

Changing Tides

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NOAA FISHERIES SERVICE

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NOAA

NOAA Commits Support to Expand Fishing Sectors Requests Further Funding for 2010

NOAA Fisheries Service continues to view sector management and catch shares as promising tools for more effectively managing New England fisheries. The agency committed \$16.7 million to get additional sectors up and running in 2010. Under Secretary of Commerce for Oceans and Atmosphere and NOAA Administrator, Dr. Jane Lubchenco, announced the funding in April. The President also requested \$18.6 million for NOAA to continue this effort in 2010.

Why the Interest in Catch Shares?

There is widespread support from both the fishing industry and NGO community for “catch share” programs, in particular sector management, where a group of fishermen are afforded a share of the total groundfish catch and more flexibility in making daily business decisions about how and when they want to fish.

The New England Fishery Management Council in June approved the development of 17 new fishing sectors, and modification to two existing sectors, under the Northeast Multispecies Fishery Management Plan (FMP) Amendment 16. All vessels with a federal limited access groundfish permit are eligible to join a groundfish sector for fishing year 2010, but must do so by September 1, 2009 when sector operations plans must be submitted to the agency. Fishermen who choose to participate, no longer have to fish under days at sea regulations, but days at sea regulations still are in effect for those who stay in the common pool. Regardless of what management scheme fishermen decide to fish under, the ultimate goal remains to end overfishing and rebuild fish stocks so they can produce higher “sustainable” yields over the long term.

Catch share programs can be an effective and efficient means for managing fish stocks provided they include comprehensive monitoring programs. Thus, much of the funding for 2009 will be spent on building the required infrastructure both within the fleet and within NOAA’s regional office to successfully support sectors. The funds will be divided approximately into thirds to support sector building, sector monitoring, and cooperative research with industry.

Sector building tasks (\$4.9 million) include training for sector managers and fishermen on how sectors can be formed and how they operate, developing and testing data gathering and reporting systems both at sea and on shore, and one-time funding for sectors to defray start-up costs. Sector monitoring tasks (\$5.8 million) include deployment of electronic trip logbooks on more vessels, and monitors at-sea and dock-side as well as additional fishery observers. Cooperative research with industry (\$6.0 million) will focus on industry-based surveys, testing of research survey trawl gear and development of trawl gear that reduces catch of unwanted fish.

Between now and September 1, 2009, when sector operations plans and supporting National Environmental Policy Act (NEPA) documents must be completed, the agency will continue to work closely with the sector managers and interested members to identify and finalize critical elements of the sector operations plans. To learn more about sectors check out our website <http://www.nero.noaa.gov/sfd/sfdmultisector.html>.





First FMP to Include ACLs and AMs Under Review by Agency

NOAA Fisheries Service is now reviewing Amendment 3 to the Northeast Skate Complex Fishery Management Plan (FMP), which was approved by the New England Fishery Management Council in April.

The purpose of Amendment 3 is to rebuild overfished skates and to bring the Skate FMP into compliance with the annual catch limit (ACL) and accountability measure (AM) provisions of the reauthorized Magnuson-Stevens Act (see definitions, page 4). This will be the Northeast Region's first amendment to include ACLs and AMs. The recommended ACL framework includes an annual catch target (ACT) and total allowable landings (TAL) allocated to the commercial skate wing and bait fisheries. The AMs would be triggered if the TAL and/or ACL are exceeded in any given year.

Amendment 3 also includes reduced possession limits for skates, seasonal quotas for the bait fishery, and other measures to improve management of the skate fisheries. The Council recommended that the trip limits become effective when the final rule is effective, while the ACL and AMs would take effect at the start of the next fishing year on May 1, 2010.

The Skate FMP was first implemented in 2003 to manage seven skate species found in the Northeast Region, and rebuild overfished stocks. Although there are small directed fisheries for skates, the majority of catch occurs in the region's groundfish, monkfish, and scallop fisheries where most skates are discarded. While some skate stocks have improved since 2003, other species have experienced declines in biomass. Currently, thorny and smooth skates are considered overfished.

