



DRAFT

**2014 Review of the
1994 Chesapeake Bay and Atlantic Coast King and Spanish
Mackerel Fishery Management Plan**

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Table of Contents

Acronyms	2
Summary	3
Status of the Fishery Management Plan	3
Status of the Stock	4
Status of the Fishery	5
Status of Chesapeake Bay King and Spanish Mackerel FMP Strategies	6
Monitoring Catch and Quotas, and Research Needs	6
Waste/Sublegal Bycatch and Hook and Release Mortalities	6
Habitat Issues	7
Fisheries Allocation Policy	7
Conclusion	9
References	10
Figures	11
FMP Implementation Table	13

Acronyms

ASMFC	Atlantic States Marine Fisheries Commission
DNR	Department of Natural Resources
EEZ	Exclusive Economic Zone
F	Fishing Mortality
FMP	Fishery Management Plan
FS	Fisheries Service
GM	Geometric Mean
K/SM	King and Spanish Mackerel
MRIP	Marine Recreational Information Program
MSST	Minimum Stock Size Threshold
MSY	Maximum Sustainable Yield
PRFC	Potomac River Fisheries Commission
PRT	Plan Review Team
SAFMC	South Atlantic Fishery Management Council
SEDAR	Southeast Data, Assessment, and Review
SEFSC	Southeast Fisheries Science Center
SFAC	Sport Fisheries Advisory Commission
SSB	Spawning Stock Biomass
TAC	Total Allowable Catch
TFAC	Tidal Fisheries Advisory Commission

Summary

The 1994 Chesapeake Bay and Atlantic Coast King and Spanish Mackerel Fishery Management Plan was reviewed in 2014. The goal and objectives of the plan provide a framework for managing king (*Scomberomorus cavalla*) and Spanish mackerel (*S. maculatus*) in the Chesapeake Bay and Atlantic Coast. The plan contains four strategies and eleven actions that address stock status, monitoring, bycatch, and habitat. The Fisheries Service Plan Review Team concurs that annual updates to the plan's implementation table are an appropriate way to show progress on meeting the plan objectives, strategies and actions. Maryland is currently in compliance with Atlantic States Marine Fisheries Commission guidelines and requirements. Since Maryland is at or near the northern and inland limit of distribution for these species, their occurrences are variable. The limited abundance results in few opportunities to collect data. The Fisheries Service Plan Review Team concluded that the Chesapeake Bay and Atlantic Coast King and Spanish Mackerel plan is an appropriate framework for managing mackerel in Maryland and recommends that the plan be incorporated by reference into Maryland regulation.

Status of the Fishery Management Plan (FMP)

Date of FMP Approval:	1994
Amendments:	None
FMP Review Dates:	2005, 2014
FMP updates	2007 – present

Fishery management plans provide a framework for how a fishery resource will be managed based on a species life history, habitat, ecosystem considerations, fishery utilization and the goals and objectives for fisheries and the stock. Over time, the status of a resource can change and new issues arise. Strategies and actions within a plan need to be periodically reviewed and evaluated to ensure the management framework is still appropriate or amended/revised to address significant changes. For specific details on the process for reviewing plans and developing or amending plans, see Appendices 1 - 3.

In June, 2014, a Fisheries Service Plan Review Team (FS PRT) was convened to review the 1994 Chesapeake Bay and Atlantic Coast King and Spanish Mackerel FMP (K/SM FMP) plan. The FS PRT was comprised of staff from the FMP Program (Nancy Butowski, Rick Morin) and Estuarine and Marine Fisheries Division Chesapeake Finfish Program (Harry Rickabaugh, Steve Doctor). Additional staff from Fisheries Service participated in the K/SM FMP review as well as members of the Sport Fisheries Advisory Commission (SFAC) and the Tidal Fisheries Advisory Commission (TFAC) (*Note: This*

draft does not yet incorporate input from SFAC or TFAC as their review is occurring now.)

The goal of the 1994 Chesapeake Bay and Atlantic Coast King and Spanish Mackerel FMP is:

Enhance and perpetuate king and Spanish mackerel stocks in the Chesapeake Bay and its tributaries, and throughout their Atlantic coast range, so as to generate optimum long-term ecological, social and economic benefits from their commercial and recreational harvest and utilization over time.

The objectives of the 1994 K/SM FMP are:

1. *Continue recovery of the king and Spanish mackerel stocks and stabilize the stock at a level capable of producing maximum sustainable yield.*
2. *Achieve compatible management throughout the range of king and Spanish mackerel.*
3. *Minimize disruption of traditional fisheries and market for king and Spanish mackerel.*
4. *Promote protection of the resource by maintaining a clear distinction between conservation goals and allocation issues.*
5. *Promote the cooperative interstate research and comprehensive monitoring activities that furnish information for effective management, and establish a mandatory and timely reporting system for monitoring catch and quotas.*
6. *Promote fair allocation of allowable harvest among various components of the fishery.*
7. *Minimize waste in the fisheries.*
8. *Continue to provide guidance for the development of water quality goals and habitat protection necessary to protect the king and Spanish mackerel population within the Bay and coastal waters.*

Management strategies intended to meet the goal and objectives address four areas: 1) stock status; 2) monitoring catch and quotas, and research needs; 3) waste/sublegal bycatch and hook and release mortalities; and 4) habitat issues.

