

Healthy Waterfront Property

A Workshop for the Lakes Region Board of Realtors

Tuesday, April 19, 2011



UNIVERSITY of NEW HAMPSHIRE
COOPERATIVE EXTENSION
WATER RESOURCES



NEW HAMPSHIRE
DEPARTMENT OF
Environmental
Services

Healthy Waterfront Property

■ Welcome and Introductions

■ Let's take care of the logistics:

- Folder and its contents
- Materials will be posted to the Lakes Program webpage
- The questions you sent to me

■ Water Quiz:

- How many lakes and rivers are used as drinking water supplies in NH? How many residents do they serve?
- Which pollutant(s) poses the greatest threat to our waters?
- What is the building setback for residences and other primary structures according to the CSPA?
- Name the sources of stormwater runoff on residential properties?
- Are lawns pervious or impervious?
- When must a Site Assessment Study be conducted? What does it tell you?

Healthy Waterfront Property

What's our Water Worth?

The Economic Value of our Lakes and Rivers

- First, some important information ...
 - 1,000 lakes and ponds = 165,000 acres
 - Greater than 10 acres in size
 - 16,000 miles of rivers and streams
 - Lots of impervious area -13,500 acres converted/year
 - Water quality impacted
 - Groundwater recharge reduced
 - Economic and population growthMore, larger, development occurring across the landscape
 - News Flash: N.H. still fastest-growing state in New England – 7.2%
 - Almost 100,000 new citizens in the past decade
 - 57 lakes and rivers are used as public drinking water supplies
 - Population served by these waterbodies = 502,000

The Economic Value of New Hampshire's Surface Waters (a multi-year, multi-phased study; phase 2)

5 USES CONTRIBUTE \$1.8 BILLION ANNUALLY TO NH'S ECONOMY - 2002

GIVEN CURRENT ENVIRONMENTAL CONDITIONS!



Boating
\$328-\$450 M



Swimming
\$269-\$380 M



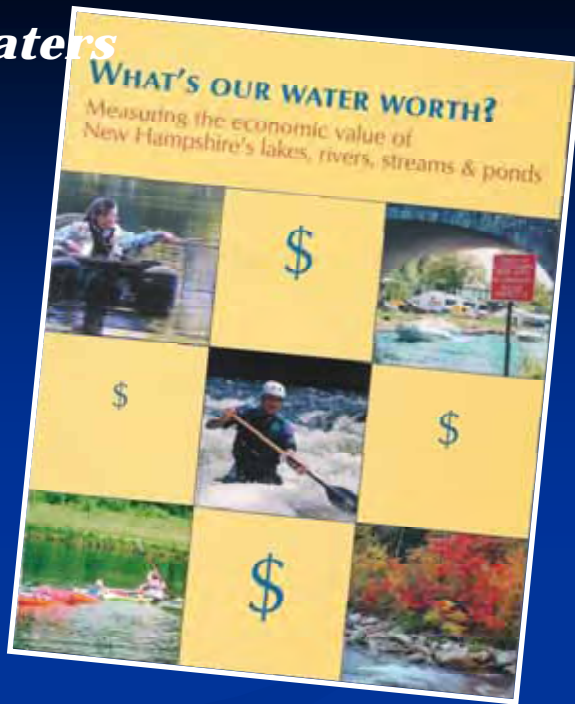
**Waterfront
Taxes**
\$247 M



Fishing
\$245-\$352 M



**Drinking
Water**
\$276-\$301 M



The Economic Value of New Hampshire's Surface Waters
(a multi-year, multi-phased study – phase 3)

How Behavior Would Change - 2004

Of swimmers, boaters, anglers and other users:

58% would decrease use if **water levels/flows** worsened.

67% would decrease use if **invasive plants** worsened.

70% would decrease use if **algae blooms** worsened.

71% would decrease use if **mercury** worsened.

75% would decrease use if **crowding** worsened.