States' Spending Plans for Red Tide Federal Disaster Aid Approved

NOAA has approved state plans for spending \$5 million in Federal disaster aid to assist shellfish industries in Massachusetts, Maine and New Hampshire affected by a 2008 harmful algal bloom outbreak, commonly referred to as red tide. Maine and Massachusetts are each receiving \$2 million and New Hampshire \$1 million to support industry-driven efforts to better address future harmful algal bloom outbreaks.

On November 14, 2008, the Secretary of Commerce declared a commercial fishery failure because large areas of the coastline had to be closed to the harvesting of clams, mussels, oysters and other shellfish. Shellfish in these coastal waters tested positive for infection, containing a single cell algae that when ingested by humans can lead to potentially lethal paralytic shellfish poisoning (PSP).

Highlights of State Spending Plans

States plan to collaborate on a number of cross-state and independent research initiatives among these are:

- ◇ Provide continued support to the Woods Hole Oceanographic Institution to map the extent and location of the Alexandrium cyst bed in the western Gulf

of Maine for use as a predictive tool for state program managers;

- ◇ Produce outreach materials for use during the next severe bloom to provide the public with clear, accurate and objective information about the risks of harmful algal blooms including harvest closures, consumption advisories, and the availability of wholesome seafood in commercial markets;
- ◇ Maine and New Hampshire will explore alternative methods to detect and monitor the shellfish biotoxin and investigate PSP in lobster tomalley;
- ◇ Maine will expand its buoy arrays for an existing PSP monitoring program;
- ◇ Massachusetts will develop and implement a lost income subsidy program to compensate Massachusetts commercial shellfish harvesters. In addition, funds will be used to support a health insurance subsidy program; and
- ◇ New Hampshire will expand and diversify its coastal shellfish aquaculture program in estuarine waters.



NOAA Fisheries Service's Tobey Curtis with thorny skate. Photo Credits: Tobey Curtis NOAA

Atlantic Bluefish Rebuilt Two Years Ahead of Schedule

The determination that bluefish stocks were rebuilt was officially announced with the publishing of the 2009 bluefish fishing specifications in May.

The stock status of bluefish is reviewed annually by the Mid-Atlantic Fishery Management Council's Monitoring Committee. The stock has been on a steady trajectory towards rebuilding since the inception of Amendment 1. During the Committee's last review, it was estimated that bluefish biomass, with help from a strong 2006 cohort, had exceeded the biomass target for the stock.

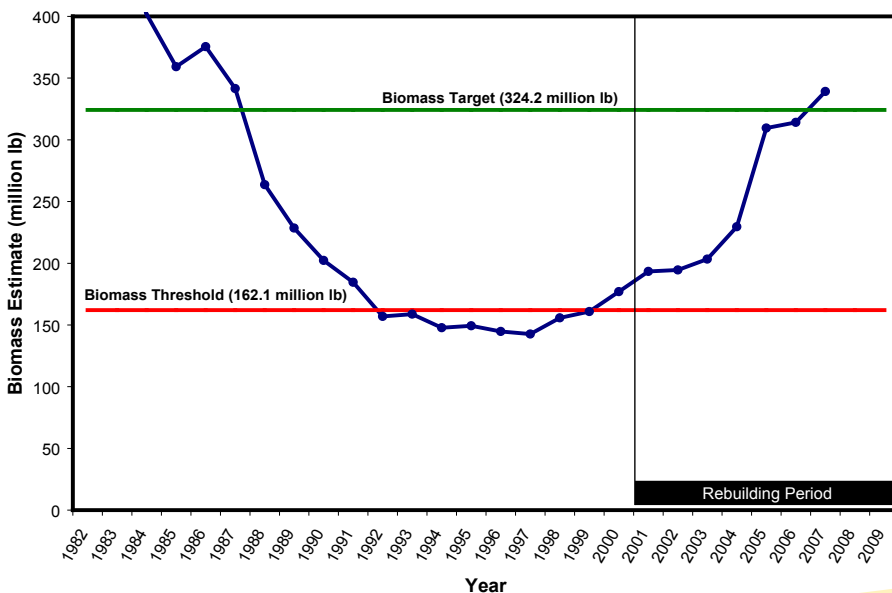
Atlantic bluefish, one of the nation's most popular sport fish, is jointly managed by the Mid-Atlantic Fishery Management Council and the Atlantic States Marine Fisheries Commission. Bluefish were declared overfished in 1997, prompting the Council and Commission to develop a rebuilding plan for the stock.

