

**Conservation Commission
Minutes
October 16, 2007**

Commissioners attending:

Jo Schuman
Gloria Barnes
Ellen Winchester
Ronnie Kamphausen

Guests:

Jeff Varichione from DEP
Merry Chapin from Phippsburg Elementary School (email: Mchapin23@yahoo.com)
Professor Peter Lea from Bowdoin
Meghan Worcester an AmeriCare Volunteer at DEP

Merry Chapin: Ideas for what to do. Professor Lea did a study on streams and ponds which was wonderful. Did not get all streams done. Would like to test stream near school.

Professor Lea: Did another round of pond sampling of same ponds. We are running same class this spring. Water quality in general in Phippsburg found to be pretty good.

Merry C: Water quality is very important. Ideas for possible 5th and 6th grader community service projects. Inspire them to go on to college and learn more. Hope to help out with Professor Lea or help out with other stream surveys. Maybe do some sampling. Their work would not “stand up in a court of law” but at least would give info. Could write grants. We need leadership, a science person to teach kids the correct way of doing things, etc.

Jeff: It is a long process of getting support in DEP to start up water quality monitoring programs. We are working on it. We could help out part time.

Professor Lea: Streams not monitored by Professor Lea? If you get kids out there doing a set of straightforward tests could come out fairly regularly. Some streams near enough the road. Kids interact with Bowdoin kids and compare data. Bowdoin website could have forum to share data. Good for Bowdoin kinds to serve teach role. Colleague doing work with New Meadows Casco Bay Estuary project. Examining tidal water restrictions, low oxygen levels, lack of flushing, not quite fresh, not quite an estuary. They have no real data about tributaries to New Meadows river. They'd very much like to interact with community. They might have money.

Possible tributaries: North Creek(? Maybe), Pasture (definitely).). Try Friends of Merry Meeting Bay and various Kennebec groups as resources.

Ronnie: asked about Water testing, what is involved?

Jeff and Prof Lea, RE water testing parameters:

1) DEP is concerned with critters in streams, the quality of critters in streams. These macroinvertebrates can be compared across Maine.

2) dissolved oxygen

3) temperature

4) E coli concentration

5) Conductivity:

offer work with volunteers on this

low conductivity in headwaters then rises may be signal pesticides fertilizers. A good screening tool for pollution.

Other parameter:

- turbidity or cloudiness, pH, nutrients like P and N

- Metals and petroleum products (more expensive)

Dept of Marine Resources: might be a resource also.

Merry: Our clammers are very active with clam flats and do water testing. Dick would be helpful. Clam Committee.

Jeff?: DMR is involved more in clam flats. Lack of resources though.

Peter: His interest is in how watersheds “work”, land use, geology.

Also measure Color (measure of dissolved organic material)

Suite of water quality variables in combination.

Class starting in January could focus on it. Winter isn't the greatest time to test water though. Could get baseline sampling.

Ronnie: how does this lead to controls?

Jeff: much detective work is involved, e.g. insect community (mayflies, stoneflies, caddisfly larvae, wormies, fly larvae) find less diversity in general in “sick” stream. Can see “healthy” v.s. “sick” stream. There are standards (e.g. dissolved O₂).

Jo and Ronnie: we are particularly interested in bottom part of North Creek which feeds into Totman Cove. Why is it polluted? Why are the clam flats closed?

Peter: could be from tidal influx from elsewhere.

We could build a project around North Creek.

Oqunquit River was successful with guidance from DMR able to find sources of problems. Could make phone calls to DMR to try.

“Optical Brightener” testing: laundry detergent . Untreated cotton pads in mesh put in stream collect and put black light on them shows laundry detergent coming in from septic.

Be careful. If you do find septic issue will be finding individual to fix it. Community small grants? Casco Bay Estuary assoc had some money.

Peter: what will work and be sustainable? How often? Where?

Jo: what can Merry’s students do?

