

Lake Gaston Stakeholders Board Technical Advisory Group (TAG)

Meeting Minutes March 8, 2010

Attendance (8 voting members):

Rob Richardson (chairman), Rob Emens (secretary), Vic Dicenzo, *Mike Grodowitz*, Mike Smart, Lloyd Hipkins, Rich Noble & Kirk Rundle.

Also present: Pete Deschenes Brian McRae, Bob Lohr, Chuck Wiley, Daniel Stich, Steve Hoyle, Mark Heilman, *Brian Murphey*, *Jeff Meyers*,

Italicized names notate attendance via conference call.

Agenda:

1. Review LGWCC historic budget and potential 2010 budget
2. Review 2009 Remetrix survey
3. Grass carp
 - o Review 2009 carp tagging report (VT)
 - o Discussion of why grass carp have not had a significant impact on hydrilla in Lake Gaston
 - o 2010 cohort analysis
 - o 2010 stocking rate recommendation
 - o 2010 stocking location recommendation
4. List of herbicides for LGWCC to send out for bid
5. Discussion of potential ways for subdivisions to pool resources to hire contractors
6. Anything else...

Dr. Richardson brought the meeting to order at 9:05 AM

1. Review LGWCC historic budget and potential 2010 budget:

- The total funding, grass carp per acre of hydrilla, survey results, and treated acreage was compiled and listed for each year from 2005-current for review.
- Funding had peaked in 2007 at \$1,350,470
- A significant decline in funding occurred in 2009 and also expected in 2010
 - o \$300,000 in contributions to date for this year

Deschenes: It should be noted that the large drop in reported hydrilla acres from 2007-2008 coincides with a change in survey methodology.

The group felt this was well noted.

2. Jeff Myers (ReMetrix) reports on 2009 survey:

- Hydroacoustic data collected from the entire littoral area
- 859 physical sampling points performed to determine species composition
- Total vegetated area = 1,652
- Hydrilla acreage estimated at 1,477
 - o increase of ~10% from 2008
- Increase in hydrilla acreage in the flats

A discussion pursued regarding the flats area.

name?? Were herbicides not used in this area due to the re-vegetation efforts?

Smart: Only a small area was planted (with native species) and this site was not particularly close to the flats

WAS THERE A TAG CONSENSUS AS TO WHETHER THIS AREA SHOULD BE TARGETED W/ HERBICIDE?

No tuber density detection work has been done in the flats but it is expected that many tubers exist there due to the number of years that hydrilla has been established.

* As a side note it was mentioned that the NCSU multi-year tuber study has been disrupted due to the lack of adherence to the scheduled treatment regime.

3. Grass Carp:

a. Review 2009 carp tagging report (VT)

Copies of a prepared document titled “Preliminary estimates of grass carp mortality in Lake Gaston” were distributed. The document presented theoretical mortality drawing from data collected from two independent studies and compared them against one another. Data collected from three groups of radio-tagged fish (2007-2009) suggested that annual mortality is 19% on average. Data collected from length-at-age sampling suggested an annual mortality of 21%.

Mortality sensors that were built into some of the tags were found to be reporting false information. Specifically, they were reporting mortality when indeed the fish was still alive. This is thought to be occurring as a result of grass carp behavior, whereas the fish remained in one spot for extended times.

The tagging study has revealed/confirmed some general grass carp behaviors:

1. Fish move the most when first released, and then settle into an area and remain there.
2. There is a correlation between location of fish and hydrilla beds.
3. There is a correlation between size of fish and distance moved, whereas larger fish move further.

The battery life of tags used in 2008 and 2009 are expected to last 536 days.

The TAG referred to the fisheries experts (NCWRC folks, Rich Noble, and Vic Dicenzo) for guidance on deciding what aspects merit continued research. Outcome is summarized below:

1. Additional age-2 survival information should be collected from existing tags.
2. Determine if mortality of small fish that were previously stocked is consistent with newly released fish.
3. Continue to collect otolith data and explore the potential of using alternate features (parts) to determine age.
4. Tagging additional 10 large fish may be too few to collect enough data to be significant for statistical use.

b. Discussion of why grass carp have not had a significant impact on hydrilla in Lake Gaston

Emens: The data collected during the fall survey provides us only with a snap shot of the amount of hydrilla present at that time. We are applying the GC stocking model to the whole system but really only seeing a part of the picture in the survey results because the survey does not detect hydrilla in the areas that are treated.

Smart: We need to work with the data that is available to us.

TAG agreed that there is generally a lag between the stocking date and observing full efficacy of grass carp. The consistency of annual stockings over the last few years should reveal the strength/effectiveness of the GC stocking model. Any inconsistencies in total acreage treated annually may influence the perceived efficacy of GC. Total acreage treated in 2010 is likely to decrease if there is a shortfall in funding. There remains concern of over-stocking if a higher target density is applied to the model at this time.

Copies of a prepared document titled “Estimation of hydrilla biomass consumed by grass carp in Lake Gaston” were distributed. The document outlines a proposal for a study that would estimate the total amount of hydrilla being consumed by grass carp based on weight gain of the carp.

Some discussion about this proposal ensued but no recommendations or conclusions were made.

c. 2010 cohort analysis

What is worthy of mentioning here?

d. 2010 stocking rate recommendation

The TAG considered modifying the model to reflect the preliminary attrition data collected from the tagging study. Specifically, should the 20% annual attrition be applied to the one and two year old fish (currently the model uses 30% for those fish, then 20% for ages 3 and up). The group felt that it would be best to remain consistent and not change the model at this time.

e. 2010 stocking location recommendation

Some generalities were reviewed to assist with the decision-making process:

- ? Carp stocked near hydrilla beds will likely remain in that area.
- ? Assume carp will not maintain residence in treated area (due to lack of forage material).
- ? Stocking multiple locations has advantages.
- ? GC supplier must consider number of stocking locations when calculating costs.

TAG reviewed several locations. Considering factors such as data from the annual survey and Chuck Wiley's personal observations the group settled on three locations and respective percentage of total delivery as follows:

River Ridge (50%)

Hub Quarter (25%)

Little Stone House (25%)

4. List of herbicide for LGWCC to send out for bid:

- 1st list was generated by referencing the NC Agricultural Chemicals Manual (all AI that have a rating of excellent for control of hydrilla)
- What if the LGWCC needs to respond to noxious weed problems other than hydrilla (ex. lyngbya)?

After some discussion that weighed simplicity against comprehensiveness the group agreed to make the recommendation that the following products should be quoted separately:

1. fluridone products only
2. formulated copper products

5. Discuss potential ways that subdivisions can pool resources to hire contractors:

The group felt this was not an appropriate topic of discussion for a technical advisory group. The objective of the TAG is to culminate and apply the best science-based approach for the lake-wide management of noxious weeds in the absence of fund-raising and political motives.

6. Anything else?

The group reviewed thoughts on the GC tagging study. Key areas of the study that should be focused on and future research needs were reaffirmed. These are captured above under section 3.

Dr. Richardson adjourned the meeting at 12:20 PM

Prepared by:
Rob Emens, Secretary

Technical Advisory Group
Lake Gaston Stakeholders Board