

Muskellunge Team Meeting Notes
Kemp NR Station, Lake Tomahawk
Wednesday, September 5, 2012

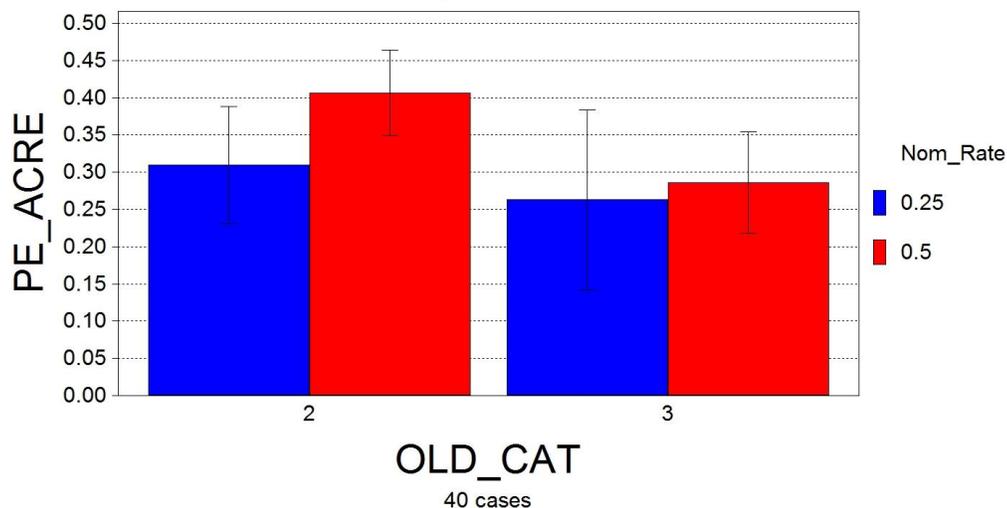
1. Attendance – Mike Donofrio (EAD), Steve Gilbert (NAD), Dan Isermann (UWSP), Martin Jennings (SS), John Aschenbrenner (WCC), Mark Luehring (GLIFWC), Dennis Scholl (NAD), Jonathan Pyatskowitz (NAD), Tim Simonson (CO), Scot Stewart (SAD), Bruce Underwood (CO), Justin Van De Hey (UWSP), Jordan Weeks (WAD), Doug Welch (SAD), Aaron Cole* (NAD), Greg Matzke* (NAD), Mike Vogelsang (NAD), Dean Bortz. *=New member.
2. Reviewed Charge - <http://dnr.wi.gov/topic/Fishing/musky/muskymanteam.html>
3. Musky Research Update – Martin Jennings provided an update on activities related to muskellunge research out of his office, including age and growth studies (including Spider Lake, Sawyer County), PIT tag retention, support of our broodstock management program, spawning/capture site fidelity and movements and implications for population estimation and brood stock capture, volunteer PIT tag recovery program, and cisco monitoring program. Contact Martin for additional information.
4. Regulations – We reviewed the 2012 Conservation Congress Advisory Questions related to muskellunge management. First, the proposal to increase the minimum length limit from 28” to 40” on Spider Lake, Sawyer County (2,003 Yes – 381 No – originated as a resolution in 2011) is currently under review by the local fisheries biologist and they plan to assemble all the available data, including a survey planned for spring 2013 before acting on this proposal. We will have a chance to review this if a rule change proposal is developed. We also review 2 Congress advisory questions related to motor trolling: The first, essentially to allow trolling with live bait using an electric motor, “while position fishing” (2,161 Yes -1,236 No – originated as a resolution in 2011) was rejected in deference to the following proposal, which was to specifically allow motor trolling statewide (1,928 Yes - 1,576 No). This proposal was supported by the Musky Team. After considerable discussion regarding whether to propose 3-lines or 1-line, the consensus was to propose 3-lines statewide, and consider the statewide vote in applying the regulations uniformly across the state. We continue to recommend that this proposal be presented as a rule change by the department at the 2013 Spring Hearings. The format of the question should be similar to the one presented by the Conservation Congress Warm Water Study Committee. In terms of citizen resolutions from the 2012 spring hearings, we supported the concept of increasing the musky size limit on Petenwell and Castle Rock from 45” to 50” because it fits within the framework we have established. Eventually, we would prefer to see the 45” waters changed to either 40” or 50”. We also discussed whether the entire Wisconsin River system (at least from the dam at Lake Du Bay downstream) should be consistent. We will discuss this further if the local biologist submits a rule-change proposal for the next cycle. We are still on track to pursue the 54” minimum length limit on Green Bay/Lake Michigan for the 2013 hearings.
5. Propagation/Stocking – We reviewed the updated “cost to creel” estimates for large fingerling muskellunge. The revised method took several stocked waters with completed creel surveys, computed annual average ongoing costs to maintain the populations with stocking, and used creel surveys to estimate a “snapshot” of average annual catch and harvest. The propagation program is still working on developing the final cost estimates, so, while the method and catch/harvest data are completed, the final cost-to-creel estimate is not available. We also discussed current issues related to musky propagation, specifically related to the increasing forage costs/quality, and the implications for management. While we considered the option of stocking small fingerlings, including the development of hypotheses, for evaluation of this technique. However, Bruce felt that these would most likely be raised on dry forage. We felt that the larger issue of the use of dry, pelleted forage for production fish needs to be addressed before we can begin to tackle the development of guidance for small fingerling stocking. We realize that cuts need to be made in the musky propagation program. The team did not feel comfortable with maintaining the same levels of production with a potentially lower quality product. Therefore, the Musky Team recommends that, until a thorough evaluation can be conducted of the long-term, in-lake survival of fish raised on dry, pelleted forage, that no such fish be used to fulfill regular production quotas. Rather, the musky team recommends that the total number of fish raised be reduced while maintaining the current live-forage rearing practices, in order to meet budget constraints. We will work with the biologists and work units to accomplish the anticipated reductions.