Spanish and king mackerel are managed by the Atlantic coastal states through the Atlantic States Marine Fisheries Commission (ASMFC) in state waters (up to 3 miles offshore) and the South Atlantic Fishery Management Council (SAFMC) in federal waters (3 to 200 miles offshore, also known as the Exclusive Economic Zone or EEZ). The applicable management unit for both species is the Atlantic Coast from New York to the east coast of Florida. The area of the Atlantic group of Spanish mackerel is divided into a northern (NY through GA) and southern group (east coast of FL). Atlantic area migratory King mackerel also are managed by northern and southern groups, with the southern line at the Volusia/Flagler (Daytona Beach, FL) county line and the northern limit through NY. The joint Coastal Migratory Pelagics FMP of the South Atlantic and Gulf of Mexico Fishery Management Councils is the main framework for management.

The Omnibus Amendment (approved in 2011, Amendment 1 approved in 2013) to the interstate FMPs for Spanish mackerel, Spot and Spotted Seatrout provides compliance measures and consistency with federal management in the EEZ.

Status of the Stock

Two stocks, Gulf and Atlantic, are recognized for each species. The Atlantic coast Spanish mackerel stock was depleted through the 1980's and 1990's when the spawning stock biomass (SSB) remained below MSY. Harvest limits were implemented and the stock recovered. There is no stock assessment for either species in the Chesapeake Bay or mid-Atlantic region. The Southeast Data, Assessment, and Review (SEDAR 2012) determined that Spanish mackerel are not overfished (Spawning Stock Biomass/Minimum Stock Size Threshold or $SSB/MSST = 2.29$) and overfishing is not occurring ($F_{2011}/F_{msy} = 0.521$). Fishing mortality for Spanish mackerel has declined and the biomass has increased in recent years (ASMFC, 2013¹).

King mackerel were unregulated until the 1980's when harvest exceeded reproductive capacity and led to overfishing. Since that time, management measures in the South Atlantic and Gulf of Mexico have been successful at lowering fishing mortality and increasing stock size. A 2008 SEDAR stock assessment of king mackerel determined that overfishing is not occurring. Data for assessing king mackerel in the Atlantic region are insufficient to estimate biomass of the stock.

Both mackerel species exhibit rapid growth rates and have high reproductive potential, which contributed to their stock recovery. Management measures in the South Atlantic have successfully rebuilt both mackerel stocks.

Status of the Fishery

Spanish mackerel support significant recreational and commercial fisheries in the South Atlantic region. The commercial fishery is managed by states through vessel trip limits. Florida landings account for over 60% of the total Atlantic coast commercial harvest and North Carolina accounts for most of the remainder of the commercial harvest. Spanish mackerel compliance reports are required by ASMFC for all states from NY to FL since 2013.

The Spanish mackerel recreational fishery is managed through a minimum size limit and a daily creel limit. Maryland, Virginia and the Potomac River Fisheries Commission (PRFC) comply with federal requirements through a 14" total length minimum size limit and a maximum recreational creel limit of 15 Spanish mackerel. The commercial fisheries in Maryland and Virginia have the same minimum size limit and a trip limit of 3500 pounds. The PRFC has no daily commercial limit, but adheres to federal seasonal closures when the federal quota is reached. There is no explicit allocation in these jurisdictions.

King mackerel are managed under a federal quota with an allocation of 37% commercial and 63% recreational. King mackerel are not specifically managed by the state of

Maryland. Most other states outside of the Chesapeake Bay have size limits ranging from a 23” total length (NJ, NY) to 24” fork length (FL, GA, SC, NC) and a possession limit of 3 king mackerel. Virginia has a 27” minimum total length limit and a 3 fish creel limit for both recreational and commercial harvests.

Recreational harvest is estimated by the Marine Recreational Information Program (MRIP). Estimates for Spanish mackerel have a high proportional standard error, which indicates that they are imprecise. Historically, Spanish mackerel have been more abundant in Virginia waters than in Maryland with 97-99% of the bay-wide catch occurring in Virginia since 1880 (Chittenden and Jones, 1993). Recreational harvest is currently greater than commercial harvest of Spanish mackerel in both states. Spanish mackerel are common warm weather migrants to the Maryland Coast and Chesapeake Bay. Commercial harvests are typically low and variable and usually are incidental catches in pound nets or gill nets (Fig. 1). Preliminary commercial harvest of Spanish mackerel for 2013 was 2,391 pounds. Estimates of Spanish mackerel recreational harvest for 2013 were approximately 2,900 fish or 7,000 lbs (percent standard error (PSE) = 101.4; PSEs > than 50 should be considered cautiously) (Fig. 2). Maryland charter boat log data show similar variability with this species (Fig. 3). The best years for recreational fishing for Spanish mackerel were in the early to mid-1990’s. There has been a downward trend in the Spanish mackerel catch per angler (Fig. 4) in Maryland since then.

MRIP estimates for king mackerel recreational harvest from Maryland are low, highly variable, and very imprecise. There has been no reported recreational catch from Maryland since 2008 (MRIP). More king mackerel are caught in VA than in MD.

