



## **Illini Muskies Alliance**

### **2011 Illinois Muskie Stocking Ray Thompson**

Note: This article is in part, a summary of the 2011 Jake Wolf Hatchery report.

A total of 37 Illinois bodies of water were stocked with muskies in 2011 by the Illinois Department of Natural Resources. The Jake Wolf Hatchery produced 237,865 (surplus fry), 46,742 (surplus two to four inch fingerlings), 150 (six inch fingerlings) and 20,620 (eleven inch fingerlings). Muskie fingerlings less than 10" are generally only fish food for other species, since studies show that very few will survive. Additionally, the Fox River Valley Chapter of Muskies, Inc. donated 335-10"-15" fingerlings to stock two lakes.

On March 14, Wayne and Rob set 27 trap nets on Spring Lake-North to capture brood musky. A total of 237 male, 92 female and 36 immature fish were collected from March 14 through March 19. The average male was 29.9 inches long and weighed 6.13 pounds, and the average female was 38.9 inches long and weighed 8.94 pounds. The lake temperature ranged from 46 to 54 degrees during the five days netting took place. The largest fish netted this year was a 30 pound, 45 inch female.

A total of twenty-two females were spawned producing 485,020 eggs. All spawns were fertilized with milt from at least two males and sometimes three. The largest female weighed 17.35pounds and the smallest was 5.55 pounds, these were post-spawn weights. The average female only weighed 10.0 pounds, which is considerably smaller than the 16 to 17 pound average from past years. All of the eggs were disinfected with iodine at 100 PPM for 15 minutes approximately 50 to 60 minutes after fertilization and water hardening.

The eggs were incubated in hatching jars at 54 degrees and were treated with hydrogen peroxide to help remove any dead material and to prevent fungus. The eggs from three spawns showed little to no viability so they were discarded. Eggs began to hatch within two weeks and the fry were transferred to swim-up baskets by April 2. While in the baskets, any remaining eggs, shells, or dead material was removed using hydrogen peroxide, or by siphoning the debris.

The fry started to swim-up within ten days or so, and by April 14, a total of 150,977 fry were transferred to 10 circular tanks and started on feed. Surplus fry were stocked into the following lakes: Canton (34,591), Johnson (47,713), Shovel (52,791), Spring (North) (47,420) and Wheel (55,350).

On April 26 and 27, 117,058 advanced fry from the circular tanks were transferred to four start tanks, which amounts to a 77.5 percent return from first feeding fry. As the fish grew and the density increased over the next couple of months, they were split into additional start tanks to minimize crowding and accelerate growth. During this period 46,742 surplus two to four inch fingerlings were stocked into Canton, Johnson, Spring (McDonough Co) and Spring Lake (North). We also transferred 150 six inch fingerlings to the Illinois Natural History Survey for research purposes.

Otohime Hirame larval fish diet was used once again to start fry on feed. It was fed exclusively for the first 24 days, and then paired with Bio-Oregon diet for another week. We had excellent luck with this feeding regime the last four years and plan on using it as long as it's available. The muskies remained on Bio-Oregon grower diet for another few weeks and were then switched to minnows in early to mid June prior to pond stocking.

During the three month intensive culture phase, the muskies were treated twice with formalin for three days to control the gill parasite *Costia*, and other than a single tank of muskies that developed a bacterial infection, we had almost no problems with *Columnaris* this year. The bacterial infection was treated with diquat at 28 ppm for one hour on three consecutive days, just prior to transferring them to a netted pond.

By late June the muskies were over five inches long and a total of 24,389 fingerlings were stocked into three net covered, one acre ponds. By the middle of August the muskies were over eleven inches long and ready to harvest. The first two ponds were harvested on August 16 and produced 7,571 and 6,724 eleven inch fingerlings. The third pond was drained on August 23 and produced 6,325 eleven inch fish. The final tally from this year's production was 20,620 fingerlings. All the Yes-1 lakes on the anticipated needs list, plus a number of the lakes Yes-3 list were stocked. Additionally one new muskie lake was added. The overall pond survival was a satisfying 84.5 percent this year.

During the extensive production phase, a total of 16,550 pounds of minnows were stocked into the three ponds. We actually fed more forage to fewer fish this year than last, which increased

the feed conversion slightly to 3.69 pounds of minnows to produce one pound of muskie. This was due to the exceptionally hot summer and warm pond temperatures. The total cost per eleven inch fish was \$2.21 this year, which is also up slightly from last year. Costs from the previous years were \$1.73, \$2.82, \$2.34 and \$2.27. The patience and dedication of the technicians during the intensive culture phase, a high quality starter diet, protective bird netting for both muskie and minnows alike, makes a significant difference in the overall return, size and cost of the muskie we produce!

Table 1 summarizes the pond production, which averaged about 84.5 percent (compared to 80.9 percent in 2010).

