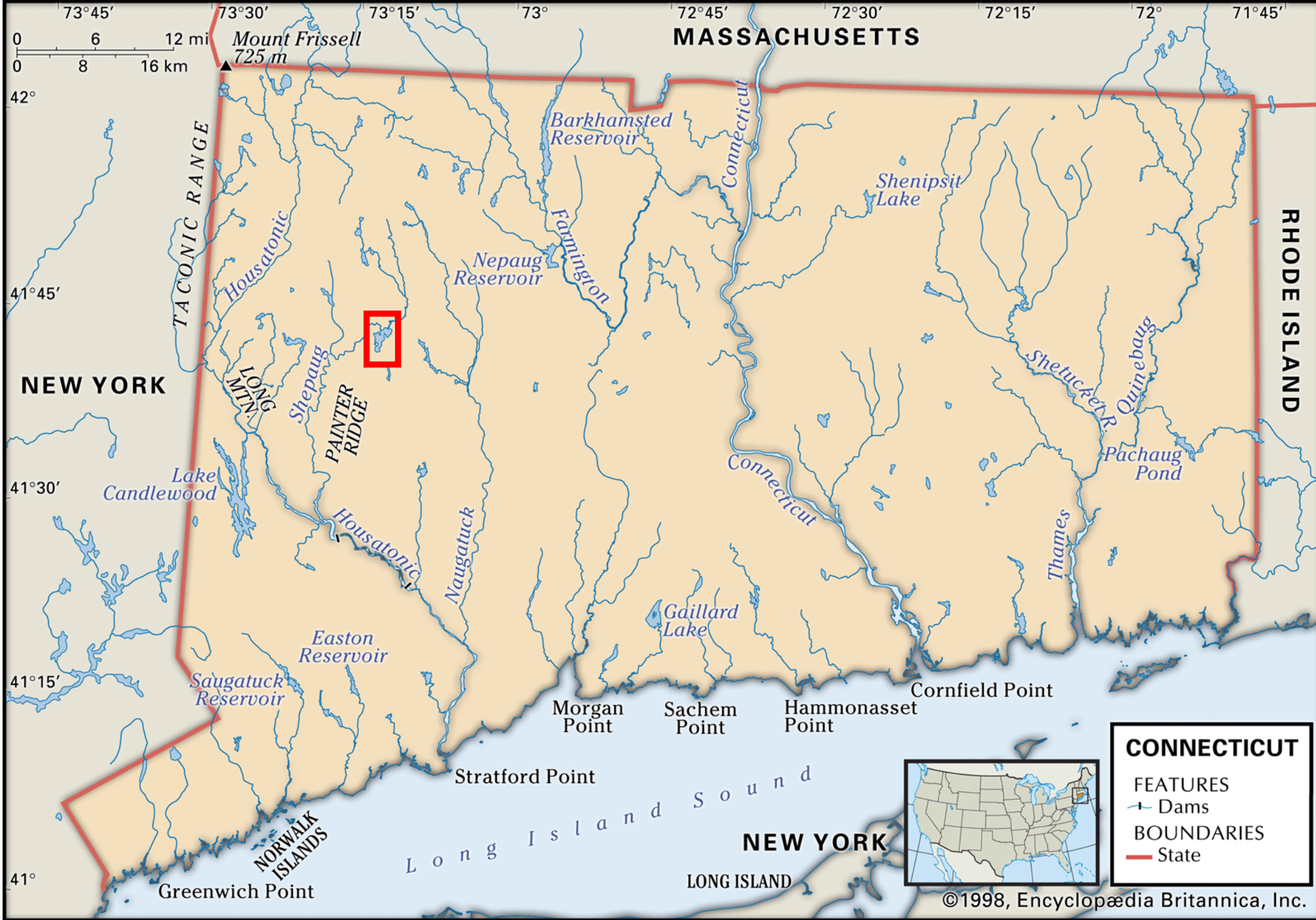


Bantam Lake

Conservation & Management of a
Premier Recreation Destination in
Northwest Connecticut





