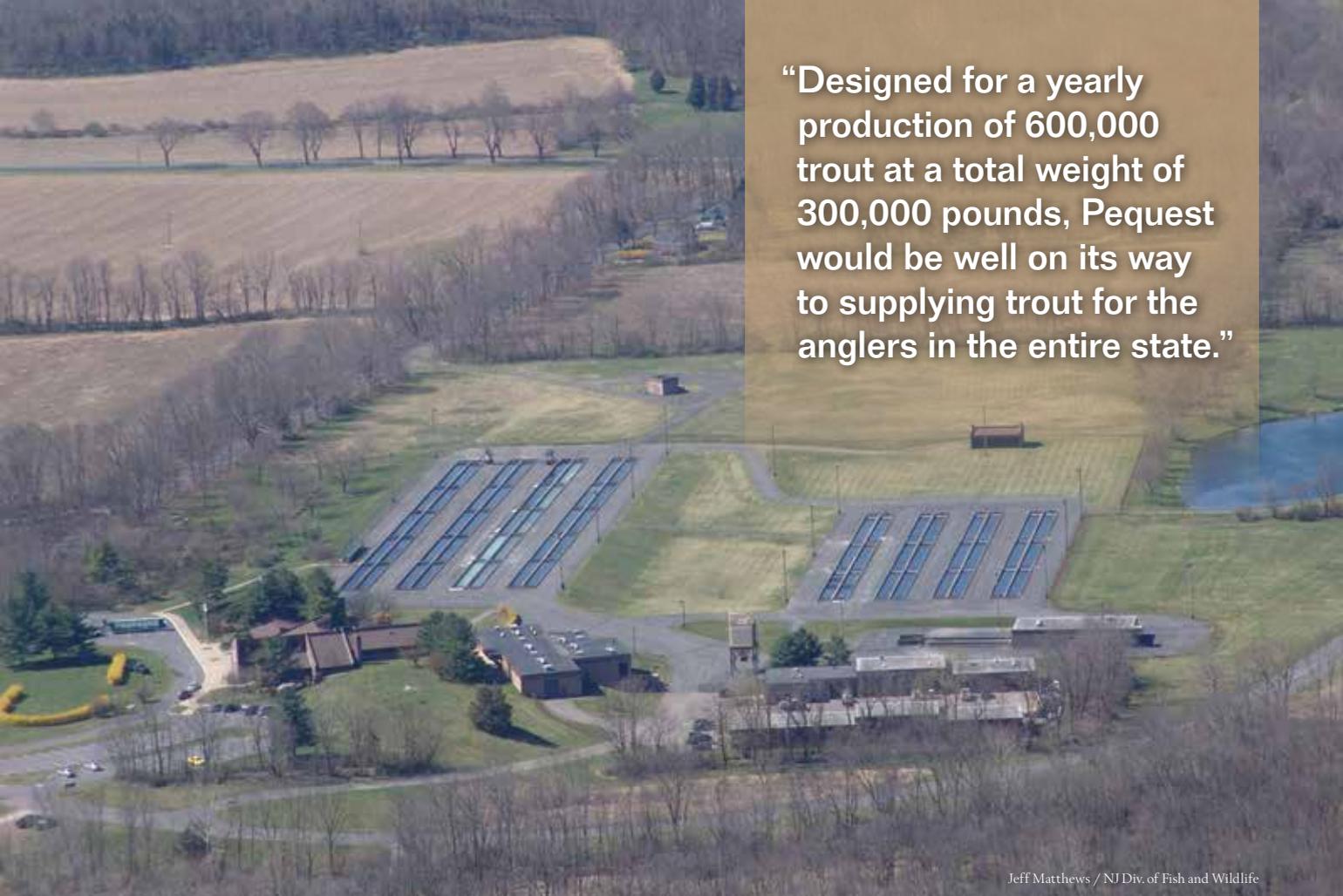


# Thirty Years of **TROUT** PRODUCTION

at Pequest Trout Hatchery

By Jeff Matthews | Hatchery Superintendent





“Designed for a yearly production of 600,000 trout at a total weight of 300,000 pounds, Pequest would be well on its way to supplying trout for the anglers in the entire state.”

