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Red Drum Regulation Change Evaluation.

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The following information was compiled to address a request by the Maryland Sport Fish Advisory Commission to explore the possibility of allowing the harvest of one large red drum (greater than 27 inches) per angler. Currently red drum regulations are managed by the Atlantic States Marine Fisheries Commission, through (ASMFC) Amendment 2 to their Fisheries Management Plan (FMP) for red drum on the Atlantic coast. This amendment does not allow for the harvest of any red drum larger than 27 inches, and therefore an addendum to Amendment 2 would be necessary before this request could be met if deemed appropriate.

Background Information

Red drum along the Atlantic coast is solely managed by ASMFC. The South Atlantic Council transferred management of the EEZ to the states through ASMFC, primarily due to the inability to establish adult stock size or total allowable catch limits for the species. The EEZ remains closed through a harvest moratorium in federal waters (3 – 200 miles off shore). In general juveniles and sub-adults are available to fishermen in estuaries and near shore areas and adult fish generally remain off shore, except during the spawning period. Female red drum do not mature until age 4-6 (varies by region) and at lengths generally in excess of 30 inches. The management strategy became to strive for an escapement rate of juvenile/sub-adult red drum to achieve a 30% Spawning Potential Ratio (SPR), and to protect the adult spawning population. Amendment 1 established harvest reductions to begin alleviating overfishing in a phased in approach with some success. Amendment 2 looked to build upon the success of Amendment 1 and established a 30% SPR threshold and 40% SPR target. The management area includes NJ through the east coast of FL. The management area is further divided in to the northern and southern region, with the split occurring at the NC SC boarder. All states in the management area are required to implement all requirements of Amendment 2. The requirements are to implement appropriate bag and size limits to obtain the target and no fish over 27 inches may be harvested commercially or recreationally.

A stock assessment was conducted in 2009 by region. Only an overfishing determination could be made. It was not possible to determine the overfished status in either region due to lack of data for the adult population. The three year average SPR for the northern region was 45.3%, and was above both the threshold and the target. Since 1996 the three year average SPR for the north has only been below the target in 2002. SPR estimates in the southern region had higher level of uncertainty, but were also currently above the target.

Reasons to Request a Management Change

The northern region is currently not experiencing overfishing. Red drum are only available to Maryland anglers (and other anglers north of NC) for a short time period each year. Therefore, red drum landings in Maryland were only a fraction of coast wide landings even when we allowed one fish greater than 27 inches. Red drum that



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are small enough to fit in the current slot limit are not common in Maryland waters in most years, limiting the ability of Maryland anglers to harvest many fish. Allowing a harvest of one large fish should lead to more opportunity, and desire, to harvest fish, and encourage fishermen to book charter trips and spend more on bait and tackle to pursue red drum. This would lead to a positive effect on the local economies and anglers overall fishing experience in Maryland.

Barriers to a Management Change

The determination of the current SPR level in the northern region is based primarily on NC data, and outside of landings no Maryland data was used (or available for use) in the stock assessment. The board must be able to determine that any alternative management action will not contribute to overfishing of the resources. This is a requirement of Amendment 2. So, we would have to be able to show we are providing an equivalent escapement rate with any new regulation as to those currently in place. We simply have no data to estimate the current escapement rate for Maryland, or that of any proposed regulation change. Escapement rates for the northern region are currently for juvenile and sub-adult red drum, so determining how to compare the effect of removing spawning age adults to the current level of sub-adults would need to be addressed as well. While overfishing is not currently occurring, we do not know if the stock is overfished. It would take an amendment to the ASMFC FMP to allow the harvest of red drum over 27 inches. The reason for the no fish over 27 inch clause in the amendment was to protect the spawning stock and discourage creating northern markets for southern fish. While the ability to keep fish over 27 inches could be limited to only the northern region, it would be safe to assume the other states in the region would want to harvest large fish as well. Catches in NC are much higher than those in the other northern states. The cumulative effect of several states removing spawning age fish in the north, while the other states continue to remove sub-adults and juveniles could have negative effects on the spawning stock, which currently would not be detected, due to lack of suitable data. I would anticipate a lot of resistance from many of the South Atlantic states to allowing the harvest of large red drum, and to initiate the addendum process a majority vote would be needed.

Potential Actions

- 1. Status Quo for Now.** Prior to Amendment 1, overfishing was severe. The generation time of red drum is 15 – 20 years, and the current regulations have been in place for 12 years. Allowing the regulations to be in place for at least one generation will allow for a better understanding of how the stock reacted to the regulations. The next stock assessment should occur in 2014 giving us a good picture of how the regulations affected the population. At this point if SPR values have remained above the target, or continue to increase, a slight liberalization of regulations would be easier to justify. Since the spawning stock can not currently be assessed a more conservative approach may be wise.
- 2. Allowing the Northern Region to Harvest Red Drum Over 27 Inches.** The inability to definitively compare the effect of regulation changes in Maryland on mortality rates would make a conservative approach more likely to pass. Female red drum in the northern region do not reach 100% maturity until 33.9 inches. A 1 fish creel limit and minimum size limit of at least 36 inches (40+ would be better)



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would allow all fish a chance to reach maturity and spawn one or more years prior to being subjected to harvest. The higher we would set the size limit the more likely we would be able to gain favor with other states board members. We may want to consider keeping the current slot limit for commercial fisheries, and make the change only for recreational fisheries in the northern region. States in the region could have the option to keep their regulations as they are (slot limits with a 27 inch maximum length) or change to the trophy limit (1 very large individual) for all fisheries or by sector. This would of course increase the number of discards. The most recent stock assessment used an 8% hook and line discard mortality rate, so this would need to be accounted for. The best chance for success of this proposal would be if NC was interested in something similar, and had the data to determine how this regulation would compare to the current slot limits in terms of fishing mortality rates. NC started a long line survey targeting adult red drum in 2007. While this is a relatively short time series for a long lived species, it may be able to provide some information on recent trends in adult abundance, and identify changes in relative abundance after a regulation change is made. This survey also reported a 40 to 41 inch annual mean length from 2007 – 2010, further illustrating the need to keep a maximum size limit at a higher value to protect the adult population from overfishing.

- 3. Allowing States from VA north to Harvest Red Drum Over 27 Inches.** Size limit recommendations and the trading of the current slot for the one large fish would remain the same as in 2 above. The advantage of this option is abundance is much lower north of NC. Therefore, adverse impacts to the coast wide spawning stock are less likely. The disadvantage is there will be little to no data to support the regulation change, and no surveys in place to monitor the affects of the regulation change. The ASMFC is less likely to accept a regulation change in the absence of supporting data and monitoring capabilities.