

Lake Water Quality – Is My Lake Clean?



Is my lake clean?

Which is the cleanest lake in Polk County? This is a common question asked of LE/AD and lake managers around the county. The answer is not simple. Lake managers typically look at the health of a lake by measuring many factors, including chemical and biological indicators. Lake quality also depends on the lake usage. If you are a fisherman, you probably prefer a nutrient rich lake with plenty of aquatic vegetation. But if you are a water-skier or jet-skier, you probably prefer a nutrient-poor lake with limited vegetation.

When we talk about lake water quality, we usually talk about sources such as fertilizers, pesticides and pet waste that enter a lake and affect its quality. In most cases, newly formed lakes are nutrient-poor and have clear water. Over time, nutrients, sediments and pollutants from the surrounding areas make their way to the lake. Plant and animal growth become abundant in the lake and the lake ultimately becomes filled with sediment and muck. This is how lakes age (eutrophication).

Nutrients

One of the biggest challenges for lake managers is over-enrichment of our lakes with nutrients like phosphorus and nitrogen. Plants use these nutrients to grow and reproduce. Phosphorus and nitrogen enter the lake through stormwater runoff. The runoff picks up excess fertilizer from lawns and materials in the roadway and then carries them into the storm drains. These storm drains flow into area lakes. Nutrients entering the lake feed the algae (small free-floating plants) and other floating, submerged and shoreline plants, increasing plant production. Plant production can cause a lake to become shallower by increasing algae and plant growth. When the plants die, it sinks to the bottom, forming a muck layer.

You keep talking about plants, but what do they have to do with water quality?

Aquatic plants are beneficial to lakes because they use and store nutrients, removing them from the water, which helps to improve water quality. Plants along the shoreline help to prevent erosion and aquatic plants provide cover for fish and substrate for aquatic invertebrates. Aquatic plants also provide habitat, supply food for fish and animals and produce oxygen.

If you would like to learn more about water quality in your lake, visit the Polk County Lake Atlas at
<http://www.polk.wateratlas.usf.edu/>

For information about Florida native plants, check out the local chapter of the Florida Native Plant Society at
<http://www.fnps.org/pages/chapters/chapterpg.php?keyword=Heartland>. For more information on Florida-friendly landscaping, check out <http://floridayards.org/>

For more information about aquatic plants, check out the website for Center for Aquatic and Invasive Plants at the University of Florida's Institute of Food and Agricultural Sciences
<http://aquat1.ifas.ufl.edu/>

What Can I Do to Protect Our Lakes?



The actions of lakefront property owners are crucial to the health of our lakes. Below is a list of how you can protect your lake and its ecology and health for your future enjoyment.

Please

How?

Why?

Use Florida-Friendly Landscaping Practices	<ul style="list-style-type: none"> Enhance natural wetland vegetation with additional plantings near the shore. Reduce lawn size next to the lake and create mulched areas. Designate a “maintenance-free zone” of at least 10 feet between your lawn or landscape and the water body. Create a vegetative bank with appropriate shoreline plants instead of a retaining wall. 	<ul style="list-style-type: none"> Turf is not as effective at erosion control near water bodies. Runoff containing fertilizer and pesticides adds pollutants to the lake. Natural vegetation stabilizes the bank, looks attractive and enhances habitat. Visit www.FloridaYards.org for information on landscaping that protects the environment.
Lose the Beach!	Don't add sand or other fill to the lake.	Adding sand suffocates the natural bottom habitat and can introduce silt to the water. (A permit is required if adding fill to a lake.)
Watch the Ducks	Don't feed the wildlife (just observe them!).	Wildlife increases bacteria and nutrients in the lake. Create a natural vegetative buffer and they will visit on it.
Don't Invite Invasives	Make sure you are not transporting organisms and vegetation from one lake to another. Carefully wash and inspect your boat prior to leaving the lake. Hydrilla can survive out of the water for a while.	Exotic plant and animal infestations create serious problems in Florida lakes such as hindering navigation and choking out native useful plants.
Build Responsibly	Any work in the lake such as dock or seawall construction will require a permit (see Important Numbers to Know).	Artificial structures alter the natural functions of a shoreline by removing vegetation and altering the natural lake bottom. Also improperly performed work can cause excess turbidity in the water!
Use Proper Car Washing Techniques	Wash cars on the lawn instead of on the driveway.	Washing the car on the driveway adds excess nutrients to the stormdrain system. Washing on the lawn adds water and nutrients to the grass, helping it grow.



