

NEW JERSEY Fish & Wildlife Digest



NOTICE

Striped Bass Provisions

Included herein

WILL NOT BE IN EFFECT

Until the legislature votes and the provisions become law

Check newspapers for announcements, or see NJ Division of Fish and Wildlife's website at www.state.nj.us/dep/fgw for updates. For those without Internet access, the Marine Fisheries Trenton telephone menu will be updated regarding striped bass regulations. Call 609-292-2083. Select Option 1 for the Bureau of Marine Fisheries (both times) to access the recreational finfish regulations. The process takes just over one minute to reach the striped bass update.

Until that time, the 1999 law stating a 2 fish daily limit, and 28" minimum size shall remain in effect.



A SUMMARY OF RULES AND MANAGEMENT INFORMATION

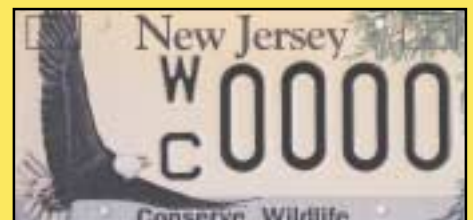
New Jersey Department Of Environmental Protection - Division of Fish & Wildlife

Vol. 13 No. 3 May 2000

Visit our website at:
www.state.nj.us/dep/fgw

Conserve Wildlife License Plates

Support Endangered and
Nongame Species
See page 16



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DEP ACTION LINE - 24 HOURS	609-292-7172
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Wildlife Damage Control	908-735-8793

TRENTON OFFICE

501 East State St., Station Plaza 5, 3rd Floor
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Internet: www.state.nj.us/dep/fgw

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Law Enforcement	609-292-9430
Marine Fisheries	609-292-2083
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Wildlife Education	609-292-9450
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Marine Education	609-748-2031
Shellfisheries	609-748-2040

Marine Law Enforcement

Wildlife Management 609-748-2050
609-748-2063

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Leeds Point, NJ 08220

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Endangered and Nongame Species 908-735-8975
Wildlife Damage Control 908-735-8793
Wildlife Management 908-735-7040

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Wildlife Damage Control 856-629-7224
Wildlife Education 856-629-7214

Seeking the Best Marine Fisheries Information



Bob McDowell, Director

In December 1999, legislation was approved and signed into law granting the Division a much-needed increase in hunting and fishing license fees. This increase will finally allow the Division to restore programs that had been curtailed due to budgetary shortfalls as well as to implement new programs. However, this funding is restricted to programs related to inland fish and wildlife.

The Division's Marine Fisheries Administration (Bureaus of Marine Fisheries and Shellfisheries) is funded through an annual appropriation from the State's general Treasury (New Jersey tax dollars) and from the Federal Aid in Sportfish Restoration Program. The federal funds received are a result of excise taxes charged on fishing equipment and motorboat fuel, and are distributed to the states based upon a formula which includes land area of a state and the number of licensed anglers. Since New Jersey has only a freshwater fishing license, our estimated one million saltwater anglers are not counted in the funding formula.

The result has New Jersey considered a minimum state for receiving these federal dollars. Most of the Sportfish Restoration funding goes to other states. It is ironic that the states of Nevada and New Mexico both receive more Sportfish Restoration funding for fisheries management than does New Jersey.

New Jersey's marine recreational and commercial fishing industries are valued between \$1.5 and \$2.5 billion, annually. The Marine Fisheries Administration is responsible for management programs that protect, conserve

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Where to Write Us

New Jersey Division of Fish & Wildlife
P.O. Box 400 • Trenton, NJ 08625-0400
Internet: www.state.nj.us/dep/fgw

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Department of Environmental Protection
Robert C. Shinn, Jr., Commissioner

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The Division of Fish and Wildlife is a professional, environmental organization dedicated to the protection, management and wise use of the state's fish and wildlife resources.

The *Digest* is available at coastal license agents and division offices. Articles and information may be reprinted with permission. Subscriptions are not available.

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and enhance the resources that support these fish. The Administration plays an active role in the development, implementation and enforcement of coastwide fishery management plans of the Mid-Atlantic Fishery Management Council and the Atlantic States Marine Fisheries Commission.

The Administration has a fine list of accomplishments (including marine habitat protection and enhancement; fish and shellfish resource surveys) despite a relatively low level of funding. Yet we recognize there is a lot that remains to be done.

Consider that for the development of sound management strategies, data collection and analysis requirements can be enormous projects. One only needs to attend a public hearing to realize there is a demand for more thorough information to justify the numerous fishery management programs. The Division completely supports the philosophy of improving the quantity and quality of marine fisheries information. Unfortunately, the only way to get better scientific information upon which to base fishery management decisions is to substantially increase the level of funding. Marine fisheries funding has remained essentially unchanged since 1995 while the number of fishery management plans and requirements has increased exponentially.

If we are to provide the best information possible to make management decisions, we must acquire a level of funding for marine fisheries management proportional to the value of our marine fisheries resources. As the new millennium begins, the challenge to us all is how best to accomplish this initiative.

Motor Boat Regulations

for information write:

Division of Motor Vehicles
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office for a boat "NJ" number

Hull numbers are issued by
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State Police Troop "F"

Marine Law Enforcement Stations

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North Wildwood	609-522-0393
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Lake Hopatcong	973-663-3400
Newark Bay	973-578-8173

REGULATORY UPDATE

by **Bruce Halgren**
Supervising Biologist

Regulatory changes for the 2000 fishing season include important recreational species such as striped bass, summer flounder, winter flounder and scup.

STRIPED BASS: Throughout the 1999 fishing season, the daily catch or possession limit for recreational anglers was two fish of at least 28 inches in length. Addendum IV to Amendment 5 of the Atlantic States Marine Fisheries Commission (ASMFC) Interstate Fishery Management Plan (FMP) for Striped Bass, which was adopted in October 1999, called for a 14% reduction in the harvest of striped bass age 8 or older. A number of management options were developed in order to comply with the requirements of the FMP. Following several public hearings, the management option supported by the State's recreational fishermen were one striped bass greater than or equal to 24 inches yet less than 28 inches in addition to one striped bass 28 inches or greater as the daily possession limit for New Jersey marine waters. This management option was approved by the ASMFC and later introduced in the State Legislature. The Division of Fish and Wildlife anticipates the approval of this management option for the 2000 recreational fishing season. At press time, statutory changes had not been finalized. Until that time, the 1999 rules remain in effect. See the striped bass NOTICE on the cover for more details and how to learn about the updated regulation when it is in effect.

The New Jersey striped bass bonus fish program which allows participants one additional striped bass 28 inches or greater per day, with an annual quota of 225,000 pounds will likely remain unchanged for 2000. Existing striped bass seasonal closures will remain the same for 2000.

For an in-depth explanation of New Jersey's striped bass management over the past 15 years, see the article, "Striped Bass Management: "Looking Back - Looking Ahead", on page 6 in this Digest.

SUMMER FLOUNDER (FLUKE): Recreational anglers will be pleased to know that the open recreational summer flounder fishing season has been extended in 2000 from May 15 through October 11 (1999 season) to May 6 through October 20. The minimum legal size limit in 2000 will remain at 15^{1/2}", with a possession limit of eight summer flounder.

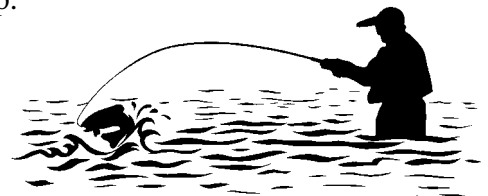
Each winter the ASMFC and the Mid-Atlantic Fishery Management Council (MAFMC) meet to review the previous year's summer flounder coastal landings and the updated stock assessment to develop management measures for the coming year. In 2000, a 41 percent reduction, by number, from 1998 landings is required. The ASMFC has determined that a liberalized recreational summer flounder season together with a 15^{1/2}" minimum legal size limit and a possession limit of eight fish will maintain New Jersey's compliance

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2 FREE FRESH WATER FISHING DAYS Saturday and Sunday, June 3 & 4, 2000

On these two days, anyone may fish New Jersey's public fresh waters without a license or a trout stamp.

However, all other regulations, including size and daily catch limits, remain in effect.



Regulatory Update
continued from page 5

with the ASMFC summer flounder fishery management plan while allowing New Jersey's fishermen to enjoy increased recreational fishing days.

WINTER FLOUNDER: For 2000, the recreational minimum size limit for winter flounder has increased from 10" to 10½". A further increase from 10½" to 11" will become effective January 1, 2001. This step-wise increase in the winter flounder size limit will lessen the immediate impact of an anticipated ASMFC required size limit increase and at the same time maintains New Jersey's compliance with the ASMFC fishery management plan for winter flounder. New Jersey anglers can continue to enjoy a season that extends from March 1 through May 31 and September 15 through December 31 with no winter flounder possession limit.

SCUP (PORGY): Although the legal minimum size for scup will remain at 7" in 2000, recreational anglers should take notice that there will be a daily possession limit of 50 scup per angler. Previously, there had been no daily possession limit on scup for recreational anglers.

During the winter meeting of the ASMFC and the MAFMC, it was determined that the 1999 coastwide scup recreational quota was slightly exceeded. The 50 fish per day possession limit for recreational scup fishermen is designed to prevent an overage of the 2000 coastwide scup recreational quota.

Additional commercial regulations have been implemented for the blue crab, summer flounder, Atlantic menhaden, American shad, scup and other commercial fisheries, and are summarized in the Division's 2000 Commercial Regulations publication, found at the Division's Website:

www.state.nj.us/dep/fgw.



**Striped Bass Management:
Looking Back - Looking Ahead**

By Tom Baum, Principal Fisheries Biologist

The Atlantic striped bass (*Morone saxatilis*) has been for centuries one of the most important coastal species from Maine to North Carolina, supporting historically valuable commercial and recreational fisheries. The popularity of this species to fishermen, the complex nature of its seasonal distribution, and decline in harvest with poor recruitment during the 1970's stimulated interest in the development of a cooperative interstate fisheries management plan. In 1981, the Atlantic States Marine Fisheries Commission (ASMFC) developed and adopted the Interstate Fisheries Management Plan (Plan) for Striped Bass of the Atlantic Coast from Maine to North Carolina. Since then there have been five amendments to the Plan, with nine addenda to the most recent two amendments, totaling 14 changes to the Plan over 18 years.

Management strategies for the coastal striped bass population during the past fifteen years had to adapt first to regulating a depleted, overfished stock during the mid 1980's; next to a recovering population during the early 1990's; then to a stock declared restored in 1995. Amendment #3 called for size regulations to protect the 1982 year class, which was the first modest size group since the previous decade. The objective was to increase size limits to allow the majority of the females from the 1982 year class an opportunity to spawn at least once. This would remain in effect until there were three consecutive successful spawns of the Chesapeake Bay stock.

In 1989, a very successful spawn of the Chesapeake stock occurred, which prompted the Management Board to adopt Amendment #4. This amendment was designed to control the reopening of the fishery, which was in the initial stages of stock recovery. This adaptive management strategy allowed the ASMFC to make revisions to the management program in response to changing circumstances.

There were five addenda to Amendment #4 that were adopted by ASMFC from 1991 through 1994. By the mid 1990's, management under Amendment #4 became cumbersome due to the vagueness of many of its principal points.

The ASMFC declared that the Chesapeake Bay stocks of Atlantic striped bass, which supports the greatest portion of the coastal

stock, was recovered as of January 1995. Amendment #5, adopted in March 1995, was designed to regulate the 1995 – 1996 fisheries for striped bass. Since then, each October, the ASMFC's Striped Bass Management Board has passed an addendum to this Amendment, setting guidelines for the following year's fishery.

Amendment #5 completely replaced the original Plan and all subsequent amendments and addenda. The goal of Amendment #5 is to perpetuate, through cooperative interstate fishery management, migratory stocks of Atlantic striped bass so as to allow a harvest consistent with the long-term maintenance of their essential habitat. The basic pattern of Amendment #5 is to adopt a target fishing mortality rate, and then to establish regulatory programs for the various fisheries that will meet this target.

The preferred alternative regime under this amendment is a minimum size limit of 20 inches in producer areas and 28 inches along the coast; a creel limit of one fish per day in producer areas and two fish per day in coastal fisheries. Fishing seasons are variable between producer areas and 365 days in coastal areas.

Since 1995, coastal striped bass regulations have remained at "status quo" (or two fish ≥ 28 inches). In October 1999, the ASMFC Striped Bass Management Board approved Addendum IV to Amendment #5. This addendum called for a 14% reduction in the harvest of striped bass age 8 and older.

