

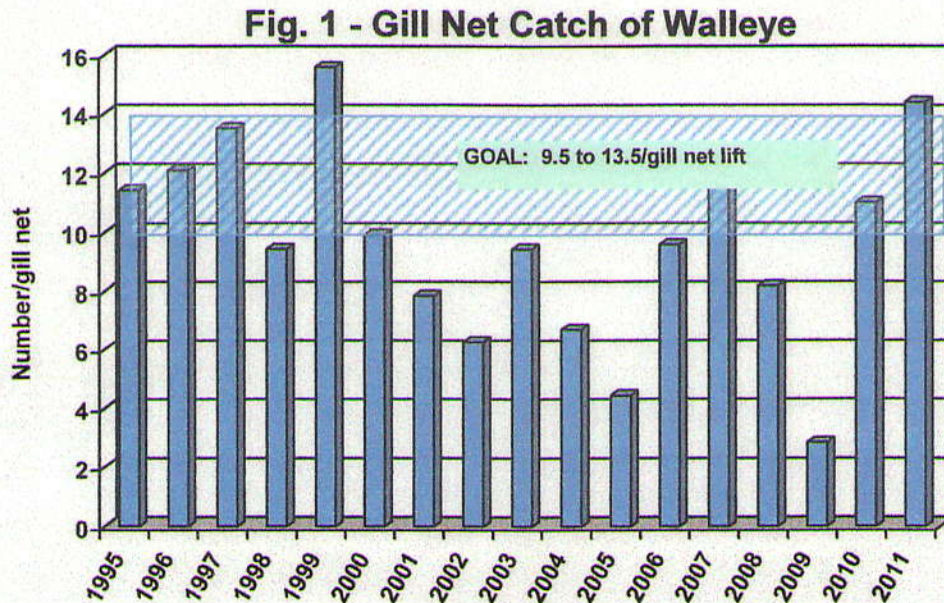
Status of Green Lake Walleye Population, 2010-2011

Prepared by Dick Sternberg for Green Lake Fishery Project
and Green Lake Property Owners Association

Results of the 2010 and 2011 lake surveys indicate that the walleye population is improving, due at least in part to the new stocking plan adopted in 2008. Although fingerlings were being stocked annually before that, poundage quotas were sometimes not met and the fish were often too small for good survival or too large, meaning that adequate numbers of fish were not stocked even though the poundage quota may have been met.

Another reason for the improvement is the return to statewide regulations in 2006. The special regulations adopted in 1997 were protecting too many smallmouth bass, largemouth bass and northern pike, resulting in increased predation on young walleyes.

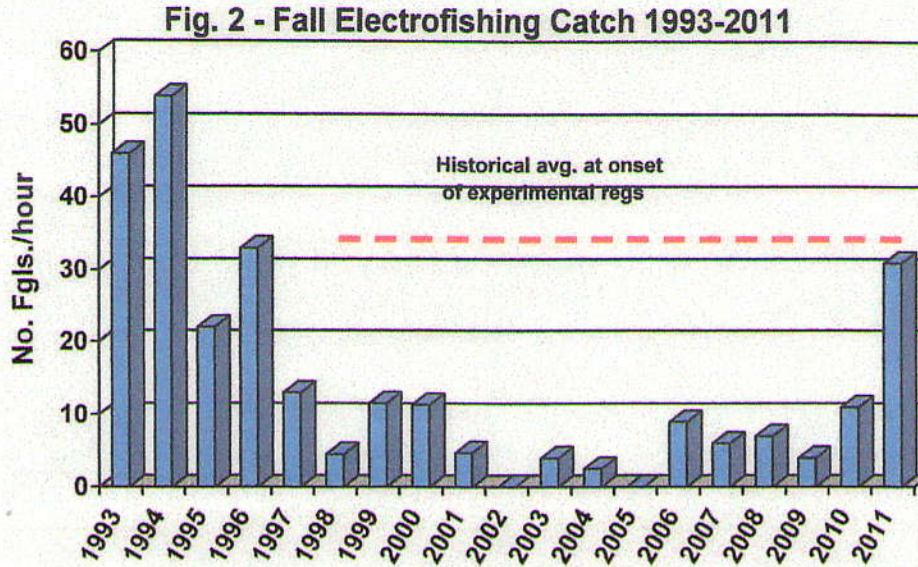
Gill-Net Results. 2010 gillnet results (11 walleyes/net) were well within the goal range of 9.5 to 13.5/net. The improvement continued in 2011, with a catch of 14.4/net, the second highest on record (Fig. 1). This is the first time in more than a decade that we have seen two consecutive years of gill-net counts within or above the goal range. There are plenty of walleyes in the 12- to 20-inch range, explaining why anglers are reporting good fishing.



