

**JOIN
THE RIDGEFIELD
LAKES ASSOCIATION!**

Each and every one of us living on or near Rainbow Lake should be aware of the lake's significance in our lives.

The opportunity to fish, swim, boat, explore and enjoy the natural setting is priceless.

Membership in the Ridgefield Lakes Association preserves this lifestyle for all. Your dedication will be rewarded far beyond a monetary value.

For more information, please visit:
www.rainbowlake.org

THANK YOU

The RLA membership would like to thank Carol Hovey, a past president and the first Handbook author. Her effort researching, organizing and writing the first Handbook made the production of this edition much easier.

Photography courtesy of Mark Amier, Betsy Hill, Rebecca Kunzmann, Heather O'Neill, Joseph Prial, and Tom Urquhart.

Acknowledgements:
Candlewood Lake Authority
CT Federation of Lakes
CT Dept of Energy & Environmental Protection



Rainbow Lake
Handbook and Guide

Prepared by
Ridgefield Lakes Association
Ridgefield, CT
January 2014 revision

LONG RANGE PLANS

The Board of Directors has initiated several studies of Rainbow Lake in recent years to better understand the dynamics of the lake, its evolution over time and the recommended means of keeping it healthy. We are continually represented at the Connecticut Department of Environmental Protection meetings on watershed and lake management.

We participate in the Connecticut Federation of Lakes, an organization that acts as a resource for information about lake management practices and a forum for concerned groups to share their experiences. We are also engaged in a Ridgefield Lakes consortium that shares our concern for the health and maintenance of lakes and watersheds.

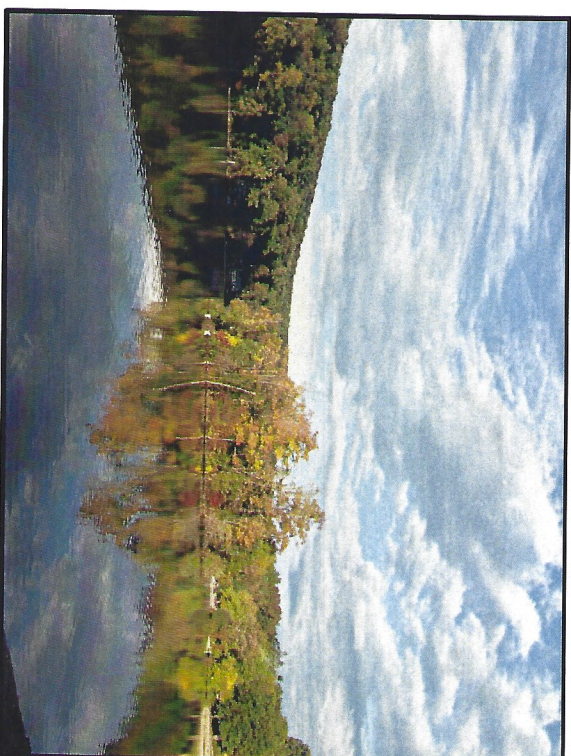
Continuing to care for Rainbow Lake will take time and careful study. From time to time we establish a few sub-committees to focus on areas requiring special dedication. While headed by board members, the sub-committees welcome those RLA members who have expertise relevant to a particular area of investigation. This is a good way to get involved where your special contribution can really make a difference.

- Dam Maintenance
- Water Quality
- RLA Property and Beach Management
- Membership and Communications
- Fundraising
- Policy and Procedures



CONTENTS

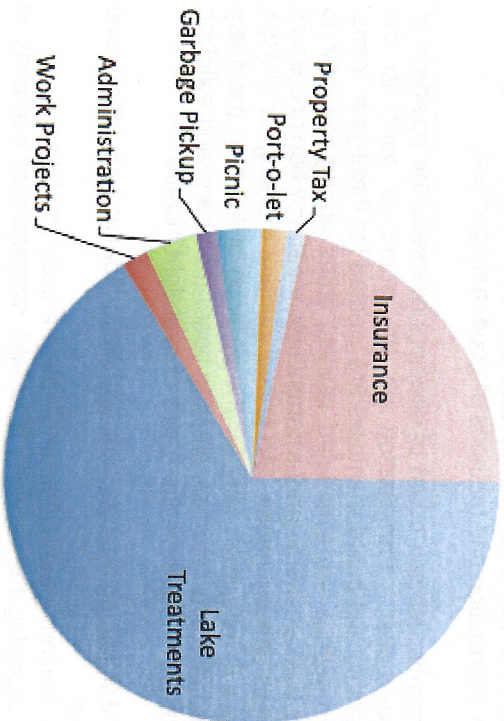
An Introduction to Our Lake.....	2
Lake Management.....	4
Care of Our Lake.....	6
Map.....	9
What We Can Do.....	10
Resources.....	11
Ridgefield Lakes Association.....	12
Your Membership Dues at Work.....	14
Vendor Discount Program.....	15
Long Range Plans.....	16
Guidelines for RLA Facilities.....	17



