



Salmonid Stocking Reduction Workshop 6 Questions

Below are questions that Department staff heard during our two Wisconsin meetings (Aug 7 and Aug 9) and answers to those questions

1) All users on the lake should help to maintain the forage base including the commercial industry. What is the commercial incidental catch of alewives and how does that compare to the USGS estimated biomass?

In Wisconsin, targeted fishing for alewives was prohibited more than 15 years ago. However, incidental catches of alewives are allowed and recorded in the smelt fishery. Below is the information from the USGS bottom trawl and their estimated pounds of alewives in Lake Michigan and Wisconsin's reported commercial harvest. In the past 5 years, the percentage of alewives harvested by Wisconsin commercial fishermen has been as high as 0.17% in 2008 and as low as 0.003% in 2011. In every case the harvest is tremendously low compared to the estimated pounds in the lake.

Uses of these data have to be carefully interpreted since we know that the bottom trawl covers only a small fraction of the lake and they undoubtedly miss a lot of alewives. However, the bottom trawls provide a reasonable index of alewife abundance over time but provides a poor estimate of absolute abundance.

Year	Estimated Pounds of alewives (USGS)	Reported Commercial harvest (lbs.) of alewives in Lake Michigan	Percentage of alewife biomass harvested
2011	16843317	475	0.003%
2010	14131631	950	0.007%
2009	28726233	5365	0.02%
2008	18232229	30825	0.17%
2007	25727946	19755	0.08%

2) All users on the lake should help to maintain the forage base including the commercial industry. What is the commercial catch of smelt and how does that compare to the USGS estimated biomass?

In Wisconsin, rainbow smelt trawling is allowed in Lake Michigan and Green Bay with certain restrictions. Below is the information from the USGS bottom trawl and their estimated pounds of rainbow smelt in Lake Michigan and Wisconsin's reported commercial harvest of smelt. In the past 5 years, the percentage of smelt harvested by Wisconsin commercial fishermen has been as high as 25.7% in 2011 and as low as 0.8% in 2009.

Uses of these data have to be carefully interpreted since we know that the bottom trawl covers only a small fraction of the lake and they undoubtedly miss a lot of smelt. However, the bottom trawls provide a reasonable index of rainbow smelt abundance over time but provides a poor

estimate of absolute abundance. For example, it seems highly unlikely that the smelt fishery in Wisconsin harvested 25% of all the smelt in Lake Michigan in 2011.

Year	Pounds	Reported Commercial harvest (lbs.) of smelt in Lake Michigan	Percentage of smelt biomass harvested
2011	1036173	266155	25.7%
2010	1873929	322123	17.2%
2009	2777825	23085	.8%
2008	1962114	190407	9.7%
2007	1940068	360957	18.6%

3) Chinook salmon are migrating in from Lake Huron because Michigan still stocks them. Why is Michigan still stocking Chinook salmon in Lake Huron and how many fish are they annually stocking?

According to Michigan, they reduced Chinook salmon stocking in Lake Huron from almost 1.5 million spring fingerlings in 2011, to 693,000 during 2012. They still have a viable sport fishery for Chinook salmon in the northern part of Lake Huron. Future stocking of Chinook salmon concentrates these fish in this part of the lake.

For more information, please click on this link.

http://www.michigan.gov/dnr/0,4570,7-153-10364_52259-259803--,00.html

4) Option 4 had a lower risk in the parameters that were evaluated including a lower risk of a low alewife outcome. Why was Option 2 chosen over Option 4?

On policies like this that affect all jurisdictions, we are committed to acting by consensus of the Lake Michigan Committee. Option 2 was the only choice that was acceptable to all members of the Committee.

In addition, during the various workshops and presentations the agencies informed the stakeholders and the public that the results from the model were one of many parameters and informational items they would look at to determine future stocking numbers in Lake Michigan. Also, results from the online surveys indicated that at least two states favored Option 2 in one of the survey methods.

Chinook salmon are the easiest to manipulate in the hatchery system because they are only held for a short period of time (6 months) and take up less space than yearling fish. In addition, chinook salmon consume the most alewives compared to the other species, so the we would have to cut many more of any combination of other species to equal the chinook salmon reductions.

5) Options 2 through 4 are using the average weight of age 3+ females from Strawberry Creek Weir, Wisconsin as the feedback mechanism and the agencies are set to use a 3 year average of this parameter to make future decisions on stocking. Why three years and can't the agencies respond quicker if there are problems?

Throughout the entire year and half process engaging the stakeholders on the issues, the stakeholders clearly told the Lake Michigan Committee that they wanted quicker action if

information warranted that action. While the Lake Michigan Committee has a goal to reduce Chinook salmon stocking for three years and evaluate the outcome, the LMC is committed to quicker action if the need arises.

6) Sea Lamprey wounding rates still seem high, what are the latest wounding and sea lamprey population estimates for Lake Michigan?

