6 stations with fyke nets from January to May in Point Judith and Charlestown ponds. The Narragansett Bay juvenile trawl survey, spring seasonal trawl survey, and coastal pond juvenile survey all show a decrease in abundance in 2013.

RIDWF monitors the recreational fishery via MRIP and the commercial fishery is monitored via NOAA Fisheries port sampling program.

Connecticut

Winter flounder have been monitored through the Long Island Sound Trawl Survey since 1984. Spring (April, May and June) and Fall surveys (September and October) are conducted each year. The 2013 spring (April-June) index (geometric mean fish/tow) for all ages of winter flounder was 6.35, ranking lowest in the 30 year time series, and the 15th consecutive year below the time series average of 53.07fish/tow. The lowest value in the time series is the 2006 spring index of 7.50fish/tow. The April-May index used to develop abundance indices at age was 10.08 fish/tow for all ages, well below the average for the time series was 63.92 fish/tow. The 2013 index for mature fish ages 4-13 was 4.03 fish/tow, also well below the time series of 9.93 fish/tow. The 2012-2013 indices from the seine survey (0.29 and 0.27 fish/haul, respectively) are the lowest in the time series and an order of magnitude below the series mean of 6.0 fish/haul.

Connecticut DEEP monitors the recreational fishery via MRIP. In 2013, CT DEEP staff withdrew from its role as a subcontractor in the MRIP survey and the NOAA/NMFS contractor (Research Triangle Institute) conducted the Connecticut survey directly beginning in May. Commercial winter flounder landings are monitored through monthly commercial fishermen logbooks, and weekly and monthly dealer reports. These reports contain daily records of fishing and dealer purchase activity. There was no sea sampling or port sampling activity for winter flounder during the past year.

New York

The NYSDEC has been conducting a small mesh trawl survey targeting juvenile finfish since 1987. The weekly survey runs from May through October in Peconic Bay using a small mesh sixteen foot semi-balloon shrimp trawl, 16 randomly selected stations are sampled each week. A total of 112 randomly chosen stations were sampled during June and July 2012 (time series average = 134 tows). Environmental data (temperature, salinity, dissolved oxygen), turbidity, and depth were recorded at each station at both the surface and bottom. A total of 20 winter flounder were caught in June and July of 2012, down from the 2012 survey's catch of 125 fish and a new time series low, considerably fewer than the survey max (25,782) in 1992 and the survey average over the last 10 years of 551 fish.

The Department also conducted a seine survey in western Long Island bays since 1986 using a 200 foot ¼ inch mesh seine. Sampling is conducted at multiple stations twice a month within each bay from May through October, although only data from May-Aug is presented here. On average, 40 tows occur in Jamaica Bay each year during this period, and 24 tows each in Manhasset Bay and Little Neck Bay.

New York does not conduct fishery-dependent monitoring.

New Jersey

The Bureau of Marine Fisheries has conducted an Ocean Trawl program in nearshore ocean waters since 1988. Winter flounder are most abundant during April, and data from this cruise have been used to develop an index of abundance for winter flounder in New Jersey waters. For each tow, information is collected on total number, total weight, and individual lengths.

Biomass indices for 2013 were an arithmetic mean of 3.67 kg/tow, (a27% decrease from 2012's 5.04), and a geometric mean of 1.38 kg/tow (lower than 2012's index of 1.74.) The biomass indices also were the lowest in the 26 years of the survey: 1.58 kg/tow arithmetic, which is 70.7% lower than the time series mean of 5.39, and 0.88 kg/tow geometric, which is 59.1% below the time series average of 2.15. Survey results have shown downward trends in abundance and biomass for the last seven years. Beginning in 1993 for the Ocean Trawl survey and in 1995 for the Spawning Survey, scales or otoliths have been collected in order to develop annual age-length keys and catch at age estimates.

New Jersey does not conduct fishery-dependent monitoring.

Delaware

Delaware has two fisheries independent trawl surveys that occasionally take winter flounder. The Adult Finfish Survey uses a 30-foot bottom trawl to sample nine fixed stations monthly in Delaware Bay from March through December in 2013. This survey has been conducted annually since 1990, and before that from 1966-1971 and 1979-1984 using a similar gear type. No winter flounder were taken in 2013 during 90 tows.