The rebuilding plan, implemented as Amendment 1 to the Atlantic Bluefish Fishery Man-

agement Plan, required that the bluefish stock be rebuilt to biomass at maximum sustainable yield (Bmsy) by 2010.

Amendment 1 applied a graduated reduction in the fishing mortality rate in order to achieve rebuilding, and required that quotas and associated specifications be implemented annually, based on the most recent information on stock status.

The bluefish fishery can now take full advantage of the healthy resource, and hopefully harvest bluefish at optimal levels for many years to come. The Council and Commission are expected to consider recommendations for the 2010 bluefish fishery in August.



Sea Turtle News: Meetings on Conservation Measures for Trawl Fisheries Complete and Loggerhead Recovery Plan Revised



NOAA Fisheries Service recently held a series of scoping meetings to solicit public input on an initiative to protect sea turtles that are incidentally caught in trawl gear, including gear used in the Atlantic sea scallop, summer flounder, and croaker fisheries. Public comment was sought on potential management alternatives, including the use of Turtle Excluder Devices in certain trawl fisheries. The input received at these meetings, and during the entire scoping period (which closes August 10, 2009), will be used to develop alternatives for analysis in an Environmental Impact Statement, and to inform future management decisions. For more information, please visit: <http://www.nmfs.noaa.gov/pr/species/turtles/strategy.htm>

The second revision of the Recovery Plan for the Northwest Atlantic Population of the Loggerhead Sea Turtle was signed in December 2008. Issued by NOAA and U.S. Fish and Wildlife Service, the revised plan reviews and discusses the species ecology, population status and trends, and identifies threats to the loggerhead turtle in the Northwest Atlantic. It lays out a recovery strategy to address the threats, based on the best available science, and includes recovery goals and criteria. In addition, the plan identifies actions needed to address the threats to the species and achieve recovery. This revised plan also identifies five unique recovery units, which comprise the population of loggerhead turtles in the Northwest Atlantic, and describes specific recovery criteria for each recovery unit. The recovery plan and threats analysis are available at <http://www.nmfs.noaa.gov/pr/recovery/plans.htm#turtles>



Testing for Two New Gears Designed to Reduce Bycatch Okay to Begin

The Massachusetts Division of Marine Fisheries recently was granted two experimental fishing permits to test new fishing gear with the goal of reducing cod and dogfish bycatch.

The sweepless (no ground gear) raised footrope trawl, also known as the 5-Point Trawl, is designed to exploit the differences in escape behavior of haddock and cod when confronted with a towed fishing net.

The experimental sweepless trawl has limited contact with the bottom, restricted to five drop chains that hang from the fishing line. These chains maintain net shape by the contact of the chain ends only. The design of the trawl allows cod to pass under the net, while the mouth of the net is designed to fish about 1.5 meters off the bottom catching haddock as they move upward in the water column.

This gear may also help to reduce the amount of other flatfish inadvertently caught such as yellowtail flounder,

winter flounder, witch flounder and American plaice. The experiment, which is expected to run until the end of this month, will involve one fishing vessel.

Plans also are to test a dogfish excluder device in standard whiting trawl gear with the hopes that it will minimize dogfish bycatch in this fishery.

Reducing dogfish bycatch will not only help reduce dogfish mortality, but also reduce damage to other catch from the animal's abrasive skin. This may also help fishermen avoid a fishery closure when new Magnuson Reauthorization Action accountability measures are put in place in 2010 if high dogfish discards result in exceeding of bycatch allowances in this fishery. The gear will be tested in areas in Gulf of Maine where dogfish and whiting are expected to be relatively abundant in order to gather sound statistical evidence of the gear's performance. One fishing vessel is expected to take part in the experiment which is scheduled to run from June-September.

Fishery Terminology

ABC: Acceptable biological catch is a level of a stock or stock complex's annual catch that accounts for scientific uncertainty in the estimate of overfishing level and any other scientific uncertainty.

ACE: Annual Catch Entitlement refers to the amount (weight) of fish that a groundfish fishing sector is authorized to catch in any specific fishing year. ACE is equal to the share times the available catch, less any penalties due to overages.

