

Sherman's Health of the Lake Forum

Saturday, October 3rd at 10 AM
Emergency Services Facility
Sherman, CT



In light of the recent toxic blue green algae blooms in Candlewood Lake and resulting beach closures, Town officials have called a meeting of Sherman lake community leaders to address the issues affecting the health of the lake.

Septic Systems

1. Failures
2. Solutions (septic walkover ordinance)

Buffer Zones

1. Education
2. Best Practices
3. Who's responsible for what?

Phosphorus Reduction

1. Sources
2. Reduction strategies



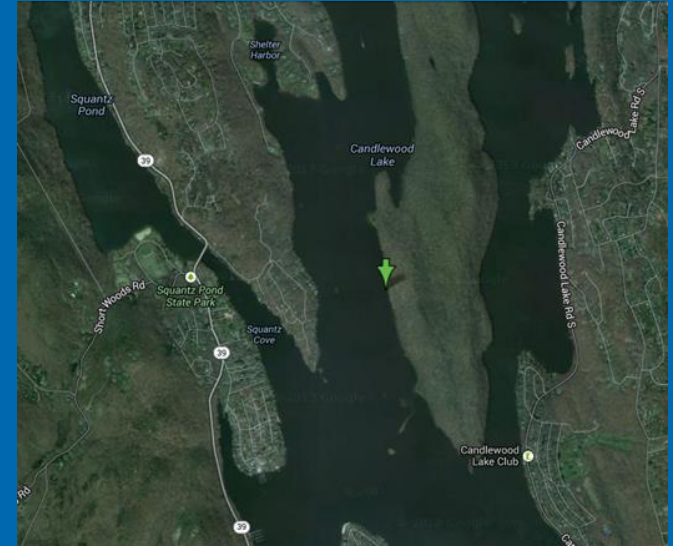
There are no silver bullets!

October 2013 - Huge Wake Up Call



Cyanobacteria and HABs

October 4, 2013



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Secchi Monitoring Pilot 3

←candlewood.maps.arcgis.com/home/webmap/viewer.html?webmap=ca9e078347bc47069dd0aac9fd86b814

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HOME

Secchi Monitoring Pilot 3

New Map>Create PresentationLarry

DetailsAddEditBasemapAnalysisSaveSharePrintDirectionsMeasureBookmarksFind address or place

AboutContentLegend

Legend

Secchi_Monitoring - Secchi Tranparency Monitoring Sites

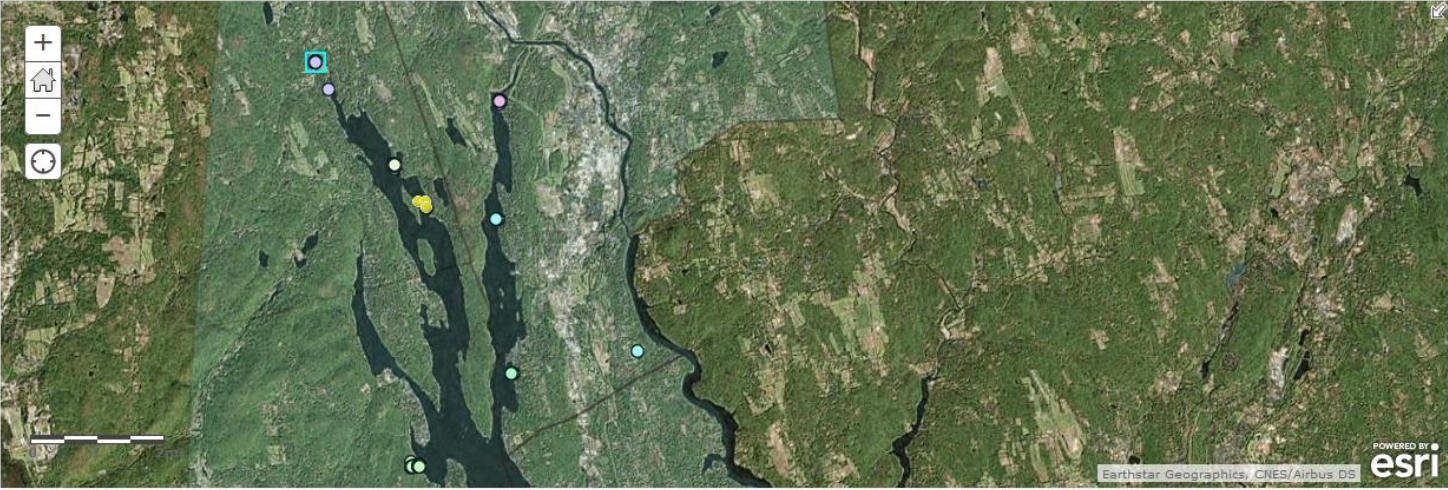
- Sherman Town Beach
- Pleasant Acres
- New Milford Town Park
- New Fairfield Town Beach
- Brookfield Town Park
- 827 Candlewood Lake Rd. S.
- 63 Lake Dr.
- 62 Forty Acre Mountain Rd.
- 529 Candlewood Lake Rd. S.
- 44 Mill Pond Road
- 42 Blackberry Rd
- 17 Woods Rd.
- Danbury Town Beach.
- 136 N. Lake Shore Dr.
- 10 Hayestown Rd.
- 13 Worden Point

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Earthstar Geographics, CNES/Airbus DS

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Secchi Monitoring - Secchi Tranparency Monitoring Sites (131 features, 1 selected)

Table Options

Monitoring Site	Monitoring Town	Secchi Transparency (cm)	Weather / Notes	CreationDate	Monitoring_Date
New Milford Town Park		188	sunny	8/14/2015	
Sherman Town Beach		154	sunny	8/14/2015	
New Fairfield Town Beach		153	sunny	8/14/2015	
Brookfield Town Park	Brookfield	173	sunny	8/13/2015	
827 Candlewood Lake Rd. S.	New Milford	200	Sunny	8/13/2015	
New Milford Town Park	New Milford	195	sunny	8/13/2015	
New Fairfield Town Beach	New Fairfield	166	sunny	8/13/2015	

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2015 Beach Closings Due to HABs

Date	Site	Cyanobacteria (Cells / mL)	Microcystin (µg / L)
July 29, 2015	Danbury Beach	17,000	<0.15
	Brookfield Beach	28,000	<0.15
	New Fairfield Beach	17,000	<0.15
	New Milford Beach	35,000	<0.15
	Sherman Beach	74,000	<0.15
Aug. 14, 2015	Sherman Beach	9,600	1.67
Aug. 18, 2015	Danbury Beach	13,000	<0.15
	Brookfield Beach	35,000	<0.15
	New Fairfield Beach	47,000	<0.15
	New Milford Beach	52,000	<0.15
	Sherman Beach	132,000	<0.15
Aug. 25, 2015	Danbury Beach	19,000	<0.15
	Brookfield Beach	45,000	<0.15
	New Fairfield Beach	29,000	<0.15
	New Milford Beach	23,000	<0.15
	Sherman Beach	7,500	<0.15

Results of analyses of cyanobacteria cell counts and microcystin concentrations in samples collected from town beach waters in late July and August.

The CT DPH and CT DEEP guidance document uses a range of 20,000 to 100,000 cyanobacteria cells per mL to characterize a Category 2 conditions and the low end of a bloom.

Cell counts above 100,000 cells/mL are considered characteristic of Category 3 when public beaches should be closed. 15 µg/L of microcystin is the recommended threshold for acceptable level of microcystin.

