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A Commonwealth of Massachusetts Agency

Future Management of New England's Groundfish Fishery

Management of New England's multispecies groundfish fishery is poised for revolution. Fishermen could expect to enjoy stronger permit privileges in the form of catch shares in the near future. The trade-off for increased permit privileges will be hard catch limits.

For each species, there will be a total allowable catch limit. Expected management challenges include avoiding a "derby" style of fishing for non-sector participants, keeping the fishery profitable and the supply of seafood steady while minimizing discards once a species' limit is reached.

It's important to make a distinction between permit privileges and "property rights" at the outset. Fishery resources in federal waters are owned publicly by all United States citizens - in the Commonwealth's waters by the citizens of Massachusetts. No one, including government, has the right to re-assign permanent ownership of these resources to private citizens. The National Marine Fisheries Service (NOAA Fisheries) and the Massachusetts Division of Marine Fisheries (*MarineFisheries*) have the responsibility to manage those resources held in public trust. Doing so could (and often does) involve creation and assignment of individual permit privileges.

Permit privileges, although they share common features differ substantially from property rights. Unlike a true property right, a permit privilege could be revoked, limited or modified at any time. A permit privilege does not grant ownership of the resource to the holder before the resource is harvested. Permits simply grant a permit holder permission to fish, not outright ownership of fish yet to be harvested.

Permit privileges for commercial fishermen were significantly enhanced in the New England multispecies groundfish fishery when a Day At Sea (DAS) Program was approved by the New England Fishery Management Council (NEFMC) and NOAA Fisheries in 1994. Essentially, the program allocated fishing privileges by assignment of 24-hour fishing days based on a permit's fishing history.

Subsequently, DAS holdings have been reduced on numerous occasions

Left: Sectors may provide relief for New England's groundfish fleet long beleagured by ongoing DAS cuts.

to ratchet down fishing effort, but a decade after implementation the program was liberalized by allowing fishermen an option to lease unused days to other active DAS fishermen (see Amendment 13). Assignment of DAS coupled with trip-limits, seasonal and permanent area closures, minimum size limits, and gear restrictions remain the major features of regional groundfish management.

Should the NEFMC and NOAA Fisheries approve sector management, shares of annual quotas for each multispecies groundfish stock would be assigned to individual permits based, at least in part, on their historical landings. Fishermen would then be allowed to take their permits and join other fishermen to form fishing sectors. Sectors would not be allowed to harvest more than the total amount of quota shared by its members and would be governed by their own rules of operation provided that those rules meet approval of NOAA Fisheries.

Once part of a sector, fishermen would be allowed to trade some of their shares or transfer all of their shares to other members of their sector. Self-enforcement of sector rules by its members would be a key ingredient for this management strategy to succeed. An infraction by one member would bring penalties to the entire sector under joint and several liability.

Industry leaders see the use of sectors as potential relief from hardships brought upon them from the DAS Program and Closed Area Management. How far NOAA Fisheries and the Council are willing to go with this strategy remains to be seen, but so far the Council continues to give consideration to sector management in addition to modification of the current DAS system.

Although sector management is an innovative idea for New England, permit privileges in various forms (e.g., ITQs) have been applied for decades in other parts of the world, even in the United States. Fisheries of New Zealand and Iceland, particularly, are commonly scrutinized because of their wide experiences with using transferable permit privileges as a principal management tool.

Even in New Zealand, which has one of the most analyzed rights-based fishery management programs, property rights remain incomplete. Ultimate ownership of fishery resources remains within the public domain in order to prevent a barbwire frontier mentality. Besides potential for fencing off oceans, other serious difficulties could confront government institutions, members of the fishing industry and the general public when rights-based management is reinforced.

Evolving permit privileges could alter dramatically the socio-economic pressure on fishing communities. Significant groups of those who "have" and those who "have-not" could develop, and if distance between them grows, new political demands would be placed on government leaders. Consolidation of fishing fleets would be inevitable likely leading to fishing lords or ventures emerging as primary harvesters. Consolidated fleets likely would encourage vertical integration of harvesting, processing, marketing and other industry activities. Such changes undoubtedly would lead to more profitability in the industry, but as managers and trustees of public fisheries, we must be watchful of how these changes will impact community structure and management for sustainable fisheries.

The so-called "fisheries problem" associated with New England's groundfish fisheries goes beyond excess fishing capacity; overfishing is compounded by the multispecies nature of this fishery. A mixed species catch of fish is difficult to avoid even with use of the most advanced technology. Although transferable catch-shares within a fishing sector or even between sectors may aid tremendously in reducing discard of bycatch, there will always be species caught that are of lesser value leading to discards. Additionally, quotas for some fish stocks could be so small that they become a limiting factor in the overall groundfish fishery. However, self-enforcement of fishing rules by sector members may lead to improved fishing practices, considering the risks of group penalties.

Stronger permit privileges in fisheries management don't completely eliminate old concerns surrounding the "fisheries problem" and likely will cause new concerns to emerge. Many who are involved intimately with New England's groundfish fishery expect that adopting sector management would be a sizeable improvement over existing rules. The largest transformation for New Englanders and perhaps the most difficult may be highly altered coastal fishing communities. Such changes hold weighty economic and political implications for all with interest in our shared marine fishery resources and their management.

by Paul Diodati, Director

Cod IBS Wraps up after Four Seasons

Through a contract funded by the National Marine Fisheries Service (NOAA Fisheries), *MarineFisheries* began implementing the Industry-Based Survey for Gulf of Maine cod (Cod IBS) in March 2003 and completed the survey on July 31, 2007. The Cod IBS was a trawl survey that was designed to study the spatio-temporal distribution of cod throughout the Gulf of Maine (GOM). Although the study was not designed to calculate absolute abundance, it was an unprecedented study of seasonal distribution of cod and their stock demographics including: age structure, diet, maturity, and sex distribution.