The Economic Value of New Hampshire's Surface Waters

(a multi-year, multi-phased study – phase 4)

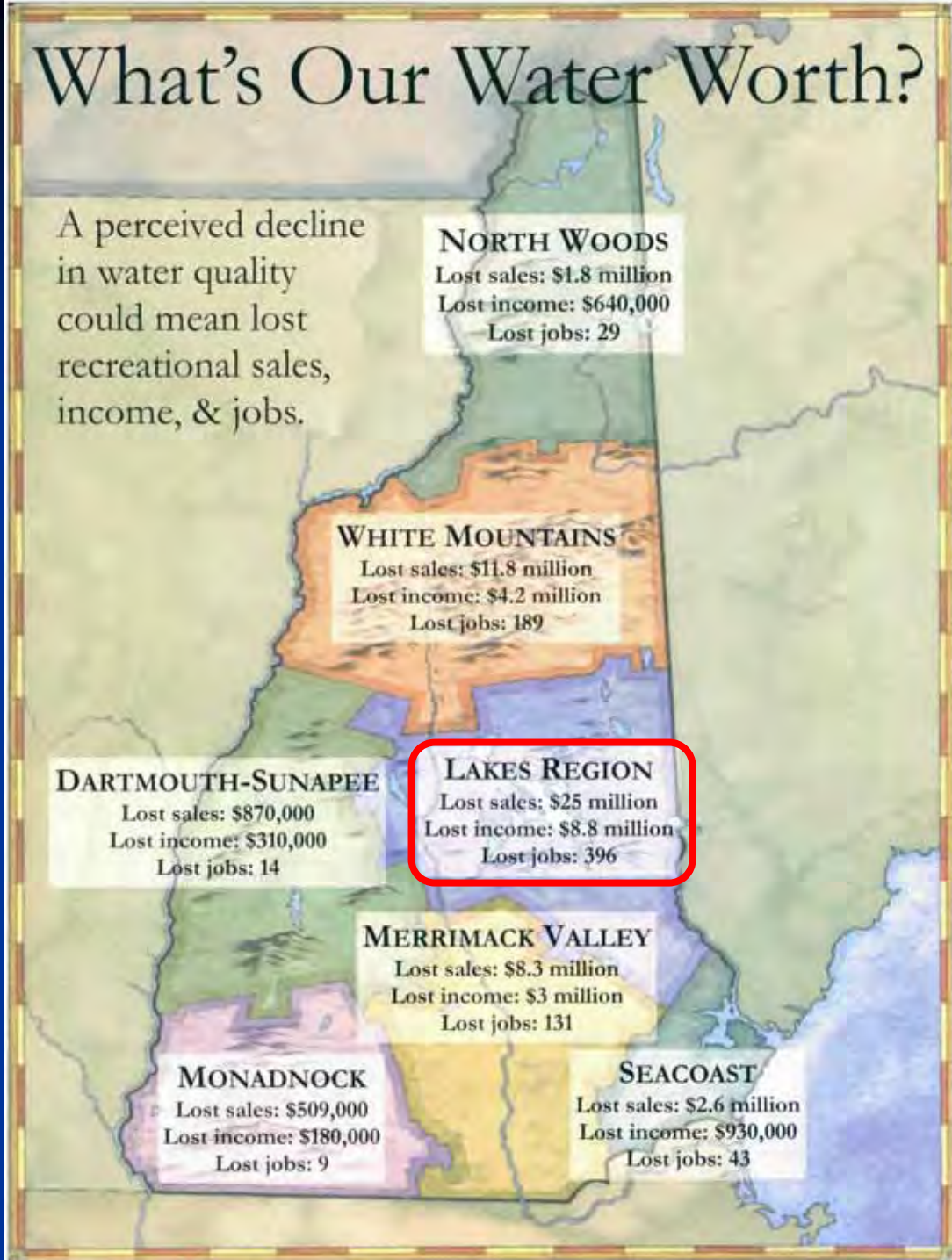
The Economic Impact of Potential Decline in NH Water Quality: The Link between Visitors Perceptions, Usage and Spending - 2006

- Fishing, boating and swimming together have the SAME economic impact as downhill skiing, cross-country skiing, snowmobiling and ice fishing COMBINED.
- The total sales generated by anglers, boaters and swimmers combined is nearly \$400 million, or 26% of summer spending.
- The total household income generated from fishing, boating and swimming related sales is about \$134 million.
- Just under 6,000 jobs (full-time and part-time) are generated by fishing, boating and swimming visits.