Electrofishing Results. Fall electrofishing is conducted annually to assess walleye reproductive success. Prior to the onset of special regulations in 1997, electrofishing captured an average of 32 young-of-the-year walleyes/hr. From 2001 to 2009, however, the count was less than 10 and in two of those years it was zero (Fig.2).

In recent years, stocked fry have been chemically marked so it is now possible to determine if a fish was stocked or produced naturally. The 2010 electrofishing count showed a marked improvement at 11/hr, and the majority (55%) were natural.

The 2011 count of 31/hr was even more encouraging. But the fish have not yet been checked for chemical marks, so we do not know how many were produced naturally.



Stocking. The new stocking plan adopted in 2008 calls for annual fingerling stocking of 1.5 pounds per littoral acre (3,081 pounds) if the fall electrofishing count is below 30 young-of-the-year walleye per hour. The minimum number of fingerlings stocked is 46,215 fish at rate of 15-30 fish per pound. The plan was reviewed during the winter of 2010-2011 to determine if any changes were necessary, and no changes were made. While the electrofishing count reached 31 in the fall of 2011, stocking was done anyway because the program has been working so well, fingerlings were available, and there were concerns that the higher electrofishing count may have been an anomaly.

Table 1 shows that prior to the new stocking plan, fish of the ideal size (15-30/lb) were stocked in only one of the previous 8 years. More consistent stocking with fish of the right size since 2008 is a major factor in improvement of the walleye population.

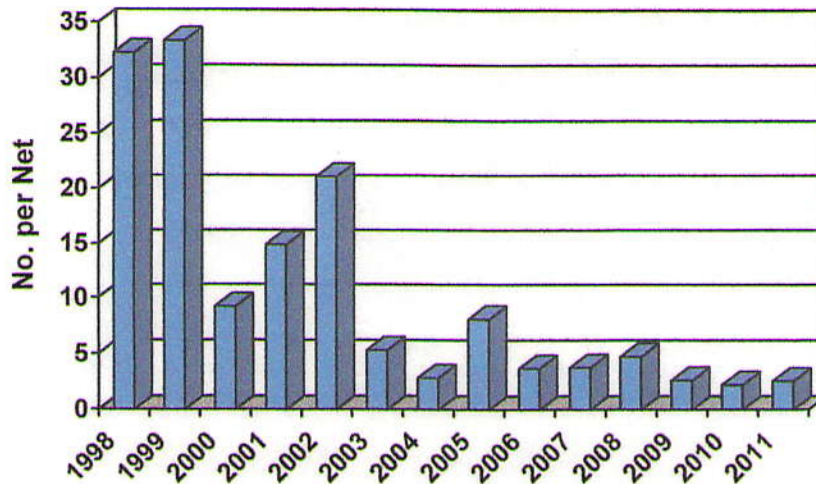
Table 1 – Green Lake Walleye Stocking, 2000-2011