6. Aspects of the muskellunge brood stock management were discussed. Bruce Underwood provided a report on 2012 field spawning operations and current production levels. This past spring, GTH collected 1.2 million musky eggs (24 quarts) from Lost Land/Teal Lakes. A total of 66 fish were spawned (27 females and 39 males) in 17- 1:1 pairings, 6- 1:2 pairings, and 4- 1:3 pairings. Of the 66 individuals spawned, 14 (21%) were tagged previously. Currently, GTH is on course to fill all 2012 musky quotas. However, because spring came 3 weeks earlier than normal, a 2-week delay in harvest was experienced due to a virus, and there are as many as 50% more large walleyes in our ponds than ever before, our total forage bill for the year is around \$180,000 – almost \$50,000 more than last year (which, up until this year, was the highest amount ever). Without a budget supplement, the facility will not be able to start the muskies it needs next spring to meet 2013's quotas. Despite the virus, Sue Marcquenski has stated that the muskies we have this year are some of the healthiest, most robust muskies she has ever seen. GTH's 2013 quotas show that nearly 10,000 muskies need to either be fin-clipped or PIT tagged, which means 3 ponds will need to be held well into September of 2013, in order for the water temperatures to cool sufficiently to allow this to be done, which means higher feeding costs. AOH collected 15+ quarts from Pelican Lake, Oneida County, March 20-April 16. A total of 32 fish were spawned with 10 pairings (5 – 3:1, 2 - 2:1, and 3 – 1:1). A total of 67 muskies were handled but not all were in spawning condition.

7. Justin Van De Hey provided an update of the ongoing evaluation of our brood stock management plan. UWSP has a graduate student (Zeb Woyak) working on a genetic-based evaluation of brood stock goals. He will be able to provide us with a detailed updated next summer, once he has gotten into his program of study. We discussed the continued practice of PIT tagging adults and stocked fingerlings in brood lakes. We concluded that we should continue to PIT tag all spawned adults, in order to determine repeated use of adults in brood lakes (which could potentially affect calculations of effective population size), and we also concluded that we should attempt to PIT tag all fingerlings stocked back into brood stock lakes. It is important to determine the relative contribution of natural versus stocked fish, especially in our brood lakes. Due to the expense, we will need to write a project for funding in the next biennium (or seek external funding).