Jeff Matthews / NJ Div. of Fish and Wildlife

**It was 1980** — a turning point for New Jersey Division of Fish and Wildlife’s Bureau of Freshwater Fisheries — when construction began for the new Pequest Trout Hatchery and Natural Resource Education Center in the Pequest Valley, Warren County. Here, a huge aquifer was discovered in the early 1950s by the state geologist.

This pristine, high-volume underground water source would make the valley an ideal location for a much-needed new trout-rearing facility. Over time, conditions had become less favorable for trout production at the Hackettstown State Fish Hatchery. Now, the Pequest Valley was destined to become the new center for raising Garden State trout. In the 1950s over four thousand acres were purchased surrounding the aquifer to protect the water quality. The new Pequest hatchery was completed in 1982.

Designed for a yearly production of 600,000 trout with a total weight of three hundred thousand pounds, Pequest would be strongly positioned to supply trout for anglers statewide. Fish and Wildlife secured more than one million trout eggs of three different species from

pathogen-free hatcheries. Rainbow trout eggs were brought in from West Virginia; brook and brown trout eggs came from Massachusetts.

From the first hatch, fish were hand-selected to serve as broodstock. To this day, a quality broodstock population is maintained at the hatchery serving as an “in house” egg source. A critical feature to note is that since day one, *no other outside fish or eggs have been introduced into the trout production cycle at Pequest.* This has been an important aspect in maintaining a pathogen-free trout rearing facility.

Many precautions and procedures have been undertaken to protect against any infection threat to our trout population. Strict access to the culture area is limited to staff only, the

nursery building is cleaned and sterilized yearly, along with culture equipment and vehicles. The over-the-road stocking trucks are loaded outside the culture area to prevent any transfer of fish pathogens that may have been encountered while stocking the lakes and rivers in the state. Public viewing areas were built so that hatchery guests can experience and learn about how trout are raised and see them in the raceways without risk of introducing pathogens.

**Over the past thirty years Pequest has earned a reputation as one of the finest pathogen-free trout hatcheries in the nation.**

A specialized hatchery feed truck distributes pelleted feed four times daily along the hatchery's 1.5 miles of raceways.



Jeff Matthews / NJ Div. of Fish and Wildlife

Having a reliable water supply, dedicated employees, using the latest in trout culture technology and following stringent disease-prevention guidelines enables the staff at Pequest to reach production objectives every year.

### **The production cycle begins early in the fall when hatchery staff will manually strip and fertilize the eggs from adult trout.**

The eggs are then placed in incubators for approximately twenty eight to thirty five days. Upon hatching, the young trout are called “sac-fry,” so named because the yolk sac remains attached to the abdomen and nourishes the young fish for about two weeks. The sac-fry are moved from the incubators to special tanks located in the nursery building. Once the yolk is absorbed, the young fish swim up from the bottom of the tanks. They are then started on a high protein diet and fed eight times per day.

Following a three-month growing period inside, the fry—now called fingerlings—are sorted for

size and moved outside in the summer to a series of pools known as raceways. The hatchery has 1.5 miles of raceway. Here, a specialized feeding truck distributes pelleted feed four times a day in each one hundred foot section of raceway. After the summer growing period the fish are again sorted for size and left in the raceways where they attain a 10.5-inch average length by early spring.

By mid-March the hatchery trucks are loaded and rolling, stocking quality trout in over two hundred lakes, streams and rivers for the enjoyment of anglers statewide. During the process of spring stocking, excess and older broodstock are liberated along with the regular production stock. These fish range from 15 to 25 inches and average 3 to 8 pounds.

