The Nelson A. Rockefeller Center at Dartmouth College
The Center for Public Policy and the Social Sciences
The Class of 1964
Policy Research Shop

The Value of Lake Champlain

Presented to the Vermont House Committee on Fish, Wildlife and Water Resources

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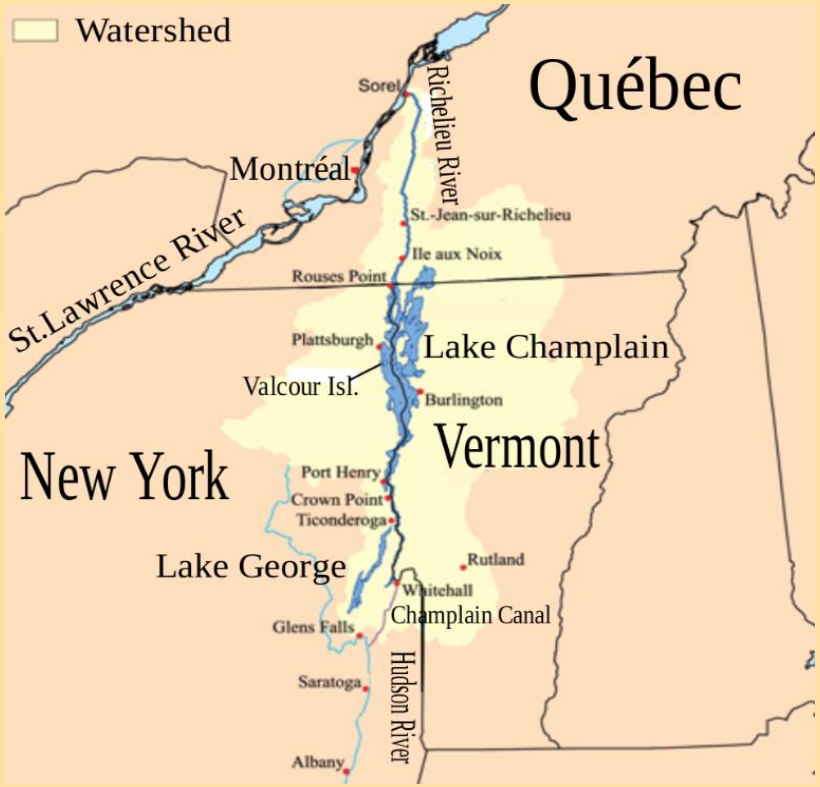
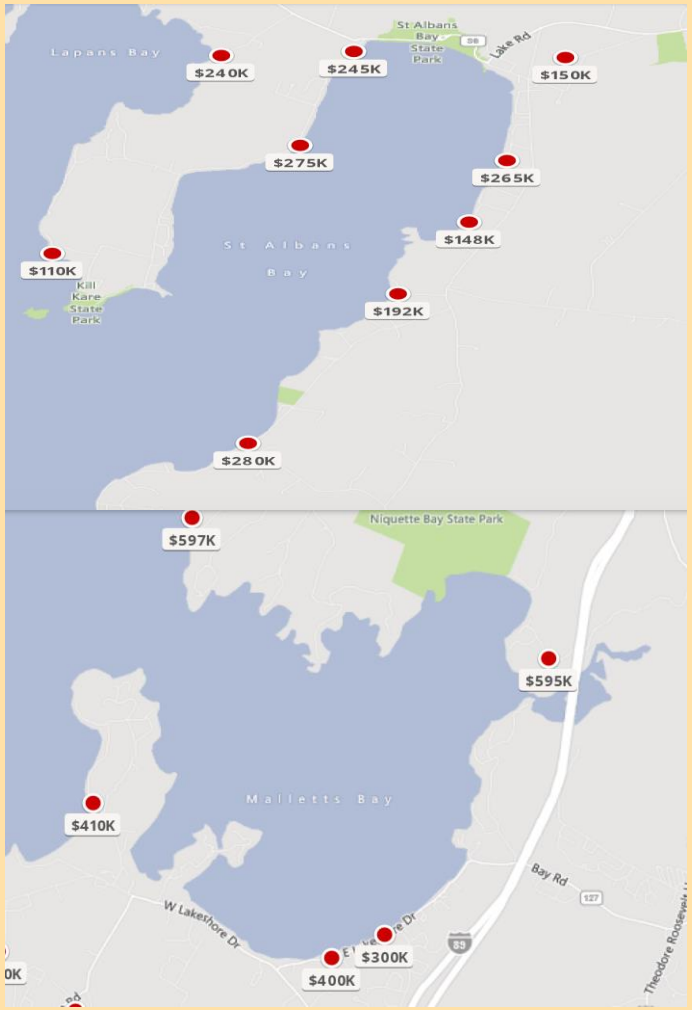
This report was written by undergraduate students at Dartmouth College under the direction of professors in the Rockefeller Center. Policy Research Shop (PRS) students produce non-partisan policy analyses and present their findings in a non-advocacy manner. . The PRS is fully endowed by the Dartmouth Class of 1964 through a class gift in celebration of its 50th Anniversary given to the Center. This endowment ensures that the Policy Research Shop will continue to produce high-quality, non-partisan policy research for policymakers in New Hampshire and Vermont.