The Economic Value of New Hampshire's Surface Waters
(a multi-year, multi-phased study – phase 4)
2006

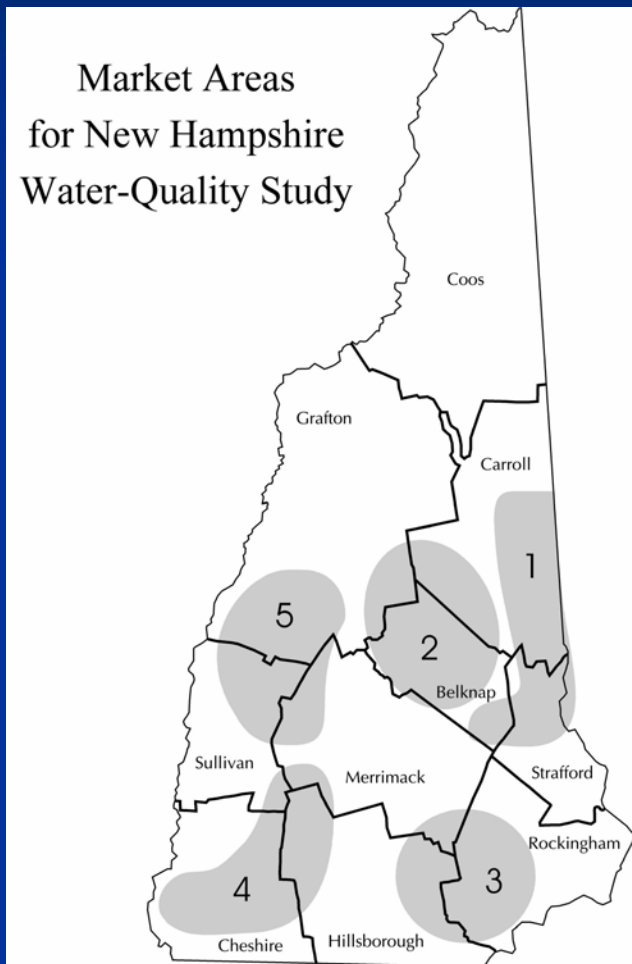
What's Our Water Worth?

A perceived decline in water quality could mean lost recreational sales, income, & jobs.



Economic Impacts: Water Clarity and Property Values

UNH Study (unpublished - 2000)



1. Lake water clarity affects prices paid for residential properties (76% of buyers surveyed asked about water clarity prior to purchasing)
2. A change in water clarity impacts property values (a change of one meter – about 3.3 feet – could impact the price from \$1,100 to \$9,800)

Economic Impacts: Water Clarity and Property Values Maine Study (1998)

Pushaw Lake:
north of Bangor
large – 5056 acres
relatively shallow
warm water lake

Forty million people live within a day's drive of Maine's lakes, and more are moving closer every day.



