

**After six years of failed treaty management on Mille Lacs—
IT'S TIME FOR A CHANGE**

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on behalf of PERM**

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Background

Following the "bite of a lifetime" in 2002, Mille Lacs anglers experienced the direct opposite in 2003—the worst fishing ever. After it became apparent in early season that the walleye kill would fall hundreds of thousands of pounds below the safe harvest level, PERM representatives met with DNR officials in June and again in July in an attempt to convince them to make a regulation change that would allow more summertime harvest. But our suggestions were rejected because the DNR wants "stability" so that they can

evaluate the present regulations. In addition, they stated that the Mille Lacs input group was also in favor of stability, although the input group members we contacted did not reflect that sentiment.

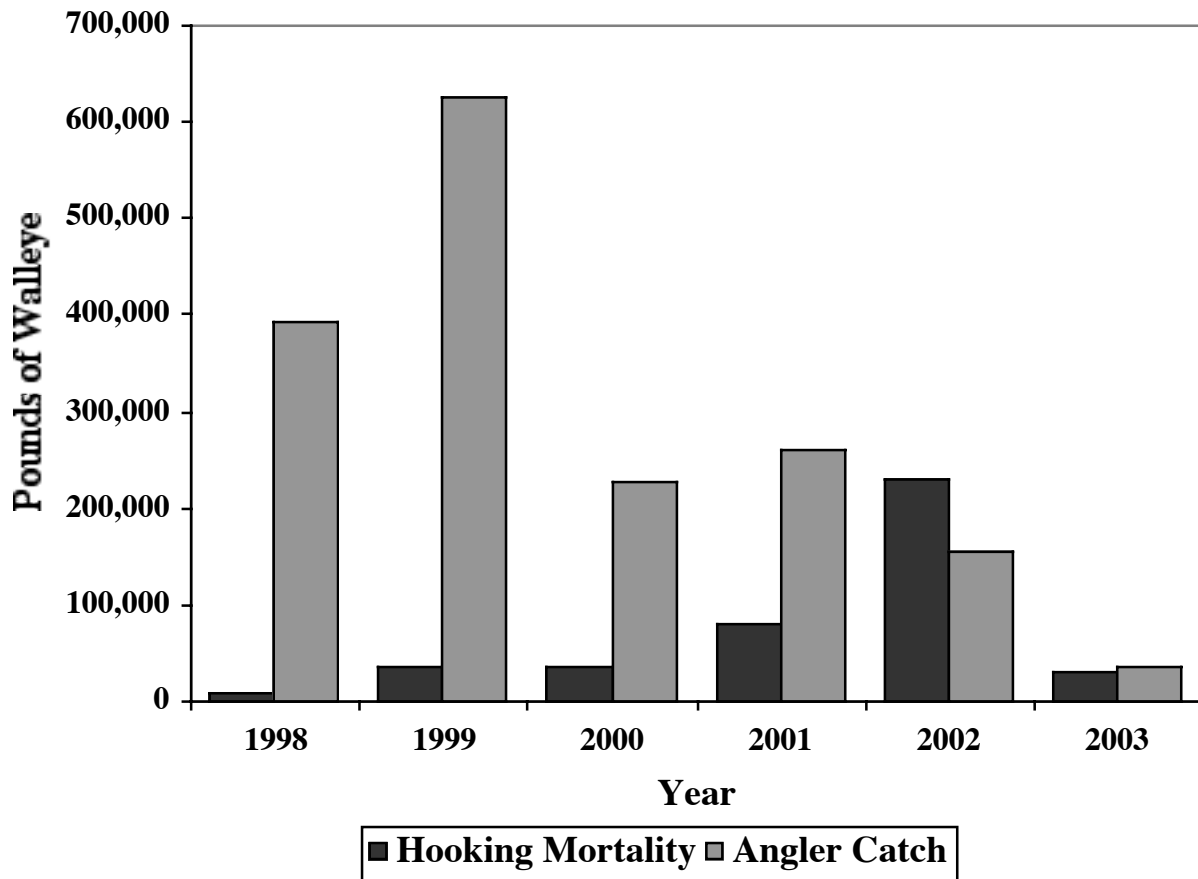
We responded to the stability argument by pointing out that even though the detail of the regulations has changed many times in recent years, the intent has remained the same: Allow harvest of small fish while protecting practically all of the large ones. The result of this philosophy was not difficult to predict—a scarcity of small fish and a glut of big ones. Because the results of the present regulation philosophy are apparent, there is no need for continued stability for the purpose of assessment.

After failing to convince DNR biologists that a change was needed to bring the population back into balance, PERM representatives contacted the Governor's office and requested a meeting to discuss the Mille Lacs regulation problem and the effects that overly tight regulations were having, not only on the walleye population but also on angler and business interests. We are still waiting for the Governor's scheduler to set a date.

In the meantime, we are working with Commissioner Merriam and John Guenther, the newly appointed Director of the Division of Game and Fish, to work out the problem. We believe there is still a good chance of a favorable regulation change in time for the 2004 season.

The data on the following pages makes a strong case for a regulation change. The information was collected from DNR gill netting, trawling and creel surveys.

