2015 Fishery Management Plan (FMP) Legislative Report (December 2016)

This document addresses the requirement to regularly report on the status of each managed stock in the Chesapeake Bay and Coastal Bays of Maryland as required under Natural Resources Article Section 4-215. The report consists of a species-specific narrative and a fishery management plan (FMP) implementation table. The narrative contains information on the FMP background, stock status, management measures, the fisheries and issues/concerns. The implementation table is a synopsis of all the management strategies and actions found in the species FMP, implementation dates, and current status of the management actions. The boldface type highlights the most recent comments.

Background

Under the 1987 Chesapeake Bay Agreement and the 1992 Amendments, the Bay jurisdictions developed a series of FMPs for commercial, recreational, and selected ecologically valuable species. The Chesapeake Bay FMPs provide a framework for the Bay jurisdictions to generate compatible, coordinated management measures to conserve and utilize a fishery resource. As ecosystem-based considerations are included in management plans, interactions among species, habitat, land use, and socioeconomic factors become part of the decision-making process thus balancing sustainable fishery yields with conservation goals. Since a large fraction of the managed fish species in the Chesapeake Bay spends a portion of their life history outside the Bay boundaries, fishery management measures must be coordinated on a regional and coastal basis. For coastal migratory species, the federal Mid-Atlantic Fishery Management Council (MAFMC) develops management measures for species mainly found in the Exclusive Economic Zone (EEZ or 3-200 miles offshore). For species utilizing the inshore coastal area (0-3 miles offshore), the Atlantic States Marine Fisheries Commission (ASMFC) defines compliance requirements. The ASMFC requires the states to prepare annual compliance reports for the following species: American eel, Atlantic croaker, Atlantic menhaden, Atlantic striped bass, Atlantic sturgeon, black drum, black sea bass, bluefish, horseshoe crabs, Spanish mackerel, red drum, shad and herring, scup, spot, spotted seatrout, summer flounder, tautog, and weakfish. Additional information on stock status and fishery management measures for these migratory fish species can be found at www.asmfc.org and www.mafmc.org. Coastal fishery requirements are mandated along the Atlantic coast. The Chesapeake Bay FMPs outline how Bay jurisdictions will implement coastal compliance requirements and identify any additional issues specific to the Bay region. The Maryland Coastal Bays FMPs outline how species are managed in the Coastal Bays. Maryland's Coastal Bays FMPs are part of a larger plan, the Comprehensive Coastal Management Plan (CCMP). The Maryland FMPs (yellow perch, white perch, Coastal Bays blue crab, Coastal Bays clams, largemouth bass and brook trout) provide a framework for managing species in Maryland waters, some inland and tidal areas.

In addition to the Chesapeake Bay Program process, Natural Resource Article §4-215 (b)(1-24), Annotated Code of Maryland states that the Department of Natural Resources shall prepare fishery management plans for a list of species. Once a plan has been developed and signed off, it is incorporated by reference into COMAR.

A 2010 legislative bill gave the Department authority to create fishery management plans without the need to annually amend §4-215 to add new species to the list of managed species. The bill requires the Department to address overfishing when data shows that it is an issue. The Department also consults with the Tidal and Sport Fisheries Advisory Commissions (TFAC and SFAC, respectively) for their input when developing management strategies and actions.

Introduction

Fifteen (15) Chesapeake Bay Fishery Management Plans (FMPs) encompassing 21 species and over 260 commitments have been adopted by the Chesapeake Bay Program's Executive Council. In addition, Maryland has developed 5 state-specific FMPs: Yellow Perch, Coastal Bays Blue Crab, Coastal Bays Hard Clam, Brook Trout, Largemouth Bass, and a technical report for catfish. Amendments to the Maryland Tidewater Yellow Perch FMP and the Chesapeake Bay American Eel Fishery Management Plan have been developed. The eel amendment is expected to be adopted in 2016 and the yellow perch amendment in 2017.