LAKES ARE FRAGILE

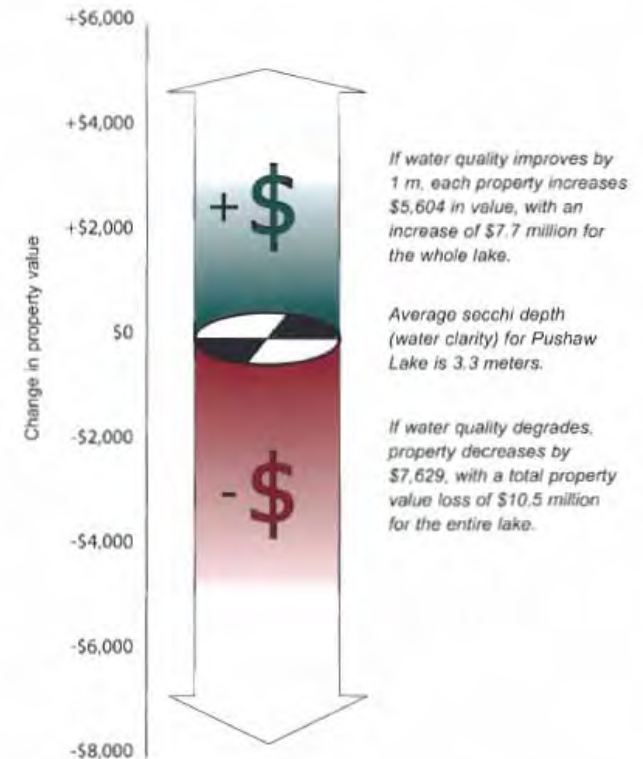
Lakes are a limited, non-renewable resource. A degraded lake may be partially restored, but lakes can, and do, reach a point from which recovery is not possible.

At least 26 of Maine's great ponds fall below state and federal standards for drinking water, aquatic life support, or human contact. Another 237 are at high risk of

impairment from development. Hundreds more lakes, which have not yet developed obvious problems, have been substantially shifted from their normal water quality. (Source: ME DEP).

Water quality affects property values around Maine lakes. But all of us, not just lakeshore residents, will lose if more lakes decline.

Changes in lakefront property prices on Pushaw Lake for a 1-meter change in water clarity.²



²Boyle, K.J., S.R. Lawson, H.J. Michael, & R. Bouchard. 1998. Lakefront Property Owners' Economic Demand for Water Quality in Maine Lakes. Maine Agricultural & Forest Experiment Station, Miscellaneous Report No. 410.

North Temperate Lakes' Study Ties Lakefront Property Values to Water Clarity - April 2005