### **Fish and Wildlife has consistently produced quality brook, brown and rainbow trout as a result of modern technology and a high quality water supply.**

There are seven artesian production wells in the Pequest Valley that supply up to seven thousand gallons of water per minute. The continuously flowing waters of Pequest remain at a constant 52 degrees Fahrenheit year round. Clean, moving, cold water is a key factor that is essential to success in a trout-rearing facility.

Along with the hatchery's complex systems maintaining water flow is the demand of electricity to keep the pumps running. The Pequest Valley experiences many power outages a year. During the original construction, one diesel-driven generator and four direct-drive diesels were installed to drive the wells and to keep the water flowing always. A state-of-the-art radio telemetry system was installed to monitor and control the operation of each individual well. Water flow, diesel motor operations and well status are all now monitored and operated with smartphones by the supervisory staff, along with desktop computer controls. Variable-speed motors have recently been installed in each of the wells. The old-style pumps ran at a constant speed and valves were used to adjust water flow. The new motors enable staff to control the amount of water being pumped from each well while reducing electrical usage and cost.



Jeff Matthews / NJDFW

Clint Decker, engineer in charge of maintenance, keeps the complex systems running smoothly at both the Pequest and Hackettstown hatcheries.

In another approach to increase the resourcefulness of Pequest's fish culture activities is the recent incorporation of an additional large fish pump. This pump has the capability of moving and loading fish up to 18 inches long. In conjunction with the older pump still functioning since the early 1980s, staff now utilizes both pumps for sorting operations and loading trucks, making the operation more efficient and less labor intensive.

The Pequest hatchery added additional stocking programs in the early eighties. Fish and Wildlife's fall stocking program began as a way to stock surplus fish from the annual sorting procedures of the production stock. These yearling fish had grown up to eight inches long. After a survey of anglers in the state it was found that they prefer larger, yet fewer, fish. As a result, the fall, winter and sea-run

trout stocking programs were woven into the production cycle as an added incentive to anglers.

The fall trout production cycle was changed to raise less fish but to retain them for an additional year of growth. Since 2005, the fall and winter stocking programs boast trout averaging up to sixteen inches in length and weighing 1.5 pounds each. And as an added angler incentive, up to one thousand rainbow trout breeders—measuring up to 25 inches—are liberated during the fall program. Fish and Wildlife offers sportsmen and sportswomen quality, catchable-sized trout throughout the fall and winter months.

**After three decades of successful trout production and always exceeding our goals, both our achievements and our funding base are attributed to each of the freshwater anglers who purchase a New Jersey fishing license and trout stamp. The Division of Fish and Wildlife is looking forward to providing you with quality trout for years to come.** 



Jeff Matthews / NJDFW

Hatchery technician Frank Jalosky carefully transfers newly fertilized eggs into hatching jars. The eggs will hatch in 28–35 days.

## TROUT STOCKING

Raised with pride at New Jersey Division of Fish and Wildlife's Pequest Trout Hatchery

### SPRING

- Over 570,000 brook, brown and rainbow trout
- Average size: 10.5 inches and ½ pound
- An additional 6,000 breeders 15–21 inches (3–6 pounds)
- Most waterbodies stocked at least three times
- 100 streams and 80 lakes stocked statewide
- All 21 counties stocked
- 180,000 trout released for Opening Day—April 6, 2013
- Stocking continues for seven weeks following Opening Day

