#### **Estuarine Resources Inventory:**

# Hard Clams in Barnegat and Little Egg Harbor Bays By Kira Dacanay, Fisheries Biologist

In the 1980s, New Jersey Division of Fish and Wildlife's Bureau of Shellfisheries received federal funding to conduct inventories of molluscan bivalve shellfish in New Jersey's estuarine waters. Unfortunately, the funding was eliminated after 1987 and the inventory program ceased for almost two decades. Some smaller scale, grant-funded inventory work was completed during that time, but it was not as extensive as the prior work. Beginning in 2011, the Bureau reinitiated the program, kicking off the fresh start with inventory work in Little Egg Harbor Bay. Barnegat Bay was surveyed the following year and both waterbodies were investigated in a truncated survey in 2013 after Superstorm Sandy. Since then, the Administration has conducted survey work in Raritan/Sandy Hook Bays (2014), the Navesink and Shrewsbury rivers (2015), and Great Bay (2016). The Bureau intends to continue the survey work southward through the Atlantic and Cape May County estuaries in 2017, returning to Monmouth and Ocean counties thereafter.

#### Filter Feeder Food Chain

Bivalve shellfish are important species in estuarine and marine ecosystems. As filter feeders, they graze on planktonic microalgae, capable of filtering 4-50 gallons of water per day depending on the species of shellfish and other environmental factors. This filtering process facilitates the transfer of carbon and nitrogen to benthic food chains, as well as the rapid recycling of particulate nitrogen as ammonia via excretion. Shellfish are also sources of food for other marine animals that prey upon larvae, juveniles, and adults. Shellfish are remarkably resilient creatures, capable of persisting through storm events and living in a variety of habitats. Diverse and abundant populations of shellfish are indicative of a healthy, functioning ecosystem.

Shellfisheries staff Garrison Grant and Andrew Hassall empty the dredge contents onto the culling table for sorting and measuring.



#### **Hard Clams and** Other Bivalves

The hard clam (Mercenaria mercenaria) is the most abundant and widely distributed species of bivalve in New Jersey's Atlantic coastal estuaries. Consequently, the inventory is primarily focused on documenting the standing stock and relative distribution of hard clams, but other important species such as Eastern oyster (Crassostrea virginica), bay scallop (Argopecten irradians), soft clam (Mya arenaria), blue mussel (Mytilus edulis), and surf clam (Spisula solidissima) are documented when found. These are species of particular interest because of their ecological value as well as their importance to recreational and commercial fisheries. Clams can generally grow to about 120mm (~4.72 inches, although larger specimens have been found) and are most often described by their size (from smallest to largest) as being a littleneck, a cherrystone, or a chowder clam. Steamed littleneck clams are often served with drawn butter while cherrystone clams are popular at raw bars, and chowder clams are a staple of this famous soup!

#### **Dredging for Clams**

For the stock assessment, hard clams are collected using a hydraulic clam dredge that is towed behind the Bureau of Shellfisheries' 42-foot vessel, the R/V Zephyrus, that is specially designed for this type of research. The dredge is designed to retain clams are that are 30mm (~1.2 inches) or larger.

#### **Barnegat Bay and Little Egg Harbor Bay**

Prior to 2011, the last comprehensive survey in Little Egg Harbor Bay was in 2001, and prior to that, 1986-87. For Barnegat Bay, the only other survey was conducted in 1985-86. In 1986-87, the population of hard clams in Little Egg Harbor was estimated at 201.5 million clams, declining sharply to 64.8 million clams in 2001. Some recovery was documented in 2011 when the stock was estimated at 85.7 million clams, but this number was still a 57 percent decline from the baseline survey in 1986-87.

In Barnegat Bay, when the population estimate in 2012 was at 138.2 million clams, this estimate was approximately 23 percent lower than the baseline stock estimate from 1985-86. Changes in water quality and suitable habitat may be influencing the decline in hard clam numbers, but there is no single specific cause for the decline. Furthermore, it is natural for shellfish populations to expand and contract over time. Regular surveying will allow researchers to better understand changing population dynamics.