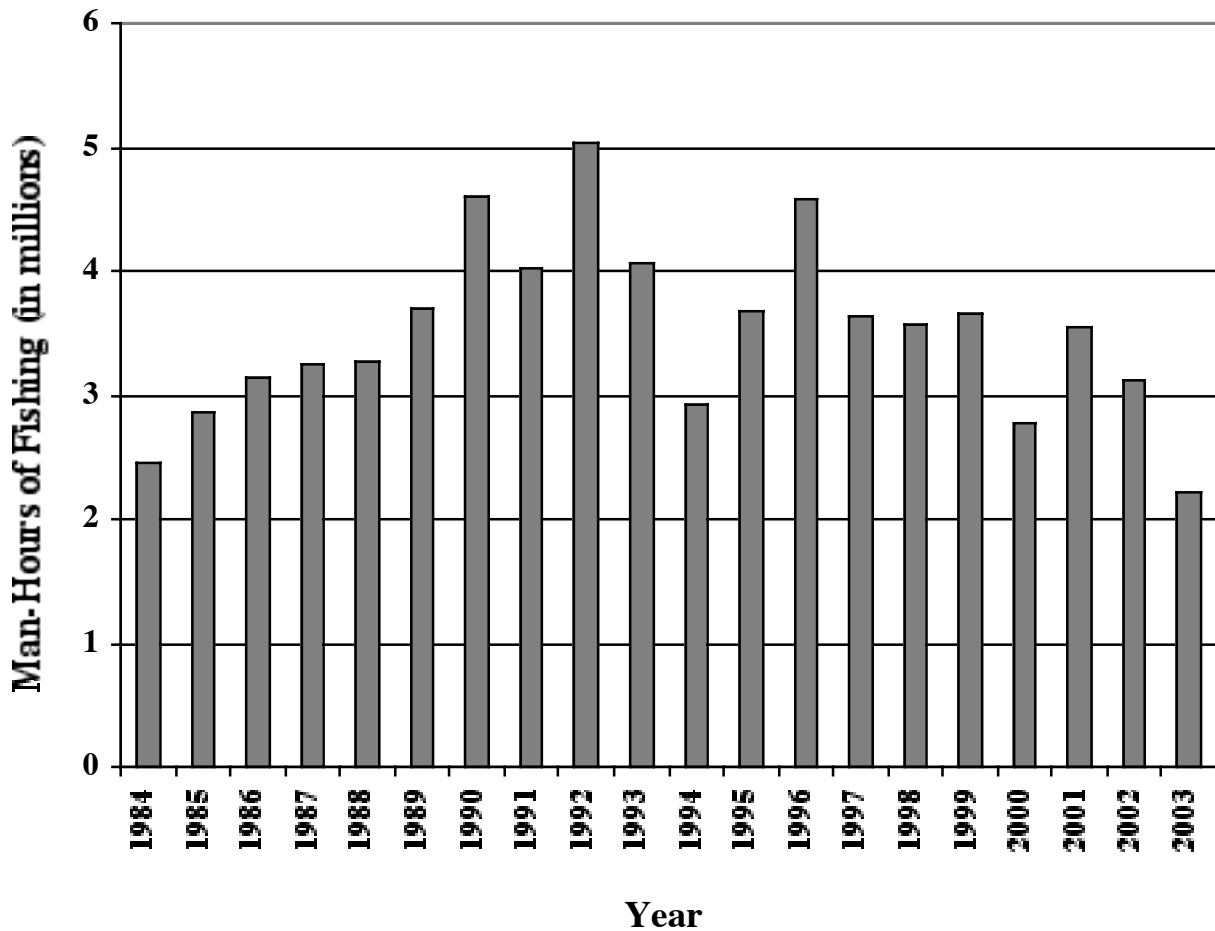
Angler Catch (kept) vs. Hooking Loss



Discussion: Since treaty management began in 1998, ever-tightening slot limits combined with a reduction in the population of legal-sized fish, has resulted in a sharp decline in the poundage of walleye kept by anglers. In fact, the poundage kept in 2003 was only about 5 percent of that in 1999. At the same time, the poundage of walleye lost to hooking mortality showed a sharp increase from 1998 to 2002, peaking at 228,282 pounds for the 2002 season. What upset so many anglers was the fact that hooking mortality in 2002 far exceeded the poundage actually kept.

The total kill for 2003 was 66,493 pounds, only about one-third of that in 1985, the next lowest year on record. The astoundingly low harvest resulted in a noticeable attitude change among anglers. Not only was the bite very slow, but when they did catch a fish, they couldn't keep it. So they solved the problem by going elsewhere.

