



Take me fishing!

The memories will last a lifetime.

New Jersey's FREE Freshwater Fishing Days

June 4 and Oct. 22, 2022

NJ Division of Fish and Wildlife has split the Free Fishing Days. The first will be held on June 4, 2022 during the summer as is traditional. This day is part of the National Fishing and Boating Week which highlights the importance of recreational boating and fishing to enhance peoples' quality of life and to preserve our country's natural beauty. The second Free Fishing Day will occur after fall trout stocking on October 22, 2022 to bring attention to this great fishing opportunity. On these two days, only residents may fish New Jersey's public fresh waters without a license or trout stamp. All other regulations, including size and daily catch limits, remain in effect.

Trout in the Classroom (TIC)

Trout in the Classroom (TIC) is a science-based program that teaches children the importance of coldwater conservation through a hands-on learning approach. More than 40,000 New Jersey students participate in the TIC program annually.



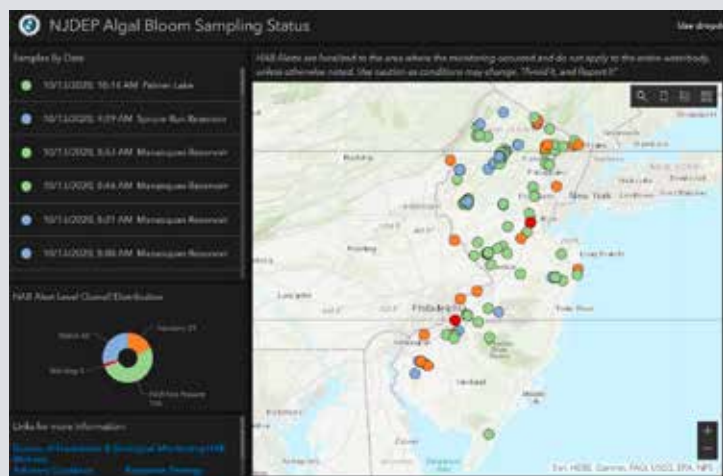
Schools receive trout eggs in October from our Pequest Trout Hatchery. Students hatch and raise the trout, monitor water quality, learn fish biology, anatomy and much more as part of this cross-curricular, hands-on format. At the end of the school year students release their fish into approved streams.

Trout in the Classroom is an exciting, inexpensive program enlivening year-round curricula nationwide. For more information about the TIC program, visit NJFishandWildlife.com/tic.htm.

Harmful Algal Bloom – Status Check

Stay up to date on the status of Harmful Algal Blooms (HABs) in New Jersey waters with the NJDEP Algal Bloom Sampling Status site. The easy, interactive dashboard provides current sampling results, waterbody locations and important advisory information at your fingertips. Also included are links to important HAB-related resources and a place to report a suspected HAB.

Information is updated daily at noon. Stay informed about the presence of potentially harmful algal blooms to protect you and your pets. Visit nj.gov/dep/hab/ and click on the map in the center.



Your Stream, Your Watershed and Ways to Protect it

By **Scott Collenburg**,
Senior Fisheries Biologist

It is the unfortunate reality that aquatic ecosystems are one of the first to fall victim to poor land use practices and climate change. Due to continued human impacts, we know that these fragile habitats will continue to degrade unless wise decisions are made. When left unprotected, vital fish habitat is severely altered, often exceeding the biological tolerances of sensitive species.

Increases in water temperature, flood and drought frequency plus the introduction of pollutants are characteristics of these impaired systems. Whether climatic forces or a localized disturbance induces the degradation of water quality and habitat, these changes can be subtle at first and virtually invisible unless monitored closely. This was the impetus for the New Jersey Division of Fish and Wildlife to implement a project aimed to identify coldwater refugia for native Brook Trout, New Jersey's only native trout.

Like their counterpart from Europe, the Brown Trout, their need for cold, clean water and sensitivity to change makes them the ultimate bioindicator, like a canary in the coalmine. This is why in 1968, Fish and Wildlife's Bureau of Freshwater Fisheries initiated the process of identifying and classifying New Jersey waters according to their suitability to support trout. Five years later, a classification system for New Jersey waters was developed.

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Although already in use by various programs within N.J. Department of Environmental Protection, Fish and Wildlife's classification system was formally recognized in 1981 under the state's then newly adopted *Surface Water Quality Standards*. The Standards recognize these critical indicators of high-quality habitats, affording various protections to waters of exceptional ecological significance. New Jersey's naturally reproducing trout populations have been routinely monitored ever since.

Identifying Refuge and Impacts

As elevated water temperatures are a significant factor leading to the decline of native Brook Trout populations, monitoring efforts in recent years have focused on continuous temperature monitoring. Between 2018 and 2020, our Freshwater Fisheries staff has monitored summer temperatures in most locations that continue to support Brook Trout. Various metrics were employed to help understand thermal regimes and resiliency to warming of these areas.