ACL: Annual Catch Limit is the level of annual catch of a stock or stock complex that serves as the basis for invoking AMs. ACL cannot exceed the ABC, but may be divided into sector ACLs.

ACT: Annual Catch Target is an amount of annual catch of a stock or stock complex that is the management target of the fishery, and accounts for management uncertainty in controlling the actual catch at or below the ACL so it is not exceeded.

AMs: Accountability Measures prevent the ACL from being exceeded and correct or mitigate overages of the ACL if they occur.

TAL: Total Allowable Landings.

OFL: Overfishing Limit is the annual numerical amount of catch that would result in overfishing if exceeded.

Delaware River Deepening Plans Reinitiated

After a several year hiatus, the proposal to deepen the Delaware River 102 miles from Philadelphia to the mouth of the Delaware Bay has been reactivated. The project involves the deepening of the Delaware River Federal Navigation Channel from 40 feet to 45 feet

Dredged material disposal is proposed at several existing disposal sites in New Jersey and for use in beach nourishment projects in Delaware and at Kelly Island. NOAA Fisheries Service is currently reviewing potential impacts on essential fish habitat and conducting necessary biological assessments.

Plans to Increase Hydro Power from Hudson River

The Green Island Hydroelectric Project on the Hudson River, approximately five miles north of Albany, New York, is seeking permission to increase its hydro-electric generating capacity from 6,000 kW to 32,000 kW as part of its re-licensing agreement. The project also includes plans to construct an additional powerhouse, and create a recreation area for public access.

The effects of this action are important because the Hudson River supports a number of ecologically important species such as American shad, blueback herring, alewife, American eel, striped bass, and the federally endangered shortnose sturgeon. NOAA Fisheries Service's focus remains to protect and enhance historical spawning, rearing, and forage habitat for these species. At a recent hydro study update meeting, the agency indicated that the potential for fish passage, both upstream and downstream, should also be explored in the license application.



Shortnose sturgeon (*Acipenser brevirostrum*). Photo Credit: Nancy Haley, NOAA

Challenges and Opportunities for Managing Spiny Dogfish

The New England and Mid-Atlantic Councils are developing Amendment 3 to the Spiny Dogfish (*Squalus acanthias*) Fishery Management Plan (FMP). Under consideration are measures including selectively harvesting males, establishing a limited access dogfish permit, and adding management measures for a recreational spiny dogfish fishery. Scoping meetings are likely to begin this August. Information regarding these upcoming meetings should be available soon on the Mid-Atlantic Fishery Management Council's website (www.mafmc.org).

A joint U.S./Canada stock assessment has been initiated and is expected to result in an updated picture of the stock structure and status. That assessment is anticipated to be completed in December 2009 and used to help to inform 2010 management decisions.

The management of spiny dogfish has long been challenging. Large female dogfish historically have been subjected to the greatest amount of fishing pressure because of market preferences and the fact that they are found in inshore waters where most of the fishing occurs. A sharp increase in U.S. landings and discards in the 1990's led to a more than two-thirds reduction in the adult female spawning stock biomass (SSB). This, in turn, led to the implementation of the spiny dogfish FMP in 2000, which closed the directed fishery for dogfish. Still, the overall stock abundance, including both males and females, remained relatively high because the smaller, less marketable males were not harvested.

Some Success in Rebuilding the Population

Since the implementation of the FMP, the overall fishing mortality on dogfish has been reduced by discouraging directed fisheries. Sub-adult females, alive when the regulations were first imposed, have grown into the mature size range which have contributed to a rebuilding of the resource. The Northeast Fisheries Science Center estimated that SSB is nearly 232,000 mt and the current estimated total stock biomass probably exceeds 600,000 mt.

As a result, the commercial quota for the 2009 fishing year was increased from 4.0 million pounds to 12.0 million pounds and the possession limit went from 600 pounds per trip to 3,000 pounds per trip. The overall increase in female SSB in recent years could provide some opportunity to experiment with cooperative research male-only harvest strategies that in the past may have posed unacceptable risks to rebuilding.

Cautious Harvest Strategy Still Warranted

As a result of this exploitation history, the sex ratio of mature males to mature females became skewed. At one point, rather than the normal ratio of about 2:1, the ratio was as high as 7:1. While the sex ratio has improved, it remains higher than normal, currently estimated at around 4:1. Furthermore, the reduction in mature females appears to have reduced the number of pups being produced for almost a decade. This will have implications for future spawning stock biomass as those smaller than average generations (cohorts) mature.

