

2013 Maryland FMP Report (July 2014)

Section 15. Red Drum (*Sciaenops ocellatus*)

Chesapeake Bay FMP

Red drum catches in both Maryland and Virginia returned to more typically observed numbers in 2013 after an exceptional 2012. The Atlantic States Marine Fisheries Commission (ASMFC) adopted a Fishery Management Plan (FMP) in 1984 to protect the red drum spawning stock. The coastal FMP included states from Florida to Maryland. ASMFC Amendment 1 (1991) to the FMP extended the FMP application north to Maine with the goal to attain optimum yield from the fishery over time. Amendment 2 was adopted in 2002 to require states to comply with recreational limits to meet the target fishing mortality. The Chesapeake Bay Red Drum Fishery Management Plan (CBRD FMP) was adopted in 1993 to address overfishing and follow the ASMFC guidelines. Management measures since 2000 have resulted in reduced fishing mortality. The CBRD FMP is scheduled for a review in 2015.

Stock Status

Status of the red drum stock is derived from the Atlantic coast stock assessment. In the 1980s and 1990s the coastal red drum stock was overfished and management measures were implemented to reduce fishing mortality (F) and rebuild the stock. Two management units were defined: the northern stock (NC to NJ) and the southern stock (FL to SC). The 2009 peer reviewed ASMFC stock assessment found the stock to be relatively stable. Although there are data limitations for adult red drum, ASMFC believes that overfishing is likely not occurring. The fishing mortality threshold is 30% of a static spawning potential ratio (sSPR) and the fishing mortality target is 40% of a sSPR. Static (or equilibrium) spawning potential ratio is based on both female biomass and egg production. The average sSPR has been above the overfishing threshold ($F_{30\%}$) since 1994 with the exception of 2002 and has been above the target ($F_{40\%}$) since 1996. Fishing pressure and mortality appear to be stable and it is likely that the stock is not subject to overfishing.¹ The next benchmark assessment is scheduled for 2015.

There is no formal red drum stock assessment for Chesapeake Bay. In most years, red drum are not frequent visitors to Maryland's portion of the Chesapeake Bay due to lower salinities. More red drum are reported from Virginia waters where salinities are higher. Schools of red drum below the minimum and over the maximum size limit may be seen in years of low freshwater flow such as 2012, a year of unusually high catches.

Current Management Measures

Red drum are managed through size limits and creel limits in compliance with all current ASMFC FMP requirements. All harvests occur in state waters. Maryland allows recreational fishermen to take 1 fish per day between 18" and 27". Charter boat logs show that anglers in Maryland release most of the red drum they catch.² Commercial fishermen in Maryland are allowed 5 fish per day with a slot limit of 18"-25". Virginia allows a slot limit of 18"-26" and a possession limit of 3 fish per day for both commercial and recreational fishermen. The Potomac River Fisheries Commission (PRFC) has a slot limit of 18"-25" and a possession limit of 5 fish per day for recreational and commercial fishermen. There are no closed seasons for the recreational or commercial fisheries.

The Fisheries

Red drum are one of the most highly sought recreational species along the Coast. In Maryland's portion of the Chesapeake Bay, red drum are only seasonally available for a relatively short period. The commercial harvest in Chesapeake Bay is small.

Figure 1. Commercial red drum landings reported to NMFS by Maryland and Virginia: 1982-2012.⁴