One of the strengths of the survey was that it sampled the entire range (out to 75 fathoms) of GOM cod including areas inside Cashes Ledge, western GOM, and rolling closure management areas starting in November and ending in May. Commonly, cod information is collected by sampling commercial catch; this method leaves large portions of the Gulf unsampled. By design, the Cod IBS was unique in that data was gathered throughout the GOM, including inside closed management areas and during times of year when other comparable trawl surveys do not sample. In just over four years, the study completed 17 cruises, 1,904 survey tows and measured over 83,000 cod! Although the survey was a single species survey directed towards cod, it took advantage of opportunities to sample the entire catch collecting information on other valuable groundfish species (e.g., GOM haddock).

The Cod IBS successfully characterized seasonal and length distribution of GOM cod.

In August 2006, the project received a formal technical peer review. For two days, *MarineFisheries* project staff gave presentations and was involved in discussions with a panel of multi-national experts in the survey research field. At the end of the review,

DMF File Photos

Four otter trawlers served as platforms during the Cod IBS; Upper left: Lisa Ann II; Lower left: Jocka; Center: Titan; Right: Lady Jane.

the panel commended the survey team "for their thoroughness and dedication" and remarked that the "Cod IBS was a good example of a cooperative project".

The survey was able to design a "blueprint" for how to implement a cooperative research project (one that includes fishery scientists and managers with commercial fishermen) as well as create an optimal survey design for studying the distribution of GOM cod. Although designed as a pilot program - a work in progress - this study has enormous long-term potential.

Managers, scientists, and fishermen would benefit from data collected on food habits for GOM cod, development of a length-weight relationship and a condition factor for Atlantic cod, increased resolution in areas of cod abundance as well as habitat information.

MarineFisheries wishes to thank all of the people, organizations, and agencies that participated in this collaborative effort. Specifically we would like to thank: NOAA Fisheries and the Cooperative Research Partners Program (who was responsible for administering the contract) for the opportunity to implement the study; the other New England states that participated and supported the program during the scoping meetings and throughout the survey (including New Hampshire, Maine, and Rhode Island); AIS Inc. for supplying experienced and well-prepared fishery observers; Reidar's manufacturing for producing top quality nets and making themselves available to repair the nets at a moments notice; and, most importantly, the commercial fishing vessels that were contracted to serve as the survey sampling platforms. Vessel owners, captains, and crew dedicated an immeasurable amount of time and effort to assure that the survey was the best it could possibly be.

If you are interested in reading more about the Cod IBS visit www.state.gov\marinefisheries.

By Bill Hoffman, IBS Project Leader

MarineFisheries Cautions Against Use of Weighted Baits - Yo-Yoing

MarineFisheries has received correspondence requesting that fishermen be restricted from rigging natural baits with metal weights and other materials. Weighted baits are used typically to target striped bass and other predatory species by vertically jigging the bait off the ocean bottom, a fishing technique commonly known as "yo-yoing." Since the weights are usually inserted into the bait and not affixed to the fishing line or terminal tackle, weighted baits can come free of the line and be ingested by targeted fish or other species. Accumulation of hardware in a fish's stomach, especially lead weights, likely has a deleterious effect on its health.

One molded lead weight is used for each bait, however, a recent fish entered into a local fishing derby was found to contain almost a kilogram worth of weights (10+ in number). Likely, this fish had swallowed many lead-baits during the year, or perhaps over a series of years. Although regulations have gone back and forth prohibiting lead shot in water fowling areas, lead sinkers used in fishing differ in that they are retrieved after use.

Whether this practice should be regulated is an open question. *MarineFisheries* will be conducting research over the coming year that will address the prevalence of yo-yo material in fish.

By Dr. Michael Armstrong, Recreational Fisheries Program Director

Photo by Bob Zunwalt

Recently a striped bass was found with almost a kilogram worth of weights in its stomach.

Interstate Recreational Angler Registry Under Construction

When President G.W. Bush approved re-authorization of the Magnuson-Stevens Fishery Conservation and Management Act (MSA) in December 2006, he set wheels in motion for all marine recreational anglers to become federally registered by January 1, 2009. Federal lawmakers view this new requirement essential to improve collection of recreational fishery statistics needed to manage the nation's fish stocks. Fishery officials in many states, however, have begun to indicate their apprehension over questions about federal vs. state authority and jurisdiction posed by the new law as well as their preference for a state-level resolution towards improved and more useful recreational fishery statistics.

The law offers exemptions from the federal register for fishermen already registered by a state's program, provided that the state program complies with federal guidelines. Although more than half of the country's coastal states already have registries in place, many of these existing saltwater programs likely will need modification to qualify for exemption. The Commonwealth of Massachusetts, indeed most of the Northeast, currently does not require a recreational fishing registry (or license) to fish for saltwater species, making the over one million marine recreational anglers fishing annually from the Bay State clear targets of this new federal legislation.

While the new law mandates NOAA Fisheries to administer the federal registry at no cost to anglers during the first two years of implementation, federal officials have already signaled that an approximate $30 charge could be expected in 2011. Fees are a concern to those who depend on high-angler participation for their livelihoods. Bait and tackle shop operators fear that some anglers will choose not to fish because of the added costs.

The law states that all recreational anglers fishing in federal waters, typically beyond three miles from shores, and all those who are fishing anywhere (even from a beach) for anadromous fish species, such as striped bass, salmon and shad, will be required to register with NOAA Fisheries. Federal officials believe that language in MSA provides them with authority to oversee angler activity in state waters with regard to anadromous species. State officials argue that the MSA language applies to federal authority beyond 200 miles from shore, the extent of MSA jurisdiction, not within a state's jurisdiction three miles from shore.

When the question of federal vs. state jurisdiction is coupled with possible exemptions for anglers registered by a state the probability of improving management of fisheries by force of federal law alone becomes more and more unlikely. Even if questions over authority and jurisdiction are resolved, exemptions for state programs create the dilemma of multiple, and no doubt non-conforming, data collection systems that make fisheries management benefits from a single federal user-registry obsolete.