Stormwater Runoff — It Doesn't Just Go Away!

What is stormwater runoff?

Impervious surfaces, or areas covered by asphalt or concrete, prevent water from seeping into the ground. When it rains, untreated stormwater runoff flows into streams or lakes. As new developments and shopping centers are constructed, more stormwater runoff is generated because the water cannot seep into the ground. As it rains, water picks up pollutants such as oil, trash, lawn debris, fertilizers and pesticides. These pollutants make their way to our lakes through the storm drains.

Should we really be concerned about stormwater runoff? How bad can it be?

Stormwater runoff is the number one source of pollution in our lakes. It's like dumping pollution directly into our lakes! This runoff can harm aquatic life and possibly contaminate groundwater drinking sources.

How can stormwater pollution be prevented?

Use common sense! Native and other Florida-friendly plants, require less fertilizer and water, therefore reducing the amount of pollutants in your stormwater runoff. Dispose of your yard waste properly by bagging or mulching instead of blowing it into the streets. Wash your car on your lawn. This allows the runoff to filter into the ground, not run into the street. Dispose of hazardous liquids properly. Don't be lazy and throw that battery down the storm drain. Don't dump or wash your paint cans in the storm drain. Educate your family and neighbors! Put litter in appropriate places.





References

State and local regulations change from year to year. Make sure that you are familiar with current requirements. For more information on waterfront property care, please visit the following references:

Waterfront Property Owners Guide created in 2001 by the Florida Department of Environmental Protection. This is a 40-page guide to help waterfront property owners become educated and broaden their awareness on the causes, effects and prevention of water pollution. This guide is available online at www.myfwc.com, or you can request a copy by calling 1-850-488-3605.

Living at the Lake, a Handbook for Florida Lakefront Property Owners by Marilyn Bachmann, Mark Hoyer and Daniel E. Canfield, Jr. in conjunction with the University of Florida, Institute of Food and Agricultural Sciences (IFAS) and the Florida Cooperative Extension Service. To order a copy of this book, call 1-800-226-1764 and ask for publication SP247.

The Florida Boater's Guide, a Handbook of Boating Laws and Responsibilities by Florida Fish and Wildlife Conservation Commission and the Florida Marine Patrol. This guide is available through your local tag agency.

Important Numbers to Know



Local Government and Area Agencies

Water Pollution & Litter

Polk County	Keep Polk County Beautiful	(863) 533-8423
	Polk County Natural Resources Division	(863) 534-7377
Lakeland	Lakeland Clean & Beautiful	(863) 834-3306
	Lakes & Stormwater Division-Aquatic Plant Control and New Docks	(863) 834-6040
Winter Haven	Keep Winter Haven Clean & Beautiful	(863) 291-5662
	Natural Resources Division	(863) 291-5881
	Lake Region Lakes Management District	(863) 293-1441
Extreme Litter (including appliances on rights of way)		(877) 891-6430

Florida Fish and Wildlife Conservation Commission

General Information (Lakeland SW Regional Office)	(863) 648-3206
Fish Kills	(800) 636-0511
Bird Deaths (unusual number dead)	(863) 648-3205
Development Activity Near Endangered/Threatened Species	(888) 404-3922
Illegal Hunting or Poaching	(888) 404-3922
Nuisance Alligator	(888) 404-3922
Injured or Dead Endangered/Threatened Species	(888) 404-3922