	No. Fgls	Lbs. Fgls	No. Carryover	Lbs. Carryover	Total No.	Total Lbs.	Rate (no/lb)
2000	100,455	2,058	0	0	100,455	2,058	48.81
2001	144,490	4,188	0	0	144,490	4,188	34.50
2002	5,976	432	0	0	5,976	432	13.83
2003	18,650	654	18,597	3,550	37,247	4,204	8.86
2004	63,160	2,383	1,466	922	64,626	3,305	19.55
2005	5,466	264	12,219	4,106	17,685	4,370	4.05
2006	25,349	1,383	25,942	3,487	51,291	4,870	10.53
2007	48,577	2,455	6,520	2,193	55,097	4,648	11.86
2008	56,657	3,314	5,016	209	61,673	3,523	17.51
2009	74,094	3,087	0	0	74,094	3,087	24.00
2010	70,717	3,086	852	259	71,569	3,345	21.40
2011	66,550	3081	0	0	66,550	3,081	21.60

= too small
 = too large
 = ideal size

Status of Other Species. Yellow perch are the primary forage species for most large predators like walleye, northern pike and bass, but they continue to show no sign of rebounding (Fig. 3). Perch serve yet another important function: controlling the population of bluegills and other panfish that prey on walleye fry. It may be that there are still too many large predators to allow the perch population to reach the 30/net levels of the late 90s.

Fig. 3 - Gill Net Catch of Yellow Perch



Beginning in 2000, when Eurasian water milfoil was first found in Green Lake, net counts of panfish including bluegills (Fig. 4), rock bass (Fig. 5) and crappies (Fig. 6) have shown dramatic increases. The additional cover afforded by the milfoil, along with the low perch population, may explain the panfish boom. Net surveys do not provide a reliable index of bass abundance, but anglers report that bass populations, while still high, have declined somewhat since all special regulations were dropped in 2006.