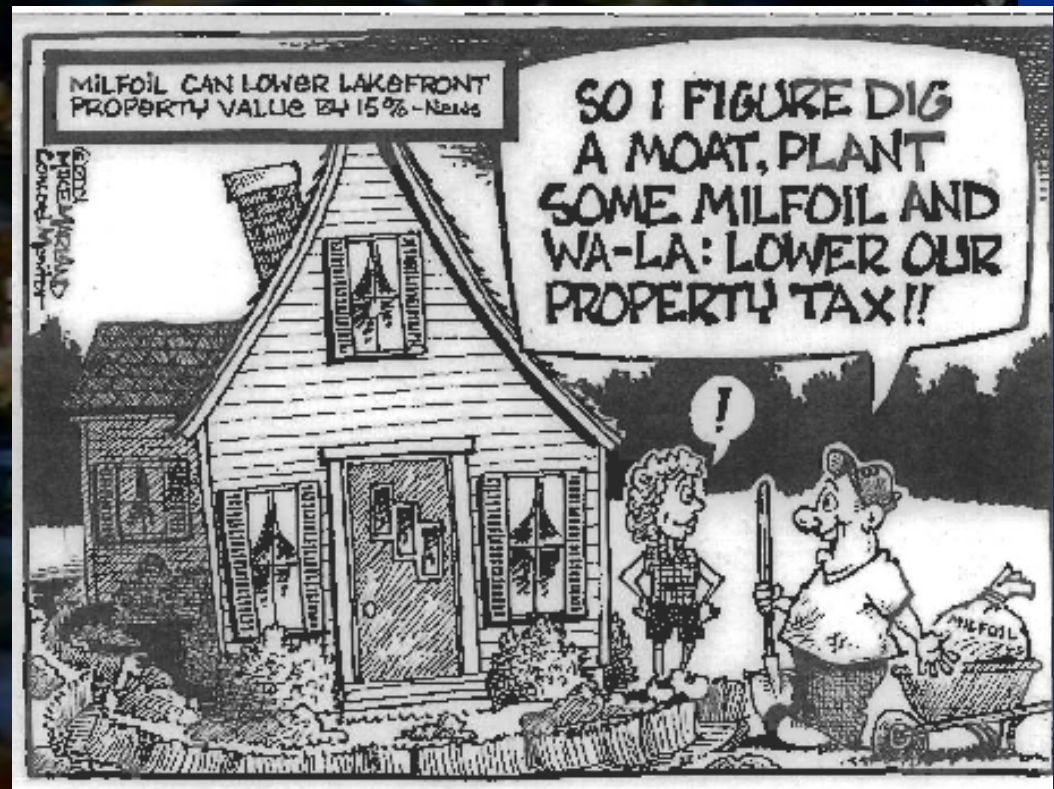
Wisconsin

- By merging economic valuation techniques used by social scientists and limnological data obtained via satellite, NTL-LTER has recently demonstrated important economic and ecological links among property valuation, shoreline zoning regulations, and water quality. In light of the rapid development of the lakes of northern Wisconsin, counties have created lake classifications and shoreline restrictions to reduce ecological impacts.
- Another factor included in the valuation was lake water clarity, as measured by Secchi depth derived from the Satellite Lake Observatory Initiative. Preliminary results indicate that water clarity also has a positive effect on lakeshore property values. At mean water clarity levels in Vilas lakes (3.25 meters), a 30 cm increase in Secchi depth raises the value of undeveloped lakeshore property by about 3.6 percent.

Economic Impacts: Exotic Species and Property Values

UNH Study (2001)

- 10 lakes analyzed
- Results showed a 15.9% decline in property values

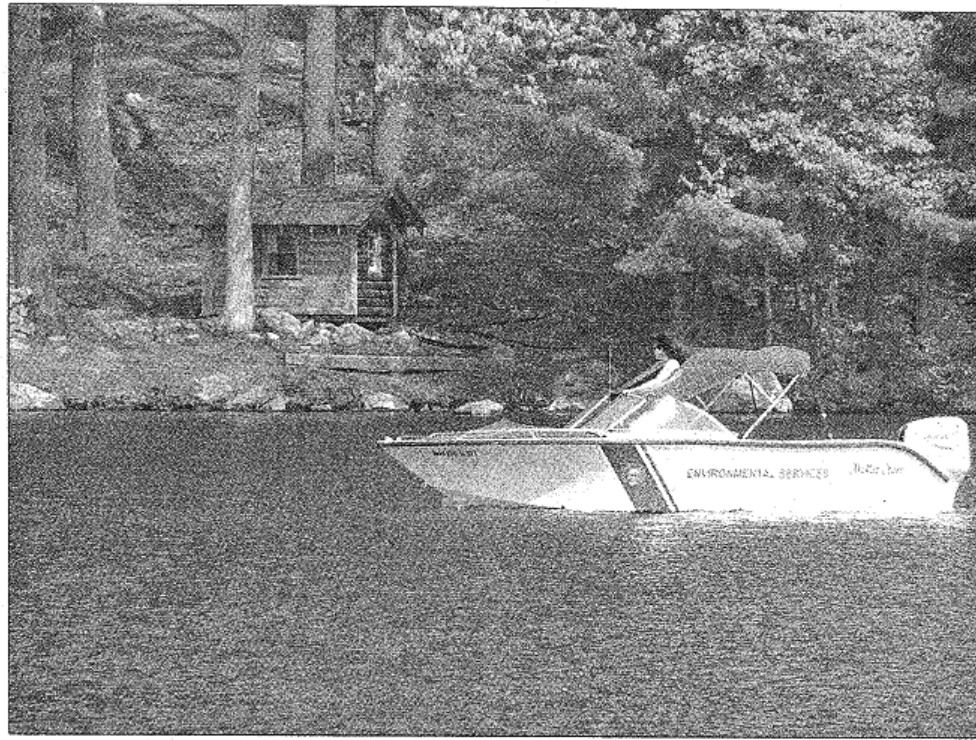


Roughly 71 percent of Moultonboro's entire tax base comes from the shorefront properties. The Milfoil Control Program has the primary goal of restoring our water resources to a healthier state. A secondary goal is protecting the value of the shorefront properties and consequently protecting the health of 71 percent of our town's tax revenue source. We believe it is a win-win for everyone in town. People who live on the lake get the lakefront water resource they want - people who live off the lake get a more favorable tax rate plus a cleaner water resource.