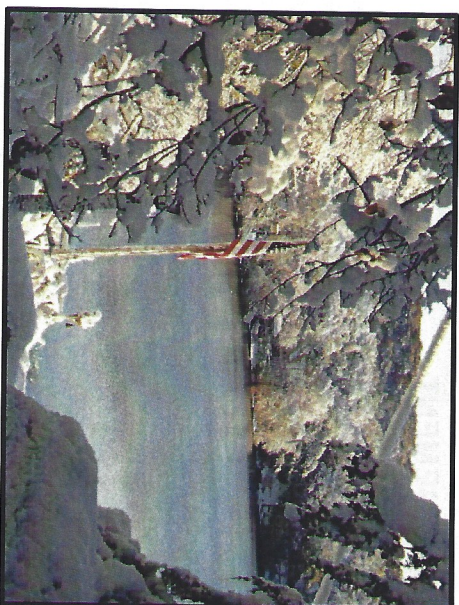
YOUR MEMBERSHIP DUES AT WORK

Managing Rainbow Lake's health and recreational facilities are funded solely by membership dues and contributions to our Lake Improvement Fund. The largest annual expense is the series of chemical treatments required each summer to control aquatic weeds and algae. The cost of these treatments currently averages \$17,500 a year and constitutes approximately 63% of our annual expenses.

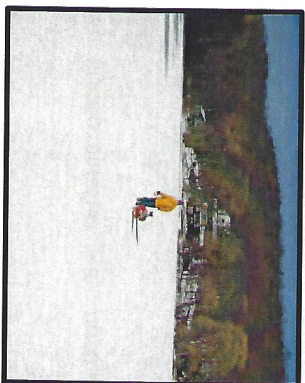
Other yearly expenses include liability insurance, taxes, work projects, administrative costs, garbage removal, dam maintenance, and social functions (summer picnic and holiday party).



The annual budget of the RLA is approximately \$28,000 and we have been breaking even the last several years. A breakdown of RLA expenses for a typical year is shown in the figure above. Also, the RLA collects roughly \$3,500 annually for the Lake Improvement Fund.



During the Winter, the Association hosts a holiday party at a neighbor's home to celebrate the holiday season. With luck the lake freezes in December and is dotted with skaters, the occasional ice hockey game and even a hardy few who enjoy ice fishing. When the lake is frozen and covered with a few inches of snow it is a great place to cross-country ski or snowshoe.



Warm weather brings members to the beaches for a swim, or to enjoy the lake's breezes in their small boats. Rafts are strategically placed around the lake by the Association for the enjoyment of the membership.

Each of us who lives here knows in a special way the joy and serenity the lake provides. The Association is committed to preserving Rainbow Lake for its community and for generations to come.

RIDGEFIELD LAKES ASSOCIATION

Ridgefield Lakes Association, Inc. (RLA) was chartered in 1943 and has assumed stewardship of the lake for the purpose of protecting the health of Rainbow Lake and maintaining it for recreational use. After passing through several owners, the lake was purchased in 1985 by the Ridgefield Lakes Association.

The purpose of RLA is to keep the water free of "bad" bacteria and to control the growth of algae and water plants, while preserving a balanced environment for fish and wildlife.