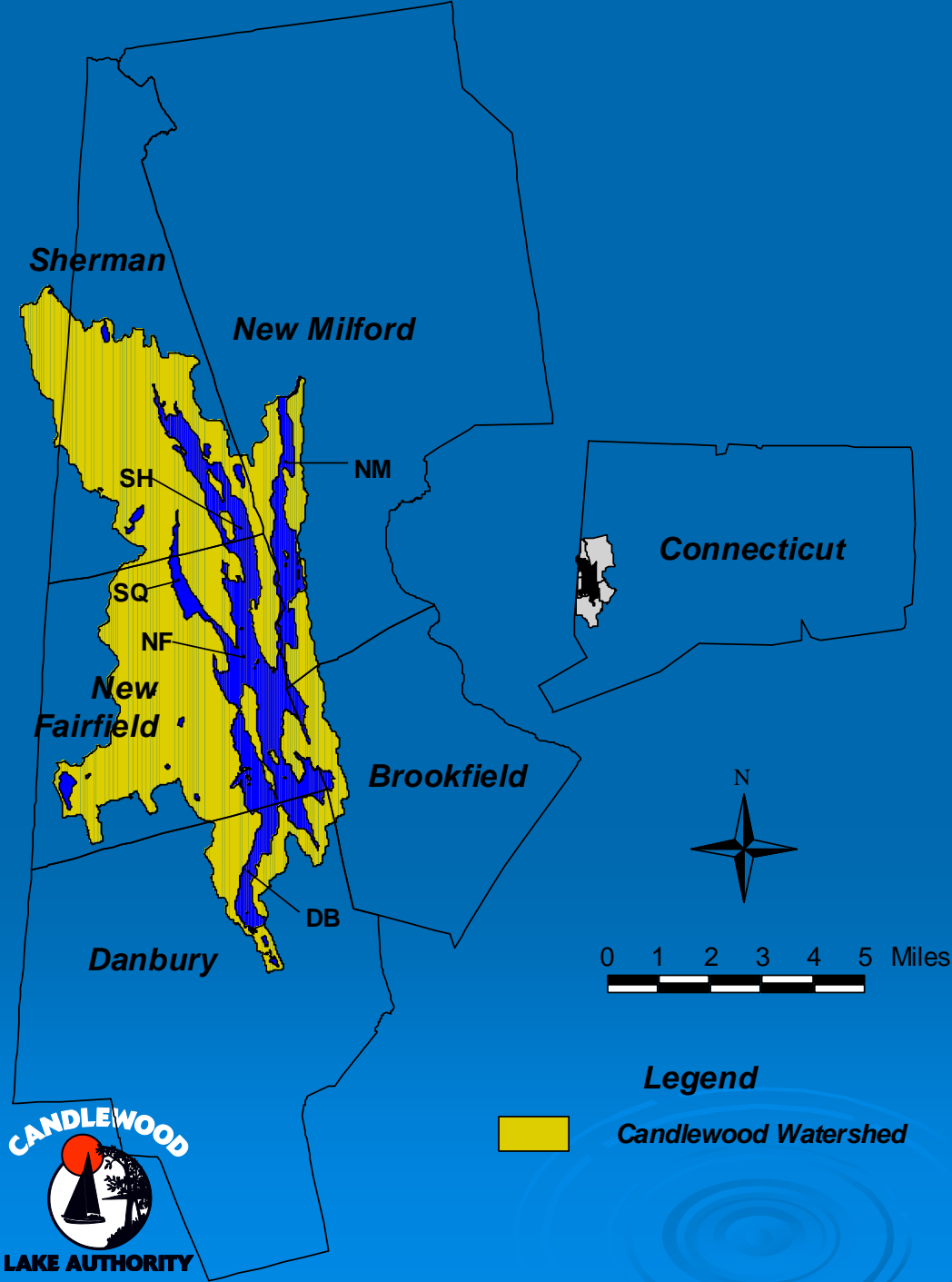


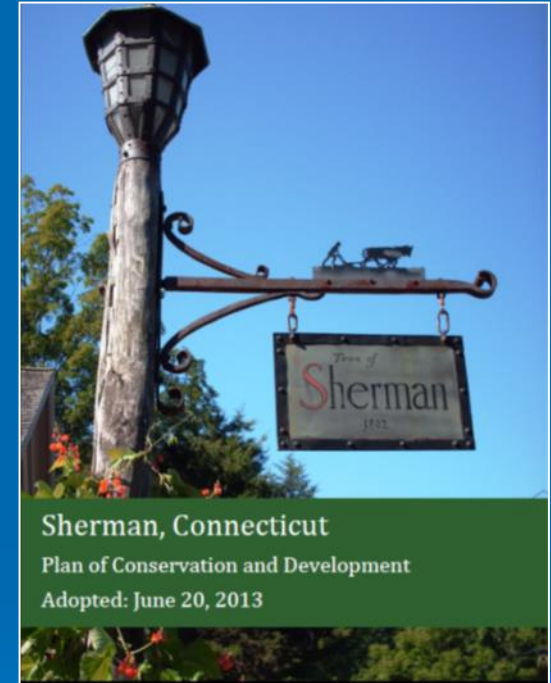
Table 1. Percentages of the Candlewood Lake watershed in each bordering municipality and the percentage of the municipality within the border of the watershed.

Town	Acres of Watershed	% Of watershed within municipal boundary	% Of municipality within watershed boundary
Brookfield	1,177	4	9
Danbury	2,726	10	10
New Fairfield	12,197	46	72
New Milford	2,629	10	6
Sherman	7,132	27	51
New York State	600	3	
Total	26,461		

Sherman Residents Believe...

Preserving Sherman's rural character means above all protecting the natural resources that sustain life and good health - the water, air and soil, the plant and wildlife. We are the stewards of the land, maintaining and enjoying it, then passing it on to the next generation. The quality of life and the value of real property in Sherman are affected by how individual property owners develop their land.

Education, regulation and enforcement are tools that we use to preserve the integrity of our natural environment.



The GIS parcel shapefiles and Assessor's data for all assessed property in Sherman was provided by the Town of Sherman. The attribute table for all parcels and Excel spreadsheet with assessment data were joined after a program was written to create a common field in both spreadsheets. Lakefront parcels were then manually selected and converted into their own shapefile.

From both the entire parcel dataset and the lakefront parcel dataset, total assessed value and total area were calculated.

Total Town Parcels (23.5 sq. mi.)

Total Assessed Value = \$661,113,900

Based on mill rate of 19.84, tax revenues are just under \$ 13.12 million dollars

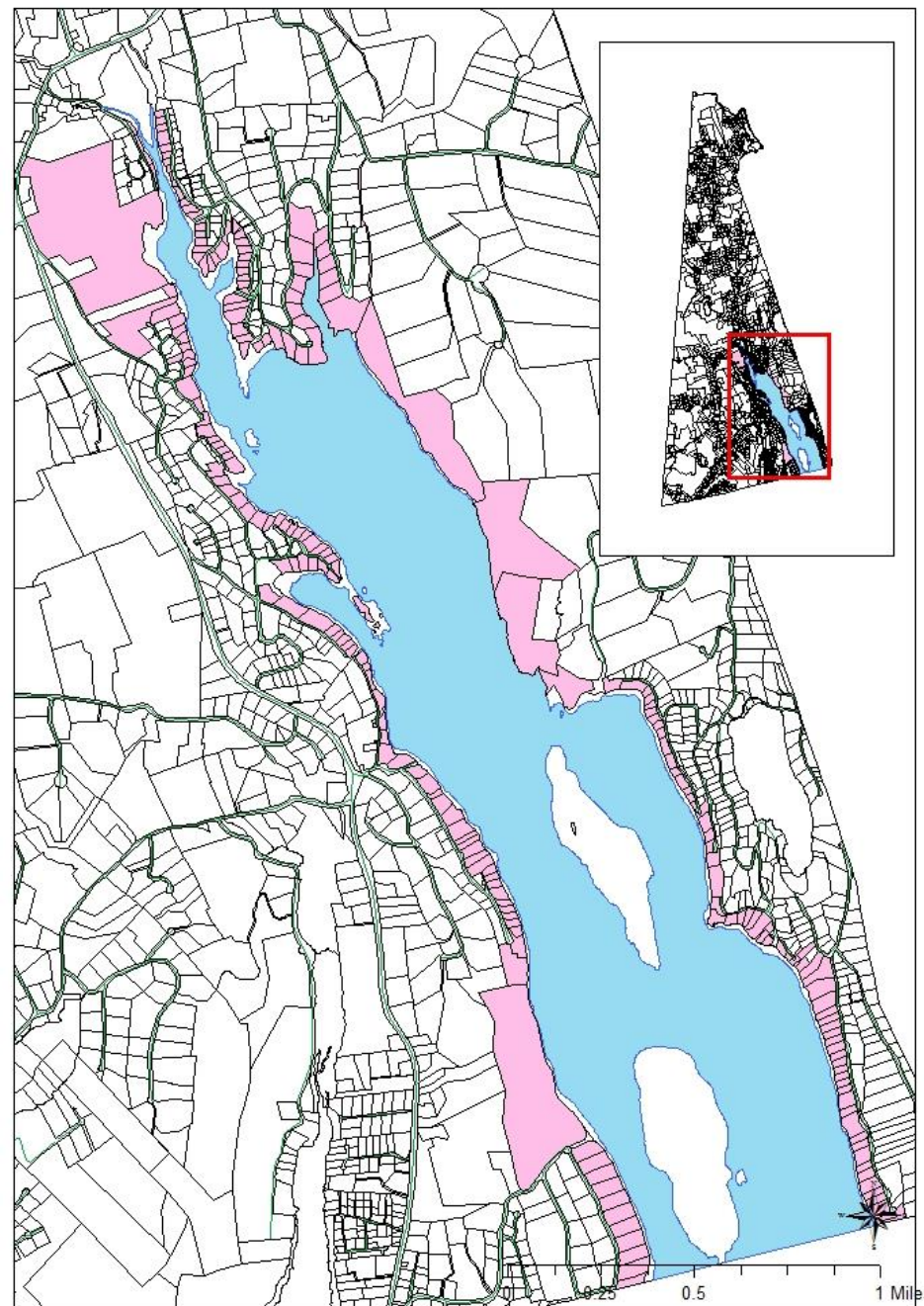
Candlewood Shoreline Parcels (0.6 sq. mi.)

Total Assessed Value = \$96,320,900

Total area = 0.6 square miles

Based mill rate of 19.84, tax revenues are just over \$ 1.91 million dollars

Conclusion - 2.5% of the total land are generate almost 15% of the tax revenues.



Economic Evaluation Of Candlewood Lake (2001)

- Dr. Sally DeLoughy of WCSU
- 3,400 surveys sent to residents of lake communities
- Description of those who responded
- Valuation of property now and if....
- Polled public opinion on CLAMP, open space and boat traffic
- “Comments” page



ECONOMIC EVALUATION OF CANDLEWOOD LAKE

By


Sara T. DeLoughy, Ph.D.
Ancell School of Business
Western Connecticut State University

Laurence J. Marsicano
Candlewood Lake Authority

2001

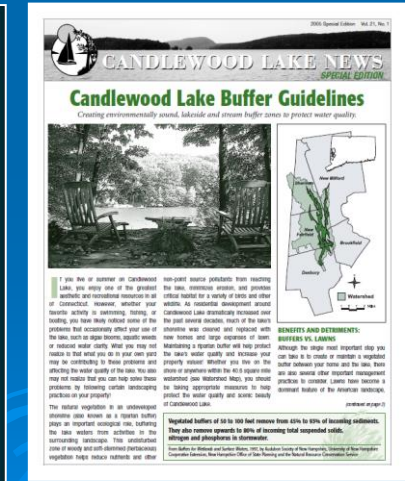
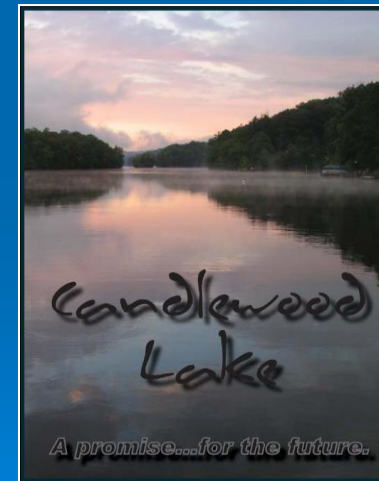


