

Lake information report

 Printable version

Name: Whitewater

Nearest Town: Hoyt Lakes
Primary County: St. Louis

Survey Date: 08/13/2007
Inventory Number: 69037600

Public Access Information

| Ownership | Type | Description |
|-----------|----------|-------------|
| City | Concrete | |

Lake Characteristics

Lake Area (acres): 1212.22
Littoral Area (acres): 564
Maximum Depth (ft): 73
Water Clarity (ft): 25

Dominant Bottom Substrate: N/A
Abundance of Aquatic Plants: N/A
Maximum Depth of Plant Growth (ft): N/A

Did you know? Each year, the **MinnAqua** program teaches beginning anglers, primarily inner city youth, about fishing and aquatic biology.

Fish Sampled for the 2007 Survey Year

| Species | Gear Used | Number of fish per net | | Average Fish Weight (lbs) | Normal Range (lbs) |
|-------------------------------|-----------|------------------------|--------------|---------------------------|--------------------|
| | | Caught | Normal Range | | |
| <i>Black Crappie</i> | Gill net | 1.58 | 0.2 - 1.4 | 0.18 | 0.2 - 0.5 |
| <i>Bluegill</i> | Gill net | 9.17 | N/A | 0.15 | N/A |
| <i>Hybrid Sunfish</i> | Gill net | 0.17 | N/A | 0.24 | N/A |
| <i>Largemouth Bass</i> | Gill net | 0.83 | 0.2 - 0.8 | 0.67 | 0.9 - 1.3 |
| <i>Northern Pike</i> | Gill net | 5.33 | 1.2 - 3.6 | 2.84 | 1.9 - 3.6 |
| <i>Pumpkinseed</i> | Gill net | 0.75 | N/A | 0.07 | N/A |
| <i>Rock Bass</i> | Gill net | 5.25 | 0.5 - 2.2 | 0.19 | 0.2 - 0.4 |
| <i>Walleye</i> | Gill net | 12.00 | 3.1 - 9.8 | 1.57 | 0.7 - 1.3 |
| <i>White Sucker</i> | Gill net | 1.17 | 2.8 - 6.7 | 1.23 | 1.3 - 2.0 |
| <i>Yellow Perch</i> | Gill net | 17.83 | 1.9 - 7.1 | 0.19 | 0.1 - 0.3 |

Normal Ranges represent typical catches for lakes with similar physical and chemical characteristics.

Length of Selected Species (Trapnet, Gillnet) Sampled for the 2007 Survey Year

| Species | Number of fish caught in each category (inches) | | | | | | | | Total |
|------------------------|---|-----|------|-------|-------|-------|-------|-----|-------|
| | 0-5 | 6-8 | 9-11 | 12-14 | 15-19 | 20-24 | 25-29 | 30+ | |
| <i>black crappie</i> | 11 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 19 |
| <i>bluegill</i> | 59 | 51 | 0 | 0 | 0 | 0 | 0 | 0 | 110 |
| <i>hybrid sunfish</i> | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| <i>largemouth bass</i> | 1 | 2 | 5 | 2 | 0 | 0 | 0 | 0 | 10 |
| <i>northern pike</i> | 0 | 0 | 3 | 4 | 14 | 26 | 11 | 6 | 64 |
| <i>pumpkinseed</i> | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| <i>rock bass</i> | 28 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 63 |
| <i>walleye</i> | 0 | 19 | 22 | 41 | 35 | 22 | 5 | 0 | 144 |
| <i>white sucker</i> | 0 | 0 | 4 | 5 | 5 | 0 | 0 | 0 | 14 |
| <i>yellow perch</i> | 20 | 181 | 13 | 0 | 0 | 0 | 0 | 0 | 214 |

For the record, the largest **Bigmouth Buffalo** taken in Minnesota weighed 41 lbs., 11 oz. and was caught:

Where: Mississippi River, Goodhue County

When: 5/7/91

Statistics: 38.5" length, 29.5" girth

Fish Consumption Guidelines

These **fish consumption guidelines** help people make choices about which fish to eat and how often. Following the guidelines enables people to reduce their exposure to contaminants while still enjoying the many benefits from fish.