MASSACHUSETTS

RHODE ISLAND

NEW YORK

NEW YORK

CONNECTICUT

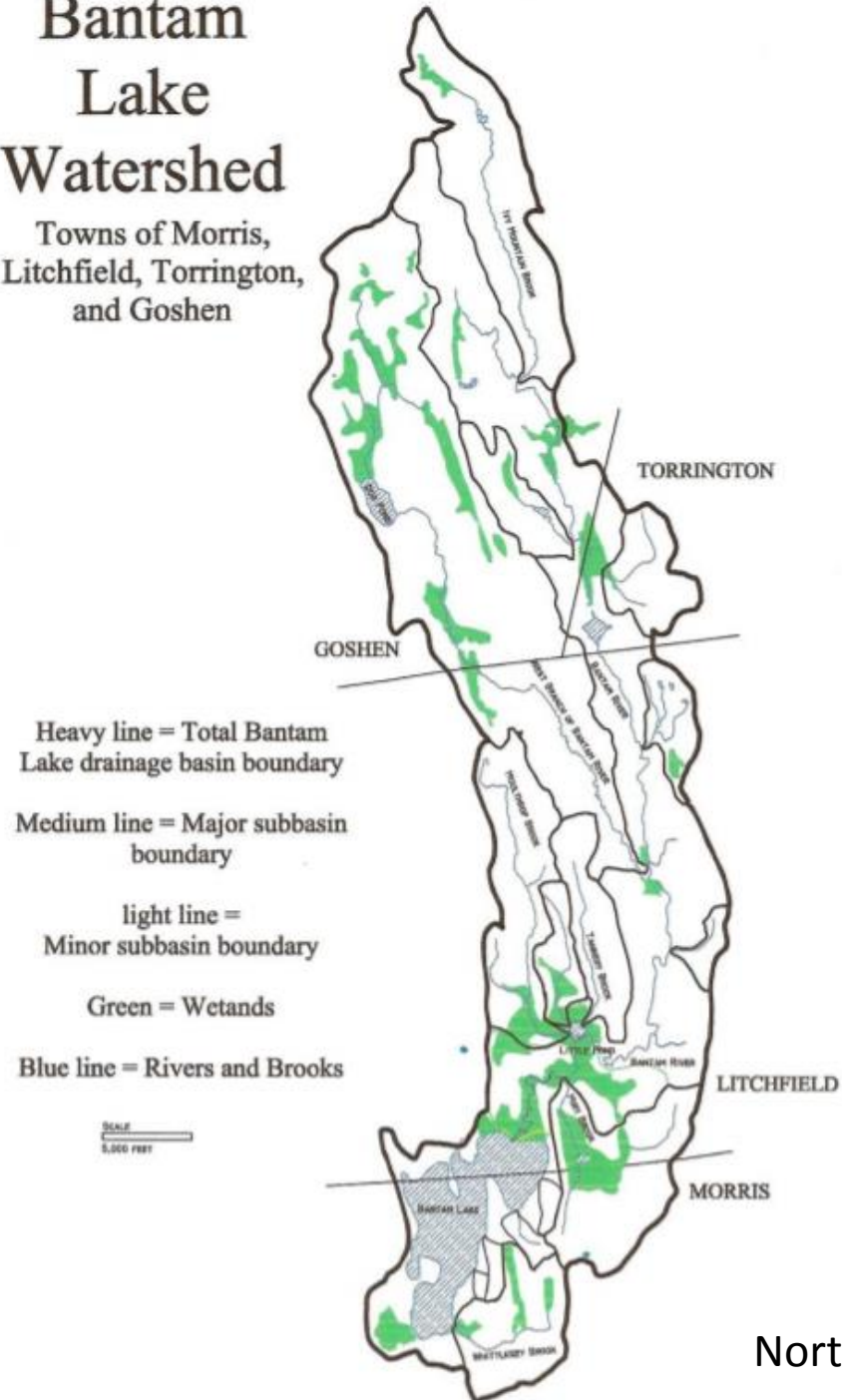
FEATURES
 + Dams

BOUNDARIES
 — State



Bantam Lake Watershed