Status of Chesapeake Bay King and Spanish Mackerel FMP Strategies

Monitoring Catch and Quotas, and Research Needs: The CB K/SM FMP management objective is to adhere to federal limits and to close the fisheries when closures are in effect in federal waters. Amendment 18 (2011) of the SAFMC Coastal Migratory Pelagics FMP established a total annual coastal catch limit of 5.29 million pounds for Spanish mackerel (allocation 55:45 commercial and recreational). King mackerel quota calculation methods are indicated by SEDAR (2009). The 2013/14 king mackerel commercial quota is 2.9 million pounds. Mackerel quotas are monitored by the Southeast Fisheries Science Center (SEFSC) Quota Monitoring System. Reports of king mackerel catches are rare in Maryland. No king mackerel were reported to the 2013 Maryland Fish Tournament for citations. Of 6,167 total entries in the Virginia Saltwater Fishing tournament, 11 were king mackerel.

In addition to establishing quotas, Amendment 18 set targets and accountability measures for both species. Commercial harvest reports are required. Research needs for the Spanish mackerel coastal stock have been identified by ASMFC based upon recommendations from the review panel for the 2012 SEDAR (ASMFC, 2013²).

Waste/Sublegal Bycatch and Hook and Release Mortalities: The major source of bycatch waste through most of the range of both mackerel species is shrimp trawling. Bycatch mortality is not a significant issue in Maryland because there is no shrimp trawling. Pound nets in Virginia take some Spanish mackerel bycatch, which is used as crab pot bait. Hook and Release mortality is unknown, although MRIP estimates of mackerel released alive (Fig.2) seem to be lower than many other species. Addendum 1 (2013) to the ASMFC Omnibus Amendment, established a two-year pilot program allowing states to reduce the minimum size limit for the commercial pound net fishery of Spanish mackerel from 12” to 11.5” fork length. This would convert dead discards to landings in an attempt to minimize waste from this fishery.

Habitat Issues: Maryland continues to work with other Bay jurisdictions through the Chesapeake Bay Program to address water quality and habitat issues. Adult mackerel are found in the region for a brief period of time. Early life stages use the inshore and estuarine habitats, where water quality is important to survival. Threats to habitat identified by ASMFC were habitat alteration (e.g., wetlands converted to agricultural use, bulkheads, proliferation of docks and marinas), dredging and dredge spoil placement, and hydrological modifications (ditching, channelization, freshwater flows) and pollution from point and nonpoint sources and ocean dumping of sewage sludge.

Fisheries Allocation Policy

The Department of Natural Resources Fisheries Allocation Policy (appendix 1) went into effect on September 1, 2012. The policy requires FMPs to address the allocation among resource users and provides guidelines and procedures for review.

As stated by the Allocation Policy, overarching factors are to be considered in allocation decisions. These factors are linked to FMP objectives and are addressed to the extent supported by available information. The overarching factors include:

- Conservation;
- Management goal for the species;
- Social and cultural importance of maintaining fisheries and dependent industries;
- Environmental impact;
- Economic value of dependent fisheries;
- Economic viability of activity supported by the fisheries;
- Management resources;
- Historical trends and values; and
- Potential for new fisheries to develop.

Among the Allocation Policy procedures are triggers for an allocation review. In accordance with policy, the pre-assessment of triggers is reviewed internally by FS PRT and shared with the SFAC and TFAC. Triggers listed by the policy with a summarized assessment are as follows:

- Initial development or revision of a FMP;

Pre-assessment: The FS PRT concluded that the existing K/SM FMP continues to be an acceptable framework for managing king and Spanish mackerel. Annual updates of the FMP are sufficient for addressing management issues. The Bay jurisdictions are required to follow the management measures set forth by the ASMFC and the SAFMC.

- Significant shift in fisheries harvest;

Pre-assessment: Years of higher recreational harvest generally correspond with higher commercial harvest with little evidence of a shift in trends between these fisheries. The most significant trend shift has been in the location of harvest, with a trend of higher Spanish mackerel harvests reported from Chesapeake Bay than the Atlantic Ocean starting in the late 1990's (Fig. 1).

The federal annual total allowable catch (TAC) for Spanish mackerel is allocated on a 55:45 percentage allocation between the commercial and recreational fisheries based on historical reports and estimates. State limits are intended to achieve the federal coastal allocation. The commercial fisheries are managed through an annual quota and trip limits. The recreational fisheries are managed with size and creel limits. A 14" minimum total length applies to NY, NJ, DE, MD, VA and the PRFC for both recreational and commercial fisheries (except no commercial fishery in DE). A 12" minimum fork length is in effect for NC, SC, GA and FL. A recreational creel limit of 15 fish is in effect for all states except for a 10 fish creel in NJ and DE. Commercial possession limits of 3500 pounds per vessel apply to most states. Florida has possession limits that vary. The 1500 pound limit is reduced when 75% of the quota is reached.

King mackerel are also managed under annual federal catch limits with 37% of the catch allocated to the commercial fishery and 63% of the catch allocated to the recreational fishery. King mackerel are rarely caught in Maryland state waters so shifts in harvest are not detectable at this time.

- Population shifts of target or non-target species;

Pre-assessment: Both species of mackerel are migratory along the Atlantic Coast and utilize estuarine areas such as Maryland waters. While Spanish mackerel were more abundant in Maryland portion of the Chesapeake Bay during 2012, they are usually present for only a few months from mid-summer to fall. In the fall, mackerel migrate to the Atlantic coast of Florida. There is currently no evidence of population shifts for either species. King mackerel occur in more offshore coastal waters than do Spanish mackerel, which migrate closer to shore and within estuaries.

