

## Town of Ayer Conservation Commission

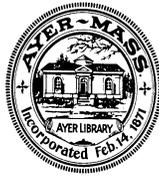
Town Hall \* One Main Street \* Ayer, MA 01432 \* 978-772-8249 \* 978-772-8208 (fax)  
Minutes for **9/30/2013** – Approved 10/10/2013

Location: Ayer Town Hall, 1st Floor

Members present: Bill Daniels (BD, Chair), George Bacon (GB, Vice-Chair), Takashi Tada (TT), Lee Curtis (LC), Becky DaSilva-Conde (CA, Conservation Administrator), Jessica Gugino (JG, Clerk)

### **7:07 PM – Open Meeting**

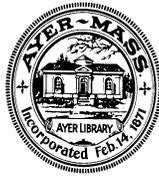
- This Special Meeting was called by ConCom for the purpose of discussing the proposal for a comprehensive study / biological assessment of Ayer’s ponds with Robert Hartzel, of Geosyntec Consultants.
- Also present were members of the Pond & Dam Management Committee (PDMC): Don Rzasa, Chuck Miller, Mark Wetzel, and Marina Giovannini.
  - Takashi Tada, present for ConCom, is also ConCom’s member representative on PDMC.
- BD opened the meeting by laying out several of the issues that were up for discussion:
  - Given limitations in funding, ConCom and PDMC are interested in narrowing the scope of the study so that money is spent most effectively, and the kind of information sought for each pond will actually be helpful.
- Mr. Hartzel said the initial RFQ was challenging to respond to because the 10 ponds cited have very different characteristics, as well as uses, and experience a range of runoff conditions.
  - The fact that they are all interconnected makes things even more complex.
  - Geosyntec was interested in working with the Town to better calibrate the scope of investigation so that limited funding is spent most effectively on a pond by pond basis.
- Mr. Hartzel noted some of the ponds have high recreational use; some have houses lining their shores and allow for some recreational use; and some are water bodies for which it would be nice to have information but where such information would not be “mission critical” in terms of affecting management of the pond or changes in access.
  - Proper management of ponds ties into a number of issues, property values and the enjoyment of habitat among them.
- Mr. Hartzel talked of the need to strike a balance between long-term practices (i.e. nutrient control) and short-term fixes (i.e. use of chemical herbicides, hydroraking).
  - The danger of concentrating only on short-term fixes leads to the risk of creating a repeating cycle that, over time, makes things worse.
- In looking at the health of a pond, it is important to understand:
  - The in-pond water chemistry;
  - What’s coming into the pond from the watershed (i.e., stormwater, fertilizer runoff, pollutants)
  - What is recycled from the sediments every year to contribute to the ‘nutrient pulse’ that fuels vegetative growth.
- Generally ponds tend to be either algae-dominated or large-plant (macrophytic) dominated.
- The goal is to figure out how much comes from ‘outside’ the pond and how much comes from recycling what is already there – and then to figure out how to manage things to arrive at a reasonable situation for each pond.
- BD gave background on Ayer’s pond management history.
  - ConCom holds an OOC for doing weed treatments on some of Ayer’s ponds.
  - The 2005 comprehensive study offered a 5-year plan for weed treatment.



