ILLINOIS DEPARTMENT OF NATURAL RESOURCES

County: Lake

DIVISION OF FISHERIES

RECEIVED

T 45N R 10E S 13

Directions: Two miles north of Grayslake, west of Rt. 45

SUPPLEMENTAL SURVEY

Date of inspection: 5/22/2002

Water (Name) Druce Lake Owner Multiple

Address of Owner Phone of owner

Lessee

Persons(s) contacted Marci Quigley Identification Village Manager, Third Lake

Address of contact Phone of contact 847/223-8422

Water classification (check) State ___ Pub-Coop ___ Pub-Other XXXXX Organ ___ Commer ___ Stream ___

1. Survey initiated by: Frank Jakubicek

2. Water size: 88.3 Acres or Miles.

3. Date of last inspection or work on water: 5/20/1998

Purpose of survey: Fish Population Survey

5. Observations, comments, recommendations:

During 30 minutes of electrofishing and overnight sets of one gill net (250') and two trap nets a total of 252 fish from 16 species were collected (Table 1). Compared to the last survey in 1998 the number of fish collected increased by nearly 100 but the number of species collected were similar. The previous report showed that bluegill (55.2%) dominated the fishery followed by largemouth bass (9.9%), carp (7.7%), and black crappie (6.6%) proportionately. This survey showed a relative increase in bluegill abundance (63.1%) of the catch followed by largemouth bass (13.9%), bluntnose minnows (4.4%) and golden shiners (4.0%). The change is insignificant and probably related to the lack of fish collected in both the gillnet and one of the trapnets (sampling error). Sometimes you, "Get What You Get," and that's part of the fun.

Aquatic vegetation was present in the lake and consisted of the typical species Eurasian milfoil, Coontail, and Curly leaf pondweed. These species are dominant in almost all lakes we visit. In some cases Lake Associations disregard vegetation management until it impacts their recreational use of the lake then proceed like wildfire, it's better to have a plan in place with a funding mechanism established for when this occurs. The State recommends that lakes maintain at least 20 % to 30% shoreline coverage to maintain adequate nursery cover for small (immature) fish and provide a substrate for invertebrate growth which in turn provides food for them. More than the recommended amount of vegetation can provide to much cover and cause small fish to become overpopulated.

Largemouth bass were collected by electrofishing at a rate of 70 fish per hour. This was above the target rate of 60 fish per hour suggesting bass were relatively abundant. Population indices show the general make-up of the fishery is balanced with a Proportional Stock Density of 55 which falls within the goal of between 40 and 60. The PSD describes how many fish are at least 12 inches long compared to all fish collected at least 8 inches long. Other indices describe how what proportion of fish are above a set length. Population indices for fish 14 inches long (Relative Stock Density 14) was 23, RSD 15 was 16, and RSD 16 was 10.

6. Biologist: Frank Jakubicek Date of Report: 1/10/2003

F.M. 5.0

(Largemouth bass Cont.)

The adult sample of largemouth bass we collected was represented by a good distribution of lengths. Proportionally, we did not collect a lot of small bass. This was likely related too either dipper bias or sampling error as the population capable of reproducing naturally and should maintain itself well. Comparative population indice goals are as follows: PSD = 40 - 60, RSD14 = 30 - 40, RSD 15 = 20 - 30, and RSD16 = 10 - 20.

Three northern pike were collected this time compared to 12 in 1998. In 1998, ten fish were collected in the gillnet compared to three this time. Gillnets are efficient at catching fish that either live pelagically (in the middle of the water column) or near the bottom like northern pike, channel catfish, and white bass, crappie and yellow perch. All three northerns collected were mature and well above the State length limit of 24 inches (Table 1). They appear to be doing well in Druce Lake.

Bluegill were the most abundant species collected. Their size distribution contained fish from age 0+ (young of the year) thru age 6+ (8.7"). Their abundance and size should provide anglers with ample fishing opportunities both in the open water season and through the ice.

Carp only made up a small proportion of the total catch by abundance (3.2%) but should be targeted by fishermen and removed when ever possible. They tend to impact the fishery by increasing turbidity and uprooting plants thus reducing survival of both game and non-game fishes.

