**This was a joint meeting held with the Ft. Meadow Commission; Hudson Conservation Commission and Marlborough Conservation Commission in Hudson, MA**

**Hudson Conservation Commission Members Present:** Leif Longtine- Chairman;Paul Byrne;, David Mercer, David Esteves, Joe Rodrigues, Marianne Iarossi

Also present was Debbie Craig- Conservation Administrator

**Absent:** Minot Wood

**Marlborough Conservation Commission Members Present:** Edward Clancy-Chairman, David Williams, and Lawrence Roy, and Dennis Demers. Also present was: Priscilla Ryder-Conservation Officer;

**Absent:**  Allan White, John Skarin, and Karin Paquin.

**Ft. Meadow Commission** - Lee Thomson Chair, was present

Absent: Joe Delginio, Mike Kaczmarek

The hearing was opened by Chairmen Clancy, Longtine and Thomson. Chairman Longtine officiated and explained the meeting process. First the consultant for Ft. Meadow Commission Aquatic Control Technologies (ACT) would speak, then the experts, then questions from the Commission and then from the audience.

Mr. Dominic Meringolo from ACT provided an overview of the lake and problems the lake has experienced in the past with Eurasian and variable water milfoil being most prominent and Fanwort being a newcomer nuisance weed to the lake. ACT has had a contract with the Ft. Meadow Commission over the past 8 years and has been inspecting the lake each spring and performing herbicide treatment as necessary. There is always a pretreatment survey and a post treatment survey to gage what needs to be done and how effective the herbicide was and what the lake health is after treatment. At tonight’s meeting the Notice of Intent (NOI), is requesting permission to treat the lake again as the past permit has expired. At this time they are proposing the use of the following herbicides when and if conditions and weed growth require it. The application methods and concentrations are dictated by the state and Federal govt. on the labels which must be strictly adhered to. Protocol and amounts are outlined in the NOI. Permission is sought to use:

Diquat – for spot treatment of water milfoil;

Clipper- for spot treatment of fanwort (the only spot treatment herbicide on the market for Fanwort control)

Sonar – for full lake treatment of water milfoil and fanwort. Requires 90 day residence time and needs reapplication to keep the concentrations high. It is a systemic herbicide which is absorbed by the roots. Once used by the plants it is tied up in the soil and is not released. It is used in water supplies. No use restrictions apply as outlined in the NOI. This has been recommended in the past but not yet used due to its “all lake treatment” use and higher cost.

All these products are in compliance with the states Generic Environmental Impact Report for Lakes and Ponds. They must be licensed by the state DEP and Dept. of Agriculture. Permits will be obtained from DEP before any use and all application rules shall be followed.

Mr. Meringolo said he knows there was a blue-green algae bloom this summer (2014) in the lake that was cause for concern and closed the lake for a while. The NOI proposes the use of either a Copper based treatment or buffered Alum to help control algae blooms in the future. The buffered alum is used to bind up the phosphorus in the water column so it isn’t available to “feed” the algae bloom. The copper treatment kills and treats the algae and then accumulates in the soil at the bottom of the lake. These are options that can be used.

Mr. Longtine then invited Mr. Mike Celona from the State Department of Public Health to speak. Mr. Celona explained that he has been monitoring algae since 2009 in the state. He noted that blue-green algae is always in all lakes in the state and around the country. It is normal to have blue-green algae in lakes. However, once in a while, as happened this past summer, under certain circumstances with the right combination of phosphorous + sunshine + stagnant water+ higher water temperatures = an algae bloom. On average blooms that gets to a critical health alert stage last about 5 weeks as conditions persist. In some lakes the bloom happens once and never occurs again. Other lakes have a more persistent algae bloom problem. The health concern is that the blue-green algae called Cyanobacteria in high concentrations can produce a toxin that is not healthy to swim in or for pets/animals to ingest. When concentrations are high the MDPH will take samples, send them to a lab and if it exceeds certain levels the MDPH will send an advisory to the local BOH and recommend beaches be closed and areas posted. Last July samples were taken which came back below “concern” levels. But when tested again in August it came back high which caused the beaches to be closed. The advisory can only be lifted after 2 weeks of testing are “below critical levels”. He explained that other lakes in the state had similar problems. Chairman Clancy asked what species of cyanobacteria were found. Mr. Celona indicated he’d have to get back to him with genus and species.

A question was posed to Mr. Meringolo about the use of copper sulfate treatment and any cautions necessary. He explained that the copper sulfate treatment is reactive and kills the algae. The treatment must be early in the bloom to be effective. More regular monitoring is required to determine when treatment is needed. This can be measured with a secchi disk to check clarity. If clarity is minimized to less than 4’ then there may be an issue.

