

50 Ways

to Preserve, Protect and Enhance

Caspian Lake



Greensboro, Vermont

Produced by the
Greensboro Association

www.greensboroassociation.org

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Every house owner and visitor to Caspian Lake has an opportunity to contribute to preserving and enhancing the lake's unique natural beauty by committing to any or all of the following 50 Ways to Preserve, Protect, and Enhance Caspian Lake.

4 Recreational Lake Use

Boating

1. Observe speed limits

a. The daytime speed limit on Caspian Lake is 40 miles per hour, and the nighttime limit is 10 miles per hour. Nighttime is defined as the period between one half hour after sunset and one half hour before sunrise.

b. With minor exceptions, all vessels must travel at no-wake speed and not over five miles per hour within 200 feet of the shoreline, of a person in the water, a canoe, rowboat or other vessel, a designated swim area, or any anchorage or dock.

2. Operator restrictions

a. **Age Limit:** No person under the age of 12 may operate a motorboat exceeding six horsepower.

b. **Certificate of boating education:**

No person born after January 1, 1974, may operate a motorboat of six horsepower or greater without a certificate of boating education. This certificate is issued upon successful completion of the prescribed course in boating safety. The state recognizes similar certification from other states. The Greensboro Association offers boating safety courses leading to such certification. The certificate must be in your possession when operating a motorboat. For more information on course locations and dates including taking the course online, contact the Vermont State Police Marine Division at (802) 244-8727 or visit <http://www.dps.state.vt.us/vtsp/boat>

3. Sunday Concerts

During July and August, concerts are broadcast every Sunday evening at the south end of the lake. It is requested that motorboats not operate in the area while concerts are in progress.

4. Alcohol and Drugs

Operating a vessel while under the influence of alcohol or drugs is forbidden and is punishable by a fine and the suspension of boat operating privileges.

5. Residential Use

Sleeping overnight on a vessel is prohibited.

6. Equipment

a. **Life Preservers:** All boats must have a wearable type PFD (personal flotation device) for each person on board or being towed. Each PFD must be in good condition and readily available, and the proper size for the intended wearer. In addition, boats 16 feet in length or longer must carry a type IV throwable device.

b. **Lights:** All vessels, including canoes, must carry and show lights when underway between sunset and sunrise. Motorboats must have red and green running lights forward and a white light visible from all directions aft. Manually propelled boats must carry a lantern which shall be displayed in sufficient time to prevent collision.

7. Water Skiing

A water skier must wear an approved personal flotation device. There must be an observer in the boat (in addition to the operator) who is at least 12 years old.

8. Personal watercraft

Use of "jet skis," personal watercraft or any other Class A vessel which uses an inboard engine powering a water jet pump as its primary source of motive power is prohibited.

6 9. Right of Way and Boat Handling

Approaching other boats: When two boats are approaching head-on, each shall bear to the right leaving the other boat on the left side. At an angle, the boat on the right has right-of-way. Powerboats should yield the right-of-way to all canoes, rowboats, sailboats and windsurfers.

10. Managing boat wake

The wake from your boat must not endanger anyone else. Canoes and small boats are especially vulnerable to high-wake turbulence, and you are responsible for any act of yours which endangers or jeopardizes the safety, life or property of another person.

11. Overloading

Do not exceed the recommended number of people your boat is built to carry safely, as shown on the plate mounted on the transom.

12. Divers

Wholly submerged divers and snorkelers must display a divers-down flag, which has a white diagonal stripe on a red background. No vessel, except a canoe or rowboat, may operate within 200 feet of a divers-down flag.

13. Fisherman

Be considerate of people fishing. Steer well clear of their lines, whether they are trolling or still fishing. Fisherman over 14 must have a Vermont fishing license.

14. Navigational Hazards

There are two submerged "islands" in the middle of Caspian Lake and many hidden rocks and shoals close to shores. Know their locations and avoid boat damage and personal injury by steering clear of these

15. Swimming area entry prohibited

All vessels, including windsurfers and canoes are prohibited from entering the designated swimming area at the public beach. The area is clearly marked by floating buoys.

16. Maintain your powerboat in accordance with the following

- a. Clean boats and tune motors each year before using.
- b. Eliminate spillage while re-fueling.
- c. Ensure that fuel tanks, hoses and all fuel connections are not leaking.
- d. Replace old and rusting fuel tanks (and store others out of the sun and water to extend lifetime).
- e. Use petroleum-absorbing pads when performing engine repairs and maintenance, to avoid accidental fuel and oil spills, and dispose of them properly.
- f. Don't fog the motor in the lake at the end of the season.
- g. Use a biodegradable hull cleaner that does not contain phosphoric acid.
- h. Install a bilge sock around your bilge pump that will absorb oil and fuel and prevent them from being displaced into the lake.