Florida Department of Environmental Protection (FDEP)

Lakefront Clearing	(863) 534-7074
New Fencing on Sovereignty Lands	(813) 744-6100
New Docks (also see local governments)	(813) 744-6100
Dredging and Filling activities relating to single-family residences (not part of new development) such as new docks, seawalls, boat ramps, fences, sand beaches; dredging or filling for the residence itself, including septic systems, pools, garages, fences	(877) 272-8335 or www.savefl.org

Southwest Florida Water Management District (SWFWMD)

General Information (Bartow Office)	(863) 534-1448
Well Construction Violation	(800) 423-1476
Watering Restrictions	(800) 423-1476
Irrigation Violations	Call local police or sheriff's office or (800) 423-1476
Dredge and fill for large developments	(800) 423-1476

Health Department

Questionable septic tank placement or illegal septic dumping	(863) 519-8330
Suspicious bird death for West Nile Virus (crows, jays, doves, birds of prey)	(800) 871-9703

Hazardous Materials

Dial 911 and ask for Fire Services

Injured Bird and Mammal Hotline(s)

Woodland Wonders	(863) 967-3298
Emergency Veterinarian	(863) 676-1451
Suspected Rabies – Animal Control	(863) 499-2600



Recreational Laws & Regulations – FISHING

With Florida's warm climate, we have some of the greatest warm water fishing in the world! With more than 7,000 lakes around the state, and 544 of them in Polk County, fishing in Florida has a lot to offer. As a lakefront property owner, you are on the front lines! But before you go out, make sure you have your fishing license, if necessary, and know the fishing regulations in your area.

Do I need a fishing license? Yes, if you are between the ages of 16 and 65. You can purchase a license from your county tax collector or a store that sells tackle and sporting goods. You must have your license with you when fishing. If you are 65 or over, or disabled, you must carry either a Senior Citizens Certificate or Permanent Hunting and Fishing Certificate (these are free from the county tax collector).

Note: There are some exceptions to the license requirement. If you are totally and permanently disabled, you do not need a license. You are exempt from needing a license in your county if you fish with a cane pole or line only (no reel), use live or natural bait, or do not fish for commercial purposes. You do need a license to fish in any lake designated as a Fish Management Area, regardless of your fishing method.

For more information about fishing licenses, go to <http://myfwc.com/fishingareas.html> or call 1-888-FISH FLORIDA.



Recreational Laws & Regulations – BOATING

If you enjoy boating, whether it's canoeing, motor boating or jet skiing, you need to know about requirements from local, state and federal agencies, such as boat registration and safety.

Below are some of the current rules and regulations for recreational boats and boating:

1. Motor-powered boats should be registered and/or numbered to operate in Florida waters. Exceptions might include those operating a boat on "private lakes" and those that have a current number from another state or county and are here fewer than 90 days. Most boats must be titled in Florida.
2. All boats must have at least one U.S. Coast Guard-approved personal flotation device (PFD) per passenger on board. Boats 16 feet or longer must have one for every passenger, plus one throwable flotation device.
3. Florida law requires every child under 6 to wear a PFD aboard any vessel under 26 feet while "underway."
4. Florida law requires at least one portable fire extinguisher on board, along with one bell whistle and visual distress signals (flare, flashlight, etc.).
5. Operating a motorboat while intoxicated is both a federal and state offense and may be subject to fine or imprisonment and points against your driver's license!
6. Channel 16 VHF-FM is a calling and distress channel that you can use if you need help.
7. Anyone under the age of 21 must complete a boating safety course in order to operate a watercraft with an engine greater than 10 horsepower.

For more information on boating safety and regulations, the State of Florida, through the Florida Fish and Wildlife Conservation Commission and the Florida Marine Patrol, published a "Boater's Guide," available through your local tag agency. Free boating courses are available through the Florida Fish and Wildlife Conservation Commission or call 1-800-366-BOAT for information on free boating courses given by the U.S. Coast Guard Auxiliary and other agencies.