State-led improvements to recreational fishery statistics through implementation of state-level angler registries gained momentum at the 2007 Annual Meeting of the Atlantic States Marine Fisheries Commission (ASMFC) in October. The ASMFC Policy Board charged Commission staff with "developing options for the Commission's involvement in establishing a state level recreational registry". Such an interstate approach would eliminate questions over authority and jurisdiction and create uniform data collection standards leading to a single more useful comprehensive angler registry. ASMFC's leadership and development of common conventions for state recreational fishing registries not only would allow vast advancement in sharing information but could result in cost-sharing and economy of scale benefits. This level of interstate involvement would also position state governments to decide the scope of their registry programs and therefore the cost to end users - the recreational angling public.

Implementation of federal law by January 2009 is fast approaching. The ASMFC Policy Board will continue discussions about interstate registry requirements during its next scheduled business meeting in February 2008. Whatever the final outcome, this initiative will result in one of America's favorite outdoor pastimes receiving more attention from political an industry leaders.

By Paul Diodati, Director

Send any questions, comments or concerns to Melanie Griffin by fax (617.626.1509), email (melanie.griffin@state.ma.us) or mail (251 Causeway St., Suite 400 Boston, MA 02114). Please include the subject title, "Saltwater License".

MRIP - A new way to estimate recreational catch

The catch of saltwater fish by recreational anglers is currently estimated through the Marine Recreational Fisheries Statistical Survey (MRFSS). The methodology used in this survey involves two parts: 1) field interviews with anglers who have just finished a fishing trip in order to estimate catch per trip, and 2) phone calls to coastal households to estimate effort (how many trips were made). These two pieces of information are mathematically combined with the result being an estimate of the total number of each fish species caught and/or harvested each year.

The numbers are used to mange the fisheries and to conduct stock assessments. However, in recent years, the numbers have been criticized owing to perceived inadequacies of the MRFSS. A review of the MRFSS by a panel of expert statisticians from the National Research Council (NRC) concluded that the survey had many flaws and biases that needed to be addressed in order for the data to be used with confidence.

To address the inadequacies highlighted by the NRC, the MRFSS will be totally redesigned using new methodologies for collecting and analyzing the data. The new system to collect recreational fisheries data is called the Marine Recreational Information Program (MRIP). Inadequacies that will be addressed include biases resulting from non-sampling of certain segments of the fishing public (e.g., night and tournament fishing, anglers who fish from private property or dock

their boats at private piers), small sample sizes, and improper statistical analysis techniques.

A cornerstone of the MRIP will be the creation of a nation-wide registry of recreational anglers. The registry will greatly increase the efficiency and accuracy of effort estimates which are currently obtained through phone calls to randomly selected coastal households. The registry will allow phone calls to be made to angler households and to contact anglers in inland counties and those who have visited from other states. Details of the registration process are still being worked out but will involve either a state-based or federally-based angler registration.

By Dr. Michael Armstrong, Recreational Fisheries Program Director

Photo by John Chisholm

Right: MarineFisheries biologist John Boardman interviews a recreational fisherman aboard a Captain John and Sons charter.

Permit Numbers to Change on Commercial Fishing Permits in 2008

Commercial fishermen saw a change to their permit number when they receive a permit renewal applications mailed during the month of December. *MarineFisheries* permits have always been assigned a 4-digit number, usually the last 4-digits of the applicant's social security number. About 30 years ago, *MarineFisheries* began entering applicant information into a database, and it became necessary to add another numerical identifier to each permit so that records could be uniquely stored and identified. The additional number that was added to permits was termed the "DMF ID", and over the years it has become the primary number that is used to identify a permit.

To eliminate confusion and misreporting that sometimes results from multiple numbers being assigned to a single permit, the 'old' 4-digit Permit Number will no longer be printed on commercial fishing permits. Beginning in 2008, all commercial fishermen permits issued by *MarineFisheries* will be identified by an unique 6-digit Permit ID No. - the same number that was listed as the DMF ID on previously issued permits.

Commercial pot fishermen, who were notified of this change during the 2007 permit renewal season, have since been branding their buoys with their 6-digit DMF ID and marking their pots with trap tags bearing their 6-digit DMF ID. Seafood dealers have also been entering fishermen's 6-digit DMF ID to report commercial seafood they purchase so that landings can be reported at the trip level and harvest data can accurately be assigned to commercial fishermen.

MarineFisheries would like to thank permit holders for their patience and understanding during this transition period.

By Kevin Creighton, Licensing Program Leader

Commonwealth of Massachusetts
Department of Fish and Game
DIVISION OF MARINE FISHERIES
COMMERCIAL PERMIT
ENDORSEMENT ONLY

DMF ID: 152976 **EXPIRES: 12-31-2007**

JOHN Q. FISHERMAN
251 CAUSEWAY STREET
BOSTON, MA 02114

DOB: 01-01-1965
ISSUED: 04-23-2007
(617) 626-1520

Signature:

The two sections above are your Division of Marine Fisheries permit. **Do not tear the top two pieces apart.** You may separate the top two sections from the rest of the form, and fold it in half. If you choose to laminate your permit, be sure to fold the two halves together so that all your permit information faces out. Your permit is not valid until you sign the Signature line above. You must carry your permit while engaged in the activity that this permit authorizes.

Deval L. Patrick, *Governor*
Commonwealth of Massachusetts

Ian Bowles, *Secretary*
Executive Office of Environmental Affairs

Mary B. Griffin, *Commissioner*
Department of Fish and Game

ENDORSEMENT ONLY
JOHN Q. FISHERMAN
152976

ENDRSMNTS: CONTAMINATED SURF CLAM

DIRECTOR: Paul J Diodati
Paul J. Diodati

CUSTOMER RECEIPT
This is your receipt. Retain receipt and store in a safe place.

JOHN Q. FISHERMAN
251 CAUSEWAY STREET
BOSTON, MA 02114

FTN: 000114986
ISSUED: 04-23-2007
PAY TYPE: CHECK

DMF - CAUSEWAY STREET, BOSTON

ENDORSEMENT ONLY, RESIDENT	$ 0.00
FEES PAID THIS PAGE	$ .00

Note: The fees listed above apply to this page only. If you purchased additional items, they will appear on supplemental pages with fees listed on those pages.

