

Lake Arrowhead Club

2008 Lakes Committee Status Report

2009 Planned Activities

Your Lakes Committee would like to present our activities and accomplishments for this year, and our plans for next year:

General – All Lakes

- Held (and continue to hold) open Lakes Committee meetings once per month (currently on 2nd Wednesday) throughout the year.
- Hired Aquatic Technology Inc., as the new chemical applicator company for aquatic plant management. Obtained seasonal, rather than per treatment, contract for algaecide applications. Company did 16 essentially biweekly inspections of the lakes from mid April until mid September, and consulted with Lake Chair about chemical applications.
- Attended Rain Garden Seminar given by Dr. Christopher Obropta, Ph.D., P.E., Water Resources Extension Specialist, Rutgers University”
- Received a review of potential for littoral / riparian zone restoration from NJDFGW. NJDFGW expert recommended creation of rain gardens and lowering of lakes in the spring of every year for next 10 years.
- Applied for and received riparian zone restoration grant from NJDFGW for ½ acre of native plants to be planted in storm water discharge routes to all three lakes. Plants to be delivered in spring of 2009. Gardens will help control addition of nutrients to our lakes and help to further reduce algae blooms and non-native plant invasion on our lakes. Will call for volunteers in spring 2009 to help with garden preparation and planting.
- LAC Board of Directors voted to accept donations of time, labor and money from non-members for the use of board sanctioned activities - including lake restoration.
- Ran Lake Restoration fund raiser, which raised >\$20,000, so far, for lake restoration activities.
- Represented LAC at NJ COLA meetings in April and September.
- Determined (from NJ COLA meeting) that Fair Share funding of lake care and maintenance may be a legal option for LAC; currently consulting with lawyer to determine applicability to Lake Arrowhead community. Consulted with Laurel Lake representative to review their experiences with implementation of Fair Share.
- Published 3 community education flyers on responsible lakeside residency, rain gardens and native plants. Flyers published on website for future reference.
- Authored LAC Newsletter Lakes blurbs.
- Held native plant seminar presented by NJ Audubon Society expert for LAC members.
- In conjunction with Membership Chair, held 2 neighborhood meetings to demonstrate that LAC is a lake care organization, and to solicit members.
- Obtained discounted rate for phosphate-free fertilizer from Anchor Hardware.
- Developing an Aquatic Plant Management Plan for Lake Arrowhead lakes.

Bay of Deep Waters

2008:

- Manual removal of algae blooms by team of volunteers over two weekends.
- Algaecide applied 8 times (May, June (2x), July (2x), August (3x)).

- Testing of phosphates (mg/l as P) 3 times during summer:
April: OP <0.01; June: TP 0.13; September: TP 0.06
- Working on scheduling hydro raking for possible late 2008 or 2009 work. Appeal will be made to lake residents once a firm estimate is received.

2009:

- Possible application of blue dye to lake to limit algae growth. This will be discussed with LAC Board and Aquatic Technologies before application.
- Rain garden will be planted in the Spring to retard nutrients from entering the lake from Pocono and Laurelwood Road storm water runoff. These plantings will be located near storm drains discharge. Plants obtained from grants from NJDFGW. Will call for volunteers in Spring to help with planting.
- Continued application of algaecide as required.
- Continued TP testing as required.

Great Bay

2008:

- Application of alum for removal of nutrients from water column to limit algae growth.
- Algaecide applied 4 times (May, June and August (2x)).
- Tested phosphates 4 times over the summer:
April: OP: <0.01, TP: 0.05; June 0.07; Sep: 0.03.
- Lowered Great Bay lake
 - Exposed the littoral zone to the air, which speeds up the decomposition (oxidation) of nutrients - making them unavailable for future algae/plant growth.
 - Exposed unwanted aquatic plants (Cabomba) and algae to the air, desiccating them, and killing a large portion of them.
 - Allowed the removal of plant debris, trees and Cabomba from exposed lakebed.
 - Allowed the inspection and repair of the Great Bay dam.
 - Allowed lake front homeowners to inspect and repair usually submerged structures.
 - Refilling of lake will commence after December 1.

2009:

- Rain garden will be planted in the Spring to retard nutrients from entering the lake from Route 46 storm water runoff and possibly BDW discharge. These plantings will be located near storm drains discharge. Plants obtained from grants from NJDFGW. Will call for volunteers in Spring to help with planting.
- Application of herbicide (Sonar) for control of Cabomba infestation in early spring of 2009.
- Continued TP testing as required.
- Continued application of algaecide as required.
- Possible application of blue dye to lake to limit algae growth. This will be discussed with LAC Board and Aquatic Technologies before application.
- Possible application of alum to limit algae growth.
- Possible hydro raking in fall of 2010. Need to get a quote from vendors.
- Exploration of creation of water garden in Rte 46 end of Great Bay lagoon.