WITH ALTERNATIVE WATER QUALITY CATEGORIES



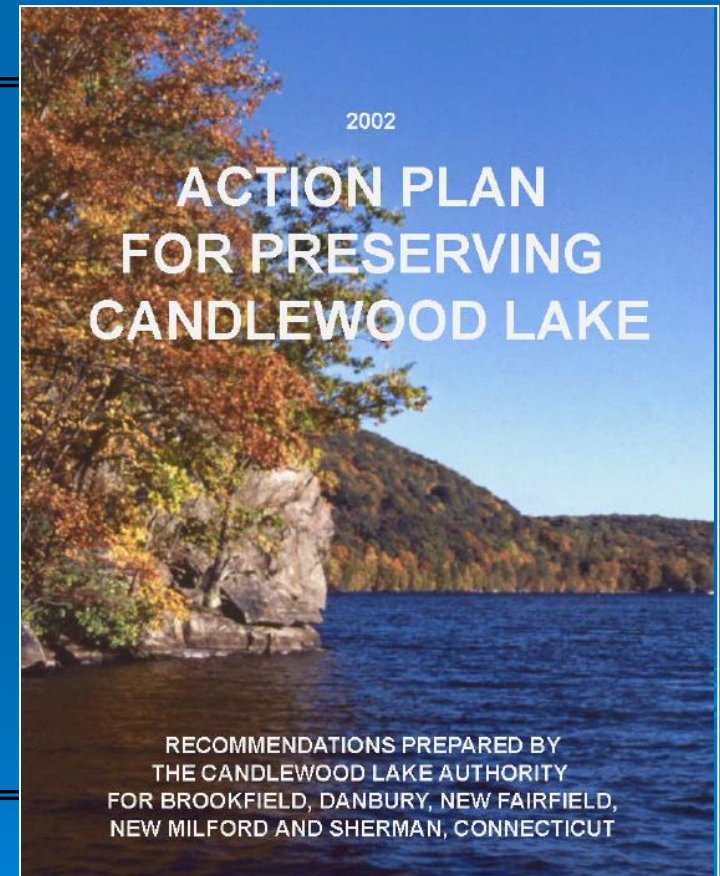
Sherman, Connecticut

Plan of Conservation and Development
 Adopted: June 20, 2013



Areas of local land use regulations in the communities surrounding Candlewood Lake Watershed that can pose a risk to water quality in Candlewood Lake if not addressed properly or lacking altogether. These are termed “Risk Factors” for the remainder of this report.

-
1. Plan of Conservation and Development
 2. Preambles of Zoning Regulations in Addressing the Protection of Candlewood Lake
 3. Buffers Adjacent to Wetlands and Waterbodies
 4. Floodplain Management
 5. Soil Erosion and Sediment Control Standards
 6. Clear Cutting and Grading Standards
 7. Septic Tank Cleaning and Inspections
 8. Stormwater Runoff and Impervious Surfaces
 9. Residential In-Ground Oil Storage Tanks
 10. Household Chemical Storage
-



**DRAFT
ACTION PLAN
FOR PRESERVING
CANDLEWOOD LAKE**

**SUPPLEMENT 2:
RECOMMENDATIONS
FOR SHERMAN, CT
APRIL, 2003**

Prepared by the
Candlewood Lake Authority
Box 37, Sherman, Connecticut 06784
Phone 860-354-6928 Fax 860-350-5611

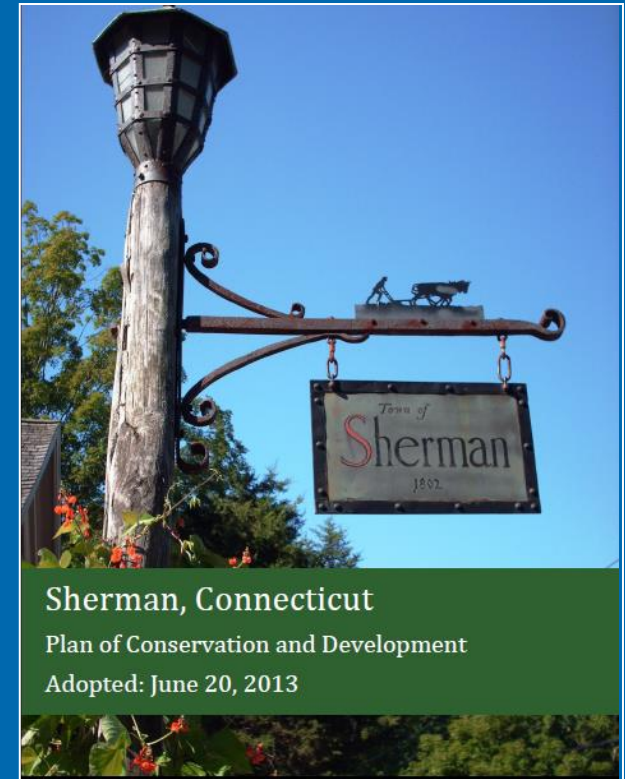


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Monitor Septic Management

Regular septic tank management is the single most important step homeowners can take to protect the quality of water. The 2010 town survey showed considerable support for stronger attention to proper septic operation and maintenance. It could start with programs to educate property owners, and if problems arise in the future, Sherman should consider adopting regulations that require septic tanks to be pumped and inspected periodically, with the results to be reported to the Town.



Sherman, Connecticut
Plan of Conservation and Development
Adopted: June 20, 2013

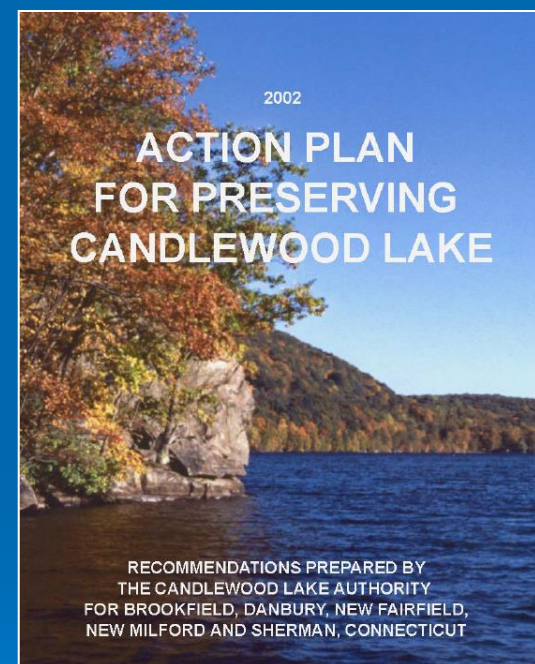


The future is here...
The future is now...

New Fairfield did adopt “*regulations that require septic tanks to be pumped and inspected periodically, with the results to be reported to the Town.*”

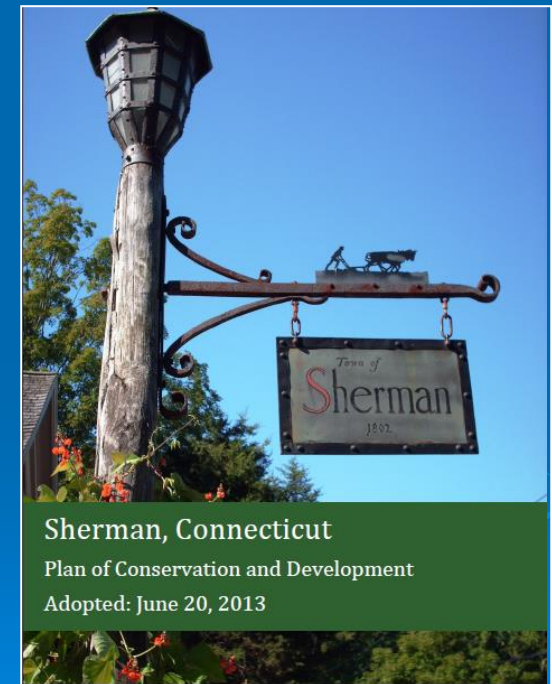
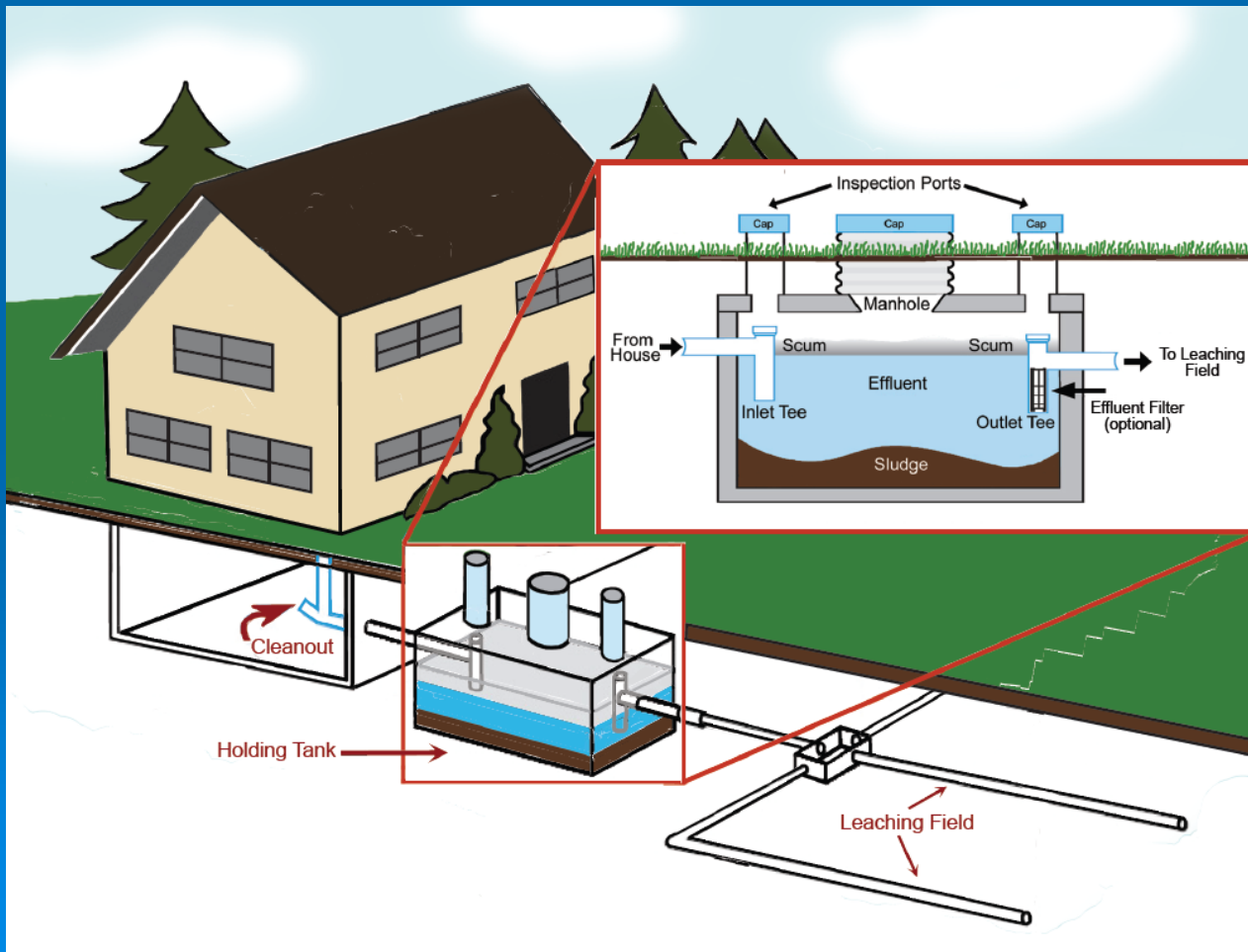
Table E-4. Number of inspections and failures detected from four Connecticut Towns including New Fairfield and Brookfield.