#### **Hard Clam Recruitment**

In addition to the overall hard clam population estimate, the Bureau also evaluates changes in recruitment over time. Recruitment refers to the percentage of smaller clams (those that are 30mm-37mm) found in each sample that are expected to grow large enough to be harvested in the commercial or recreational fishery in the coming year. High numbers of smaller clams are therefore desirable, as it indicates that new individuals are entering the population. In 2011, the recruitment of small clams in Little Egg Harbor Bay was significantly higher than the recruitment in 2001, a positive finding consistent with the documented increase in overall numbers of clams. However, in Barnegat Bay, there was no statistical change in recruitment when comparing the 1985-1986 and 2012 data.

#### Storm Resilience

After Superstorm Sandy, the Bureau conducted a truncated survey in both Barnegat and Little Egg Harbor bays to check for any signs of major changes to the clam population that would warrant repeating a full, comprehensive survey and more in-depth pre- and post-Sandy analysis. Based on the data collected, there was no evidence to suggest that hard clams experienced a significant adverse impact from the storm, as the abundance and relative distribution of clams remained generally the same before and after the storm. This was not a surprising outcome as hard clams are a very resilient species and are capable of moving vertically and horizontally through the substrate in order to reach the substrate-water column interface for feeding. They can also "clam up," with their shells remaining closed until favorable conditions return.



Fisheries biologist Kira Dacanay sorts the hard clams collected from the dredge.

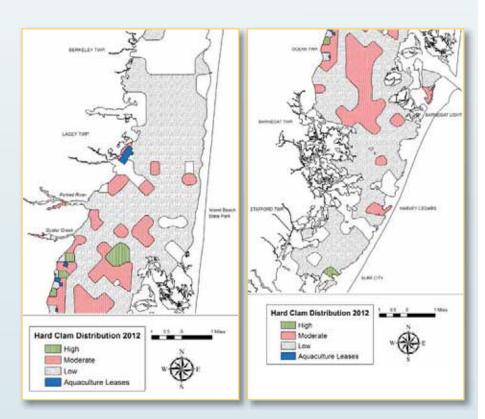
#### **Abundance and Distribution**

The Bureau publishes a final report that provides more in-depth analysis than what is found in this article, along with figures that document the relative abundance and distribution of hard clams throughout the entire waterway, plus the visualization of trends in recruitment, natural mortality, and size-age characteristics.

Bureau personnel use survey information to implement fishery and habitat management strategies, including a focus on the best areas for shellfish restoration and enhancement activities. All reports dated 2000 and later are available on the Division of Fish and Wildlife website at www.NJFishand-Wildlife.com/shelhome.htm9#scinvent.

## Assessing Populations Can Reveal Trends

New Jersey Division of Fish and Wildlife's Bureau of Shellfisheries plans to revisit the Barnegat-Little Egg Harbor estuary every few years on a rotational basis to continue hard clam population assessments. Having multiple time series of data is critical to understanding any natural system. Researchers can document changes over time and understand trends in natural cycles. As demonstrated by the Little Egg Harbor Bay surveys, although the 2001 population was drastically lower than in 1986-87, the encouraging 2011 survey showed an increasing population. Hopefully, the next survey will show continued population growth of the hard clam population, back to baseline levels or even exceeding them!



Charts show the relative distribution of hard clams in central (left) and lower (right) Barnegat Bay. Areas without shading or coloring are read as "None." The full report and charts are available at www.NJFishandWildlife.com.





**MARINE TRADES** 

## Skillful Angler Recognition Program

#### RECOGNITION PROGRAMS

The Skillful Angler Program is designed both to supplement the New Jersey Record Fish Program and to acknowledge that many anglers catch freshwater and marine fish that are not record size but are still worthy of recognition because the size and weight of the fish sufficiently tested the angler's skill. Open to resident and non-resident anglers. All fish must be caught in New Jersey waters using a hook and line during legally open seasons.



Saltwater species taken from a boat must have been caught from a boat that left from, and returned to, a New Jersey port during the same trip.

The Program has three main divisions: Adult (for anglers age 16 and older), Junior (under age 16) and Catch and Release (based on length). A clear, side-view photo that allows accurate species identification must be included with each application.

