

# Province Lake Association Annual Meeting Minutes

## July 19, 2014

**Welcome:** Jon Samuelson, President, called the meeting to order at 9:09 AM and welcomed everyone to the annual meeting of the Province Lake Association (PLA). Thanks were expressed to Province Lake Golf for hosting this meeting. Both members and non-members are welcome to attend.

**Secretary's Report:** A motion was made to accept the 2013 meeting minutes as published in Province Lake Association Web site. The motion was seconded and passed unanimously.

**Fund-raising breakfast:** Thanks and gratitude to Donna and Carl Davis for hosting the third annual fund-raising breakfast and to the 32 volunteers helping with all the work. The fund-raising breakfast was attended by about 225 people and brought in \$3878 in match money for the grant and \$1820 in ticket sales for a total of \$5698.

**Raffle and Meeting Questionnaire announcements.** There will be a 50/50 raffle today with the drawing to take place just before the invited address. The Meeting Questionnaire will be conducted at the end of the Watershed Plan presentation, with a raffle associated with that questionnaire.

**Volunteer program:** Volunteers are needed for weed watch, Lake Host Program, watershed work, and fund raising activities. A sign-up sheet is available.

**Golf tournament:** The second annual PLA golf tournament is planned for Saturday July 26 at Province Lake Golf Course: 7:30 register, 8:30 shotgun, scramble format. There will be a barbecue lunch and hole-in-one contest.

### **Treasurer's Report:**

- Treasurer's report, presented by Jon Samuelson. For calendar year 2013: We took in \$71,203, the majority or 74% from a grant monies for the Watershed Plan, other significant funds came from the PLA Golf Tournament, Lake Host money funds from the towns of Effingham and Wakefield and , memberships and fundraising monies. Expenses were \$65,621: Watershed Plan costs account for the majority of that (81%), then paying for Lake Host, golf tournament costs, insurance payments, water quality sampling, and miscellaneous. The net income for the year ended Dec. 31, 2013 was \$5582. Excluding the two CD's we had at the beginning of the year, we ended year with \$15,130 in the checking account. We let two low interest CDs (approx.. \$11,000 each) expire and put those funds into the checking account, so we ended the year with about \$37,000 in the checking account. This provides some cash in the bank for handling emergencies such as invasive weeds.
- Audit report, presented by Michelle Schank. Accounts were reviewed for the calendar year 2013. All records appear to be complete and accurate and she applauded the meticulous bookkeeping of our treasurer.
- Motion to accept Treasurers Report and Audit Report: Move, seconded and approved unanimously.

**Membership Report:** Presented by Peter Dinger. Our membership numbers have grown over the past few years. We send a mailing to the 600 people in our database. Last year we had 140 members by the end of the year. We currently have 124 paid members, more than

the 110 by last year's annual meeting, so we are on track for exceeding last year's membership numbers. This year so far we have collected \$3100 in dues and \$1695 in extra donations.

