



New Jersey Department of
Environmental Protection

New Jersey



NEW JERSEY DIVISION OF
Fish and Wildlife

Fish & Wildlife

D I G E S T

2005 Marine Issue

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A Summary of Rules & Management Information
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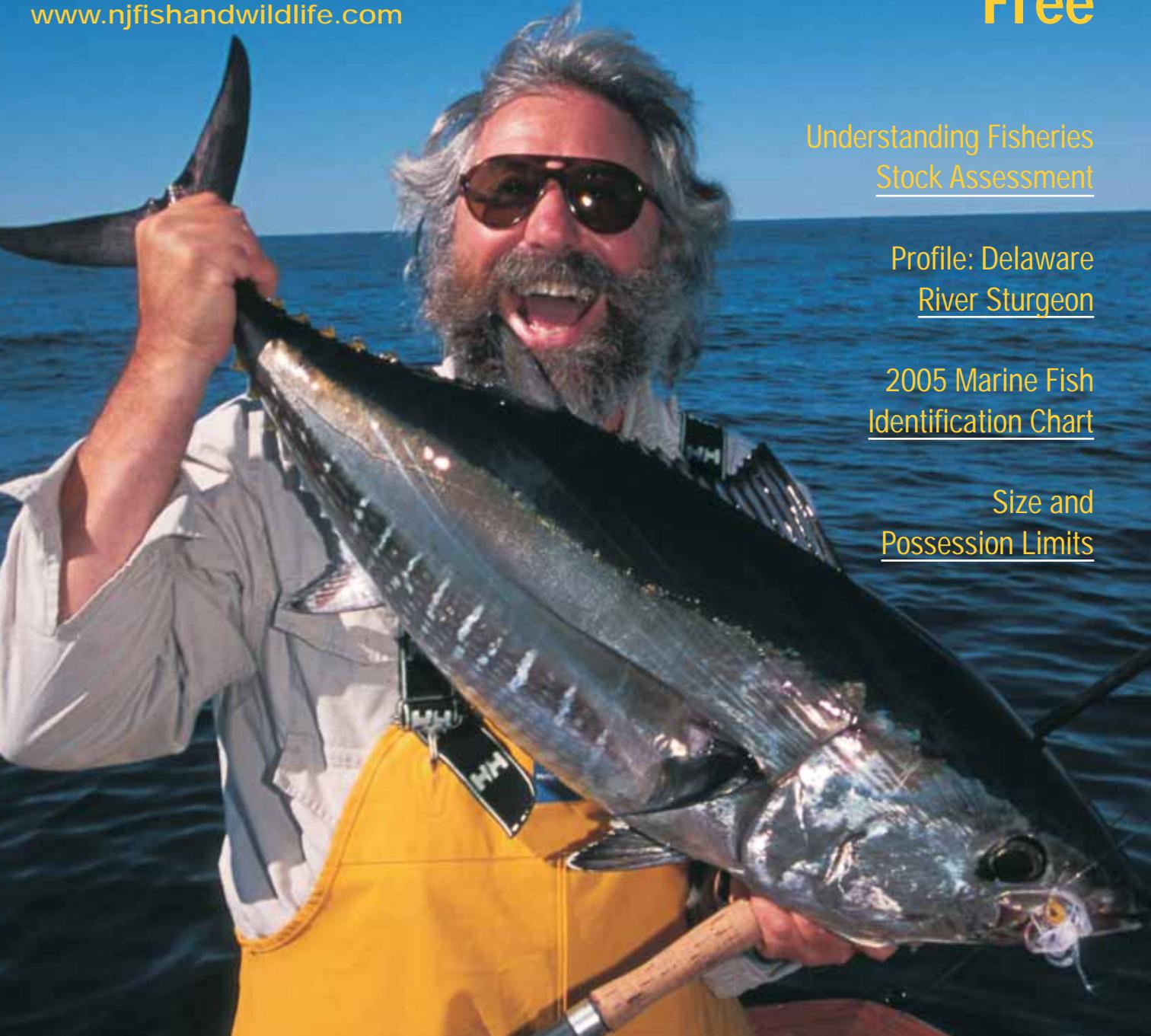
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Understanding Fisheries
Stock Assessment

Profile: Delaware
River Sturgeon

2005 Marine Fish
Identification Chart

Size and
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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.