17. Consider the following when you replace your motor

- a. Replace your older outboard motor with a new, cleaner burning, four-stroke or direct-injected or electronic fuel-injected two-stroke motor to reduce emissions into the air and water. While new motor technologies are more expensive to purchase, they are cheaper to operate and maintain, and pollute less (old two-stroke motors release up to 25% of their fuel, unburned, into the lake).

b. Downsize your outboard motor when replaced; both the lakes and the recreational enjoyment of others would benefit.

c. Consider installing an auxiliary motor on your powerboat. This will avoid the release of emissions into sensitive areas of the lake, be less disturbing to wildlife, and reduce propeller repair/replacement. Or, consider purchasing an electric boat.

18. Try lower impact boating in place of internal combustion motor boating

electric motors, canoes, kayaks, sailboats, windsurfers, etc.

19. Operate powerboats in accordance with the following

limit idle and/or full-throttle operation as much as possible to reduce hydrocarbon emissions and minimize wear and tear on the motor.

20. Wash boats, trailers, and other equipment thoroughly before use in Caspian

Visiting other water bodies, either fresh or salt, provides a mechanism to transfer exotic aquatics (see page 9 for more details). The recommended procedure is washing with very hot water, well away from the lake, flushing the motor, and letting it dry for two days before launching.

Wildlife

21. Loons, ducks and other birds are especially sensitive to boat traffic

It is a punishable offense to kill or harass any water bird through the operation of a boat on any Vermont lake.

a. Steer a wide course (approximately 500 feet) away from loons – singles, pairs, nesting or brooding (with young). A canoe,

kayak, or sailboat can be just as disruptive as a powerboat if too close. (Loons are known to abandon their nests and/or young due to human disruption.)

22. Switch to lead-free tackle when fishing

Since 1989, 50% of analyzed loon deaths in Vermont were directly related to ingestion of lead sinkers.

23. Do not feed ducks

Encouraging the duck population could result in increased risk of swimmers' itch that comes from duck feces.

Respect for Others

24. Be conscious of noise levels

Loud music, voices, motors and other sounds carry over water. Sound travels much farther over water than over land, especially in calm weather and at night. Many people come to Caspian Lake to enjoy its quiet beauty and peaceful swimming and fishing, which are particularly outstanding during the early morning and evening hours. It is suggested that all users of the lake respect this tranquility by limiting noise and boat speeds before 8:00 in the morning and one half hour before sunset.

25. Keep trees and shrubs around buildings to screen visibility from the lake.

26. Use only necessary exterior lighting

Indirect lighting, motion sensors, and switching off unused lighting reduces background illumination, allowing better viewing of the night sky. Avoid using reflective materials or surfaces.

10 WATER QUALITY

Invasive Species

27. Please keep an eye out for the following invasive species and report any suspected infestations to Andy Dales at 533-7733 or email: G.Dales@att.net or call VT Water Quality Division at (802)241-3777.

a. Eurasian Water milfoil: This prolific aquatic plant found in Lake Champlain and many inland lakes in Vermont interferes with boating, fishing and swimming, and displaces native plants. It is easily spread when plant fragments are caught and moved on boat trailers, propellers, anchors and other equipment, or in live wells.



b. Zebra Mussel: These are tiny D shaped mollusks that are well established in Lake Champlain. They clog water intake pipes, damage boat engines, obscure historic shipwrecks, and alter native species populations. Adult zebra mussels can attach and be moved on boat hulls, engines and other equipment. Microscopic larva can get trapped and moved in water of boat engines, bilges, bait buckets, and live wells.



c. Water Chestnuts: This prolific annual plant is found in southern Lake Champlain, Lake Bomoseen, and a few inland lakes. It interferes with boating, hunting and fishing, and displaces native plants. It is spread by seeds or rosettes caught on boats and equipment.



d. Alewife: This small bait fish was recently found in Lake St. Catherine. It may displace our native forage fish and can be introduced to new water bodies if it is accidentally caught and used for bait, or dumped from bait buckets or live wells.