Another member asked about phosphorus in the lake and what we know about its abundance. Mr. Meringolo explained that ACT has not been testing for nutrients they have only been looking at plant growth. A treatment of Alum in the spring may help if conditions warrant, however it is a very expensive treatment. The copper treatment would also need some extensive monitoring too. He explained that controlling phosphorous and doing a watershed plan for the lake will help in the long term but will not affect short term treatment. There was discussion about when this is applied. Alum is applied early prior to a bloom, copper is applied during the bloom but not too late.

Chairman Longtine asked what the trends are in this lake and what he has seen. Mr. Meringolo said that water milfoil has been a constant but is kept in check with spot treatments. The fanwort is the new invader and is more difficult to control. Chairman Clancy asked about the effectiveness of Sonar and if that will be used. Mr. Meringolo said they have been using Reward and Clipper for spot treatments at Ft. Meadow. However, if Fanwort takes over a full lake treatment with Sonar may be required. They would like to keep that treatment option available should it be needed. All herbicides are mixed with water and sprayed underwater at the target plant species.

There was a discussion about the recreational value of the lake and the need to control weeds to keep the lake healthy for both fish, water quality and recreational values. The controls proposed are only for the nuisance weeds and to promote the growth of native “healthy” weeds for a healthy ecosystem and fish population in the lake. Chairman Longtine asked if Richard Hartley from Div. of Fish and Wildlife was present, who had been invited to speak about the fish health in the lake, but he was not present.

Chairman Longtine opened the questions to the audience and asked everyone to state their names and addresses when speaking: (note these are clumped together by speaker and did not necessarily occur in this order)

Warren Carlson from Marlborough asked what happens to the herbicides used and do they accumulate over time. The consultant explained that all the herbicides break down quickly into inert products, however copper when used does accumulate in the sediments so caution must be used when deciding when and how to apply copper treatments. Mr. Carlson also asked about the “all” salt use that the city has adopted and is concerned what impacts the salt is having on the lake and he has seen an abundance of small clams and wondered if they were a problem. Mr. Clancy explained that the Marlborough Commission has the same question about salt and will be meeting with the DPW to discuss same next week. The clams observed are the invasive “Asian clam” which were discovered quite a few years ago. They are at the northern edge of their range and haven’t created the problems expected when first discovered, but the Commission is watching this as well.

Chris O’Keefe from 39 Cullinane Dr. Marlborough wanted to know who would be monitoring the algae next year and how that would be paid for. Sam Wong, Hudson Board of Health Director was present and explained that since the BOH in Hudson routinely monitors the beaches in the summer for bacteria they could also be trained to look at algae in the lake. When clarity is reduced to a certain level a call can then be made to the MassDPH to take samples. He agreed to do this for Hudson and the Marlborough Commission agreed to ask the Marlborough BOH as well.

Dave Domke of 74 Paquin Dr. asked what mechanism is to be used to notify residents about the algae bloom. He noted that because of sickness his immune system is suppressed. He swam the day Hudson residents were notified by reverse 911 NOT to swim. He did not receive the notice until 24 hours later. He wasn’t sure why Hudson was notified sooner. No one from the Marlborough BOH was present to answer, but this question will be conveyed to the BOH as a concern.

Gail Barbera from 111 Cullinane Dr. explained that she is with the Lakeshore Dr. association and has a lot of questions. She noted that there seems to be a communication breakdown with the reverse 911 notification and wanted to know how that would be addressed. She hears that there are two issues discussed tonight weeds and algae and wondered if treatments happen together. Mr. Meringolo explained that the weeds can be seen and treated on a schedule. The algae has to be treated when it’s present which cannot be predicted. She asked about road salt too and that she had read that chloride can lead to low water quality too. She is concerned about the overall lake health and thinks something more must be done. She raised concerns about road salt and lawn fertilizer use and noted that there are plenty of lakes around the state and country which have salt and fertilizer restrictions that come with fines for violations. She advocated education and is willing to help. Mr. Meringolo wasn’t’ familiar with salt concentration issues but did note that a whole lake watershed approach was a good idea for long term lake health. On short term treatment is still required to keep the invasive weeds in check. She also asked about how alum sulfate is used to remove phosphorus as noted previously. Mr. Meringolo explained that it is very expensive and does strip the phosphorous from the water column and binds it to the sediments. She was concerned that the city needs to pay more attention to this issue now that they have invested so much money in upgrading Memorial Beach.