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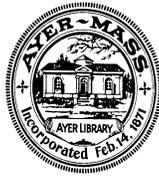
- Gaps in treatment due to weather, the economic crash, and changes in support from the Board of Selectmen (BOS) meant management goals were not met or sustained.
  - In response to petitioning by the Friends of Flannagan Pond, however, the BOS created the Pond & Dam Management Committee in 2011.
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- Mr. Miller said a comprehensive study and analysis of baseline conditions would help to clarify or dispel common perceptions about the cause of problem weed growth (i.e. use of lawn fertilizers).
    - Mr. Hartzel said the kind of model Geosyntec develops should indicate percentages of impact from run-off into the ponds versus recycled nutrients (“the internal load”) from existing sediment.
  - Given the reality of limited funding, the discussion turned to going through the original RFQ and paring down the scope of work to what is both necessary and effective.
    - Aquatic Vegetation Surveys
      - This would look at the distribution and abundance of invasive, non-native aquatic species as well as overabundance of native species in some instances.
        - This was deemed straightforward without need for adjustment.
    - Water Quality / Chemistry Sampling
      - While the RFQ provided an extensive list of parameters for testing, Mr. Hartzel said this could be significantly trimmed.
      - A focused sampling plan should include information on depth, water temperature, water clarity, and dissolved oxygen.
      - Geosyntec recommends lab testing for:
        - Total Phosphorus
          - Lab testing for Total Phosphorus is common but if Ayer ponds don’t have septic drainage issues, then Mr. Hartzel said this test wasn’t as important.
        - Ammonia Nitrogen
        - Chlorophyll-a
          - Testing for Chlorophyll-a is relatively expensive but is an important trophic status index and therefore necessary to do.
    - Algae Identification
      - Mr. Hartzel said algae problems tend to be sporadic.
        - It is more important to be responsive when an algae bloom occurs and to perform testing at that point if it creates a problem in a particular pond.
        - As an overarching assessment tool, algae testing is not worth doing.
      - Mr. Hartzel suggested the Town work to develop a protocol for recognizing and dealing with an algae bloom in areas where recreational activities take place, and contacting the Board of Health if necessary.
    - Fish and Wildlife Habitat Survey
      - Mr. Hartzel said it is impossible to show up one day and get a realistic general assessment of fish and wildlife.
        - Either one should do a fullblown fish and wildlife survey, which is very costly, or not bother.
      - Indirectly one can better derive information about habitat via water quality testing.
    - Pollutant Source Assessment
      - Since watersheds can be immense, Geosyntec recommends concentrating on proximal watersheds, roads and rings of roads closer to the ponds.



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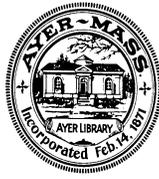
- This is where there is less chance for attenuation of pollutants, and where some may flow directly into ponds.
  - This assessment would allow Geosyntec to determine what the pollutant load is for each pond and estimate what sort of pollutant load reduction would be possible if specific measures were taken.
    - Such measures could include rain gardens and other small-scale infiltration projects.
  - Mr. Hartzel said the goal of a watershed reconnaissance is to:
    - Identify Best Management Practices (BMPs) for reducing pollutant loads;
    - Lay out the cost of BMPs;
    - Estimate the cost-effectiveness of BMPs for the amount of reduction to be sought.
  - Such information then becomes the basis for grant-applications for State grant funding (i.e. Section 319: The Nonpoint Source Competitive Grants Program).
- Funding sources for a comprehensive study were discussed.
  - Mr. Hartzel said there is very limited grant funding available for performing studies and what funding is available is very competitive.
    - More grant funding is available for actual implementation projects after a study has been done.
    - Geosyntec would be able to help with such grant applications.
  - Mr. Miller said that after a study was done, when moving on to implementation of a management plan, maintenance of designated ponds should be part of the Town's annual operating budget.
    - Use of UDAG funds should also be discussed with the BOS.
    - Mr. Wetzel mentioned the possibility of the Stormwater Enterprise Fund being a future source of funding.
  - All those present agreed on the trickiness of Town politics, but that there was a need for a longterm plan and equally the need to seek broader consensus and support from the Town as a whole.
  - In terms of grant applications, Mr. Hartzel said that a well-written proposal includes attention to implementation projects, public education and outreach, and plans for monitoring.
  - BD asked if Geosyntec also does assessments of dams.
    - Mr. Hartzel said they have that capacity but it is a specialized subset of civil engineering.
      - Geosyntec would probably sub it out.
    - Mr. Wetzel said the Town already has a good understanding of the condition of its dams.
      - The real question is whether there is agreement as to spending the money to do what needs to be done.
- BD asked if there was anything significant missing in ConCom's RFQ.
  - Mr. Hartzell said no, it was more the need to fine-tune the RFQ to meet the reality of limited budgets.
- Discussion moved to looking at the list of 10 ponds in the RFQ and whether some of them could be eliminated from a comprehensive study.
  - Upper Long Pond, which is on private property, was eliminated.
  - Plow Shop Pond, currently undergoing dredging by the Army, was eliminated.
  - Rock Meadow Pond, a wetland system in natural flux because of beaver activity, was eliminated.
  - Shaker Mill Pond was also eliminated.