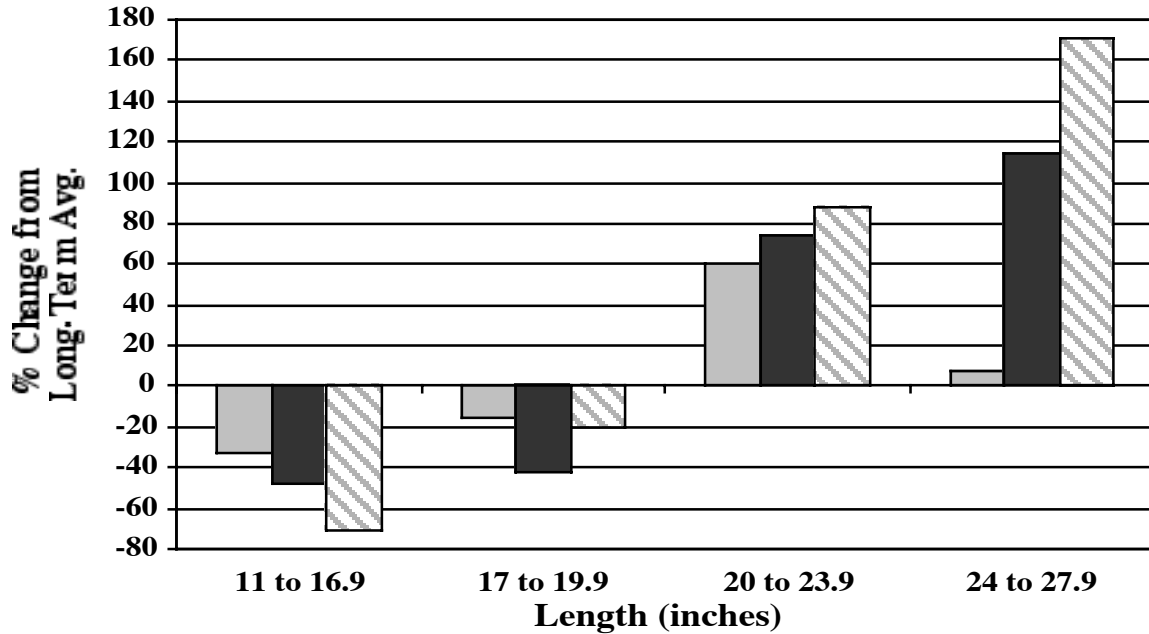
Annual Fishing Pressure



Discussion: Even though fishing pressure on most of Minnesota's large lakes has shown sharp increases in recent years, the trend on Mille Lacs has been downward. In fact, the amount of fishing in 2003 was at a 20-year low. To make matters even worse for resorters and other business interests that rely on Mille Lacs anglers, 73% of the total fishing pressure for the year occurred before mid-June, explaining why the summer and fall business was the slowest most observers had ever witnessed.

The "tough bite" got most of the blame for the lack of interest by anglers, but as one resorter observed, "We've had poor fishing years before, but people still went fishing because they could keep most of what they caught. Now they can't, and that's the difference."

