

# LILLY LAKE NEWS

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### Water Temperatures in Lilly Lake—2017

#### Early April:

49 F, surface to bottom

#### Late July:

79.7 F, surface

73.7 F, at 21 feet

#### Late September:

68 F, surface to bottom

Measured in the middle of the lake. Warmer temperatures will be found in shallow areas.

#### Under the ice in winter:

~39 F



## LAKE TURNOVER

Lake turnover is the process of a lake's water turning over from top (epilimnion) to bottom (hypolimnion). During the summer, the epilimnion, or surface layer, is the warmest. It is heated by the sun. This process is called stratification. The deepest layer, the hypolimnion, is the coldest. The sun's radiation does not reach this cold, dark layer. See illustration. You can sometimes feel this colder layer if you are swimming in the deeper areas and you dive down below this layer.

During the fall, the warm surface water begins to cool. As water cools, it becomes more dense, causing it to sink. This dense water forces the water of the hypolimnion to rise, "turning over" the layers.

Lilly Lake behaves this way, except that in the summer the deep, cooler water layer is small. Because the lake is clear and not very deep, sunlight can warm most of the volume of the lake. In a less clear lake, the sun's rays will be absorbed by the particles floating in the water, and only the top layer of water is warm.

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### Lake Turnover

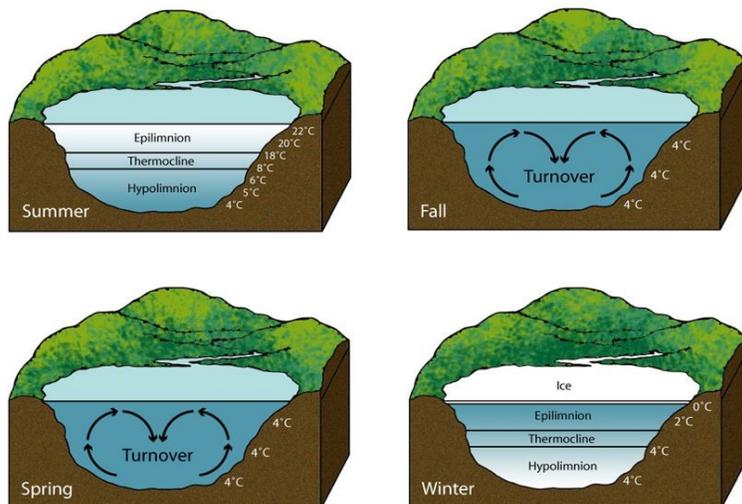


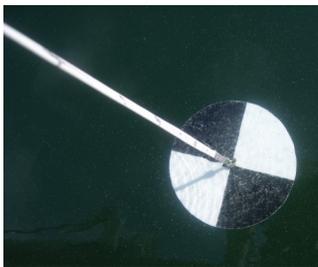
Image from <http://media.nationalgeographic.org/assets/photos>

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Strong winds and waves can also “mix” the lake, even during the summer. Typically, Lilly Lake’s water temperature remains very similar, top to bottom (see sidebar on page 1). The water temperature is important because it influences the dissolved oxygen (DO) concentrations in the water. Warmer water holds less DO than cooler water. Some shallow lakes can even experience fish kills in the summer if the water temperature is too high which causes the DO to fall to levels too low for some fish to survive. Prior to the historic dredging of the lake, Lilly Lake had similar issues. Some lakes will try to remedy this issue by installing an aerator to improve water circulation and moderate water temperatures. Aeration is not needed in Lilly Lake, as the DO issues seen in the past are not a problem due to the increased depth and removal of dead decaying matter (i.e., muck).

## Get to Know Your Lake Day - July 7th, 10-11am (rain date: July 14th) Public Boat Launch

Ever wonder how the lake’s water quality data are collected? Why are some aquatic plants (weeds) good for the lake and others bad? What do they look like?



Join Mike Adam as he demonstrates how he collects water clarity readings, water samples, and talks about the aquatic plants in the lake. We will start at the public boat launch at 10am and then head out for a tour of the lake (pending boat availability). Kayaks and canoes welcome!



May 12, 10am  
May 19, 10am  
May 26, 10am  
June 30, 11am  
July 7, 10 am  
July 7, Dusk  
August 4, 10am  
August 4, 6pm/Dusk  
August 11, 10am  
October 27-28

Lake District Rehab Meeting  
Summerhaven Assoc. Meeting  
Walk Around the Lake  
4th of July Kids Parade  
Get to Know Your Lake  
Movie on the Beach  
Summerhaven Assoc. Meeting  
Venetian Night/Movie on the Beach  
Lake District Rehab Meeting  
Fall Decorating Contest

Town Hall  
Town Hall  
Start at Beach  
Lily Lake Rd/77th St  
Public Boat Launch  
Public Beach  
Town Hall  
Public Boat Launch/Beach  
Town Hall  
Community-wide



### Planning for 2018-19

Do you have an idea for our community? Want to include something in the newsletter?

Please contact:  
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<https://www.facebook.com/LilyLakeSummerhaven/>