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DMF NEWS

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MarineFisheries

A Commonwealth of Massachusetts Agency

Lobster: Better Management Across Stock Units

The Atlantic States Marine Fisheries Commission (ASMFC) has approved new biological measures in Addendum XI to help rebuild the southern New England (SNE) American lobster stock, some of which will impact fisheries and markets beyond southern New England.

Reasons for the marked decline in SNE are many including shell disease linked to warming water temperatures, increased predation, and overfishing. Recruitment of young lobsters to the population appears to remain low so recovery of this population will take considerable time. Consequently, ASMFC voted to extend the rebuilding time-line to 15 years, about two generations of lobster.

In 2006 stock definition boundaries were changed resulting in just three primary stocks: southern New England, George's Bank and Gulf of Maine. These changes were scientifically sound, but socially problematic because management areas, known as Lobster Conservation Management Area (LCMAs) do not strictly align with stock units (Figure 1).

LCMAs 1, 2, 3, and Outer Cape Cod extend across biological stock areas, but there's been minimal support to re-align the LCMAs with stock units. Established 10 years ago, each LCMA (except LCMA 1) now has trap limits that are specific to each permit holder based on individual fishing history in the specific LCMA. The political nature and burdensome administration of these allocation plans make changes to the human dimension of the fishery equation difficult to accomplish.

For lobster stock assessment scientists, it's hair-pulling frustration trying to determine the attribution of landings

DMF Photo by Bill Hoffman

Large lobsters like the one above gain greater protection via Addendum XI.

to each of the three stocks when the LCMAs are mis-aligned with biological stock areas. Making matters worse has been the different regulations, notably biological measures, between LCMAs within the same stock unit.

Within each stock unit there are two or three different minimum and maximum sizes and v-notch standards. The challenge continues to be to determine the degree that one LMCAs less restrictive rules undermine another's when lobsters migrate between areas within the same stock unit.

By July 1, 2008 all states will be required to enact rules for southern New England (LCMAs 2-6) that include a 3 3/8" minimum size, a 5 ¼" maximum size, and a new v-notch definition that extends the time a released female lobster is protected after being marked

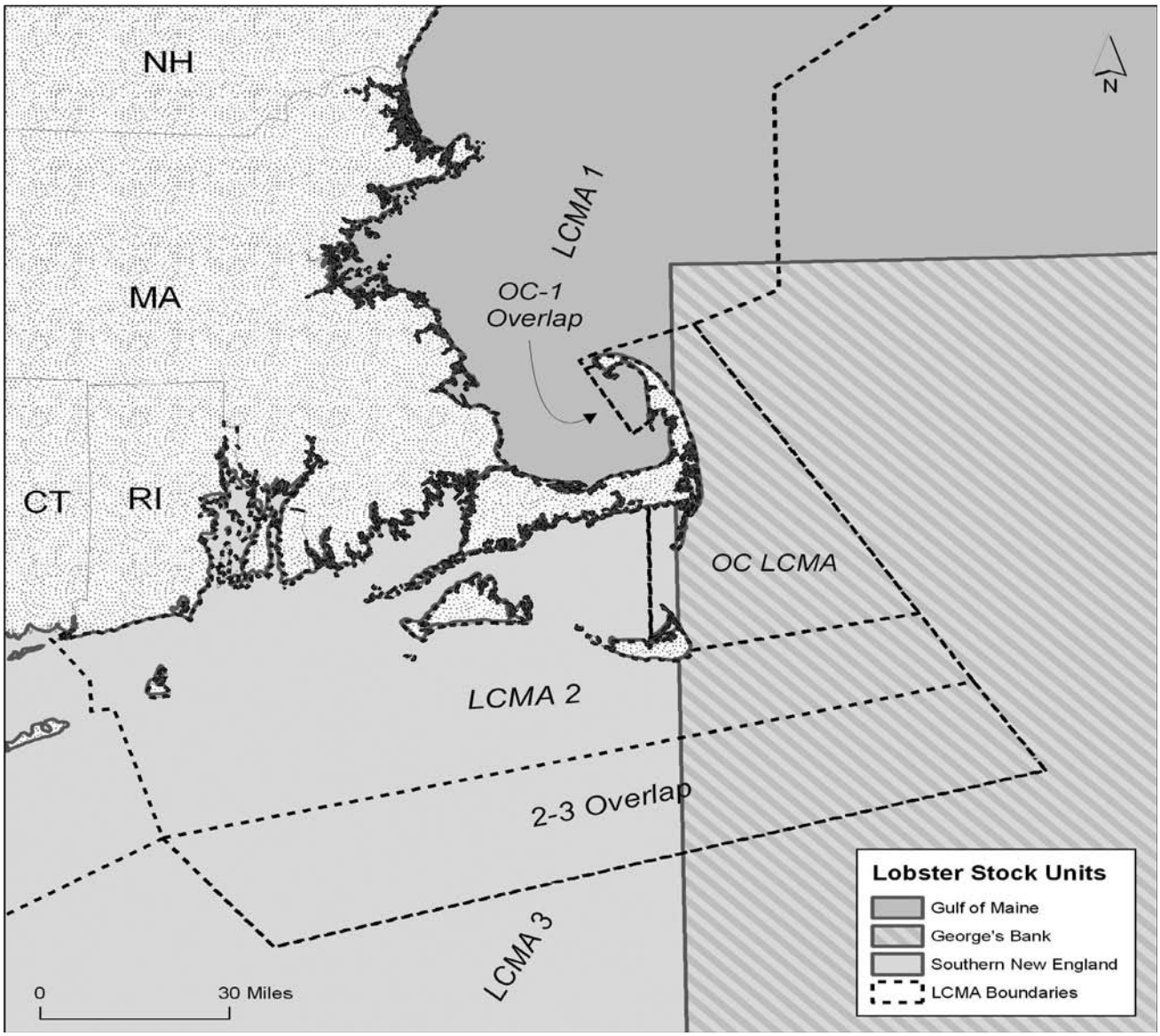
with a carved "V" in a specific flipper. Decreasing the minimum size for a legal v-notch to 1/8" protects mature female lobsters another 1-4 years from capture after being released with a carved "V" in their flipper. *MarineFisheries* enacted this rule last year for LCMA 2 as an emergency measure, and now it has become a regional standard. This rule comes very close to the current standard in LCMA 1, where the so-called "zero tolerance" rule applies.