- Threatened and endangered species issues;

Pre-assessment: Mackerel are caught in gill nets along the coast. Marine mammals and sea turtles may become entangled in gill nets. However, mackerel are most commonly caught as bycatch in other fisheries in Maryland. There are no known threatened and endangered species interactions with directed mackerel fisheries in Maryland. It is

possible that the same gear types in which mackerel are seen as bycatch might also catch threatened and endangered species as bycatch.

- Changing social patterns & values;

Pelagic mackerel are of far greater importance to more southern fisheries from NC to FL. They are among the most popular recreational species during the winter fishing months in FL. Most commercial landings are from the Atlantic coast of Florida.

There is a trend of increased catch & release with many recreational fisheries, including Spanish mackerel (Fig. 2). MRIP catch & release estimates are available for both Maryland and Virginia, but the estimates are imprecise. Despite this imprecision, charter-boat logs generally agree with the MRIP estimates and confirm the trend (Fig. 3).

- Ecosystem needs;

Temperature and salinity are the prime factors that influence mackerel distribution. Both species prefer warm temperatures (king – 22-28°C; Spanish – 21-31°C) and high salinity (32-36 ppt). King mackerel larvae prefer slightly higher salinities, while juvenile Spanish mackerel can tolerate lower salinities between 12-19 ppt. The latter provides evidence that some Spanish mackerel use estuaries as nursery areas. Both species are considered pelagic carnivores. The primary prey of adults and juveniles are small schooling fish such as menhaden, anchovies, herring, shad, small jacks and pompano. Penaeid shrimp and squid are also consumed. Increased temperatures due to climate change have the potential to shift the population distribution northward. The overall potential consequences of climate change on these species have not been discussed. Sea level rise may affect habitat for early life stages and rising water temperatures could affect distribution and abundance of all life stages. The effects of mackerel fishing practices on habitat and ecosystems in Maryland are negligible. Pelagic species like mackerel are consumed primarily by sharks.

- Market dynamics;

Both mackerel species are migratory and only available to the market in late summer to early fall. The fish are sometimes available locally as fresh product or smoked. Mackerel are available elsewhere along the coast as fresh, frozen, salted, canned or smoked.

- Management resources;

Management resources directed towards these species are low. Mackerel are not usually abundant in Maryland. However, biological monitoring for Spanish mackerel will continue from commercial pound nets.

- New data;

Maryland-specific data are lacking for king mackerel and limited for Spanish mackerel. Only 107 Spanish mackerel were measured in 2012 from Maryland pound net sampling. This was the largest sample size collected since 2005 to 2007. The highest number of Spanish mackerel were collected in 2006 (n=445).

Conclusion

There were no public requests to consider changes in allocation for these species. The harvest limits currently in place are sufficient to meet ASMFC allocation goals and Maryland must comply with ASMFC recommendations.

King mackerel are rarely found in Maryland state waters and harvest reports indicate few if any fish are harvested on an annual basis. Spanish mackerel occur seasonally and harvest varies from year to year. When they are available, they are caught by both the recreational and commercial fisheries. Based on a review of the Allocation Policy parameters, no shifts in fisheries harvest have occurred. The FS PRT recommends no changes in allocation.

The FS PRT concluded that the 1994 K/SM FMP is still an appropriate framework for managing the mackerel stocks in Maryland and recommend that the plan be incorporated by reference into regulation.

References:

ASMFC. 2013¹. 2013 Review of the Atlantic States Marine Fisheries Commission Fishery Management Plan for Spanish Mackerel (*Scomberomorus maculatus*) 2012 Fishing Year. Prepared by the Spanish Mackerel Plan Review Team. Kirby Rootes-Murdy, Randy Gregory and Gregg Waugh. 16p.

ASMFC. 2013². Research priorities and recommendations to support interjurisdictional fisheries management. Special Report #89. ASMFC, Arlington, VA. 58pp.

Chittenden, M.E. Jr. and C.M. Jones. 1993. Spatial and temporal occurrence of Spanish mackerel *Scomberomorus maculatus* in Chesapeake Bay. Fishery Bull. 91:151-158.

Rickabaugh, H. W. Jr. 2013. Maryland Spanish Mackerel (*Scomberomorus maculatus*) Compliance Report to the Atlantic States Marine Fisheries Commission – 2012. Maryland Department of Natural Resources, Fisheries Service.

SEDAR. 2009. Southeast Data, Assessment, and Review. SEDAR 16. South Atlantic and Gulf of Mexico King Mackerel. 4055 Faber Place Drive, Suite 201, North Charleston, SC 29405.

Figure 1. Maryland commercial Spanish mackerel landings in pounds by region, 1965-2012. (Rickabaugh, 2013)