**Size Composition of 2001-2003
Gill Net Catch (catchable-size walleyes only)**

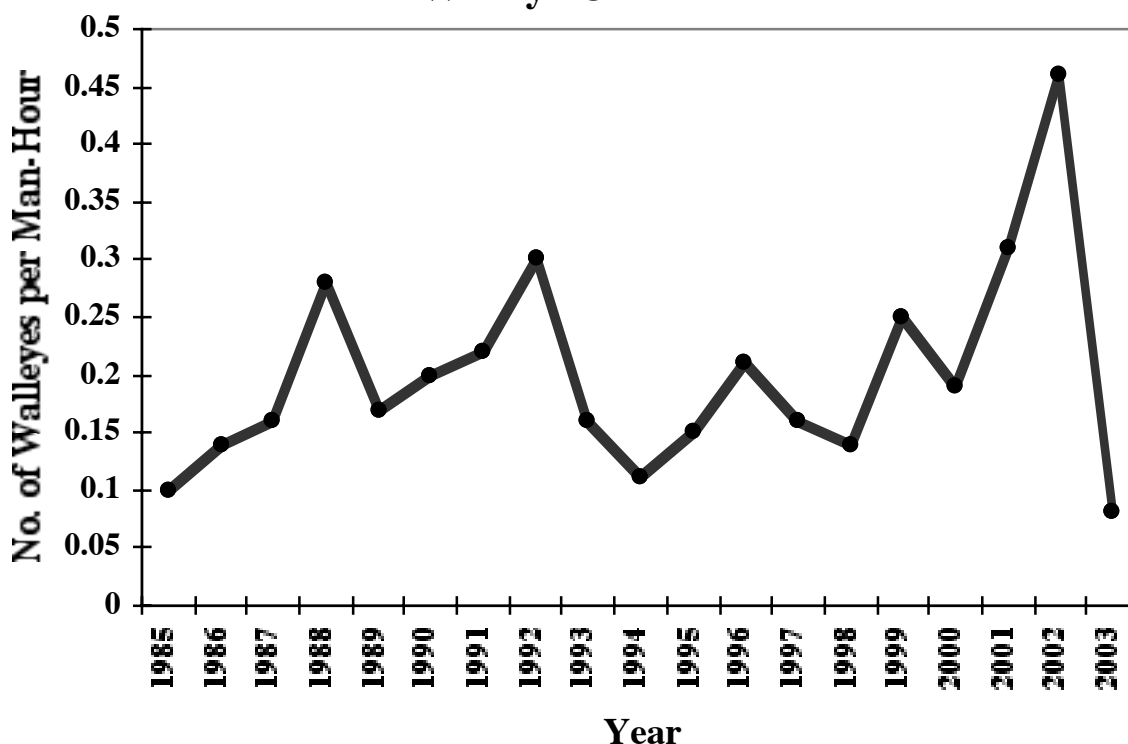


Percent Change 2001
 Percent Change 2002
 Percent Change 2003

Discussion: This graph demonstrates the effects of slot limits that have targeted the smaller walleyes in recent years and clearly explains why it has become so difficult to catch a "keeper." In 2001, the number of walleyes in the 11- to 17-inch size group was already 33 percent *below* the long-term average while the number in the 20- to 24-inch group was 60 percent *above* the long-term average. The trend toward fewer small fish and more big fish has continued and even accelerated in 2002 and 2003. The 11- to 17-inch group is now down 71 percent while the 20- to 24-inch group is up 88 percent and the 24-inch-plus group, 171 percent.

While stability of regulations is a goal of the DNR and some resorters, it is now obvious that the present regulations have created a serious population imbalance and should not continue.

Walleye Catch Rate

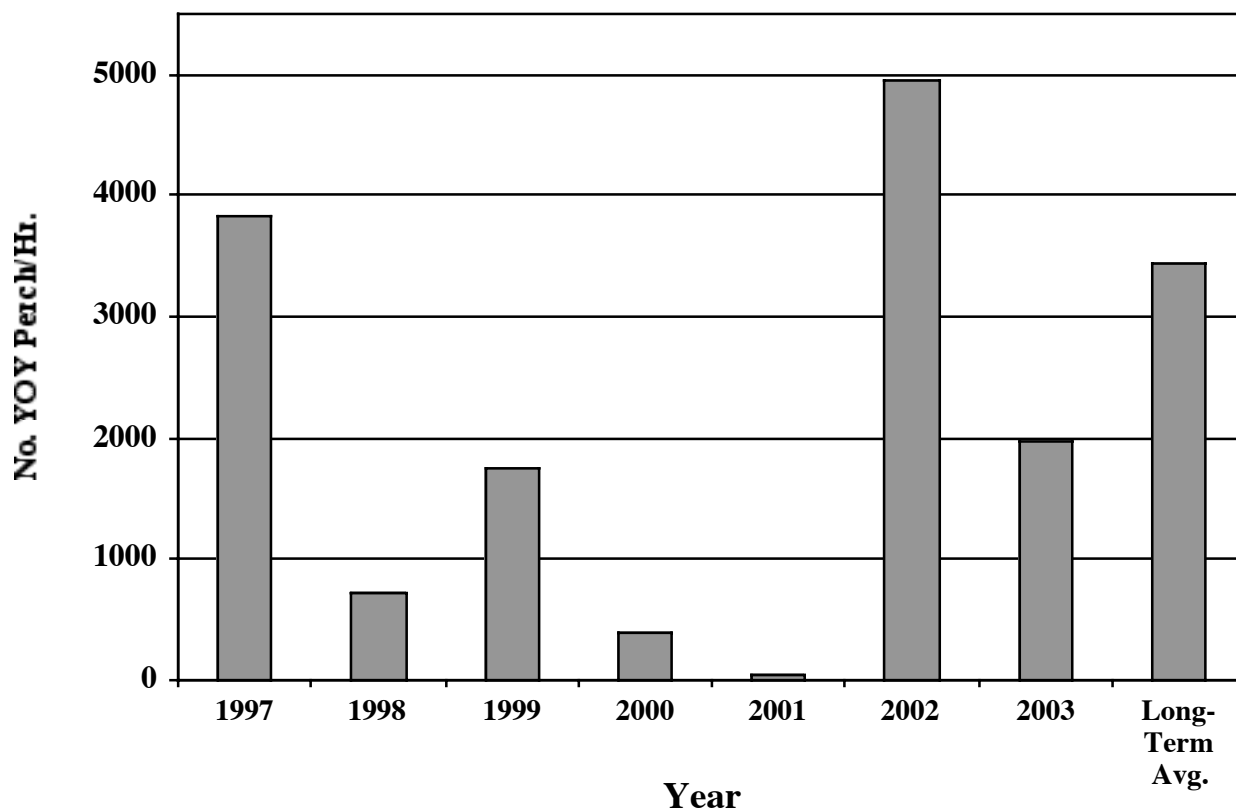


Discussion: Fishing success, which is usually measured in terms of number of walleyes caught per man-hour of fishing, has always been highly variable on Mille Lacs, ranging from 0.1 to 0.3 walleyes per hour in most years. The main factors affecting the catch rate are the abundance of catchable-size walleyes and the abundance of baitfish, particularly young-of-the-year yellow perch. If walleyes (especially the smaller, more catchable ones) are numerous and baitfish scarce, the bite is likely to be hot and vice versa.