Not all of Southern New England will abide by the same size limits. The offshore component of the fishery (LCMA 3) will be subject to a larger minimum (3 ½") and maximum (7") size. The larger minimum size is a requirement of Addendum III which mandated a scheduled increase of 1/32" per year for the past seven years; 3 1/2" goes into effect July 2008. The 7" maximum gauge is a major change for offshore fishermen who have resisted maximum sizes in the past.

Though larger than the maximum size applied to nearshore zones, this rule will generally protect females above 9-lbs. and males above 10-lbs, and the scheduled drop to 6 ¾" by 2010 will generally protect females above 8 ¼-lbs. and males above 9-lbs. Because this rule will apply to non-trap fishermen as well as trap fishermen, the impacts will certainly be measurable.

It is important to note that LCMA 3 cuts across all three stock units prompting rule changes to provide conservation benefits beyond southern New England. To prevent undermining of such conservation benefits, *MarineFisheries* has proposed applying the 7" maximum size and new v-notch definition to the Outer Cape Cod LCMA (see public hearing notice on page 10). Like LCMA 3, Outer Cape Cod LCMA cuts across all three stock units but Outer Cape lobstermen fish primarily on the inshore migrants from the George's Bank stock.

The net result of these proposals to consumers and markets will be a loss of jumbo lobsters above 8-10 lbs. and the requirement for fishermen and dealers to pay closer attention to v-notch lobsters, especially those that have molted and the notch has grown in or changed shape. From an enforcement and compliance perspective, more uniform rules (where practical and justifiable) will enhance compliance because they can be enforced at-sea, dockside, at dealers, and in commerce.
by Dan McKiernan, Deputy Director



Map of Lobster Conservation Management Areas (LCMAs) off Massachusetts overlaid on Lobster Stock Units.

Reauthorized Magnuson-Stevens Act Challenges

On January 12, 2007 the Magnuson-Stevens Fishery Conservation and Management Act (MSA) was amended and reauthorized. Long overdue, the reauthorized MSA will preoccupy state and federal fisheries managers for some time to come as we struggle to meet its challenges, especially here in New England.

One important challenge will be to clarify Congressional intent regarding the setting of annual catch limits and accountability measures. Another challenge will be to meet the stricture that councils' catch limits may not exceed fishing levels recommended by their Scientific and Statistical Committees. This requirement raises questions and concerns about the current peer review process for providing scientific "advice" as well as giving rise to a debate on the impacts of the Council's potential loss of flexibility in selecting the best levels of catch. Some would say, "that's a good thing" while others would be concerned that the council has been removed from any debate regarding allowable catch levels and uncertainty of scientific advice.

States are partners in fisheries management, and our challenge will be to find the resources to keep us in the scientific and management "mix." Otherwise, federal decisions made "in the best interest of the nation" may lack insight into state fisheries management interests and the welfare of our fishing communities.

The National Marine Fisheries Service (NMFS) has completed a public scoping process to gather opinion as to how it should modify National Standard 1 (NS 1) guidelines by the end of 2007. Generally, NS 1 is the "overfishing standard;" however, that description is a bit incomplete. NS 1 is more complex, stating: *"Conservation and management measures shall prevent overfishing while achieving on a continuing basis, the optimum yield from each fishery for the United Sates fishing industry."* This definition has brought the debate back to what defines optimum yields and maximum sustainable yields (MSY) for each fishery and what level of fishing actually jeopardizes our achieving MSY on a continuing basis. *MarineFisheries* has submitted comments addressing many questions asked by NMFS to assist the agency determine how to proceed with potential changes to NS 1 guidelines.

One of *MarineFisheries*' main concerns is that some potential interpretations of the reauthorized MSA may foreclose Council's options to minimize socioeconomic impact on fishing communities. Time will tell how the MSA and NMFS guidelines will affect commercial and recreational fisheries in New England and across the nation, but *MarineFisheries* is committed to ensuring balance of local and regional interests with conservation.

by David Pierce, Ph.D.

Framework 42 Lawsuit Update

The Commonwealth's lawsuit against the Secretary of Commerce has not gone away. In early May, *MarineFisheries* and our New Hampshire counterpart, the Department of Fish and Game's Division of Marine Fisheries, filed a motion in the U.S. District Court for the District of Massachusetts asking for a Court order to compel the Secretary of Commerce to supplement the administrative record in two ways: (1) add documents relating to the composition and administration of the Closed Area Model (CAM) used to forecast impacts of Framework 42 (FW 42) measures, and (2) include all documents relating to the Secretary's decision not to analyze the likely impact of the "mixed-stock exception."

NOAA Fisheries identified the mixed-stock exception it its National Standard guidelines as a legitimate, albeit "limited exception" to the requirement to prevent over-fishing, acknowledging that "harvesting one species of a mixed-stock complex at its optimum level may result in the over-fishing of another stock component in the complex." Many species in the groundfish complex cannot be harvested at optimum levels due to concern about one component - Gulf of Maine/ Cape Cod yellowtail flounder.

The Commonwealth's complaint alleges that FW 42 violates, among other things, several National Standards: (1) National Standard 1 because it fails to prevent over-fishing of targeted stocks, and simultaneously fails to permit fishermen to achieve an optimum yield of species within the mixed stock that are safely within their targeted recovery schedules; (2) National Standard 2 because the Secretary of Commerce failed to make use of the best scientific information available in selecting the measures that would be adopted as part of FW 42, and (3) National Standard 4 because FW 42 measures will have a disproportionate impact upon fishermen in Massachusetts and New Hampshire. Stay tuned.

by David Pierce, Ph.D.

Right Whale Litigation Update

On January 24, 2007 Judge Nathaniel Gorton of the Federal District Court for the District of Massachusetts issued an order to "stay" for two years the case of Richard ("Max") Strahan against the Commonwealth. Plaintiff Strahan filed a suit under the federal Endangered Species Act seeking to stop *MarineFisheries* from licensing the use of fixed fishing gear (lobster traps and gillnets) unless that gear was proven to be incapable of entangling endangered whales.

The Commonwealth argued that it has the most whale-safe environment of any jurisdiction along the range of right whales from the Gulf of Mexico to the Canadian Maritimes. *MarineFisheries* prohibits gillnetting in known right whale habitat during January through May 15, and since January of 2007, *MarineFisheries* has prohibited use of floating groundline that connects lobster traps set as a string. Massachusetts is the first state, province or government to take this regulatory action.