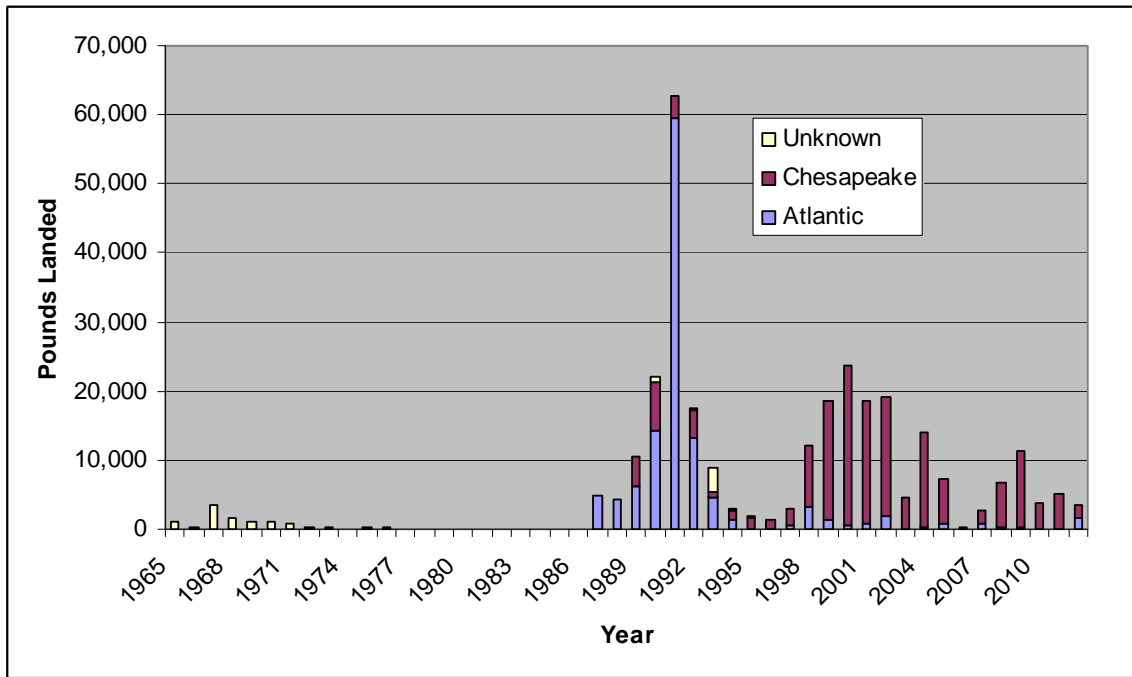


Figure 2. Maryland recreational harvest and release estimates for Spanish mackerel, 1986-2013. Estimate from MRIP, downloaded June 30, 2014.

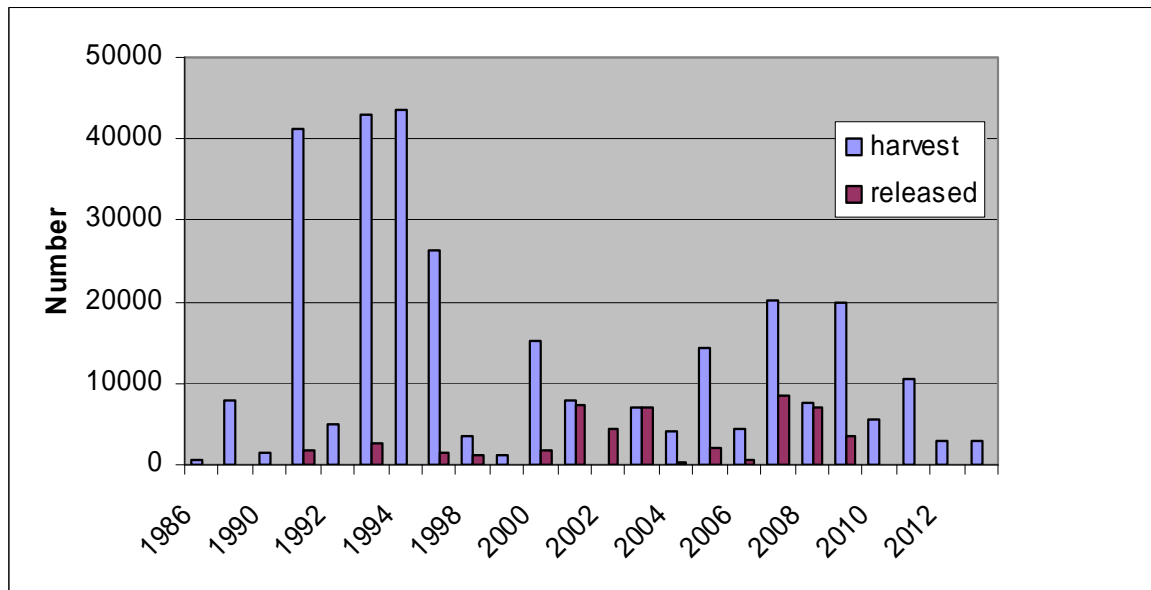


Figure 3. Number of Spanish mackerel captured and number of anglers reported during trips harvesting Spanish mackerel by year from Maryland charter boat log data, 1993-2012. (Rickabaugh, 2013)