Both sea lamprey abundance and sea lamprey wounding rates are above the goals set by the Great Lakes Fishery Commission and the USFWS. Highlights from the Lake Michigan Committee include –

- Wounding rate is greater than the target.
- Declining abundance of larger lake trout may result in the higher wounding rates.
- Increased sea lamprey-induced mortality in the northern portion of the lake has set lake trout restoration efforts back by at least a decade.
- The commission, in collaboration with management agencies, is working to build lake trout wounding and abundance databases to allow for analyses to advance the assessment of success and guidance of the program.

For more details, check out this link - <http://www.glfrc.org/sealamp/catchdb/status/Michigan.pdf>

7) Reduction of fish in Wisconsin hatcheries should result in cost savings to the DNR allowing them to do other things with this money. How much money will Wisconsin save by not raising 440,000 Chinook salmon and what will happen to this money?

The statewide average cost for stocking Chinook salmon for the time period FY 08 through FY 11 is \$0.197, +/- \$0.011 per fish. A cut of 440,000 small fingerling Chinook could result in an average cost savings of up to \$86,680. The actual amount saved will depend on which facility the production is cut from, related personnel and facility costs, distribution. Real actual savings are likely to be somewhat less – perhaps around \$50,000 or so.

Chinook salmon are in the hatchery for a short time – 6-7 months depending on when fish can be stocked. The propagation system as a whole is facing a total budgetary shortfall of approximately \$500,000 in the next 4 years due to inflationary increases in fish food, utilities, vehicle fleet rates, etc. The savings realized by cutting chinook production would be used to prevent the reduction in operations of hatcheries used for the Great Lakes Stocking program.

8) Lower Chinook salmon stockings in Wisconsin will reduce the fall spawning runs in Wisconsin, what will be the impact of these reduced runs in Wisconsin?

Reductions in Chinook salmon stocking into our streams and harbors will reduce the number of returning fall spawners. The main goal of the reduction is to better match the available forage with the predators in the lake.

One of the bigger questions that might get answered with our Coded Wire Tag Study is “When do chinook salmon begin to return to their stocked stream as part of their spawning behavior?” Right now we do not know when this happens. If chinook salmon begin their spawning migration in early summer (July/August) that would dictate a different stocking strategy compared to if the salmon begin their spawning migration in late summer or early fall (after September 1). Once information is obtained from this study, staff will determine if stocking changes need to be made.

9) Wisconsin's share of the reduction (37.8%) is too high; Michigan should take a higher percentage to fully account for natural reproduction in Michigan's Lake Michigan tributaries.

During discussions of the percentage reduction of Chinook salmon in Lake Michigan, the Lake Michigan Committee decided that we would first reduce the number of fish stocked by Michigan into natural reproducing streams in Michigan. The 405,000 chinook salmon currently stocked by Michigan into naturally reproducing chinook streams and slated for reduction is the equivalent to an "elimination" of stocking into these streams. This number, 405,000 was then subtracted from the total number that we needed to reduce to account for in part the naturally reproducing Chinook salmon in Michigan tributaries. The resulting number was then spread evenly across all four states resulting in Wisconsin's share of the reduction (37.8%).

Several things to keep in mind as you analyze the reduction percentages. While we know that about 50% of the age 1+ Chinook salmon at large and in the Lake are from natural sources, we do not know exactly where they are coming from. They could be from Michigan tributaries to Lake Michigan, they could be from Lake Huron or lastly they could be coming from Ontario waters of Lake Huron. To assign all natural reproduction of Chinook salmon observed in Lake Michigan to Michigan would not be accurate. In addition, Michigan is already reducing their stocking numbers by over 1 million fish and not all areas of Michigan have naturally reproducing Chinook salmon. Some fish have to be left to stock by Michigan into these areas for the same reason Wisconsin anglers want fish stocked in their area – for fall spawners and fall fishing.

10) Wisconsin's pro-rated reduction by port is 44.5%. Stocking reductions should be based on license sales and number of anglers at each port. Why is Wisconsin reducing every port by the same percentage and why is Strawberry Creek not getting a reduction?

In previous stocking reductions of Chinook salmon in Wisconsin, non-brood river ports have been reduced the same percentage no matter their location on Lake Michigan. We feel that this is the fairest way to reduce the number. If this is not done, stocking battles among the various ports will ensue and be highly contentious.

Strawberry Creek is the main source of brood stock that produces future generations of Chinook salmon for Wisconsin anglers. This creek has been the main source of eggs since the stocking program began in the late 1960s. In addition over time, the health of Chinook salmon returning to this creek has been better than other brood rivers in Wisconsin. Strawberry Creek gets 175,000 Chinook salmon annually and at this time is not slated to be reduced. However, staff will be analyzing this number over the next several months to determine the best stocking number into the future.