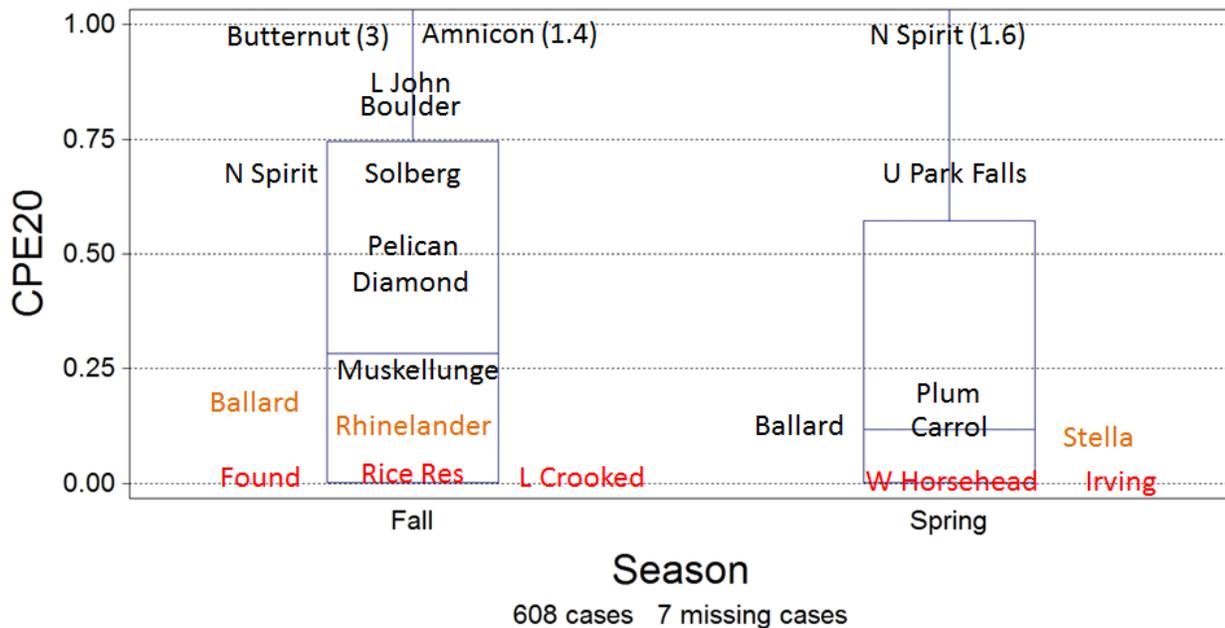
8. We discussed the ongoing Stocking Evaluation, including what we know right now, and what we need to accomplish in 2013-14. We reviewed all the existing data for stocked lakes from the last 10+ years. There are several patterns that will guide us in revising our stocking guidance over the next several months. First, we looked at abundance of muskies in category 2 and 3 lakes, stocked with large fingerlings at different rates (0.25/acre/year versus 0.5/acre/year). Generally, category 2 waters tended to have higher densities (presumably due to the joint contribution of natural and stocked fish). Also, the two stocking rates did not seem to strongly influence adult density in stocked (category 3) waters (see figure, below). A stocking rate of 0.25 fingerlings/acre/year typically results in acceptable adult densities in both types of musky waters. For waters where the goal may be a somewhat lower adult density, a lower stocking rate is recommended (e.g., A1 "trophy" waters). We will finalize these recommendations at our winter 2013 meeting.