Above is an example of a 2008 commercial fishing permit, which displays the 6-digit DMF ID in the upper left-hand corner.

An Update on Lobster Cooperative Research in the Commonwealth

Since 1981 *MarineFisheries'* Coastal Lobster Project has conducted a commercial lobster trap sea-sampling program in an effort to characterize the Commonwealth's lobster fishery. This program now has a 27 year history of working with volunteer commercial lobstermen to monitor lobster catches in coastal waters and continues to be the backbone of lobster monitoring in Massachusetts.

Although the sea-sampling program has been extremely successful and has generated a wealth of information, the complex life history of lobsters and changing dynamics of the lobster fishery create a need for additional lobster research. *MarineFisheries* is now focusing on two new cooperative research programs with local lobstermen: 1) the Massachusetts Ventless Lobster Trap Survey and 2) the Northwest Atlantic Lobster Tagging Program.

The Ventless Lobster Trap Survey, initiated in 2004 with money from the Hubline Mitigation Fund, was the first random-stratified ventless trap survey in U.S. territorial waters. Historical sea-sampling of commercial catches, by design, excludes undersized lobsters (i.e., incoming year classes). Lack of such data hampers the ability to forecast trends in the fishery. Ventless traps, however, retain non-legal sized lobsters.

The 2004 pilot effort served as a launch pad for two high intensity ventless trap surveys in Massachusetts Bay (2005 – 2006) and Buzzards Bay (2005 – 2007), which were funded by the Northeast Consortium and the Massachusetts Marine Fisheries Institute, respectively. The successes of these two surveys led to development of the Atlantic States Marine Fisheries Commission's Coastwide Ventless Trap Survey in 2006.

The Coastwide Survey marks the first time that lobster have been monitored in a standardized fashion from eastern Maine all the way to western Long Island Sound in New York. The primary goal of the interstate ventless trap survey is to provide an additional means to estimate relative abundance and recruitment of American lobster in our coastal waters. These surveys are unique in that they have been a truly cooperative effort with Massachusetts lobstermen since their inception and design. During more than four years of ventless trap work we have made over 300 trips, completed greater than 24,000 trap hauls, and observed more than 140,000 lobsters. In 2007 *MarineFisheries* maintained a total of 84 random sampling stations spanning from Cape Ann to the southwest corner of Buzzards Bay. *MarineFisheries* has funding to continue the survey at similar levels of effort in 2008 and is seeking additional funding to make the ventless trap survey part of our annual lobster monitoring program.

Captain "Skip" Ryan and sternman Phil Lewis haul ventless traps off of Deer Island in Boston Harbor as part of MarineFisheries' ventless trap survey

Captain John Barrett (left) and MarineFisheries biologist Tracy Pugh (right) working up lobsters from the ventless trap survey in Massachusetts Bay.

The aforementioned Northwest Atlantic Lobster Tagging Program (NWALTP) was initiated in 2006 to learn more about migration patterns of Gulf of Maine lobster, one of three stocks of lobsters. Because Lobster Conservation Management Areas (LCMAs) do not coincide exactly with stock units, knowing how lobster stocks intermingle and move across LCMAs is crucial to crafting effective LCMA-specific conservation measures.

In 2006 and 2007 *MarineFisheries* tagged over 10,000 lobsters with the assistance of fifteen Massachusetts lobstermen and four Maine lobstermen. Nearly 350 fishermen have reported more than 1,100 tagged lobsters since the program was started. Each lobsterman reporting a tag received a NWALTP hat and map depicting where the lobster was originally released and where it was recaptured. Additionally, each lobsterman received one entry into a lottery for every lobster reported. In August of 2007, we drew 5 winners from our first round of tagging. Arthur Sawyer of Gloucester, Peter Fadden of Marblehead, Steven Whelan of Hanover, David Johnson of Long Island, Maine, and Tim Alley of Walpole, Maine each won a $500.00 gift certificate to West Marine. Preliminary results of the study demonstrate an offshore migration of lobsters occurring in the fall and an inshore migration of lobsters in the spring.

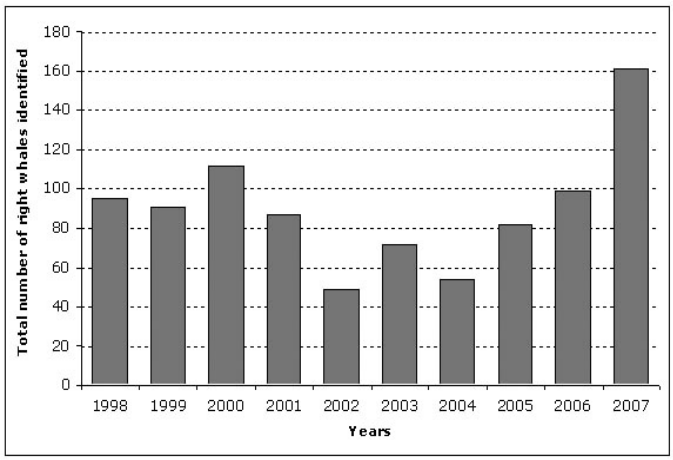
There are still many lobsters at large and we would still like to keep receiving tag reports. Tags can be reported to the lobster tagging hotline at 617-767-0394 x 363. *MarineFisheries* plans to continue this program and is currently seeking funding from the Northeast Consortium to expand the program into Outer Cape Cod and Georges Bank.

by Robert Glenn, Marine Biologist

2007 Brings Record Number of Right Whale Sightings

In 2007, *MarineFisheries* and the Provincetown Center for Coastal Studies conducted the Right Whale Surveillance Program in Cape Cod Bay for the 10th consecutive year. The season brought record-breaking results with more individual right whales sighted than in any previous year of the study. From January - May 2007, 161 individual right whales were observed in Cape Cod Bay and adjacent areas, which is twice the yearly average from 1998-2006. In addition, 34 of these right whales had never been seen by the survey before.