The benchmark for measuring the required reductions is a two-fish daily limit and 28" minimum size. The reason for this measure was the fishing mortality rate from the 1998 fisheries exceeded the target rate set by the guidelines in Amendment #5. It also instructs the Board to proceed with the preparation of a new amendment to the Plan and if the amendment is not approved for 2001, states will be required in 2001 to implement additional reductions of the harvest on age 8 and older striped bass.

On February 7, 2000 representatives from New Jersey presented three management options to the ASMFC Striped Bass Management Board, of which two were approved. During the third week of February 2000, three public meetings were held in New Jersey (Rochelle Park, Toms River and Cape May Court House) in order to gather



NJ Fish and Wildlife personnel tagging striped bass during January survey of New Jersey's ocean trawl survey.

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Winter Flounder - A Profile

by Paul G. Scarlett, Principal Fisheries Biologist,
Bureau of Marine Fisheries

Common Name: Winter Flounder, also called Flounder, Blackback, Black Flounder, Georges Bank Flounder, Lemon Sole, Sole, Flatfish, Rough Flounder and Mud Dab.

Scientific Name: *Pleuronectes americanus*

Range: Winter flounder live in estuarine and coastal waters from Labrador to Georgia. They are most common between Nova Scotia and New Jersey. Locally, winter flounder are most abundant in New Jersey's northern and central estuarine and nearshore coastal areas with numbers diminishing south of Barnegat Bay. Good populations of winter flounder can be found in Raritan Bay, Sandy Hook Bay, Navesink River, Shark River, Manasquan River and parts of the Barnegat Bay estuarine system.

Size: Winter flounder can grow to sizes of more than 25 inches and weigh more than 8 pounds. The New Jersey sport fish state record was landed in 1992 and weighed 5 pounds, 11 ounces. Females grow faster than males and juvenile winter flounder can reach a length of about 6 inches during their first year. Twelve inch winter flounder are generally 3 years old and may weigh slightly more than a pound. In New Jersey, few winter flounder live past the age of 10.

Predators, Food and Feeding: Natural predators of winter flounder include sharks, oyster toadfish, summer flounder, striped bass, monkfish and spiny dogfish. When feeding, a winter flounder will lie motionless, partly concealed on the bottom, with its head raised off the bottom, braced by

the dorsal fin. When prey is sighted, the fish remains motionless, pointing toward the prey, then lunges forward and downward to capture it. This semi-hidden feeding behavior enables the fish to effectively capture prey while at the same time providing a hiding mechanism to protect the winter flounder from its predators. Winter flounder are sight feeders and feed during daylight. Throughout their range, winter flounder eat polychaete worms, amphipod and isopod crustaceans, clam siphon tips and plant material. They are omnivorous and opportunistic, eating whatever is available.

Migration: In New Jersey, adult winter flounder usually inhabit nearshore coastal and estuarine waters from October through May. During the summer, they migrate just off the beach to several miles offshore. In the fall, most winter flounder return to the same estuary they inhabited the previous winter.

Juveniles spend their first year in estuaries where they were spawned, after which they join the adult migration.

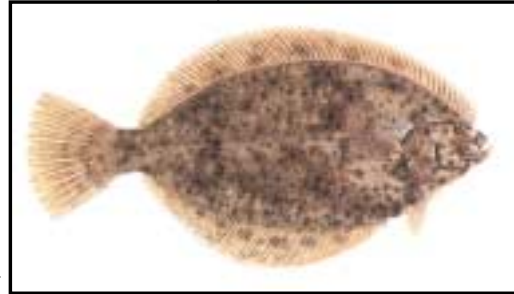
Habitat: Estuaries and nearshore oceanic water habitats are critically important to the life cycle of winter flounder. These areas are used as wintering, summering and spawning grounds by adults and as nursery areas by juveniles. Winter flounder prefer sand or mud-sand mixture bottoms, but can be found in creeks and sea grass beds with muddy or silty substrates.

Spawning: In New Jersey, winter flounder spawn in estuaries from February to April at temperatures of 1°C to 10°C and salinities ranging from 10 to 35 parts per

thousand. Almost all winter flounder are sexually mature by 3 years of age. Females can release as many as three million eggs, with egg numbers directly related to fish size. When hatched, winter flounder larvae are about one-tenth of an inch long. Larvae are structurally similar to those of other fish species, with one eye on each side of the head. By the time the larvae reach a size of about one-half inch, the left eye has migrated to the right side of the body and the fish assume a true flatfish, bottom-associated existence.

Importance: Winter flounder are a highly prized food fish sought by both commercial and recreational anglers. The majority of landings from commercial fisheries are

taken by otter trawl in the spring and fall. Commercial fishermen usually land between 200,000 and 300,000 pounds of winter flounder in New Jersey per year.



These fish are also a mainstay of the inshore spring and fall sport fishery along the Atlantic coast. During the last 10 years, New Jersey's sport fishermen have harvested over 550,000 winter flounder per year. In terms of numbers, New Jersey annually ranks at or near the top of per state winter flounder harvest among all East coast states.

Fishing Techniques: Winter flounder sport fishing occurs mainly within estuarine bays and rivers, usually from an anchored boat or the bank. A common fishing outfit would include a six foot light to medium action rod and a conventional or spinning reel filled with 6 to 10 pound test. Most freshwater fishing outfits also work well for winter flounder. Winter flounder can be taken on small (#10) long shanked hooks baited with clams, mussels or blood-worms. Whole kernel canned corn works well as bait and can also be used as chum, along with rice and crushed mussels. Stirring up the bottom under an anchored boat with heavy weights, an oar, or even a plunger fastened to a long pole will attract fish. Hooks can be fished singly, in a multiple hook rig or with spreaders, with sinkers heavy enough to hold bottom. Winter flounder can provide lively action, especially on light tackle. Recreational harvest in New Jersey is controlled by a season and size limit. During 2000, the winter flounder fishing season is March 1 through

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PORTIONS OF THIS DIGEST ARE
AVAILABLE IN ENLARGED FORMAT FOR
THE VISUALLY IMPAIRED.

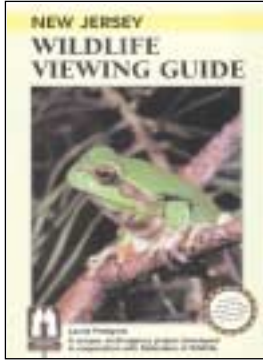
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NEW JERSEY WILDLIFE VIEWING GUIDE

The NJ Division of Fish and Wildlife is proud to announce the publication of the New Jersey Wildlife Viewing Guide. The publication of the Guide is the culmination of a two year project coordinated by the Division's Endangered and Nongame Species Program to establish a network of viewing sites throughout the state.

The Guide beautifully illustrates the rich natural treasures that few people realize exist in the state. Experience the amazing diversity of New Jersey's wildlife and habitats at 87 of the state's best Wildlife Viewing Areas. The 165 page Guide is full of color photos and illustrations and provides directions to each site and information on site facilities, best viewing seasons and which animals and habitats can be seen.



Unique to the New Jersey Guide is the addition of Wildlife Diversity Tours. In four regions, expanded information is provided on five sites in each region that when experienced through a 2-3 day trip provide a deeper understanding and appreciation of the ecosystems and wildlife found in the region.

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The creation of the Wildlife Viewing Guide and the development of a Watchable Wildlife Program for New Jersey was made possible in part through grants from the EPA, US Fish and Wildlife Service, National Park Service and Department of Defense. Major funding has been provided through proceeds from the sale of 'Conserve Wildlife' license plates.

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2000 Summary of Marine Fish & Shellfish Regulations

This is not the full law. Consult the Division of Fish and Wildlife for further details.
All persons are reminded that statutes, code and regulations are the legal authorities.

Resource Information

Anyone who takes fisheries resources may be required to provide information on the species, number, weight or other information pertinent to management of resources.

Methods of Fishing

No person shall take, catch, kill or attempt to take, catch or kill any fish within the marine waters of the State by any means except in the manner commonly known as angling with hand line or rod and line unless specifically provided for by statute or regulation.

Spear Fishing

Spear fishing can be conducted by means of a spear, harpoon or other missile while completely submerged in the marine waters of the state for any species, except lobster.

Persons who fish with a spear for species with size limits are reminded that it is their responsibility to ensure the fish meets the minimum size limits *before* being killed or injured.

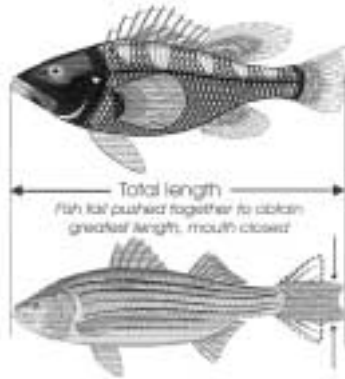
Fish Releasing

All fish which are undersize, not intended for eating or not to be kept for mounting, educational or scientific purposes should be released immediately to the wild. This should be done GENTLY and QUICKLY.

Here are some specific suggestions:

- * For small fish, grasp it with wet hands around the "neck" from below, closing the gill covers. Do NOT get fingers under the gill covers into the gill area. Grasp the hook at its bend, either with fingers or pliers, and gently shake it loose. If unsuccessful cut the hook or leader as short as possible with pliers. It is best to do this in or over the water. If not possible, do not let fish flop on the deck.
- * For large fish, do not attempt to handle it. Reach out over the water and cut hook or leader as short as possible.
- * Use only plain hooks, not stainless, so they will rust away quickly in the fish's mouth.
- * To measure fish for legal size, have a measuring device or template of that length marked out on a flat surface for quick access.

FINFISH



Filleting

The filleting at sea of all fish with a size limit is prohibited. Party boats may fillet fish at sea if they obtain a Special Fillet Permit. Applications may be obtained from the Marine Fisheries Administration.

Black Sea Bass

The minimum size limit for black sea bass is 10 inches measured along the midline from the snout to the end of the central portion of the tail, **not to include the tail filaments**. There is no possession limit and there is no closed season.

Bluefish

Bluefish taken with hook and line may be sold **only** from June 16 through August 7 **and only** if the harvester is in possession of a valid commercial bluefish permit issued in his or her name by the National Marine Fisheries Service (978/281-9370). Any harvester in possession of a valid commercial bluefish permit may possess more than 10 bluefish per day but **only** during the commercial season of June 16 through August 7.

Shark

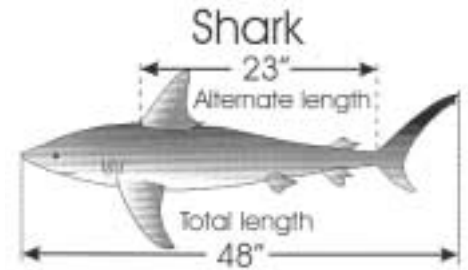
The minimum size limit for any species of shark, except dogfish (see note below) is 48 inches total length.

Sharks - Prohibited Species

basking shark sand tiger shark
whale shark bigeye sand tiger shark
white shark

The fins may not be removed from a shark, except after fishing has ceased and such shark has been landed. A shark may be eviscerated and the head removed prior to landing, provided that the alternate length as measured from the origin of the first dorsal fin to the pre-caudal pit (located just forward

of the origin of the upper lobe of the tail fin) is not less than 23 inches in length. The possession limit is 2 shark per vessel.



Note: To differentiate sharks from dogfish – the smooth dogfish has flat, tiny teeth; the spiny dogfish has strong, dorsal spines, shorter than, and in front of, the dorsal fin. Neither is present in sharks.

Striped Bass

(includes Hybrid Striped Bass)

The minimum size limits for striped bass and hybrid striped bass in all marine waters of the state is 28 inches. The possession limit in all marine waters is two fish, either striped bass or hybrid striped bass, NOT of each.

It is illegal to take, catch or kill any striped bass from or in any marine waters of this state, by means of a net of any description, or by any methods other than angling with a hook and line or by spear fishing.

It is illegal to possess any striped bass, or parts of a striped bass from which the head and / or tail has been removed (other than while in preparation or being served as food), which is less than the legal minimum size.

Harvest and possession of striped bass from federal waters (outside 3 miles) is prohibited.

Sale of striped bass in N.J. is prohibited.

Closed seasons:

Jan. 1 - Feb. 28 - All waters except the Atlantic Ocean from 0-3 miles offshore.
April 1 - May 31 - Delaware River & Bay and their tributaries from the upstream side of the U.S. Route 1 bridge downstream to and including the Salem River and its tributaries.
Striped Bass Bonus Fish Program
Fishermen may possess one (1) additional striped bass per day under the Striped Bass Bonus Fish Program subject to the following:

continued on page 12

1999 Summary of Marine Fish and Shellfish Regulations

continued from page 11

1. The fisherman must apply for and receive a fish possession card in advance of attempting to take a bonus fish.
2. The minimum size limit for a striped bass taken under the bonus program is 28 inches.
3. Fisherman must comply with all aspects of the regulations. A guide to these regulations is provided with the fish possession cards.
4. Two fish possession cards are issued to each applicant. Only one card is good per day. Cards are valid only during the year issued. The pink card is good for the 2000 season only.
5. Participants wishing to continue in the program in future years can do so by mailing the fishing logs enclosed with their cards.