Lake Arrowhead

2008:

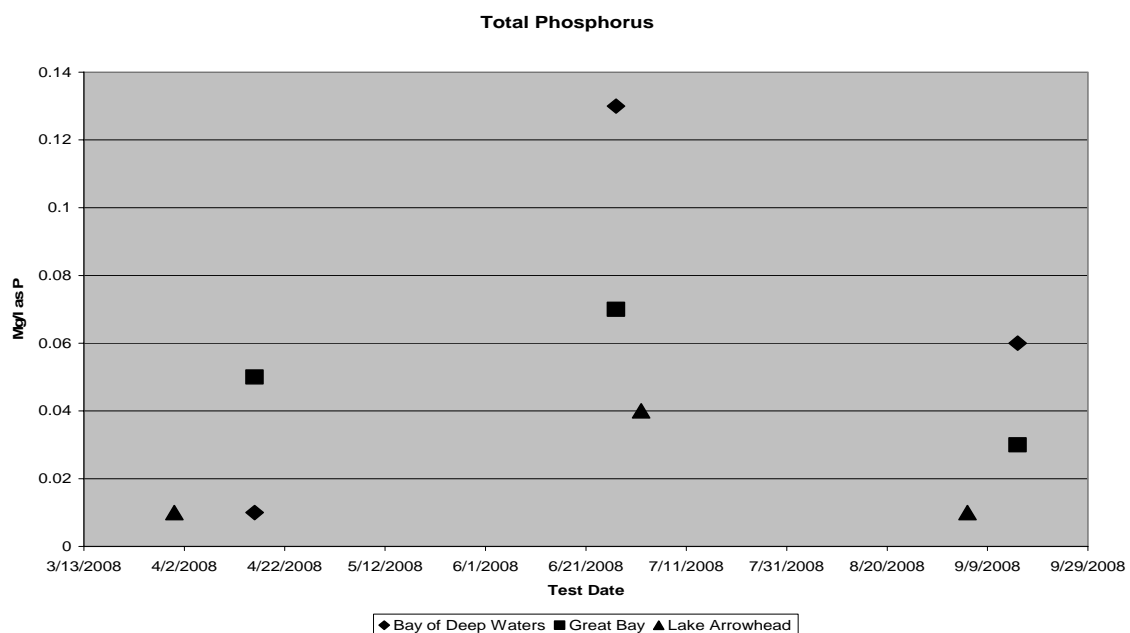
- Application of blue dye limited algae growth. Also applied dye to Rt 46 pond.

- Applied algaecide 5 times (in August and September only).
- Tested phosphates 5 times over the summer (in swim area/dock unless otherwise noted):
 - March: OP: <0.01, TP: <0.10; July TP: 0.04;
 - September: TP (past isl) <0.01, TP <0.01
- Lowered Lake Arrowhead
 - Exposed the littoral zone to the air, which speeds up the decomposition (oxidation) of nutrients in that zone - making them unavailable for future algae/plant growth
 - Exposed unwanted aquatic plants and algae to the air, desiccating them, and killing a large portion of them.
 - Allowed the removal of plant debris and trees from exposed lakebed.
 - Allowed the inspection of the Lake Arrowhead dam. Gate valve was repaired.
 - Allowed lake front homeowners to inspect and repair usually submerged structures.
 - Refilling of lake will commence after December 1.

2009:

- Application of blue dye to lake to limit algae growth.
- Investigate hydro raking in fall of 2009. Quote needed from vendor.
- Rain garden may be planted in the Spring to retard nutrients from entering the lake from Lakewood Drive and Jaeger's Pond storm water runoff and GB Dam discharge. These plantings will be located near storm drain / dam discharge. Plants obtained from grants from NJDFGW. Will call for volunteers in spring to help with planting.
- Continued TP testing as required.
- Continued application of algaecide as required.
- Possible application of alum to limit algae growth.

The Lakes Chair would like to thank the members of the Lake Committee for all their thoughtful discussions and active participation in lake care activities this year. The Chair would also like to thank the LAC Board of Directors for their assistance and the Lake Arrowhead community residents (both LAC members and non-members) for their help, and for their donations of time and money in the beginning of the ongoing effort to help restore our lakes. We have made a start!



Lake Restoration Fund Status

So far, the following amounts have been raised:

Source	Amount Received
12 GB residents:	\$3900
4 BDW residents	\$2500
5 Non-LF residents	\$1275
LA residents	
18 Current drive	\$6150
5 Previous drive (net)	\$7235
Total	\$21060

So far, the following amounts have been allocated

Project	Amount Allocated
Great Bay dam repair	\$1500
[Great Bay lagoon raking *	\$16500]
Great Bay Sonar	\$6000
Great Bay lowering costs	\$500
Currently unallocated	\$13060

Other projects under consideration:

Project	Estimated cost
BDW Hydro raking [†]	\$6000 - 20,000
LA Hydro raking [‡]	\$6000 - 20,000
2009 Treatment Expenses (?) [§]	\$16,000

* Project not funded because of insufficient funds.

[†] Original LRF Project. Tentatively scheduled for mid December 2008 (weather dependant). Vendor hard estimate requested. Actual cost may depend on how much LAC decides to do.

[‡] Original LRF project. Planned for fall of 2009. Vendor estimate to be obtained. Actual cost may depend on how much LAC decides to do.

[§] Estimated 2009 treatment expenses based on 2008 costs (as per verbal communication with vendor).