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Rebuilding Overfished Fisheries Under the Magnuson-Stevens Fishery Management Act
Committee on Natural Resources
U.S. House of Representatives

December 5, 2007

Madam Chairwoman and Members of the Committee, I am Jim Donofrio, the Executive Director of the Recreational Fishing Alliance (RFA). The RFA is a national 501(c)(4) non-profit grassroots political action organization whose mission is to safeguard the rights of salt water anglers, protect marine, boat, and tackle industry jobs, and insure the long-term sustainability of our nation's marine fisheries.

I appreciate the opportunity to appear before you today to discuss the Magnuson-Stevens Fishery Conservation and Management Act (MSA) and the challenges in meeting its requirements. The Committee has raised questions about rebuilding plans, ending overfishing, statutory timeframes, rebuilding targets, information and data factored into rebuilding targets, non-fishing impacts on rebuilding targets, and factors which hinder the ability to meet rebuilding plan goals. Today, I plan to use summer flounder to highlight the fact that in certain instances, the law and the science do not produce the results that Congress must have intended. In particular, I will discuss the science behind the summer flounder stock assessment and the rebuilding requirements contained in the MSA. Collectively, these two aspects drive summer flounder management and are responsible for the negative impacts anglers and businesses engaged in this fishery are currently experiencing.

It is important to describe this fishery in terms of its social importance to the recreational fishing community. Of all the species of finfish along the Mid-Atlantic coast, none is more valuable to the recreational fishing sector than summer flounder. The recreational summer flounder fishing sector includes individual anglers, party and charter boat businesses, boat builders, fishing tackle manufacturers, bait and tackle retailers, marinas, and many other businesses in fishing communities from North Carolina to Massachusetts. In 2006, the recreational summer flounder fishery contributed in excess of $3.5 billion to the economies of the Mid Atlantic. The recreational fishing infrastructure in the Mid-Atlantic has become greatly dependent upon anglers being

engaged in the summer flounder fishery.

According to the National Marine Fisheries Service (NMFS), over 8 million anglers targeted summer flounder from Maine to North Carolina in 2006.[i] Unlike many other important recreational fisheries, personal consumption is the main motivation driving participation. Based on this attribute, the overall recreational effort targeting summer flounder is more closely linked with regulations and the opportunity to land a legal-sized fish than the size of the stock. It is also a fishery that can be accessed by anglers fishing from all platforms making it available to fishermen of all skill and financial levels.

In 1988, NMFS approved the original fishery management plan for summer flounder. The objectives of the plan were to reduce fishing mortality, increase spawning stock biomass, and improve yield from the fishery, among others.[ii] The establishment of a maximum fishing mortality rate that produces the maximum yield per recruit would be used to set annual harvest limits. When the plan was adopted, the stock size was depressed, the fishing mortality rate was over 2.0 (508% over the maximum fishing rate allowed under the rebuilding plan), and no summer flounder older than three years were collected in the NMFS coastwide surveys. Since that time, fishing mortality has decreased over 80%, total harvest has decreased over 96%, and both total stock biomass and spawning stock biomass have increased 251% and 280% respectively. The most recent assessment of summer flounder (2007) also indicates that more older fish (age 3+) are being observed in both fisheries dependant and independent data than ever before. Improved age structure is a key point which scientists and managers look for when assessing the health of a fishery.[iii] This level of rebuilding is comparable to Atlantic striped bass which increased 202 percent during the same 1988-2004 time frame[iv] and has been described by the Atlantic States Marine Fisheries Commission[v], NMFS[vi], and many other observers as a 'rebuilding success'.

Yet, recreational and commercial fishermen have had unprecedented loss of access to the stock in recent years despite historic high levels of abundance. The 2007 and pending 2008 summer flounder quotas are the lowest set in the history of this fishery.

The problems with the science of the summer flounder assessment are not unique to this species. In fact many of the problems, including outdated tuning indices, unfounded modeling assumptions, inadequate sampling techniques, poorly understood stock recruitment relationship and unrepresentative data collection, plague some of the most important recreational fisheries. Yet, NMFS has indicated that the quality of the scientific data used in the summer flounder stock assessment is among the best produced by this agency. This means that similar assessment techniques will be applied to other fisheries, likely with similar results – arbitrary statutory deadlines dictating biologically impossible results.

Quantitative modeling of marine fish populations is valuable as a tool to guide fisheries management. However, modeling is a simplistic representation of a complex system. In the most pragmatic description, modeling is a good science but not a perfect

science. Despite the well know limitations of quantitative models, NMFS has approved an absolute rebuilding biomass for the summer flounder stock based on this modeling exercise. A basic principle in marine ecology is that even in the absence of fishing mortality, natural variations in fish populations occur for unquantifiable reasons.[vii] As a result, assumptions and omissions must be made in order to run these models. The scientific reality of fisheries management is that there will always be uncertainty. Unlike chemistry where two hydrogen atoms and one oxygen atom always produce a water molecule, the ocean and creatures in it are always responding to their ever changing environment. For this reason, managers need to have flexibility when dealing with such complex systems.

Without flexibility in the statute, fisheries managers will continue to be held to unrealistic and unachievable expectations. It is impracticable and unfair to place unrealistic requirements on fishermen to rebuild fish populations, knowing full well the limitations of fisheries science and the uncertainties in the marine environment.