Additional cards will be provided upon checking fish at one of the 56 designated check stations or by mailing the completed card to the Division. For a list of Striped Bass Bonus Program Check Stations, call 609-748-2020.

Summer Flounder (Fluke)

The possession and minimum size limit for summer flounder is 8 fish at 15 1/2 inches and an open season from May 6 to October 20.

Tautog (BlackFish)

The minimum size limit for tautog is 14 inches. There is a 1 fish possession limit during the period of June 1 through October 9 and a 10 fish possession limit during the period of October 10 through May 31.

Weakfish

The possession and minimum size limit for weakfish is 14 fish, at least 14 inches in length.

Winter Flounder

The minimum size limit for winter flounder is 10 1/2", increasing to 11" as of January 1, 2001. For winter flounder the open season is March 1 - May 31 and September 15 - December 31.

Additional Marine Fishing Seasons

See pages 17 and 18 for the clip out reference charts applicable to both New Jersey State and Federal waters.

Prohibited Species

It is illegal to take, possess, land, purchase, or sell any of the following species:

- Atlantic Sturgeon
- Basking Shark
- Bigeye Sand Tiger Shark
- Sand Tiger Shark
- Shortnosed Sturgeon
- Whale Shark
- White Shark

SEA TURTLES & MARINE MAMMALS

It is illegal to intentionally molest, kill or possess sea turtles or marine mammals, or to possess any part thereof.

BAIT FISH

No license is required for the taking of baitfish for personal use with the following gear:

1. Dip nets 24" in diameter or less for the taking of herring for live bait.
2. Bait seines 50 feet long or less.
3. Cast nets 20 feet in diameter or less.
4. Lift or umbrella nets four feet square or less.
5. Not more than five (5) killipots for taking killifish for bait.
6. Not more than two miniature fykes or pots for the taking of killifish or eels for bait.

Fish taken in this manner may not be sold or used for barter unless a commercial bait net license is in possession.

No person shall take more than 35 alewife or blueback herring in aggregate per day.

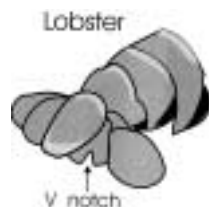
No person shall take or attempt to take fish by any means from the Deal Lake flume, Lake Takanasse spillway or Wreck Pond spillway on any Monday, Wednesday or Friday during the months of April and May.

CRUSTACEANS

American Lobster

The legal possession size of whole lobsters, measured from the rear of the eye socket along a line parallel to the center line of the body shell to the rear of the body shell, shall be not less than 3 1/4 inches. Lobster parts may not be possessed at sea or landed.

The possession limit is 6 lobsters per person. No person shall possess any lobster with eggs attached or from which eggs have been removed or any female lobster with a



v-notched tail, as illustrated above.

The use of spears, gigs, gaffs or other

penetrating devices as a method of capture for lobsters is prohibited. A license is required for the use of pots or traps for the capture of lobsters.

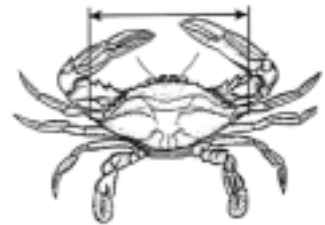
Crabs

1. Crabs may be taken recreationally with hand lines, manually operated collapsible traps or scoop nets without a license. A non-commercial crab pot license is required for the use of not more than two (2) non-collapsible Chesapeake-style crab pots (see illustration on page 23) or two (2) trot lines to harvest crabs. See page 23 for the non-commercial crab pot license application or stop by coastal bait and tackle shops. The possession limit of one (1) bushel per person per day and the prohibition of sale applies under this license.

2. It is illegal to harvest or possess more than one bushel of crabs per day per person or offer for sale any crabs without having in your possession a valid commercial crabbing license.

3. Minimum size of crabs that may be harvested (measured from point to point of shell) are as follows:

- a. Peeler or shedder crab - 3 inches
- b. Soft crab - 3 1/2 inch
- c. Hard crab - 4 3/4 inches (for sale)
- d. Hard crab - 4 1/2 inches (possession)



4. All female crabs with eggs attached and all undersized crabs shall be returned to the water immediately.

5. Recreational trot lines shall not exceed 150 feet in length with a maximum of 25 baits.

6. All pots and trot lines shall be marked with the identification number of the owner.

7. All crab pots must be tended at least once every 72 hours.

8. No floating line may be used on any crab pot or crab pot buoy.

9. No crab pot shall be placed in any area that would obstruct or impede navigation or in any creek less than 50 feet wide.

10. Only the owner, his agent or a law enforcement officer may raise or remove contents of a legally set fishing device.

11. Crabs taken with a bait seine may be retained for personal use only if the fisher-

continued on page 13

1999 Summary of Marine Fish and Shellfish Regulations

continued from page 12

man possesses a bait net license, and may not be bartered or sold unless the fisherman possesses a commercial crab license.

12. No crabs may be harvested from the Newark Bay Complex as described under the section on Health Advisories, page 28.

13. Crab Pot/Trot Line seasons:

Delaware Bay and tributaries - April 16 to Dec. 14; all other waters - Mar 15 to Nov 30. The following waters are closed to the use of crab pots and trot lines: Cumberland Co: Cohansy River and creeks named Back, Cedar, Nantuxent, Fortesque, Oranoken, and Dividing; Cape May Co: West and Bidwell Creeks and the Cape May Canal; Atlantic Co: Hammock Cove (Dry Bay); Ocean Co.: on East shore of Barnegat Bay, that area of Sedge Islands WMA enclosed by a line drawn from the northern bank of Fishing Creek on Island Beach State Park to the northern tip of the Sedge Island (Hensler Island), then south from point to point along the western side of the Sedge Islands WMA and terminating on the most southwestern point of Island Beach State Park.

14. The Division will issue a non-commercial crab dredge license for the harvest of not more than one bushel of crabs during the crab dredge season. Crabs so taken may not be sold or offered for barter. There is a fee of \$15.00 for this non-commercial crab dredge license. Call the Marine Fisheries Administration at 609/748-2040.

NOTICE: All non-collapsible Chesapeake-style crab pots (see illustration on page 23) must be constructed to include a biodegradable panel designed to create an opening to allow crabs and other organisms to escape if the pot is lost or abandoned. All non-collapsible Chesapeake-style crab pots set in any man-made lagoon or any water body less than 150 feet wide must also include a turtle excluder device inside all pot entrance funnels.

HORSESHOE CRABS

The harvest of horseshoe crabs is prohibited without a permit. Applications are available from the Marine Fisheries Administration.

MOLLUSKS (SHELLFISH)

1. All persons must be licensed to participate in the harvest of hard clams, soft clams, surf clams and oysters.
2. It is illegal to harvest clams, oysters and mussels from condemned waters, even for bait purposes. It is also illegal to harvest surf clams from beaches adjacent to water classified as condemned. Water classification charts are available from license agents, any state shellfish office or Marine Police Station. Charts are updated annually.
3. Shellfish harvesting is prohibited before sunrise, after sunset and on Sundays.
4. Harvesting of clams, oysters and mussels on public grounds is restricted to the use of hand implements.
5. It is illegal to harvest shellfish from leased grounds. These grounds are delineated by stakes or buoys set by the lease holder. Charts of the leases may be examined at the Nacote Creek or Bivalve Shellfish Offices during regular business hours.

Hard Clams

1. No person shall harvest more than 150 clams per day unless such person is a holder of a commercial clam license. Only certified shellfish dealers may purchase clams from commercial harvesters. All persons selling clams commercially must tag each container listing date of harvest, name and address of the harvester and the waters from which the shellfish were harvested.
 2. A non-resident recreational license is valid only during the months of June, July, August and September.
 3. Anyone engaged in any clamming activity with someone holding a commercial clam license must also possess their own commercial clam license.
 4. It is illegal to dredge clams. Hand implements are the only legal harvest methods.
 5. The minimum size of hard clams that may be harvested is 1-1/2 inches in length. Clams less than 1-1/2 inches in length must be immediately returned to the bottom from which they were taken.
 6. It is illegal to harvest shellfish on Sunday except on the seasonal waters of the Navesink River between November 1 and April 30.
- ### Oysters
1. Oysters may be sold only to certified dealers.
 2. It is illegal to dredge oysters on public grounds. All harvesting on public grounds

- is restricted to the use of hand implements.
3. Shells taken in the process of harvesting oysters must be culled from the live oysters and returned immediately to the area from where they were taken.
 4. Specific seasons and regulations exist for oyster beds in Great Bay, Delaware Bay, the Mullica, Great Egg Harbor and Tuckahoe rivers. Check with appropriate shellfish offices for detailed regulations.
 5. One license covers recreational and commercial oystering.



Coastal Workshop For Teachers

NJ Division of Fish and Wildlife hosts a weekend coastal workshop annually in May at the Wetlands Institute in Stone Harbor.

Openings for this year may still be available. Or call to be placed on the mailing list for future workshops:

856-629-7214

New Jersey Division of Fish & Wildlife

- Mission -

To protect and manage the state's fish and wildlife to maximize their long-term biological, recreational and economic values for all New Jerseyans.

- Goals -

1. To maintain New Jersey's rich variety of fish and wildlife species at stable, healthy levels and to protect and enhance the many habitats on which they depend.
2. To educate New Jerseyans on the values and needs of our fish and wildlife and to foster a positive human/wildlife co-existence.
3. To maximize the recreational and commercial use of New Jersey's fish and wildlife for both present and future generations.

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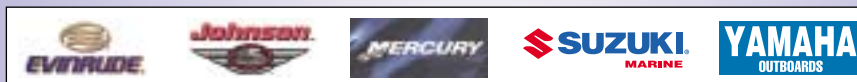
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Oceanville, NJ 08231

For information on the Reef Program, call 609-748-2020.

Know Your Sharks

by John McClain, Principal Fisheries Biologist
Barry Preim, Fisheries Technician

Recreational regulations were adopted for sharks for the first time in 1999. These regulations include a 48 inch total length limit on all sharks; a two shark per vessel possession limit and a prohibition on the taking, possession, landing or sale of any basking shark, whale shark, white shark or sand tiger shark. These regulations do not apply to smooth or spiny dogfish.

The N.J. Marine Fisheries Council and the Department of Environmental Protection approved these regulations to be compatible with the previously adopted federal management plan for Atlantic sharks to protect and enhance shark populations. Because sharks and dogfish are frequently taken incidentally while fishing for other species, anglers don't always know what shark species they may have on the end of their line.

The following key to protected sharks and other commonly caught sharks has been taken, with the kind and appreciated permission, from the "Anglers" Guide to Sharks of the Northwestern United States' published by the United States Department of Interior, Fish and Wildlife Service, Circular 179.

It is very important that anglers properly identify their shark catch for multiple reasons. One, of course, is so the angler doesn't risk a significant fine for a mistake. Another is to recognize that protected species are listed based on concerns about the apparent decline in population levels, and care must be taken not to harm the animal as you bring it to the boat for release.

Finally, all sharks, with the exception of the two species of dogfish, can inflict very serious bite injuries. Some sharks, such as the sandbar shark and sand tiger shark, come into our bays to give birth to their young. The young "pups" may be about the same size as the commonly caught dogfish, but have sharp teeth and can inflict a nasty bite. One additional word of warning for anglers: the spines of a spiny dogfish, located just in front of both dorsal fins, can also inflict a wound which must be cleaned thoroughly to prevent infection.

Striped Bass Management

continued from page 6

public input as to which option seemed agreeable. The options are designed to: 1) reduce the harvest of age 8 and older striped bass by 14% or more in the year 2000 and 2) better utilize NJ's striped bass resource in both its coastal and producer waters while complying with the mandatory 14% reduction.

The two options were very similar: Option 1 proposes one fish per day greater than or equal to 24 inches but less than 28 inches in addition to one fish 28 inches or greater for NJ marine waters, with the Bonus Fish Program having one fish 28 inches or greater per day and a 225,000 pound quota. Option 2 proposes one fish greater than or equal to 24 inches but less than 30 inches in addition to one fish 30 inches or greater for NJ marine waters, with the bonus fish program having one fish 30 inches or greater per day and a 225,000 pound quota.

According to Amendment #5, if a state wished to lower its coastal size limit, a specified reduction is required. These reductions (lower size limit and the 14% reduction required by Addendum IV) are satisfied by having one fish 28 inches or greater in length. There are pluses and minuses of the adaptive management strategies of plans like those for striped bass and summer flounder. On the negative side, management measures are often complex and are modified frequently, making it difficult for anglers to maintain current knowledge of the regulations.