Pregnant Women, Women who may become pregnant and Children under age 15

| LAKE NAME County, DOWID | Species | Meal Advice | | | | Contaminants |
|--|---------------------|--------------|----------------|-----------------|------------------|--------------|
| | | Unrestricted | 1 meal/week | 1 meal/month | Do not eat | |
| WHITEWATER St. Louis Co., 69037600 | Bluegill Sunfish | | All sizes | | | Mercury |
| | Northern Pike | | | All sizes | | Mercury |
| | Walleye | | | All sizes | | Mercury |
| | White Sucker | | | All sizes | | Mercury |

General Population

| LAKE NAME County, DOWID | Species | Meal Advice | | | | Contaminants |
|-------------------------------|---------|--------------|----------------|-----------------|--|--------------|
| | | Unrestricted | 1 meal/week | 1 meal/month | | |

| | | | | | Do not eat | |
|--|---------------------|-----------|-----------|--|------------------|---------|
| WHITEWATER St. Louis Co., 69037600 | Bluegill Sunfish | All sizes | | | | |
| | Northern Pike | | All sizes | | | Mercury |
| | Walleye | | All sizes | | | Mercury |
| | White Sucker | | All sizes | | | Mercury |

DOWID - MN DNR, Division of Waters' lake ID number.

Contaminants listed were measured at levels that trigger advice to limit consumption.

Listing of consumption guidelines do not imply the fish are legal to keep, MN DNR **fishing regulations** should be consulted.

Dioxin

Mercury

PCBS - Polychlorinated biphenyls

PFOS - Perfluorooctane sulfanate

Status of the Fishery (as of 08/13/2007)

Whitewater Lake is in Ecological Lake Class 7, which consists of 41 lakes in northeast Minnesota that are very large, have irregular shoreline shapes, and have very soft (unmineralized) water. Whitewater Lake is deeper than many of the lakes in this lake class, and has clearer and harder (more mineralized) water. Whitewater Lake ranks as mesotrophic according to Carlson's Trophic State Index.

Whitewater Lake was thermally stratified on 08/13/2007 with a surface temperature of 73 F and a bottom temperature of 42 F. Adequate oxygen for fish (more than 2 ppm) was retained to a depth of 22 ft, where the temperature was 69 F. Bottom substrates along the shoreline of Whitewater Lake are mostly gravel, rubble, and sand. Aquatic plants grow to a depth of 8 ft and are found in a shoreline fringe around the lake with concentrations in shallow bays. The most common plants are cattails, sedges, northern milfoil, and several species of pondweeds.

Whitewater Lake was impounded in 1955 for use as a water storage reservoir for the Erie Mining taconite operation to the north of adjacent Colby Lake. Formerly known as Partridge Lake, this impoundment increased the size and depth of Whitewater Lake and subjected it to greater annual water level fluctuations. The inlet/outlet control structure is now owned and controlled by Minnesota Power. An overflow outlet to the St. Louis River on the southern dike is not used. Water losses through the dike due to groundwater seepage are substantial. Whitewater Lake receives sewage treatment effluent from Hoyt Lakes. Various developments are being considered or under construction at the old Erie Mining (LTV) site: Polymet rare metals mining and concentrating, Mesabi Nugget steel production, Excelsior Energy coal-gasification electrical generation plant. These developments

all require water and may want to rely on the Whitewater Lake/Colby Lake water supply system developed for Erie Mining.

Riparian development on Whitewater Lake consists of the previously mentioned water control structures and a public access and campground with 70 campsites on a peninsula (Fisherman's Point) on the northeast shore of the lake. Minnesota Power acquired the land around Whitewater Lake when it purchased the land from the defunct LTV taconite plant (formerly Erie taconite) in 2002. It has developed about 20 lakeshore home lots on the Fisherman's Point peninsula, but transferred ownership of the campground and boat access to the City of Hoyt Lakes.

