

## **Lake Mills Fish Hatchery Update**

Rock Lake Improvement Association (RLIA), Lake Mills City staff, and Jefferson County Land & Water Conservation Dept. (LWCD) met on November 20, 2023 with Wisconsin DNR (WDNR) staff, including the Lake Mills Fish Hatchery management team to discuss whether the fish hatchery could modify the amount of Rock Lake surface water which they would withdraw for this winter/early spring since Rock Lake is below winter minimum water levels. Unfortunately, changes to the fish hatchery operational plan cannot be done without significantly impacting its operations.

The Lake Mills Fish Hatchery was established in 1929 by the U.S. Fish and Wildlife Dept. In 1984, ownership of the hatchery went to the WDNR who realized that central and southern Wisconsin water bodies needed fish raised within their own climate and ecological parameters to succeed. The hatchery has two wells drilled to 311 feet that are cased, with a steel pipe, from the surface to 80 feet and 110 feet respectively. The source of water that is withdrawn from these wells comes from any depth between the ends of the casing to the bottom of the well. The collective capacity is up to one million gallons of water a day. These wells feed the raceways within the pole shed and the two ponds near the pole shed for rearing Coho salmon. The outer ring of ponds are fed solely by Rock Lake water withdrawals and are used to raise northern pike and walleye. After harvest, these ponds are drained into Rock Creek, tilled, and left fallow until the next rearing cycle.

### **Coho Salmon:**

Between 140,000 and 160,000 small Coho fingerlings are transferred to the hatchery in March each year for rearing in the raceways housed under the long pole shed. As the fish grow, rearing is switched to the ponds. When water temperatures in Rock Lake are cool enough for salmon, the hatchery switches from using well water to primarily Rock Lake water. A minimal amount of temperate well water is used in the winter to maintain water temperatures suitable for the Coho by warming it just enough to keep the ponds ice-free to facilitate the feeding of fish. The use of too much well water at the warmer temperatures would allow the fish to grow too quickly, exceeding the capacity of the ponds. Consequently, the balance of water usage (well vs. surface water) is closely monitored and cannot shift without compromising hatchery production and efficiency. The WDNR explained that there is no possibility of shifting production of Coho salmon to other locations for rearing due to capacity and staffing issues within the system. Right now, the requests for Coho salmon exceed the capacity to rear and stock fish. The hatchery's Coho is released into Lake Michigan as six-inch yearlings.

### **Northern Pike & Walleye:**

In late March, the hatchery prepares for northern pike which is 15-20% of the fish production in the ponds. The rest of the pond production is walleyes for southern Wisconsin which typically spawn in late April or early May, depending on the weather. Both northern pike and walleyes are raised from eggs. The hatchery fills the northern pike and walleye ponds with Rock Lake water three days before releasing the swim-up fry (three-day old) into the ponds. The lake water has important zooplankton and fertility needed to feed the young fish until they've grown to a size large enough to swallow other prey, such as small fish. The hatchery's management team has found that if the ponds are filled too early, the zooplankton will be too large for the fry to eat, and returns will be very low. Beyond filling each pond at

the beginning of the rearing cycle, a small amount of water is used to assist with pond harvest each year. Harvest is usually in the first weeks in June. Typically, 98% of the hatchery's northern pike are stocked as small fingerlings (2¼ inches) with 2% being stocked as large fingerlings (4 inches). For walleyes, around 97% are stocked as small fingerlings (1 inch) and 3% are stocked as large fingerlings (6¼ inches). Over the years, Rock Lake has seen a significant walleye stocking effort, receiving fry or small fingerlings every year since 1989. Then in 2015, as part of the Walleye Initiative Program, Rock Lake began receiving around 20,000 large fingerlings (during odd years) to try to re-establish its walleye population. Our most recent stocking event was 2023 and those fish came from the Lake Mills hatchery.

**Lake Mills Fish Hatchery Water Withdrawal:**

|                                      | 2018        | 2019        | 2020        | 2021        | 2022        |
|--------------------------------------|-------------|-------------|-------------|-------------|-------------|
| Rock Lake (gal)                      | 129,524,500 | 180,147,477 | 125,092,800 | 142,572,800 | 172,147,520 |
| Inches Reduction in Lake Surface (*) | 3.5"        | 4.9"        | 3.4"        | 3.85"       | 4.7"        |
| Wells (gal)                          | 231,056,080 | 351,570,224 | 191,276,640 | 250,388,640 | 205,224,480 |

(\*) 36.93 million gallons = 1' of lake height

(Water acreage calculations include Rock Lake, Millpond, Marsh Lake)

**Summary of Lake Mills Fish Rearing 2023**

| Species       | Age/Size at Intake      | Total into the Hatchery | Age at Stocking  | Size at Stocking (inches) | Total Stocked |
|---------------|-------------------------|-------------------------|------------------|---------------------------|---------------|
| Coho Salmon   | Small Fingerling (2.4") | 153,000                 | Yearling         | 6                         | 133,522       |
| Walleye       | Egg                     | 25 Quarts               | Small Fingerling | 1.1                       | 784,111       |
| Walleye       | Egg                     | 5 Quarts                | Large Fingerling | 6.24                      | 20,946        |
| Northern Pike | Egg                     | 12 Quarts               | Small Fingerling | 2.3                       | 133,522       |
| Northern Pike | Egg                     | 5 Quarts                | Large Fingerling | 4                         | 3,288         |