On the positive side, however, these management plans have been very successful in allowing optimum utilization of the resource while still achieving the goal of stock restoration.

Future amendments to the Plan will look into the feasibility of a uniform size limit; rather than the current dual size limit of producer areas (20 inches) and coastal areas (28 inches).

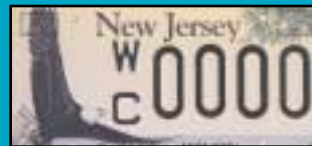
Don't Miss The Ninth Annual Governor's Surf Fishing Tournament

This year's tournament will be held Sunday, October 1st at Island Beach State Park. Last year, more than 1,300 adults and children registered for the event. The tournament generated more than \$10,000 in registration fees which will be used for a variety of conservation projects such as the construction of a beach access ramp, mobile fishing education carts and specialized wheelchairs for the disabled and elderly. The goal of the tournament is to foster a life-long commitment to marine conservation and the sport of surf fishing. The winner of the 1999 Governor's Cup was Dorothy Harrison of Wayne, New Jersey with a 29 inch Red Drum. The Division would like to thank the following organizations for their contribution to the Eighth Annual Governor's Surf Fishing Tournament: Acme Tackle Company, Airlite Plastics, Ande Inc., BASS Inc., Bill Lewis Lures, Bry's Marine, CK Co., Cabela's, Coleman Company, Cortland Line Company Inc., Crowe Rope Industries LLC, DOA Fishing Lures Inc., DeLorme, Dows Boat Rental, Dubro Products, F.J. Neil, Fin-Nor International, Fishing Tackle Co. Inc., Frank's Boats, Fulcrum Publishing, G. Loomis Inc., GBS Distribution LLC, H.D. Wood Advertising, Hopkins Fishing Lures Co. Inc., Hoppe's A Brunswick Company, Lamiglas Inc., Leatherman Tool Group Inc., Legal Limits, Mister Twister Inc., Morrison's, Ocean County Library, Ocean Fresh Seafood, Orvis (Paramus), Penn Fishing Tackle Mfg. Company, Ramsey Outdoors (Ledgewood), Ramsey Outdoors (Paramus), Rays Sport Shop Inc. (N. Plainfield), SCS Limited, SPRO Corporation, Scott's Bait & Tackle, Shakespeare, Sportsman's Outpost, Springfield Marine & Aluminum, TTI Companies, Techsonic Industries Inc., The Fisherman Magazine, Ultimix Lures, Water Gremlin Co., and Wright & McGill Co.

For more information and registration forms contact: Division of Fish and Wildlife, 605 Pequest Rd., Oxford, NJ 07863 or call 908-637-4125.

Conserve Wildlife License Plates Support Nongame and Endangered Species

Since 1972 the Endangered and Nongame species Program (ENSP) has worked to protect and restore New Jersey's endangered and threatened wildlife. You can help the program through the Income Tax Check-off and/or through the Conserve Wildlife license plate.



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Previously available by mail only, motorist may now purchase the plates in person at DMV offices regardless of their current expiration date. Plates can also be purchased from car dealers when buying or leasing a new car.



Outdoor skills workshops for women

These workshops are for you if you have never tried these activities and hope for an opportunity to learn, you are a beginner who hopes to improve your skills, you have some outdoor experience and would like to expand your abilities, and you are excited to meet other outdoor enthusiasts. While Becoming an Outdoors-Woman workshops are designed primarily for women, anyone over 18 years of age is welcome to participate.

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2000 Recreational Regulations Applicable to Federal Waters

Summary of recreational regulations on selected species applicable to federal waters (3 to 200 miles) off the New Jersey coastline. This information is only a guide, as regulations are constantly modified.

For additional information, please contact:
National Marine Fisheries Service (NMFS), NE Region,
1 Blackburn Pl., Gloucester, MA 01930-2298

For possession limits call 978-281-9260.

For federal permit applications, 978-281-9370

Local NMFS Enforcement Office 609-528-3315 or 609-390-8303

Tuna quota updates (in season only) 301-713-1279

www.usatuna.com or call 888-USA-TUNA

Species*	Minimum Size	Possession Limit (number per angler per day unless otherwise specified)
Marlin, Blue	99 inches lower jaw - fork length	1 of either
Marlin, White	66 inches lower jaw - fork length	
Sailfish	63 inches lower jaw - fork length	
Swordfish	47 inches, lower jaw - fork length	

Tuna

-Bigeye & Yellowfin
-Bluefin

27" total curve fork length
27"

Phone toll free for permit
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*Prohibited Species: striped bass, basking shark, whale shark, white shark, sand tiger shark, bigeye sand tiger shark

The 1999 New Jersey waterfowl stamp design features a pair of redheads at Barnegat Bay and a baymen's boat called the Garvey. Design artist Richard Clifton is an avid hunter of waterfowl and upland game, which influences his keen appreciation of and life-like depiction of nature's beauty and splendor. He is a native of Milford, Delaware and has designed an impressive num-

ber of state waterfowl stamps. This is the sixteenth issue of New Jersey waterfowl stamps and the third in a series of historic boats.

The Garvey or "Baymen's Boat" is a unique flat-bottomed craft that traces its origin and name to Jarvis (Gervas) Pharo who settled in the village of West Creek in the early 1700's. He brought with him a design for a "Punt Boat," a



long, narrow, shallow-draft vessel suitable for maneuvering in water often less than two feet deep. In many productive shell fishing beds in Barnegat Bay, the water rarely exceeds two to three feet in depth. Early Garveys were poled, rowed or sailed across the bay.

The traditional Garvey is between 14 and 30 feet long and constructed of native Atlantic White Cedar. This wood is favored for its insect resistance, durability and light weight. Many other types of boats produce a wake, causing bank erosion along shallow creeks and sedge islands. The design of Garveys allows for the wakes to be dissipated with a noticeably reduced force of wave action.

Generations of Baymen utilized this stable workboat for tonging and raking clams, oystering, crabbing and fishing. Over the years local boat builders made modifications and improvements on the original Garvey. Few of their designs and plans have ever been drawn out on paper. Fathers passed the traditional construction secrets and refinements to their sons. Today only a few Garvey builders still exist. The Garvey has evolved into a wide, flat-bottomed and very stable utility craft.

New Jersey, through an act of the State Legislature, began annually requiring waterfowl stamps in 1984. The program is administered by the New Jersey Department of Environmental Protection, Division of Fish and Wildlife for the purpose of purchasing wetlands for waterfowl habitat. Proceeds from the sale of New Jersey's duck stamps and prints total over \$3,500,000, all to acquire wetlands for waterfowl habitat and public use. To date, over 11,000 acres of waterfowl habitat have been purchased or donated.

Limited Edition, signed and numbered prints of the Sixteenth New Jersey Waterfowl stamp may be purchased from art dealers. To find the dealer nearest you, contact SPORT'EN ART, Sullivan, IL 61951, telephone (toll-free) 1-800-382-5723.

Each print includes a resident and non-resident stamp and sells for \$170.00. Stamps without prints can be purchased directly from the Division of Fish and Wildlife.

New Jersey Division of Fish & Wildlife 2000 Marine Recreational Fishing Seasons Possession & Minimum Size Limits

Species	Open Season	Minimum Length	Harvest & Possession Limit (per person unless noted)
Black Sea Bass	No Closed Season	10" Excluding tail filaments	No Limit
Bluefish	No Closed Season	No Minimum	10
Cobia	No Closed Season	37"	2
Cod	No Closed Season	21"	No Limit
Eel, American	No Closed Season	6"	No Limit
Flounder, Summer	May 6 - Oct. 20	15 1/2"	8
Flounder, Winter	March 1 - May 31 Sept. 15 - Dec. 31	10 1/2" *	No Limit
Haddock	No Closed Season	21"	No Limit
Mackerel, King	No Closed Season	23"	3
Mackerel, Spanish	No Closed Season	14"	10
Pollock	No Closed Season	19"	No Limit
Porgy (Scup)	No Closed Season	7"	50
Red drum	No Closed Season	18"	5, only 1 over 27"
Shad	No Closed Season	No minimum	6
Shark+	No Closed Season	48"	2 per vessel
***except prohibited species			
Striped bass or hybrid striped bass			
-Del. River & tributaries (Route 1 bridge to Salem River & tributaries)	Mar. 1 - Mar. 31 and June 1 - Dec. 31	28"	1
-Del. River & tributaries (upstream of Trenton Falls)	Mar. 1 - Dec. 31	Greater or equal to 24" but less than 28"	1
-Atlantic Ocean 0-3 miles from shore	No Closed Season		
-All other waters	Mar. 1 - Dec. 31		
Tautog	Oct. 10 - May 31 June 1 - Oct. 9	14" 14"	10 1
Weakfish	No Closed Season	14"	14
No species of fish with a minimum size limit listed above may be filleted or cleaned at sea (except striped bass if fillet is at least 28" long). (Party boats licensed to carry 15 or more passengers may apply for a permit to fillet the above species, except striped bass, at sea.)			
Blue Crab			
- peeler or shedder	No Closed Season**	3"	
- soft	No Closed Season**	3 1/2"	1 bushel
- hard	No Closed Season**	4 1/2"	
Lobster (carapace length)	no closed season	3 1/4"	6
Hard Clam - license required	no closed season	1 1/2"	150 clams

*Effective Jan. 1, 2001, minimum size limit of winter flounder increases to 11".

**Unless using non-collapsible, Chesapeake-style crab pots. See section on crab pots, page 12.

***Prohibited Sharks Species: basking shark, whale shark, white shark, sand tiger shark, bigeye tiger shark

+Not including dogfish: see description on page 11.

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Suzuki QuadRunner ATVs may be used only by those aged 16 and older. Suzuki highly recommends that all ATV riders take a training course. We'll even pay for it. For safety and training course information, see your dealer or call the SVIA at 1-800-852-5344. ATVs can be hazardous to operate. For your safety, always wear a helmet, eye protection and protective clothing. Always avoid paved surfaces. Never ride on public roads. Never carry passengers or engage in stunt riding. Riding and alcohol or other drugs don't mix. Avoid excessive speeds. Be extra careful on difficult terrain. Along with concerned conservationists everywhere, Suzuki urges you to "Tread Lightly" on public and private land. Preserve your future riding opportunities by showing respect for the environment, local laws and the rights of others when you ride.

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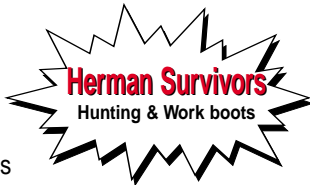


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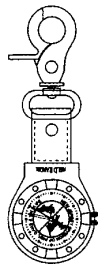
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Sea Run Brown Trout Program

by Mark Boriek,
Principal Fisheries Biologist

October 1999 marked the third annual stocking of this five-year program. A total of 80,645, eight inch brown trout have been stocked in the resh-water/tidal and brackish portion of the Manasquan River. We anticipate these trout will migrate out to the estuary for one or two years to take advantage of the abundant forage there.

After growing to a size of 2-4 pounds or larger, they will return to the freshwater Manasquan River in the fall of the year. Although it is doubtful the existing water quality will support successful reproduction, the urge to spawn will concentrate these fish in the freshwater portion of the Manasquan River creating an exciting new fishery.

To date there have been nine confirmed catches of sea run browns in freshwater and five in saltwater. The largest, caught in the Manasquan River at Brice Park near Allenwood, Monmouth County, weighed 6 pounds and was 18 inches long. It had the characteristic silvery color and deep body of a sea run trout. Additionally, its clipped adipose fin indicated that it had been stocked in October, 1997.

The Ernest Schwiebert and Jersey Shore Chapters of Trout Unlimited provided financial support and assisted in clipping the left pelvic fin of 1999's fish. Anglers should report all catches of such trout to 908-236-2118 or 908-637-4173.

SEA RUN BROWN TROUT



The New Jersey Division of Fish and Wildlife has stocked brown trout in the lower Manasquan River. Fishermen are asked to report all catches of brown trout in tidal waters. These fish tend to develop a more silvery coloration, masking most of the body spots, after an extended time in salt water.

The future of this program depends on these fish being caught and reported.

WE NEED YOUR COOPERATION

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or

Lebanon Fisheries Lab (908) 236-2118



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Shellfish and Non-Commercial Crab Pot License Information

Prior to harvesting any shellfish, be certain to consult the Shellfish Growing Water Classification Charts published by the Division of Watershed Management, available at any shellfish license agent, state shellfish office or Marine Police Station, or call 609-748-2000.