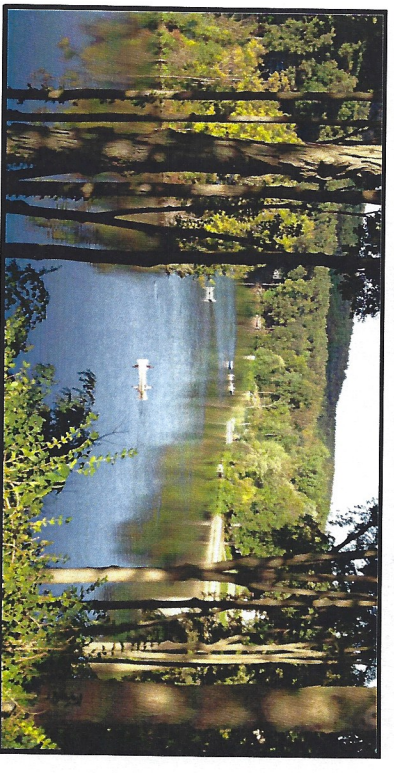
As the land around the lake has been developed, and the waterfowl population grown, it has become increasingly difficult to maintain the health and beauty of Rainbow Lake. It is only through constant vigilance and the cooperation of every resident family that we can hope for a healthy lake for many years to come.

Membership in the Association is open to all families who reside within the Association's boundary (see centerfold map) and to families outside the boundary who have deeded lake rights. Members discover the beauty of the lake each year anew and some have enjoyed Ridgefield's "best kept secret" long enough to have second and third generation swimmers, boaters and fisherman.

The RLA owns and maintains the 44-acre Rainbow Lake and its facilities. These include, but are not limited to, the dam, the beaches on Lakeside Drive and Crescent Drive, the rafts, the docks, and any other facilities that may become available in the future. Docks for member use are located at Crescent Beach.

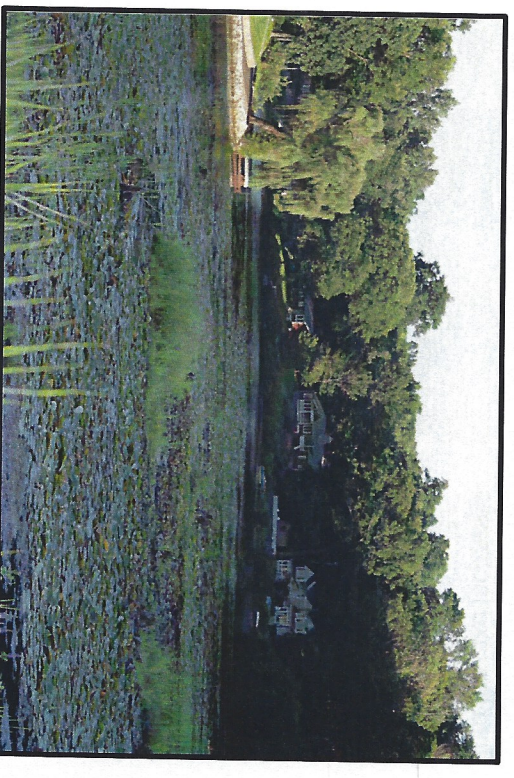


With lake management, membership dues, and support our lake looks like:



OR.....

If left unmanaged, the following is an example of what our lake could look like:



WHAT CAN WE DO TO PRESERVE OUR LAKE

Water Quality

- Do not feed the water fowl.
- Fencing the shoreline or planting shrubs and tall grasses creates a barrier to geese and swans.
- Placing a few balloons, flags or windsocks early in the season along the edge of lakefront property is a good visual frightening technique to prevent birds from establishing a feeding pattern. Be persistent and move the locations often.

Weed and Algae Control

- Guard against using household products such as dishwashing and laundry detergents that contain phosphorus. Phosphorus that seeps into the water encourages aquatic weed and algae growth.
- Minimize the use of fertilizers with high nitrogen and phosphorus levels. When possible, use no fertilizer.
- Just one pound of phosphorus can produce up to five hundred pounds of algae!
- Have your septic system inspected and cleaned regularly. Failure of your system and infrequent cleaning causes nutrient matter to leach into the soil and the lake.
- Do not deposit leaves and clippings in the lake or close to the shore.
- Aerate lawns to encourage better water infiltration, thereby reducing runoff.
- Lakeshore owners should leave an un-mowed buffer strip between the lawn and lake, or a strip of natural vegetation along the shoreline. Mowing right to the shoreline gives more opportunities for phosphorus to enter the water.
- Hand rake aquatic weeds and their roots to remove them from the exposed lakebed along the shoreline after winter draw down.