Towns of Morris, Litchfield, Torrington, and Goshen

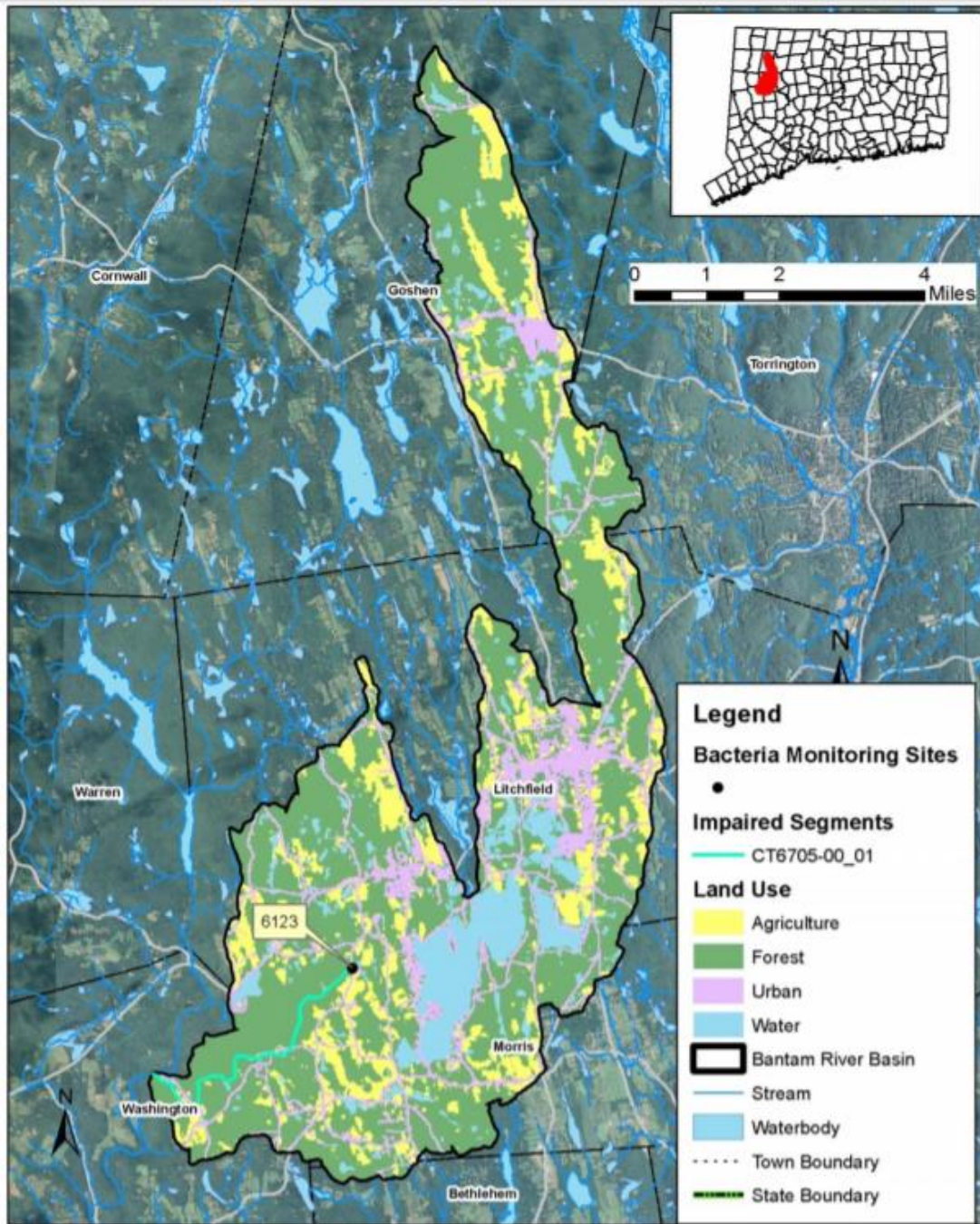


Watershed Area: 20,218 ac. (8182 ha.)

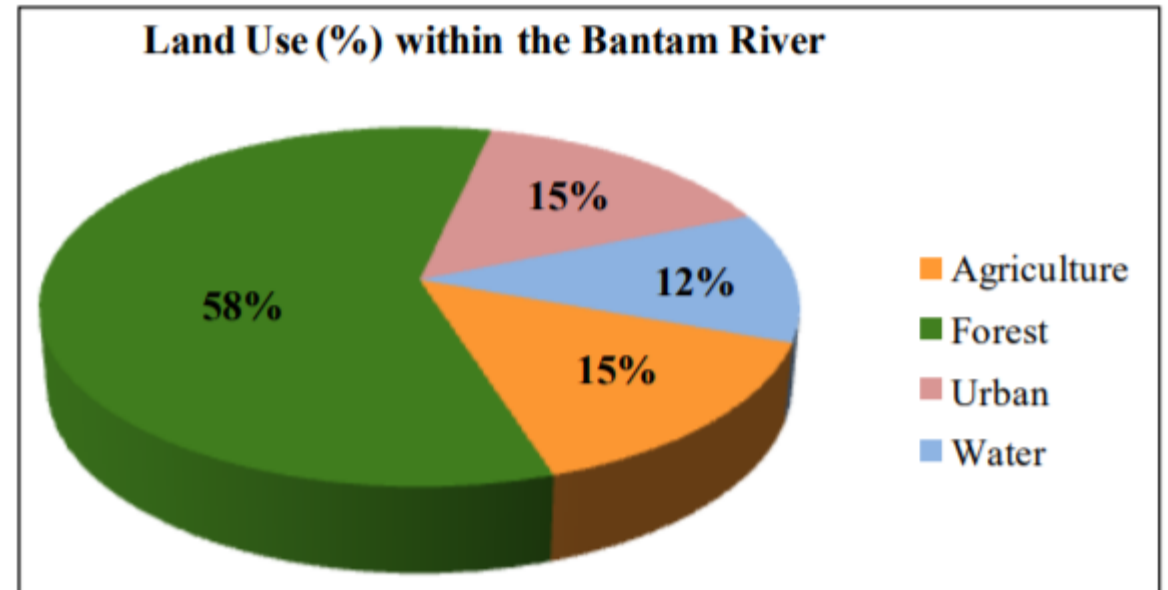
Goshen, Torrington, Litchfield, and Morris