- Residential recreational clam, \$10.
- Harvest limit of 150 hard, soft, surf clams per day. Sale of catch prohibited
- Non-resident recreational clam, \$20. Harvest limit of 150 hard, soft, surf clams per day. Sale of catch prohibited. License valid only during the months of June, July, August and September.
- Juvenile recreational clam, \$2. For persons under 14 years of age. Subject to same restrictions as resident or nonresident adult recreational license holders.
- Commercial clam, \$50. Unlimited harvest. Clams may be sold to certified dealers only.
- Oyster, commercial or recreational, \$10. Unlimited oyster harvest. Oysters may be sold to certified dealers only.
- Senior Citizen recreational, FREE. NJ resident 62 years of age or older for clam/oyster license. Harvest limit of 150 clams per day. Unlimited oyster harvest. Sale of clams or oysters prohibited. There is a \$2 application fee for the Senior Citizen Recreational Shellfish License.
- Disabled veterans may apply for free recreational clamming or crab pot licenses at the following Division offices:
 - Trenton Office
 - Pequest Hatchery & Ed. Ctr.
 - Nacote Creek Research Station
 - Northern Region Office
 - Central Region Office
 - Southern Region Office
 For locations, see Directory, page 2
- Mussels, no license required.
- Mussels, may only be harvested from approved waters.

NOTE: When obtaining a license from a license agent, an additional \$1 fee is charged.

SHELLFISH & NON-COMMERCIAL CRAB POT LICENSE AGENTS (For over the counter sales only)

ATLANTIC COUNTY

Bayside B&T, 4401 Atl-Brigantine Blvd., Brigantine, 609-266-2819
 +Gifford Marine, Inc. 124 Margate Blvd., Northfield, 609-383-9500
 Jersey State Marina, 601 Bayshore Ave., Brigantine, 609-266-7011
 Misty Morning Marina, 1820 Mays Ldg.-Somers Pt Rd., EH Twp., 609-927-5303
 +Nacote Creek Shellfish Office, Route 9, Mile 51, Port Republic, 609-748-2021
 +Sid's Servistar Hdw., 208 N. Philadelphia Ave., Egg Harbor City, 609-965-0815
 #Zeus Sporting Goods, 6679 Black Horse Pike, EH Twp., 609-646-1668

CAMDEN COUNTY

*Andersen Sales, 71-75 So. White Horse Pike, Stratford, 856-783-7997
 *Berlin Hunting & Fishing, Berlin Auction, 41 Clementon Rd., Berlin, 856-767-1119

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Avalon Hodge Podge, 2389 Ocean Dr., Avalon, 609-967-3274
 *Budd's B&T, 109 Fullingmill Rd., Villas, 609-886-6935
 Capt. Tate's Tackle Box, 450 No. Route 47, Cape May CH, 609-861-4001
 +City Hall, 9th & Asbury Ave., Ocean City, 609-399-6111
 Forty Third St. Dock, 319 43rd St., Sea Isle City, 609-263-2095
 +Just Sports, 21 W. Mechanic St., Cape May CH, 609-465-6171
 Red Dog B&T, 367 43rd St., Sea Isle City, 609-263-7914
 +Upper Twp. Municipal Bldg., 2100 Tuckahoe Rd., Petersburg, 609-628-2011, Ext 200

CUMBERLAND COUNTY

+Bivalve Shellfish Office, 6959 Miller Ave., Port Norris, 856-785-0730
 Maurice River Sports Ctr., 329 W. Main St., Millville, 856-825-5500
 Four Star Marina, River Rd., Leesburg, 856-785-1273
 *South Jersey Sportsman, 3466 Route 47, Millville, 856-825-5454

GLOUCESTER COUNTY

Washington Twp. Parks, Hurfville-Cross Keys Rd., Turnersville, 856-589-6427

HUDSON COUNTY

*Fishing Equipment, 3424 Kennedy Blvd., Jersey City, 201-798-2130

MERCER COUNTY

+NJ Div. Fish and Wildlife, 501 E. State St., 3rd Fl., Trenton, 609-292-2965

MIDDLESEX

Sayreville Sportsman Shop, 52 Washington Ave., Sayreville, 732-238-2060

MONMOUTH COUNTY

Brielle Tackle, 800 Ashley Ave., Brielle, 732-528-5720
 *Fishermen's Den, Belmar Marina, Route 36, Belmar, 732-681-5005
 *Mac's Bait & Tackle, 1301 Highway 35, Neptune, 732-774-4360

OCEAN COUNTY

American Sportsman, 857 Mill Creek Rd., Manahawkin, 609-597-4104
 Barnegat Boat Basin, 491 E. Bay Ave., Barnegat, 609-698-8581
 Bruce & Pat's B&T Shop, 317 Long Beach Blvd., Surf City, 609-494-2333
 +Clarke's Marine Supply, 227 E. Main St. (Route 9), Tuckerton, 609-294-0166
 Downe's Bait & Tackle, 287 Brennan Concourse, Bayville, 732-269-0137
 Fishermen's Headquarters, 280 W. 9th St., Ship Bottom, 609-494-5739
 Forked River Freezer, 105 Route 9, Forked River, 609-693-3931
 George's Sports-A-Rama, 2597 Hooper Ave., Bricktown, 732-477-6671
 Mole's Bait & Tackle, 403 Route 9, Waretown, 609-693-3318
 Pell's Fish & Sport Shop, 335 Mantoloking Rd., Bricktown, 732-477-2121
 +Scott's Bait & Tackle, 945 Radio Rd., Little Egg Harbor Twp., 609-296-1300
 Wheel House Marina, 267 24th Ave., So. Seaside Park, 732-793-3296

SALEM COUNTY

*Buck Road Sport Shoppe, 128 Buck Rd., Elmer, 856-358-3535

SOMERSET COUNTY

Efinger's Sporting Goods, 513 W. Union Ave., Bound Brook, 732-356-0604

* Sell only recreational crab pot licenses

Sell only clam licenses

+ Also sells oyster licenses

Terrapin Excluders and Biodegradable Panels Are Required on Chesapeake-Style Crab Pots

Users of non-collapsible, Chesapeake-style crab pots (self-fishing) should be aware that all pots set in any body of water less than 150 feet wide at a mean low tide or in any man-made lagoon MUST include diamond-back terrapin excluder devices. In addition, all non-collapsible, Chesapeake-style crab pots set in any body of water MUST include biodegradable panels.

The use of terrapin excluder devices and biodegradable panels on non-collapsible, Chesapeake-style crab pots will help reduce the unintentional drowning of diamondback terrapins and allow for escapement of these and other species in the event that pots are lost or abandoned. The regulations apply to both commercial and recreational users of non-collapsible, Chesapeake-style crab pots.

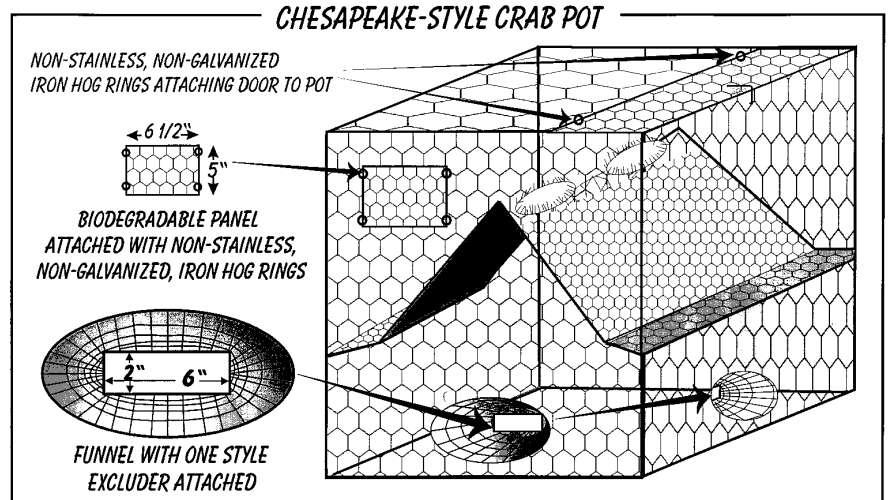
Terrapin excluder devices must be rectangular or diamond-shaped and no larger than two inches high by six inches wide. The devices must be securely fastened inside each funnel entrance to reduce the openings to no larger than the above size.

Biodegradable panels must be oval or rectangular. The opening left when the panel falls out must measure at least six and one-half inches wide by five inches high, be located in the upper section of the crab pot, and be in a position to allow for the eventual and unobstructed escape of crabs and other marine organisms should the crab pot be lost or abandoned. The panel must be constructed of, or fastened to the pot, with one of the following materials: wood lath, cotton hemp, sisal or jute twine not greater than 3/16 inch in diameter, or non-stainless steel, uncoated ferrous metal not greater than 3/32 inch in diameter. The door or a side of the pot may serve as the biodegradable panel ONLY if it is fastened to the pot with any of the material specified above.

Crabbers should remember that ALL non-collapsible, Chesapeake-style crab pots, whether used for recreational or commercial purposes, MUST be licensed and marked with the gear identification number of the owner. For crab pot license information and regulations, see the regulations on page 12; for license agents, see page 22.

Recreational license holders are limited to two non-collapsible, Chesapeake-style crab pots, cannot harvest more than one bushel of crabs per day, and cannot sell or barter their catch.

Anyone requiring further information on terrapin excluder devices, biodegradable panels, or other crabbing regulations can contact the Bureau of Marine Fisheries at 609/748-2020.



**NJ Division of Fish and Wildlife
Marine Fisheries Administration**
Application for 2000
Non-Commercial Crab Pot/Trot Line License

A license is required for the recreational use of non-collapsible, Chesapeake-style crab pots or trot lines. See Summary of Marine Fish and Shellfish Regulations.

APPLICATION FEE \$2.00

Name: _____
 Address: _____
 City: _____ State: _____ Zip: _____
 Phone: _____ Social Security #: _____
 Date of Birth: _____ Height: _____ Weight: _____
 Eye Color: _____ Hair: _____ Sex: _____
 Signature: _____ Date: _____

Please make check or money order payable to: NJ Fish & Wildlife.
 Completed applications may be sent to any of the following offices:

- | | | |
|---|---|--|
| NJ F&W - Crab Pot Lic.
PO Box 418
Port Republic, NJ 08241
609-748-2021 | NJ F&W - Crab Pot Lic.
PO Box 432
Port Norris, NJ 08349
856-785-0730 | NJ F&W - Crab Pot Lic.
PO Box 400
Trenton, NJ 08625-0400
609-292-2965 |
|---|---|--|

**Report marine fish violations to 609-748-2050
or 24 hr. DEP Hotline 877-WARNDEP.
Violators of the fillet law are subject to
\$20 per fish or \$100 to \$3,000.**

Winter Flounder - A Profile continued from page 7

May 31 and September 15 through December 31. The size limit is 10-1/2". Beginning January 1, 2001, the winter flounder recreational size limit will increase to 11".

References: Bigelow and Schroeder (1953), Bowman, et al. (1976), Geiser (1977), NMFS (1999), Olla, et al. (1969), Percy (1962), Perlmutter (1947), Phelan (1992), Scarlett (1988, 1991, 1997), Scarlett and Allen (1992).

Seagrass: Nature's Nursery

Seagrass: Nature's Nursery By Michael Celestino, Fisheries Biologist

Seagrasses are a group of approximately 50 species of vascular plants that complete their entire life cycle fully submerged in the marine environment. The most common and ecologically important seagrasses in New Jersey are eelgrass (*Zostera marina*) and widgeon grass (*Ruppia maritima*). Widgeon grass, however, is actually a fresh/brackish water plant with extreme salinity tolerance, and is therefore sometimes not classified as a "true" marine seagrass.

Nevertheless, both eelgrass and widgeon grass are true flowering plants with subsurface roots and root-like rhizomes that extend through unconsolidated sediments varying from pure, firm sand to fine, soft muds. Seagrasses are found worldwide in shallow coastal waters and can migrate from year to year or even from season to season within suitable habitat. In New Jersey they are most prevalent in the shallow (<5') portions of the Navesink, Shrewsbury, Manasquan and Metedeconk Rivers and in Barnegat, Manahawkin and Little Egg Harbor Bays.

Seagrasses are sometimes considered a nuisance by boaters and waterfront property owners where the vegetation can interfere with boat engines and tends to accumulate in piles of detritus on beaches. However, the ecological benefits provided by seagrasses can be shown to far outweigh any "inconveniences" to recreation or leisure.

Specifically, seagrass communities help stabilize sediments, dampen wave energy, buffer shorelines from erosion and improve/enhance water clarity and quality. Seagrasses also serve an especially important role in the production of fishery resources. Extensive data indicate that seagrass meadows provide a high quality habitat for fishes and invertebrates. For exam-

ple, the physical structure provided by seagrass beds along with associated epiphytes (attached algae) and drift algae enhances the habitat for invertebrates by providing attachment sites and refuge from predators. In addition, the rhizome layer may protect shallow dwelling hard clams, whereas on exposed sand flats, whelks and other predators easily detect and capture clams. Similarly, seagrasses serve as nursery areas for juvenile and sub-adult finfish, providing abundant and varied food resources as well as refuge and protection from larger predators. Many fishery organisms occur in seagrass beds at some stage in their life history, including juveniles of open water coastal fisheries (menhaden, summer flounder, bluefish, Atlantic croaker, Pacific herring, spot, weakfish, silver perch, mullet, and blue crabs).