ROGER AMSDEN PHOTOS

Water milfoil, a fast-growing exotic plant shown above, has turned up in lakes all over the state. Amy Smagula of the Department of Environmental Services has been creating GPS charts of milfoil off Moultonborough Neck that will be used next month to apply a synthetic hormone designed to attack the plants in infested areas.



“Real estate turnoff”

... also poses an economic threat

Milfoil sinking property values along Winnepesaukee

◆ **Real estate turn-off:** Towns joining to fight the invasive weed.

By **ROGER AMSDEN**
Union Leader Correspondent

MOULTONBOROUGH — Variable milfoil, a non-native aquatic plant that now infests 64 lakes and ponds across the state, also poses an economic threat as well as an aesthetic problem for the state's largest lake.

drop in property values,” Jensen said.

“This is the part of the lake that milfoil seems to like best. We have a lot of coves and inlets with shallow water and that's where milfoil thrives,” said Jensen.

Moultonborough, which for years had relied on several cove associations to take the lead in treating milfoil infestations, this year established a \$200,000 milfoil control trust fund and through its milfoil committee has established a long term

with the bulk of the cost, \$26,369, coming from a grant from the New Hampshire Lakes Association in support of the innovative three-town approach.

Jensen said the units will be built over the winter and used to help pull the milfoil out of the lake after it has been treated with 2-4-D, a synthetic plant hormone which is applied from boats on infested areas, killing the plants and their root system.

Those treatment plans hit a

other parts of Greens Basin.

Jensen and Paul Daisy, another member of the Milfoil Committee, say the town would like to treat those areas this fall, now that the breeding season for the Bridle Shiners, a small minnow which is about two inches long, is over.

Fish and Game Executive Director Glenn Normandeau and Amy Smagula and Jody Connor of the Department of

Environmental Services met with the committee late last month to discuss the fall treatment issue.

Normandeau told the committee that legally a bridge shiner requires the exact same protection as, for example, a loon, but that the department doesn't see a problem with a fall herbicide treatment now that the breeding season is over.