3 smaller waterbodies: Dog Pond, Timber Lake, and Little Pond

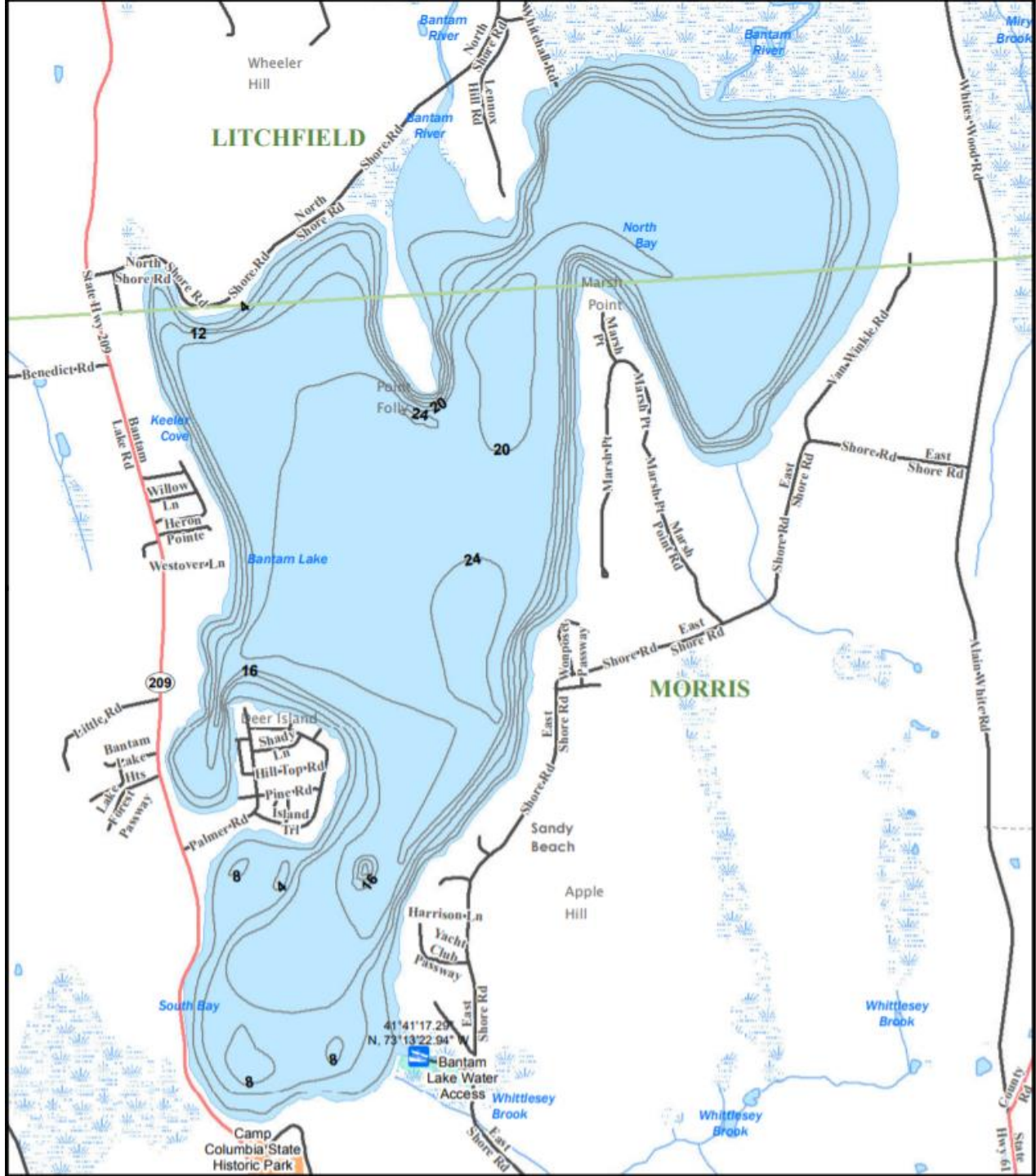
Extensive herbaceous, shrubby, and forested wetlands