The largest number of right whale Surface Active Groups (SAGs) was also observed in 2007. The surveillance team documented more SAGs in Cape Cod Bay than in any previous season. A total of 30 SAGs were observed in 2007, in comparison to a yearly average of 9.2 from 1998-2006. Though there was no change in the survey methods, the extraordinary 2007 season could be attributed to a variety of factors, including recruitment of juvenile right whales or changes in food supply. However, right whale abundance in Cape Cod Bay is highly variable each year, so upcoming survey seasons will demonstrate if abundance in 2007 was a fluke or a continuing trend.



In 2007, over 160 right whales were sighted, nearly double the average number of right whales sighted during the previous decade.

The 2007 right whale season included improvements to acoustic monitoring. *MarineFisheries* deployed three upgraded right whale acoustic buoys in Cape Cod Bay. These real-time buoys are known as "Gumby Buoys" because of the elastic hydrophone tether which reduces false detections. The improved buoys were activated in December 2007 and will listen for right whales during the 2008 surveillance season, providing information about right whale presence when bad weather prevents aerial survey.

In 2008 *MarineFisheries* will begin partnering with Cornell University and the Northeast Fisheries Science Center on an acoustic validation study for right whales. Acoustic detection of right whales can provide valuable information about presence, but little is known about how the number of vocalizations detected relates to the number of individuals present.

Right whales do not have individually distinctive calls and tracking the movements of one individual using acoustic monitoring is difficult. The acoustic validation study will use real-time buoy data, archival buoy data, aerial surveys, and vessel survey to clarify the relationship between call counts and right whale abundance. This work will be conducted systematically in Cape Cod Bay, Stellwagen Bank, and the Great South Channel and results will be compared between the various habitats. This study will aid in making acoustic monitoring a viable tool for managing human impacts to right whales and reducing the threat of vessel interactions.
by Erin Burke, Protected Species Specialist

Funding for the project was provided by the National Marine Fisheries Service and the National Fish and Wildlife Foundation.

MarineFisheries Staff Comings and Goings...

Brant McAfee has joined *MarineFisheries* as an Aquatic Biologist with the Sea Sampling program. Brant previously worked for *MarineFisheries'* Industry Based Survey project and also for Oregon's Department of Fish and Wildlife on salmon spawning and aquatic habitat. **Brant** holds a degree in Environmental Science from University of Oregon, at Eugene and is a member of the Phi Beta Kappa Honor Society. As a new addition to our New Bedford facility, **Julian Race-Moore** will be working as a Systems Analyst/GIS Analyst. **Julian** worked most recently for SAIC as a database/GIS analyst, focusing on analyzing GIS data in support of dredging operations around the country. **Julian** is a graduate of Worcester Polytechnic Institute with a degree in Management Information Systems. **Ashley Silberzweig** joined Gloucester's Shellfish Laboratory in July as a Bacteriologist and will be conducting both water quality and red tide monitoring. **Ashley** is a graduate of Fitchburg State College in MA and had previously worked for Phylonix Pharmaceuticals of Cambridge and also Boston's New England Aquarium. *MarineFisheries'* Newburyport Shellfish Purification Plant welcomes **Harrison Stearns** who joined *MarineFisheries* as a plant laborer in May. **Harrison** is a graduate of Arrowhead High School in Hartland, WI and comes to the Division from the Newburyport Yacht Club. Finally, **Devon Winkler** joined the shellfish program in Gloucester as an Aquatic Biologist. **Devon** had previously worked with AmeriCorps Cape Cod and also as a seasonal shellfish assistant for Natural Resources. **Devon** obtained her undergraduate degree from UMass-Amherst in Biology and completed her Masters in Environmental Science and Policy at Clark University.

Julie Barber, an aquatic biologist with *MarineFisheries'* Hubline Mitigation Program for artificial reef, has left after three years of service with the Division. After much planning, **Julie** and her boyfriend will be traveling abroad for the next year. We wish her well in her global travels.

2007 Quota Monitoring Summary

Several of the Commonwealth's commercial fisheries are managed by annual quota, including striped bass, bluefish, fluke, black sea bass, scup and now tautog. These fisheries are monitored using data reported by licensed Massachusetts seafood dealers. Dealers that purchase directly from fishermen are known as 'primary buyers,' and are required to report a week's worth of transactions no later than the following Tuesday. So, while we collect transaction-level data (species, pounds, price, market category, etc.), this information comes to us on a weekly basis.

The monitoring process entails calculating an average daily landings rate and using it to forecast the date when 100% of the quota will be filled. However, since the landings rate can change dramatically from week to week depending upon weather, regulations, price, as well as a host of other factors, our fisheries often end up closing somewhere above or below 100%. Fisheries that have a short season and whose landings occur at a rapid pace, such as striped bass, present a particular challenge. When a fishery does end up over 100%, those 'overage' pounds are subtracted from next year's quota.

A large part of quota fishery management is monitoring dealer reporting compliance. When a dealer is late in submitting their reports or neglects to report some of their transactions, it severely hinders our ability to accurately forecast a closure date. To address this issue, *MarineFisheries'* Statistics Project has mounted a campaign of educating dealers of their role in quota fisheries management and informing them of their compliance status on a regular basis. Dealers that fail to meet their reporting requirements can face permit suspension, revocation, and/or fines. A single dealer in 2006 neglected to report any fluke transactions until a month *after* the season closed. Since that dealer purchased close to 10% of the entire state's quota, it had a significant impact on our quota monitoring efforts. As a consequence, that dealer's authorization to purchase fluke was revoked for two years.

Other species, such as spiny dogfish, Atlantic herring, *illex* and *loligo* squid are also managed by annual quotas, but since those quotas are shared by several Atlantic coast states, their monitoring is coordinated at the Federal level by the National Marine Fisheries Service.