Anglers qualifying for a Skillful Angler award receive a certificate with an artistic rendering of the fish species they caught as a testament to their achievement.

The Skillful Angler Program now recognizes different levels of fishing expertise. An angler who submits five applications of qualifying size for the same species will receive a Specialist Certificate. An angler who submits five applications of qualifying fish of different species will receive a Master Certificate. Catch 10 or more qualifying species of fish within the year, and the angler will earn an Elite Angler Certificate. The Program also now recognizes the first fish caught no matter the age of the angler. Qualified anglers will receive a First Fish certificate.

The program now has four marine "Slam" categories — an Inshore Slam 1, Inshore Slam 2, Offshore Pelagics Slam and Marlin Slam. For the Inshore Slam 1, an angler must submit qualifying applications for a Striped Bass, Bluefish and Fluke. For the Inshore Slam 2, an angler must submit qualifying applications for Black Sea Bass, Tautog, and Weakfish. The Offshore Pelagics Slam will be obtained if

an angler submits qualifying applications for Bluefin Tuna, Bigeye Tuna, Yellowfin Tuna and Dolphin. For the Marlin Slam, an angler must submit qualifying applications for a White Marlin and a Blue Marlin.

Each month, the leaders of each category and species will be posted on our Skillful Angler Leader Board web page. At the end of the year, special recognition is given to anglers who catch the largest fish in each species category. The winner of each category is sent a special certificate recognizing his/her accomplishment as the best of New Jersey's Skillful Anglers.

Fish must be measured from the tip of the nose (with mouth closed) to the tip of the tail. For catch and release categories, the fish must be measured and photographed alongside a ruler. For Adult/Junior division, fish must be weighed and measured by fishing license agents, tackle shops or authorized Fish and Wildlife fisheries biologists.

Anglers must submit two photographs of the fish caught, one at the site of the catch and one with the fish alongside a ruler for clear identification and measurement verification. Take time to compose good quality (and high resolution) photos to submit with your application. The best photo may be selected for publication in this *Digest* next year! Include your e-mail address on back of the photo so we may contact you for a digital copy of your print.

#### Apply online at:

NJFishandWildlife.com/pdf/skflangapp-salt.pdf.



#### Minimum Entry Requirements:

| Species         | Adult Weight<br>(lbs., oz.) | Junior Weight<br>(lbs., oz.) | Catch & Release (inches) |
|-----------------|-----------------------------|------------------------------|--------------------------|
| Black Sea Bass  | 4                           | 3                            | 20                       |
| Striped Bass    | 40                          | 36                           | 42                       |
| Black Drum      | 70                          | 63                           | 46                       |
| Bluefish        | 18                          | 16                           | 33                       |
| Cod             | 30                          | 27                           | 42                       |
| Dolphin         | 30                          | 27                           | n/a                      |
| Winter Flounder | 2                           | 1 lb., 8 oz.                 | 16                       |
| Fluke           | 8                           | 7                            | 27                       |
| Kingfish        | 1                           | 8 oz.                        | 13                       |
| Mako Shark      | 250                         | 225                          | n/a                      |
| Blue Marlin     | 400                         | 360                          | n/a                      |
| White Marlin    | 60                          | 54                           | n/a                      |
| Pollock         | 25                          | 22 lbs., 8 oz.               | 41                       |
| Tautog          | 8                           | 7                            | 22                       |
| Albacore Tuna   | 50                          | 45                           | n/a                      |
| Big Eye Tuna    | 200                         | 180                          | n/a                      |
| Bluefin Tuna    | 500                         | 450                          | n/a                      |
| Yellowfin Tuna  | 120                         | 108                          | n/a                      |
| Tuna (other)    | 250                         | 225                          | n/a                      |
| Weakfish        | 10                          | 9                            | 30                       |

The New Jersey State Record Fish Program requires a separate application and is based on weight alone. Scale certification documentation and a weighmaster's signature are necessary. Other rules apply. Visit Fish and Wildlife's website at NJFishandWildlife.com for a complete list of current state records. See also page 28.