Jeff: can provide equipment, has handout. Various educational testing kits.

Professor Lea: has a little grant with discretionary supply money to work with school groups.

Professor Lea:

“Is the water “healthy” or not?” is not a good question. Better to look at processes, compare and contrast.

- Sampling strategies:
 - Time Series: regular time frame, sample. See what happens with seasons, between storm and fair weather
 - Snapshot Sampling: pick some number of sites that are different in terms of land, geology. Go out on same day and sample sites then do a spatial comparison and try to relate in terms of the watershed characteristics.

Morse HS chose eight sites to do water quality tests. Snapshot + time series.

Allows you to piece together what is causing the water to change.

Time, schedule, logistics, scope of effort. Must decide this first.

Merry: could go out everyday. CC could help make sure testing is as scientific as possible. Could tie in with Nature Conservancy in basin area. Maybe ask Dick Lamont about what is most important to clambers. E.g. stream going into Drumore Bay. Dick could come to one of our meetings. Let’s bring in clammer expert to get his input into what’s important.

Peter: some of the ponds are also being affected by streams. Almost anywhere you look streams are relevant. We were thinking about coming back to add in more streams.

Try to get DMR involved as partners and convince them that the info is reliable and could help them make decisions. They may have the equipment to test (e.g. fecal coliform). DMR says close flats which can give leverage to CEO. CEO is the one that goes to a homeowner to tell them to clean up septic.

Ronnie: CEO has a suspicion of where the problem is.

Jeff: citizens can make complaints about known problem

Peter: can be extremely complicated to locate the pollution. No guarantee you will find problem or do something about it.

Jeff: Sebasco Estates has a known problem. Could get phone number of enforcement person. Data and evidence important! Don Part (marine biologist for DMR) lives in Phippsburg may know about this. Check on volunteer monitoring for DMR.

Merry: overboard discharge permit

Professor Lea: Important to view data as NOT POLITICAL, no agenda, just data. Just report, not interpret.

Gloria: cat tails seem to be increasing in Winnegance River.

Peter: probably due to sediment filling in over time. More nutrients from development.

Jeff: North Creek crosses 209 in two places. Good candidates for sampling spot.

Peter: quality of data, standards, gets educationally at the importance of the methodology of science, i.e. so DMR will take it seriously. Replicating is important. When start?

Merry: ASAP.

Peter: come with sampling gear. We could just start showing you stuff.

Merry: Would CC like to come?

Step 1: Bowdoin come out and test

Step 2: Dick Lamont: part of shellfish commission should come too.

Timing:

Tuesday afternoon. With or without students. Kids should be involved. We'll learn together. 2:45 best. A class on Thursday. Outside school.

Next week. October 25. Behind the school. Park at town hall. Meet at the cemetery. Unless dumping rain...

GOAL: Get Merry and students and CC ladies up to speed with stream sampling methods.

Then conversation with Dick. Maybe he can come?

North Creek and Totman Cove key interests.

What about Maine Healthy Beaches?

Jeff is the bug expert. 1 ½ hours.

Maybe Morse HS could be involved.

Peter: grant to provide money for Bowdoin kids here in summer link with hs students.

Summer is slack time for data. Here are communities that we'd like to slot someone in. School and CC could write recommendation for the grant.

Jeff: handed out newsletter. We'd like people to participate. Bowdoin stream survey website url and snapshots on there.

Peter: it is an open website, can add any content to it. Training session. Set up accounts. Show how to put stuff in there. Want to keep level of energy going forward.

Merry: put Peter's link on Phippsburg website!!!!

We can have a Phippsburg forum on his website!

Ronnie: what about Nature Conservancy? Nancy would like to come too?

Gulf of Maine Resource Institute. Invasive Species. Water testing?

Peter: early December to start bounding ideas about which ponds and streams. Will have student enrollments then.

Other water samples just to try. Bring in jar from their houses.