Vegetation

28. Buffers

are the single most important water protection measure and the best thing to prevent erosion. The following will help maintain a buffer strip between your property and the lake:

- a. Do not alter (moving soil, rocks, or trees) from the shoreline.
- b. Cut as few trees as possible to protect root systems.
- c. Choose native and appropriate non-native plantings near the lake as opposed to grass/lawns that require fertilizers, pesticides and excess watering. This will reduce ground and surface-water pollution, reduce erosion, and encourage local wildlife.
- d. Minimize access points to the lake along your shoreline so the rest can revert to the native vegetation scheme.
- e. Where erosion has already occurred, consider methods that will allow you to mimic a natural shore, rather than build retaining walls, which are expensive, offer no lake habitat or ecological benefits, are a barrier to wildlife, and will require replacement over time.
- f. Visit: http://www.vtwaterquality.org/lakes/htm/lp_protection.htm for specific steps to follow in creating a buffer, sample plans and other tips.

29. Refrain from introducing sand to the lake to create swimming areas.

Filling introduces unwanted nutrients, reduces water clarity, increases weed and algae growth and damages fish spawning sites.

30. Reduce the amount of nutrients added to the lake

- a. Avoid the use of pesticides, lawn and garden fertilizers, and other household phosphorous-containing products. Their residues are environmentally persistent, enter ground water and the lakes and cause lake eutrophication (e.g. algae bloom).

See: www.lawntolake.org for tips on how to care for your lawn without

using phosphorus fertilizer, and

http://www.lcbp.org/Factsht/P-free_detergents.pdf

for a list of phosphorus-free dishwashing detergents.

- b. Place drainage swales and vegetation near structures, driveways, and paths and direct storm water away from lake and septic fields.
- c. Keep piles of leaves and brush away from the shoreline or any drainage.
- d. Do not burn leaves or brush close to the shoreline or any drainage.

Household Tips

31. Avoid high phosphate and chemical detergents and cleaners

Everything that goes down the drain will likely affect ground water and end up in the lake and/or your well. Consider the following:

- a. Use only eco-friendly cleansers and laundry/dishwater detergents and do not use products with dyes, water-softeners or synthetic perfumes. Companies that provide high-quality natural cleaning products include: Seventh Generation, Ecos, Earth Rite, Ecover, Life Tree and a local company - Northeast Queendom Herbal Collective.
- b. Use baking soda followed by vinegar as an alternative drain cleaner. Baking soda is an effective scouring powder for kitchens and bathrooms. Baking soda also makes a great carpet deodorizer as well as a laundry detergent. Apple cider vinegar works well on windows and for cleaning kitchens and bathrooms. Vinegar removes stains such as grease while acting as a deodorizer. Silver can be polished by soaking it in warm water with a little baking soda, salt and a piece of aluminum foil. Other metals can be polished with a paste made from vinegar, salt and a little flour. Use non-chlorine bleach alternatives such as hydrogen peroxide.
- c. Use alternative bathroom cleaning products such as soap and water, baking soda, borax and other non-chlorine scouring powders. Toilet bowl deodorizing cakes contain dyes and bleaches as well.

32. Reduce insecticide use

for example, put up a bat house. A single brown bat devours up to 1200 mosquito-sized insects in an hour.

33. Don't defecate or urinate (animals and humans) in or within 150 feet of the lake

Keep animal manure far from the shoreline or streams to prevent phosphorous and other nutrients from becoming washed into the lake by rain. Cleaning up after pets in areas close to the shoreline is best.

34. Littering

It is prohibited to throw refuse of any kind in or near the lake. Take all your trash away with you.

35. Cover or store garbage

and trash in an enclosed area to avoid attracting seagulls, raccoons, and other scavengers that pose a threat to loons.

14 Docks, Construction and Renovation

36. Construct docks and floats with environmentally friendly material such as cedar, redwood, cypress, recycled wood/plastic, or aluminum.

a. Avoid using pressure treated wood. Studies have proven that these chemicals are harmful to living organisms.

b. Dispose of pressure-treated wood by taking it to your local landfill or transfer station. Treated wood should not be illegally dumped or burned because toxic chemicals can be emitted into ground and surface water or to the atmosphere.

37. Set new houses back a minimum of 150 feet from the shoreline

as required under local regulation.

38. Prevent pollution through wise exterior chemical/paint use

a. Use drop cloths under exterior work areas.

b. Clean paint brushes and tools using non-toxic citrus-based solvents in areas well away from the shoreline.

c. Buy chemicals/paints in quantities needed only for the task so there is no need to store or dispose of excess.

d. Never paint anything over or near the water.

e. Use non-toxic paints and stains; for example, consider using Hardwick-produced Vermont Natural Coatings wood furniture and wood floor finish found at Willey's.

