**Showcasing the DNR: Collecting eggs to maintain world-class fisheries**

*DNR collects eggs for walleye and steelhead stocking programs*

**By DARREN KRAMER, SCOTT HEINTZELMAN and BRIAN GUNDERMAN**

**Fisheries Division Great Lakes unit managers**

**Michigan Department of Natural Resources**

It’s simple math really: Zero eggs equals zero fish for future stocking programs.

So, the spring walleye and steelhead egg collections by the Michigan Department of Natural Resources are critical components of the strategy for maintaining world-class fishing opportunities in the Great Lakes State.

Walleye fishing (and the fish fries that follow) are a quintessential part of Midwest culture. Whereas this species does reproduce naturally in some large rivers and northern Michigan lakes, many of the popular walleye fisheries in the state are dependent on stocking. The DNR uses two donor populations to supply the eggs for statewide stocking programs.

**Lower Peninsula – Muskegon River**

The DNR’s 2024 walleye egg collection efforts began on the Muskegon River on March 26. Personnel from the Southern Lake Michigan and Central Lake Michigan management units used an electrofishing boat to capture adult walleye downstream of Croton Dam in Newaygo County.

Walleye were transported to holding pens at the Pine Street boating access site, where a fish-processing assembly line was created. One Wolf Lake State Fish Hatchery employee stripped eggs from a female walleye into a bowl. Another person collected milt from a male walleye, then added the milt to the bowl to fertilize the eggs. Both male and female walleye were released back into the river after these steps.

A third hatchery worker added the eggs to a bucket where they were mixed with a type of fine clay that coated the eggs and prevented them from clumping together. Next, the eggs were poured into a mesh bag in the river to water-harden for about an hour. This step is crucial as fresh eggs are very fragile.

Finally, the eggs were loaded into buckets and transported to the Wolf Lake State Fish Hatchery in Van Buren County. The same process was repeated on March 28, April 2, and April 4, except some of the eggs collected on April 2 went to the Platte River State Fish Hatchery in Benzie County. In total, over 31 million walleye eggs were collected from 195 male-female pairs on the Muskegon River this spring.

**Upper Peninsula – Little Bay de Noc**

Meanwhile, in Delta County, although a mild winter in the Upper Peninsula with low snowfall and mild temperatures led to earlier than normal ice-off conditions on Little Bay de Noc, egg take efforts were completed on April 10, 12 and 14, which were close to the long-term average dates over the past 30 years.

Staff from the Northern Lake Michigan Management Unit collected ripe female and male walleye for the egg take with trap nets and electrofishing gear in the Whitefish River.

Staff from the Thompson State Fish Hatchery in neighboring Schoolcraft County came over to Little Bay de Noc on the scheduled egg-take days to process the fish.

In total, 120 pairs of walleye were spawned with approximately 13 million eggs collected. Once all walleye were spawned for the day, the fertilized eggs were transported back to the hatchery’s cool-water facility and placed in incubation jars to reside until hatching.

One unique part of the spring operations on Little Bay de Noc is the continuation of a long-term adult walleye tagging project led by research staff from the Marquette Fisheries Research Station during the annual egg take.

Walleye used for the tagging project are either fish returned to the bay after being used for egg-take operations or fish that were not used and deemed “extra” fish. For over 30 years, several hundred adult walleye have been jaw-tagged – with small circular bands that attach around part of the jaw – and then released.

Each tag has a unique number stamped on it. When anglers catch and report a tagged fish, this gives researchers information on the movements and habits of individual walleye in the northern Green Bay area of Lake Michigan.

The walleye collected on the Muskegon River and Bay de Noc this spring will remain inside the hatcheries until they reach the fry stage. At that point, they will be moved into rearing ponds located throughout the state to grow to size suitable for stocking. Many of these fish will be stocked in June when they are around 1-2 inches in length, whereas walleyes from a few ponds will be held until October and stocked at around 6 inches long.

**Steelhead efforts**

Steelhead capture the attention of a diverse swath of anglers. Whether you’re trolling the vast waters of the Great Lakes, quietly waiting for that bite on a deserted beach or standing waist deep in an ice-cold stream, steelhead fishing offers year-round opportunities.

To create, enhance, and supplement this amazing Michigan fishery, steelhead eggs are collected every spring at the Little Manistee River Weir in Stronach in Manistee County.

This process typically begins in March when grates are lowered on the weir structure to stop the upstream migration of lake-run rainbow trout, more commonly called steelhead. Once large numbers of steelhead have gathered below the weir, pumps are activated that flood the facility ponds and raceways, offering steelhead a passageway.

Steelhead are then guided into ponds where they will ripen for egg collection. The spawning period for steelhead in streams begins in late March and continues through April. This is the same time frame that eggs are collected at the weir.

A day of egg collections begins by preparing the workspace for all the various steps that are necessary for success.

Buckets for the individual collection and buckets for transportation to hatcheries must be cleaned and labeled. Cups for collecting milt from male steelhead must be numbered to spawn one female with one male. Egg treatment and disinfection solutions must be mixed to exact recipes to ensure eggs have the best chance at fertilization and survival.

Once staffers have everything prepared at their station, it’s time to bring in the fish.

Steelhead are moved from the ponds and through the raceway with a machine called a crowder, which that has a basket that herds the fish and can lift them into a large tank inside the facility.

Fish are then moved from the tank onto a table to determine ripeness and to sort males and females. Ripe fish are then put into a separate tank where they are sedated to assist with handling.

Eggs are removed from ripe females using a small needle that blows compressed air into the body cavity, pushing the mature eggs out of the fish and into a small bucket. Milt from a mature male is captured in a paper cup and added to the bucket of eggs.

Next, a solution mixed for fertilization is added to the bucket, and in a matter of seconds the eggs will be fertilized. Spawned fish are moved to a recovery pond before being released upstream of the weir.

On an average day, this process will happen over 200 times.

From this point, the eggs are disinfected, water-hardened and placed on an egg battery that cleans the mixed egg buckets with oxygenated river water. These are now healthy steelhead eggs ready for transport to waiting hatcheries where staff will rear the young fish over the next year.

The steelhead egg quota this year is just shy of 6 million eggs, which will support the stocking programs of Michigan, Ohio and Indiana.

The efforts of DNR fisheries staffers to collect eggs each spring help provide sport anglers with hours and hours of fantastic walleye and steelhead fishing fun, along with countless meals eaten by resident families, individuals and visitors to Michigan from near and far – one example of the numerous things that help make the Great Lakes State great!

Check out previous Showcasing the DNR stories at [Michigan.gov/DNRStories](http://www.Michigan.gov/DNRStories). To subscribe to upcoming Showcasing articles, sign up for free email delivery at [Michigan.gov/DNREmail](http://www.Michigan.gov/DNREmail).

###