Twelve fisheries lake surveys or fish population assessments have been conducted on Whitewater Lake. The initial investigation, in 1950, was done before the impoundment of the lake in 1955. For purposes of comparison, only data from the eleven investigations after impoundment (beginning with the 1967 investigation) will be used in the following discussion unless otherwise noted. All eleven of these investigations used gillnets (2-12 nets) to sample fish populations. Trapnets (4-14 nets) were used during seven of these investigations. Shoreline seining was done in seven years during the period 1950 through 2002.

Trapnets were not used during the 2007 investigation due to workload considerations and because the fish species of interest (walleye, perch, northern pike) are best sampled by gillnets.

The total catch of fish in the gillnets in 2007 (all species combined) of 54 fish/net (42 lb/net) was in the fourth quartile for this lake class and was higher than the median catch of 33 fish/net (26 lb/net) in all investigations on this lake. More fish of all species (except white sucker) were caught in 2007 than is typical for this lake. As in previous investigations, however, the gillnet catch in 2007 was dominated by walleye, northern pike, and yellow perch.

Walleye were not present in Whitewater Lake during the initial investigation in 1950 and were stocked periodically after the 1955 impoundment, from 1956 through 1984. Walleye numbers in 2007 (12.0/gillnet) were in the fourth quartile for this lake class and were higher than the median catch of 8.3/gillnet in all investigations on this lake. Walleye sizes in 2007 averaged 15.0" (1.6 lb), which was in the fourth quartile for this lake class and was larger than the average size of 13.1" in all investigations on this lake. The largest walleye in 2007 was 27.8". Recent walleye year-classes were very evenly distributed. Walleye growth was slower than normal by area standards.

Northern pike numbers in 2007 (5.3/gillnet) were in the fourth quartile for this lake class and were higher than the median catch of 3.9/gillnet in all investigations on this lake. Pike sizes in 2007 averaged 21.9" (2.8 lb) which was near the median for this lake class and was larger than the average size of 18.4" in all investigations on this lake. The largest pike caught in 2007 was 33.0". Most pike captured in 2007 were ages 2-4. Pike growth was normal by area standards.

Yellow perch numbers in 2007 (17.8/gillnet) were in the fourth quartile for this lake class and were higher than the median catch of 13.8/gillnet in all investigations on this lake. Perch sizes in 2007 averaged 7.4" (0.19 lb) which was near the median for this lake class and was similar to the average size of 7.6" in all investigations on this lake. The largest perch in 2007 was 10.5". Recent perch

year-classes were very evenly distributed. Perch growth was normal by area standards.

Black crappie and bluegill sunfish catches were higher in 2007 than in most previous investigations on this lake, although trapnets (not gillnets) are the primary sampling gear for these species. Bluegill numbers have increased in many area lakes in recent years, perhaps due to longer and warmer summers. Largemouth bass are probably more abundant in Whitewater Lake than indicated by the gillnet catch. Bass are "net-shy" and are difficult to catch with standard sampling nets.

Many of the game fish examined in 2007 were infected with neascus. Some of the yellow perch were also infected with yellow grub. Neascus (black spot) and yellow grub are common parasites that are native to the area. They cannot infect humans, are often removed by filleting fish, and are killed at temperatures used to cook fish.

Many native crayfish (26/gillnet) were captured in 2007.

For more information on this lake, contact:

Area Fisheries Supervisor
650 Hwy 169
Tower, MN 55790
Phone: (218) 753-2580
Internet: [Tower Fisheries](http://Tower.Fisheries)
E-Mail: Tower.Fisheries@state.mn.us

Lake maps can be obtained from:

Minnesota Bookstore
660 Olive Street
St. Paul, MN 55155
(651) 297-3000 or (800) 657-3757
To order, use **B0376** for the map-id.

For general DNR Information, contact:

DNR Information Center
500 Lafayette Road
St. Paul, MN 55155-4040
TDD: (651) 296-6157 or (888) MINNDNR
Internet: www.dnr.state.mn.us
E-Mail: info.dnr@state.mn.us



Turn in Poachers (TIP):

Toll-free:
(800) 652-9093