By Micah Dean, Environmental Analyst

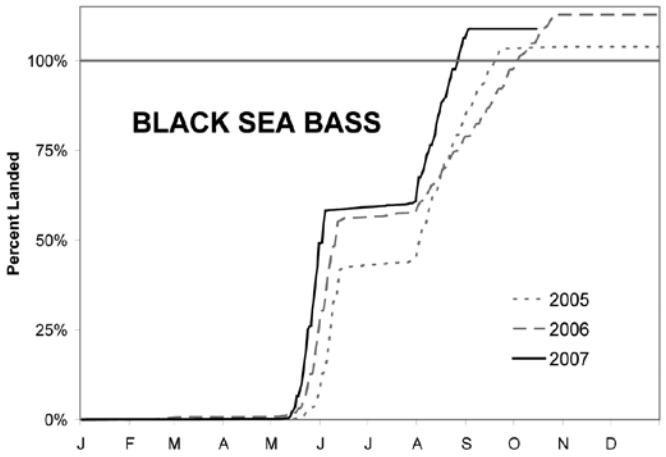
Table 1. ***Summary performance of quota managed species landed in Massachusetts during the 2007 calendar year.***

Fishery	2007 MA Quota	2007 Landings	Percent Landed
Black Sea Bass	*407,462*	*443,647*	*108.9%*
Bluefish	*575,973*	*561,515*	*97.5%*
Fluke	*654,285*	*660,470*	*100.9%*
Scup (May - Oct)	*1,023,834*	*997,871*	*97.5%*
Striped Bass	*988,406*	*1,063,141*	*107.6%*
Tautog	*96,000*	*95,275*	*99.2%*

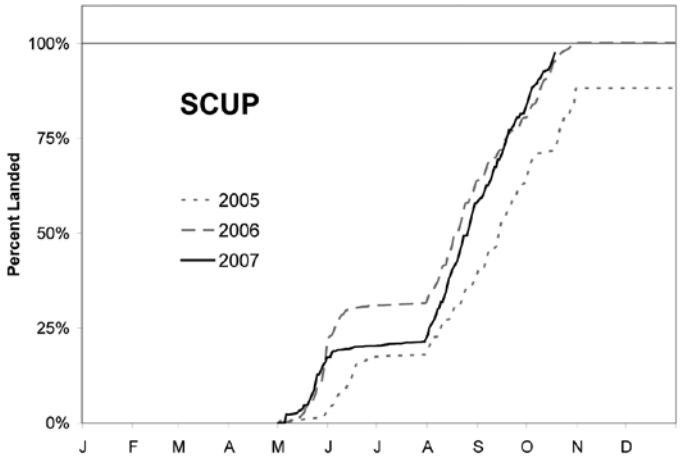
Table 2. ***Summary of species landed in Massachusetts during the 2007 calendar year totaling more than $1-million in landed value (data from SAFIS; * indicates quantity was reported in multiple values, for further information see MarineFisheries' website).***

Species (does not include unclassified landings)	**Quantity** (in lbs.)	**Value**
Sea Scallop	*	$221,122,397
American Lobster	9,251,124	$48,045,555
Atlantic cod	11,627,213	$22,616,284
Atlantic mackerel	*	$19,767,348
Clam, Northern Quahog	*	$18,046,835
Goosefish/Monkfish	6,176,979	$17,293,692
Skates	12,626,592	$16,300,397
Haddock	5,798,117	$12,034,039
Atlantic Sea Herring	*	$9,434,371
Menhaden	*	$8,605,220
Soft Shell Clam	*	$7,983,580
Winter Flounder	3,671,438	$7,458,037
Yellowtail Flounder	3,300,800	$5,678,366
Atlantic Pollock	10,719,434	$5,661,257
Eastern Oyster	*	$5,456,873
Witch Flounder/Gray Sole	1,582,399	$5,436,542
Crabs	*	$3,955,044
Striped Bass	1,042,304	$2,750,106
Amer. Flounder/Plaice/Dab	1,491,823	$2,565,457
Channeled Whelk	*	$2,351,482
Bay Scallop	*	$2,218,243
Silver Hake/Whiting	3,171,825	$2,107,057
White Hake	1,539,557	$2,103,571
Loligo Squid	1,882,957	$1,967,382
Summer Flounder/Fluke	660,570	$1,627,540
Black Sea Bass	448,041	$1,196,404
Scup	1,105,162	$1,036,148

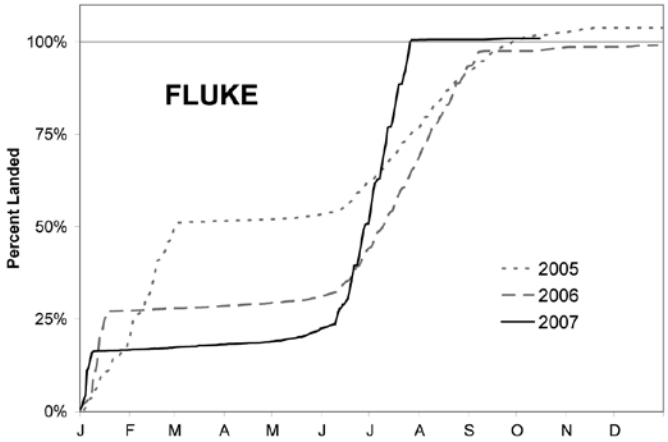
Progression of MA quota managed commercial fisheries for the past 3 years



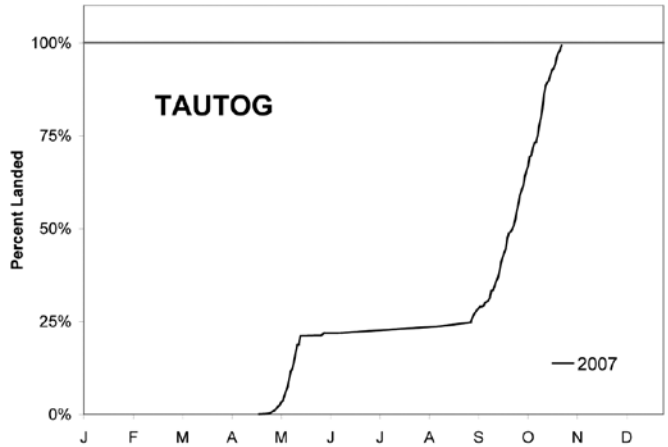
Once the early black sea bass season gets underway in mid-May, it can be exhausted in two to three weeks, landing 15,000-20,000 lbs. per day.