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Cover image, bluefin tuna caught on fly, by Sam Talarico, Photographer.

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Our Mission

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

Our Goals

- 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.
To educate New Jerseyans on the values and needs of our fish and wildlife and to foster a positive human/wildlife co-existence.
To maximize the recreational and commercial use of New Jersey's fish and wildlife for both present and future generations.

2 Commissioner's & Director's Messages

23 Health Advisories: Fish & Crabs

32 Telephone Directory

fishing regulations
8 Marine Fish Regulations

10 Shellfish Regulations

11 Seasons, Minimum Size & Possession Limits Chart

12 NJ Marine Fish Identification Chart

14 Shellfish & Non-Commercial Crab Pot License Info

15 Crab Pot/Trot Line License Application

fish features
3 Exercise Caution Near Shellfish Leases

4 Understanding Fisheries Stock Assessment

6 New Jersey's Clean Vessel Act Program

16 Profile: Delaware River Sturgeon

20 Counting the Fish in the Ocean

31 DEP's New Artificial Reef Initiative

get hooked
24 Skillful Angler Awards Program

25 Free Fishing Days

26 Outdoor Skills Workshop for Women

28 Governor's Surf Fishing Tournament

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COMMISSIONER'S MESSAGE

By *Bradley M. Campbell*

Every year, more than half a million anglers head for the waters off New Jersey's coastline and bayshores to experience saltwater fishing at its finest. At the Department of Environmental Protection, we find it rewarding that our state enjoys a faithful following of sportfishing enthusiasts. But rather than rest on our laurels, we are doing even more to enhance the recreational value of our ocean resources and help preserve the sporting traditions that contribute to the Garden State's economy.

This year, a special bonus program for striped bass and plans to enhance New Jersey's impressive network of artificial reefs are among key initiatives intended to build upon the significant action we already have taken to strengthen protection of our ocean waters and coastal resources, improve public access and foster better stewardship of our marine environment.

Come September, anglers fishing for striped bass in New Jersey's marine waters will get the chance to keep a third striper per day, an opportunity offered by no other state on the East Coast.

Under current striped bass recreational size limits set by the New Jersey Legislature last fall to avoid a federally imposed moratorium on the fishery, anglers can take one fish at 24 inches to less than 28 inches and one fish at 34 inches or greater. This year's Striped Bass Bonus Program will allow anglers to keep a third fish at 28 inches or greater.

The Striped Bass Bonus Program is free of charge, and more than half of the 20,000 bonus cards will be distributed to anglers through a lottery. The program has enjoyed enormous

popularity in the past, and we believe the coming season, set to begin on or around Sept. 1, will be no exception. To get all the details on the bonus program, turn to the striped bass section of the Marine Fish Regulations.

Fishermen, deep-sea divers and boaters are sure to applaud efforts to protect and enhance shore recreation under Acting Governor Richard J. Codey's 2005 Coastal Initiative. In addition to reef enhancement, the Governor's initiative includes easier public access to the oceanfront and bays, new public boat ramps for fishermen in the Oyster Creek and Cape May areas and more public and private boat slips at New Jersey's marinas.

Elsewhere in this edition, you can learn about the DEP's efforts to enhance our artificial reef sites through the acquisition, cleaning and deployment of three decommissioned ships at different sites along the Jersey coast in 2005.

The new fishing grounds that develop around reefs are a boon to anglers. In fact, one out of every five fish reeled in by recreational anglers in New Jersey's ocean waters during 2000 was caught on a reef site. Divers also welcome the new wrecks and other underwater attractions provided on the reefs. Anglers and divers using reefs generate \$50 million each year for coastal tourism and fishing industries.