Smagula said that as many as

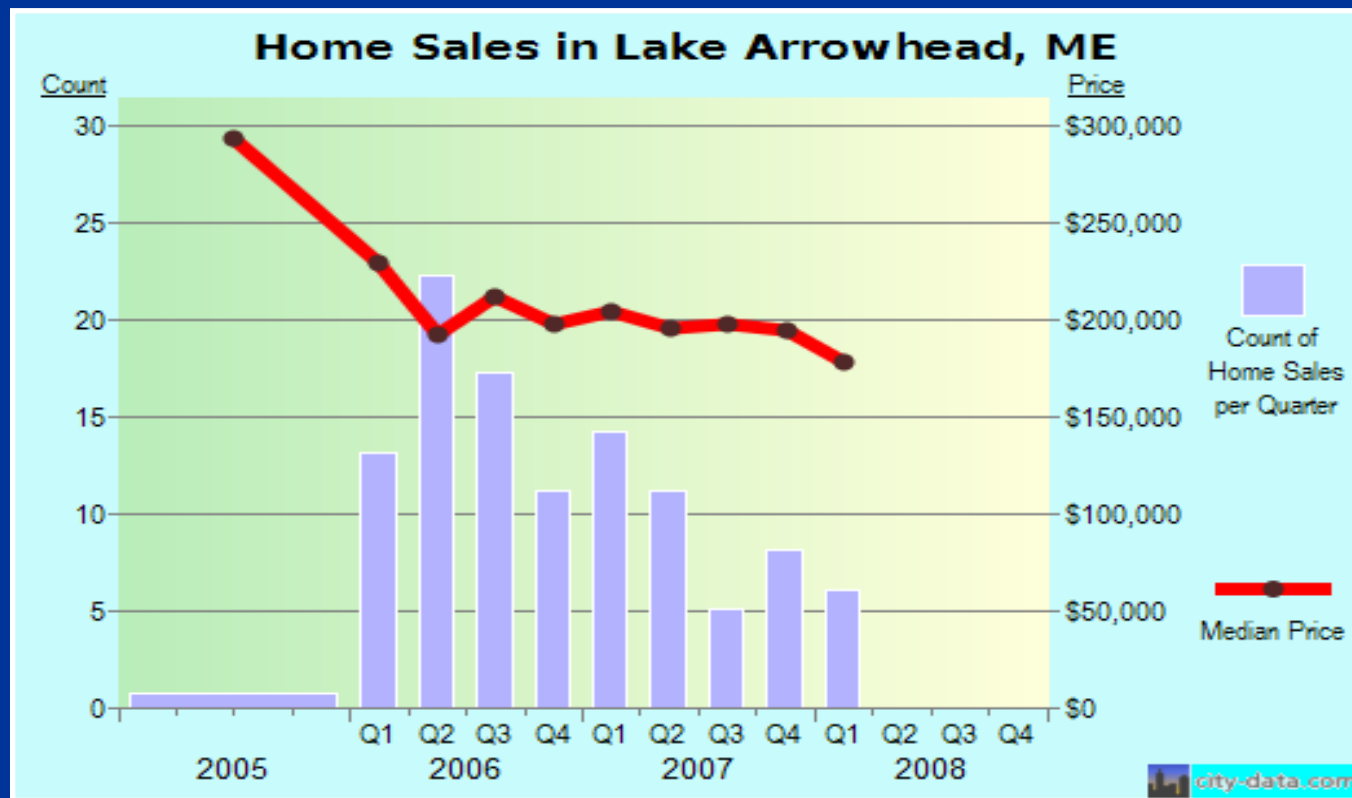
three treatments may be needed in successive years before the milfoil problem is manageable, but shouldn't last longer than that.

Jensen said Smagula has been mapping milfoil concentration around Moultonborough Neck this summer, providing GPS coordinates that can be used by contractors applying 2-4-D and that the committee hopes to treat those areas this fall.

Lake Arrowhead, Maine

Property Evaluations (2007)

“On Lake Arrowhead we reduced waterfront components of the land value by ten percent on all waterfront properties to recognize milfoil. We also tried to identify the individual properties that have a significant infestation problem and reduced these properties by an additional ten percent.”



Economic Impacts: Toxic Algae and Property Values



In NH, toxic algae is affecting:

- ✓ **Vacation choices**
- ✓ **Lake and beach visits**

Home sales?

**According to Dr. Jim Haney, UNH:
He is not aware of any research to
determine the impact of toxic
algae on property values.**



