

PUBLIC NOTICE

Dear Stakeholder:

The NJ Department of Environmental Protection, Division of Fish and Wildlife (Division) and the NJ Fish and Game Council (Council) are inviting comment on the proposed policy (see below) regarding management of the bacterial disease furunculosis, which occurred this past Fall at the Pequest Trout Hatchery as well as a proposal to alter Spring trout stocking in order to protect the state's trout resources.

Public meetings to discuss these topics are being held on February 22, 2014 at 10 am at the Batsto Village visitor Center, Batsto RD. #9, Hammonton NJ 08037 in Wharton State Forest in Burlington County and on March 8, 2014 in the Centenary Theater (aka The Little Theater), located in the Seay Building, Centenary College, Jefferson Avenue, Hackettstown, Warren County at 10 a.m.

Directions for Seay Building are at: www.centenarystageco.org/03AboutUs/directions.htm

Persons wishing to send comments in electronically may do by March 9, 2014 (link below).

As part of their regularly scheduled monthly meeting on March 11, 2014, the Fish and Game Council will discuss this proposed policy and comments received and vote on the proposed plan and notify the Department of their decision. The meeting, which begins at 10 am, will be held at the Central Region Office located on the Assunpink Wildlife Management Area, 1 Eldridge Road, Robbinsville, NJ. (use Upper Freehold Township for GPS navigation) Directions can be found at: www.njfishandwildlife.com/pdf/directions_cro.pdf

Policy for the Use of Trout Affected by Furunculosis at the Pequest Trout Hatchery

The Division's Pequest Trout Hatchery has experienced an outbreak of furunculosis, which is a disease caused by the bacterium *Aeromonas salmonicida*. The Division has implemented a plan to control the disease at the Hatchery and plans to implement a modified trout stocking program to conserve our wild fisheries. Below is information about the disease, the situation at the Pequest Trout Hatchery, and an outline of our proposed actions. We are seeking input on these actions, which we believe are protective to our waters and will allow for the continued success of stocking healthy trout within the state as authorized by N.J.S.A 23:2-3..

The bacterium causing furunculosis (*A. salmonicida*) is present in New Jersey and most of the world. Isolations of the bacterium from wild fish in North America have occurred predominantly in the Northeastern and Northwestern United States, based on data collected by the U.S. Fish & Wildlife Service, National Wild Fish Health Survey Database. Furunculosis is typically a disease of salmonid fish, although it has been documented in other fish species in both marine and fresh waters, including smallmouth bass, American eel, muskellunge, northern

pike, carp, suckers, shiners, minnows and flounder. The bacterium has also been found in a number of other fish species resulting in various forms of skin ulcerations. The bacterium is a fish pathogen and there are no human health risks associated with it. At the Pequest Trout Hatchery, the bacterium was introduced from an outside source, likely by a bird, and it caused chronic mortality in brook and brown trout from early September through October 2013. The initial fish affected with the disease included about 20,000 2+ year old brook and brown trout kept in raceway lines E and I, which were intended for the 2013 fall stocking. The hatchery is set up in three main sections in which water flows serially from the upper raceway lines (raceways A-D), to the lower raceway lines (raceways E-H), which flow into the broodstock raceway line (raceway I). In an attempt to control the disease, these fish were euthanized and removed from the hatchery between September 16th-18th 2013.

Several weeks later the disease appeared in brook and brown trout, with approximately 275,000 affected fish in the B,G, and H raceway lines, being reared for the 2014 spring stocking. These fish were treated with Aquaflor from October 18th-27th 2013. Aquaflor is an animal use antibiotic that has been approved for use in trout for the treatment of furunculosis. The antibiotic was applied in accordance with manufacturer guidelines (10 mg/kg fish body weight daily for 10 days). The mortalities subsided and disease signs were not evident until December 5th when furunculosis-related mortality occurred in a small number of fish in these same raceways. The fish were sampled and analyzed by Dr. Lovy, the states fish pathologist, to confirm the presence of the bacterium. Following confirmation of the disease, these fish were once again treated with Aquaflor which started on December 18th, 2013 and terminated on December 27th, 2013. These fish responded well to the second round of antibiotic treatments and are currently symptom free. These fish are currently in excellent condition and are growing well. Retesting will occur on all fish to ensure that they are disease-free. Recently 120 brook trout that were previously affected by furunculosis have been lethally sampled from one raceway for retesting. These fish were very good condition, appeared healthy, and all tested negative for the bacterium, demonstrating the effectiveness of the antibiotic treatment.

One of the characteristics of *A. salmonicida* is that when fish recover from infection, some of these fish will become carriers of the bacterium even though no disease symptoms are observed. These carriers may not be detected by our testing because of the low levels of bacteria in the fish and the lack of sensitivity in the laboratory tests. When fish are carriers of the bacterium it is then possible that environmental stressors may cause the disease to emerge again. Previous studies and experiences suggest that the disease is mostly associated with hatchery stressors and disease is less likely to occur in the wild.