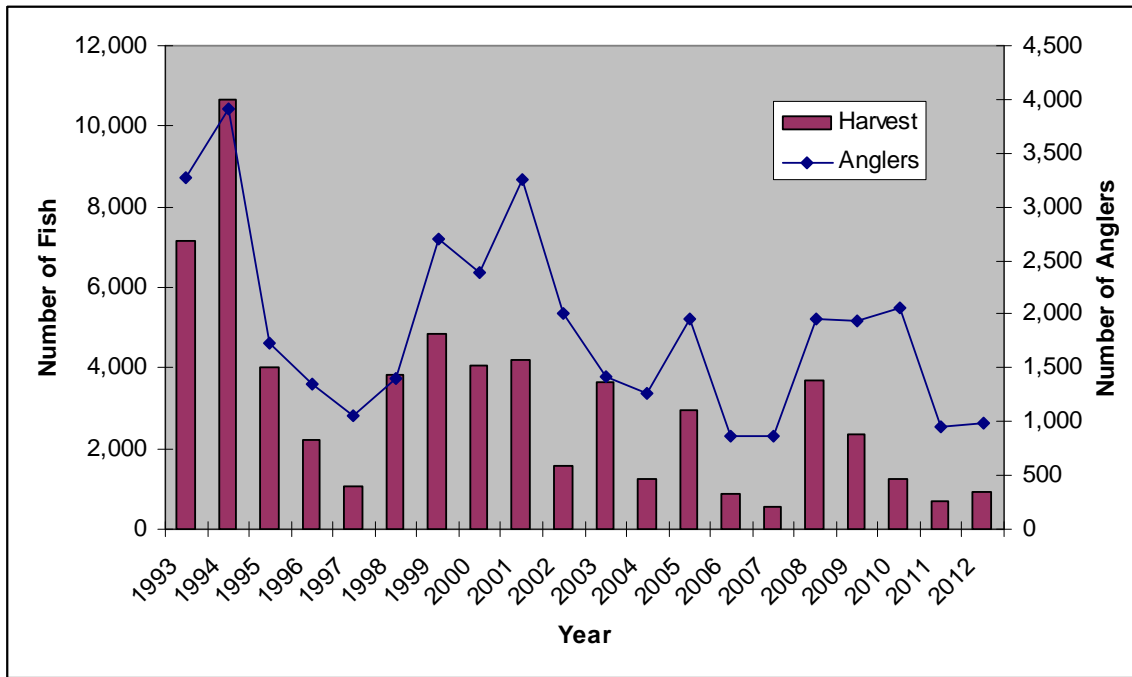
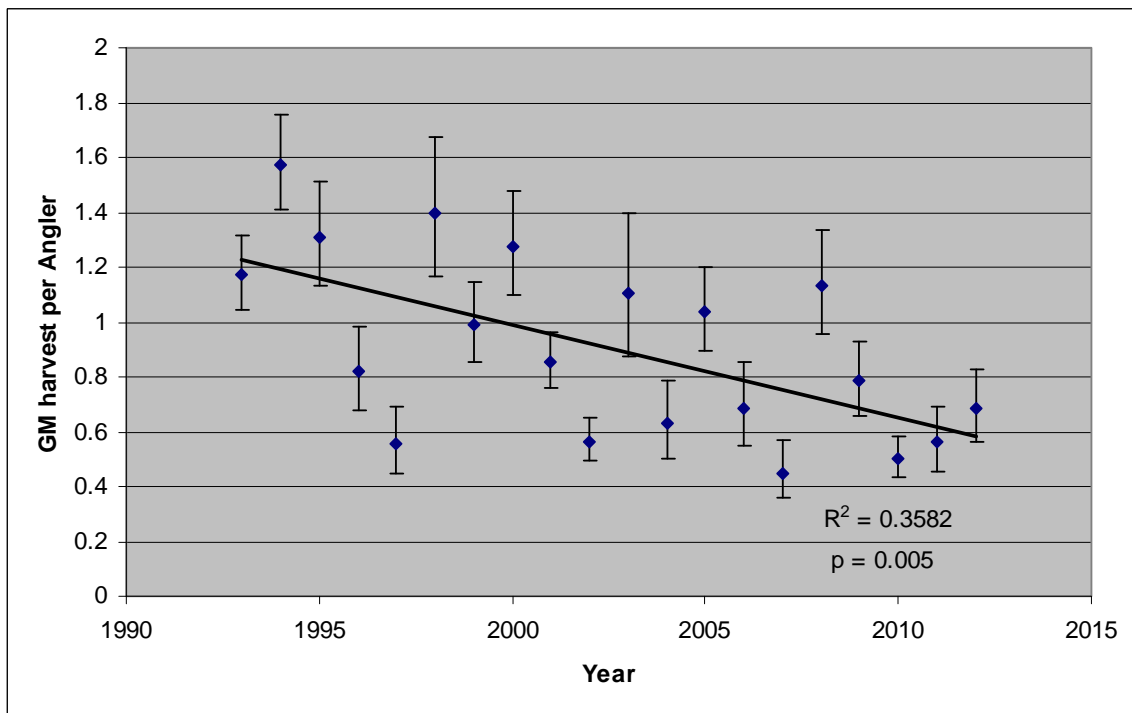


Figure 4. Spanish mackerel geometric mean (GM) harvest per angler by year from Maryland charter boat log data, 1993-2012. (Rickabaugh, 2013)