Fishery management plans are updated on a regular basis and periodically reviewed to evaluate progress towards meeting goals and objectives. An FMP update consists of Fisheries Service (FS) staff compiling the most recent information on the status of management strategies and actions for each FMP species. An FMP review consists of a more intensive evaluation of a species FMP goal, objectives, management strategies and actions, the current stock status, and any outstanding species issues. The review is conducted by the species-specific biologists and FMP staff. In order to maintain effective management strategies that reflect the changing needs of fishery resources, the review team: 1) examines the monitoring data for status and trends of the species being reviewed; 2) updates the recreational and commercial fishery statistics; 3) implements coastal recommendations (ASMFC and/or MAFMC); 4) integrates habitat and trophic considerations; 5) tracks the progress/implementation of management actions; 6) addresses any new issues; and , 7) makes recommendations for adaptive management, i.e., whether to continue with the current management framework, amend the plan or revise the plan. The plan review team's recommendations are presented to the Sport Fisheries Advisory Commission and the Tidal Fisheries Advisory Commission as part of the review process. The commissions provide additional input (Figure 1). If an amendment or revision is recommended by the review team, the process for developing FMPs begins (Figure 2). Beginning in 2013, the review process also included the 2012 Fisheries Service Allocation Policy.

During 2015, the Fisheries Service Plan Review Teams (FS PRT) did not complete any FMP reviews. Instead, the reviews will be totally replaced by the annual updates for the FMP report until further notice. The Fisheries staff will rely on requests from the TFAC and SFAC members regarding what species will be reviewed, if any.

Fish Habitat and Land Conservation

Maryland Fisheries Service (FS) has identified land development as one of the major threats to fish habitat. However, fisheries managers have no authority to regulate land use. To address this challenge, FS is developing strategies to

work with constituents to communicate fisheries' concerns. An ad hoc fish habitat workgroup has been convened and developed a vision, objectives and work plan. The message is "land conservation = fish conservation." Studies have been conducted to assess the impacts of impervious surface on fish and fish habitat. A DNR study on the Choptank River (1980-1990) examined the survival rate of striped bass larvae and agricultural best management practices (BMPs). Larval survival increased with the increased adoption of BMPs especially those that conserved soil, reduced run-off and reduced the use of pesticides and fertilizers. Two agricultural methods were notable, conservation tillage and cover crops.

Another DNR Fisheries study examined how the amount of impervious surface (due to the amount of development) affects water quality and then impacts fish spawning. The DNR Fish Habitat Program examined the number of herring eggs or larvae present in a stream. They found that the number of herring decreases with increasing development. As rural watersheds (impervious surface less than 10%) transitioned to suburban watersheds (greater than 10% impervious surface), the number of streams with eggs or larvae decreased. A study on larval yellow perch feeding success also found negative effects due to increasing impervious surface in a watershed. For more details about these studies go to http://www.dnr.maryland.gov/fisheries/fhep/pdf/CBC_Land_Conservation_Fish_Conservation_Fact_Sheet.pdf

These studies illustrate how important land use decisions are to fish management. Land use policies and conservation strategies need to be better aligned with fishery management strategies.

As a conservative recommendation, impervious surface should be kept below 8% to minimize the effects on the aquatic habitat and fish. As impervious surface increases above 10%, fishery resources are less able to cope with the stress of poor quality habitat. DNR's Fisheries Service has developed a map to help guide conservation and land management. First, they identified high quality anadromous fish habitat. Then they added stressors that limit fish production. Areas were ranked into three categories (good, fair, and poor) based on the potential to support anadromous fish spawning under the existing levels of development. For more detailed information on the Habitat and Ecosystem Program go to http://www.dnr.maryland.gov/fisheries/fhep/index.asp?p=pub