The erratic nature of the bite has always been a concern to fisheries managers because it results in a "boom-or-bust" walleye harvest. In arguing for more restrictive size limits, the DNR frequently pointed to the million-pound-plus walleye harvest in 1992 which was followed by a harvest of only about 200,000 pounds two years later. Supposedly, tighter slots would help smooth out the curve.

But as this graph clearly shows, the ultra-tight slots of the post-treaty era have had the opposite effect. Not only did the catch rate drop from its highest ever (.46/hr) in 2002 to its lowest ever (.08/hr.) in 2003, the walleye kill dropped 82% in the same period. Never has the downturn from one year to the next been this severe.

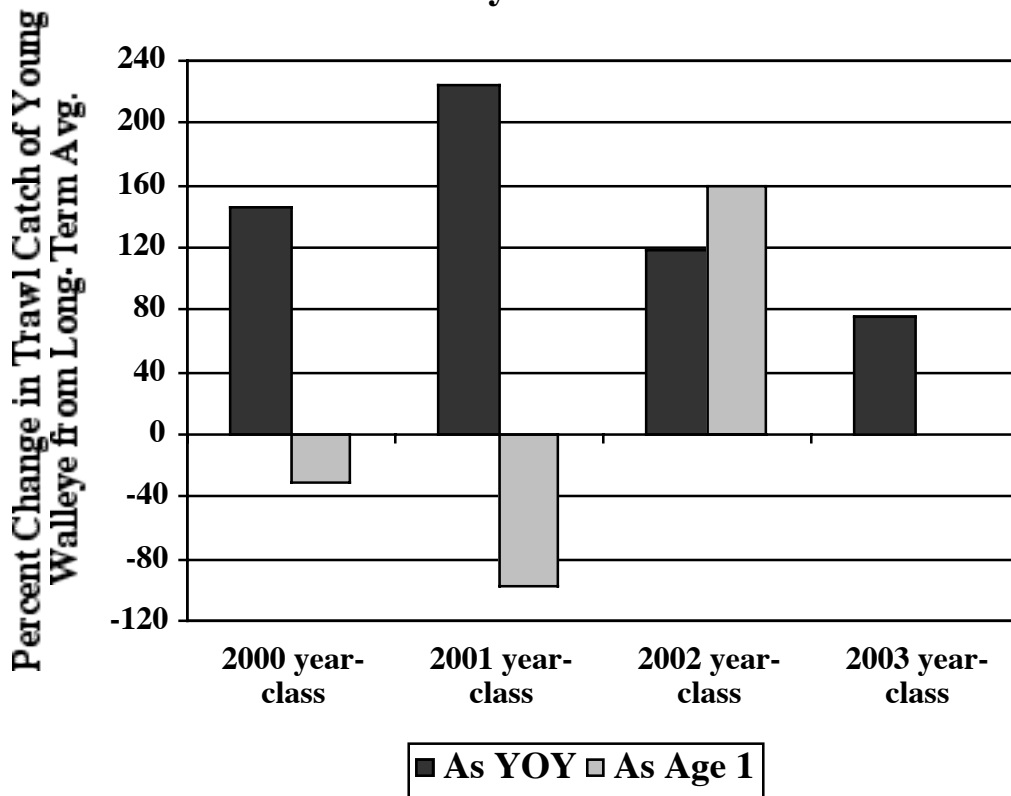
Trawl Catch of YOY Yellow Perch



Discussion: The abundance of young-of-the-year (yoy) baitfish, especially yellow perch, is a major factor in determining the willingness of walleyes to bite. Perch hatch in early spring, but do not reach the size necessary to interest walleyes until mid-summer. Following two particularly weak year classes in 2000 and 2001, due at least in part to the continuing build-up of large walleyes, the "bite" at the start of the 2002 season was phenomenal. The hot bite became apparent at the beginning of the ice-fishing season and continued well into the summer of 2002. But in late summer, when walleyes begin to feed heavily on yoy perch from the huge 2002 hatch, the bite began to fade. By season's end, anglers were struggling to catch fish, and the problem grew even worse in 2003.

The moderate perch hatch of 2003 signals an improvement in fishing for the 2004 season, but it is unlikely the bite will be anything even close to that seen in 2002.

Change in Abundance of Recent Walleye Year-Classes



Discussion: DNR trawl catches show that the size of all walleye year-classes since the year 2000 have all been well above average, with the strongest year-class coming in 2001. But in the case of both the 2000 and 2001 year-class, the numbers were seriously depleted by the time the fish reached a year of age, most likely as a result of predation by the increasing population of large walleyes. In fact, the exceptionally strong 2001 year-class went from 225% *above* average to 98% *below* average within one year. The 2002 year class survived well to age 1, probably because the large 2002 year-class of yellow perch relieved the predation pressure. As the situation now stands, future walleye fishing in Mille Lacs depends greatly on the 2002 year-class and possibly on the 2003 year-class, assuming it does not meet the same fate as the 2000 and 2001 year-classes.

As long as the Mille Lacs walleye population remains heavily skewed toward the larger size classes, the threat of heavy cannibalism of young-of-the-year walleyes will persist.