Under the 2005 Coastal Initiative, the state also will strengthen standards and regulations that protect the coastal ecosystem, expand protection for coastal wildlife and wildlife habitats and boost New Jersey's tourism, seafood and maritime industries.

Like you, we treasure the Jersey shore and all it has to offer. We intend to remain focused on protecting and enhancing these resources. They represent a legacy that will enhance the quality of life in New Jersey for many generations to come.



DIRECTOR'S MESSAGE

By *Marty McHugh, Director*

New Jersey's 127 miles of shoreline and wealth of marine resources offer an outstanding variety of recreational opportunities for residents and visitors alike.

With the help of many partner organizations and volunteers, the Department of Environmental Protection's Division of Fish & Wildlife works hard to encourage the public to enjoy the state's marine resources and to use them responsibly. This was apparent to me as I walked the beaches of Island Beach State Park during the annual Governor's Surf Fishing Tournament last fall.

Every October, hundreds of seasoned surf anglers and novices flock to the beach with their families and friends to participate in the popular tournament, created to foster an appreciation of our marine resources and their conservation.

The Tournament Committee comprises representatives from the divisions of Fish & Wildlife and Parks and Forestry, Jersey Coast Anglers Association, New Jersey State Federation of

Sportsmen's Clubs and the New Jersey Beach Buggy Association. Staff and volunteers work together year round to ensure an enjoyable event.

The Surf Fishing Tournament is just one of the marine education, conservation and recreation events offered in New Jersey. For example, Parks and Forestry professionals conduct free surf-fishing workshops and many other environmental education programs at Island Beach. At Fish & Wildlife's Sedge Island Natural Resource Education Center, teachers and students can learn about ecosystems, outdoor ethics and the management of resources for recreational activities such as fishing, crabbing and clamming. Becoming an Outdoors-Woman and Hooked On Fishing Not On Drugs also are excellent programs, which owe much of their success to volunteer instructors from partner organizations.

Whether you're interested in meeting new people or learning a new skill, consider taking advantage of these opportunities to experience New Jersey's great outdoors. Or, volunteer some time with an organization. Your involvement can help ensure a healthy marine environment in the future.

For more information about our marine conservation programs and those offered by partner organizations, visit www.njfishandwildlife.com.





photo: Sam Talarico

Striped bass fishing is popular among New Jersey anglers.

Exercise Caution when Fishing near Shellfish Leases in Coastal Bays

By Dr. Gustavo W. Calvo, Senior Fisheries Biologist

Throughout New Jersey's coastal bays, shellfish harvesters lease areas for the cultivation of hard clams and oysters. New Jersey first began leasing areas for shellfish cultivation in the late 1800s to early 1900s. The practice continues today and is administered by the New Jersey Department of Environmental Protection's Division of Fish and Wildlife, Bureau of Shellfisheries.

Most individual shellfish lease parcels are between two acres to five acres delineated by corner markers made of cedar poles or PVC stakes. Typically, lease parcels are concentrated in defined areas and not scattered throughout the bays. Most leaseholders use these parcels to plant juvenile