As climate change projections predict increasing air temperatures, the effect on our state's coldwater resources is of particular concern. However, the results from this study paint a more optimistic picture for the future of Brook Trout than one might assume. Streams do not warm uniformly across space, as groundwater influences stream temperatures in headwater streams where Brook Trout are primarily found. Predicting future strongholds for Brook Trout will rely heavily on understanding the dynamics of groundwater inputs and stream temperature on a fine spatial scale.

The good news is, not all coldwater habitats should disappear, as some large-scale climate and stream models have predicted. However, this places urgency on the Division of Fish and Wildlife and our other partners throughout the state to identify and protect locations of coldwater refugia.

While temperature is considered one of the main determinants of fish distribution, it is only one piece of the puzzle in understanding how human impacts can influence the survival of our aquatic friends. Fish and Wildlife has documented temperature spikes indicative of stormwater impacts at 31 individual sites with this monitoring network. In 2019, it was determined that these patterns were significantly related to land use characteristics associated with human development. These relationships are no surprise, but we may not think about, or see, how these events affect fish.

What Do These Impacts Mean for Fish?

For instance, what happens to trout and other coldwater fish residing in a stream when a summer thunderstorm pelts the hot pavement and flows directly into your favorite trout stream? While fish have fins and can seek refuge, in many cases this opportunity does not exist due to the widespread magnitude of a warming event. This example also

highlights how fish are often uniquely vulnerable to negative impacts because they are confined to aquatic habitats where movement to alternative habitats is more restricted.

Continuing the rainwater example, when Brook Trout are exposed to temperatures above 68°F, they undergo stress that can be measured at a cellular level that can ultimately affect their survival. Chronic exposure to elevated temperatures can have drastic impacts on trout and other coldwater populations. This emphasizes the importance of a strong groundwater influence in the face of rising air temperatures and the groundwater's ability to provide a more consistent cold temperature regime, helping buffer trout from the harmful effects of temperature increase.

Temperature is merely one of the many concerns of stormwater. You may be asking, what else is being carried by stormwater? That's an excellent question, but the answer is confounded based on the location, timing and length of the storm. The best-designed stormwater systems to accommodate runoff aim to make the water percolate back into the aquifer or to follow the sewer conduit system leading to a wastewater plant prior to being released into the environment. Unfortunately, most stormwater systems lead directly into streams and lakes. A host of scientists are researching these impacts to understand what is happening to fish exposed to the cocktails of pollutants or toxicants that are washed into streams with each rain event, from which fish have no means to escape.

The effects of aquatic pollution are seemingly endless, from acute mortality, to developmental issues impacting sensory organs, not to mention the impacts on humans and other wildlife when these fish are consumed. Most trout anglers can relate to the sensitivity of aquatic invertebrates such as mayflies and understand the species' role as prey for trout, both of which are impacted by road runoff. Chloride from salt used to de-ice roads (which seems to be increasing in frequency) can wash into streams, rivers, and lakes, thereby inhibiting fish spawning.

This all sounds dire and daunting, especially at the individual level. So, what can you do as an angler, resident or neighbor looking to foster and share a healthier environment? No doubt a few questions and even some anxiety begins to bubble to the surface of our consciousness as we consider all the potential and reoccurring impacts.

Property owners can help by considering how water flows over their property and where it goes. Stormwater runoff is indeed created by surfaces that do not allow water to infiltrate into the ground, such as pavement and even highly compacted earthen surfaces. These are commonly referred to as impervious surfaces. Guides are available to help homeowners in developing a plan for their property, including recommendations such as rain gardens, rain barrels and installation of permeable hardscapes. An N.J. DEP Green Infrastructure website is found at <https://www.nj.gov/dep/gi/>.

Here are additional actions you can take to encourage others to become more knowledgeable and to help minimize impacts on your local waterway:



Senior Biologist Scott Collenburg checking a stream temperature logger.

- Use fertilizer and pesticides sparingly and never before a rainstorm.
- Mulch grass clippings into your lawn as a natural fertilizer instead of bagging them.
- Use a low phosphorous organic fertilizer.
- Minimize use of salt on driveways and walkways.
- Never dump anything down a storm drain.
- Maintain a *wide*, unmowed natural vegetative buffer (or mow only once a year) along any waterway, helping to slow rainwater runoff so it can permeate into the ground, trapping excess fertilizer and sediment from your lawn.
- Plant shade trees along waterways to reduce solar input to keep the water cool.
- Store compost, trash, firewood and other material away from any waterway.
- Maintain your car and prevent oil leaks that may travel onto the street and into the nearest storm drain.
- Choose to wash your car either at a car wash with a water reclaim system or at home while parked on the lawn, gravel or another *permeable* surface.