Sedimentation

- Follow all silt control regulations when beginning construction or remodeling.
- Grade and stabilize banks when landscaping or building to prevent erosion.
- Maintain driveways and private accesses.
- Plant shrubs and grasses to hold the soil along the lakeshore.

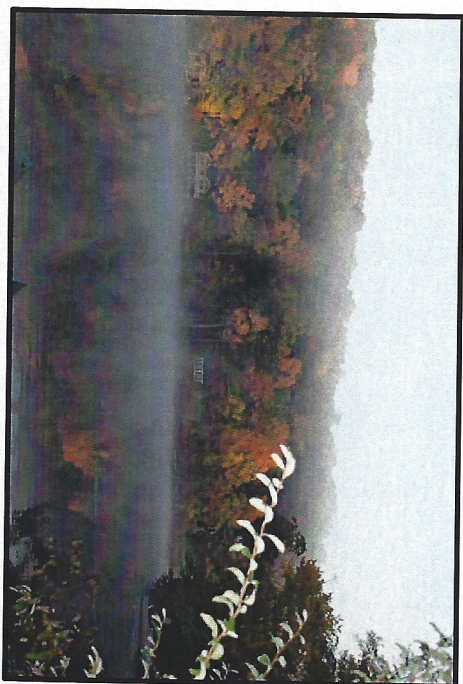
Water level draw down is another method of weed control. In November, the level of the lake is gradually lowered several feet. A sluice gate at the base of the dam allows nutrient rich bottom water to flow out of the lake to reduce the food supply. Winter freeze and a dry lakebed help kill waterweeds that grow along the shore in the shallows. Fed by rain and melting snow from the surrounding hills, the lake rises to full depth in the spring.