Even though there has been some rebuilding success, both the agency and the councils recognize the need to proceed with caution in expanding the fishery given the concentrated size frequency of the female population, low pup production, and a skewed ratio of males to females.

Moving towards Ecosystem Approaches to Management

Many stakeholders have raised concern over the effects of a large spiny dogfish population on other commercially valuable species. This predator-prey relationship is complicated and we still have much to learn. For example, there are concerns from the industry that an increased population in dogfish will negatively impact the rebuilding of other stocks. However, recent assessments of some commercially important stocks, such as summer flounder and Gulf of Maine cod, show that these stocks are

improving. In addition, some of the prey items consumed by dogfish are also predators on larval and juvenile fish of commercially important species. It is critical to understand these complicated relationships better so we can more effectively manage dogfish, as well as other species. The magnitude of spiny dogfish predation on a range of species will be part of the upcoming joint U.S./Canada stock assessment. As we move forward to manage this stock in the future, ecosystem approaches should be integrated into the management program.

\$10 Million Blue Crab Disaster Assistance Grant for Virginia Watermen Virginia and Maryland Eligible for \$9.9 Million More in 2009

NOAA has awarded \$10 million in disaster assistance to the Commonwealth of Virginia to assist watermen economically hurt by the commercial fishery failure in the soft shell and peeler blue crab fishery in the Chesapeake Bay. The fishery has experienced a 41% decline in baywide value since the late 1990s. Maryland has already been awarded \$10 million for assisting fishermen hurt by the same fishery failure.

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Dogfish in holding tank. Photo credit: NOAA



Saltonstall-Kennedy Grant Program Update

The Saltonstall-Kennedy Grant Program (S-K) is a competitive program administered by NOAA Fisheries Service. The program is designed to provide economic opportunities to the fishing industry as the resources continue to rebuild

to sustainable levels. Proposals are solicited through a notice published in the Federal Register. In 2009, a total of 143 proposals were received nationwide. Of the 38 projects selected nationally, 16 projects were in the Northeast

Region (see Table below) requesting \$3.6 million in federal funding support. For more information on the S-K Program, check out the S-K homepage at http://www.nmfs.noaa.gov/mb/financial_services/skhome.htm.

Project Title	Recipient Organization	Federal Funding
Biofouling tunicates on shellfish aquaculture gear as potential vectors of harmful algal introductions	University of Connecticut	\$249,651
Dismissing dogma: use of satellite tags to examine behavior of spiny dogfish in relation to habitat use, depth preferences & movement patterns in NW Atlantic	University of New England	\$237,078
Test of rope separator trawl on Georges Bank	University of New Hampshire	\$247,090
Use of alternative lipid sources & finishing feeds to improve nutritional value & safety of aquaculture products	Southern Illinois University	\$183,548
Development of a probiotic feed supplement for Am. lobster	University of Maine	\$247,547
Assessment of nutraceutical properties & palatability of squid processing byproduct hydrolysate for applications in human & pet food supplements	University of Rhode Island	\$167,226
Improving conservation of New England whelks	University of Massachusetts Dartmouth	\$220,381
Development of an integrated economic & ecological framework for EBM of fisheries in New England	Woods Hole Oceanographic Institute	\$130,468
Epidemiological studies on a parasitic ciliate of blue crabs & its possible role in winter mortalities	Virginia Institute of Marine Science	\$247,767
Establishing Atlantic cod breeding program for U.S. aquaculture industry	University of Maine	\$246,783
Connectivity between offshore & inshore lobster populations in southern New England, genetics & morphology	Boston University	\$243,493
Post-release survivability of longline-caught large coastal sharks	University of Massachusetts, Dartmouth	\$362,294
Development of a technology platform for the assessment & controlled delivery of therapeutic bacteriophage in aquaculture	Micro Technologies, Inc.,	\$185,645
Addressing issues of hatchery production & grow out of sea urchins for aquaculture development in the Gulf of Maine	University of New Hampshire	\$236,503
Novel application of bio-chemical fingerprinting to evaluate nursery potential of Chesapeake Bay subestuaries to contribute to blue crab spawning stock	Smithsonian Institution	\$229,544
Joint modeling of seasonal recreational demand, entry-exit decisions & fish stocks over time, w/ application to Great Lakes sportfishing	Arizona State University	\$190,806