The second fishery independent survey that has the potential to take winter flounder is the Juvenile Finfish Survey, which uses a 16-foot bottom trawl to sample 39 fixed stations in Delaware River and Delaware Bay and 12 fixed stations in Delaware's Inland Bays. This survey is conducted monthly from April through October. This gear has a 0.5-inch mesh liner in the cod end of the trawl to retain primarily juvenile fishes. Although 23 winter flounder were caught in the Inland Bays during 2013, no winter flounder taken with in Delaware Bay in 2013.

Delaware was approved for *de minimis* status for 2013 and does not conduct biological monitoring of winter flounder.

VI. Status of Management Measures and Issues

Amendment 1

Winter flounder is managed under Amendment I to the Interstate Fishery Management Plan for Inshore Stocks of Winter Flounder, implemented in November 2005 to completely replace all previous management plans for winter flounder in state waters. Amendment I required a minimum size limit of 12 inches for commercial and recreational fisheries for both GOM and SNE/MA stock units. Recreational creel limits were ten (10) fish in the SNE/MA stock area and eight (8) fish in the GOM. There are no required closed recreational seasons in the GOM, while there must be a closed season of 20 days during March and April in SNE/MA. The 60-day open season for recreational winter flounder fishing can be split into no more than 2 blocks. States must implement a minimum size of 6.5 inches square or diamond mesh for the cod-end in both GOM and SNE/MA inshore waters. Additionally, a 100-pound trip limit is required if smaller mesh is being used in the SNE/MA. This "mesh trigger" is intended for the landing of a small amount of winter flounder as bycatch in small-mesh fisheries.

Addendum I to Amendment 1

Implemented in June 2009, Addendum I aimed to reduce fishing mortality and rebuild the GOM and SNE/MA stocks. This addendum does not rescind the management required by Amendment 1, and states are required to continue implementing all measures in Addendum I and Amendment 1. These regulations only applied to non-federally permitted vessels in state waters.

Gulf of Maine: For the GOM commercial fishery, the maximum possession limit is 250 pounds per vessel. This limit was estimated to reduce 2006-2007 harvest levels by 31% for state water fishing vessels. For the GOM recreational fishery, Addendum I required states to implement regulations to reduce fishing mortality by 11% from the average of 2006-2007 levels. This 11% reduction was estimated to reach F_{MSY}. States were allowed to achieve reductions through possession limits, seasons, or a combination of both, and also had the option to submit conservation equivalency proposals to achieve the necessary reductions through alternative management measures, subject to approval by the Board.

Southern New England/ Mid-Atlantic: Addendum I's management measures were designed to reach the lowest F rate possible with minimal economic and social impacts and dead discards, and to prevent an influx of effort into state waters. Non-federally permitted commercial vessels may possess a maximum of 50 pounds of winter flounder. This level was estimated to reduce harvest by 65%, and was intended solely to allow for bycatch. Recreational fishermen may possess a maximum of two (2) winter flounder from inshore waters of the SNE/MA stock area. All winter flounder must be at least 12 inches in length (Section 4.1 of Amendment 1). This bag limit was estimated to reduce harvest by 46%.

De Minimis: Amendment I allows a state to be granted *de minimis* status if their fishery constitutes less than 1% of the coastwide commercial or recreational landings for the preceding three years for which data are available. A state that qualifies for *de minimis* status based on their commercial landings will qualify for exemptions in the commercial fishery only, and a state

that qualifies for *de minimis* based on their recreational landings will qualify for exemptions in their recreational fishery only. States that apply for and are granted *de minimis* status are exempted from biological monitoring/sub-sampling activities for the sector for which *de minimis* has been granted.

Northeast Multispecies Fishery; Gulf of Maine Winter Flounder Catch Limit Revisions

Through emergency action, NOAA Fisheries doubled the catch limit for GOM flounder for the remainder of the 2011 fishing year, and again in 2012. In response to updated stock status information and federal action to substantially increase the GOM winter flounder state waters annual catch limit subcomponent, the Board approved Addendum II to Amendment 1 of the Winter Flounder Interstate FMP (2012) to change commercial and recreational management measures for the state waters component of the GOM stock only. Specifically, it increased the maximum possession limit for non-federally permitted commercial vessels to 500 pounds. It also removed the 11% reduction in F for the recreational fishery and allows states the option to open their recreational fishing season year-round.