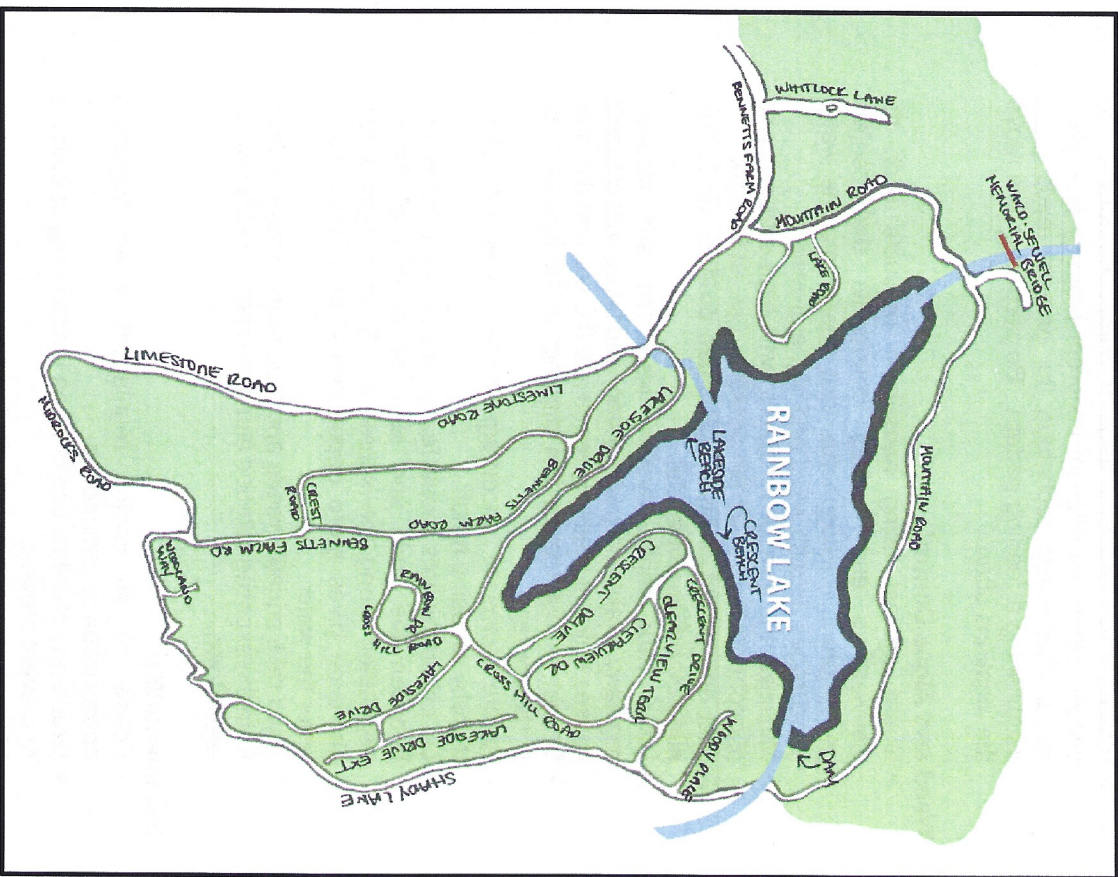
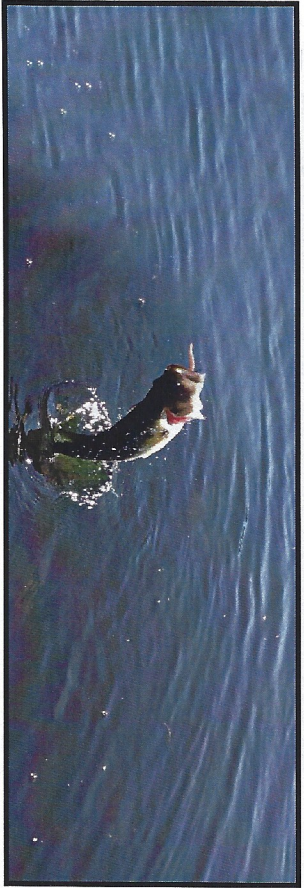
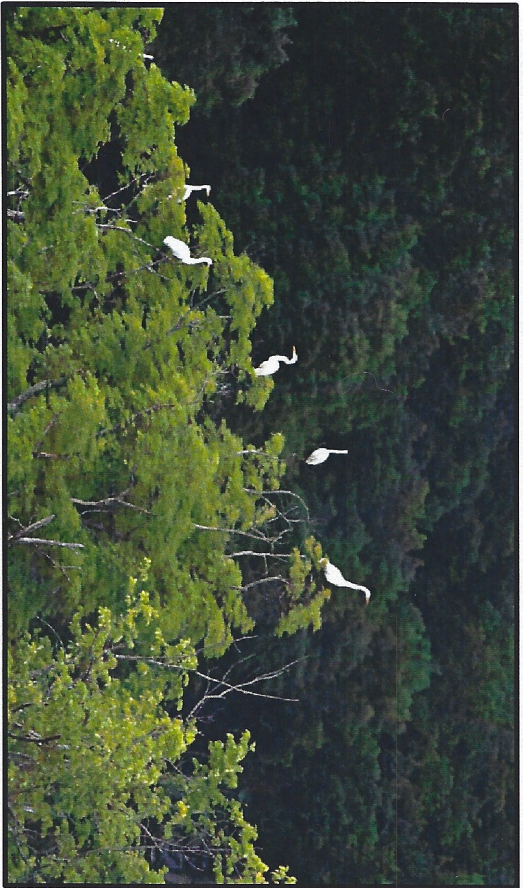
The chemical program and water draw down are only two solutions. The RLA Board and membership are actively engaged in developing a set of other short and long-range plans for the control of aquatic weeds and algae.

Sediment Deposits

Sedimentation is the gradual depositing of sand, silt, dirt and gravel in a lake that decreases water depth and encourages weed growth. Some sedimentation occurs naturally as a result of erosion. When the land surrounding a lake is disturbed, the amount and rate of sedimentation increases dramatically. Disturbances include any land development activities that remove natural vegetation and the organic top layers of soil. With the natural protections removed, rainfall carries mineral laden subsoil into the lake at a rapid rate. Roadside run-off, sand, salt, leaves, and topsoil are also significant contributors to sedimentation.

We work closely with the town to insure roads are maintained and catch basins are installed in low-lying areas adjacent to the lake. Catch basins are cleaned and maintained in good working order by the town.





RLA MAP 1993
MEMBERSHIP * ELIGIBLE AREA

CARE OF OUR LAKE

We focus our efforts on three major areas: water quality, weed and algae control, and sediment deposits.