While juvenile fish can utilize other types of shelter, the bulk of shelter habitat in many estuaries is provided by seagrasses. Its loss, therefore, will likely lead to declines in juvenile fish recruitment. Entire fisheries have completely crashed as a result of eelgrass loss. This was dramatically illustrated in the 1930's when a disease epidemic virtually eliminated eelgrass from the entire eastern US coastline. Scallops, clams, oysters, crabs and many species of fish suffered dramatic declines from the loss of productive habitat with the concomitant siltation, creation of mudflats and erosion that occurred because eelgrass no longer anchored bottom sediments.

While the catastrophic loss of eelgrass in the 1930's may have resulted from a very unique event, any activity that degrades seagrass habitat, reduces light penetration, or physically destroys seagrass will limit the plant's growth and survival. At the extreme, chronic levels of these disturbances could ultimately lead to the severe declines experienced in the 1930's.

Seagrass meadows are often subject to tremendous damage by even the most seemingly "innocent" human activities. For example, walking through seagrass meadows can drive shoots deep into the muddy bottom, which often kills them. More dramatic and systemic declines stem from decreased water clarity resulting from boat propeller wash and vessel wakes that can dislodge sediments and even uproot seagrasses. This is most commonly seen when vessels operate in or have wakes that reach shallow waters. The resuspension of sediments through turbulence generated by vessels can greatly reduce light penetration which in turn limits the distribution of suitable habitat for seagrasses.

Similarly, shading from docks and other structures also leads to seagrass loss. Light penetration and availability are thought to be

the most important factors affecting and regulating the density, productivity, growth and survival of seagrasses. In fact, reductions in the amount of light reaching seagrass blades is widely considered the major reason for seagrass decline in coastal waters.

Likewise, boat propeller scarring (severing of seagrass leaves, roots and/or rhizomes with a boat propeller) resulting from boaters taking "shortcuts", misjudging water depths or grounding are particularly destructive to seagrasses. Slow recovery (up to 10 years or more) from scarring, coupled with increased scarring rates, elevates the rate of cumulative loss of seagrasses and their habitat values.

Losses of seagrass due to chronic disturbances are difficult to reverse because the sediment stabilization and water column filtration benefits of the seagrass cover have been lost. Sediments are therefore easily re-suspended, adding to the turbidity of the water column and decreasing the likelihood of effective restoration.

Even if the affected areas resulting from any of these activities are relatively small compared to the size of the seagrass bed, these impacts fragment and disrupt the beds, making the entire habitat more susceptible to damage from other stresses like meteorological events such as storms. These and other disturbances may be acting together to result in large scale declines in seagrass distribution.

Eelgrass is an important part of our coastal ecosystem and its health is an indicator of the overall health of bays and estuaries. The longevity of seagrass meadows, coupled with their complex physical structure and high rates of primary production, enable them to form the base of an abundant and diverse faunal community. For many fishery organisms there is no one reason why they should be attracted to seagrass meadows, but rather there are a combination of features providing many essential resources. The benefits provided by seagrass systems are furnished free of charge, provided we act responsibly and protect this valuable resource.

References

Brown-Peterson, N.J. et al., 1993; Burdick, D.N. & F.T. Short, 1998; Fonseca, M.S. et al., 1979; Fonseca, M.S., W. J. Kenworthy & G.W. Thayer, 1992; Good, R.E. et al., 1978; Kenworthy, W.J. & D.E. Haurert (eds.), 1991; Lockwood, J.C., 1990; Lockwood, J.C., 1991; New Jersey Administrative Code Rules on Coastal Zone Management, 1994; Sargent, F.J. et al., 1995; Short, F.T., 1988; Stevenson, J.C & L.W. Staver, 1990.

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Sharks frequently caught by New Jersey anglers

Mako – *Isurus oxyrinchus*

Distinctive characters: Flattened caudal peduncle and crescent-shaped tail. The mako is separable from the white shark by its teeth and more slender form; also by the relative position of the second dorsal and anal fins.

Color: Deep blue-gray above when fresh caught, but appearing cobalt or ultramarine blue in the water; snow-white below; dirty gray on lower surface of pectoral fins. Maximum size: 12 feet. Size at birth: Unknown.

Range: An oceanic species of the tropical and warm-temperate Atlantic; Gulf of Maine to Brazil.

Remarks: Strong-swimming, pelagic shark, known to leap from the water under natural conditions and when hooked. It is a fisheater, preying upon schools of mackerel, herring and squid. It is considered to be the only natural enemy of the broadbill swordfish.

Blue Shark – *Prionace glauca*

Distinctive characters: Distinguished from other western Atlantic sharks by combination of long pointed snout, long sickle-shaped pectoral fin, and blue color.

Color: Blue on upper surface, shading to pure white below.

Maximum size: 12 feet 7 inches. Size at birth: About 21 inches.

Range: Worldwide in tropical and temperate seas; common along the northeastern United States during warmer months.

Remarks: Reputedly the most numerous of the large oceanic sharks; it is the one with which sperm whalers were most familiar, and the one around which many superstitions about sharks have developed. Its diet includes herring, mackerel, other small fishes, squid and garbage.

Sandbar Shark (Brown Shark) - *Carcharhinus plumbeus*

Distinctive characters: Distinct ridge along back between dorsal fins; separated from similar species by its larger first dorsal (vertical height exceeds 10% of shark's total length – less than 10% in dusky sharks), also the first dorsal is further forward in relation to the pectoral fins.

Color: Gray to brown above. Paler below. Fin margins slightly darker.

Maximum size: 7 feet 8 inches. Size at birth: About 25 inches.

Range: Common in inshore and offshore waters along east coast of the United States from Cape Cod to Florida.

Remarks: This is the most common large shark reported from New York-New Jersey coastal waters. Adult females enter bays in this area to give birth to their young. Large males are seldom taken and probably remain farther offshore. Its diet is similar to that of the dusky.

Dusky Shark – *Carcharhinus obscurus*

Distinctive characters: Distinct ridge along back between dorsal fins. Distinguished from the sandbar shark (above) by the size and position of its first dorsal fin.

Color: Lead gray, bluish, or copper above, white below.

Maximum size: 11 feet, 8 inches. Size at birth: 38 to 48 inches.

Range: Common in inshore and offshore waters along east coast of United States from Cape Cod to Florida.

Remarks: One of the most common sharks in New Jersey waters. Feeds primarily on bottom fishes including searobins, skates, goosefish and flatfish.

Smooth Dogfish – *Mustelus canis*

Distinctive characters: Both dorsal fins triangular and of nearly the same size. Separated from the sand tiger sharks by the position of the first dorsal fin, and from all sharks in this region by its minute, flat, pavementlike teeth. Sometimes confused with the spiny dogfish (below) from which it is distinguished by the presence of an anal fin and the absence of dorsal spines.

Color: Gray to brown above and grayish white below.

Maximum size: 5 feet. Size at birth: About 13 inches.

Range: Cape Cod as far south as Uruguay.

Remarks: One of our most abundant sharks. Preys primarily on crabs, but also on lobsters and small fishes.

Spiny Dogfish – *Squalus acanthias*

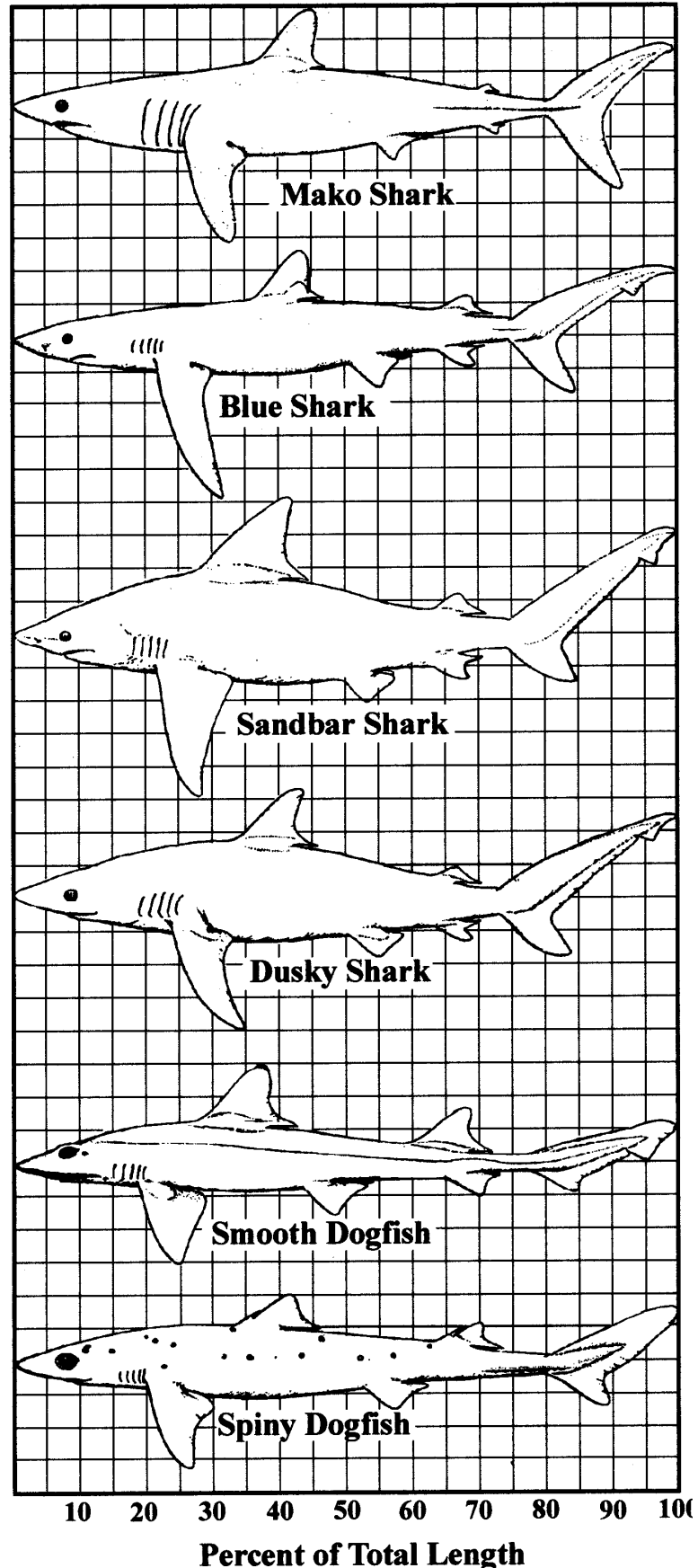
Distinctive characters: Lacks anal fin. Distinguished from the smooth dogfish (above) by the presence of dorsal spines.

Color: Slate colored above, pale gray to white below; young specimens with white spots scattered on body.

Maximum size: 4 feet. Size at birth: 6 1/2 to 13 inches.

Range: Worldwide in temperate and subarctic latitudes.

Remarks: One of our most common sharks found inshore and to depths up to 100 fathoms. It feeds on smaller fishes, squid, worms, shrimps and jellyfish. The spines are mildly poisonous.



Prohibited Sharks (Illegal to take, possess or land protected species)

Whale Shark – *Rhincodon typus*

Distinctive characters: Unique because of its great size and spotted color pattern; its mouth is at tip of snout; prominent ridges on the sides of the body.

Color: Dark gray to reddish or greenish brown and sides; marked with round white or yellow spots and a number of white or yellow transverse bars; white or yellow below.

Maximum size: 45 feet. Size at birth: Unknown.

Range: All tropical oceans; reported as far north as Long Island.

Remarks: This offshore species is the largest living fish known to man. It does not bear its young alive, but deposits egg capsules. Its diet is composed mainly of plankton and small fishes.

Basking Shark – *Cetorhinus maximus*

Distinctive characters: The combination of a crescent-shaped tail, enormously long gill openings, long gill rakers and numerous minute teeth sets the basking shark apart from all others.

Color: Grayish brown to slaty gray or nearly black above, underside may be same color or lighter than the back, sometimes with a triangular white patch under the snout and two pale bands on the belly.

Maximum size: 45 feet. Size at birth: 5 to 6 feet.

Range: Has been reported in the Gulf of Maine and off northeastern shores. Only one report farther south than North Carolina. In the past, there have been numerous reports of basking sharks off Massachusetts and on occasion off New York and New Jersey.

Remarks: Basking sharks often gather in schools and swim sluggishly near the surface. In the winter it is assumed they retire to deeper water. Their diet consists of plankton which they sift out of the water by means of their gill rakers.