Another approach to sustainable fisheries and habitat is through partnership with the Chesapeake Bay Program. A Chesapeake Watershed Agreement was completed in 2014 and defined goals and outcomes to restore and protect the Chesapeake Bay. The goals address sustainable fisheries, vital habitats, water quality, toxic contaminants, healthy watersheds, stewardship, land conservation, public access, environmental literacy and climate resiliency. These goal categories led to the development of specific outcomes and the development of management strategies to outline what steps to take to achieve the outcomes. Of particular importance to fisheries are the blue crab abundance and management outcomes, the oyster outcome, the forage fish outcome, the fish habitat outcome, the brook trout outcome, the stream health and wetlands outcomes, and the fish passage outcome. During 2015, the partners of the Chesapeake Bay Program developed 2-year work plans for 2016/2017 that contain specific actions for each outcome. For

the most recent information on the work plans, go to: http://www.chesapeakebay.net/blog/post/bay_program_releases_final_two_year_work_plans

Marine Recreational Information Program (MRIP)

Recreational fishery statistics are an important part of any stock assessment. Scientists need to know how many fish are taken, how much effort was used to catch the fish, and where the fish were caught. The National Oceanic and Atmospheric Administration (NOAA), National Marine Fisheries Service (NMFS) is responsible for collecting statistics on marine recreational fishing and calculating harvest estimates. The NMFS recreational fishing statistics program formally known as the Marine Recreational Fisheries Statistics Survey or MRFSS has transitioned to a new process.

The NMFS began a new process in 2008 to improve the estimation of recreational harvest. The program was implemented in three concurrent phases: evaluation of current methods; identification and testing of new methods; and implementation of improved methodologies (MRIP 2011). MRIP has accomplished the following: utilized the National Saltwater Angler Registry; tested alternative effort survey approaches; created a new catch estimation methodology; improved the collection of catch data; and improved data timeliness. Improvements to the methodology include better angler dockside surveys, improved statistical precision, and more frequent reporting. The MRIP estimates replace the previous MRFSS recreational estimates. The MRIP recreational catch estimates improve the accuracy of the estimates by removing statistical bias. Since historic estimates are particularly important data for stock assessments, the recreational catch estimates have been recalculated. Prior to 2004, the dockside survey design was different and not compatible with the new methodology.

During 2012, MRIP developed a revised method to recalculate catch estimates going back in time as far as possible. The recalculation of recreational harvest estimates resulted in species-specific changes. Some catch estimates went up, some went down and some stayed about the same. There was no overall trend in catch estimates from the previous MRFSS estimates. On a coastwide basis, approximately 20% of the species harvest estimates differed by more than or less than 15% of the previous estimates. Species harvest estimates that were considerably different from past estimates include mid-Atlantic scup and species from other areas (Maine- Atlantic cod and haddock; Gulf of Mexico – mutton snapper and black grouper; South Atlantic – black and red grouper; and Atlantic yellowfin tuna). The MRIP recreational harvest estimates did not directly change any of the species' stock status.

Improvements to recreational harvest estimates have continued under MRIP. Since 2012, MRIP has evaluated a number of pilot projects including: an electronic logbook reporting system for charter boats; enhanced angler dockside survey; additional ways to report estimates in a timelier manner; improved protocols for the access point angler intercept survey; the development of an online, interactive Site Register of every recreational fishing access point; and expanded regional surveys. Priorities for 2014 included cataloging and testing

survey designs, monitoring and adjusting new field methodologies for effort estimates, using license and registration information, increasing reporting efficiency for the charter boat fleet; and utilizing new and emerging technologies to understand fishery health.

Recently, a new survey design, Access Point Angler Intercept Survey (APAIS), has been utilized to estimate the number of fish caught, kept and discarded. Part of the improvements in the survey include sampling at all times of the day (no longer assuming that day and night catch rates are the same), using probability sampling protocols, implementing an on-line registry of public fishing sites, utilizing electronic logbooks for headboats and using multiple methods for estimating effort. More information about recent improvements and a summary of 2015 MRIP-funded pilot studies can be found on their website:
http://www.st.nmfs.noaa.gov/Assets/recreational/pdf/FINAL-updated-implementation-plan-3.22.16.pdf