Land Use In The Bantam River Sub-Regional Basin Map
 MAP Data: CT DEEP Map Created: October 2011



CT DEEP 2012



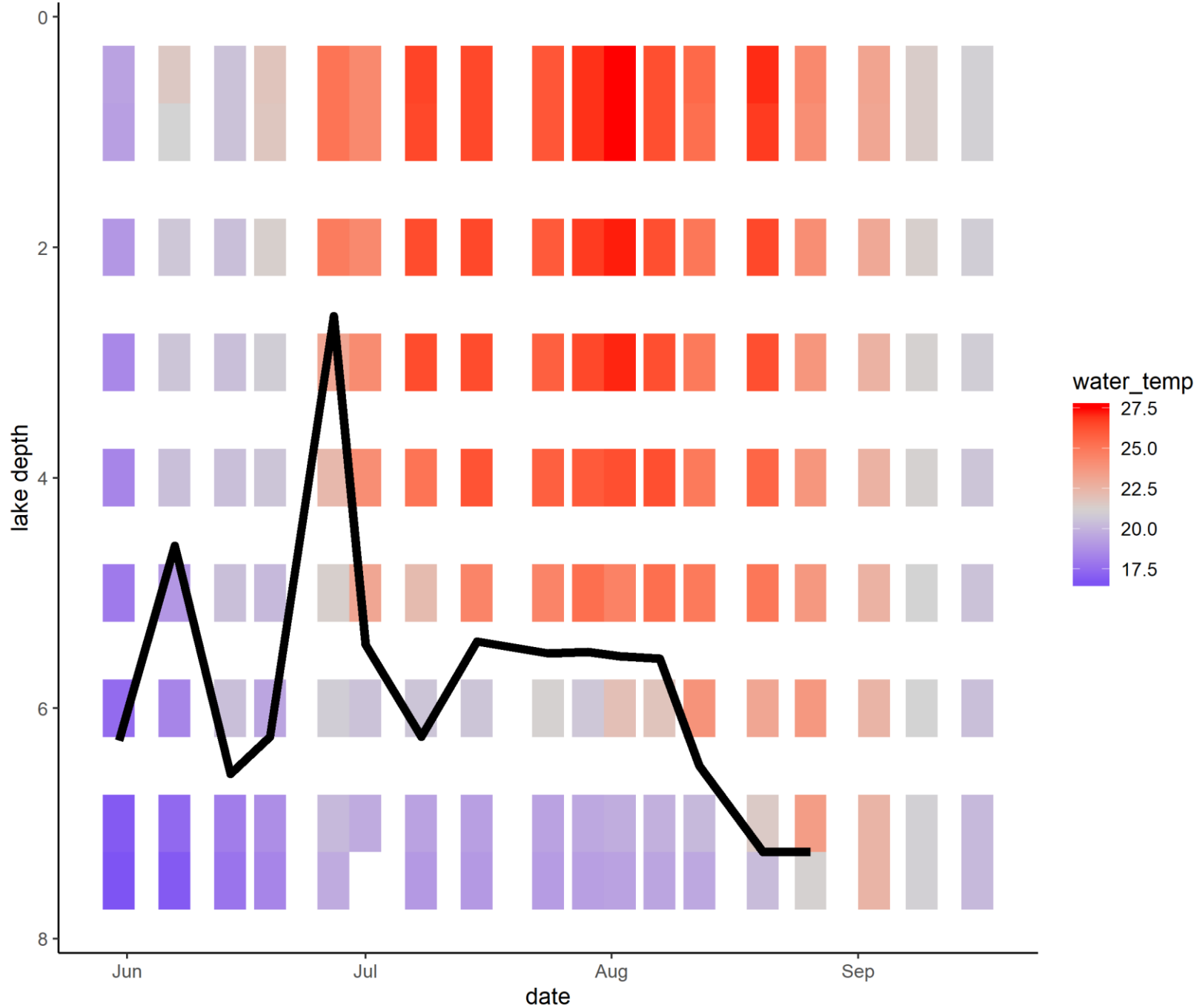
Maximum depth = 25 ft. (7.62 m)

Average Depth = 14.3 ft. (4.4 m)

Surface Area = 916 acres (371 ha)

Watershed Area : Surface Area
20 : 1

Center Lake water_temp concentration by water depth



Cyanobacteria Blooms (a.k.a. blue-green algae, HAB's)