39. Construct driveways and paths of pervious materials such as crushed stone

40. Use measures to control erosion

- a. Use sediment control measures such as hay bales and filter fences during construction.
- b. Phase vegetation removal and replace/restore vegetation to reduce erosion.

41. Use cedar shingles that do not require painting or staining

42. Design walking paths so that they fit with the sites topography

16 Septic Systems

Everyday Household Tips

43. Use the following to help your septic system operate properly:

- a. Use white toilet paper (colored paper takes far longer to decompose).
- b. Collect cooking grease in an old can and dispose of it in the trash, not down the drain.
- c. Remove your garbage disposal because fats and greases from food interfere with the normal bacterial activity.
- d. Keep the leaching field clear of parked cars, heavy stored objects and buildings. Excess weight will compact the soil in the field reducing permeability and/or break pipes causing failure.
- e. Keep deep-rooted trees and shrubs from growing on or near your leaching area or near any part of the septic system. Root systems can disrupt underground pipes or crack your tank, causing the system to fail. Ground covers, flowers or low-maintenance grasses are fine.
- f. Enzymes or commercial additives should not be added to your system. The bacteria already present in your system should provide all the digestion required.

44. Reduce your water use and put less pressure on your well and septic system

The more water that flows through your system, the greater the possibility of nutrients leaching out unfiltered by the system.

- a. Avoid running the water when it is not needed (e.g. turn off the tap while brushing teeth or shaving, use a dishpan to wash dishes).
- b. Replace regular showerheads, sink faucets, and toilets with low-flow fixtures (if toilets cannot be replaced, fill ½ gallon jugs with water and put them in the toilet tanks).
- c. Purchase water and energy efficient appliances when replacing old ones (e.g. front load washers).

- d. Repair leaking fixtures promptly.
- e. Run dishwashers and clothes washers only when they are full, and stagger laundry loads over a period of days rather than doing them all at once.
- f. Presoak soiled clothes so they need washing only once.

45. Avoid introduction of toxic and/or hazardous chemicals

(such as solvents, pesticides, drain openers, polishes, waxes, used oil, paint, paint thinner, chlorine bleach, etc.) to your septic system. These compounds impact ground and surface water and kill the naturally occurring bacteria that make septic systems function properly.

- a. Do not dispose of toxic materials down the drain.
- b. Buy non-toxic alternatives or less toxic products.
- c. Buy quantities appropriate for the task.

46. Dispose of any residual materials at household hazardous waste sites

- a. Call the Central Vermont Solid Waste District at (800)730-9475 for locations and dates of household hazardous waste disposal.

Septic System Operation

47. Maintain your septic system by doing the following

- a. Have your septic systems inspected by a qualified specialist, if your home was built more than 15-20 years ago, to be sure that the septic tank and leaching field are operating properly and designed to handle the load it is currently receiving.
- b. Pump your septic tank every one to three years. The proper frequency depends upon tank size, frequency of use, number of people, etc. - check with your local septic company. If sludge/solids are not removed as necessary, they clog the leaching field, causing

the system to fail. Consider adding an effluent filter to stop larger solids from getting out to the drain field (the filter would need to be cleaned when your septic tank is pumped).

c. Inspect your septic system every year to ensure that all aspects of the system are operating properly.

d. If your septic system has a pump, ensure that the pump is functioning properly.

e. Look for signs of malfunction: odors, slow or backed-up drains, standing water on the leach field.

48. Test your drinking water for e.coli/coli form and nitrogen levels

The presence of e.coli/coli form bacteria is a sign of human fecal contamination. Elevated nitrogen levels may mean that your septic system is leaking. Both can pose serious health hazards to humans as well as to the lake. Call H.A. Manosh at (802)888-4681 for more information on water testing.

General

49. **Join the Greensboro Land Trust;** Visit www.greensborolandtrust.org or contact the GLT chair Clive Gray at (802)533-7723 or email: information@greensborolandtrust.org for more information.

50. **Join the Greensboro Area Association;** visit www.greensboroassociation.org or send a check for \$20 dues and your information to:

Greensboro Association, P.O. Box 59, Greensboro, VT 05841

Thank you to the Greensboro Association, Squam Lakes Association and the Vermont Department of Environmental Conservation for the content in this booklet. If you have questions, corrections or suggestions, please contact Annie Paumgarten at annieclay@hotmail.com or (802)760-8460.

If you would like to make a donation towards the printing costs of this booklet or future editions, please send a check to: Greensboro Association, P.O. Box 59, Greensboro, VT 05841 and note that you would like the money to go to distributing '50 Ways to Preserve, Protect and Enhance Caspian Lake'.