Take Action to Support Watershed Management

- NJDEP offers tools for teachers to integrate watershed management into their classroom and include free classroom presentations on water pollution through the Watershed Ambassadors Program, Project WET (Water Education for Teachers), and WaterSense programs for water conservation, stormwater lessons, and publications. Visit: <https://www.nj.gov/dep/watershedrestoration/outreach.html>.
- Local watershed associations or groups are a great way to get involved locally and need volunteers to get much of their work done. Volunteering to collect water quality data, work on trails, or plant trees to shade waterways are just a few of the things you can sign up for and help protect your local watershed.
- Take a kid fishing! There is no better way to introduce youth to the outdoors and to get them to think about being a thoughtful steward of the environment.

Fishing Tournament

GOV. SURF FISHING TOURNAMENT

DEP Action Line, 24 Hrs.

The Department has a toll-free telephone hotline number you can use to report environmental incidents, abuses, and complaints in New Jersey or impacting it.

877-WARN-DEP
877-927-6337

Make Hunting & Fishing Dreams Come True!

Hunt of a Lifetime is a nonprofit organization that grants hunting and fishing dreams to children, age 21 and under, who have been diagnosed with life threatening illnesses.



If you are interested in helping a child live their dream, please contact us for more information.

Toll Free 866.345.4455 HuntofaLifetime.org

Mark your calendar for the Governor's Surf Fishing Tournament!

May 15, 2022

Island Beach State Park, Seaside Park, NJ

Enjoy a great day of surf fishing with family and friends at the Governor's Surf Fishing Tournament.

The individual who catches the overall largest fish wins the "Governor's Award" and will have their name engraved on the Governor's Cup, which is permanently displayed at Island Beach State Park. Prizes are awarded to winners in a variety of age group and fish species categories.

All funds raised by the tournament go toward improving beach access, surf fishing instruction programs and equipment plus marine education and restoration projects.

The tournament is sponsored by NJDEP's Division of Fish and Wildlife and Division of Parks and Forestry, New Jersey State Federation of Sportsmen's Clubs, Jersey Coast Anglers Association and New Jersey Beach Buggy Association.

For more information visit:

NJFishandWildlife.com/gsft.htm or call 609-748-4347



Courtesy Venuri/NJ Div. Fish and Wildlife

Congratulations to Manasquan High School as the 2021 High School Team category winners!

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If you care about:

- Wise management of fish and wildlife populations
- Protection and enhancement of natural lands and waters
- Preservation of traditional outdoor sports

Then get involved!

- Stay informed on issues affecting NJ sportsmen and sportswomen
- Make an impact on outdoor issues
- Meet others who share similar sporting interests
- Have fun and participate in Federation-sponsored activities: jamborees, clay target shoots, tournaments, dinners, conventions, and more!

Membership:

____ \$40 Includes monthly e-newsletter and \$1 million excess liability insurance covering your sporting activities throughout the U.S. and Canada.

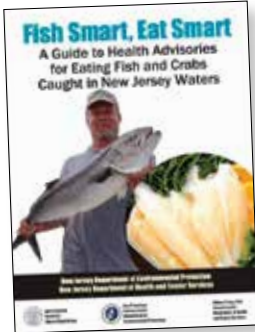
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www.njsfsc.org

Eating Fish And Crabs Caught In New Jersey Waters



Fishing is an enjoyable and relaxing recreation. Fish are an excellent source of protein and nutrients as part of a healthy, well-balanced diet. Many anglers enjoy cooking and eating their own catch. However, elevated levels of potentially harmful chemical contaminants such as dioxin, polychlorinated biphenyls (PCBs), pesticides, mercury and PFOS (perfluorooctane sulfonate) have been found in certain fish and crabs in some New Jersey waters. Fish consumption advisories guide citizens on safe consumption practices.

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


The current fish consumption advisories

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

Do not eat fish or shellfish from a waterbody where a harmful algal bloom is present. For more information, see page 31.

For a complete list of state and federal marine fish consumption advisories visit: **FishSmartEatSmartNJ.org**

The fish consumption advisories and Fish Smart-Eat Smart website are updated periodically and are available online or from the Division of Science and Research at 609-940-4078 and through the Department of Health's Food and Drug Safety Program at 609-826-4935.

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

NEW Interactive Map!

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

FishSmartEatSmartNJ.org



Instructors NEEDED!

Become an instructor with Fish and Wildlife's Hunter Education Program.

Our Hunter Education Unit wants New Jersey's best sportsmen and sportswomen to become instructors at locations where students take the test and field course after first having completed the home study portion. A minimum of six weekend days each year are required.

Call 856-629-0552

Leave your name and address to receive an application.

Or visit our website: NJFishandWildlife.com



Briana Merritt/NJ Div. Fish and Wildlife

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