### **Other Business**

- **Lake Host Program:** The program is overseen by the NH Lakes Association. Lake Host monitors get trained and work at the boat ramps weekends and holidays during the boating season with grants to pay for their time (volunteers are needed to cover additional time periods, but availability of people is limited). We inspected about 360 boats entering and leaving last year. Some of the costs of the program (\$4000) are covered by the towns of Wakefield and Effingham. We staff Friday through Sundays, plus the week of the 4<sup>th</sup> of July, 10 hours each day. The Board is considering whether we should expand our Lake Host Program, requiring us to expend PLA funds for more coverage (longer hours, more days). Keeping weeds out is extremely important because treating them is very expensive and you can never eradicate invasive weeds once they are established. The employer is the NH Lake Host Program, and we pay them for the costs. Province Shores Campground does not have a formal program at their ramp, but are aware to look for weeds. The Campground is 99% seasonal with few transients that bring boats that have been in other lakes. A weed watch program to watch for weeds that may have escaped the boat inspectors, supplements the Lake Host program. Carl Davis and Tucker Vye will be taking over the weed watch program for the coming year.
- **Increase in Water Sampling:** Thanks expressed to Steve Craig for coordinating the water testing program last year. We have been doing water testing with the UNH Lay Lakes Monitoring Program once a month this year and UNH staff transport the samples. As a result, we no longer have transport expenses to Concord where previous testing was conducted in State labs. Since UNH charges less for testing than the State did we were able to add more testing than prior years.
- **Vegetative buffer on Rte 153:** We are adding a vegetative buffer near Butler Field along Rte 153. We are organizing a planting on July 22, coordinated by AWWA.
- **Beach Clean Up:** We are organizing a beach cleanup along Route 153, and it will start at 9AM in the Maine corner on Aug 23. Volunteers are needed.
- **Regulatory information/awareness:**
  - We want to increase awareness that events such as boat parades, fishing tournament, waterski shows, and other events that affect boat traffic or crowds require a permit but no fee.
  - Swim lines require a permit every year but no fee.
  - Paddle boards require having a life jacket on board.
- **Recognition:** Thanks were expressed to Bob Demer for organizing the PLA Golf Tournament. He is also stepping off the board as a result of his moving out of the area. Thanks were also expressed to Dennis Derby, past president, on the board for 29 years, and original master of the water control device. Dennis has now retired from the Board. Steve Craig is also stepping down from the board while staying on as water testing coordinator and weed expert, and we thank him for his years of effort.

### **Next Term Officers and Board Members**

Nominating Committee suggested the following slate of candidates.

The officer slate:

President: Peter Dinger. Vice-President: Mindy Schuman-Vye.

Treasurer: Thom Townsend. Secretary: Donna Luce.

Board member slate:

Carl Davis, Donna Davis, Jon Samuelson, Mary McLoughlin, and Tucker Vye.

**Motion to approve was seconded and accepted unanimously.**

**Open items from the floor:** Peter Dinger presiding.

Jim Murfey, president of the Gaffney Library: This library in Wakefield (on 14 High Street, next to Town Hall) serves Brookfield and Wakefield with memberships available for anyone. We have books, 55 art items of exhibit, a chocolate reception at the end of the month, wireless access, literacy program, programs for kids, etc.

Question from floor about bird activity: Steve Craig answered: There are four loons, no success at producing offspring. Remember to stay 150' away from nesting loons or loons carrying babies. We were sent pictures of two baby eagles on one nest along Point Rd. There is another eagle nest along Remick Rd.

Question from floor about a UNH study by Prof. Haney: Jon Samuelson answered: That was not part of the Watershed Plan but the information is shared with the Watershed Plan and with DES in NH. Prof. Haney has done plankton sampling and tried to do a core sample. He continues to be actively involved in testing and producing reports.

**Presentation on Watershed Plan:**

Carl Davis introduced the topic, gave some history of the plan, and introduced the speakers. We have over 1000 hours of volunteer time involved in the project. If you fill out the Meeting Questionnaire at the end of the presentation, that counts for volunteer hours that we receive matching funds for and you will also be entered into a raffle to win a \$30 gift certificate to the Wakefield Inn.

**Overall summary:** Forrest Bell from FB Environmental (FBE) gave a Watershed Plan presentation, followed by Q&A. The Watershed Plan is completed and will be posted on the PLA website once all information from the surveys is incorporated and final edits are completed. Phosphorus levels have been identified as a potential contributor to the growth of cyanobacteria and of excessive weeds. The plan has recommendations for short and long term implementations to reduce this over a 15 year period. As part of the watershed planning process, FBE, PLA, Acton Wakefield Watersheds Alliance (AWWA), and NH DES met with representatives of the states of Maine and NH to discuss road improvements along the one mile stretch of Rt. 153 that borders the lake. There was money in the watershed planning grant for best management practices (BMP) to be implemented at the Towle Farm ramp area. A new (implementation) grant is being applied for to implement additional BMPs that were identified. Linda Schier and AWWA have agreed to manage and submit the next grant application on behalf of the PLA under AWWA's name.