Water Quality

Water quality is the term we use to refer to water clarity and bacterial levels. The biggest detriment to water quality is the large waterfowl population, primarily geese and swans. Bird droppings are a primary source of nutrients on which plants thrive and add significantly to the bacteria levels. There is no easy solution to this problem.

Dissuading birds that return every year from nesting at Rainbow Lake will reduce their numbers. This is important because they lose their flight feathers in late June and remain on the lake where they have nested for a good part of the summer.

Presently, we monitor goose and swan nests in early spring. A permit is obtained from the Connecticut Environmental Protection Agency for this purpose.

Weed and Algae Control

Every lake naturally has some form of aquatic plant life. The flora and fauna that inhabit the lake live a life that is environmentally balanced. In its natural state, a lake surrounded by meadows or woodlands will receive nutrients that support the animal and plant populations. As the area around the lake is developed, the amount of nutrients that leach into the lake increases.

From April to September, we treat the lake to control aquatic plant life. Professionally applied, Sonar and copper sulfate are harmless to humans and wildlife, and are commonly used for lake and pond maintenance. Connecticut State guidelines permit only a specified number of treatments during the season. The Town of Ridgefield's Health Department periodically checks the water for bacteria.

Usually our initial treatment consists of seeding the lake with Sonar, a chemical that stops the growth of bottom weeds. Copper sulfate is introduced later during spring and summer to eliminate the algae that float on the surface and cloud the water. A second submerged weed treatment is done in the latter part of the summer if necessary.

RESOURCES

Cleaning Products

Cleaning and laundry products eventually leach into the lake. Even more immediate contamination occurs when cleaning products are used outside (washing your car and lawn furniture) where runoff goes directly into the lake. Products containing bleach or ammonia are particularly bad for our lake environment. Please consider using environmentally responsible cleaning and laundry products to lessen our algae problem.

We recommend Sun and Earth products (dish liquid and all purpose cleaner) and all the Seventh Generation or Ecover products available at Stop & Shop, Trader Joe's and Nature's Temptations.

Fertilizer

The same ingredients that make grass and flowers grow make algae grow. Fertilizer spread over lawns and gardens eventually make their way into the lake and encourages algae growth. It's preferable to use no fertilizers.

If you must use fertilizer, consider using low nitrogen, low phosphate organic fertilizers. Young's of Wilton as well as Home Depot and other area nurseries have these products.

For more information visit these websites:

- www.gaiam.com (Seventh Generation products available online)
- www.ecover.com (Ecover products available online)
- www.ridgefieldct.org (Wetlands and Watercourse regulations)
- www.nalms.org (North American Lake Management Society)
- www.ctlakes.org (CT Federation of Lakes)

- Home Depot – Danbury 203-730-9600
- Nature's Temptations – Ridgefield 203-438-5443
- Trader Joe's – Danbury 203-739-0098
- Young's Nurseries – Wilton 203-762-5511



LAKE MANAGEMENT

As with all manmade and shallow lakes, Rainbow Lake seeks to return to the meadow and wetlands it once was. Sediment continually washes into the lake, decreasing its depth over time. Organic debris – such as leaves, grass and brush that find their way into the lake – decomposes and settles to the bottom. Nutrients, specifically phosphorus and nitrogen, feed the aquatic plants and algae growth that has filled the lakebed over the years. Phosphorus and nitrogen enter the lake from numerous sources: waterfowl droppings, household runoff from septic systems, and garden lawn fertilizers are the most significant contributors.

Our lake is a fragile ecosystem. The runoff and numerous streams from the surrounding watershed are the source of its water. (A watershed is the total land and water area that drains into a lake's basin.) Rainbow Lake's watershed is approximately two square miles. What is introduced into the watershed eventually makes its way into the lake.

The overpopulation of geese and swans has become a major pollution problem. Although they are attractive to see, in large numbers they are serious polluters, which, if encouraged or left unchecked, will undermine the lake's health.

There are two major areas of concern in maintaining the quality of Rainbow Lake:

- 1) **Sediment**
Sediment – silt, dirt, road sand, and organic debris washing into the lake.
- 2) **Nutrients**
Phosphorus is the primary nutrient that promotes the growth of algae and aquatic plants. Controlling the phosphorus and other nutrients that enter the lake from the watershed and from waterfowl deposits is an important priority.