Municipality	Year(s)	No. of Inspections	No. of failures detected	%
Torrington	1979 – 1990	116	20	17.2
New Hartford	1979 – 1990	2,662	232	8.7
Brookfield	1998	2825	N/A	N/A
	1999	362	16	2.5
	2000	944	9	1
New Fairfield	1991	809	19	2.4
	1992	1927	78	4.1
	1993	615	16	2.6
	1994	2791	58	2.1
	1995	1933	92	4.8
	1996	2380	39	1.6
	1997	2095	58	2.8
	1998	1853	50	2.7
	1999	2081	25	1.2
	2000	1772	54	3.1



Protect Natural Resources

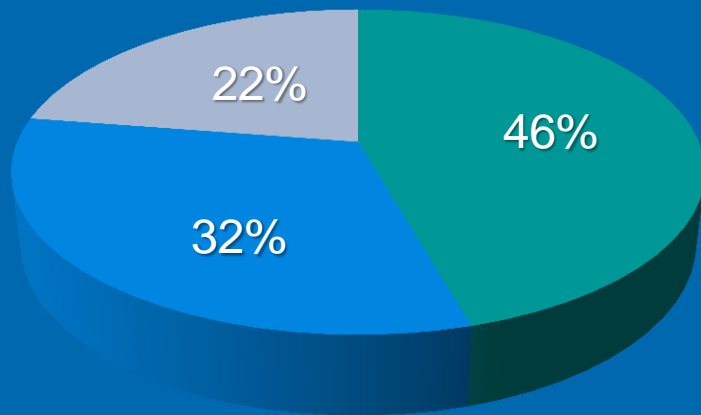
- Within two years of the date of adoption of this POCD, the land use agencies of the Town shall consider regulations for septic and oil tank maintenance with the goal of eliminating or reducing these items as sources of potential water contamination.



Candlewood Lake: A Tentative Plant Nutrient Budget

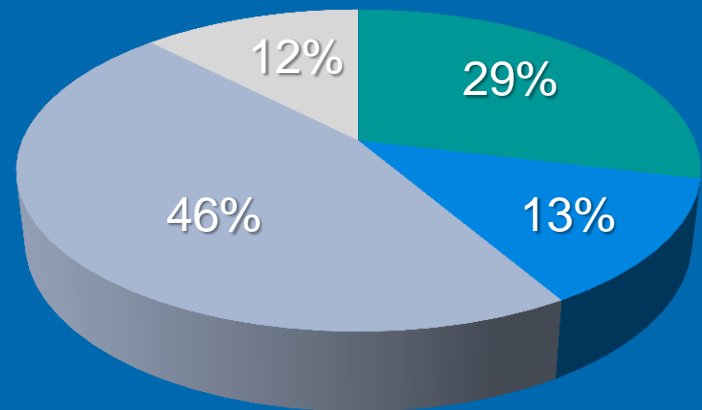
Dr. Charles Frink. Connecticut Agricultural Experiment Station. 1971.

Phosphorus (% lbs. per annum)



- Housatonic River
- Watershed direct runoff
- Septic Tank Leakage
- Direct Rainfall

Nitrogen (% lbs. per annum)



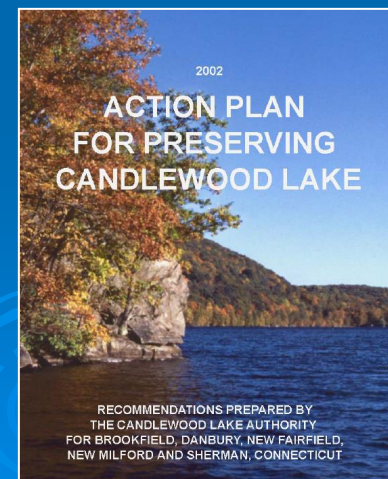
- Housatonic River
- Watershed direct runoff
- Septic Tank Leakage
- Direct Rainfall

Recent Investigations

- Northeast Aquatic Research – August 12th
- Brook phosphorus (P) load was low
- Rocky River P load was ~4X the brooks
- Direct flow P was 10X the brook inputs
- Internal P load was 10X the brooks
- Direct nitrate load was extremely high

Overlay zones in the municipalities surrounding Candlewood

Municipality	Overlay Zone of District	Water Resource?
Brookfield	Aquifer Protection Zone	Yes
	Floodplain District	Yes
	CL Watershed Protection District*	Yes
Danbury	Airport Protection Zone	No
	Floodplain Protection Zone	Yes
	Public Water Supply Watershed Protection Zone	Yes
New Fairfield	No Overlay Zones	
New Milford	Government Service District	No
	Town Landmark District	No
	Housatonic River District	Yes
	Driveway and Access Management Overlay Zone	No
	CL Watershed District*	Yes
Sherman	No Overlay Zone	



* Since 2002

Protect Natural Resources

- Within two years of the date of the adoption of this POCD, the Planning & Zoning Commission shall develop a regulation to ensure zero increase in runoff on new construction.

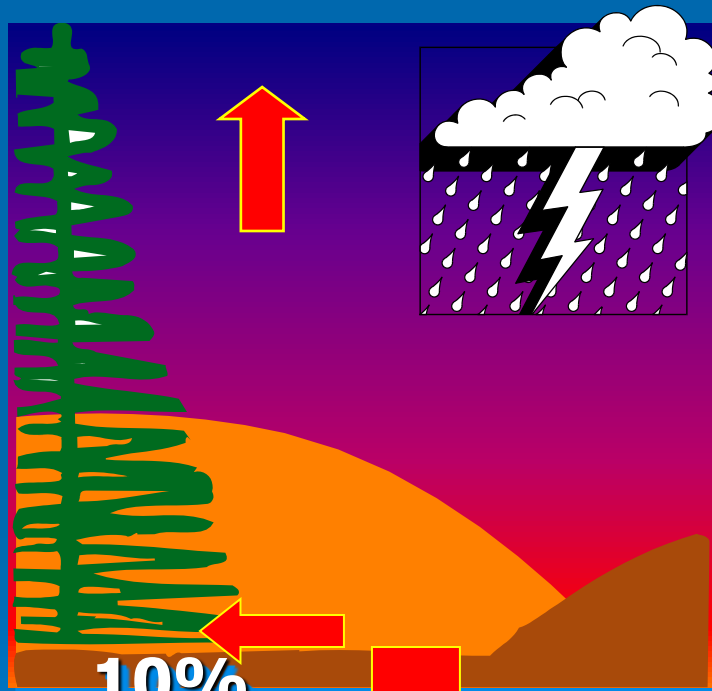
d.b.a.