Cyanotoxin

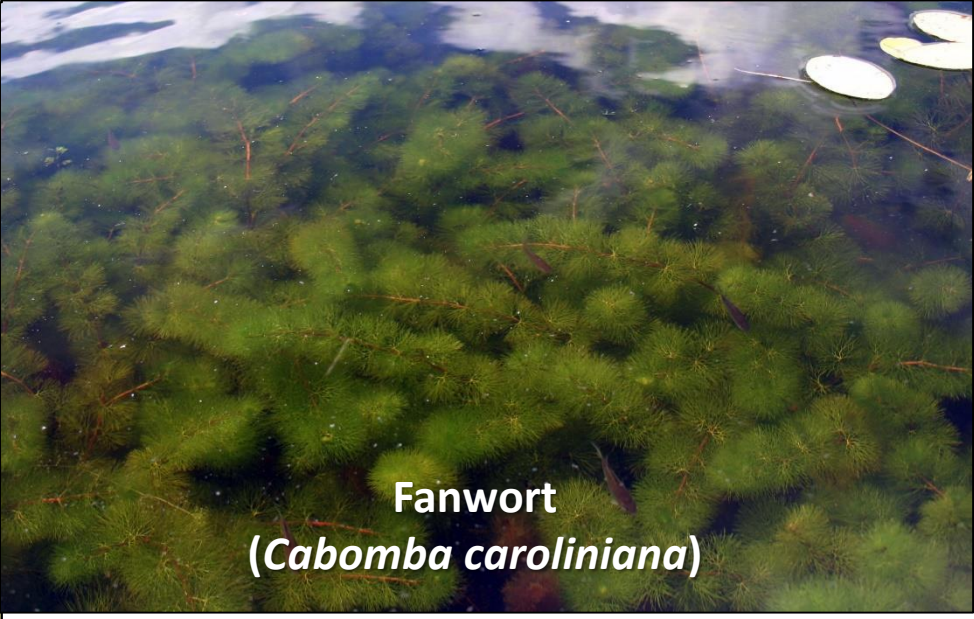
BACKGROUND AND PURPOSE
 Blue-green algae, also known as cyanobacteria, occur naturally in lakes and ponds throughout Connecticut. These microscopic organisms are components of the aquatic food chain. In ordinary circumstances, cyanobacteria cause no apparent harm, however warmer water temperatures and high nutrient concentrations may induce a rapid increase in their abundance. This response is commonly called a "bloom" because algal biomass increases to the extent that normally clear water becomes markedly turbid. This tainted water takes on a green, blue-green or reddish-brown colored hue (See Figures 1-3).

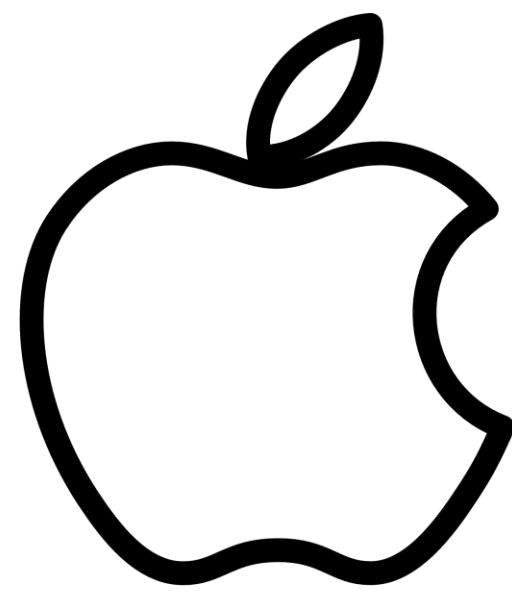
Cyanotoxin	Primary target organ in mammals	Cyanobacteria genera
Microcystins	Liver	<i>Microcystis</i> , <i>Anabaena</i> , <i>Planktothrix</i> (Oscillatoria), <i>Nostoc</i> , <i>Hapalosiphon</i> , <i>Anabaenopsis</i>
Nodularins	Liver	<i>Nodularia</i>
Anatoxin-a(S)	Nerve synapse	<i>Anabaena</i>
Aplysiatoxins	Skin	<i>Lyngbya</i> , <i>Schizothrix</i> , <i>Planktothrix</i> (Oscillatoria)
Cylindrospermopsins	Liver	<i>Cylindrospermopsis</i> , <i>Aphanizomenon</i> , <i>Umezakia</i>
Lyngbyatoxin-a	Skin, gastro-intestinal tract	<i>Lyngbya</i>
Saxitoxin	Nerve axons	<i>Anabaena</i> , <i>Aphanizomenon</i> , <i>Lyngbya</i> , <i>Cylindrospermopsis</i>