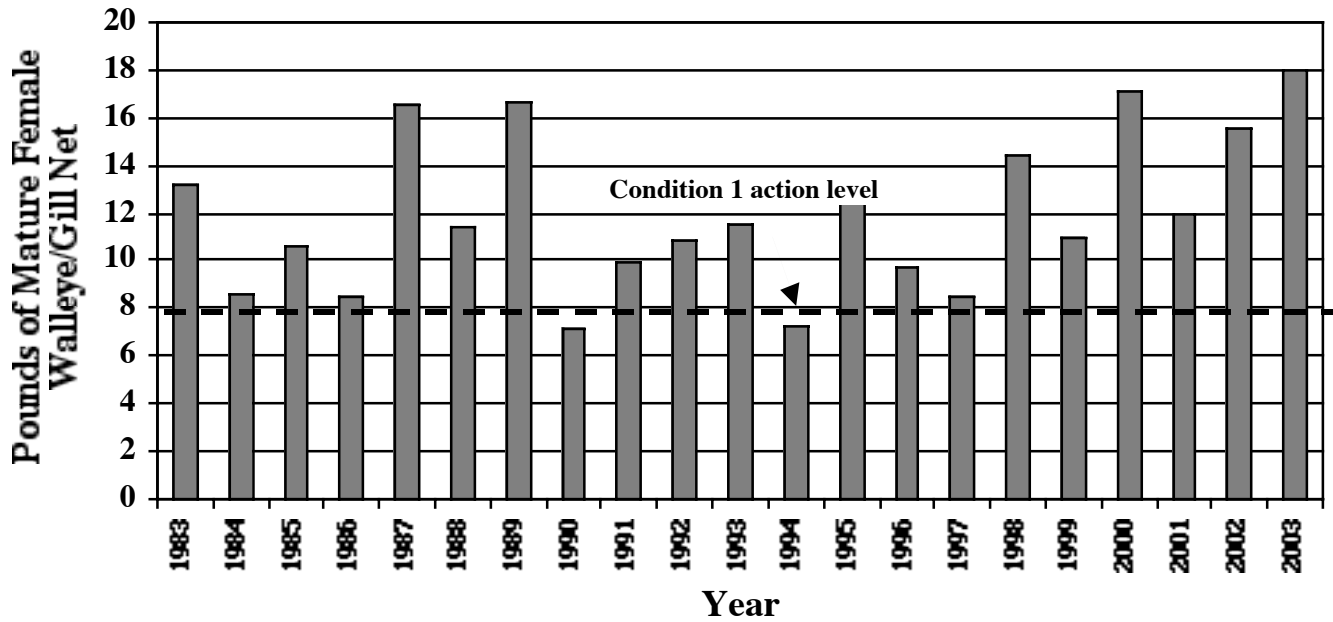
Condition Levels

The five-year plan adopted in 2002 is conditional, meaning that the regulations will depend on the status of the walleye population—the healthier the population, the more liberal the regulations may be. The population’s health is defined by the following criteria, as determined by the annual fall gill-net survey:

- Spawning stock biomass (pounds of mature female walleye per gill net).
- Number of mature female walleye year classes.
- Pounds of walleye per gill net.

Based on these annual measurements, the overall health of the population will be rated as Condition 1 (all three criteria at 110% or more of historic lows), Condition 2 (any of the criteria are between 100 and 110% of historic lows) or Condition 3 (any of the criteria at historic lows).