Expert witnesses from around the region, renowned for their endangered whale expertise and advocacy, testified on the unprecedented conservation benefit from eliminating floating groundlines from the water column - the primary focus of ongoing endangered whale rulemaking by NOAA Fisheries. Thousands of miles of rope (shown to arc 10 to 20 feet off the ocean floor) has been eliminated.

Despite the plaintiff's request, Judge Gorton did not order a "whale-safe" requirement for fixed fishing gear because such technology simply does not exist. Gorton cited a brief submitted by the New England Law Foundation that the requested injunction "would be devastating to the livelihood of fishermen and the survival of their communities" already facing conservation restrictions and recent declines in some local lobster populations.

Judge Gorton did order *MarineFisheries* to continue to monitor potential risk of whale entanglements for two years as well as any advances in "whale-safe" fishing technologies and report periodically on these issues to the Court.

by Dan McKiernan, Deputy Director

Real-time Acoustic Monitoring for Right Whales -

Can You Hear Me Now?

Acoustic monitoring for right whales in Cape Cod Bay just got a whole lot clearer. Since 2003, *MarineFisheries*, Cornell University, and Woods Hole Oceanographic Institute have teamed up to build the world's first real-time acoustic monitoring system for right whales. The system's listening buoys detect right whale vocalizations and relay that information in near real-time via cell phone. Older buoys were relatively noisy and caused false detections due to the motion of the hydrophone in the water column. In response to this problem, Woods Hole Oceanographic Institute designed a hydrophone tether that stretches, thus reducing self-noise and false detections.

Affectionately known as the "Gumby hose", this new elastic configuration compensates for erratic sea surface conditions by stretching up to 3 times its original size. Dr. Chris Clark of Cornell describes the new design as "a rubber band inside a Slinky." No longer are these hydrophones at the mercy of rough weather and this improves our ability to detect right whale calls.

Right whale protection relies in part on seeing whales, but a great deal can be learned about the movement patterns of right whales by listening for them too. Clark has put fixed hydrophones on the bottom of Cape Cod Bay that show right whales emit routine "contact calls" – such communication is less complex than humpback whale songs.

Seafloor buoys only provided a hindsight view of vocalizations because they are retrieved only at the end of a season. The challenge has been to get that information in near real-time to make it useful for research and conservation. Armed with a better understanding of the presence and location of whales, we can alert vessel operators about avoiding collisions. Vessel strikes are a major cause of right whale mortality and injury.

The surface buoy system was developed by WHOI and Cornell to provide near real-time information about right whale vocalizations. At the start of the project, this technology was in its infancy, and a great deal of trouble-shooting has been done along the way. The new hydrophone hose is a great leap forward.

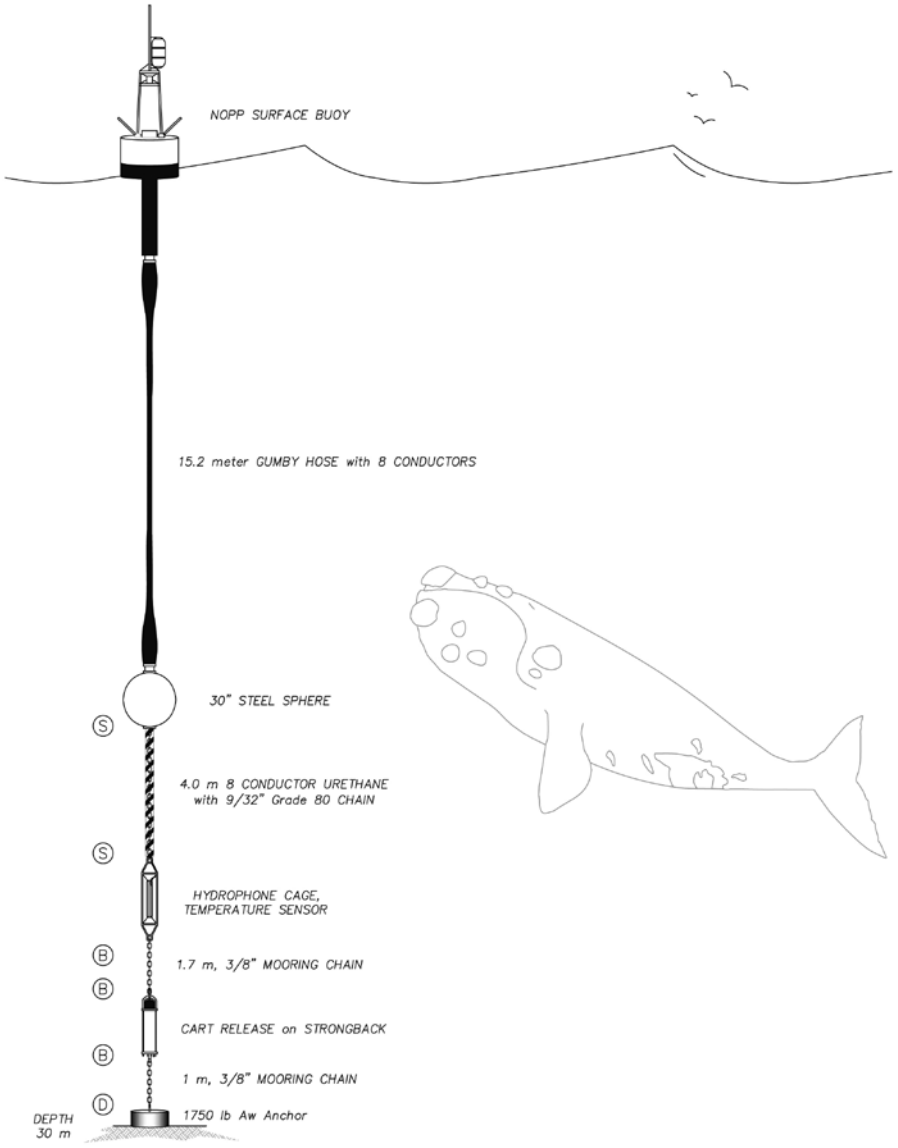
On March 22nd, 2007, the first real-time buoy using the Gumby hose was deployed off Sandwich, Massachusetts. The new system has shown remarkable progress in reducing false detections and improving the data quality when compared to the previous design and has performed exceptionally well in recent high seas and strong winds. During the April Nor'easter, the buoy continued to pick up right whale calls, letting managers know that the whales rode out the storm in Cape Cod Bay.