The RLA maintenance program reduces nutrients and controls sediment in the lake. The lake aging process can be slowed. It depends upon the vigilance of everyone who lives in the watershed area. Lakeside property has the greatest impact, but each home in the surrounding watershed is a potential contributor. What are we doing now? And, what can we do in the future to preserve or even restore Rainbow Lake?

RLA membership is available to persons and members of their immediate family who:

- 1) Own or rent property at Rainbow Lake within the boundaries shown on the centerfold map (RLA Map 1993) including properties on either side of the boundary roads.
- 2) Own property outside the boundaries, but have deeded rights to Rainbow Lake (Lake 1 as shown on Map 1 dated October 1934 – Town of Ridgefield Map #335)*.

***Ownership of property with deeded rights does not constitute RLA membership and does not entitle the property owner to use RLA facilities and other improvements.**

Ridgefield Lakes Association is a member of the Connecticut Federation of Lakes and cooperates with other lakes in Ridgefield, sharing information and methods of good management.

A 19 member elected board of directors oversees the business of Rainbow Lake. Participation on the board is open to the membership and board members are elected for three-year terms. Board meetings are scheduled several times during the year to conduct business with various committees meeting when necessary to address specific needs. An annual general meeting for all RLA members is held each May for the purpose of keeping members informed of board activities, electing board members, and soliciting input from the membership. Areas of oversight include:

- Maintaining the beaches, pathways, floating rafts, docks and dam.
- Monitoring the condition of roads around the lake.
- Engaging the services of a lake management company to handle water quality and weed/algae control.
- Conducting annual membership drives and fundraising.
- Handling financial matters such as taxes, insurance and capital improvements.
- Developing and implementing long range plans to care for and improve the lake.
- Maintaining the website.
- Sponsoring annual events such as the summer picnic and holiday party.

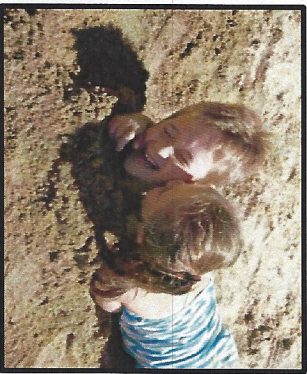
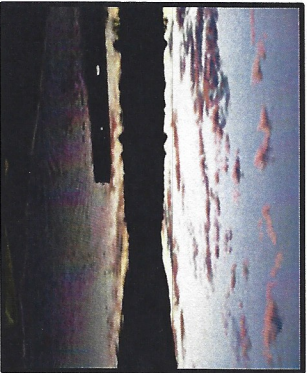
AN INTRODUCTION TO OUR LAKE

Rainbow Lake covers 44 acres and its depth ranges from 2 feet to approximately 15 feet. At the eastern end of the lake, a dam and spillway, originally built in the late 1930s and repaired 2002-2003, controls the water flow. The run-off from surrounding hills, two streams and numerous springs feed this manmade lake.

The lake is home to several species of fish, amphibians and a variety of waterfowl including geese, swans and ducks. Heron and hawks are often seen, and an occasional bald eagle is sighted. On shore, the lake supports raccoon, deer, muskrat and the occasional beaver.

In the 1930s and 1940s, Willie Winthrop, a developer who envisioned a string of lakes and summer homes here in Ridgfield, developed Rainbow Lake and the surrounding area. Three lakes were created: Wataba Lake, Fox Hill Lake, and the lake running along south Lakeside Drive. Many of us know Wataba Lake as Rainbow Lake, however, most town and state maps refer to it as Wataba Lake.

Living on the lake offers a unique blend of privacy and community. We enjoy a sense of safety for children at play, the neighborliness of walkers and joggers who smile as they pass, and a distinct concern for each other.



Over the years, families have come together each summer for the Rainbow Lake annual picnic. Held at Crescent Beach on the first Saturday in August, the day is filled with games, fun, food and celebration.