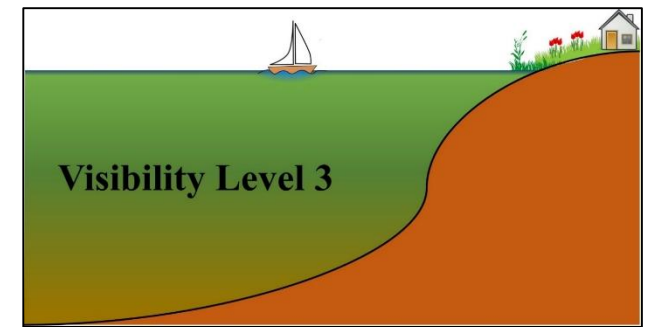
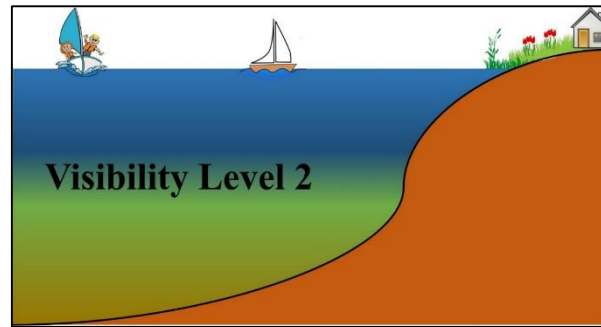
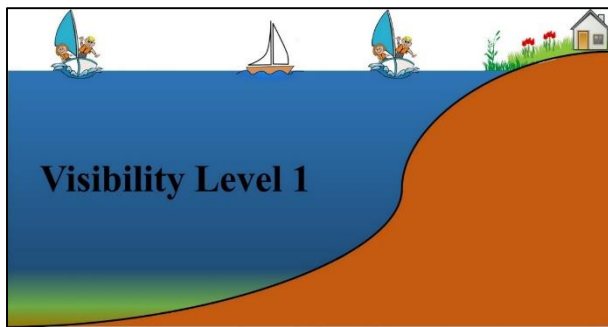
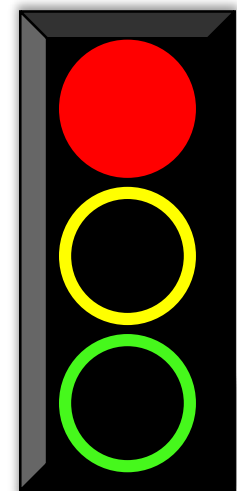
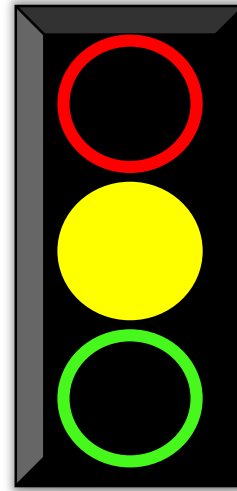
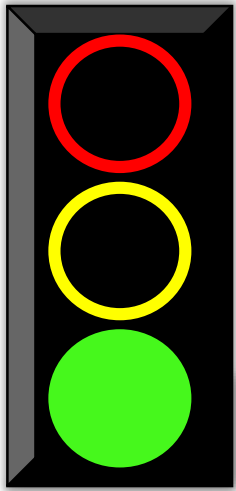
Figure 1: Open water view of bloom conditions at Fisher Meadow Pond, Avon CT, in June 2015. View across shoreline and into a cove.