Given early successes of the new buoy design, *MarineFisheries* is very excited about surveillance potential for the 2007-2008 right whale season in Cape Cod Bay. This upcoming season we intend to have three strategically placed buoys in Cape Cod Bay to transmit information about right whale presence to improve protection measures. Our success will pave the way for similar programs in other right whale habitats and will help to improve applications for acoustic monitoring programs across the globe.

Right whales….we can hear you better now.

by Erin Burke, Protected Species Specialist and Dan McKiernan, Deputy Director

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



The GUMBY prototype system moors an acoustic monitor buoyed at the surface that records right whale calls so that they can be tallied and sent via cell-phone to Cornell University in near real-time. Graphic courtesy of WHOI, designed by John Kemp and drawn by Betsey Doherty.

Operation Ghost Trap

Hauling back traps during daylight at low tide is a long-standing tradition among Cape Cod Canal lobstermen hoping to bring home a few lobsters. Over the years, though, lost or abandoned lobster traps, known as "ghost traps," lie at the bottom of the canal where they continue to catch lobsters and other marine life.

Hoping to combat this risk to marine life, Massachusetts Environmental Police Officer Kevin Clayton approached the Cape Cod Canal Resource Management staff (USACOE), with a proposal to identify and remove ghost traps from several targeted areas in the canal. The operation would also identify active tended traps not in compliance with state regulations, such as the size of escape vents, materials used to secure escape vents and the attachment of lobster permit numbers to each trap.

Correctly rigged lobster pots have built-in escape mechanisms: state regulations require that all lobster traps have either a rectangular escape vent or two circular escape vents in the parlor section(s) of the trap. Also any trap not constructed entirely of wood must have a large escape panel that, if correctly rigged, falls out after being left in the ocean for a long period of time; the ocean serves to rot out "natural" escape panels in wooden traps. Incorrectly rigged traps without vents or escape panels are like "Roach Motels" - critters swim in but they can't swim out.

During Operation Ghost Trap, DMF divers entered Canal waters to survey target areas for ghost traps and compliance throughout the summer. If a ghost trap was located it was removed, if divers were unable to remove a trap due to it being "silted in", divers would cut the tops off releasing any trapped lobsters. Non-ghost traps out of compliance with design and marking specifications were removed from the water and the violation(s) recorded by Environmental Police.

Dive sites in the canal were chosen in advance based on fishing effort to maximize the impact of enforcement and removal of ghost gear. The following sites were surveyed in 2006: Esco Fuel Unloading Area, Bourne Canal Fishing Pier, The Dolphins, Behind the Coalman, Bourne Scenic Park and the Buzzards Bay Recreation Area (by the railroad bridge).

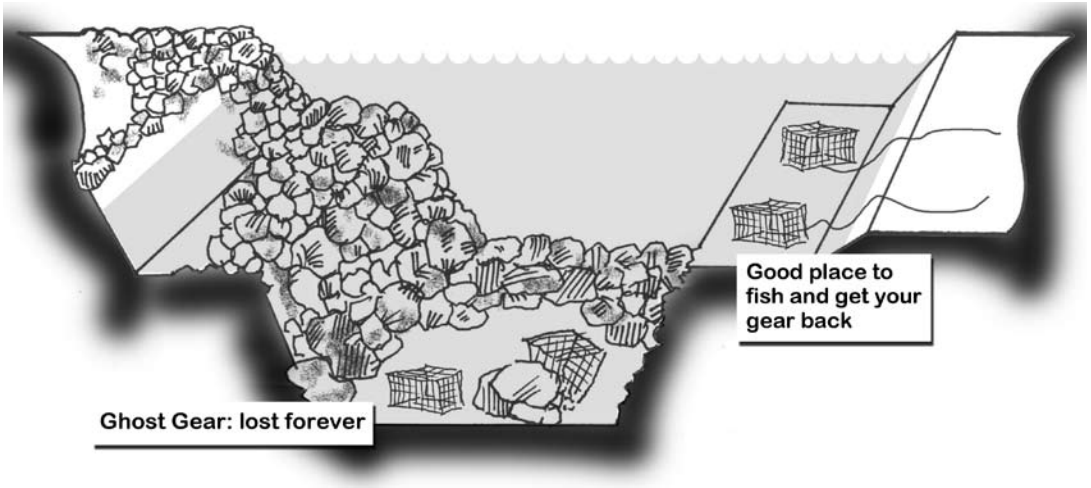
Operation Ghost Trap surveyed a total of two hundred and thirty three traps, more than half of which were identified as ghost traps. Divers were able to extract half of these ghost traps for recycling, the remainder were irretrievable and disabled in place. Environmental Police noted 67 gear specification and marking violations with actively tended traps, including ghost panels incorrectly connected to a trap or escape panels tie-wrap on to the trap. It was noted that in some of the ghost traps, the ghost panels had either fallen off or were so loosely attached that a lobster could have pushed it open and escaped.

Having located a ghost trap, divers remove it from the waters of the Canal. ***DMF Photo by Neil Churchill***

It is important to note that only about 10% of the Canal was surveyed. The operation also gained the attention of countless inquisitive visitors who were educated on the detrimental effects the unattended lobster traps had on the marine resources of the Canal.

Operation "Ghost Trap" was carried out safely and efficiently by three agencies dedicated to promoting marine conservation and protecting a valuable and renewable resource for lobster permit holders for years to come. Thanks to all USACOE canal park rangers and other DMF staff who assisted taking the traps from the divers and dragging them up the canal bank for processing. To ensure the safety of the divers, the Cape Cod Canal Marine Operations staff stationed patrol boats to alert approaching vessels and keep them out of the dive area.

See *MarineFisheries*' web page for rules and regulations requiring escape panels on lobster pots: www.mass.gov/marinefisheries. Further information on the Cape Cod Canal, visit: www.nae.usace.army.mil/recreati/ccc/ccchome.htm.
by Matthew McClintock, United State Army Corp of Engineers and Neil Churchill, MarineFisheries.



Graphic by Dave Gabriel, DFG

Traps may be fished effectively on the shallower ledges of the canal but often are irretrievable and become problematic ghost gear when fished in the deeper channel.