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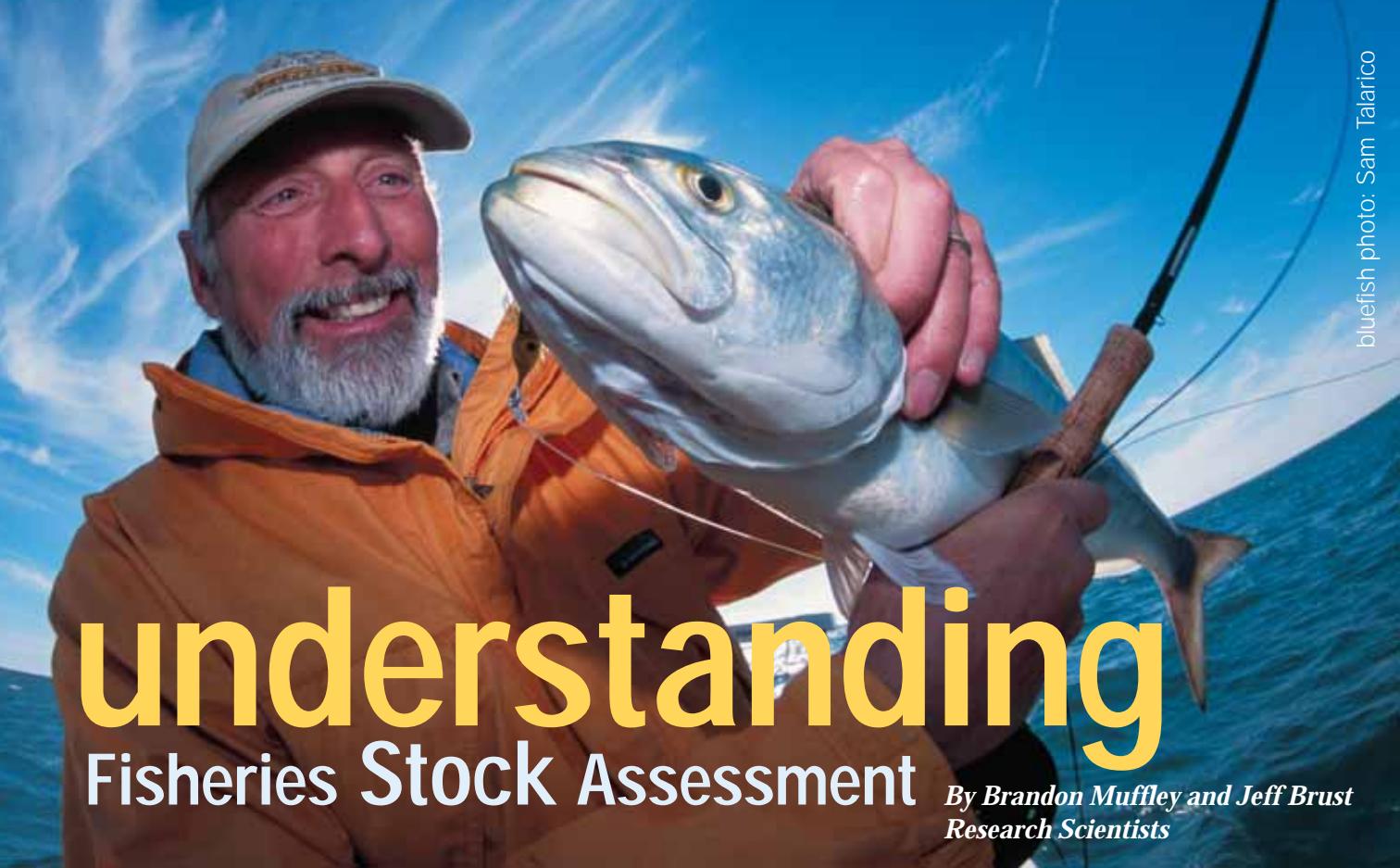
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- Mays Landing: 609.407.1711
- Freehold: 732.358.1400
- Woodbridge: 732.621.8400
- East Hanover: 973.428.0889



understanding

Fisheries Stock Assessment

By *Brandon Muffley and Jeff Brust*
Research Scientists

As the sun rises on another muggy summer morning, an eager crew of marine biologists load their survey boat with nets, measuring boards, buckets and survey meters and head out to sample fish populations in the Delaware River. After disembarking on a small section of undeveloped beach along the New Jersey shoreline, the biologists cast a 100-foot net to try to catch various creatures inhabiting the shallow waters near the beach, particularly juvenile striped bass. Pulling the net onto the beach, the biologists find hundreds of small fish such as bay anchovy, bluefish, white perch, herring and the targeted species - striped bass.

Now the activity really picks up as biologists begin to sort the catch by species, count each fish and measure the lengths of some of the fish. This work is just the beginning of the stock assessment process, generally done to estimate the number of animals in a particular population. Although fishery surveys are the heart of stock assessments, the process is much more complex than counting the number of fish in a net.