**Forrest Bell presented the following:**

Phosphorus sources: Soil in the area is roughly .02% phosphorus, and as much as 420 tons of sediment may reach Province Lake each year. Vegetation removes phosphorus from the soil so developed land has more phosphorus run-off. The three towns around Province Lake (Wakefield, Effingham and Parsonsfield) are growing by an average of 2.5% population per year. We have 6.3 miles of roads within the riparian buffer – edges of lake and inflowing streams.

Best Management Practices (BMP): 20 sites were prioritized for action.

Various reports have been produced including reports on the watershed survey, stream monitoring, septic survey, lake sediment coring, modeling results, watershed action plan, plan for BMPs.

**Jennifer Jespersen presentation:**

Summary on trends found in water quality analysis.

Trends: Province Lake is listed as impaired for levels of phosphorus and chlorophyll-a, with pH (acidity) also marginal. Also Province Lake is impaired for re-occurring cyanobacteria blooms. Cyanobacteria naturally occurs in lakes, 8 of the species in NH lakes are toxic, 2 of which have been observed in Province Lake, one a hepatotoxin (liver toxin) and the other a neurotoxin. Since 2010, there have been at least a dozen reports of these blooms in Province Lake. According to Dr. James Haney of the University of New Hampshire, levels of phosphorus above 9 ppb may increase the toxicity of cyanobacteria markedly. Province Lake may be susceptible because it is shallow so has a large zone of penetrating sunlight and warm water. Whenever conditions are right, dormant cells come up and propagate. In the 1960's there were high levels in Province Lake, then no reports of blooms from the 1970's until 2010. Unclear why cyanobacteria was dormant so long.

Possible phosphorus sources: The overall result of the watershed plan is to set a reasonable and achievable goal for reductions in phosphorus. The data over time show no trends that can identify a particular source of the problem. Large storm events in 2011 and 2012 could have affected conditions – the wetlands hold colored dissolved material and the storms might have flushed a lot of material into the lake. Goal is 10.8 ppm, a 25% reduction. A model was developed to provide guidance as to what actions would be most helpful towards this goal. It is estimated that 60% of phosphorus comes from watershed runoff, 23% from septic system waste water. Developed land contributes 56% of the watershed runoff. In total, 21 residential sites, 14 beach sites, 12 road sites, and 13 other sites were identified through a locally-led watershed survey as potentially contributing to phosphorus run off. The highest priority sites are along Rte153. The septic survey showed a high number of old septic systems which may contribute to phosphorus problems. Also 25% have no septic system (i.e., have outhouses or cess pools). 81% of phosphorus load is estimated to come from old septic systems and outhouses or cess pools. A priority target is working with landowners to upgrade these outdated systems.

Boat activity in shallow areas stir up sediments which could increase phosphorus in the water. We will educate boat owners through future grant programs.

Future sources of phosphorus also need to be minimized, particularly from growth in the area. A build-out analysis indicates the effects on the lake over time of development. There

is buildable area in 65% of the Province Lake watershed. If we project building over this area, phosphorus loading could increase by 62% just from that development.

**Forrest Bell presented on “What can be done?”**

Goal: reduce from 14.3 to 10.8 ppb phosphorus.

Methods: septic systems, shoreline BMPs, roads, ordinances and land conservation, boating, water quality monitoring. Septic systems: Work with landowners on improving systems. BMPs at 20 priority sites can produce 76% of P reduction goal. Residential shoreline areas: The YCC is a great asset for fixing many sites with erosion control that doubles as attractive landscaping. Rte 153 has substantial soil eroding into the lake; we met with road crews from two states together who are agreeing to work together. Golf course: there is no phosphorus in the fertilizer they have used for many years but there are areas of storm water improvement that the golf course is cooperating in. Ordinances: Storm water and other ordinances will protect the lake. The action plan is not posted yet but will be.