Volunteer Anglers Contribute to Striped Bass Conservation

As part of an Atlantic coastwide effort to manage and conserve striped bass, each year *MarineFisheries* provides the Atlantic States Marine Fisheries Commission (ASMFC) with size, age, and catch data for striped bass caught in Massachusetts. In 2002, to increase the information provided to ASMFC, *MarineFisheries* initiated the Sportfish Angler Data Collection Team (SADCT) program, in which volunteer recreational anglers collect biological samples from striped bass.

Anglers who join the SADCT program follow simple protocols for measuring striped bass, recording data, and obtaining scale samples. Scales are used for age determination, because much like trees, growth rings form annually on striped bass scales and the scales of many other temperate fish species. *MarineFisheries* requests that program participants collect scale samples and biological information from ten striped bass per month, May-October (60 samples for the season).

Overall, results from the program provide continued information on striped bass growth and help determine which age classes are experiencing the highest fishing mortality in Massachusetts. In five years 10,300 striped bass have been sampled with the SADCT program. Length frequency (Figure 1) varied slightly from year to year. The smallest bass sampled was 8 inches and the largest was 50 inches – average length of striped bass caught by the SADCT anglers was 24 inches (4 or 5 years old). The average length at age stayed relatively constant. The youngest striped bass sampled was age two and the oldest was age 16 - average age for a legal 28 inch fish is six years old.

The success of the SADCT program stems from the volunteer efforts of over 160 anglers. While striped bass samples were returned from all areas in Massachusetts, a majority of SADCT striped bass were caught on the North Shore, the Merrimack River and the Plum Island Sound area, a favorite for volunteer anglers (Figure 2). Anglers from the Cape Cod area, Martha's Vineyard and the Islands are actively encouraged to participate.

The Sportfish Angler Data Collection Team provides a means for interested and dedicated anglers to help study the resource they enjoy. All participating anglers receive a project t-shirt (after the first year), a ball cap (after the second year), etc., along with an annual study report that includes an individualized data summary (i.e., each person receives information about the fish they caught/samples they returned).

To find out more about this program or to sign up, contact Jennifer Stritzel Thomson at the Massachusetts Division of Marine Fisheries, Annisquam River Marine Fisheries Station, (978) 282-0308, ext. 130 or Jennifer.S.Thomson@state.ma.us.
by Jennifer S. Thomson, Aquatic Biologist

Photo courtesy of Dave Bitters

A happy dad and kids with their striped bass catch.

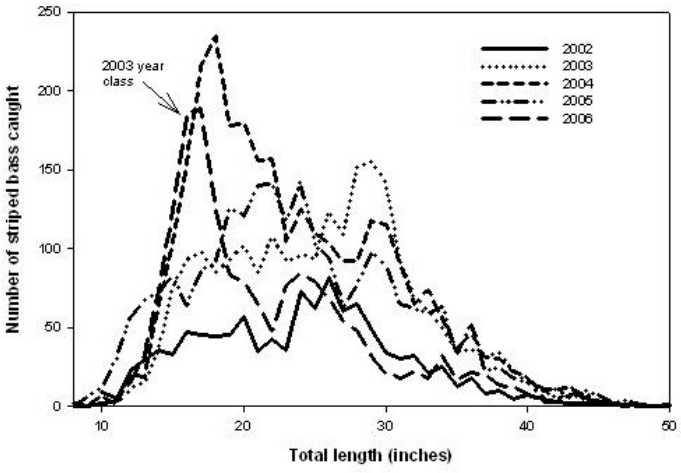


Figure 1. Length distribution of striped bass caught by SADCT anglers in Massachusetts waters from 2002 to 2006.

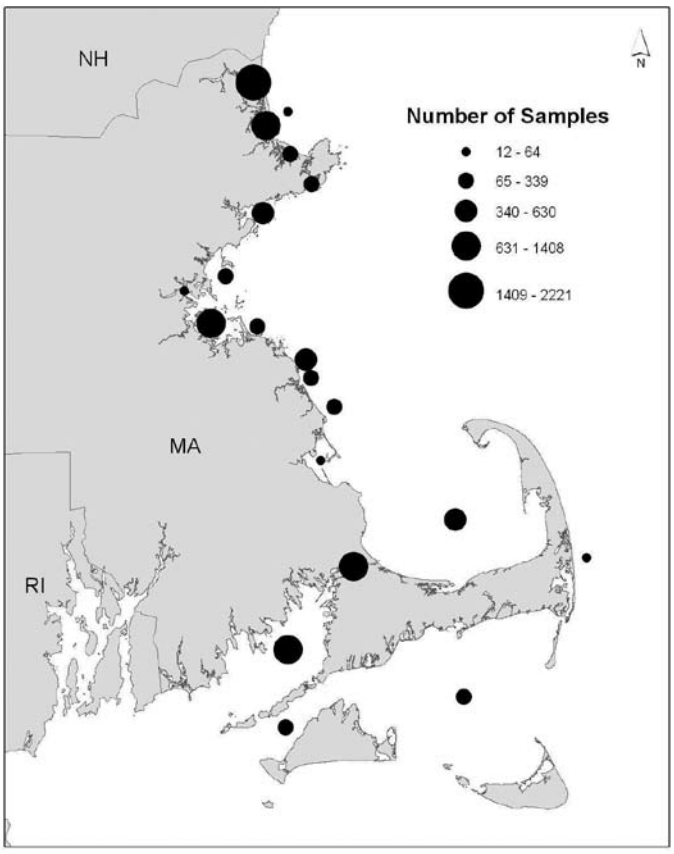


Figure 2. Location of collected striped bass samples by SADCT anglers in Massachusetts waters from 2002 to 2006.

Red Tide in New England - Monitoring in real-time and federal aid for local shellfishermen

Red Tide precipitated-shellfish closures have become an almost annual event in the Commonwealth. During the eight-year period from 2000 to 2007 *MarineFisheries* has enacted closures in five years, including the last three years in a row.

Since the first recorded Red Tide event in Massachusetts in 1972 the Commonwealth's shellfish biotoxin monitoring program has grown from weekly shellfish and plankton sampling to a comprehensive regional effort alongside state and private partners. The 2005 Red Tide event may have been the largest since 1972, but *MarineFisheries* and its partners successfullyl ensured public health and safety.

Red Tide, Paralytic Shellfish Poison (PSP), toxic phytoplankton are all terms used to describe any harmful algae bloom. In Massachusetts, Red Tide is caused by single celled algae know as a dinoflagellate and may be one or both of two species of *Alexandrium: fundyense* or *tamerense*.