### FALL

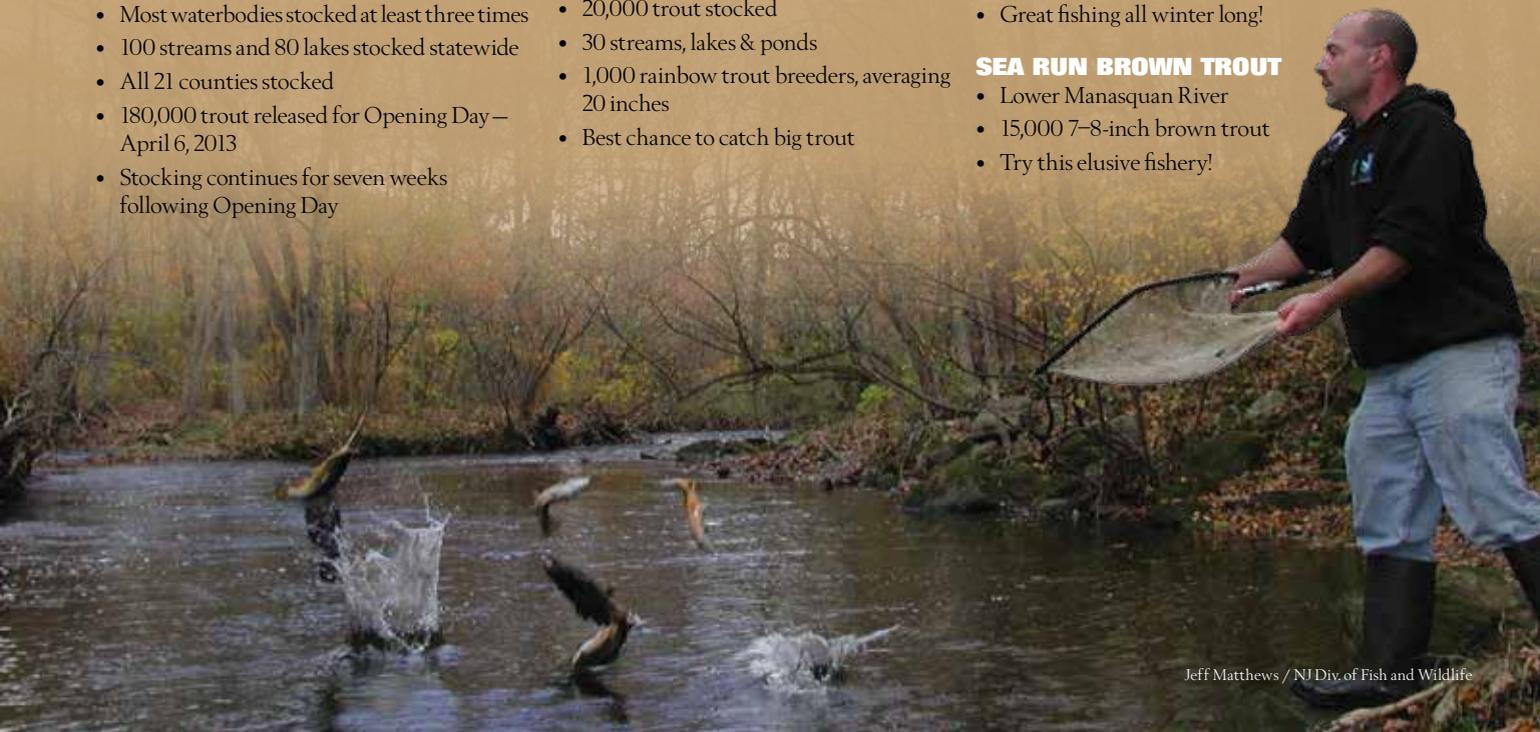
- Second and third weeks in October (fall stocking begins October 8, 2013)
- All large, two year old trout, measuring 14–16 inches
- 20,000 trout stocked
- 30 streams, lakes & ponds
- 1,000 rainbow trout breeders, averaging 20 inches
- Best chance to catch big trout

### WINTER

- All large two year olds, measuring 15–16 inches
- Over 5,000 trout
- 24 lakes and ponds
- Great fishing all winter long!

### SEA RUN BROWN TROUT

- Lower Manasquan River
- 15,000 7–8-inch brown trout
- Try this elusive fishery!



Jeff Matthews / NJ Div. of Fish and Wildlife