Funding the action plan: Approximately \$700,000 will be required over the next 10 years. Grants and volunteers are needed.

We need to measure progress over the next 5-10 years in terms of the following:

- 1) Water quality monitoring (sampling season extended, add color, cyanobacteria, etc.).
- 2) Number and effectiveness of BMPs.
- 3) Social: more volunteers, education, participation, PLA members.

**Linda Schier of AWWA and Sally Soule of DES presented implementation steps.**

We have applied for the next grant (pre-proposal phase). Funds from NH come from the Clean Water Act. Proposal includes the following plans over 2 years to result in 10% of the needed reductions at least.

- 1) Septic programs: Coordinate with septic haulers to arrange group pump out discounts to increase frequency of pumping (Lakes Region Septic has agreed to give discount for 3 people in same town pumping at same time). Identify high-risk systems and provide funding to professional septic evaluations and provide cost-sharing for failing systems.
- 2) BMPs:
  - a. AWWA Youth Conservation Corps (YCC) will work with landowners to address residential polluted runoff issues; work with the golf course to install buffer plantings along streams and lakeshore of the course; install rubber razors on dirt roads and driveways to reduce runoff.
  - b. The town of Wakefield Department of Public Works (DPW) will correct additional chronic erosion along Bonnyman Rd. Towle Farm intersection is in progress with the help of UNH Storm Water Center. Wakefield will assist in 3-4 other fixes along Bonnyman Rd.
  - c. Land conservation: We will work with the three land conservation organizations to hold workshop with landowners to discuss land conservation and forest management practices.

- d. Water quality monitoring will continue to monitor change over time. We are asking for funds to increase the amount and type of sampling. We would like to add stream monitoring equipment. Additional monitoring of sources of bacteria to rule out human versus wildlife sources of bacteria.
- e. Looking for volunteers: Contact Linda Schier at AWWA or Pete Dinger of PLA.

Linda and Sally distributed the Meeting Questionnaire for attendees to help evaluate the meeting and provide information for planning next steps for the project.

**Presentation Discussion by members:**

1. What does weed pulling in front of one's property do to water quality? Answer: It is illegal and disturbs sediments; plants remove phosphorus from water.
2. Septic tank into a dry well as effective as leach field? Answer: Depends on the system but it requires much more maintenance.
3. Suggestion: Work with towns to give more variance in set backs if you are improving your septic systems – we hit walls with the town when trying to improve ours so gave up. Answer: Linda Schier said that is a great idea for them to use.
4. How problematic are outhouses? These are a lesser contributor than older septic systems are. A group system of outhouse pumping was done in one community. Answer: Changing to a community bathroom is another solution. Even upgrading an outhouse to a holding tank that is easily pumped is an improvement.
5. One citizen said: We are concerned about plans to restrict beach access by installing guard rails in Maine. In the winter, the beach is flooded every winter, causing erosion, and guard rails won't help that. The culverts are inadequate for serious storm runoff and spring melts. These are much more important than guard rails. Forrest Bell responded: the traffic has been increasing erosion on the shoulder, thereby increasing gulleys. Floor response: it is the water runoff, not the foot traffic that increases the gulleys. Linda Schier responded: Please send us your objections to guard rails so we can study them.
6. Other areas of Bonnyman have serious erosion, are there plans for these? Answer: Yes.
7. How and when to avoid cyanobacteria avoidance was queried: Answer: If you see a scum, avoid it, but if you do not see a scum and there is a warning, then you need to use your own judgment on if it is OK to swim. When NH issues a warning, PLA cannot lift the warning. Question: What about the jelly-like green clumps? That is a normal algae, no problem.
8. Citizen comment: Road areas that became paved in the last 15 years increase runoff versus absorption. More intense storms in recent years have increased erosion.

The meeting was adjourned at 11:55 AM.

Respectfully submitted,

Damaris J. Rohsenow  
Secretary, Province Lake Association