In 2013, NOAA Fisheries lifted the moratorium for the Southern New England winter flounder stock that was in effect since 2009.

VII. Implementation of FMP Compliance Requirements

State Compliance

For fishing year 2013, all of the states with a declared interest in the management of winter flounder have implemented commercial and recreational regulations that are consistent with ASMFC's Winter Flounder FMP (Tables 4 and 5).

Request for *De minimis* Status

Delaware was the only state that requested *de minimis* status for its commercial and recreational fisheries. Commercial harvest levels averaged less than 1% of coastwide landings of winter flounder for the last three years (2011-2013). There were no reported recreational landings since 2006. **The PRT recommends the Management Board grant Delaware *de minimus* status for their recreational and commercial fisheries during the 2014 fishing year.**

VIII. Research and Monitoring Recommendations

SAW52 produced new research recommendations based upon reviewed assessments and review panel reports for 2011 SAW52, 2008 GARM III, 2002 SARC 36, and prior assessments.

Coastwide (from 2008 GARM III)

1. Assessment approaches needs to be explored that consider all three Winter Flounder stocks as a stock complex within which there is significant interaction amongst the individual stock components. The Panel also had concerns about the unit stock, not only for this stock, but for all of the Winter Flounder stocks assessed. It recommended an analysis of Winter Flounder as a stock complex, rather than as individual stocks, be undertaken.

Southern New England - Mid-Atlantic

1) Update and investigate migration rates between stock and movement patterns. The most recent comprehensive tagging study was completed in the 1960s (Howe and Coates), and a new large scale effort is warranted. Further investigate localized structure/genetics within the stocks.
2) Investigate the feasibility of port samplers collecting otoliths from large and lemon sole instead of scales because of problems under-ageing larger fish.
3) Investigate use of periodic gonad histology studies as a check to make ensure maturity estimates are accurate, with particular attention to obtaining sufficient samples from the Georges Bank stock. Explore options to conduct periodic maturity staging workshops involving State and NEFSC trawl survey staff.
4) Investigate the skipped spawning percentage for each stock, and estimate interannual variation when sufficient data have been collected.
5) Investigate ways to improve compliance to help VTR reporting. Currently about 300 of the 1,500 permitted vessels consistently under-report the number of statistical area fished.
6) Encourage support for Industry Based Surveys, which can provide valuable information on stock abundance, distribution, and catchability in research surveys that is independent of and supplemental to NMFS efforts.
7) Explore use of a more complex Stock Synthesis model with small rates of migration between stocks.
8) Develop time series of winter flounder consumption by the major fish predators of winter flounder.
9) Conduct studies to better understand recruitment processes of winter flounder, particularly in the GOM and on GBK.
10) Revise the NEFSC assessment software to include the ability to model S-R functions including environmental factors with errors/probabilities.
11) Further explore the relationship between large scale environmental forcing (e.g., temperature, circulation, and climate) for effects on life history, reproduction, and recruitment in the Georges Bank stock.
12) Explore development of an index of winter flounder larval abundance based on MARMAP, GLOBEC, etc., time series.

Gulf of Maine

1) Update and investigate migration rates between stock and movement patterns. The most recent comprehensive tagging study was completed in the 1960s (Howe and Coates), and a new large scale effort is warranted. Further investigate localized structure/genetics within the stocks.
2) Investigate the feasibility of port samplers collecting otoliths from large and lemon sole instead of scales because of problems under-ageing larger fish.
3) Investigate use of periodic gonad histology studies as a check to make ensure maturity estimates are accurate, with particular attention to obtaining sufficient samples from the Georges Bank stock.
4) Investigate the skipped spawning percentage for each stock, and estimate interannual variation when sufficient data have been collected.