Today, assessment biologists must have an understanding of sampling methods, species life history, recreational and commercial fisheries, various assessment models and fisheries management strategies. Fisheries management requires cooperation among numerous state agencies, the federal government, fisheries managers, biologists, anglers and the public.

The first step in stock assessment is compiling the information about the species being assessed, often from several sources and numerous states. Fish species data is grouped into two categories: fishery-dependent and fishery-independent information. Fishery-dependent data is collected on fish caught in the recreational and commercial fisheries and can include information on the number of fish caught and kept; the number caught and released; fishing effort; socioeconomic data; and the age, length and weight of individual fish. The Striped Bass Bonus Program and Striped Bass Volunteer Angler Survey are examples of fishery-dependent data collected by the New Jersey Department of Environmental Protection's Division of Fish and Wildlife. Scientists collect fishery-independent data through surveys that are not associated with a recreational or commercial fishery. This data includes juvenile abundance, adult abundance, sex information, fish age and environmental data. The ocean trawl survey (see page 20) and the striped bass juvenile seine survey in the Delaware River are just two examples of the numerous fishery-independent studies conducted by Fish & Wildlife.

Both fishery-dependent and fishery-independent data provide scientists with information on species life history, abundance and fishery activity. Examples of life history data include growth rate, age when sexual maturity is reached, number of eggs produced by mature females, and the number of fish which die of natural causes in a given

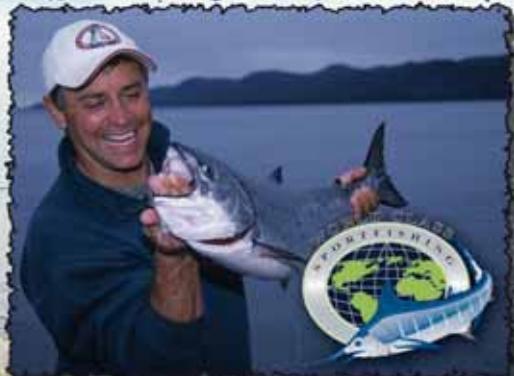
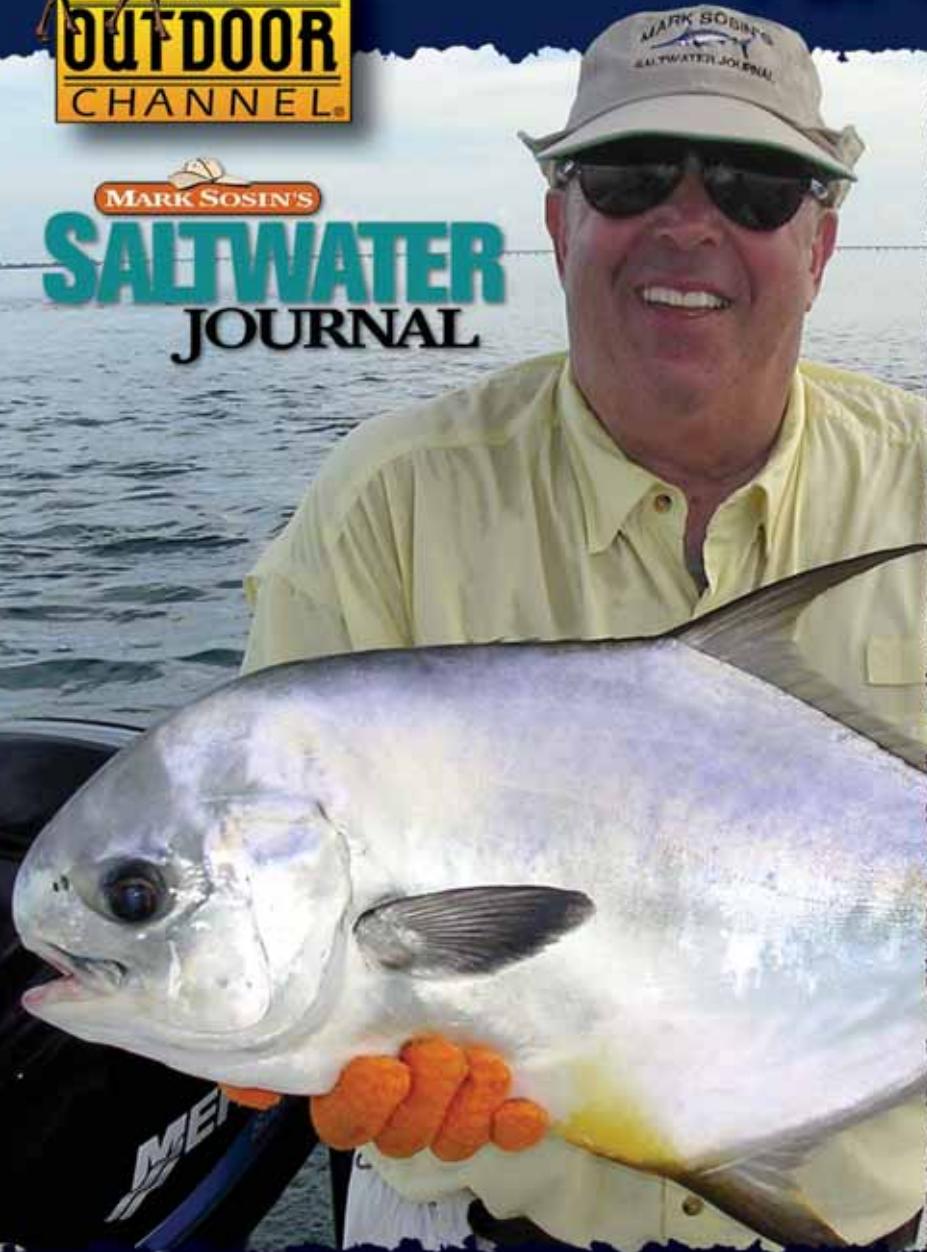
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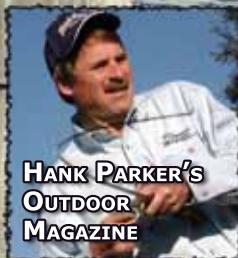
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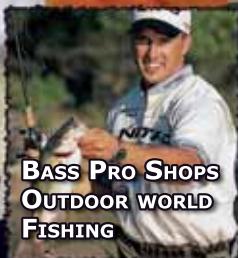
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NEW JERSEY'S Clean Vessel Act Program