1994 Chesapeake and Atlantic Coast King and Spanish Mackerel Management Plan Implementation Table (update 06/14)			
Section	Action	Date	Comments
Stock Status	Action 1.1.1 A) Virginia will enforce a 14" TL minimum size limit and a 10 fish/person/day bag limit for Spanish mackerel.	1991 Continue	Minimum size and creel limits in place. Creel limit increased to 15 fish/person/day.
	Action 1.1.1 B) Maryland will enforce a 14" TL minimum size limit for both the recreational and commercial fisheries and a 10 fish/person/day bag limit for Spanish mackerel.	1993 Continue	Minimum size and creel limits in place. Creel limit increased to 15 fish/person/day. VA has a commercial limit of 3500 pounds Spanish mackerel per vessel per day. MD implemented a 3500 pound commercial limit in 2012. Spanish mackerel must be landed with head and fins intact.
	Action 1.1.2 A) Virginia will enforce a 5 fish/person/day bag limit for king mackerel.	1991 Continue	Minimum size and creel limits in place. Creel limit reduced to 3 fish/person/day.
	Action 1.1.2 B) Maryland will enforce a 5 fish/person/day bag limit for king mackerel.		MD has not developed regulations for king mackerel since most of the catch is outside state waters. Fishermen must abide by the limits imposed in the EEZ. No recreational harvest of king mackerel has been recorded through MRIP since 2008.
	Action 1.1.3. Virginia and Maryland will enforce a 20" FL or 23" TL minimum size limit for king mackerel.		Minimum size limit of 27" established in Virginia.
	Action 1.1.4. Virginia and Maryland will close their respective commercial and recreational fisheries for king and Spanish mackerel when such closures are in effect in Federal waters.	1995	Closures will be in compliance with South Atlantic Fishery Management Council (SAFMC) recommendations.
Monitoring catch and quotas, and research needs.	Action 2.1.1. Virginia and Maryland will require mandatory reporting of commercial landings	Continue	Both states are in compliance with reporting requirements.
	Action 2.1.2. Virginia and Maryland will supplement the Marine Recreational Statistics Program. MD will require charter boat logbooks.	Continue	Coastal charter boat logbook system was improved in 1994. Improvements in estimating recreational harvest are in progress under the NOAA Marine Recreational Information Program (MRIP)

1994 Chesapeake and Atlantic Coast King and Spanish Mackerel Management Plan Implementation Table (update 06/14)			
Section	Action	Date	Comments
	Action 2.1.3. Jurisdictions will support stock assessment research for mackerel stocks.	Continue	VA samples Spanish mackerel for length and weight. A new King Mackerel Stock Assessment Report was completed in March 2009 for South Atlantic and Gulf of Mexico. The ASMFC omnibus amendment was approved in 2011 and was implemented July 1, 2012. The amendment includes monitoring and management recommendations and requires state regulatory changes now in progress. Maryland submitted its plan to implement the requirements of the omnibus amendment to ASMFC in March, 2012. Addendum I was adopted in 2013 to establish a 2 yr. pilot program to reduce waste in the commercial fishery. Maryland submitted its first Spanish mackerel compliance report to ASMFC in 2013.
Waste/sublegal bycatch and hook and release mortalities	Action 3.1.1. Virginia will evaluate the use of escape panels as a means of reducing undersized bycatch. VA will enforce a 2 7/8" minimum mesh size for gill nets.	Continue	VA conducted studies on escape panels in pound nets and found they were successful at reducing bycatch.
	Action 3.1.2. Jurisdictions will support angler educational programs.	Continue	In 2008, Project FishSmart was organized by UMCES to develop a process for developing a consensus position on fisheries management options by a stakeholder group comprised of biologists, environmental organizations, tackle shop owners, charter boat operators, anglers, commercial fishermen, and tournament organizers. The pilot project species was King Mackerel and the goal of the project was to prevent overfishing and preserve a year-round fishery. A consensus goal that the fishery should be managed to prevent overfishing from occurring and recommendations were adopted Nov 7, 2008. A report was submitted to the South Atlantic Fishery Management Council that recommended three options for consideration (UMCES, 2008). The Council included the three management recommendations in its public scoping document.
	Action 3.1.3. Virginia will monitor bycatch sold as crab bait from the pound net and haul seine fisheries.	1995	
Habitat Issues	Action 4.1.1. Jurisdictions will continue to work with the Chesapeake Bay Programs, the Coastal Bays initiative, and water quality improvement goals for the Bay and coastal areas.	Continue	The CBP has adopted new water quality goals and are working towards attaining the goals. Status of the water quality indices can be found on their website at www.chesapeakebay.net

Acronyms:

ACL = Annual Catch Limit

ASMFC = Atlantic States Marine Fisheries Commission

CBP = Chesapeake Bay Program

EEZ = Exclusive Economic Zone

UMCES = University of Maryland Center for Environmental Studies

PRFC = Potomac River Fisheries Commission

Appendix 1

Fishery management plans (FMPs) provide a framework for how a fishery resource will be managed based on a species life history, habitat, and fishery utilization over time. Maryland law (Natural Resources Article §4-215) contains a statutory mandate for the development of FMPs for a given list of species. Legislation enacted in 2010 expanded MD Department of Natural Resources' (MDNR) authority to prepare FMPs for additional fish species. MDNR no longer needs to go to the General Assembly to justify adding new species to the list. FMPs can be prepared for species based on specific concerns about the status of a species and after consultation with the Tidal Fisheries Advisory Commission (TFAC) and the Sport Fisheries Advisory Commission (SFAC).