In order to devise a strategy to deal with the disease in the hatchery and to develop a trout stocking plan, we consulted numerous state agencies. Furunculosis is a common disease that most states have encountered in their trout hatcheries and there is considerable scientific knowledge available about the bacterium. Research and other states' experiences with the disease in their hatcheries suggest that the disease is unlikely to occur in the wild when the hatchery stressors are removed. Nearby state agencies that we have contacted, including New

York, Pennsylvania and Connecticut stock trout that have been affected by furunculosis as long as they have been treated and deemed to be disease-free (test negative for the bacterium) prior to stocking. Individual state policies are varied in the length of time required to ensure fish are free of disease and locations where fish may be stocked, ranging from stocking immediately after antibiotic treatment and the appropriate withdrawal period to holding fish up to 1 year and undergoing two tests to confirm fish are free of the bacterium.

Dr. Lovy, the state's fish pathologist, attended the Great Lakes Fish Health Committee (GLFHC) Meeting to present the situation and obtained feedback/recommendations. The GLFHC is made up of 21 fish health specialists representing 8 state agencies, the U.S. Fish & Wildlife Service, the Division of Fisheries & Oceans Canada, and other groups. Dr. Lovy is continuing to work with the GLFHC to complete a more formal risk analysis for the hatchery situation and the stocking program. We will be implementing similar fish health guidelines and risk analyses policies that have been put forth by the GLFHC. Based on the experiences of other state agencies, as well as recommendations from the GLFHC and preliminary results of the risk analysis, below are the Division's recommended actions. In following these recommended actions, the Division will be complying with the same standards that apply to private fish culture facilities, including documenting that all production lots of fish have been inspected and found free of certain diseases including furunculosis and performing inspections using approved sample sizes and methods. See N.J.A.C. 7:25-6.26(1)5-6. To review Pequest health inspections reports use the links below:

http://www.njfishandwildlife.com/pdf/2014/pequest_insp_rprt12.pdf

http://www.njfishandwildlife.com/pdf/2014/pequest_insp_rprt13.pdf

http://www.njfishandwildlife.com/pdf/2014/pequest_insp_rprt14.pdf

In the Hatchery, following an outbreak of furunculosis or fish testing positive for the bacterium *A. salmonicida*, fish will undergo a treatment period that is to last a minimum of 3 months. During this time every effort will be made to reduce stress to the fish and antibiotic treatment will be applied to control the disease. One to two weeks prior to stocking fish into the wild each raceway line will be tested for the bacterium using a lethal sample size large enough to detect the pathogen at a 5% prevalence level with 95% confidence. For sample size and procedures, we follow the guidelines provided by the American Fisheries Society, Fish Health Section Blue Book, Suggested Procedures for the Detection and Identification of Certain Finfish and Shellfish Pathogens (<http://www.afs-fhs.org/blue-book.php>).

Testing of fish will determine their infection status related to *A. salmonicida* as summarized below:

- 1) Negative fish are a population of fish which have been tested and the bacterium has never been detected. No restrictions will be made on the stocking of these fish.,

- 2) Negative and exposed fish are a population of fish which have been tested and the bacterium has never been detected and these fish have been held in downstream water of a raceway that has undergone an outbreak of furunculosis. It is believed that these fish could be potential low level carriers of the bacterium. These fish will not be stocked into trout production waters. They may be stocked into trout maintenance or non-trout waters.
- 3) Positive fish are a population of fish in which the bacterium has been detected from the fish using the above mentioned sample size. These fish may show active signs of the disease or are asymptomatic and test positive for the bacterium. These fish will not be stocked into state waters.
- 4) Treated fish are a population of fish in which the pathogen has been previously detected, gone through a mitigation period, and subsequently test negative for the bacterium as outlined in 1) above. These fish will be considered as carriers of the bacterium and will only be stocked in waters that do not support trout (non-trout waters such as warmwater lakes and rivers).

A power point presentation in PDF format regarding our treatment and stocking plans is available at: http://www.njfishandwildlife.com/pdf/2014/peq_furunc_presentation.pdf

Proposed Trout Stocking

As a result of the furunculosis outbreak this Fall , the Division proposes changes to the spring 2014 stocking schedule that differ from that published in the *New Jersey Freshwater Fishing Digest*. In order to protect priority trout resources, no trout will be stocked in Trophy Trout Lakes, Holdover Trout Lakes, and certain trout production streams, lakes, or ponds feeding into these waters. Based on the category of infection status provided above, the Division plans to stock negative fish only in waters that have or are directly connected to waters with existing trout populations. The Division plans to stock treated fish only in waters that do not support trout (non-trout waters such as warmwater lakes and rivers). The Division plans to stock negative and exposed fish only in trout maintenance or non-trout waters. The Division will not stock positive fish into state waters.

A detailed list of the proposed changes to the stocking schedule can be found at:

http://www.njfishandwildlife.com/pdf/2014/trout_changes14.pdf

Submit comments at http://www.njfishandwildlife.com/trout14_comment.htm .