5) Investigate ways to improve compliance to help VTR reporting. Currently about 300 of the 1,500 permitted vessels consistently under-report the number of statistical area fished.
6) Encourage support for Industry Based Surveys, which can provide valuable information on stock abundance, distribution, and catchability in research surveys that is independent of and supplemental to NMFS efforts.
7) Explore use of a more complex Stock Synthesis model with small rates of migration between stocks.
8) Develop time series of winter flounder consumption by the major fish predators of winter flounder.
9) Conduct studies to better understand recruitment processes of winter flounder, particularly in the GOM and on GBK.
10) Revise the NEFSC assessment software to include the ability to model S-R functions including environmental factors with errors/probabilities.
11) Further explore the relationship between large scale environmental forcing (e.g., temperature, circulation, climate) for effects on life history, reproduction, and recruitment in the Georges Bank stock.
12) Explore development of an index of winter flounder larval abundance based on MARMAP, GLOBEC, etc. time series.

IX. References

National Oceanic and Atmospheric Administration. Commercial Fisheries Statistics Tool. Access: http://www.st.nmfs.noaa.gov/commercial-fisheries/commercial-landings/annual-landings/index

National Oceanic and Atmospheric Administration. Marine Recreational Fisheries Program: Recreational Fisheries Statistics Tool. Access: http://www.st.nmfs.noaa.gov/recreational-fisheries/access-data/run-a-data-query/index

Northeast Fisheries Science Center. 2011. *52nd Northeast Regional Stock Assessment Workshop (52nd SAW) Assessment Report*. US Department of Commerce, Northeast Fish Science Center Ref Doc. 11-17; 962 p. Available online at http://www.nefsc.noaa.gov/nefsc/publications/

Northeast Fisheries Science Center. 2008. *Assessment of 19 Northeast Groundfish Stocks through 2007: Report of the 3rd Groundfish Assessment Review Meeting (GARM III),* Northeast Fisheries Science Center, Woods Hole, Massachusetts, August 4-8, 2008. US Department of Commerce, NOAA Fisheries, Northeast Fish Science Center Ref. Doc. 08-15; 884 p + xvii.

X. Figures and Tables

Figure 1. Southern New England/ Mid-Atlantic winter flounder spawning stock biomass and biological reference points.
Data Source: SAW52 (2011)

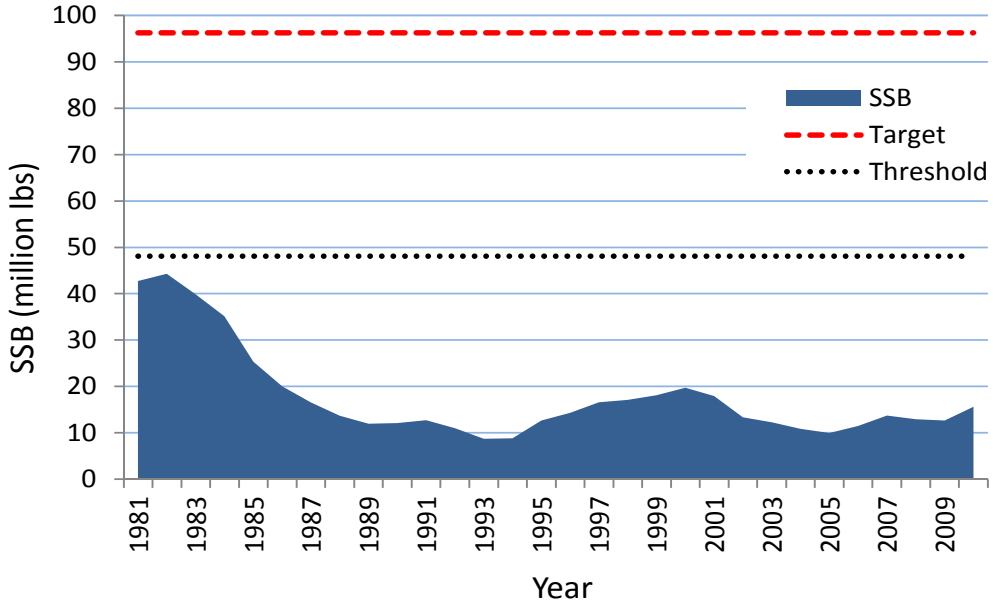

Figure 2. Southern New England/ Mid-Atlantic winter flounder recruitment.
Data Source: SAW52 (2011)