# New Jersey State Federation of Sportsmen's Clubs

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- Protection and enhancement of natural lands and waters
- Preservation of traditional outdoor sports



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## State Record Marine Sport Fish

#### RECOGNITION PROGRAMS



Chris Kahler of Brick made his way onto the state record fish list by landing a record winter flounder while spearfishing. Chris was free diving near a jetty in Manasquan Inlet when he speared the 3 pound, 5 ounce. 20-inch fish.

New Jersey Division of Fish and Wildlife's Record Fish Program honors anglers who catch the largest of select species of freshwater and saltwater fish. Record size is based on weight alone; there are no line classes. Currently there are 76 marine species eligible for entry into the program which includes a new spearfishing category with 17 additional species.

Anglers are reminded that the objective of the Record Fish Program is to increase awareness of fishing opportunities for species that are regularly sought and routinely found on or off the coast of New Jersey. The original list of 72 species was pared down with that objective in mind.

Twelve species are now retired from the list of program-eligible fish, but remain on a separate list posted on Fish and Wildlife's website. One historical catch is also retired and posted on the list.

Anglers should be aware of the procedure in effect for entering the Record Fish Program. First, separate applications are required for freshwater and saltwater species. Second, for saltwater entries, it is now mandatory that a marine biologist inspect any potential record fish, as identification solely by photo is not always accurate. Anglers must call Fish and Wildlife's Nacote Creek Research Station at (609) 748-2020 to make arrangements for inspection. In most instances, the fish must be transported to this office in Port Republic. However, in the case of extremely large fish (i.e., shark and tuna), a biologist should be available to travel for dockside inspection. Note that all scale certification requirements still apply, including a valid Certificate of Inspection/Test Report and current Registration Certificate issued by the County Office of Weights and Measures.

The entry deadline is now no later than one month after the date of catch. Note that the triggerfish category is now defined as gray triggerfish.

For a complete list of state record fish or to print an application with complete program rules, visit the Division of Fish and Wildlife's website at NJFishandWildlife.com/fishing.htm.

#### **New Jersey State Record Marine Fish**

| Species            | Lbs.   | Oz.      | Year | Angler                  | Where Caught       |
|--------------------|--------|----------|------|-------------------------|--------------------|
| Amberjack, greater | 85     | 0        | 1993 | Edwin Metzner           | Off Cape May       |
| Bass, black sea    | 9      | 4.5      | 2010 | Steve Singler           | Off Cape May       |
| Bluefish           | 27     | 1        | 1997 | Roger Kastorsky         | 5 Fathom Bank      |
| Bonito, Atlantic   | 13     | 8        | 1945 | Frank Lykes, Jr.        | Off Sandy Hook     |
| Cobia              | 87     | 0        | 1999 | John Shanchuk           | Off Sea Bright     |
| Cod                | 81     | 0        | 1967 | Joseph Chesla           | Off Brielle        |
| Crab, blue         | 8¾" pt | . to pt. | 2009 | Raymond Ponik           | Bayonne            |
| Croaker, Atlantic  | 5      | 8        | 1981 | Frederick Brown         | Delaware Bay       |
| *Cunner            | 3      | 0.5      | 2012 | Raul de la Prida        | Off Pt. Pleasant   |
| Dogfish, smooth    | 19     | 11.2     | 2013 | Michael J. LaTorre, Jr. | Sculls Bay         |
| Dogfish, spiny     | 15     | 12       | 1990 | Jeff Pennick            | Off Cape May       |
| Dolphin            | 63     | 3        | 1974 | Scott Smith, Jr.        | Baltimore Canyon   |
| Drum, black        | 109    | 0        | 2008 | Nick Henry              | Delaware Bay       |
| Drum, red          | 55     | 0        | 1985 | Daniel Yanino           | Great Bay          |
| Eel, American      | 9      | 13       | 1988 | Warren Campbell         | Atlantic City      |
| Fluke              | 19     | 12       | 1953 | Walter Lubin            | Off Cape May       |
| Flounder, winter   | 5      | 11       | 1993 | Jimmy Swanson           | Off Barnegat Light |
| Hake, white        | 41     | 7        | 1989 | Wayne Eble              | Off Barnegat Light |
| Kingfish, Northern | 2      | 8        | 2004 | Chester Urbanski        | Barnegat Bay       |
| Ling (red hake)    | 12     | 13       | 2010 | Billy Watson            | Off Manasquan      |
| Mackerel, Atlantic | 4      | 1        | 1983 | Abe Elkin               | Manasquan Ridge    |
| Mackerel, king     | 54     | 0        | 1998 | Fernando Alfaiate       | Off Cape May       |
| *Mackerel, Spanish | 9      | 12       | 1990 | Donald Kohler           | Off Cape May       |
| Marlin, blue       | 1,046  | 0        | 1986 | Phil Infantolino        | Hudson Canyon      |
| Marlin, white      | 137    | 8        | 1980 | Mike Marchell           | Hudson Canyon      |
| Perch, white       | 2      | 12       | 1998 | Michael King            | Little Beach Creek |
| *Pollock           | 46     | 7        | 1975 | John Holton             | Off Brielle        |
| Porgy              | 5      | 14       | 1976 | Victor Rone             | Delaware Bay       |
| Sailfish           | 43     | 4        | 2006 | Dr. John Tallia         | Linden Kohl Canyon |
| Seatrout, spotted  | 11     | 2        | 1974 | Bert Harper             | Holgate Surf       |
| Shad, American     | 7      | 0        | 1967 | Rodger West             | Great Bay          |
| Shad, hickory      | 2      | 13       | 2011 | Robert Macejka          | Mantoloking        |