Economic Costs of Lake Restoration: Baboosic Lake, Amherst

Lake Characteristics: 222 acres; max depth 26ft.; Mesotrophic to Eutrophic

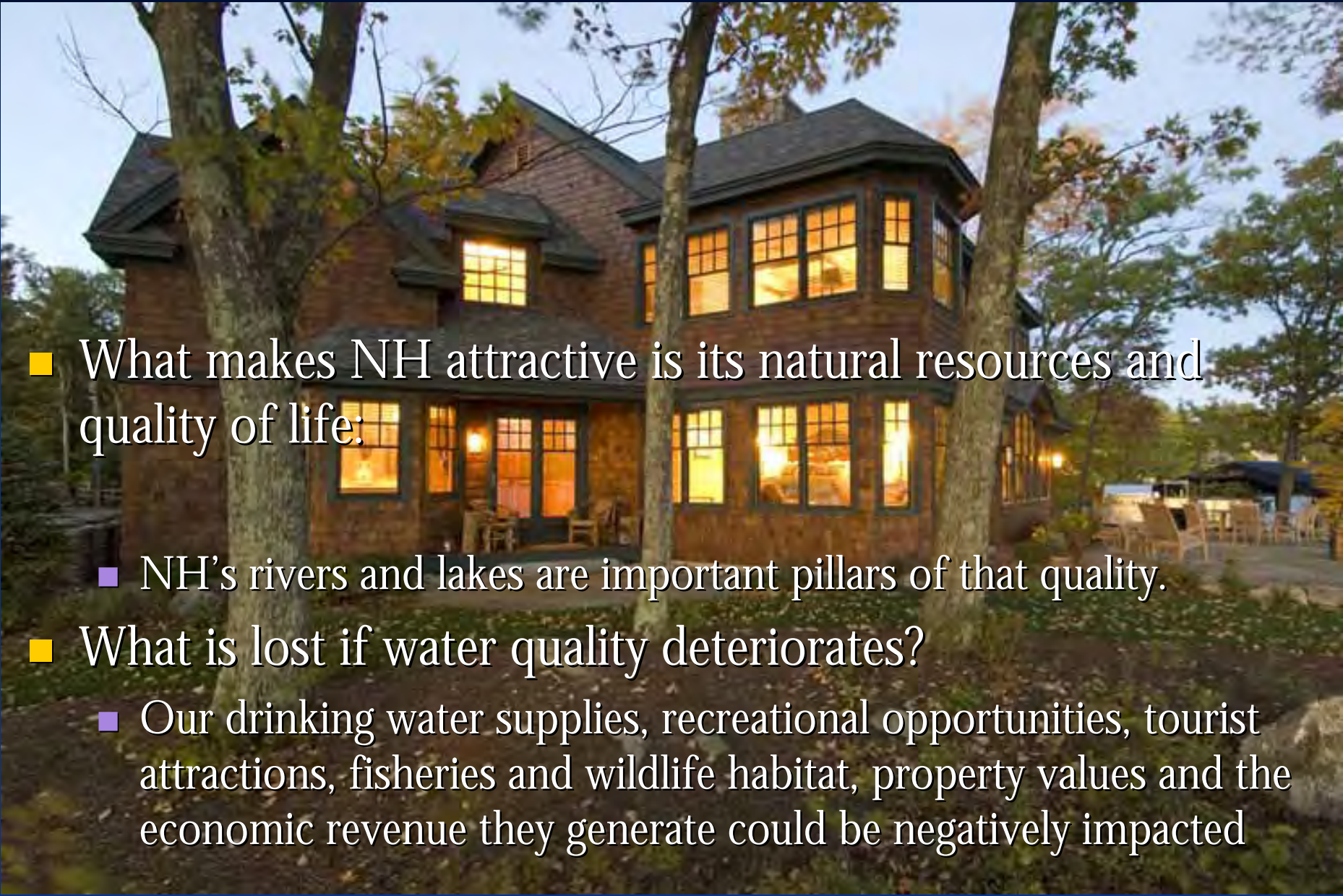
Problem: Older YR homes on small lots; older septic systems – phosphorus loading - increasing frequency of algae blooms

Project: 2002-09: Community Wastewater System – serving 35 homes

Total annual phosphorus reduction: >220 lbs/year



	Grant Amount	Local Match	Total (per phase)
Initial Proposal:	\$ 17,000		\$ 17,000
Phase 1:	\$159,933	\$142,171	\$302,104
Phase 2:	\$180,000	\$142,697	\$322,697
Phase 3:	\$144,105	\$478,922	\$623,027
Total (to date)	\$501,038	\$763,790	\$1,264,828

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- What makes NH attractive is its natural resources and quality of life:
 - NH's rivers and lakes are important pillars of that quality.
 - What is lost if water quality deteriorates?
 - Our drinking water supplies, recreational opportunities, tourist attractions, fisheries and wildlife habitat, property values and the economic revenue they generate could be negatively impacted

How Can You Help?

- First point of contact – you are not just selling a piece of waterfront property, you are selling a piece of an ecosystem
- Be familiar with the do's and don'ts and share this information with your clients
 - Maintain the green infrastructure
 - We are fortunate to have good water quality, everyone needs to understand that they must participate
- Ask the buyer what they are looking for – the house AND the waterfront should be a good fit.
 - Types of water based activities
 - Quiet cove or lots of activity

Good Development



Better Water Quality



Best Property Values