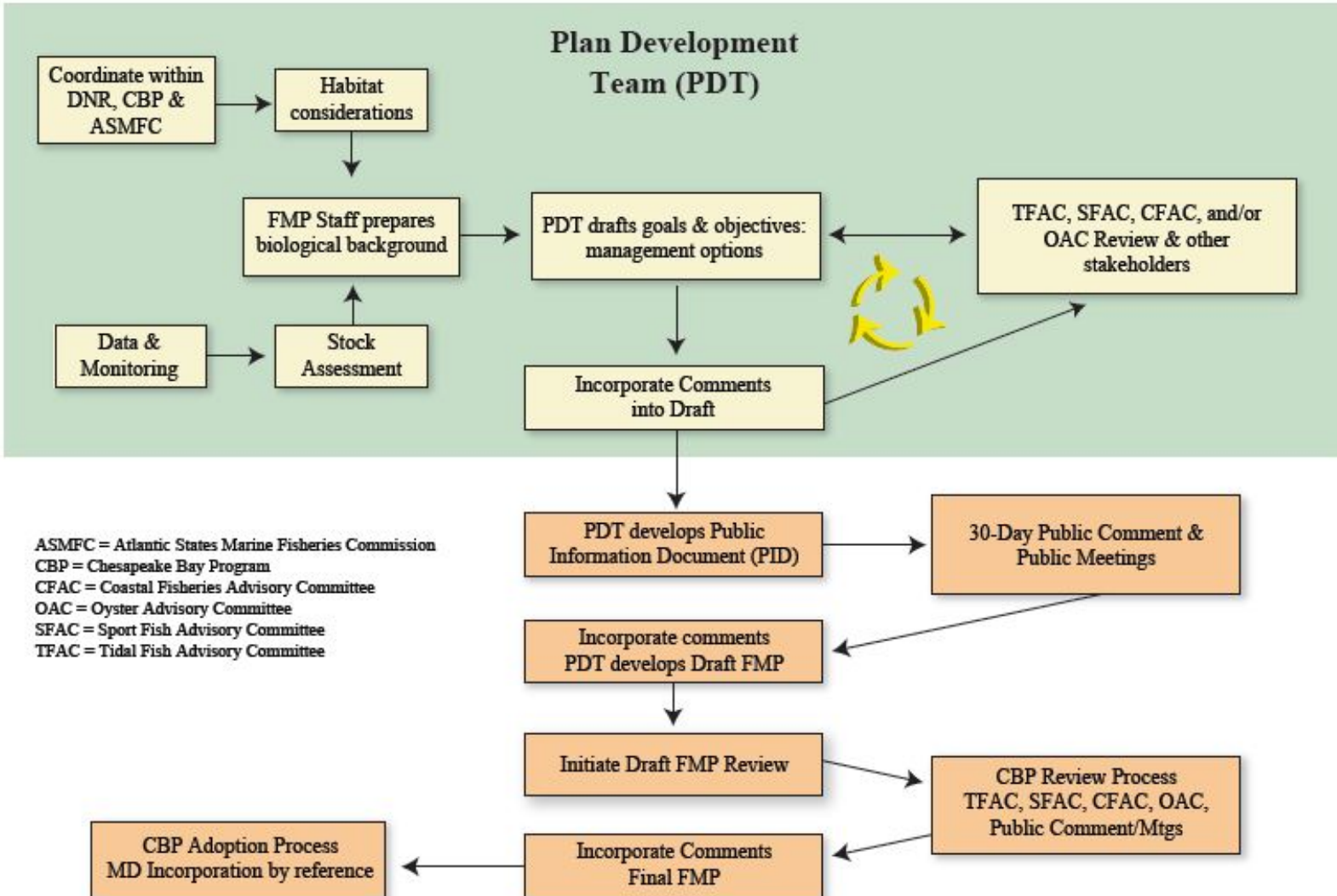
A Maryland Task Force on Fishery Management (Task Force) was convened in 2008 to review the current fishery management planning process and recommend improvements to the process that would increase stakeholder input and transparency during all stages of the FMP development and review process (Appendices 4 and 5 for flowcharts of the FMP Development Process and the FMP Review Process). The FMP staff developed a time line to review FMPs for 26 species. It is used to delineate an annual work plan.

FMP review begins with the designation of a Plan Review Team (PRT) by the Fisheries Service (FS) Director. The FS PRT evaluates the FMP goal, objectives, management strategies, and actions for their implementation status and applicability to current management needs. Depending on the particular species, the FMP review could also include the Chesapeake Bay Program and/or coordination with the Atlantic States Marine Fisheries Commission (ASMFC). After reviewing the components of the FMP and providing comments on the status of the management actions, the FS PRT recommends one of three pathways: 1) continue implementing the plan; 2) develop an amendment to significantly change or add to the FMP; or 3) revision of the FMP. The FS PRT drafts a FMP review report for review by the Fisheries Service Senior Management Team. The draft is also sent to the TFAC and SFAC for their review and input. The final, revised FMP review report is submitted to the Fisheries Service Director who makes the final decision regarding which of the three options to pursue: status quo, amendment, or revision.

In 2008, the Task Force emphasized the need for ecosystem-based management for all state managed fish species, including ASMFC managed species such as striped bass. The Task Force recommended MDNR continue research on the influence of habitat on fish populations, factors that impair fish habitat, participation in the environmental review process, updating regulations, transparent management framework, and outreach to County, local, and public entities. Chesapeake Bay jurisdictions are developing quantitative ecosystem-based management tools that will supplement traditional management tools currently in use. Ecosystem-based tools will address habitat, food web, stock assessment, and socioeconomic issues.

Appendix 2. Schematic of the fishery management plan development process in Maryland.

Fishery Management Plan (FMP) Development Process



Appendix 3. Schematic of the fishery management plan review process in Maryland.

Fishery Management Plan (FMP) Review Process