Visit <http://myfwc.com/boating> for more information on boating laws and regulations.

LAKESHORE RESIDENT'S GUIDE

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Southwest Florida
Water Management District

WATERMATTERS.ORG • 1-800-423-1476



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Working together to protect the natural environment from Venice to Estero Bay to Winter Haven

www.chnep.org

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Southwest Florida Water Management District: www.WaterMatters.org

Charlotte Harbor National Estuary Program: www.chnep.org

City of Lakeland Lakes & Stormwater Division: www.lakelandgov.net

City of Winter Haven Natural Resources Division: www.mywinterhaven.com

FDEP, Bureau of Invasive Plant Management:

http://www.dep.state.fl.us/mainpage/programs/invasive_plants.htm or
<http://www.dep.state.fl.us/lands/invaspec/2ndlevpgs/Aquaticplnts.htm>

Florida Fish and Wildlife Conservation Commission: www.myfwc.com

Lakeshore Resident's Guide Introduction



Welcome to the lake – where your adventure begins!

As a lakeshore resident, you will experience changing environmental conditions, wildlife, recreational lake users (on most lakes) and governmental agencies, and sooner or later you will probably want to make some alterations to your property or the lakeshore. This packet has been created as a useful tool with information about area lakes and defines your responsibilities as a lakefront owner.

This packet includes information about lake water quality, stormwater runoff, aquatic vegetation (control and maintenance), wildlife, boating safety, permitting requirements for lakeshore property owners and a resource list for further information. As a lakeshore resident, you have privileges that other folks don't, but you also have a responsibility to educate yourself about the environment you've chosen to live near. Your actions have a direct impact on the water quality of your lake; so whether you've lived at your lake for a while or are a newcomer, we feel that some pertinent environmental information and resources would be of value to you.



What Do I Need a Permit For?



Local governments as well as federal agencies regulate activities on your lakefront property that could impact water quality. Before you buy, before you build and before you make changes to your shoreline or dock, find out what regulations the city, county or state might have and what permits you might need.

The activities listed below may require one or more permits from one or more agencies.

1. **New Dock Construction** requires permitting from FDEP for sinking your posts, the SWFWMD as well for waterflow and boat traffic safety and your local government agency.
Call your local government agency: Lakeland (863) 834-6040 or Winter Haven: (863) 291-5695 as well as FDEP: (813) 744-6100 and SWFWMD: (863) 534-1448
 2. **Aquatic Plant Management** requires permitting from FDEP and often your local government agency.
FDEP: (863) 534-7074 as well as Lakeland: (863) 834-6040 or Winter Haven: (863) 291-5881
 3. ***Adding Fill to the Shoreline** requires permitting from FDEP as well as your water management district and possibly your local government agency.
Call your local government agency: FDEP (813) 744-6100, SWFWMD (863) 534-1448 and Lakeland: (863) 834-6040 or Winter Haven: (863) 291-5881
 4. ***Sea Wall Construction** requires permitting from FDEP as well as your water management district and your local government agencies.
Call your local government agency: FDEP (813) 744-6100, SWFWMD (863) 534-1448 and Lakeland: (863) 834-6040 or Winter Haven: (863) 291-5881
 5. **Adding Erosion Control Material to the Shoreline** requires permitting from FDEP as well as your local governmental agency and your water management district.
Call your local government agency: FDEP (813) 744-6100, SWFWMD (863) 534-1448 and Lakeland: (863) 834-6040 or Winter Haven: (863) 291-5881
- Shoreline re-vegetation** Call your local government agency or FDEP Aquatic Plant Division
Lakeland: (863) 834-6040 or Winter Haven: (863) 291-5881
and FDEP (863) 534-7074

*If you live in a subdivision or own a business or farm on a lake, your local water management district will require a permit for adding fill or constructing a seawall. Permit holder for a subdivision is your homeowners association. It is recommended that you work with your association, as the permit the association obtains will often answer questions.