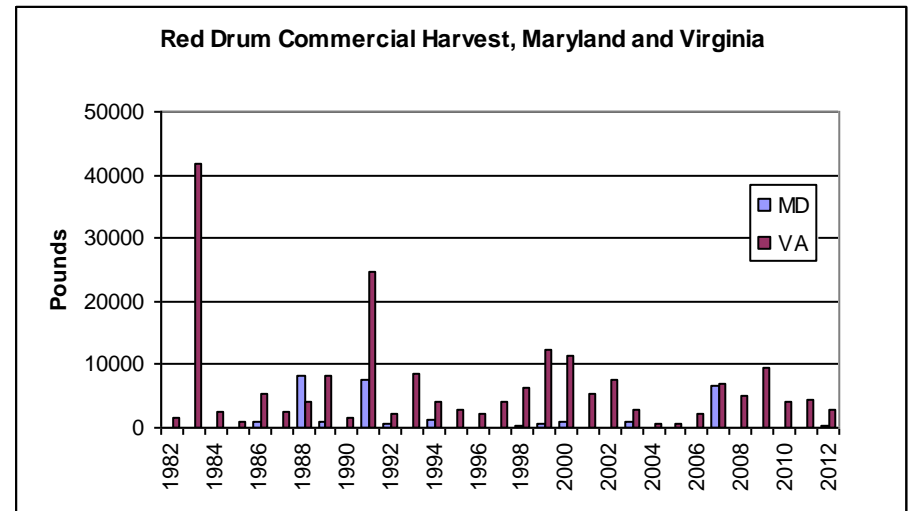
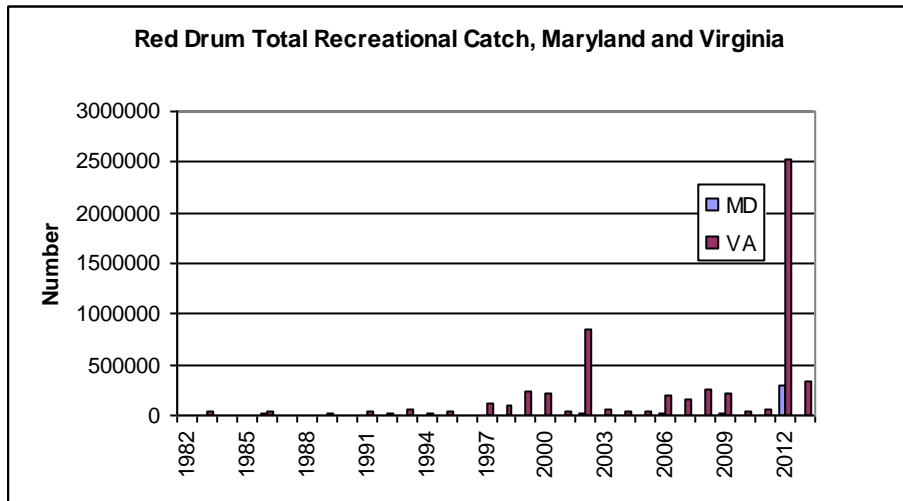


Figure 2. Total recreational red drum MRIP catch estimate for Maryland and Virginia, all modes combined, 1982-2013.⁵ (Includes fish caught and released)



Issues/Concerns

Red drum has been identified by ASMFC as a priority species in need of research. Coastal states are developing a cooperative plan to collect more age/length data to improve stock assessment modeling results. Maryland will continue to monitor commercial pound nets and fish houses and measure red drum when they are encountered.

The Maryland Sport Fisheries Advisory Commission asked the Maryland DNR, in 2013, to consider allowing recreational fishermen to take one large red drum. Since red drum are managed by the ASMFC, allowing any harvest of fish over 27 inches would require an amendment to the FMP. Such an amendment is unlikely in the absence of supporting data and increased monitoring.

Submerged aquatic vegetation (SAV) beds are important red drum habitat. Efforts by EPA and state programs to achieve SAV restoration and water clarity goals will continue. In 2013, ASMFC approved Addendum I to Amendment 2 to the Red Drum Fishery Management Plan.³ Addendum I revised the habitat section to include the most current science for red drum habitat needs for spawning, egg and larvae, juvenile, subadult, and adult life history stages. Habitat identification and description, habitats of concern, and potential threats to recovery and sustainability were also defined.