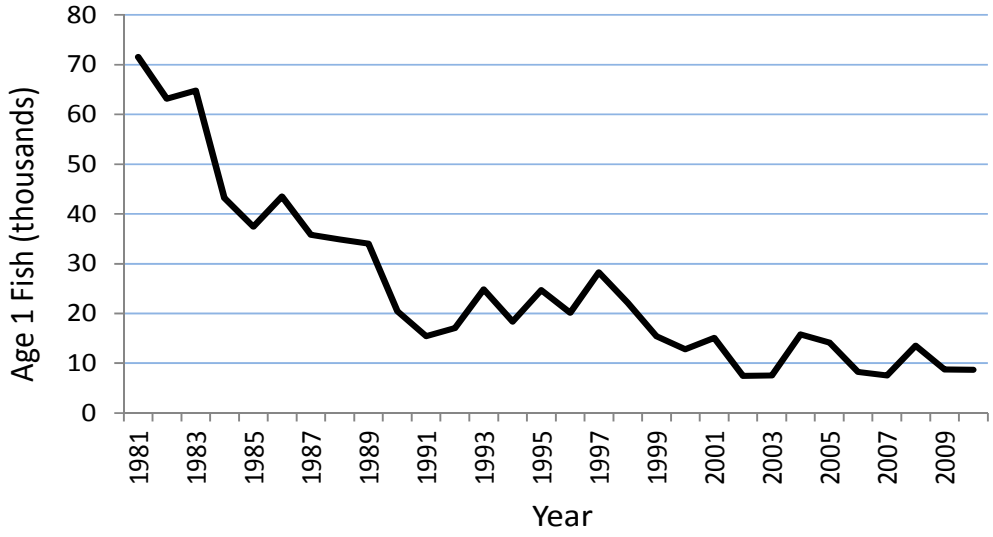

Figure 3. Total landings of winter flounder, commercial and recreational (A+B1) landings. Recreational time series began in 1981. Data Source: NOAA and MRIP

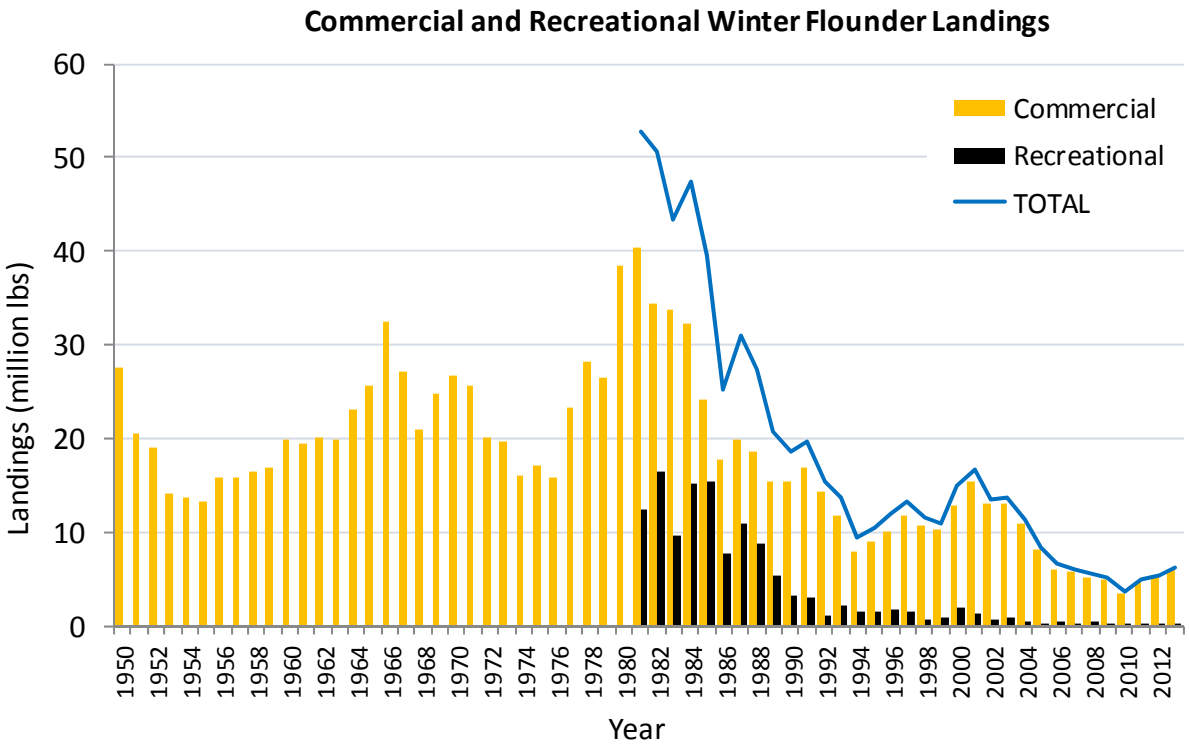

Table 1. Coastwide commercial and recreational (A+B1) landings of winter flounder.
Source: NMFS, MRIP.