Ellen King from Ft. Meadow Dr. in Hudson said that sometimes when she kayaks near Red Spring Rd. it smells. Ms. Ryder and Chairman Clancy noted that the BOH had provided a list of septic systems on Red Spring Rd. and provided information about 12 of the 28 systems that exist. Mr. Wong explained that the septic systems should be pumped at least every two years and that documentation should be provided to the BOH. The Commission will follow up with the Marlborough BOH to find out more information and ask to get a better handle on whether these systems are working properly and if there is any concern with nutrients entering the lake from these systems.

Michael Manning of 302 Lakeshore Dr. (??) asked Mr. Celona about his experience with the lake, he also asked if ACT’s solutions have worked in the past. Mr. Celona explained that he is responsible to support the local BOH and to help identify the health issues when they arise. His job is not to solve the problem, just identify any health issues and assist in guiding local BOH to notify about advisories and beach closures until the health issues has gone away. Mr. Meringolo explained that treatment is effective at reducing weed growth each year but is not a full solution, reducing nutrient loads is a long term solution. Mr. Manning also wanted to know if other companies were looked at to do the treatment. Chairman Thomson explained that the Ft. Meadow Commission has a 5 year contract now with ACT. They will advise the city on weed and algae treatment in the coming years. He wanted to know if interns were appropriate to use to test the lake and algae. Mr. Wong explained that tests were taken once a week using a specific protocol and would continue. Testing does not continue after the beaches are closed. Mr. Manning was concerned that people still swim into Sept. and Oct.

Conray Wharff of Hudson - The Chairman of the Lake Boon Commission he explained that Lake Boon has had similar issues, they originally worked with Lycott Env. Phosphorous is an issue for them and they did a study of the lake runoff and eventually had 30 catch basins installed to collect sand and treat runoff before it entered the lake which has helped. He agreed that a total lake program is a good idea, everything contributes to the lakes health, including drawdowns, weed treatment, pollution control etc. They did use sonar on their lake which was effective. Now they used a pelletized form of sonar for spot treatments. They have also used diquat/reward for spot treatments. He just wanted to lend his support for this weed program and be a resource if necessary. He also noted that there are shallow wells around Lake Boon and the use of Sonar was not an issue in that situation so shouldn’t be on Ft. Meadow Reservoir either.

Henry Powell of 88 Paquin Dr. Marlborough, Asked if the salt issue could be addressed with the DPW in Marlborough. (See answer above)

Another attendee expressed concern that there is no consistent plan for the lake that everyone is venting here but there is no one taking charge or stepping up to the plate to create a plan. Chairman Thomson suggested that the Ft. Meadow Commission take the lead and meet with all the associations. He is in charge of the Ft. Meadow treatment budget and if other items need to be addressed he can ask for funding to address it in his budget. Chairman Leif suggested that it would be a good idea to look into a larger comprehensive plan for the lake in the future and he’d like to work with others on this.

Ruth Brown (mother of Gail Barbera) 111 Cullinane Dr. – asked if the lake could be dredged, wondered what information was available on the drains and suggested that everyone get together to make a plan. Ms. Ryder noted that there has been a committee on and off around the lake for years, some years has lots of interest. For the past few there hasn’t been any. She would be willing to work with the group too.

Richard Shebak 6 Elizabeth Rd. Hudson. He explained that it was he who called Ms. Ryder first and she had her interns take a sample of the lake. He was in favor of doing more monitoring of the drains into the lake. He noted the lake is priceless and he would like to see the city and town come up with a whole lake program to protect everything about the lake.

Randy (past Ft. Meadow Assoc. Member president?) He reiterated other comments but specifically that testing needs to be done on Red Spring Road septic systems to understand their contribution. Wants to get all the associations together to take action, and thought that was a good idea.

Mr. Esteves from Hudson Commission asked Mr. Thomson who has keys to the boat ramp gate since he’s seen lots of boats go in early and is concerned that no one is checking their boats for invasive weeds because it is before the attendants get there. Mr. Thomson said to please report these to him immediately and he’ll take away the keys. Only a few early morning fishermen have keys. He’ll keep an eye on this too.

Chairman Clancy closed the Marlborough Public Hearing. Chairman Longtine closed the Hudson Public Hearing. Draft conditions will be prepared by Ms. Ryder and Ms. Craig and distributed for consideration at each of the Commissions meetings on Feb. 5, 2015.

 Adjournment:

 There being no further business the meeting was adjourned at 9:30 PM.