Makes Marina Pumpout Station Directory

By Al Ivany, Principal Biologist

Recreational boaters can now locate marinas offering sewage pump-out services on a new interactive Web site created by the New Jersey Clean Vessel Act Program. The interactive map server allows Web users to view the pump-out station directory online and create customized maps unique to their favorite boating areas.

The Rutgers' Center for Spatial Analysis created the Web site in conjunction with the Clean Vessel Act Steering Committee. It was designed to make finding a pump-out station easier and less time con-

suming for boaters and is part of an ever-expanding educational effort headed by the Steering Committee. Users of the site can zoom in and out, change the spatial extent, toggle features on and off and search pump-out sites for more information. The Global Positioning System location of each pump-out station is listed, as is the business name, hours of operation, phone number, largest vessel depth, depth at pump out, VHF frequency, fee and ramp access.

Information other than pump-out station locations is available on the Web site. Users can view open-

space areas, seagrass beds, shellfish water classifications, no-discharge areas and coastal and nautical maps, making the site interesting for boaters and non-boaters alike. The user-friendly Web site is updated as new information is received.

To access the New Jersey Boaters Pumpout Station Guide, visit <http://www.dbcrrsa.rutgers.edu/im/s/pumpout/viewer.htm>.

Please remember: Be a safe boater, and keep New Jersey's waters clean - use pumpouts! 



photo: Ben Edmonson

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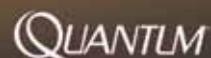
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