**Table 1**

| <b>Pond Number</b> | <b>Date Stocked</b> | <b>Number Stocked</b> | <b>Size at Stocking</b> | <b>Date Harvested</b> | <b>Number Harvested</b> | <b>Size at Harvested</b> | <b>Yield %</b> |
|--------------------|---------------------|-----------------------|-------------------------|-----------------------|-------------------------|--------------------------|----------------|
| 20                 | 7/1/11              | 8,510                 | 5.4"                    | 8/23/11               | 6,325                   | 11.6"                    | 74             |
| 21                 | 6/27/11             | 7,992                 | 5.6"                    | 8/16/11               | 7,571                   | 11.3"                    | 95             |
| 22                 | 6/28/11             | 7,887                 | 5.4"                    | 8/16/11               | 6,724                   | 11.3"                    | 85             |

Table 2 details the individual lake stockings from all sources.

**Table 2**

| <b>Body of Water</b> | <b>Number</b> | <b>Size</b> | <b>Date</b> | <b>Remarks</b>                      |
|----------------------|---------------|-------------|-------------|-------------------------------------|
| Argyle               | 93            | 11.6        | 8/25        |                                     |
| Busse                | 840           | 11.6        | 8/24        |                                     |
| Canton               | 34,591        | Fry         | 4/15        |                                     |
| Canton               | 25,132        | 2           | 5/19        |                                     |
| Canton               | 500           | 11.6        | 8/25        |                                     |
| Carlton              | 76            | 11.3        | 8/19        |                                     |
| Deep                 | 25            | 11.6        | 8/25        |                                     |
| Double T             | 64            | 11.6        | 8/25        |                                     |
| Evergreen            | 926           | 11.3        | 8/18        |                                     |
| Fox Chain            | 1,500         | 11.6        | 8/24        |                                     |
| Fox Chain            | 300           | 13          | 10/22       | TGF <sup>1</sup> -Leech Lake strain |
| FCRA #3              | 90            | 11.6        | 8/25        | (Fulton Co. Conservation Area)      |
| FCRA #4              | 36            | 11.6        | 8/25        | (Fulton Co. Conservation Area)      |

|                   |        |      |       |   |
|-------------------|--------|------|-------|---|
| George            | 167    | 11.3 | 8/19  |   |
| Heidecke          | 1,955  | 11.3 | 8/19  |   |
| Hennepin-Hopper   | 1,000  | 11.3 | 8/19  |   |
| INHS              | 150    | 6    | 6/?   | Illinois Natural History Service-research |
| Johnson           | 47,713 | Fry  | 4/18  |   |
| Johnson           | 3,594  | 3    | 6/2   |   |
| Johnson           | 5,708  | 4    | 6/16  |   |
| Johnson           | 600    | 11.3 | 8/19  |   |
| Kinkaid           | 2,000  | 11.3 | 8/18  |   |
| Lake of the Woods | 26     | 11.6 | 8.25  |   |
| Loon              | 35     | 13.5 | 10/22 | TGF <sup>1</sup> -Hybrids                 |
| Mallard           | 89     | 11.6 | 8/24  |   |
| McMaster          | 164    | 11.6 | 8.25  |   |
| Mill Creek        | 366    | 11.6 | 8/24  |   |
| Mingo             | 170    | 11.6 | 8/24  |   |
| Otter             | 765    | 11.3 | 8/19  |   |
| Pana              | 219    | 11.6 | 8/25  |   |
| Pierce            | 162    | 11.3 | 8/22  |   |
| Prairie           | 200    | 11.6 | 8.25  |   |
| Sam Dale          | 191    | 11.3 | 8/22  |   |
| Schuy-Rush        | 185    | 11.6 | 8/25  |   |
| Shabbona          | 319    | 11.3 | 8/22  |   |
| Shelbyville       | 5,500  | 11.3 | 8/18  |   |
| Shelbyville       | 728    | 11.6 | 8/25  |   |
| Shovel            | 52,731 | Fry  | 4/15  |   |
| Shovel            | 200    | 11.3 | 8/19  |   |
| Spring            | 6,308  | 2    | 5/19  | McDonough Co.                             |
| Spring            | 277    | 11.6 | 8/25  | McDonough Co.                             |
| Spring (North)    | 47,420 | Fry  | 4/18  |   |
| Spring (North)    | 5,000  | 2    | 5/19  |   |
| Spring (North)    | 1,000  | 3    | 6/1   |   |
| Staunton          | 84     | 11.3 | 8/19  |   |
| Storey            | 164    | 11.6 | 8/25  |   |
| Sule              | 77     | 11.6 | 8/25  |   |

|                    |        |      |      |                              |
|--------------------|--------|------|------|------------------------------|
| Super              | 230    | 11.6 | 8/24 | Pyramid State Park           |
| Three Oaks (South) | 282    | 11.6 | 8/24 | <sup>2</sup> new muskie lake |
| Wheel              | 55,350 | Fry  | 4/18 |                              |
| Wheel              | 350    | 11.3 | 8/19 |                              |

Notes:

<sup>1</sup> Purchased by the Fox River Valley Chapter of Muskies, Inc. from Trophy Game Fish.

<sup>2</sup> Crystal Lake Park District-McHenry Co.