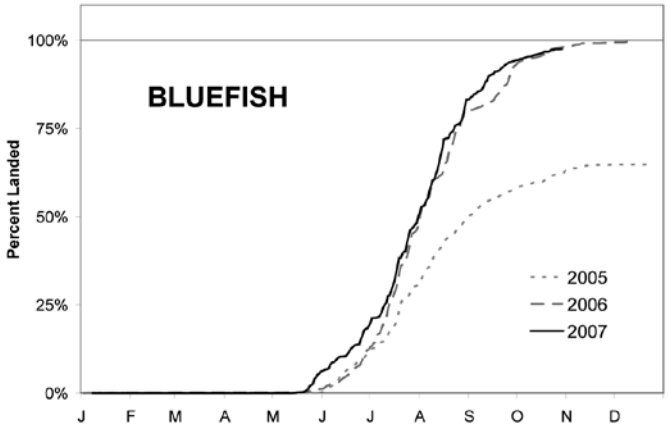
The summer period scup fishery conducted in MA waters has shortened in duration each year and is likely to be more than a month shorter due to an impending quota reduction in 2008.



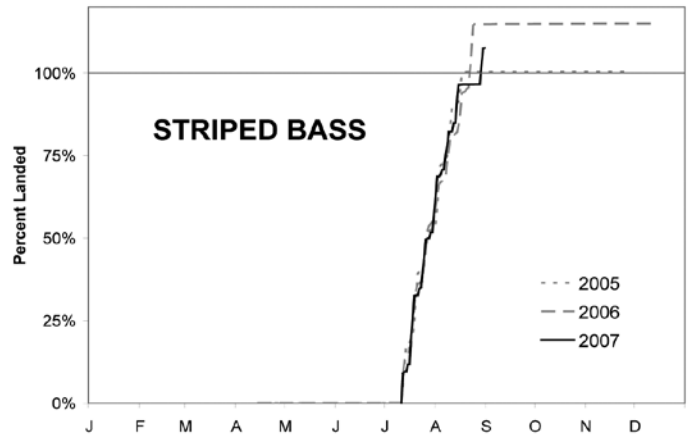
During the last three years, large volume landings and reduced quotas have led to a shorter Winter I period summer flounder/fluke fishery beginning January 1st.



Last year was the first time MA managed the commercial tautog fishery under a quota. Although the spring sub-quota was not reached before May 15th, it likely will be filled and in a shorter period due to a quota reduction in 2008.



The Commonwealth has capitalized on available bluefish during the last two seasons.



The commercial striped bass fishery has continued to harvest its quota in just over a month.

DMF *Rules UPDATE*

Public Hearings • Regulations • Legislation

Notice of Public Hearings
February 26 & 27, 2008

Under the provisions of M.G.L. Ch 30A and pursuant to the authority found in M.G.L. Ch. 130 ss. 17, 17A, and, 80, Division of Marine Fisheries (DMF) and the Marine Fisheries Advisory Commission (MFC) have scheduled hearings on the following proposed regulations:

1. Accept comments on DMF proposals to comply with new commercial harvest levels of black sea bass as required by ASMFC for the 2008 fishery (322 CMR 6.28) by reducing possession limits and/or season lengths and/or increasing no-fishing days, including, but not limited to:
    a) a delayed opening of the directed nearshore fishery (from May 1st to July 16th), which would then open under a 500-lb. black sea bass trip limit for pot and weir gear; 100-lb. black sea bass trip limit for lobster and trawl gear; and 200-lb. black sea bass trip limit for hook gear.

2. Accept comments on DMF proposals to comply with new commercial and recreational harvest levels of scup as required by ASMFC for the 2008 fishery (322 CMR 6.28 & 8.06) by amending possession limits, season lengths, minimum sizes and/or allocated quotas, including, but not limited to:
    a) a reduction in the nearshore scup fishery quota for weirs during May – October (from 225,000-lbs. to 121,500-lbs.);
    b) a delayed opening of the directed nearshore fishery conducted by hook and pot gear (from May 1st to July 16th), which would then open under a 500-lb. scup trip limit;
    c) for private recreational anglers: a 10-fish possession limit and reduced season; and for recreational anglers aboard for-hire vessels: an 11" minimum size, 45-fish possession limit during a limited spring period to be reduced to 10-fish for the remainder of a shorter season.

3. Accept comments on DMF proposals to comply with new commercial harvest levels of summer flounder (fluke) as required by ASMFC for the 2008 fishery (322 CMR 6.22) by amending possession limits, season lengths, minimum sizes and/or allocated quotas, including, but not limited to:
    a) allocating 30% of the MA commerical fluke quota to a Period I fishery beginning on February 1st with a 500-lb. fluke trip limit – decreasing to 100-lbs. of fluke per trip when 25% of the quota has been reached;
    b) allocating 70% of the MA commercial fluke quota to a Period II fishery beginning April 23rd and ending on December 31st or when 100% of the MA commercial fluke quota has been harvested, whichever comes first.

4. Accept comments on DMF proposal to enact commercial daily possession limits for monkfish complementary to current federal trip limits (322 CMR 6.03 & 8.06):
    a) 50 lbs. of monkfish tails; or
    b) 166 lbs. whole monkfish.

5. Accept comments on DMF proposal to re-establish a June 7, 2007 control date for all fisheries using hook gear, excluding striped bass (322 CMR 7.04).

Two public hearings have been scheduled for 6PM on:
Tuesday, February 26, 2008 at the Annisquam River Marine Fisheries Station (30 Emerson Ave., Gloucester) &
Wednesday, February 27, 2008 at the Radisson – Plymouth Harbor (180 Water St., Plymouth)

Comments received by e-mail (marine.fish@state.ma.us), fax (617.626.1509), or
mail (251 Causeway St., Suite 400; Boston, MA 02114)
will be accepted until 5PM on Thursday, February 28, 2008.