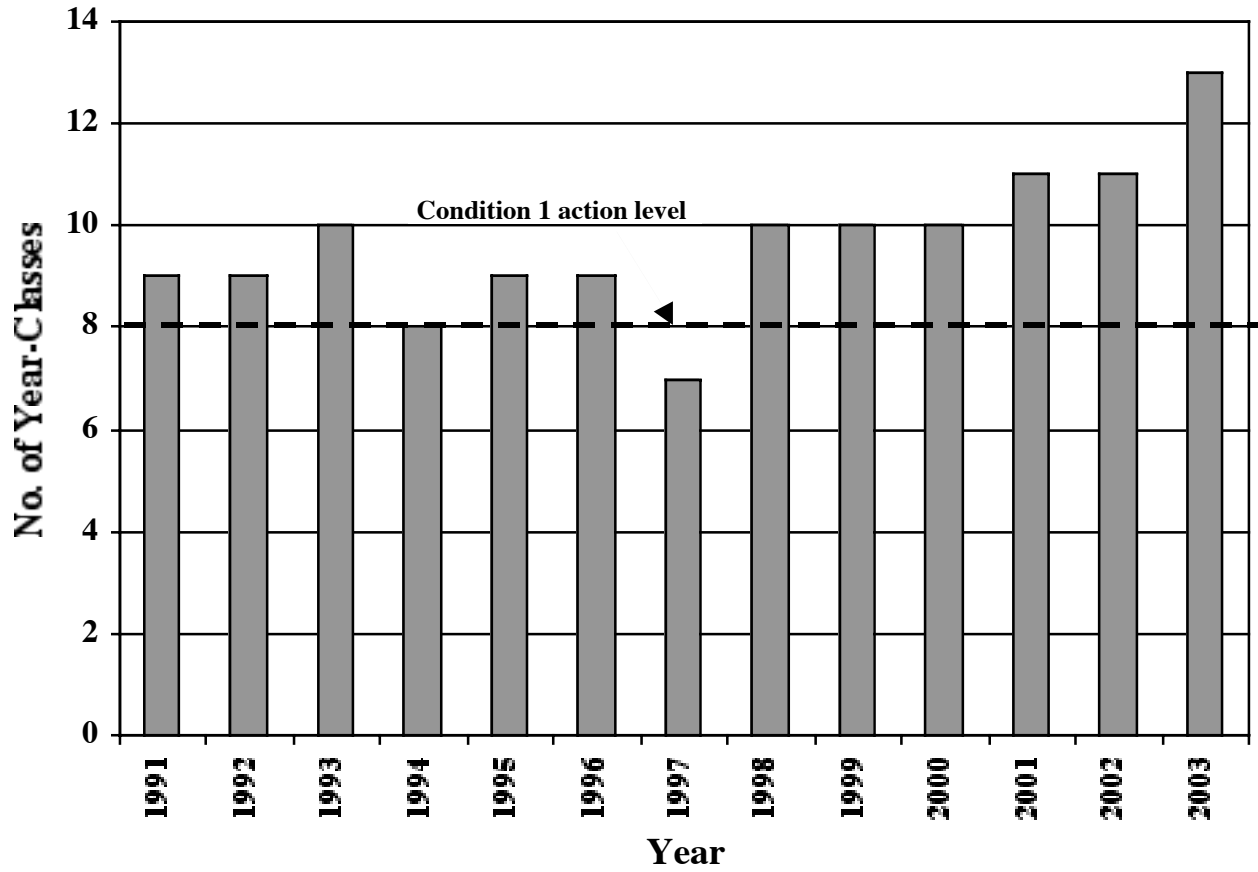
Spawning Stock Biomass



Condition 1; 7.9 lbs. or more; Condition 2: 7.2 to 7.9 lbs.; Condition 3: less than 7.2 lbs.

Discussion: Spawning stock biomass has been in Condition 1 in all but 2 years out of the 21-year historic baseline period (1983-2002). The lowest biomass occurred in 1990, when there were only 7.2 pounds of mature females per gill net. The 2003 biomass was 18 pounds per gill net, which is the highest on record and more than double the Condition 1 action level.