Fig. 4 - Trap Net Catch of Bluegills

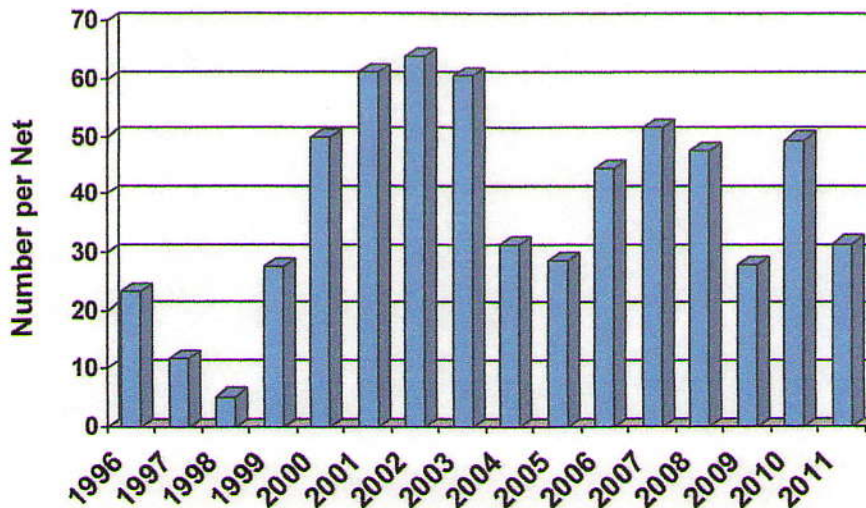


Fig. 5 - Gill Net Catch of Rock Bass

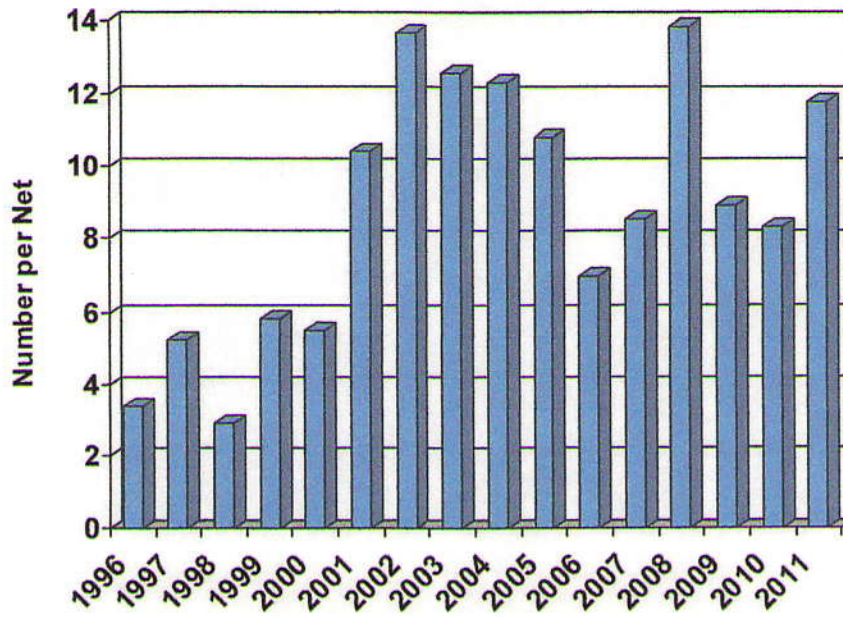
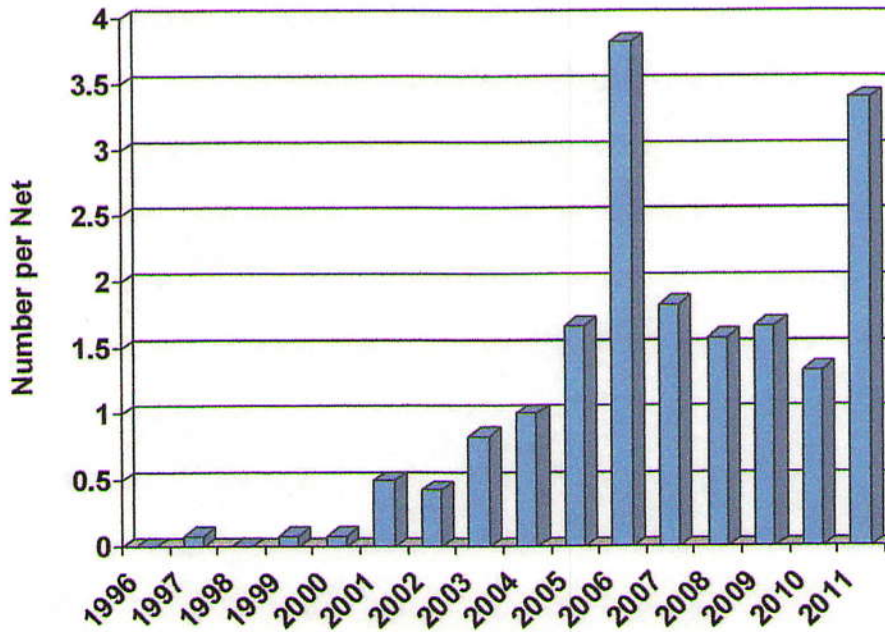


Fig. 6 - Gill Net Catch of Crappies



Conclusion: With the improvement in the stocking program, the walleye population has responded nicely. The DNR should be commended for their efforts in attaining adequate numbers of fish of the right size for the new stocking program.

But excessive predation on walleye fry by the large panfish population remains a threat. If panfish consume too many stocked or naturally produced walleye fry, fingerling stocking will have to continue at present levels. Even though the fall electrofishing catch of 31 YOY/hr was a promising sign, we need to be sure that natural reproduction and/or survival of stocked fry is occurring consistently and at a level high enough level to maintain a strong walleye population before any changes are made to the stocking plan.

The DNR agrees with this philosophy as evidenced by the following statement in their 2010 Lake Management Plan: "Until natural reproduction/recruitment is able to support a viable walleye fishery, walleye stocking will continue to be conducted." Should DNR see the need to make any changes to the stocking plan, the LMP states that "All stocking plan decisions will be coordinated with interested stakeholders." It is important that all of us stay involved to ensure that we protect the hard-fought gains that have been achieved for the Green Lake fishery.