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- Sandy Pond, Long Pond, Flannagan Pond, Pine Meadow Pond, and Balch Pond would be the focal points of the study.
- Grove Pond was the subject of extended debate as to whether it should be eliminated or included.
  - The Town's wellfield is on the eastern side of the pond where the water quality is better than the western side.
    - Pollutants from an old tannery, among others, have left contaminated sediments in Grove Pond.
  - Mr. Wetzel said the water quality of the pond has not affected the water quality in the wells.
    - However, it was still a good idea to model BMPs for property around the pond.
  - Pirone Park also abuts Grove Pond.
    - John Canney, from the audience, asked if it was possible to expand the park by using fill to reduce the size of Grove Pond.
      - Mr. Hartzel noted that dredging projects are very costly and take 10-15 years just to launch.
      - BD said it would be extremely difficult to get permits from the State for such a project.
      - There was also a huge problem with exposing contaminated sediments to the air.
    - CA noted that the Town's Parks & Recreation Department has expressed frequent interest in expanding recreational activities on Grove Pond (i.e. boating) accessible via the park.
      - CA also noted the difference in health impacts experienced by children with less developed immune systems than adults when exposed to environmental pollutants.
      - For this reason, it would be useful to include Grove Pond in the study to better understand what can or cannot be done.
  - TT asked if Geosyntec would be able to perform a risk-assessment / liability analysis of Grove.
    - Mr. Hartzel said Geosyntec has people who are expert in this, but that it is a very different kind of question to ask than what was outlined in the RFQ.
    - BD asked Mr. Hartzel to put a number to the cost of a risk assessment.
    - Mr. Miller suggested a baseline study of the water quality in Grove and its risks, recognizing the particular history around this pond, could at least point to recommendations for further study, and associated costs, that would guide next steps.
- BD summed up the discussion thus far:
  - Four ponds were eliminated from the study and an additional element – risk assessment on Grove Pond – was to be added.
- Mr. Hartzel talked of the need to do morphometric modeling of the depth and shape / contours of the ponds to be studied.
  - This forms the basis for determining important data such as the flushing rate of each pond.
  - Contour and depth data can be obtained through use of a handheld sonar unit and GPS data to set up a grid.



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- Mr. Hartzel agreed that the cost for this kind of modeling could be reduced if the ‘field reconnaissance’ was performed by volunteers.
- The goal of the study is produce accurate models of the state of each pond selected, and to lay out management options.
  - Mr. Hartzel underscored the distinction between short-term fixes and long-term goals.
  - Geosyntec’s modeling would point to the pros and cons of taking different paths.
  - As an example, a short-term attempt to control an overgrowth of native vegetation (i.e. water lilies) could lead, long-term, to their replacement with invasive species, creating a bigger problem down the road.
- The cost estimates cited in Geosyntec’s proposal were reviewed.
  - The cost per pond for baseline water quality assessment was \$2952;
  - The cost per pond for pollutant loading analysis could range from \$2800 to \$7200.
    - Mr. Hartzel said the higher cost includes the more detailed mythometry such as morphometric modeling.
    - It was agreed that the kind of data members wanted in this study would leave the cost per pond at \$7200.
  - The cost per pond for a management plan was \$2424.
  - The funding needed for the study of the six ponds specified would be \$75-76,000.
    - This number would need to be readjusted with the new numbers reflecting a risk-assessment of Grove Pond.
- Next Steps:
  - Mr. Hartzel said the optimal time for studying the ponds would be in July and August.
  - It was decided that ConCom and PDMC would delay presenting a proposal to the Town until Spring Town Meeting 2014.
    - BD thought this would provide an opportunity to find funding from other sources in the meantime, so that the amount asked for by a Town Meeting vote would be lessened.
  - Mr. Hartzel was asked to provide a revised proposal that eliminated specified ponds from the study and included changes to the cost for Grove Pond.
  - ConCom will meet jointly with PDMC at their 10/21 meeting.
    - Mr. Hartzel was asked to submit a revised proposal, in PDF format, prior to that date.
    - CA will circulate the proposal to members ahead of the 10/21 meeting.
  - ConCom and PDMC will then meet with the BOS to discuss what commitments the BOS will make toward funding and supporting a comprehensive study.
- **9:33 PM – Adjourn Meeting**
  - GB moved to adjourn; JG 2<sup>nd</sup>.
    - Motion approved unanimously.