Phosphorus Reduction

1. Sources
2. Reduction strategies

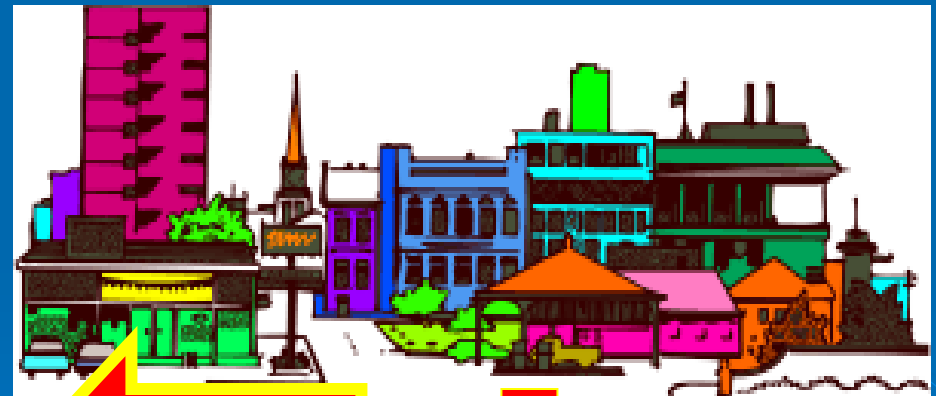


Development Impacts on the Water Cycle



10%

50%



30%

55%

15%



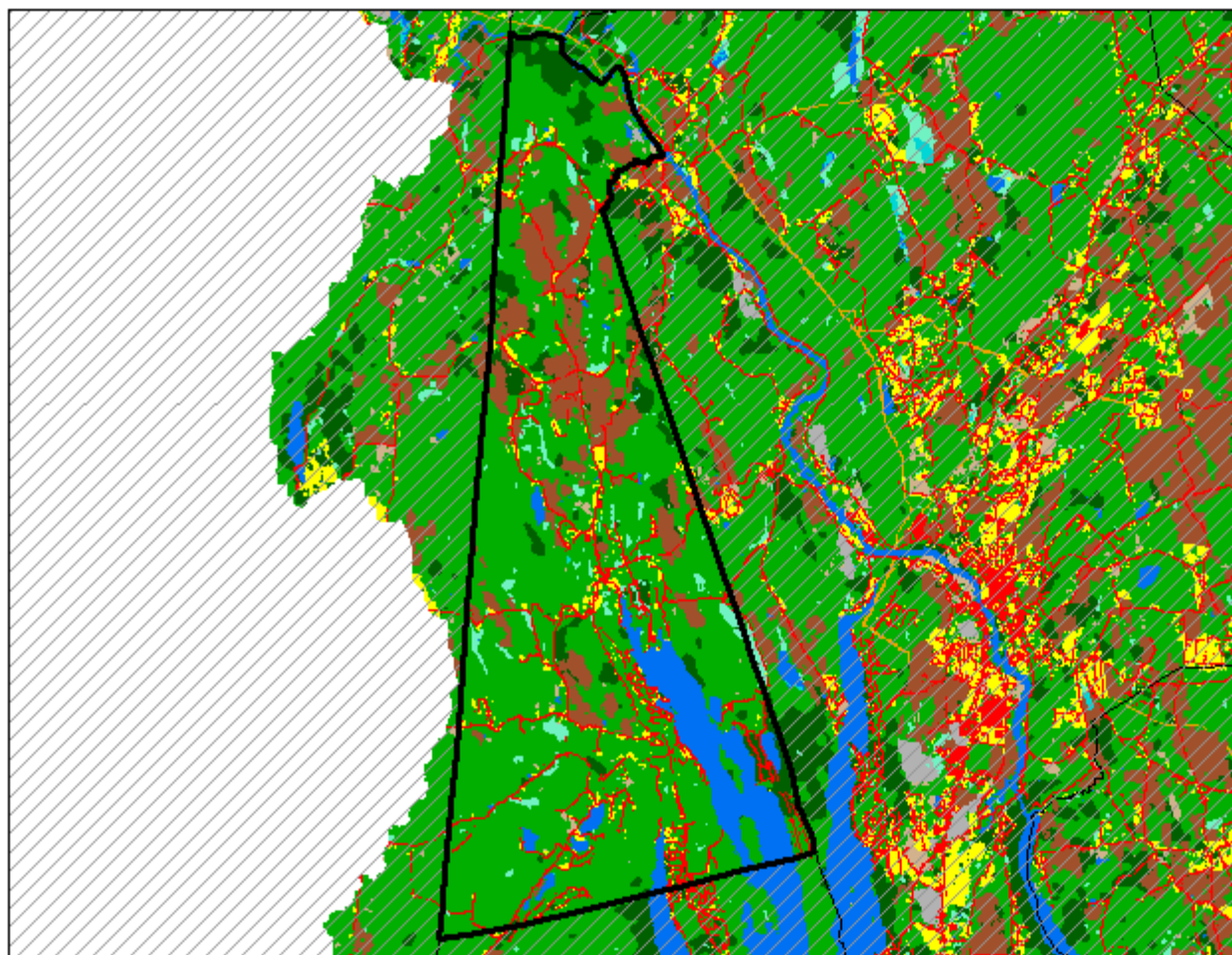
Development Impacts on Water Quality

Nutrients
Pathogens
Sediment
Toxic
Contaminants
Debris
Thermal Stress

Increased quantity
Decreased quality



1985 Land Cover	1990 Land Cover	1995 Land Cover	2002 Land Cover	2006 Land Cover	Change To Developed	Change From
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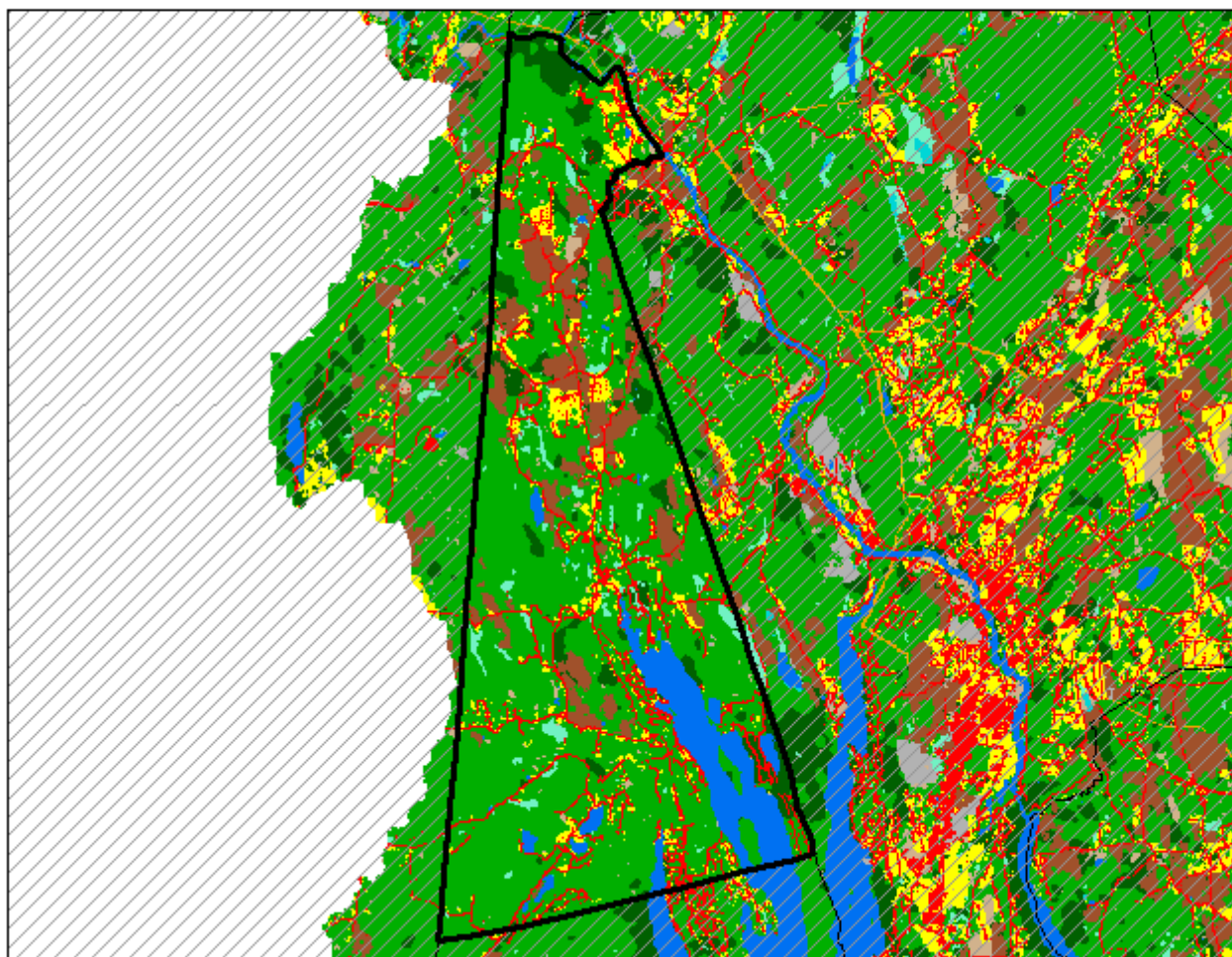
1985 Land Cover

[Printable PDF](#)

LAND COVER

- Developed
- Turf & Grass
- Other Grass
- Agricultural Field
- Deciduous Forest
- Coniferous Forest
- Water
- Non-forested Wetland
- Forested Wetland
- Tidal Wetland
- Barren
- Utility (Forest)

1985 Land Cover	1990 Land Cover	1995 Land Cover	2002 Land Cover	2006 Land Cover	Change To Developed	Change From
--------------------	--------------------	--------------------	--------------------	--------------------	------------------------	----------------



2006 Land Cover

[Printable PDF](#)

LAND COVER

- Developed
- Turf & Grass
- Other Grass
- Agricultural Field
- Deciduous Forest
- Coniferous Forest
- Water
- Non-forested Wetland
- Forested Wetland
- Tidal Wetland
- Barren
- Utility (Forest)



Sherman Land Cover and Land Cover Change

	1985		1990		1995		2002		2006		Change	
	acres	% of town	acres	% of town	acres	% of town	acres	% of town	acres	% of town	acres	% change
Developed	1160	7.7%	1269	8.5%	1300	8.7%	1389	9.3%	1413	9.4%	252.8	21.8%
Turf & Grass	301	2%	445	3%	469	3.1%	587	3.9%	663	4.4%	361.5	120%
Other Grasses	76	0.5%	130	0.9%	161	1.1%	100	0.7%	112	0.7%	36.2	47.8%
Agricultural Field	1614	10.8%	1391	9.3%	1363	9.1%	1274	8.5%	1265	8.5%	-348.3	-21.6%
Deciduous Forest	9360	62.5%	9282	62%	9244	61.7%	9201	61.5%	9117	60.9%	-242.8	-2.6%
Coniferous Forest	903	6%	895	6%	894	6%	884	5.9%	880	5.9%	-23.6	-2.6%
Water	1178	7.9%	1180	7.9%	1177	7.9%	1169	7.8%	1164	7.8%	-14.2	-1.2%
Non-forested Wetland	6	0%	6	0%	6	0%	6	0%	6	0%	0	0%
Forested Wetland	359	2.4%	348	2.3%	344	2.3%	344	2.3%	344	2.3%	-15.2	-4.2%
Tidal Wetland	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Barren	13	0.1%	25	0.2%	12	0.1%	18	0.1%	7	0%	-5.9	-45.6%
Utility (Forest)	2	0%	2	0%	2	0%	1	0%	1	0%	-0.5	-25.9%



The two basins of this lake were separated by a plastic curtain. The lower basin received additions of carbon, nitrogen and phosphorus; the upper basin received carbon and nitrogen only. The bright green color is from a surface scum of algae resulting from phosphorus additions.