In conclusion, Druce Lake has developed into a relatively nice fishery with quality size largemouth bass, northern pike, bluegill and black crappie. Some species within the lake were not collected as abundantly as I would like but most fish were represented by relatively large individuals suggesting their populations are likely in good shape. Several longnose gar were seen (one collected) which is fun and indicative of most glacial lakes in the area. They add to the species diversity and are only seen in surveys when their abundance is relatively strong. Vegetation abundance may be of some concern and should be monitored in the future. I believe there is an open connection with Third Lake which likely allows the transfer of fish between lakes. The typical

Recommendations (in priority order):

1. Establish a 15 inch minimum length limit and 1 per day catch limit on largemouth bass.

2. Establish a 24 inch minimum length limit and 1 per day catch limit on northern pike.

3. Treat aquatic vegetation when surface coverage exceeds 20% of the lake.

TABLE 1. DRUCE LAKE SPECIES CATCH SUMMARY, 5/22/2002.

			LENGTH (inches)		
SPECIES	NUMBER	PERCENT	MINIMUM	AVERAGE	MAXIMUM
LARGEMOUTH BASS	35	13.9	4.7	11.4	19.3
SMALLMOUTH BASS		0.0			
BLUEGILL	159	63.1	1.2	4.6	8.7
PUMPKINSEED SUNFISH	3	1.2	6.6	6.9	7.2
ORANGESPOT SUNFISH		0.0			
GREEN SUNFISH		0.0			
LONGEAR SUNFISH		0.0			
REDEAR SUNFISH		0.0			
SUNFISH HYBRID	1	0.4	6.2	6.2	6.2
WARMOUTH		0.0			
ROCK BASS		0.0			
BLACK CRAPPIE	2	0.8	10.1	10.4	10.7
WHITE CRAPPIE		0.0			
YELLOW BASS	5	2.0	10.0	10.1	10.2
WHITE BASS		0.0			
WHITE PERCH		0.0			
WALLEYE		0.0			
YELLOW PERCH	3	1.2	6.9	7.3	7.7
LOGPERCH		0.0			
JOHNNY DARTER		0.0			
IOWA DARTER*		0.0			
MUSKELLUNGE		0.0			
TIGER MUSKIE		0.0			
NORTHERN PIKE	3	1.2	29.1	31.0	33.1
GRASS PICKERAL		0.0			
CHANNEL CATFISH		0.0			
FLATHEAD CATFISH		0.0			
BLACK BULLHEAD		0.0			
BROWN BULLHEAD		0.0			
YELLOW BULLHEAD	2	0.8	8.9	10.8	12.7
BOWFIN	1	0.4	22.8	22.8	22.8
LONGNOSE GAR	1	0.4	32.7	32.7	32.7
FRESHWATER DRUM		0.0			
CARP	8	3.2	18.1	21.2	23.4
GRASS CARP		0.0			
GOLDFISH		0.0			
GOLDEN SHINER	10	4.0	2.4	2.8	3.4
COMMON SHINER		0.0			
EMERALD SHINER		0.0			
SPOTFIN SHINER		0.0			
SPOTTAIL SHINER		0.0			
BIGEYE SHINER		0.0			
BLACKCHIN SHINER*		0.0			
BLACKNOSE SHINER*		0.0			
FATHEAD MINNOW		0.0			
BULLHEAD MINNOW		0.0			
BLUNTNOSE MINNOW	11	4.4	2.0	2.4	3.2
BROOK SILVERSIDE	6	2.4	3.1	3.4	3.6
BANDED KILLIFISH*		0.0			
CENTRAL MUDMINNOW		0.0			
QUILLBACK CARPSUCKER	2	0.8	22.1	22.1	22.1
WHITE SUCKER		0.0			
SPOTTED SUCKER		0.0			
SHORTHEAD REDHORSE		0.0			
LAKE CHUBSUCKER		0.0			
GIZZARD SHAD		0.0			
ALEWIFE		0.0			
SPECIES= 16 TOTAL=	252	100.0			

*ENDANGERED OR THREATENED SPECIES.