Beginning in mid-March, *MarineFisheries* analyzes shellfish collected weekly from 16 primary stations along the coast. Blue mussels are used as the sentinel species because they rapidly accumulate toxin if *Alexandrium* is present and quickly purge the toxin in the absence of exposure, making them an ideal indicator of the presence, intensity and progress of a bloom. If toxin is noted in the mussels, other species of shellfish, that generally accumulate toxin at a slower rate, are sampled from secondary stations in close proximity. Sampling frequency is increased in areas that are exhibiting a rapid rise in toxin levels. Additionally, plankton samples help determine the presence and relative abundance of toxic algae and thus whether additional shellfish sampling is needed.

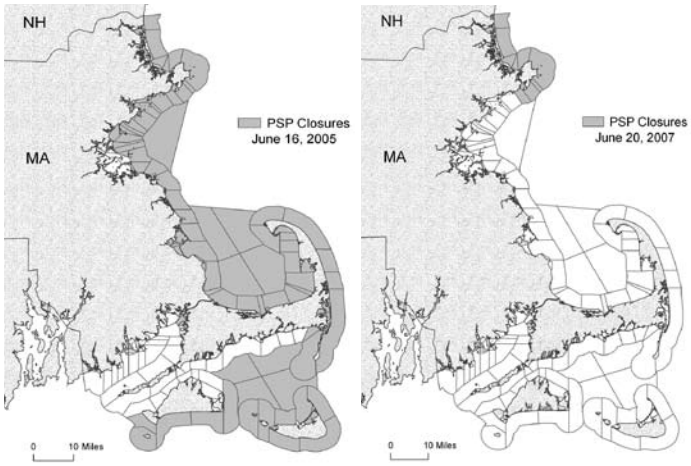
The process of following toxic blooms and ensuring public health and safety with respect to shellfish consumption has advanced an intense regional effort. During the Red Tide season, the States of Maine, New Hampshire and Massachusetts routinely communicate and share information on shellfish toxicity, closures and other pertinent data.

Starting in 2005, the Woods Hole Oceanographic Institution (WHOI) has been conducting research in Massachusetts Bay and on Georges Bank to determine cell counts and bloom dynamics. In 2005 this was extremely helpful because for the first time *MarineFisheries* had real-time data courtesy of at-sea WHOI researchers and NOAA on toxic cell counts and location, and data on the direction and speed of coastal currents carrying the bloom. This information supports timelier decisions concerning public health closures, allocation of resources, sampling strategies and re-opening of shellfish areas, which have important public health and economic consequences.

This year, the R/V Endeavor owned by the National Science Foundation and operated by the University of Rhode Island is conducting surface live cell counts on the southern New England Shelf, Georges Bank and in coastal waters east of Cape Cod. Two cruises have been completed and revealed a large bloom on Georges Bank.

This year's bloom on the North Shore was short-lived (just eight days) with the initial closure on June 19th. Compare this to the 2005 event when harvest of blue mussels and soft-shelled clams from the area was prohibited for 54-days; harvest closures for other species in 2005 remained in place even longer due to high levels of toxin and longer retention times.

The 2005 PSP closure was the largest since 1972 and set a record for Red Tide distribution and closures. A total of 1,351,265 acres were closed to shellfish harvesting or 77.4% of the Commonwealth's marine waters in 42 coastal communities.



A record Red Tide event in 2005 led to extensive closures throughout state waters (left) while 2007 saw shorter closures confined mainly to the North Shore (right).

The extensive 2005 closures had adverse economic consequences on commercial harvesters, shellfish growers, as well as recreational harvesters. Additionally, there was a ripple effect throughout all segments of the seafood industry from distributors, processors and retail markets to restaurants.

Recognizing the significant impacts of the 2005 Red Tide Event, the Commonwealth declared a state of emergency allowing the state to seek federal disaster aid for the shellfish industry. Subsequently, the Department of Commerce declared New England's red tide outbreak a commercial fishery failure and in June of 2006, the U.S. Congress designated $2-million to assist recovery of the Commonwealth's shellfishermen.

MarineFisheries has completed disbursement of these funds to 382 shellfishermen through its Red Tide Disaster Relief Program. Applicants must have held an eligible 2005 Massachusetts Commercial Fishing Permit endorsed for shellfishing in a MA community that was impacted by the 2005 red tide event. *MarineFisheries* incorporated the recommendations of a volunteer steering committee comprised of representatives of various harvest sectors of the commercial shellfish industry and related state agency personnel in establishing eligibility criteria, determining distribution equitability, and formulating standards for appeals. For further information on the Red Tide Disaster Relief Program please visit our webpage at: www.mass.gov/marinefisheries.

Relief awards ranged from just over $1,000 to $27,000 with a median award of approximately $3,500. Unfortunately, this relief cannot fully compensate applicants for all lost wages resulting from the 2005 red tide disaster, estimated by *MarineFisheries* to be more than $10 million.

by J. Michael Hickey, Chief Biologist Shellfish Program

Annual "Bucket Brigade" Helps Thousands of Herring to Spawning Grounds

May 25th marked the start of the Third Annual Herring Bucket Brigade – a two-day volunteer effort to move river herring over the dam from Lower Mystic Lake to Upper Mystic Lake. Without the bucket brigade, the dam prevents thousands of herring from reaching 165 acres of spawning habitat in Upper Mystic Lake. Last year's brigade helped more than 4,000 river herring reach the upper lake, and this year's event more than quadrupled that result with more than 19,000 river herring successfully transported.

"The Commonwealth is grateful for the hard work of the many volunteers who commit to helping out with this project each year," said Energy and Environmental Affairs Secretary Ian Bowles, who acknowledged volunteers from the Medford Boat Club, Mystic River Watershed Association and River Watch Volunteers of Massachusetts. Secretary Bowles also announced that plans to replace the aging dam between the Upper and Lower Mystic Lakes moved ahead this week with the Department of Conservation and Recreation's approval of a contract to begin planning and design work for a new dam. The new dam will enhance public safety and flood control and include a fish ladder to aid herring migration.

The Mystic River system supports upwards of 50,000 river herring – anadromous fish that spend most of their lives at sea but return to rivers, lakes and ponds to spawn each spring. Installation of a fish ladder at the Upper Mystic Lake Dam is *MarineFisheries*' top priority for enhancing habitat for the Commonwealth's anadromous fish. Opening passage to spawning habitat in Upper Mystic Lake has the potential to more than double the Mystic's river herring population.