Year	Commercial Landings (lbs)	Recreational Landings (lbs)	Total Harvest (lbs)
1981	40,328,004	12,424,306	52,752,310
1982	34,299,800	16,417,409	50,717,209
1983	33,817,000	9,640,481	43,457,481
1984	32,310,416	15,156,822	47,467,238
1985	24,222,895	15,372,730	39,595,625
1986	17,643,994	7,634,912	25,278,906
1987	19,926,128	10,967,183	30,893,311
1988	18,593,695	8,779,904	27,373,599
1989	15,421,400	5,363,355	20,784,755
1990	15,385,073	3,156,378	18,541,451
1991	16,776,460	2,899,482	19,675,942
1992	14,245,420	1,071,535	15,316,955
1993	11,648,778	2,129,667	13,778,445
1994	7,944,331	1,496,956	9,441,287
1995	8,882,929	1,529,595	10,412,524
1996	10,129,515	1,757,069	11,886,584
1997	11,777,821	1,514,640	13,292,461
1998	10,762,583	717,765	11,480,348
1999	10,222,856	768,056	10,990,912
2000	12,880,614	2,020,880	14,901,494
2001	15,278,708	1,304,052	16,582,760
2002	12,955,714	583,547	13,539,261
2003	12,986,593	773,793	13,760,386
2004	10,833,480	483,364	11,316,844
2005	8,084,062	220,289	8,304,351
2006	6,050,949	471,593	6,522,542
2007	5,879,052	207,309	6,086,361
2008	5,095,612	399,210	5,494,822
2009	4,870,667	288,173	5,158,840
2010	3,498,442	198,562	3,697,004
2011	4,682,379	209,318	4,891,697
2012	5,270,477	107,987	5,378,464
2013	6,052,806	76,837	6,129,643

Table 2. Winter flounder commercial landings and percentage by state from 2011-2013.
Source: NOAA FIsheries

State	2011		2012		2013	
	Pounds	%	Pounds	%	Pounds	%
Massachusetts	4,474,275	95.6	5,149,233	98.5	5,376,430	72.6
Rhode Island	84,759	1.8	44,992	0.9	409,710	21.6
New York	11,952	0.3	10,430	0.2	confidential	NA
New Jersey	6,051	0.1	7,266	0.1	confidential	NA
Connecticut	7,175	0.2	15,794	0.3	103,847	5.5
New Hampshire	5,189	0.1	10,307	0.2	6,085	0.3
Delaware	0	0.0	0	0.0	0	0
Maine	confidential	NA	confidential	NA	confidential	NA
Annual Total*	**4,589,401**		**5,227,715**		**1,894,222***	

* Annual Total excludes confidential data

Table 3. Recreational harvest (A + B1) by weight (lbs) by state 2011-2013.
Source: MRIP.

State	2011		2012		2013	
	Pounds	%	Pounds	%	*Pounds*	%
Massachusetts	66,728	31.9	47,698	44.2	62,797	81.7
New Jersey	33,744	16.1	40	0.0	7,788	10.1
New York	66,012	31.5	47,343	43.8	6,252	8.1
Connecticut	25,449	12.2	12,471	11.5	0	0
New Hampshire	17,385	8.3	433	0.4	0	0
Rhode Island	0	0.0	0	0.0	0	0
Delaware	0	0.0	0	0.0	0	0
Maine	NA		NA		NA	
Annual Total	**198,562**		**209,318**		**76,837**	

Table 4. Commercial winter flounder regulations implemented by states in 2013.