| Species               | Lbs.                             | Oz. | Year | Angler             | Where Caught               |
|-----------------------|----------------------------------|-----|------|--------------------|----------------------------|
| Shark, blue           | 366                              | 0   | 1996 | William Young, Jr. | Mud Hole                   |
| Shark, bull           | Vacant (Minimum Weight 150 lbs.) |     |      |                    |                            |
| Shark, dusky          | 530                              | 0   | 1987 | Brian Dunlevy      | Off Great Egg Inlet        |
| Shark, hammerhead     | 365                              | 0   | 1985 | Walter Thacara     | Mud Hole                   |
| Shark, porbeagle      | Vacant (Minimum Weight 100 lbs.) |     |      |                    |                            |
| Shark, s-fin mako     | 856                              | 0   | 1994 | Christopher Palmer | Wilmington Canyon          |
| Shark, thresher       | 683                              | 0   | 2009 | Bennett Fogelberg  | Fingers                    |
| Shark, tiger          | 880                              | 0   | 1988 | Billy DeJohn       | Off Cape May               |
| Sheepshead            | 19                               | 1   | 2014 | William Catino     | Longport                   |
| Spadefish             | 11                               | 6   | 1998 | Cliff Low          | Delaware Bay               |
| Spearfish, longbill   | 42                               | 0   | 1989 | George Algard      | Poor Man's Canyon          |
|                       | 42                               | 0   | 1997 | Joseph Natoli      | Hudson Canyon              |
| Spot                  | 0                                | 13  | 2003 | Robert Belsky, Jr. | Little Sheepshead<br>Creek |
| *Striped bass         | 78                               | 8   | 1982 | Al McReynolds      | Atlantic City              |
| Swordfish             | 530                              | 0   | 1964 | Edmund Levitt      | Wilmington Canyon          |
| *Tautog               | 25                               | 0   | 1998 | Anthony Monica     | Off Ocean City             |
| Tilefish, golden      | 63                               | 8   | 2009 | Dennis Muhlenforth | Linden Kohl Canyon         |
| Tilefish, gray        | 23                               | 4   | 2015 | Mark Milici        | Lindenkohl Canyon          |
| Triggerfish, gray     | 6                                | 11  | 2016 | James Massimino    | Sea Girt Reef              |
| Tuna, albacore        | 77                               | 15  | 1984 | Dr. S. Scannapiego | Spencer Canyon             |
| Tuna, big-eye         | 364                              | 14  | 1984 | George Krenick     | Hudson Canyon              |
| Tuna, bluefin         | 1,030                            | 6   | 1981 | Royal Parsons      | Off Pt. Pleasant           |
| Tuna, skipjack        | 13                               | 4   | 1999 | Craig Eberbach     | Wilmington Canyon          |
| Tuna, yellowfin       | 290                              | 0   | 1980 | Wayne Brinkerhoff  | Hudson Canyon              |
| Tunny, little         | 24                               | 15  | 1977 | Mark Niemczyk      | Off Sea Bright             |
| Wahoo                 | 123                              | 12  | 1992 | Robert Carr        | 28-Mile Wreck              |
| Weakfish              | 18                               | 8   | 1986 | Karl Jones         | Delaware Bay               |
| Whiting (silver hake) | Vacant (Minimum Weight 2.5 lbs.) |     |      |                    |                            |
|                       |                                  |     |      |                    |                            |