Summer flounder is one of the most studied species in the ocean, but its stock assessment illustrates this concept of uncertainty. NMFS produces rebuilding projections for summer flounder annually as specified by its fishery management plan. These projections illustrate how we can expect the stock to respond to various fishing mortality rates applied to the fishery. Yet, NMFS has implemented the law in a manner which ignores natural variations in fish populations that are independent of fishing effort. This is a basic theory which would be similar to predicting how long it will take a car to get to a certain point only taking into account the distance and speed of the car and forgetting about traffic, road construction, or stopping to purchase gas or food. Likewise, predator-prey interactions, degradation of estuarine habitats, and all other environmental and biological factors that collectively influence fish rebuilding are currently left out of the summer flounder assessment. In NMFS's defense, scientists purposely overlook this aspect because they are limited in managing fishermen only. Furthermore, current law requires managers to rebuild and maintain all federally managed species at maximum sustainable yield (msy) at the same time, including species that directly compete with summer flounder.

Reductions to the summer flounder quota are having a diminishing return on rebuilding the stock. In recent years, survivorship, the proportion of fish living from one year to the next, is decreasing. Based on the characteristics of the current fishery, low harvest, low fishing mortality, and high biomass, fishing is not the primary factor driving this increase in natural mortality. Under these circumstances, cutting the quota year after year will not translate into increases in stock size. For unknown reasons, there has been decreasing return (stock size increase) on quota reductions in the past few years. This illustrates that fishermen are not the exclusive source of mortality in the ocean and that overfishing can have little to do with actual fishing.

I believe we must improve stock assessments and data collection for all marine species. Members of this committee were influential in securing a review of recreational data collection programs including the For-Hire Survey, Large Pelagic Survey,

Recreational Billfish Survey and most importantly the Marine Recreational Fisheries Statistical Survey (MRFSS). The outcome of the review found this data collection tool inadequate for policy or management decisions. Yet, it is still utilized in quota setting and its estimates are included in stock assessments because no other alternative has been implemented and thus continues to fall under the definition of 'best available science'. It is in our best interest to manage the nation's resources with the best information available. However, improvements, no matter how substantial, will never eliminate uncertainty. For this reason, managers must have flexibility.

Clearly fisheries science is not and will never be a perfect science. This is not in itself a problem if fishery management can be adaptive and accommodate uncertainty in rebuilding. However, current law prohibits such management. As you know, MSA, as reauthorized in 2006 contains requirements to rebuild overfished fisheries to maximum sustainable yield in ten years (sec. 304(e)(4)(ii)). This requirement is problematic on two levels. First, determining msy for even the best understood fisheries, such as summer flounder, is one of the most difficult exercises in population dynamics. Summer flounder has a rebuilding goal of 197 million pounds of spawning stock biomass, a level of abundance never recorded in history. Currently, the summer flounder population is about half way to the target. Secondly, the maximum time for rebuilding is an arbitrary timeframe that does not consider the dynamic nature of the marine environment or marine fish populations. To illustrate how unnatural and arbitrary the ten-year rebuilding requirement is, we have quadrupled the summer flounder biomass under the rebuilding plan. Yet, the current level of abundance is only half way to the msy goal. Therefore, MSA requires that we must double the stock size in the next five years. Most objective observers would agree that even with zero fishing mortality, it is highly unlikely that we can meet the statutory requirement.

As you know, MSA governs all federally managed fish stocks, so of course the challenges associated with its rebuilding and ending overfishing provisions are not limited to summer flounder. In the Gulf of Mexico and South Atlantic regions these provisions are poised to have significant implications for fisheries such as gag grouper, vermillion snapper, and red snapper. The recent red snapper stock assessment establishes the spawning potential ratio (SPR) at seven times larger than the last assessment (2000).[viii] Similar to summer flounder, the red snapper population is at historic high levels of abundance. However, as a result of the recent overfishing requirements, an interim rule was established that reduced the TAC from 9.12 million pounds to 6.5 million pounds for 2007. The TAC will be further reduced to five million pounds and only a four month season with a two fish recreational bag limit. The recently approved overfishing and overfished requirements have resulted in unintended consequences causing unnecessary regulatory discarding and severe negative social and economic impacts to local fishing communities across the Gulf.

The RFA commends you, Madam Chairwoman, and the other members of this Committee who have expressed interest in this important issue. From the individual saltwater angler to the many small businesses that comprise the marine, boat, and tackle industry, our members are hopeful that Congress will take the right steps to improve the

way summer flounder and many of our other fisheries are managed. I believe that we can develop language that will promote healthy fisheries, allow fishermen to access robust fish stocks and at the same time achieve long-term conservation.

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[i] National Marine Fisheries Service. Personal communication (MRFSS)

[ii] Mid-Atlantic Fishery Management Council, **Amendment 2 to the Fishery Management Plan for the Summer Flounder Fishery.** May 1991.

[iii] SAW Southern Demersal Working Group. **Summer Flounder Stock Assessment for 2007**.

[iv] Atlantic States Marine Fisheries Commission. **Species Profile: Atlantic Striped Bass *The Challenges of Managing a Restored Stock*..** 2004

[v] Atlantic States Marine Fisheries Commission. 2004. **Species Profile: Atlantic Striped Bass *The Challenges of Managing a Restored Stock.*** Fisheries focus Vol. 13, Issue 1 January 2004.

[vi] National Marine Fisheries Service. http://www.nmfs.noaa.gov/fishwatch/species/atl_striped_bass.htm

[vii] Lackey, R.T. 1974. **Introductory Fisheries Science**. Sea Grant Extension Division. VPI-SG-74-02

[viii] Southeast Data, Assessment, and Review. 2005. Stock Assessment Report of SEDAR 7, Gulf of Mexico Red Snapper. SEDAR7 Assessment Report 1