Energy & Environmental Affairs Secretary Ian Bowles lifts herring over dam to Upper Mystic Lake spawning habitat.

The Mystic River is one of approximately 100 herring runs in Massachusetts. After measuring a dramatic decline in the number of spawning adults in most runs between 2004 and 2005, *MarineFisheries* imposed a moratorium on harvesting the state's two river herring species – alewife and blueback herring. This is the second year of the three-year fishing ban. Herring declines are occurring along the entire East Coast, and several other states have also enacted or are considering regulations to reduce or prohibit the harvest of herring.

MarineFisheries is addressing the recent decline through efforts including developing with UMass/Amherst a high-tech digital counting system to better assess populations on important runs; a radio telemetry study (also with UMass) in the Ipswich River; several fish ladder restoration projects; examining levels of herring by-catch; and assessing the impact of removing two dams on the Acushnet River.

DFG Photos by Bob Greco

Top: Department of Fish & Game Commissioner Mary Griffin nets some herring for transport; Below: herring are released into Upper Mystic Lake during final stage of the "bucket brigade"

MA Tops CVA List

Massachusetts once again topped the list of states receiving Clean Vessel Act (CVA) grants, made available to state agencies and partners to construct and operate facilities for sewage disposal for recreational boaters. On April 25th, U.S. Fish and Wildlife Service director H. Dale Hall announced that *MarineFisheries* will receive over $1-million to install three new or replacement sewage pumpout facilities, purchase four sewage pumpout boats, provide operation and maintenance funding for existing pumpout boats and facilities throughout the state's coastal waters, as well as continue its educational efforts. For further information on CVA grants in Massachusetts visit: http://www.mass.gov/dfwele/dmf/programsandprojects/cvabig.htm#cva; for further information about CVA grants in other states visit: www.fws.gov.

Holly Bourbon Inducted to Women Divers Hall of Fame

Holly Martel Bourbon, Diving Safety Officer for *Marine-Fisheries* and the Marine Fisheries Institute, was inducted into the Women Divers Hall of Fame (WDHOF) on March 24, 2007 at the Beneath the Sea Diving Show in Secaucus, NJ. Holly was nominated for this prestigious honor earlier in the year by her former colleagues at the New England Aquarium, where she worked for 18 years as the Senior Aquarist for the Giant Ocean Tank and as Diving Officer.

The Women Divers Hall of Fame was created to recognize women divers who are pioneers, leaders, innovators, and world record holders throughout the international diving community. Members come from all areas of diving and undersea endeavors including the Arts, Science, Medicine, Exploration & Technology, Marine Archeology, Business, Media, Training & Eduction, Safety, Commercial & Military Diving, Free Diving, and Underwater Sports.

As a member of the WDHOF, Holly joins scientists such as Dr. Sylvia Earle, Dr. Eugenie Clark, and Dr. Ruth Turner of Harvard, as well as filmmaker Valerie Taylor and free diver Tanya Streeter who holds the women's breath hold diving record of 525-ft.

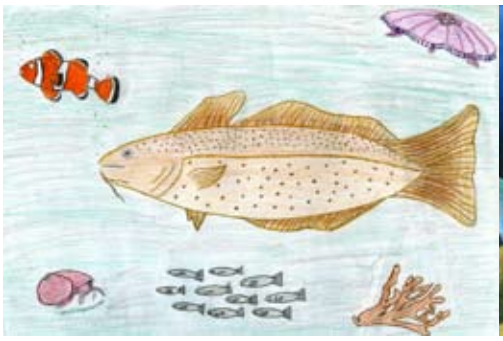
Vin Malkoski Honored as Rochester "Friend of Education"

On June 13th, the Old Rochester Professional Educator's Association honored DMF's Vin Malkoski for his work with the Old Rochester Regional High School's Guidance and Science Departments. For several years Vin has been meeting to speak with students on a variety of marine topics, including DMF activities and programs, marine habitat and what it's like to pursue a career in marine science.

Massachusetts Youth Win 2007 State-Fish Art Contest

On April 22nd, Wildlife Forever announced the winning artwork for the 2007 State-Fish Art contest: Megi Resvlaj of South Boston won for Grades 4-6 and Erin Watson of Auburn won for Grades 10-12. Winning artwork is displayed at www.statefishart.com and both Megi and Erin will join other youth artists from across the country at the State-Fish Art Expo July 21-22 at the Mall of America's Central Rotunda. The national "Best of Show" winner in grades 10-12 will be announced at the Expo.

Wildlife Forever is a non-profit organization dedicated to conserving America's wildlife heritage at the grassroots level. For further information on Wildlife Forever's State-Fish Art Contest, visit www.statefishart.com.



Winning drawings by Megi Resvlay (left) and Erin Watson (right). Images courtesy of Wildlife Forever.

Photo courtesy of Vin Malkoski

Women Divers Hall of Fame 2007 inductee, Holly Martel Bourbon.

Staff Contributions -
DMF authors listed in bold

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Notice of Public Hearings
August 27 & 28, 2007

Under the provisions of M.G.L. Ch 30A and pursuant to the authority found in M.G.L. Ch. 130 ss. 17, 17A, 44B, 80 and 104, Division of Marine Fisheries (DMF) and the Marine Fisheries Advisory Commission (MFAC) have scheduled hearings on the following proposed regulations:

1. **Accept comments on DMF proposals to comply with Addendum XI to the Interstate Fishery Management Plan for American lobster (322 CMR 6.01 & 6.02) and to make lobster regulations more consistent where possible, including:**
    a. **5 ¼″ maximum size for lobsters harvested by commercial and non-commercial fishermen in LCMA 2;**
    b. **the following schedule of maximum size for lobsters harvested by commercial and non-commercial fishermen in LCMA 3 and the Outer Cape Cod LCMA:**
        i. **7″ from June 30, 2008 through June 30, 2009;**
        ii. **6 7/8″ from July 1, 2008 through June 30, 2010; and**
        iii. **6 ¾″ from July 1, 2010 and beyond; and**
    c. **amended v-notch definition for dealers & commercial and non-commercial fishermen fishing in LCMA 3 and the Outer Cape Cod LCMA, which would complement current LCMA 2 v-notched lobster definition: "any female lobster that bears a notch or indentation in the base of the flipper that is at least as deep as 1/8″, with or without setal hairs".**
2. **Accept comments on DMF proposal to comply with ASMFC-approved six-weakfish recreational creel limit; a decrease from current ten-weakfish creel limit (322 CMR 8.06).**
3. **Accept comments on DMF proposal to complement federal trip limits for mobile gear targeting *Loligo* squid (322 CMR 6.39).**
4. **Accept comments on DMF proposal to:**
    a. **prohibit finning of smooth dogfish; and**
    b. **implement a 100-lb. smooth dogfish daily landing and possession limit (322 CMR 6.41).**
5. **Accept comments on DMF emergency action to limit the landing and possession of lobsters caught by gillnets in the Outer Cape Cod Lobster Conservation Management Area (OCC LCMA) 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).**

Two public hearings have been scheduled for:
Monday, August 27, 2007 (7PM) at the Annisquam River Marine Fisheries Station
(30 Emerson Ave., Gloucester) &
Tuesday, August 28, 2007 (7PM) 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 Wednesday, August 29, 2007.