Musky Abundance

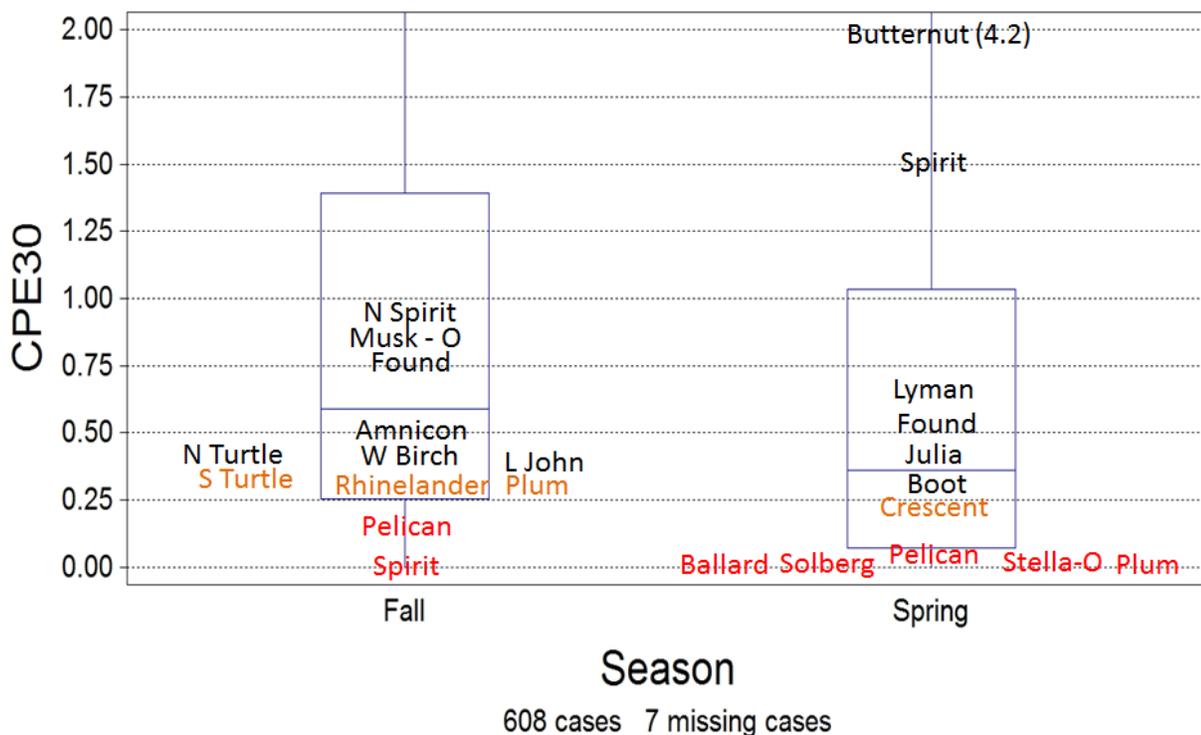


We also looked at the randomly selected category 2 waters where stocking was terminated. Most have some information available, although very few have current population estimates (Trout, Plum, Crescent, N&S Turtle). We discussed other types of data that could be used to complete the evaluation. We have quite a bit of electrofishing data from these waters showing the catch of juvenile muskies. Is this sufficient to wrap up this project, or do we need population estimates? Given the status of Tier II funding, it is unlikely that we will have many more opportunities to conduct PEs on these lakes.

Juvenile Musky EL CPE NOR 2000-12



Juvenile Musky EL CPE NOR 2000-12



9. GL Spotted Musky – Mike Donofrio provided as update on development of our inland brood stock lakes. We anticipate again obtaining spotted muskellunge fingerlings spotted from the Michigan DNR this fall. We expect to obtain 3,000 fingerlings from 20 females. These fish were spawned from Lake St. Clair this past spring. The fish will be transported by us to the Wild Rose hatchery, where they plan to hold them overwinter for eventual stocking into the brood lakes in spring. Last year, catastrophic losses occurred at the hatchery and no fish were stocked.
10. We discussed standard sampling and assessment protocol for muskellunge fisheries. Based on the work of Martin Jennings, as well as the experience of our biologists, we recommend that, when conducting musky population estimates as part of a more comprehensive survey, that the marking be conducted in the year prior to the “comp survey” and the recapture period be included as part of the “comp survey”. It is important to include a variety of sampling gears and periods to complete the recapture, and to put in as much effort as possible to increase the number of recaptured fish (which improves the estimate). Also, the marking period will provide a good indicator of whether the population is large enough to even complete an estimate of abundance. For example, if very fish are marked, it may not be cost effective to conduct the recapture. It is also very important to move the nets often during both the marking and recapture periods, given the high degree of site-fidelity that has been seen for muskellunge, included both targeted (based on past surveys and likely habitat) as well as random net locations. The protocol and handbook will be revised to reflect these recommendations. Also, we discussed and finalized standard criteria for assessment of trophy (Class A1) waters. These are expectations for our designated trophy waters, based on the normal ranges of data and best professional judgment. Lakes or rivers meeting these criteria (or with the potential to meet these criteria) should be designated trophy waters. Designated trophy waters not meeting these criteria should be evaluated for further management action(s).

Metric	Value
PSD42 (%)	≥ 17
PSD38 (%)	≥ 30
PE (number/acre)	≤ 0.3
CPE (Number/net-night)	< 0.5
Length _{infinity} (inches)	≥ 48
Omega (inches/year)	8
Lake Size guideline (acres)	≥ 1,000

We also discussed assessment criteria for determination of self-sustained waters. Below is a draft list of criteria for further discussion. There was a suggestion to add a PSD metric for the size-structure criteria. Simonson will evaluate this and provide the information for further input and a final recommendation.

Metric	Value	Normal range
Fall CPE ≤ 20" (number/mile)	≥ 0.24/mile	0.0 – 0.53
Fall CPE < 30" (number/mile)	≥ 0.67/mile	0.26 - 1.38
Spring CPE ≤ 20" (number/mile)	≥ 0.13/mile	0.0 - 0.69
Spring CPE < 30" (number/mile)	≥ 0.37/mile	0.00 - 1.65
Size-structure	“several sizes/ages”	- -
Adult PE (number/acre)	≥ 0.14/acre	0.14-0.52

11. FYI - Musky symposium, Twin Cities, Spring 2016 – Muskies Inc.
12. Winter Meeting – May want to consider meeting at the fisheries statewide. If we do end up having a Statewide, it will be in February.