<sup>\*</sup> Fish was previously certified by the IGFA as a world record.

For information concerning the New Jersey State Record Fish or Skillful Angler programs, visit the New Jersey Division of Fish and Wildlife's website at NJFishandWildlife.com.

#### New Jersey State Record Marine Fish - Spearfishing Category

In 2014, the NJ Record Fish Program expanded with the addition of a Spearfishing category for saltwater. Seventeen (17) species commonly sought after by spearfishers are part of the Program. Spearfishers now have a unique opportunity to be recognized in New Jersey's Record Fish Program. Anglers are reminded that the objective of the Record Fish Program is to increase the awareness of fishing opportunities for species that are regularly sought and routinely found in or off the coast of New Jersey.

| Species            | Lbs.                | Oz.    | Year | Angler            | Where Caught            |  |  |
|--------------------|---------------------|--------|------|-------------------|-------------------------|--|--|
| Amberjack, greater | Min. Wt. 60 pounds  | VACANT |      |                   |                         |  |  |
| Bass, black sea    | Min. Wt. 5 pounds   | VACANT |      |                   |                         |  |  |
| Bluefish           | Min. Wt. 18 pounds  | VACANT |      |                   |                         |  |  |
| Cobia              | Min. Wt. 60 pounds  | VACANT |      |                   |                         |  |  |
| Cod                | Min. Wt. 50 pounds  | VACANT |      |                   |                         |  |  |
| Dolphin            | Min. Wt. 40 pounds  | VACANT |      |                   |                         |  |  |
| *Fluke             | 15                  | 5      | 2014 | Robert A. Davis   | Off Barnegat Lighthouse |  |  |
| Flounder, winter   | 3 pounds            | 5      | 2016 | Chris Kahler      | Manasquan Inlet         |  |  |
| Hake, red (ling)   | Min. Wt. 9 pounds   | VACANT |      |                   |                         |  |  |
| Pollock            | Min. Wt. 30 pounds  | VACANT |      |                   |                         |  |  |
| Porgy              | Min. Wt. 4 pounds   | VACANT |      |                   |                         |  |  |
| Sheepshead         | Min. Wt. 12 pounds  | VACANT |      |                   |                         |  |  |
| Spadefish          | Min. Wt. 9 pounds   | VACANT |      |                   |                         |  |  |
| Striped bass       | Min. Wt. 55 pounds  | VACANT |      |                   |                         |  |  |
| *Tautog            | 23                  | 14     | 2007 | Luke Dylan Hickey | Off Cape May            |  |  |
| Triggerfish, gray  | Min. Wt. 3.5 pounds | VACANT |      |                   |                         |  |  |
| Weakfish           | Min. Wt. 14 pounds  | VACANT |      |                   |                         |  |  |

<sup>\*</sup> Fish was recognized by the International Underwater Spearfishing Association as a world record.



## Health Advisory

FISH SMART, EAT SMART =

#### **Eating Fish And Crabs Caught In New Jersey Waters**



Fishing provides enjoyable and relaxing recreation. Fish are an excellent source of protein and other nutrients and play a role in maintaining a healthy, well-balanced diet. Many anglers enjoy cooking and eating their own catch. However, elevated levels of potentially harmful chemical contaminants such as dioxin, polychlorinated

biphenyls (PCBs), pesticides and mercury have been found in certain fish and crabs in some New Jersey waters. Fish consumption advisories have been adopted to guide citizens on safe consumption practices.