State	Stock Unit	Size Limit	Trip Limit	Seasonal Closure (dates inclusive)	Recruitment Assessment	SSB Assessment	Min. Mesh Size	*De minimis Request*
Maine	GOM	12"	500 lbs	May 1 – June 30	N/A	N/A	6.5”	No
New Hampshire	GOM	12"	500 lbs	April 1 – June 30	N/A	N/A	6.5”	No
Massachusetts	GOM	12"	500 lbs	Open all year	YOY Seine Survey (June)	Bottom Trawl Survey (May, Sept)	6.5”	No
	SNE/MA	12"	50 lbs	Open all year	YOY Seine Survey (June)	Bottom Trawl Survey (May, Sept)	6.5”	No
Rhode Island	SNE/MA	12"	50 lbs	Open all year	Narragansett Bay Juvenile Finfish Survey	Trawl Surveys	6.5”	No
Connecticut	SNE/MA	12"	50 lbs or 38 fish	March 1 – April 14	N/A	Long Island Sound Trawl Survey	6.5”	No
New York	SNE/MA	12"	50 lbs	June 14 – Nov 30	Small Mesh Trawl Survey, Seine Survey	N/A	6.5”	No
New Jersey	SNE/MA	12"	38 fish	June 1 – Nov 30. Fyke net closed Feb 20 – Oct 31	N/A	Ocean Trawl Survey	6.5”	No
Delaware	SNE/MA	12"	50 lbs	N/A	Juvenile Trawl Survey	N/A	Trawling prohibited	YES, Recommended

Table 5. Recreational winter flounder regulations implemented by states in 2013.

State	Stock Unit	Creel Limit	Size Limit	Seasonal Closure (dates inclusive)	Qualifies for *de minimus?*	*De Minimis Request?*
Maine	GOM	8	12"	October 1 – June 30	Yes	No
New Hampshire	GOM	8	12"	May 15 – May 24	No	No
Massachusetts	GOM	8	12”	February 1 – May 31 (spawning closure)	No	No
	SNE/MA	2	12"	OPEN from 4th Saturday in April and Sept., to remain open for 30 consecutive days	No	No
Rhode Island	SNE/MA	2	12"	January 1 – February 28	No	No
Connecticut	SNE/MA	2	12"	May 31 – March 31	No	No
New York	SNE/MA	2	12"	May 31 – March 31	No	No
New Jersey	SNE/MA	2	12"	May 22 – March 22	No	No
Delaware	SNE/MA	2	12"	April 11 – Feb 10	Yes	YES, Recommended

Atlantic States Marine Fisheries Commission

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MEMORANDUM

January 26, 2015

To: **Winter Flounder Management Board**

From: **Toni Kerns, ISFMP Director** TMK

RE: **2015 Specifications for the Winter Flounder Fishery**

Each year, the Winter Flounder Management Board can set commercial and recreational management measures for the upcoming fishing year based on federal groundfish specifications. The New England Fishery Management Council's Framework Adjustment 53, which includes the 2015-2017 specifications package for winter flounder, has not been approved at this time. The Council's preferred options pertaining to the state sub-component are listed in Table 1. Current state-water management measures for the Gulf of Maine (GOM) and Southern New England/Mid-Atlantic (SNE/MA) stocks are listed in Table 2.

Table 1. Proposed specifications for the GOM and SNE/MA winter flounder stocks for the 2015 fishing season.

Stock	State Sub-Component		Total Annual Catch Limit (mt)
	% of ABC	Metric Tons	
GOM	17% (was 25% in 2014)	87	489 (was 1,040 in 2014)
SNE/MA	7% (was 14% in 2014)	117	1,607 (was 1,612 in 2014)

Table 2. Current management measures for the winter flounder.

Stock	Sector	Trip Limit/ Possession Limit	Size Limit	Season	Gear
GOM	Commercial	500 lbs/trip/ day	12"	Maintain Closures	Minimum 6.5" square or diamond mesh in cod-end
	Recreational	8 fish	12"	NA	
SNE/MA	Commercial	50 lbs 38 fish/trip/day	12"	Maintain Closures	Minimum 6.5" square or diamond mesh in cod-end 100-lb mesh trigger
	Recreational	2 fish	12"	March 1 – December 31	

Please contact Melissa Yuen (myuen@asmfc.org, 703-842-0740) with any questions about the Interstate Winter Flounder FMP.

M15-09