References:

- ¹ 2012 Review of the Atlantic States Marine Fisheries Commission Fishery Management Plan for Red Drum (*Sciaenops ocellatus*) 2011 Fishing Year. 22p.
- ² Rickabaugh, H.W. Jr. 2013. Maryland Red Drum (*Sciaenops ocellatus*) compliance report to the Atlantic States Marine Fisheries Commission – 2012. Maryland Department of Natural Resources, Fisheries Service, June 2013. 6p.
- ³ Addendum I to Amendment 2 to the red drum fishery management plan: *Habitat Needs & Concerns*. Approved August, 2013. 24p.
- ⁴ Personal communication from the National Marine Fisheries Service, Fisheries Statistics Division. March 24, 2014. <http://www.st.nmfs.noaa.gov/st1/commercial/>.
- ⁵ Personal communication from the National Marine Fisheries Service, Fisheries Statistics Division. March 24, 2014. <http://www.st.nmfs.noaa.gov/st1/recreational/index.html>.
- ⁶ SAV in Chesapeake Bay and Coastal Bays. VIMS William & Mary Virginia Institute of Marine Sciences. http://web.vims.edu/bio/sav/sav12/exec_summary.html
- ⁷ Chesapeake Bay Program. Submerged Aquatic Vegetation (SAV) Outcome Justification. http://www.chesapeakebay.net/publications/title/submerged_aquatic_vegetation_sav_outcome_justification

1993 Chesapeake Bay and Atlantic Coast Red Drum Management Plan Implementation Table (updated 3/14)			
Section	Action	Date	Comments
1. Overfishing	1.1.1 Virginia will continue to enforce a 5 fish creel limit and an 18 inch minimum size limit with one fish over 27in in the recreational fishery.	1992 Modified in 2003 Continue	In compliance with coastal recommendations. VA has adopted a slot limit and now allows harvest of 18-26" red drum. A new possession limit of 3 fish has been adopted for both recreational and commercial harvest. The 2009 peer reviewed ASMFC stock assessment found the resource to be relatively stable with overfishing not occurring. Next coastal stock assessment is scheduled for 2015.
	1.1.2 Maryland and the PRFC will implement a 5 fish creel limit and an 18 in minimum size limit with one fish over 27in in the recreational fishery	1994 Modified in 2003 Continue	In compliance with coastal recommendations. MD has a recreational size limit for red drum of 18-27" and a commercial size limit of 18-25". The possession limit is 1 fish/day for the recreational fishery and 5 fish/day for the commercial fishery. PRFC has a size limit of 18-25" and a possession limit of 5 fish for both recreational and commercial harvest.
	1.2a Jurisdictions will investigate the potential for using bycatch reduction devices in nonselective fisheries	1992 Continue	The bycatch of immature red drum has not been a problem in Chesapeake Bay fisheries because small fish are infrequently encountered. Bycatch reduction devices that are currently in place should increase the escapement of juvenile red drum.
	1.2b Virginia and Maryland will work with the South Atlantic Fishery Management Council (SAFMC) and ASMFC to develop and require more efficient gear to reduce bycatch and/or discards.	1992 Continue	MD and VA appointed representatives to the ASMFC/SAFMC Red Drum Advisory Panel.

1993 Chesapeake Bay and Atlantic Coast Red Drum Management Plan Implementation Table (updated 3/14)			
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2. Stock Assessment and Research Needs	2.1 Jurisdictions will support fecundity research and tagging studies to determine movements of juvenile red drum and develop juvenile indices. Maryland and Virginia will continue the Baywide trawl survey of estuarine finfish species and crabs.	1993 Continue	The VA red drum tagging program is ongoing. The tagging program includes a fishery independent study and a volunteer recreational study. Tag recapture data indicates a southward, late fall migration of juvenile red drum out of the Bay and along the Virginia coast. Future tag returns should provide information about the movements of these fish upon reaching sexual maturity. The Chesapeake Bay Multispecies Monitoring and Assessment Program (ChesMMAAP) continues but the collection of red drum is not sufficient to guide any stock assessment. The Maryland Shoal Water (blue crab) Trawl Survey continues (data for fish and crabs). ASMFC has recommended that all states implement a tagging program for red drum. ASMFC has continued to facilitate standardized ageing protocols and consistency among laboratories.
	2.2 VMRC Stock Assessment Program will continue to collect biological data from commercial catches of red drum	1993 Ongoing	There is little fishery dependent information on larger, reproductive red drum and limited fishery-independent information (ASMFC). The large adults are primarily found offshore where fishing for red drum is prohibited.
	2.3a Jurisdictions will continue collecting commercial fisheries statistics.	Continue	Maryland's Chesapeake Bay red drum harvest remains insignificant. Virginia commercial reports were 2,815 pounds in 2012, a slightly lower harvest than that reported in recent years.
	2.3b Virginia will implement a limited and/or delayed entry program and a mandatory reporting system for commercial licenses.	1993 Continue	Implemented in January 1993.