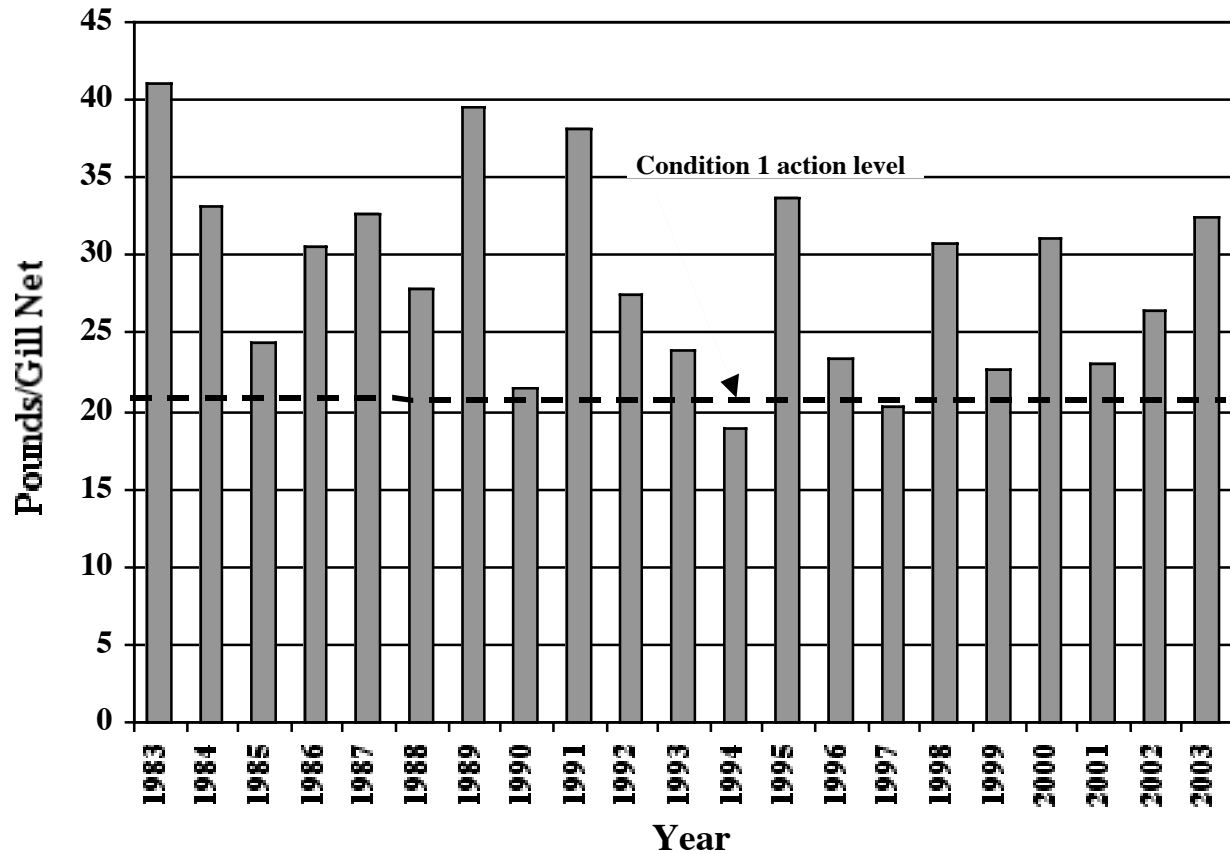
Number of Mature Female Year-Classes



Condition 1: 8 yr. classes; Condition 2: 7 yr. classes; Condition 3: less than 7 yr. classes

Discussion: The number of mature female year classes is now at 13, the highest on record and well above the Condition 1 action level of 8. The fact that both the number of year classes and the mature female biomass are both at historic highs should put to rest the Band's argument that there is a shortage of spawning stock.

Gill Net Catch of Walleye



Condition 1: 20.8 lbs. or more; Condition 2: 18.9 to 20.8 lbs.; Condition 3: less than 18.9 lbs.

Discussion: The poundage of walleye per gill net increased dramatically in 2003 and is now at 32.4, well above the Condition 1 level of 20.8 and the highest in the last eight years. The increase was probably related to the record-low angler walleye harvest in 2003.

With all three indicators well above Condition 1 action levels, the stage is now set for more liberal fishing regulations in 2004.

Summary, Conclusions & Recommendations

The lowest fishing pressure in the last 20 years resulted in the lowest walleye catch since creel records have been kept. The total 2004 walleye kill (lbs. kept + hooking mortality) also set a record low—by a wide margin. The lack of anglers, especially in summer and fall, resulted in a tremendous hardship for the Mille Lacs fishing economy, with many resorters and bait dealers reporting a drop in business of 50% or more. One launch operator saw his business fall off by more than 90%.

The walleye catch rate (.08 walleyes per hour) was the lowest on record, but that figure includes the number of walleyes released. In terms of walleyes kept by anglers, the catch rate was only .01 per hour, meaning that an angler had to fish almost 100 hours to catch a keeper.

The DNR blames the poor fishing in 2003 on the large perch hatch in 2002. But there have been even larger perch hatches in the past and they have not resulted in such slow fishing. What compounded the problem is the fact that the "slot fish" (17 inches and under) now make up a much smaller percentage of the population than they have in previous years. Since the larger fish that remain are considerably more difficult to catch than the smaller ones, the drop in the catch rate is understandable.

As an integral part of their latest five-year plan, the DNR and Band agreed on a set of indicators that would be used to monitor the health of the walleye population. All of these indicators are well above the "Condition 1" action levels. In fact, two of the indicators, spawning stock biomass and number of year classes of adult females, are at historic highs. And the total gill net catch was 56 percent higher than the Condition 1 action level. This means that the walleye population is strong enough to allow more liberal fishing regulations and a substantial increase in harvest.

Two other factors further support liberalization:

- The rebound in baitfish numbers. With the perch population now in the average range, the bite is likely to be within normal bounds.
- The "underage" resulting from the record-low 2003 walleye harvest. With a safe harvest level of 550,000 pounds for the 2003 season and deductions of only 66,492 pounds (angler kill), 70,536 pounds (Band kill) and 7,600 pounds (overage from 2002), there is an underage of 405,372 pounds that will carry over to the final four years of the five-year plan. That underage will be prorated, resulting in an annual underage of 101,343 pounds.

Although the 2004 safe harvest level has not been announced, it logically should be higher than the 2003 level, based on the increase in all of the Condition factors. Let's assume the 2004 safe harvest level is 600,000 pounds minus a 100,000-pound deduction for the possible Band Catch. That would leave a 500,000-pound quota for angler kill, with an underage "cushion" of 101,343 pounds should that catch be exceeded.

While it is clear that regulations can and should be liberalized, the highly skewed size distribution of the walleye population means that the new regulations will have to be carefully tailored. With much of the population nearing the end of its life span, the harvestable fish severely depleted and a great deal of cannibalism of young walleyes in recent years, there is serious concern about the future. Whatever regulation is chosen, it should *not* focus the harvest on the 17-inch-and-under size class, which has been badly overfished already.

We believe the DNR should establish length regulations that protect more of the walleyes under 17 inches while allowing a reasonable harvest of larger fish. One possibility would be a harvest slot of 17 to 21 inches with one fish over 28 inches and a limit of 4. Or, to be more conservative, start the season with a 17- to 19-inch harvest slot and then switch to a 17- to 21-inch slot when the night ban goes off in early June. Not only would these regulations help promote walleye population balance, they will give anglers a chance to harvest a larger share of the sportfishing allocation.

If at all possible, the new regulations should take effect in January 2004. This move could salvage what will almost surely be a disastrous ice-fishing season if current regulations remain in place.