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

Regulations Update

During the period January 2007 through March 2007, the following regulatory changes were enacted by DMF after public hearings and Marine Fisheries Advisory Commission (MFC) approval. Emergency regulations that have subsequently expired or regulations replaced by subsequent filings are not included:

Scup and Summer Flounder (fluke)

1. DMF enacted a 30,000-lb. scup possession limit for the Winter I fishing period (January through April 2007), which will be reduced to 1,000-lbs. of scup per day when 80 percent of the federal quota is projected to be reached; and a 2,000-lb. limit is set for Winter II period from November through December 2007 which may increase based on any NOAA Fisheries and ASMFC approved increases.

2. DMF lowered the catch limit of fluke from 7 to 5 fish per angler and establish an open fishing season of June 10 through August 15. The minimum size limit of 17 ½" remains the same. No modifications were made to the commercial fluke fishery rules.

Groundfish

3. DMF enacted as final the following emergency regulations:

a. a 24" minimum size for recreationally caught cod in the GOM Cod Management Area;

b. a 2-cod private recreational possession limit not to exceed 75-lbs. per vessel in the GOM Cod Management Area during November through March (a 10-cod limit during April through October for private recreational anglers);

c. a prohibition on the possession and landing of cod harvested from the GOM Cod Management Area by persons aboard for-hire vessels during November through March (a 10-cod limit during April through October aboard for-hire vessels); and

d. a 250-lb. commercial trip limit for yellowtail flounder year-round.

Tautog

6. DMF established a 96,000 lb. commercial tautog quota and will cap the spring fishery (April 16 – May 15) to 26,900 lbs. (28% of the total). DMF modified the summer/fall season to September 1 – November 30 (previously July 11 - October 31) which will receive the remainder of the quota.

Spiny Dogfish

7. DMF approved a commercial spiny dogfish daily limit of 600-lbs. during May 1 – August 14 and 2,000-lbs. beginning August 15 until DMF determines 58% of the annual ASMFC approved regional quota of 6-million lbs. has been reached. When 58% of the interstate plan quota is reached, landings of dogfish (by state and federal permit holders) will be prohibited through the end of the fishing year.

Lobster

1. In response to growing concerns about rising lobster landings by gillnetters in Outer Cape Cod, *MarineFisheries* took emergency action to restrict such landings. The new rule caps gillnetters in Outer Cape Cod 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). These crates are commonly used, are readily available and have hard plastic covers that can be closed without doing damage to lobsters. This rule for gillnetters is being implemented to support the conservation objectives of the interstate lobster plan, and is expected to result in a drop in the total poundage of lobsters landed by gillnetters.

In addition to the catch limit, gillnet vessels are subject to additional restrictions to enhance compliance: requirement to separate lobsters from other catch for inspection by Law Enforcement and store all lobsters in lobster crates while fishing and a prohibition on storing lobsters overboard – carring - in coastal waters.

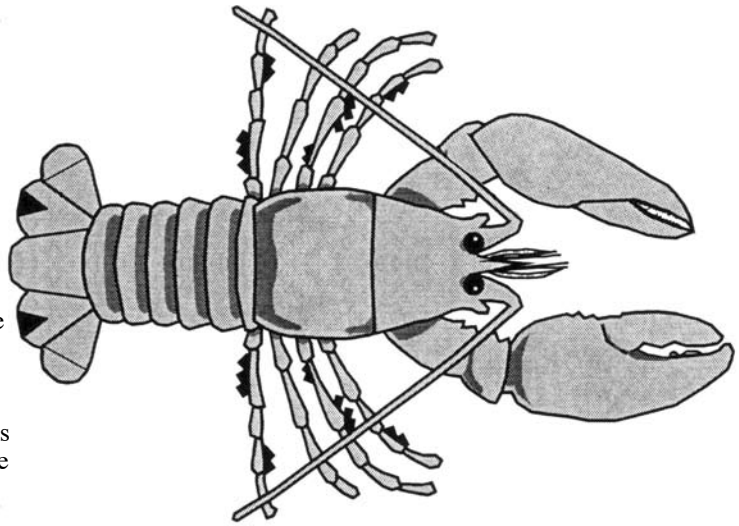
Fishermen without a commercial lobster permit are reminded that it is unlawful to land or possess any lobsters. Offshore lobster permit holders fishing with mobile gear remain constrained solely by the 100 lobster per day limit, as do those fishing with gillnet gear outside of the OCC LCMA.

2. DMF will be implementing criteria for transferring SCUBA-based effort in the directed lobster fishery to trap-based effort in those LCMAs under management of an effort control plan (322 CMR 6.13 & 7.03).

SCUBA-based commercial harvest of lobsters, while lawful in any of the LCMAs, only occurs in the Outer Cape Cod LCMA because of unique bathymetric features of the area resulting in harvestable quantities of large lobsters available to divers. To prevent a "doubling" of effort that might occur if a SCUBA diver transfers their trap allocation but continues to dive for lobsters, permit holders who receive trap allocations based on SCUBA history will be limited to transferring their entire trap allocation as a block with their permit (i.e., they cannot transfer just increments of their trap allocation). Furthermore, they will be prohibited from transfers until their permit has been actively fished in four of the last five years, excluding catch history prior to the issuance of trap allocations.

Atlantic Bluefin Tuna

The MFC failed to endorse a continued ban on purse seining for Atlantic bluefin tuna in Cape Cod Bay. Regulations governing the bluefin tuna fishery (322 CMR 6.04) therefore remain *status quo*.



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.

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

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