At the beginning of each calendar year we conduct our annual membership drive. A package that includes information about the RLA is sent to current members and non-members. Included is a form describing membership dues. Along with membership dues, we collect money for the "Beach Buddy" and "Lake Improvement Fund" programs. The funds specified for "Beach Buddy" go directly toward beach improvements. The funds earmarked for "Lake Improvement Fund" provide a measure of security should a major improvement need to be made to lake property. Additionally, this fund is used for any emergency or long-term capital improvements, such as maintenance of the dam and lake restoration projects. We hope you consider including contributions to both programs with your annual dues payment.

VENDOR DISCOUNT PROGRAM

In the Fall of 2012 we started the RLA Vendor Discount Program as a fundraising tool to attract new members while maintaining our current membership on an annual basis. Paid members can opt into this program which gives them access to discounts on such things as heating oil, heating propane, refuse removal and recycling, painters, landscapers, plumbers, electricians and more. This is simply a discount program and all decisions of use rest solely with the individual RLA members. Members are never obligated to use any of the deals, and can opt out at any time. However, keep in mind that as our base of members using the oil and refuse discount grows, our buying power will naturally increase. Individual members should call the vendors directly to initiate services.

Our goal is to use Ridgfield-based vendors when possible in an effort to support our local community, especially fellow paid RLA members. We will also strive to periodically have RLA Deals with local shops and restaurants. We hope that you will find this program an additional benefit of your membership, and as always, any suggestions you may have can be emailed to:

rladmin@rainbowlake.org

If you do experience any quality issues, please let us know and we will use that information in evaluating whether or not to keep vendors in the program.

WELCOME TO RAINBOW LAKE

As chairman of the Ridgfield Lakes Association, I want to welcome you into our community and ask that you consider joining with us to care for and protect this little slice of heaven.

This body of water is the primary reason why many of us "fall in love" with Ridgfield. Fishing, canoeing, swimming, bird watching, skating, ice hockey, beautiful sunrises, and equally glorious sunsets, can all be found at the lake. Each season allows us to embrace Rainbow Lake in a different, uniquely rewarding way. A walk around the lake in Autumn, a leisurely canoe ride in Spring, skating across 44 acres of ice in Winter or lounging on the beach in Summer, are all great ways to meet neighbors and simply enjoy the lake!

This handbook has been developed for you to learn about the history and the important issues facing our lake. Understanding the forces affecting lake ecology will help us protect this fragile environment and permit us to be more responsible stewards – while also protecting our collective investments in our homes.

Our community association is made up of homeowner members like yourself, who not only share the commitment to preserve this quality of life for our own enjoyment and for future generations, but also want to insure and increase the value of our investment.

Why not become members today? Join the Ridgfield Lakes Association now and take an active role in protecting our lake for years to come.

Please contact us at rladmin@rainbowlake.org or visit our website at www.rainbowlake.org. I look forward to hearing from you and seeing you on the lake.

Sincerely,



Norman B. Naishtut
On behalf of the Ridgfield Lakes Association

GUIDELINES FOR RLA FACILITIES

Swimming, Boating, Use of Beaches and Facilities IS AT YOUR OWN RISK.

General Regulations

1. All beach and lake facilities are private and for the enjoyment of members and their guests.
2. Beach hours are from dawn until dusk.
3. No motorized boats may be used. (Electric trolling motors are permitted.) Use of snowmobiles and other recreational motor vehicles are prohibited.
4. Children under age 12 must be supervised.
5. Appropriate attire is required.
6. No pets on the beaches.
7. Boats must be parked on the beach perimeters out of the way of swimmers and sunbathers.
8. No fishing from the beaches.
9. No alcoholic beverages after 9 p.m.
10. No glass permitted on the beaches.
11. No fires permitted.
12. No littering. Refuse and recycling containers have been provided at both beaches.
13. Please take your personal belongings home with you after every visit.
14. Community furniture such as lounge chairs should be neatly stacked and placed to the side.
15. If your children use the community toys at Crescent Beach, please put toys in the designated space when they are finished.
16. Enjoy the lake, rafts and beaches responsibly.

Guest Regulations

1. Guests are permitted, but must be accompanied by a RLA member in good standing.
2. RLA members are responsible for the conduct of their children and guests.

Boat Regulations

1. All boats stored on the beaches **MUST** have current RLA stickers. Stickers are received upon payment of the Annual RLA Membership Fees (RLA Membership Fees are due every year by May 1st to stay current, but it is never too late to join!)