White Shark – *Carcharodon carcharias*

Distinctive characters: Flattened caudal peduncle and crescent-shaped tail. The large, triangular, saw-edged teeth and more rearward position of the anal fin (relative to the second dorsal fin) separate the white shark from the mako.

Color: Slaty brown, dull slate blue, leaden gray or even almost black above, shading to dirty white below; may have a black spot in the axil of the pectoral; the dorsals and caudal darker along rear edges.

Maximum size: 36 1/2 feet. Size at birth: About 50 inches.

Range: Widespread in tropical, subtropical and warm-temperate belts of all the oceans.

Remarks: Occurs both inshore and offshore. The white shark feeds often on large prey which it devours practically intact, as illustrated by the presence of other sharks (4 to 7 feet), as well as sea lions, seals, sturgeons and tuna in the stomachs of some specimens. The white shark is credited with numerous attacks on man in tropical and temperate waters the world over and has thus been given the name "meneater."

Sand Tiger Shark – *Carcharias odontastis*

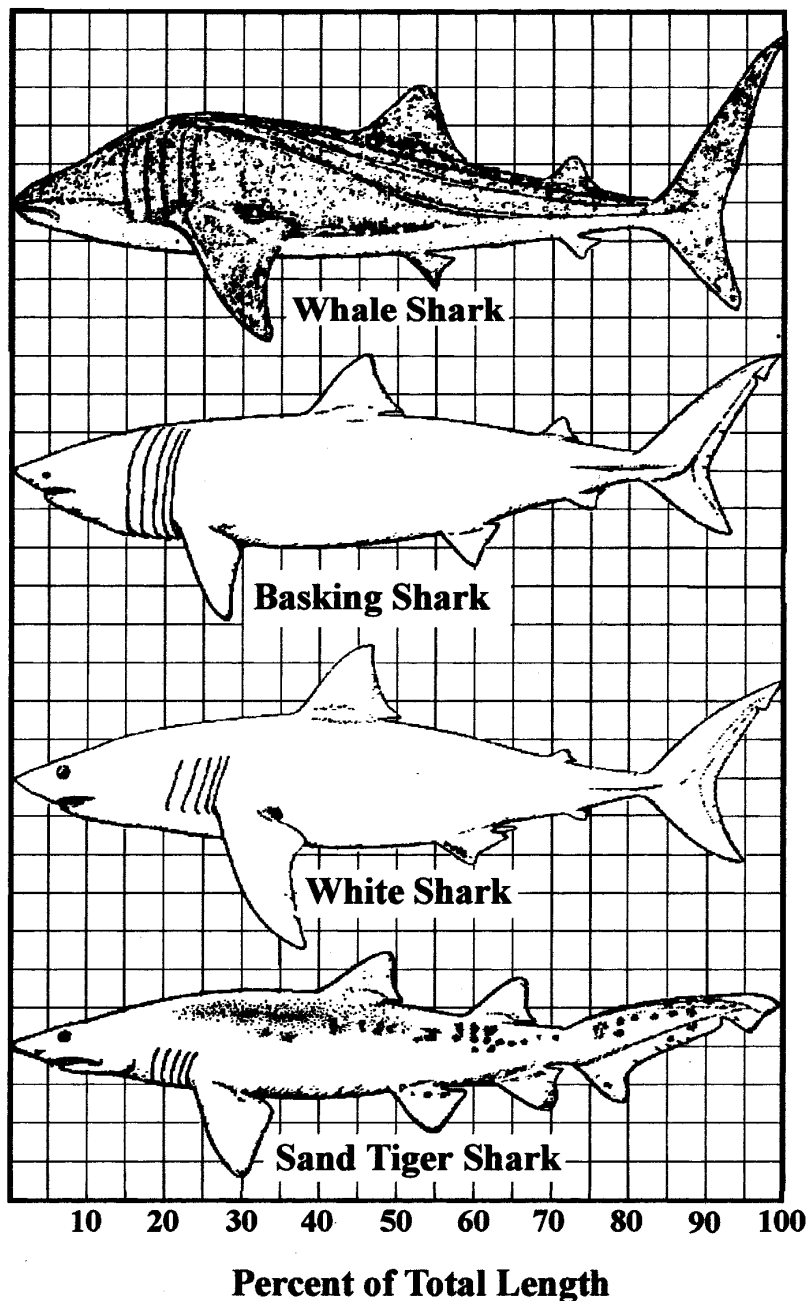
Distinctive characters: Both dorsal fins triangular and of nearly the same size as in the smooth dogfish; easily distinguished from the smooth dogfish by its sharp pointed teeth and more rearward position of the first dorsal fin.

Color: Gray-brown above becoming grayish white below; in some specimens darker spots cover the posterior section of the trunk.

Maximum size: 10 feet 5 inches. Size at birth: About 36 inches.

Range: Gulf of Maine to Florida.

Remarks: One of our most common large sharks during the summer months. The diet of this inshore species includes black drum, bluefish, butterfish, eels, flatfishes, menhaden and others; reported to travel in schools and surround other fishes.



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IMPORTANT HEALTH INFORMATION

Fish are an excellent source of protein, minerals and vitamins and play a role in maintaining a healthy, well-balanced diet. Many people enjoy cooking and eating their own catch. However, since 1982, when research began to show elevated levels of potentially harmful contaminants in certain fish and crabs in some New Jersey waters, advisories were adopted to guide citizens on safe consumption practices.

These advisories were developed with reference to federal guidelines for dioxin, PCBs, chlordane and mercury in the aquatic species in the water bodies listed in the charts. You should read both charts thoroughly before going fishing.

Dioxin, PCBs and chlordane are classified by the United States Environmental Protection Agency as probable cancer-causing substances in humans. Mercury can pose health risks to the human nervous system, particularly to developing fetuses.

To minimize exposure to these potentially harmful contaminants and to protect your health, follow the guidelines below when preparing and eating the species taken from the areas mentioned. The following charts contain advisories and prohibitions in effect for specific fish and crabs in each water body as of January 1999. (See the note on the advisory updates.)

These charts also contain information about advisories issued by the states of Pennsylvania and Delaware that cover the Delaware River and the Chesapeake and Delaware Canal. These areas are common fishing spots for New Jersey residents.

BOUND BROOK INTERIM FISH ADVISORY

In August 1998, NJDEP issued a final fish consumption advisory for the entire length of the Bound Brook and its tributaries, including New Market Pond and Spring Lake. This action follows an interim advisory issued in 1997, when as part of an EPA investigation of the Cornell-Dubler Superfund site in South Plainfield, NJ excessive polychlorinated biphenyls (PCBs) contamination was identified in the fish collected from the Bound Brook. This final NJDEP advisory warns the public **do not consume any fish** from the waters described above. This final advisory extends beyond the Bound Brook to include Spring Lake (tributary to the Bound Brook) as a second round of fish testing conducted by EPA identified level of PCBs in excess of the FDA action level. All waterways have been posted accordingly and public information on these toxic contaminant's is available in this and other publications. Should you want any additional information concerning this matter, contact the agencies listed below.

CATCH & RELEASE FISHING

Some fish have been tagged as part of ongoing scientific programs. If you capture a tagged fish, record the name and address of the tagging agency or program printed on the tag along with the number on the tag and the date and location of capture. Many programs offer small rewards for this information. For additional information on catch and release or tag and release, contact:

US Fish & Wildlife Service 1-800-448-8322 NJ Division of Fish and Wildlife 609-748-2020
American Littoral Society 1-800-8BAYKPR NJ Chapter Hudson River Fishermen's Assoc. 201-857-2400

PREPARATION AND COOKING GUIDELINES FOR FISH UNDER ADVISORIES

You can reduce the level of PCBs, dioxins and most other chemicals (but not mercury) by properly cleaning, skimming and trimming species affected by most advisories and by following the cooking recommendations below. However, do not eat prohibited fish (see charts at right).

FISH: • Before cooking, remove and do not eat, the organs, head, skin, and the dark fatty tissue along the back bone, belly and lateral line (sides). • Avoid batter or breading, because they hold in the liquid which may contain contaminant's. • Bake or broil the fish on an elevated rack that allows fats to drain to the pan below; do not fry in a pan. • After cooking, discard all liquids. • Do smaller-sized fish (within state size regulations), instead of larger fish. Smaller, younger fish have lower levels of contaminant's than larger, older fish. • Eat a variety of fish from different locations.

BLUE CRABS: Eating, selling or taking (harvesting) blue crabs from Newark Bay Complex is prohibited. The highest levels of chemical contaminant's are found in the hepatopancreas, commonly known as the tomalley or green gland. It is the yellowish green gland under the gills. If blue crabs are taken from the water bodies other than Newark Bay Complex, the following preparation techniques can be followed to reduce exposure to some contaminant's: • Do not eat the green gland (hepatopancreas). • Remove green gland (hepatopancreas) before cooking. After cooking, discard the cooking water. • Do not use cooking water or green gland (hepatopancreas) in any juices, sauces or soups.

LOCATION	SPECIES	FISH AND CRAB ADVISORIES BASED ON PCB, DIOXINS AND CHLORDANE CONTAMINATION	GENERAL POPULATION	HIGH RISK INDIVIDUAL ¹
NEW JERSEY STATEWIDE Notes: local advisories may be more specific for the same species. See below.	American eel bluefish (over 6 lbs.) striped bass* American lobsters	do not eat more than once a week do not eat more than once a week consumption advisories vary by area; see below do not eat green glands	do not eat more than once a week do not eat more than once a week consumption advisories vary by area; see below do not eat green glands	do not eat do not eat consumption advisories vary by area; see below do not eat green glands
NEWARK BAY COMPLEX This complex includes Newark Bay, Hackensack River downstream of Oradell Dam, Arthur Kill, Kill Van Kull, tidal portions of all rivers and streams that feed into these water bodies and Passaic River downstream of Dundee Dam and streams that feed into this section of the river.	striped bass* American eel* blue crab* bluefish (over 6 lbs.), white perch and white catfish all fish and shellfish* blue crab*	do not eat do not eat more than once a week do not eat or harvest ² do not eat more than once a week do not eat do not eat do not eat or harvest ²	do not eat do not eat more than once a week do not eat or harvest ² do not eat more than once a week do not eat do not eat do not eat or harvest ²	do not eat do not eat do not eat or harvest ² do not eat do not eat do not eat or harvest ²
HUDSON RIVER Hudson River includes the river downstream of NY/NJ border (about 4 miles above Alpine, NJ) and Upper New York Bay.	American eel* striped bass* bluefish (over 6 lbs.), white perch and white catfish blue crab	do not eat more than once a week do not eat more than once a week do not eat more than once a week do not eat green gland (hepatopancreas) ³	do not eat more than once a week do not eat more than once a week do not eat more than once a week do not eat green gland (hepatopancreas) ³	do not eat do not eat do not eat do not eat green gland (hepatopancreas) ³
RAITAN BAY COMPLEX This complex includes the New Jersey portions of Sandy Hook and Raritan bays, the tidal portions of the Raritan River, the tidal portions of the 1 bridge in New Brunswick and the tidal portions of all rivers and streams that feed into these water bodies.	striped bass* bluefish (over 6 lbs.), white perch and white catfish blue crab	do not eat more than once a week do not eat more than once a week do not eat green gland (hepatopancreas) ³	do not eat more than once a week do not eat more than once a week do not eat green gland (hepatopancreas) ³	do not eat do not eat do not eat green gland (hepatopancreas) ³
NORTHERN COASTAL WATERS This area includes all coastal waters from Raritan Bay south to the Barnegat Inlet	striped bass*	do not eat more than once a week	do not eat more than once a week	do not eat
CAMDEN AREA See additional advisories below This area includes Strawbridge Lake, Pennsauken Creek (north and south branches) Cooper River and its drainage, Newtom Lake, Stewart Lake and Newtom Lake.	all fish, shellfish and crustaceans*	do not eat	do not eat	do not eat
LOWER DELAWARE RIVER & BAY Lower Delaware River and Delaware Bay. See additional advisories on other chart. Delaware River from Yardley, PA to the PA/DE border, includes all tributaries up to the head of tide Delaware River from the DE/PA border south to C & D Canal Delaware River from the C & D Canal to the mouth of Delaware Bay	American eel striped bass* channel catfish* All finfish striped bass White catfish American eel White perch	do not eat do not eat more than one meal a month do not eat more than one meal every two months do not eat For species listed do not eat more than one 8-oz. meal per year	do not eat do not eat more than one meal a month do not eat more than one meal every two months do not eat For species listed do not eat more than one 8-oz. meal per year	do not eat do not eat more than one meal a month do not eat more than one meal every two months do not eat For species listed do not eat more than one 8-oz. meal per year

* Selling any of these species from designated water bodies is prohibited in New Jersey.