Cooperative Research Funding Available Under RSA

NOAA Fisheries Service is now accepting proposals under the New England Fishery Management Council's 2010 Atlantic Sea Scallop Research Set-Aside (RSA) Program and the New England and Mid-Atlantic Fishery Management Council's 2010 Monkfish RSA Program. Full proposals must be received on or before 5 p.m. EDT, August 31, 2009.

For complete details on these opportunities and how to apply, please visit the Grants Online website at <http://www.grants.gov>.

- Under 'Find Grant Opportunities', click on 'Search for Grant Opportunities'
- [For the scallop announcement search: NOAA-NMFS-NEFSC-2010-2001979](#)
- [For the monkfish announcement search: NOAA-NMFS-NEFSC-2010-2001980](#)

The Federal Funding Opportunity announcements are also posted at: www.nero.noaa.gov/nero/hotnews/nersa/

Opportunities to Fully Harvest U.S. Atlantic Bluefin Tuna and Swordfish Under Consideration

To increase opportunities for U.S. fishermen to fully harvest the U.S. Atlantic bluefin tuna and north Atlantic swordfish quotas, NOAA Fisheries Service issued an Advanced Notice of Proposed Rulemaking (ANPR) on June 1, 2009, to request public comment on a broad range of potential regulatory adjustments.

The status of the swordfish stock is quite different from that of the bluefin. Whereas the agency is optimistic that swordfish will soon be declared fully rebuilt, the bluefin fishery continues to be overfished with overfishing continuing. Subsequently the changes in measures considered by the ANPR carefully balance the different needs of the swordfish and the bluefin fishery while considering the latest biological information for each.

For both the swordfish and bluefin fisheries all comments received in response to the ANPR will be considered in any future rulemakings.

The ANPR comment period for the issues specific to the Bluefin tuna fishery has ended and NOAA Fisheries Service is currently considering development of a rulemaking that would enable more thorough utilization of the U.S. share of this quota while balancing continuing efforts to end overfishing by 2010, rebuild the stock by 2019, and minimize bycatch and bycatch mortality to the extent practicable.

For swordfish, the agency has taken several steps in recent years to address persistent under-harvest of this species and revitalize the fishery. These include increasing retention limits and modifying vessel upgrade restrictions. NOAA Fisheries Services is currently collecting public comment through the ANPR process on potential changes to the permitting system, longline target catch requirements, and bycatch caps, among others, to gain better understanding of the effects of potential regulatory changes, including potential advantages and disadvantages to fishery participants.

The comment period for swordfish and other highly migratory species issues in the ANPR remains open until August 31, 2009, to allow additional time for the public to comment on those complex issues that may be pursued over a longer timeframe.

NOAA Fisheries Service plans to discuss both a proposed action for the BFT fishery and potential next steps regarding these longer-term issues at the upcoming Highly Migratory Species Advisory Panel meeting, September 9-11, in Silver Spring, MD.



Blue crab. Photo credit: NOAA

Blue Crab Disaster Monies cont'd from page 5

Virginia officials intend to use \$7.5 million of the monies awarded for derelict pot gear removal, a crab license buyback program, an update to the blue crab stock assessment and administrative costs associated with distributing and tracking the funds.

The remaining \$2.5 million will be used for oyster aquaculture, research to reduce terrapin and finfish bycatch in crab pots, and industry diversification through a collaborative industry grants program, administered in conjunction with the Commonwealth's "Waterman Fund."

Both Virginia and Maryland are also eligible for about \$4.9 million each in additional blue crab disaster assistance monies which were made available through the Omnibus Appropriations Act of 2009. The states were required to submit spending plans to the agency for review by June 1.

On September 23, 2009, then-Secretary of Commerce Carlos M. Gutierrez determined that a decline in the harvest of soft-shell and peeler blue crabs in the Chesapeake Bay was significant enough to warrant a commercial fishery failure declaration, an important step in making watermen and their communities eligible for this economic assistance.