From Brookfield Zoning Regulations

§242-506.Watershed Protection Districts [eff. 11/5/03]

A. Candlewood Lake Watershed District, CLW

Purpose:

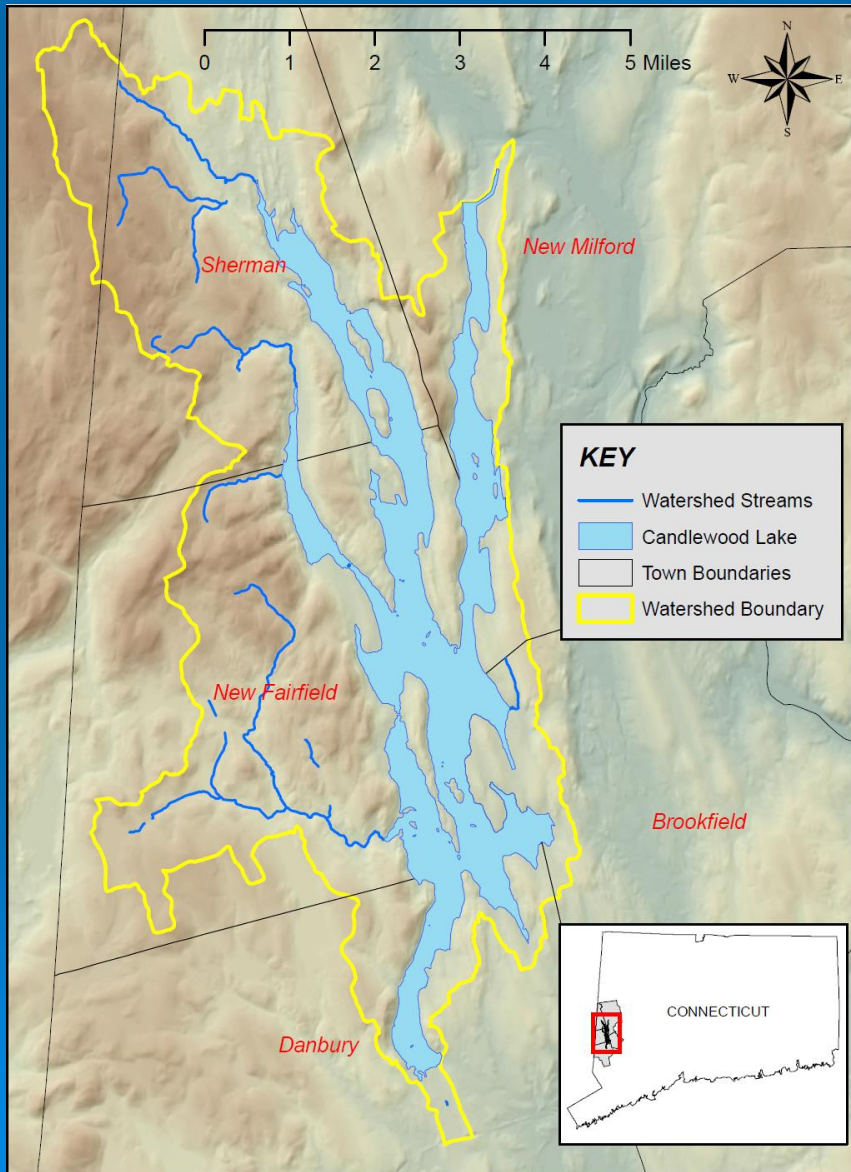
The purpose of the Candlewood Lake Watershed District is to prevent nutrient enrichment or contamination of Candlewood Lake and its watershed and to avoid the need for sewers in this densely developed area of Brookfield. Specifically, the purposes are:

- a) To minimize the impervious surfaces and maximize infiltration of stormwater runoff.
- b) To reduce peak stormwater flow and minimize the likelihood of soil erosion, stream channel instability, flooding and habitat destruction.
- c) To preserve and/or create vegetative buffers of native plantings to control and filter stormwater runoff.
- d) To minimize disturbance of natural grades and vegetation and utilize existing topography for natural drainage systems.
- e) To contain stormwater runoff on the site, wherever possible to reduce the volume of stormwater runoff before it reaches the groundwater or surface water bodies.



§242-506. Watershed Protection Districts [eff. 11/5/03]

A. Candlewood Lake Watershed District, CLW



Land to which these regulations apply:

These regulations apply to all land within the boundaries of the Candlewood Lake watershed as delineated on a map on file in the offices of the Zoning Commission entitled “Candlewood Watershed District, Town of Brookfield.”

Required Stormwater Management Plan and Data:

All new building construction, or an addition, alteration or enlargement that results in an increase in the amount of impervious surface (paved drives, walks, patios, etc.) on a lot where the total impervious surface is 10% or greater shall require a Stormwater Management Plan. In addition to that data required elsewhere in these regulations, the following data shall be required:

(a) A narrative report prepared by a licensed engineer indicating:

- Any risk or threat to Candlewood Lake or the water resources in its watershed from site development, site improvements, or on-site operations proposed in the application and measures.
- Methods of assessment and best management practices to prevent and reduce any such risk or threat.
- Supporting documentation, including calculations, engineering details, shall be provided to illustrate the existing and proposed development's compliance with these regulations which shall be designed in accordance with the stormwater management design guidelines of either the "2004 Connecticut Stormwater Quality Manual" published by the University of Connecticut, Cooperative Extension Service, NEMO Project and/or the Connecticut DEP's "Manual for Best Management Practices for Stormwater Management."

(b) A site plan indicating:

- All relevant data required under §242-502F.
- Location and area of all impervious surfaces on the site.
- Location and area of turf cover (lawn areas).
- Location and area of all existing woodland areas.
- Location and area of all existing and proposed vegetative buffer areas.
- Location and description of all potential runoff and pollution sources including erosive soils, steep slopes.
- Location and specification of all existing and proposed stormwater best management practices.

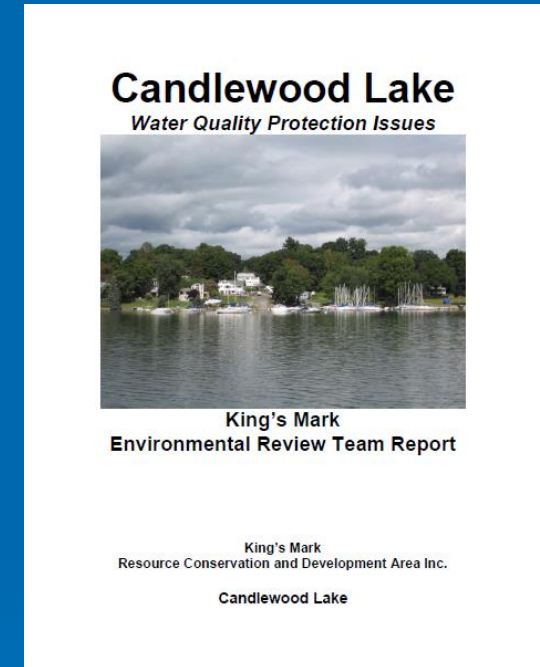
Best Management Practices:

The following practices and methods shall be incorporated into all Stormwater Management Plans where practicable:

- Vegetated swales, buffers, filter strips
- Vegetative buffer or filter strips and level spreaders
- Grassed drainage swales, wet or dry
- Maintain or restore pre-development vegetation
- Minimize creation of steep slopes
- Bio-retention structures/residential rain gardens
- Rain water harvesting/rain barrels Dry detention ponds
- Underground detention ponds
- Proper location and reduction of impervious surface area on site
- Disconnect flows from multiple impervious surfaces
- Permeable pavement choices

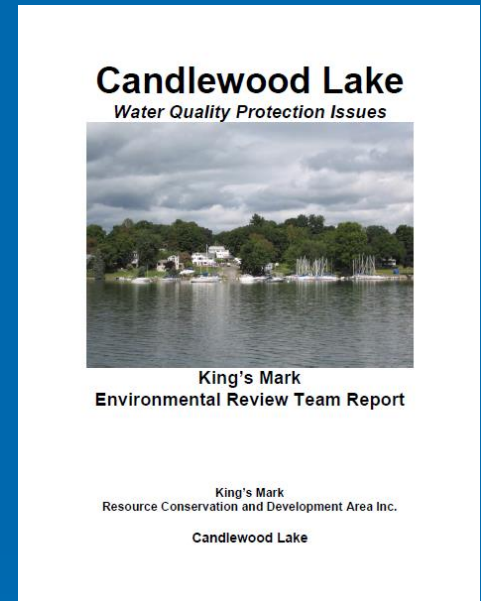
Other Models: Town of Columbia, CT

- Lake Watershed Protection Overlay Zones on the Residential Agricultural District: Zoning Regulations for Zoning Compliance for New Zoning/Building Permits
- The regulations require the use of LID techniques
- Requires a pre and post development pollutant loading analysis of any project proposed near the Lake Columbia
- Require that a project demonstrate with calculations that the project will reduce phosphorus loads by 10% as compared to pre-development conditions.