To reduce exposure to harmful chemical contaminants when preparing and eating the fish species taken from the identified waters, it is essential to follow the guidelines provided. The DEP encourages you to consult the Fish Smart-Eat Smart Fish Advisory Guide or www.FishSmartEatSmartNJ.org when making decisions about eating recreationally caught fish and crabs.

The current list of fish consumption advisories consists of statewide, regional and water body-specific warnings for a variety of fish species and fish consumers. The New Jersey Department of Environmental Protection (DEP) and the Department of Health and Senior Services have prepared new "how to" electronic pamphlets on cleaning and cooking your catch to reduce your exposure to these harmful chemicals. These e-pamphlets are downloadable in multiple languages.

For a complete list of state and federal marine fish consumption advisories visit: www.FishSmart-EatSmartNJ.org.

The fish consumption advisories and Fish Smart-Eat Smart website are updated periodically and are available online or from the Office of Science at (609) 984-6070 and through the Division of Health and Senior Services at (609) 826-4935.

Check online for fish consumption advisories on the local water body in which you fish! Go to www.FishSmartEatSmartNJ.org

## NEW Interactive Map!

One click on the waterbody where you fish takes you to any current health advisories.









### September 9 & 10, 2017



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# Sedge Island Natural Resource Education Center Programs — Summer 2017

- Sedge Island Fishing Experience:
   A 4-day 3-night marine fishing intensive program. Open to students going into grades 8 and 9 in the fall of 2017.
- Sedge Island Field and Research Experience: A 7-day 6-night program focused on conducting field research. Open to high school students.
- Sedge Island Field Experience:
   A 4-day 3-night program that has students work alongside biologist in the salt marsh field. Open to students going into grades 7, 8 and 9 in the fall of 2017.
- Bay to Bowl: A 3-day 2-night program open to adults interested in harvesting food from the bay and learning how to prepare and cook it.

For more details, dates and cost visit **NJFishandWildlife.com/sedge.htm** or contact Karen Byrne at Karen.Byrne@dep.nj.gov.



# Law Enforcement and Regulation Information

Contact a New Jersey
Division of Fish & Wildlife Law
Enforcement office that serves
the county where you hunt or fish.

- Northern Region (908) 735-8240 (Bergen, Essex, Hudson, Hunterdon, Morris, Passaic, Somerset, Sussex, Union and Warren counties)
- Central Region (609) 259-2120 (Burlington, Mercer, Middlesex, Monmouth and Ocean counties)
- Southern Region (856) 629-0555
   (Atlantic, Camden, Cape May, Cumberland, Gloucester and Salem counties)
- Marine Region (609) 748-2050 (coastal and bay areas)
- To report violations anonymously call Operation Game Thief — (855) OGT-TIPS

#### **Attention Boaters**

# **Keep Our Water Clean— Use Pumpouts**

Ready To Serve Boaters! Visit marina pumpout facilities or contact one of the pumpout boats. A complete listing of operational pumpout facilities at marinas and detailed information on the pumpout boats can be found at NJBoating.org.

Proper maintenance and operation of your on-board toilet and holding tank are critical to ensure they function properly.

- Always use sufficient water when flushing
- Use toilet paper designed for use in marine/RV systems
- Have your marina inspect your onboard toilet system to make sure it is operating properly



#### **Operation Game Thief**

#### **Report Abuse of our Outdoor Heritage!**

## 1-855-0GT-TIPS

#### 24 Hours a Day, Seven Days a Week

The person who poaches, pollutes habitat and abuses public land tarnishes the image of sportsmen and robs us of our fish and wildlife as well as tax and license dollars. You can make a difference.

#### **Call OGT to report:**

- Negligent use of firearms
- Over the limits for game and fish
- · Commercial exploitation of fish and wildlife
- Pollution of habitat, dumping on state land
- · Destruction of signs and state property
- Illegal killing, taking or possession of any wildlife

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Designed to encourage sportsmen to report poaching and wildlife crimes.