¹ High risk individuals include: infants, children under the age of 15, pregnant women, nursing mothers and women of childbearing age. They are advised not to eat any such fish or crabs taken from the designated regions since these contaminant's have a greater impact on the developing young.

² No harvest means no taking or attempting to take any blue crabs from these waters.

³ Interim recommendation based on research showing elevated levels of chemical contaminant's in the blue crab hepatopancreas (green gland).

⁴ The State of Pennsylvania and the State of Delaware do not differentiate advisories between General Population and High Risk Populations, but do recognize that certain sub-populations may be at a higher exposure and should take additional steps when consuming fish under their advisories. (issued 6/99)

AMERICAN LOBSTERS: A recent regional study of the American lobster has shown elevated levels of PCBs, cadmium and dioxin in the green gland (tomalley or hepatopancreas). This finding is consistent with other lobster studies conducted in waters of the northeastern coastal states. Therefore, consumers are advised to remove and not consume the green gland of all American lobsters caught from Maine to NJ, as well as avoid products made from the lobster green gland. This advisory does not apply to other edible portions of the lobster.

ADVISORY UPDATES

Advisories on fish consumption can change to protect public health as new data are collected and reviewed by state and federal agencies. Also, these agencies on occasion offer different advice for fish consumption. New Jersey is working with other agencies and is committed to developing the most useful, consistent advice possible. For the latest information, call one of the numbers below.

A GUIDE TO MERCURY HEALTH ADVISORIES FOR EATING FISH FROM NEW JERSEY FRESHWATERS

Recent research on largemouth bass and chain pickerel prompted the Department of Environmental Protection and the Department of Health & Senior Services to issue consumption advisories due to elevated levels of mercury found in these species. Mercury, a toxic metal, accumulates in fish tissue through the food chain. Since larger fish feed on smaller fish, mercury collects in their tissue as well, so that larger fish at the top of the food chain—such as largemouth bass and chain pickerel—are more likely to have elevated levels of mercury.

It is very unlikely that the levels of mercury found in these fish would cause immediate health effects. However, repeated consumption of contaminated fish poses potential health effects. Of particular concern is the potential effect on the nervous system of developing fetuses.

Although data show elevated levels of mercury in certain fish, it does not affect the quality of the waters used for drinking and bathing.

The charts provide general and specific information on the statewide and the Pinelands area advisories. The Pinelands area covers much of the seven counties in the southeastern portion of the state: Atlantic, Burlington, Camden, Cape May, Gloucester, Gloucester and Ocean counties. Some but not all of the water bodies covered under these general advisories have been tested. More testing is under way.

See recently issued advice below by the federal government regarding mercury in saltwater fish.

FEDERAL ADVICE ON MERCURY IN SALTWATER FISH

In the September 1994 issue of FDA Consumer magazine, the US Food and Drug Administration (FDA) issued advice on eating shark and swordfish based on elevated levels of mercury contamination. Pregnant women and women of childbearing age who may become pregnant are advised by the FDA to limit their consumption of shark and swordfish to not more than one 7-ounce meal a month. For the general population, the FDA advises that consumption of shark and swordfish be limited to no more than one 7-ounce meal per week.

Some evidence suggests, however, that shark and swordfish should be consumed less frequently. This information is based on a US Environmental Protection Agency June 1994 report and on average mercury levels in shark and swordfish as reported by the FDA. Based on this evidence, women of childbearing age would be advised to eat no more than one 8-ounce portion of shark or swordfish every two months. The general population would be advised to eat shark no more than twice a month and swordfish no more than three times a month. Children under seven would be advised not to eat shark and swordfish at all.

If you would like further information, please call the New Jersey Department of Health & Senior Services at (609) 588-3123. You may also consider discussing this matter with your family physician.

FOR MORE INFORMATION

Some of the advisories listed herein may be changing. For the most up-to-date information, please contact:

NJ Department of Environmental Protection
Division of Science & Research (609) 984-6070
Division of Fish & Wildlife (609) 748-2020

NJ Department of Health & Senior Services
Consumer & Environmental Health Services (609) 588-3123

For background information on the advisories in the chart,
local libraries can refer you to NJ Administrative Code 7:25-14.18A

For information on Delaware Health Advisories, contact:
DE Department of Health and Social Services (302) 739-5617

For information on New York health advisories, contact:
NY Department of Environmental Conservation (518) 457-6178

For information on Pennsylvania health advisories, contact:
PA Department of Environmental Resources (717) 787-9633

For information on health advice regarding saltwater fish, contact:
US Food and Drug Administration Seafood Hotline at (800) FDA-4010

CONSUMPTION ADVISORIES FOR LARGEMOUTH BASS AND CHAIN PICKEREL FROM NEW JERSEY FRESHWATERS

LOCATION	SPECIES	ADVISORY
NEW JERSEY STATEWIDE For all freshwater bodies (except those listed below)	bass and pickerel	HIGH RISK INDIVIDUAL. do not eat more than once a week
PINELANDS AREA For all water bodies (except those listed below)	bass and pickerel	do not eat more than once a month do not eat
SITE-SPECIFIC PINELANDS		
Lake Lenape	bass pickerel	do not eat more than once a month do not eat more than once a week do not eat more than once a month do not eat more than once a week
Mirror Lake	bass pickerel	no restrictions do not eat more than once a month do not eat more than once a week
Stafford Forge	bass pickerel	do not eat more than once a month do not eat more than once a week do not eat more than once a month do not eat more than once a week
Wading River	bass pickerel	do not eat more than once a month do not eat more than once a week
SITE-SPECIFIC STATEWIDE		
Assumpink Creek	bass pickerel	no restrictions do not eat more than once a week do not eat more than once a month do not eat
Atlantic City Reservoir - No Fishing/Allowed	bass pickerel	do not eat do not eat
Big Timber Creek	bass pickerel	no restrictions do not eat more than once a week do not eat more than once a month do not eat
Canisteer Reservoir	bass pickerel	do not eat more than once a week do not eat more than once a month do not eat
Clinton Reservoir	bass pickerel	do not eat more than once a week do not eat more than once a month do not eat
Cranberry Lake	bass pickerel	do not eat more than once a week do not eat more than once a month do not eat
Crosswicks Creek	bass pickerel	no restrictions do not eat more than once a week do not eat more than once a month do not eat
Crystal Lake (Burlington County)	bass pickerel	no restrictions do not eat more than once a week do not eat more than once a month do not eat
Delaware River (Easton to Trenton)	bass pickerel	no restrictions do not eat more than once a week do not eat more than once a month do not eat
Delaware River (Trenton to Camden)	bass pickerel	no restrictions do not eat more than once a week do not eat more than once a month do not eat
See additional advisories above	bass pickerel	do not eat more than once a week do not eat more than once a month do not eat
Lake Carasajlo	bass pickerel	no restrictions do not eat more than once a week do not eat more than once a month do not eat
Lake Hopatcong	bass pickerel	no restrictions do not eat more than once a week do not eat more than once a month do not eat
Manasquan Reservoir	bass pickerel	do not eat more than once a month do not eat more than once a week do not eat more than once a month do not eat
Merrill Creek Reservoir	bass pickerel	do not eat more than once a week do not eat more than once a month do not eat
Monksville Reservoir	bass pickerel	do not eat more than once a week do not eat more than once a month do not eat
Rockaway River	bass pickerel	do not eat more than once a week do not eat more than once a month do not eat
Round Valley Reservoir	bass pickerel	no restrictions do not eat more than once a week do not eat more than once a month do not eat
Shadlow Lake	bass pickerel	no restrictions do not eat more than once a week do not eat more than once a month do not eat
Spruce Run Reservoir	bass pickerel	no restrictions do not eat more than once a week do not eat more than once a month do not eat
Swartswood Lake	bass pickerel	do not eat more than once a week do not eat more than once a month do not eat
Union Lake	bass pickerel	do not eat more than once a month do not eat more than once a week do not eat
Wanaque Reservoir	bass pickerel	do not eat more than once a week do not eat more than once a month do not eat
Wilson Lake	bass pickerel	do not eat more than once a week do not eat more than once a month do not eat
Woodstown Memorial Lake	bass pickerel	no restrictions do not eat more than once a week do not eat more than once a month do not eat

1 One meal is defined as an eight-ounce serving.

• High risk individuals are pregnant women, women planning pregnancy within one year, nursing mothers and children under five years old.

Boat Ramp Maintenance Permit

Any vehicle used to transport or launch a vessel or water conveyance on the following WMAs must have affixed to the lower corner of the driver's side rear window a Boat Ramp Maintenance Permit or applicant's copy from a valid hunting, fishing or trapping license. Boat Ramp Maintenance Permits may be purchased for a fee of \$15.00 from division offices at the Pequest Trout Hatchery Natural Resource Education Center, Northern, Central and Southern Region, Nacote Creek, Bivalve, Tuckahoe, Lebanon and Trenton offices. Boat Ramp Maintenance Permits may also be purchased through the mail from N.J. Division of Fish and Wildlife, PO Box 400, Trenton, N.J. 08625, Att: Boat Ramp Permit.

- | | |
|-------------------------------|---------------------|
| 1. Round Valley Angler Access | 6. Mad Horse Creek |
| 2. Kingwood | 7. Union Lake |
| 3. Assunpink | 8. Menantico Ponds |
| 4. Dennis Creek | 9. Prospertown Lake |
| 5. Tuckahoe | |

PUBLICATIONS AVAILABLE

The following publications are available by writing:

Nacote Creek

Research Station Publications

PO Box 418 • Port Republic, NJ 08241

- Shellfish Growing waters Classification Charts. Send postage stamps in the amount of \$0.77. Note: this publication is available free at any shellfish license agent.
- *NJ Reef News* leaflet is available free. Sent postage stamps in the amount of \$0.55 to address above.
- *New Jersey Wildlife Profiles* Vol 1. This full color, 112 page book features wildlife art by Carol Decker with species profiles, reprinted from *NJ Outdoors* magazines. Available at the Trenton or Pequest offices for \$23.95, or send check or money order for \$28 to Profiles, NJ F&W, PO Box 400, Trenton, NJ 08625-0400. For more information call 609-292-9450.
- Party and Charter Boat Directory. Send postage stamps in the amount of \$0.77.
- *A Guide to Fishing and Diving New Jersey Reefs*. See this Digest, page 15, for details.

Clean Vessel Act Program

by John F. Makai, Supervising Biologist

In 1992, the Clean Vessel Act (CVA) was passed by Congress to help reduce pollution from vessel sewage discharges. Sewage from boats degrades coastal water quality leading to closure of shellfish beds and swimming areas. Organic matter in sewage is decomposed by bacteria which consume oxygen, resulting in less oxygen for fish and other aquatic animals.

Under U.S. Coast Guard regulations, if a boat has an installed toilet it will be required to have a certified Marine Sanitation Device (MSD). The sewage disposal system selected will depend on boat design, space configuration and electrical system. Any MSD selected must be certified by the U.S. Coast Guard.

Recreational boaters can select a treatment device, holding tank or a combination of the two. Equipment options include manual, electrical or vacuum toilets; pipes or hoses; and flexible or rigid tanks. Owners of smaller crafts can choose less costly portable toilets.

Direct discharge of untreated waste into waters within three miles of shore is prohibited, unless operating under a waiver granted by the U.S. Coast Guard. Sewage from holding tanks and portable toilets must be pumped out at shoreside marinas. To date, the Division has received 152 applications from marinas inter-

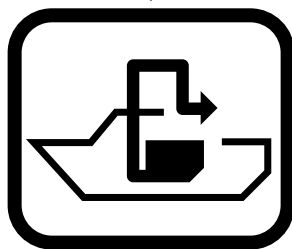
ested in receiving federal funds administered through the U.S. Fish and Wildlife Service, to install a pumpout station and/or dump station.

In addition to the 115 marinas that have completed construction, there are approximately 40 more marinas coastwide that already provide sewage pumpout services. CVA participating marinas can charge a pumpout fee not to exceed \$5.00 – a small price to pay for preserving the water quality of our estuaries. A single overboard discharge of human waste can be detected in up to a one square mile area of shallow, enclosed water and close shellfish beds for harvesting.

The Borough of Seaside Park again will be operating a sewage pumpout boat in Barnegat Bay. The "Circle of Life" will be available to pump out recreational boats – free of charge – Friday through Monday. During

the 1999 boating season, 557 boaters took advantage of this service and prevented over 7,500 gallons of sewage from entering our coastal waterways.

For information on the location of pumpout and/or dump stations in New Jersey waters, contact the Division of Fish and Wildlife's Office of Information and Education at 609-748-2056 or the Marine Trades Association at 732-206-1400 or 1-800-ASK-FISH. Also, look for CVA information on the Internet – visit the Division's web site at: www.state.nj.us/dep/fgw.



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