Other Models: Tolland, CT

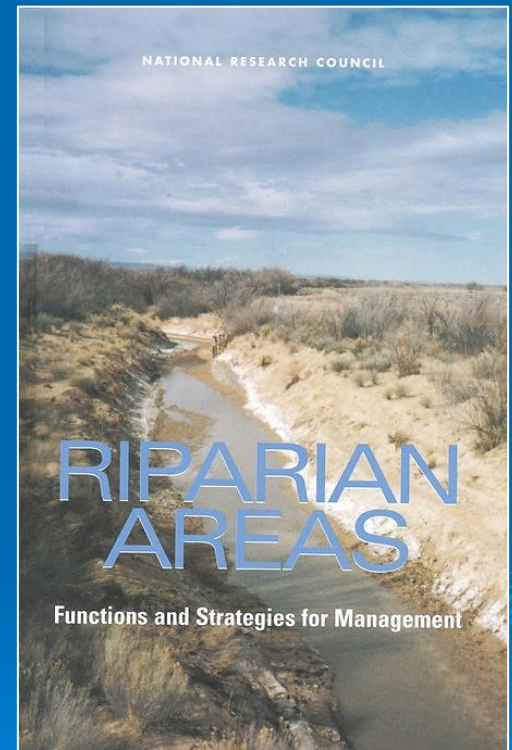
- Require everyone proposing land use changes in the town to use the Town of Tolland's Low Impact Development Stormwater Treatment Systems Performance Requirements Road Design and Stormwater Management Design Manual (Trinkaus Engineering, LLC. January 2008).
- The town has the authority to require proven Low Impact Development and Environmental Site Design strategies and stormwater quality management measures that are appropriate to protect adjacent natural resources.
- The design manual also provides land developers with clear unambiguous guidance so they have the both the tools and mandate to propose effective stormwater treatment systems. In addition, performance standard for the removal of common stormwater pollutants are specified in the Design Manual.



Riparian Areas: Functions and Strategies for Management

National Research Council, 2002

The federal Clean Water Act requires that wetlands be protected from degradation because of their multiple, important ecological roles including maintenance of high water quality and provision of habitat for fish and wildlife. For the last 15 years, this protection has slowed the precipitous decline in wetland acreage observed in the United States since European settlement. However, protection of wetlands generally does not encompass riparian areas—the lands bordering waterbodies such as rivers, lakes, and estuaries—even though they often provide many of the same functions as wetlands.





National Lakes Assessment

Fact Sheet

April 2010

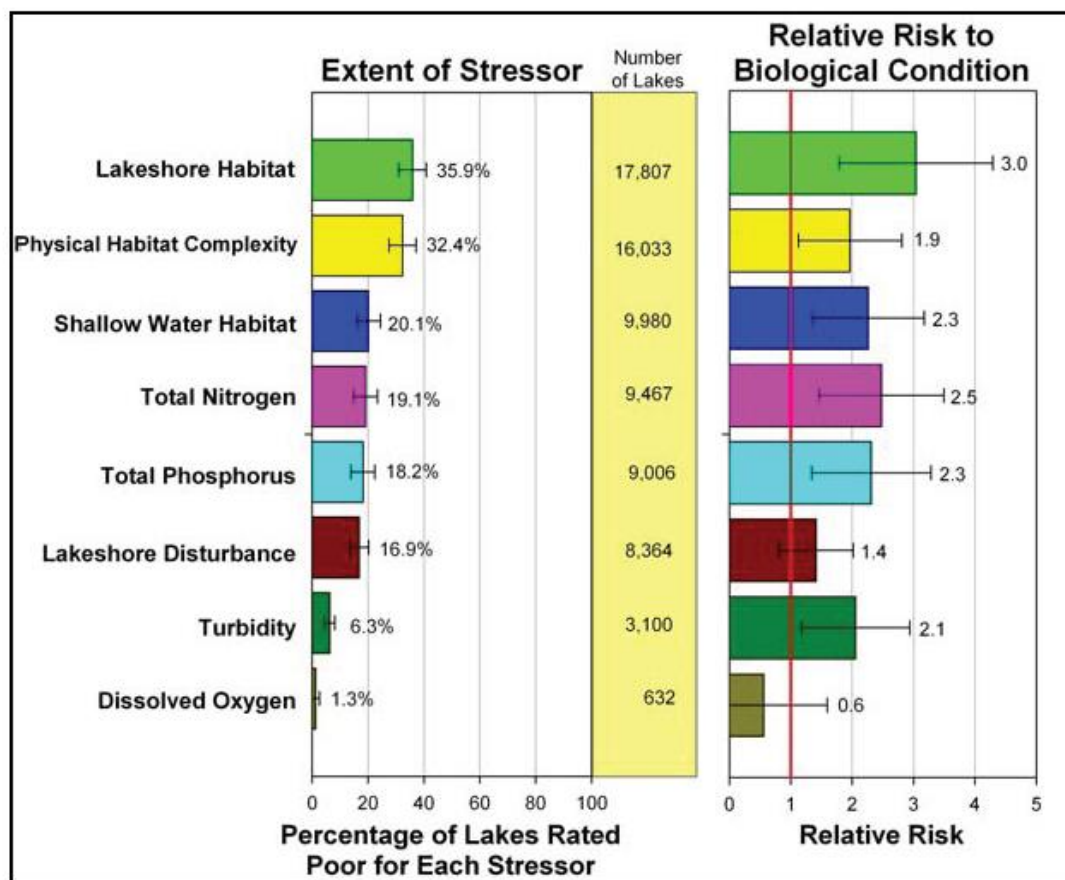


Figure 2. Relative Extent of Stressors and Increased Likelihood of Degraded Biology when Stressor Rated Poor

Poor habitat conditions along the lakeshore and high levels of the nutrients nitrogen and phosphorus are the most significant stressors of those assessed in the survey (Fig. 2). These stressors increase the likelihood (*i.e.*, relative risk) of degraded biological condition.

- Lakeshore habitat is rated poor in 36% of lakes. Poor biological health is three times more likely in lakes with poor lakeshore habitat relative to lakes with good habitat.
- The nutrients nitrogen and phosphorus are at high levels in about twenty percent of lakes. Poor biological health is 2.5 times more likely in lakes with high nutrient levels.

Shoreland Protection Acts

Clear-cutting of trees and shrubs is prohibited in the strip of land from the ordinary high water mark to 35 feet inland with the exception of a 30-foot wide path, for every 100 feet of shoreline, down to the water. Limitations on cutting are also applied to the remaining shoreland area, which comprises another 965 feet back from the high water mark.

- Wisconsin's Shoreland Minimum State Standards, s. 59.692 and NR115

Adjacent to great ponds and rivers flowing to great ponds, a buffer strip is required to extend 100 feet from the normal high-water line. "Clear-cut openings", defined as openings in the forest canopy greater than 250 ft., are prohibited although 40% of the volume of trees 4 inches in diameter, measured at 4½ feet above ground level, can be removed in any 10-year period.

- Maine's Mandatory Shoreland Zoning Act, Title 38-3-B §§ 435-449

Where existing, a natural wooded buffer shall be maintained in a 150 ft. of the public boundary line. This affects public water bodies 10 acres or larger, as well as fourth order or higher rivers and tidal waters¹. Cutting limits within 150 feet of great ponds and fourth order streams and within 50 feet of all perennial streams, rivers and brooks are 50% of the pre-harvest basal area².

- New Hampshire's Comprehensive Shoreland Protection Act, RSA-483-B¹

- New Hampshire's Basal Area Law, RSA-227-J:9²



Who is Responsible?

- Above or below the 440 foot contour (CL&P datum)
- Below 440 is managed by FirstLight Power
- Above 440 is largely under local jurisdiction
- Land Use Agreement between municipalities and FERC licensee

Sawmill Road

Taken in August 2006

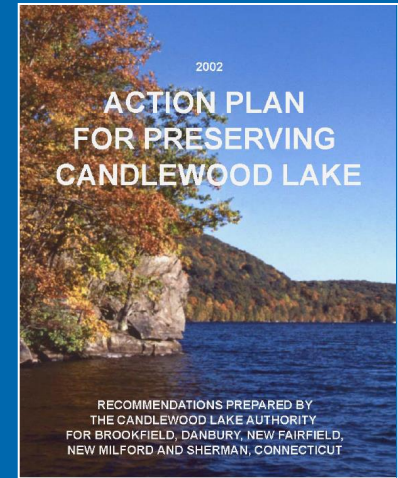


Taken on May 27, 2015



Sherman's Buffer Regulations

- Buffer areas were discussed in Section in Section 350 of Sherman's Zoning Regulations (Additional Standards and Requirements) as a means of screening activity on the lot from neighboring residential areas.
- Sherman's IWW Regulations contained the standard definition for "Regulated Activity" and included the removal or deposition of material, discharge, clear cutting, obstruction, construction, grading, paving, excavating, alteration, pollution, grubbing, and discharging of storm water into wetlands or watercourses. The "Upland Review Area", where certain activities are regulated, was defined as the land within 100 feet measured horizontally from the boundary of any wetland or watercourse.



Candlewood Lake Buffer Guidelines



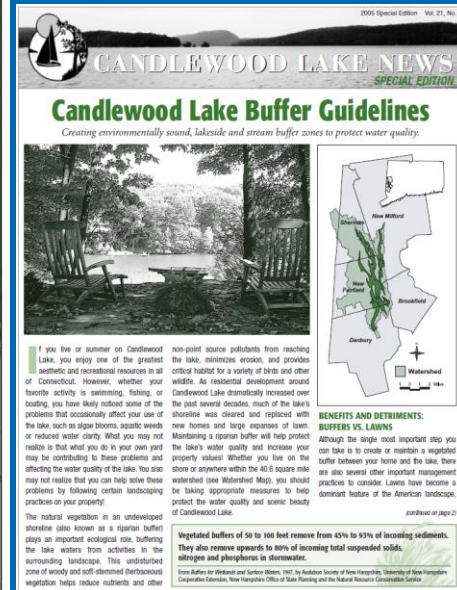
FIGURE 1

Existing Condition: Lawn extends to the Candlewood Lake shoreline.