1993 Chesapeake Bay and Atlantic Coast Red Drum Management Plan Implementation Table (updated 3/14)

Section	Action	Date	Comments
	2.3c Virginia and Maryland will continue to supplement the Marine Recreational Statistics Program	Continue	<p>Maryland awarded 50 citations for red drum up to 54” in length that were caught and released in 2013. This is a decrease from the record high 209 citations in 2012. In 2013, VA anglers received citations for 995 red drum over 46” in length that were caught and released which represented 16% of all tournament entries. The Marine Recreational Information Program (MRIP) has replaced MRFSS with refined estimates of recreational harvest and total catch. Proportional standard errors (PSE) have dropped below 50 in the past two years, indicating that recreational red drum harvest estimates were more precise. MRIP estimated that recreational fishermen in MD harvested 17,869 red drum and released 280,000 in 2012. By contrast, Maryland anglers harvested nearly equal numbers (2,097) to those released (2,187) in 2013. Virginia angler harvest was estimated at 28,159 and over 2.5 million released in 2012. In 2013, Virginia anglers harvested 124,028 red drum – more than four times as many as in 2012, while releasing 220,333 fish, about 10% of the released estimate in 2012.</p>
	2.3d Maryland will continue a sampling program using pound nets and trawls.	Continue	<p>Maryland conducts fishery dependent sampling from pound nets in the Chesapeake Bay. Twenty-one red drum were sampled in 2008 (mean 361mm TL, range 237-541mm TL). None were collected in 2009 and 2010 and only two were collected and released in 2011.³ In 2012, biologists sampled 458 red drum from pound nets; of this total, 455 were under the 18” minimum TL and 3 were over the 25” maximum TL size limit. Accordingly, no legal-sized red drum would have been available to commercial or recreational fishermen.</p>

1993 Chesapeake Bay and Atlantic Coast Red Drum Management Plan Implementation Table (updated 3/14)			
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3. Habitat Issues	3.1 Jurisdictions will continue to set specific objectives for water quality goals and review management programs established under the Chesapeake 2000 agreement	Continue	<p>SAV beds are important red drum habitat. Water clarity and water quality goals were adopted by the Chesapeake Bay Program signatory states in 2003 that will help in achieving a SAV restoration goal of 185,000 acres by 2010. In 2008, there were nearly 77,000 acres of bay grasses, or 42% of the goal. By 2009, this had grown to nearly 86,000 acres but decreased to just under 80,000 acres in 2010 due to warmer water temperatures. Bay grasses decreased 21% in 2011 to 63,074 acres after high spring flows, Hurricane Irene and Tropical Storm Lee. Grasses in the coastal bays of Maryland decreased by 35% in 2011. Another 21% overall decrease was calculated in 2012 from areas mapped in both 2011 and 2012. The largest SAV declines were noted for upper and middle Chesapeake Bay. Among Chesapeake Bay sites, only the Potomac River and middle James River locations showed any increases from 2011 to 2012. The Delmarva Peninsula Coastal Bays (Assawoman, Isle of Wight, Sinepuxent, Chicoteague and Southern VA Coastal Bays declined 8% from 13,455 acres in 2011 to 12,326 acres in 2012⁶. The 2013 SAV estimate is 59,927 acres.</p> <p>The SAV outcome in the new Chesapeake Bay Program Watershed Agreement is to achieve an ultimate goal of 185,000 acres. Progress towards the goal/outcome will be measured against a target of 90,000 acres by 2017 and 130,000 acres by 2025.⁷</p>

Acronyms:

ASMFC = Atlantic States Marine Fisheries Commission	SAV= Submerged Aquatic Vegetation
MRFSS = Marine Recreational Fisheries Statistics Survey	VIMS= Virginia Institute of Marine Science
PFRC= Potomac River Fisheries Commission	VMRC = Virginia Marine Resource Commission