Contact DMF for regulations and further details or visit our website at www.mass.gov/marinefisheries.

Regulations Update

During the period April through December 2007, the following regulatory changes were enacted by DMF after public hearings and Marine Fishery Advisory Commission (MFC) approval. Emergency regulations that have subsequently expired are not included:

Sea Herring

1. DMF enacted a prohibition on the possession and landing of any sea herring caught from the Massachusetts/ New Hampshire Spawning Area during the period September 21st through October 18th:

a. on Saturdays and Sundays from 12:01AM Saturday through 11:59 PM Sunday,

b. on Fridays, Saturdays, & Sundays when 50% of the Management Area 1A quota is taken or projected to be taken on or before October 1st,

c. when 100% of the Management Area 1A quota is taken or projected to be taken,

d. during the closure, vessels may land or possess up to 2,000-lbs. of sea herring (322 CMR 9.03).

Groundfish

1. DMF reduced the commercial minimum size for haddock from 19" to 18" (322 CMR 6.03).

2. DMF took emergency action to prohibit the harvest of cod from the Cod Conservation Zone (waters under the jurisdiction of the Commonwealth north of latitude 42 degrees 20 minutes and south of 42 degrees and 30 minutes) during December 1, 2007 through February 28, 2008. Furthermore all groundfish gear capable of harvesting cod is restricted from the area.

3. DMF restricted landing and possession of lobsters caught by gillnets in the Outer Cape Cod Lobster Conservation Management Area to an amount of lobsters that fit into two 3.9 cubic foot "lobster crates" not to exceed 100 lobsters (322 CMR 4.06 & 6.26). Gillnetters are also prohibited from storing lobsters overboard in coastal waters and are required to separate their lobster from other catch for inspection by Law Enforcement (lobsters can be placed in live wells, but must be immediately transferred to proper crates upon the request of law enforcement).

Weakfish

DMF restricted recreational fishermen to landing and possession no more than 6 weakfish per person per day (322 CMR 8.06).

Smooth Dogfish

DMF restricted fishermen to landing and possessing no more than 100-lbs. of smooth dogfish per vessel per day. Finning of smooth dogfish is also prohibited.

Lobster

1. DMF has repealed the requirement to process all lobster parts within 30 minutes of their separation from the tail.

2. Additionally, DMF repealed the prohibition on the sale of frozen shell-on lobster parts other than the tail, specifically lobster carapaces.

3. DMF allocated lobster trap allocations to permit holders based on SCUBA-based harvest history during qualifying years for specific LCMA's under management of and effort control plan. Permit holders are reminded that allocations are not transferable.

4. DMF enacted rule changes to comply with Addendum XI of the Interstate Plan for American Lobster (see Table 1).

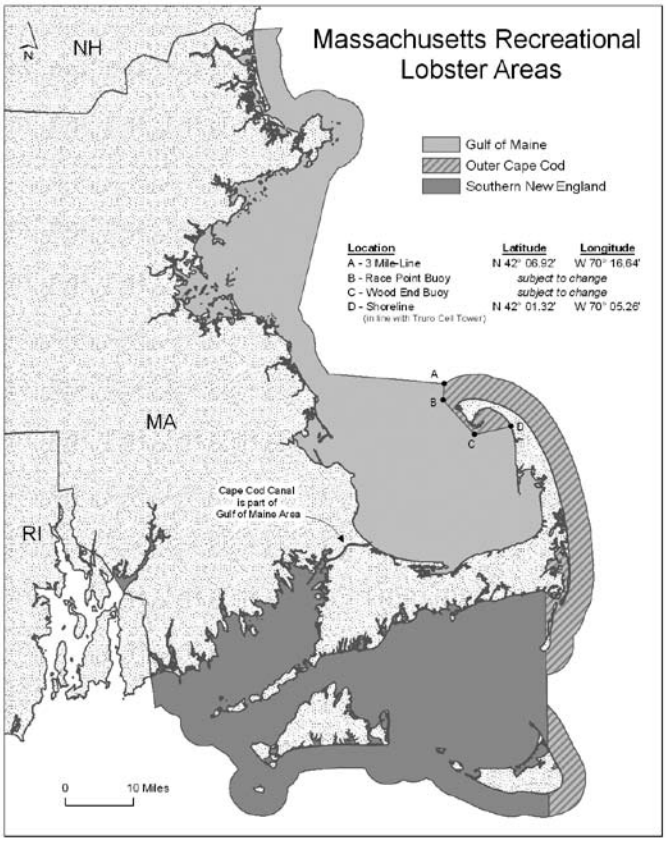


Table 1. ***Summary of approved changes for LCMAs 2, 3, 4, 5, & 6 (effective July 1, 2008) and the Southern New England and Outer Cape Cod Recreational Lobster Areas (effective January 1, 2008).***

Area	Minimum Size	Maximum Size	V-notch Possession Standard
LCMA 2, 4-6	3 3/8" **(No change)**	5 ¼" **(New)**	1/8" indentation w/ or w/out setal hairs **(No change)**
LCMA 3	3 ½" **(No change)**	7" **(New)** 6 ¾" by 2010	1/8" indentation w/ or w/out setal hairs **(New)**
Southern New England Recreational Lobster Area	3 3/8" (**No change**)	5 ¼" **(New)**	1/8" indentation w/ or w/out setal hairs **(New)**
Outer Cape Cod Recreational Lobster Area	3 3/8" (**No change**)	N/A (**No change**)	1/4" straight-sided w/out setal hairs **(No change)**

INSIDE...

Surfers • Surfers • Surfers

This Newsletter and Other Information is available at our Web Site!

http://www.mass.gov/marinefisheries

DMF NEWS

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MarineFisheries receives state and federal funds to conduct research, management and development of the Commonwealth's marine fishery resources. Information in this publication is available in alternative formats.

Deval L. Patrick, Governor
Timothy P. Murray, Lt. Governor
Ian A. Bowles, Secretary, EOEEA
Mary B. Griffin, Commissioner, DFG
Paul J. Diodati, Director, *MarineFisheries*

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