FIGURE 2

Phase One: Define buffer limits. Stop mowing, allow native vegetation to grow.



Candlewood Lake Buffer Guidelines



FIGURE 3

Phase Two: Add native trees to frame views and provide shade.



FIGURE 4

Phase Three: Introduce native shrubs and herbaceous plants to provide texture, seasonal interest and habitat to the buffer area.

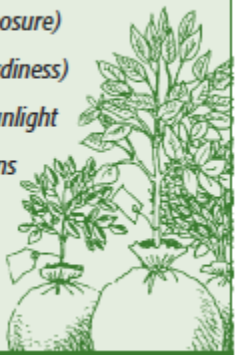
NATIVE PLANTS VS. LAWN

- Native plants require fewer pesticides than lawns
- Native plants require less water than lawns
- Native plants don't require mowing and help reduce air pollution
- Native plants provide shelter and food for wildlife



SITE CHARACTERISTICS TO CONSIDER:

- Orientation (exposure)
- Plant Zones (hardiness)
- Availability of Sunlight
- Building Locations
- Activities
- Soil Types
- Slope



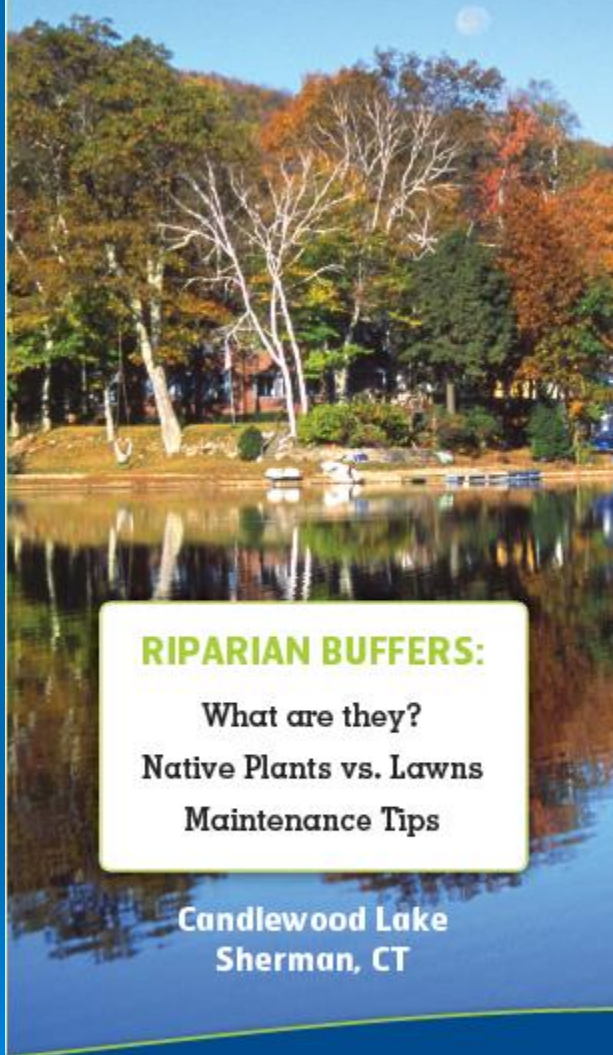
CANDLEWOOD LAKE AUTHORITY'S BUFFER GARDEN



KEY BOTANICAL NAME COMMON NAME

AI	<i>Alnus incana</i>	SPECKLED ALDER
AL	<i>Amelanchier levis</i>	SHADBLOW
BN	<i>Betula nigra</i>	RIVER BIRCH
CA	<i>Comus amomum</i>	SILKY DOGWOOD
CP	<i>Comptonia perigrina</i>	SWEET FERN
HV	<i>Hamelis virginiana</i>	WITCHHAZEL
IG	<i>Ilex glabra</i>	INKBERRY
IV	<i>Ilex verticillata</i>	WINTERBERRY
KL	<i>Kalmia latifolia</i>	MOUNTAIN LAUREL
MP	<i>Morella pensylvanica</i>	BAYBERRY
PS	<i>Pinus strobus</i>	WHITE PINE
RA	<i>Rhus aromatica</i>	FRAGRANT SUMAC
RAgl	<i>Rhus aromatica "grolow"</i>	GROWLOW FRAGRANT SUMAC
RH	<i>Rhododendron aborescens</i>	SWEET AZALEA
RP	<i>Rhododendron Prinophyllum</i>	ROSEHELL AZALEA
VA	<i>Vaccinium angustifolium</i>	LOWBUSH BLUEBERRY
VC	<i>Vaccinium corymbosum</i>	HIGHBUSH BLUEBERRY

CANDLEWOOD LAKE BUFFER GARDEN



RIPARIAN BUFFERS:

What are they?

Native Plants vs. Lawns

Maintenance Tips

Candlewood Lake
Sherman, CT

WELCOME TO THE CLA'S DEMONSTRATION BUFFER GARDEN

The plants you see form a diverse, healthy community that is low maintenance and self-sustaining. The area was originally a few existing trees and shoreline shrubs and was redesigned and enhanced using a variety of native plants.

Note the different levels of vegetation as you walk on the meandering mulched path – trees, shrubs, perennial and other groundcover layers. All are important components of an ecologically functioning buffer that also provides a place to sit and enjoy the natural world.

Lakeside buffers are important for a variety of reasons including:

- Protection of water quality
- Minimizing shoreline erosion
- Providing fish and wildlife habitat

Native Plants vs. Lawns

- Native plants require fewer pesticides than lawns.
- Native plants require less water than lawns.
- Native plants don't require mowing and lots of maintenance
- Native plants provide, unlike lawns, habitat for wildlife.

Maintenance Tips:

- When possible, allow leaves to remain on ground to act as a natural fertilizer.
- Never blow or rake lawn trimmings and leaves into the lake. Compost them for great fertilizer.
- Leave logs and snags out as refuge for birds and other animals.
- Spray eco-friendly deer repellent on garden if necessary.

Public Act No. 12-155

AN ACT CONCERNING PHOSPHOROUS REDUCTION IN STATE WATERS.

Be it enacted by the Senate and House of Representatives in General Assembly convened:

Section 1. (*Effective from passage*) *The Commissioner of Energy and Environmental Protection, or the commissioner's designee and the chief elected officials of the cities of Danbury, Meriden and Waterbury and the towns of Cheshire, Southington and Wallingford, and the chief elected official of any other municipality impacted by the state-wide strategy to reduce phosphorus, or such chief elected officials' designees, shall collaboratively evaluate and make recommendations regarding a state-wide strategy to reduce phosphorus loading in inland nontidal waters in order to comply with standards established by the United States Environmental Protection Agency. Such evaluation and recommendations shall include (1) a state-wide response to address phosphorus nonpoint source pollution, (2) approaches for municipalities to use in order to comply with standards established by the United States Environmental Protection Agency for phosphorus, including guidance for treatment and potential plant upgrades, and (3) the proper scientific methods by which to measure current phosphorous levels in inland nontidal waters and to make future projections of phosphorous levels in such waters.*



(Approved June 15, 2012)



Public Act No. 12-155

- Prohibits application of fertilizer or any compost that contains phosphate to an established lawn, except when: (1) A soil testing method approved by the Commissioner of Agriculture and performed within the previous two years indicates the soil is lacking in phosphorus and fertilizer, soil amendments or compost containing phosphate is needed for the growth of such lawn, or (2) such fertilizer, soil amendment or compost containing phosphate is used for establishing new grass or repairing such lawn with seed or sod.
- Prohibits application of any fertilizer (defined in the CT General Statutes), soil amendment (defined in the CT General Statutes, or compost that contains phosphate to any portion of a lawn that is located twenty feet or less from any brook, stream, river, lake, pond, sound or any other body of water, except if such fertilizer, soil amendment or compost is applied with the use of a drop spreader, rotary spreader with a deflector or targeted spray liquid, such application may occur on any portion of lawn that is located not less than fifteen feet from any such brook, stream, river, lake, pond, sound or any other body of water.

Public Act No. 12-155

- Prohibits application of fertilizer with phosphate to any impervious surface
- Prohibits use of phosphate fertilizers from December 1st thru March 15th
- 12th State in the Nation to pass similar legislation

Fertilizers with phosphates

- Existing lawns rarely need P
- Numbers on fertilizer bags
- Organic fertilizers – beware!
- Lawn care companies
- Leaves in lake



**DRAFT
ACTION PLAN
FOR PRESERVING
CANDLEWOOD LAKE**

**SUPPLEMENT 2:
RECOMMENDATIONS
FOR SHERMAN, CT
APRIL, 2003**

Prepared by the
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Proposed modifications to Sherman's draft ORDINANCE REGARDING SEPTIC SYSTEM MANAGEMENT:

- The Town will make available on its website a listing, by week, of the properties to be inspected therefore providing prior notification to residents of the approximate timing of the walk-over inspection.
- A resident can, solely at their expense, engage a licensed Septic company to conduct an inspection of their septic system and submit a letter to Sherman's Board of Health certifying that it is in good working order. Having such a letter on file dated within three years of the Town's scheduled walk-over will eliminate that property from inspection for the current inspection cycle.
- At the conclusion of one-cycle (three years), a committee including the three Selectman and Sherman's Director of Health will review the effectiveness of the program and consider any necessary changes to insure that the program is meeting its intended goals.