Invasive Aquatic Plants





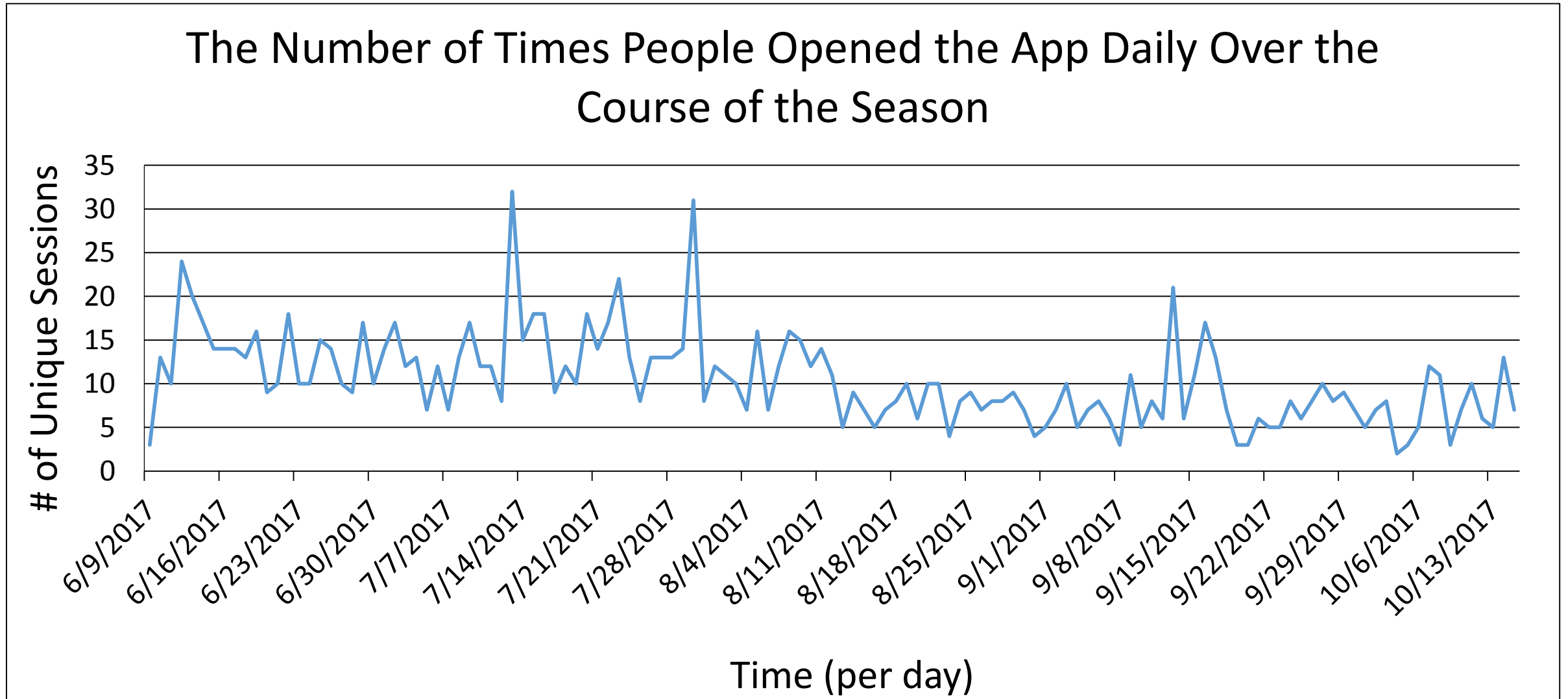
The lake's current conditions are posted with an associated icon.



Below the icon, is a corresponding table with up-to-date data.

	Measurement	Trend	Comments
Water Clarity	1.95 m (6.4 ft.)	Becoming less clear but recent rain improves clarity is north part of lake near inlet.	
Cyanos Cell Count	60,000 cells/ml	Increasing	Predominately <i>Aphanizomenon</i>
Water Temp.			Lake is thermally stratified.
Surface	°16.4 C (61.4 °F)	Increasing	
Deep	°C (°F)	Stabilizing	
Dissolved Oxygen			
Surface	≥100%	Remaining stable	
Deep	5 – 8 mg/L	Declining	

The public has been constantly engaged with the app because cyanobacteria counts are unpredictable.



Additional statistics:

App downloads: 159

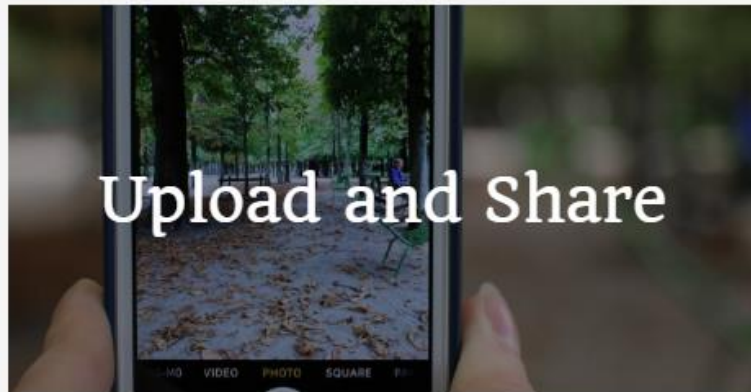
Website views: over 5,000

Images taken by app: 4-5



Taken on 12 September 2017 from the northern shore of Deer Island by a Bantam Lake resident in Morris, CT.

www.mybantamlake.org





Fish



Winter Birds



Aquatic Plants



Other Wildlife



Thank You