Introduction

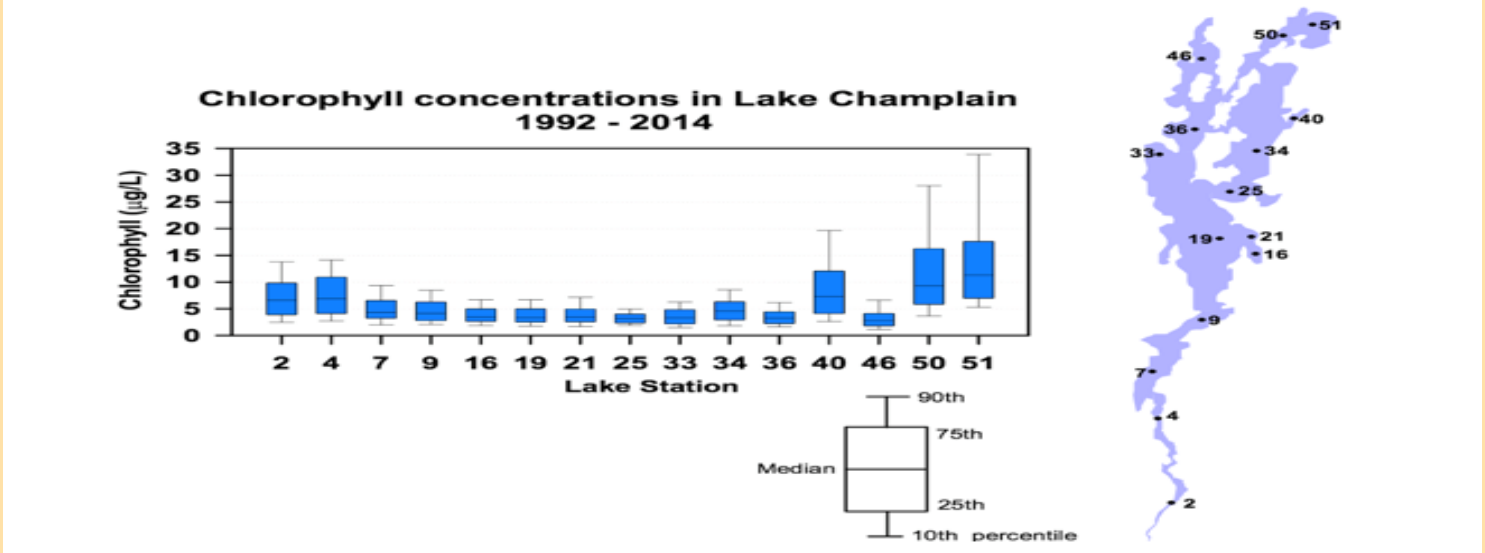
- Tens of thousands of tourists a year; cultural landmark
- Currently facing a serious phosphorous pollution threat from nearby farms and agricultural lands
- Two main sources of pollution:
  - Point Source (easily trace-able)
  - Non-Point Source (harder to trace)
- Economic value of Lake derived from:
  - Water Quality
  - Property Values
  - Tourism (fishing and boating)
  - Qualitative factors



Property Values



- Avg. value in St. Albans Bay is $219,000; avg. value in Malletts Bay is $460,000.
- Georgia decreased the property value of 37 homes by $50,000 each; $1,850,000 lost in taxes.



Property Values

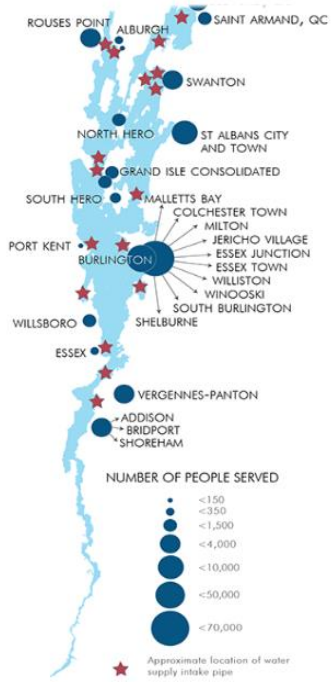
- Study conducted by Professor Brian Voigt at the University of Vermont revealed several significant conclusions about property on the lake.
- A one meter decrease in Secchi disk depth decreases the value of a seasonal residence by $53,000 and a single family dwelling by $4,900
- A one meter increase in Secchi disk depth increases the value of a seasonal residence by $61,000 and a single family dwelling by $5,700.

Table 2: Potential Impacts on Properties Bordering Lake Champlain

Impacts	Single Family Dwelling	Seasonal Residence
Future Phosphorous Impact	-$4,900	-$53,000
TMDL Clean-Up Impact	+$5,700	+$61,000

Water Quality

Figure 3. Sources of Lake Champlain Drinking Water



Source: http://www.lcbp.org/water-environment/human-health/drinking-water/

- Roughly 20 million gallons pumped from Lake Champlain daily
- Provides 145,000 people with drinking water (approximately 20 percent of the Basin population)
- Lake Erie algae bloom left 500,000 people without drinking water

Tourism

- $2.5 billion from tourism in Vermont
- $300 million generated by Lake Champlain
  - $72.75 million in spending and nearly 1,070 jobs
- Lake Champlain State Parks bring in $629,000 annually

Potential Losses for Tourism

- One-meter decrease in water quality as benchmark
- Could lead to $110,544 decrease in room expenditures in August and the loss of 195 full-time jobs
- $16.8 million annual economic reduction

Fishing

Table 3. Fishing Spending on Lake Champlain

Total spending by anglers on Lake Champlain	$205 million/year
Spending on nondurable goods such as tackle, bait, and refreshments	$100 million/year
Spending on durable goods such as fishing rods and fishing boats	$105 million/year
Number of fishing and fishing-related businesses within ten miles of Lake Champlain	98
Percentage of fishing-based income that owners of these businesses estimated were due to anglers fishing Lake Champlain	78 percent of $7.2 million ($5.6 million)

Source: Lake Champlain International, Inc. "Fishing: Economic Fa$t Fact$," 2010.

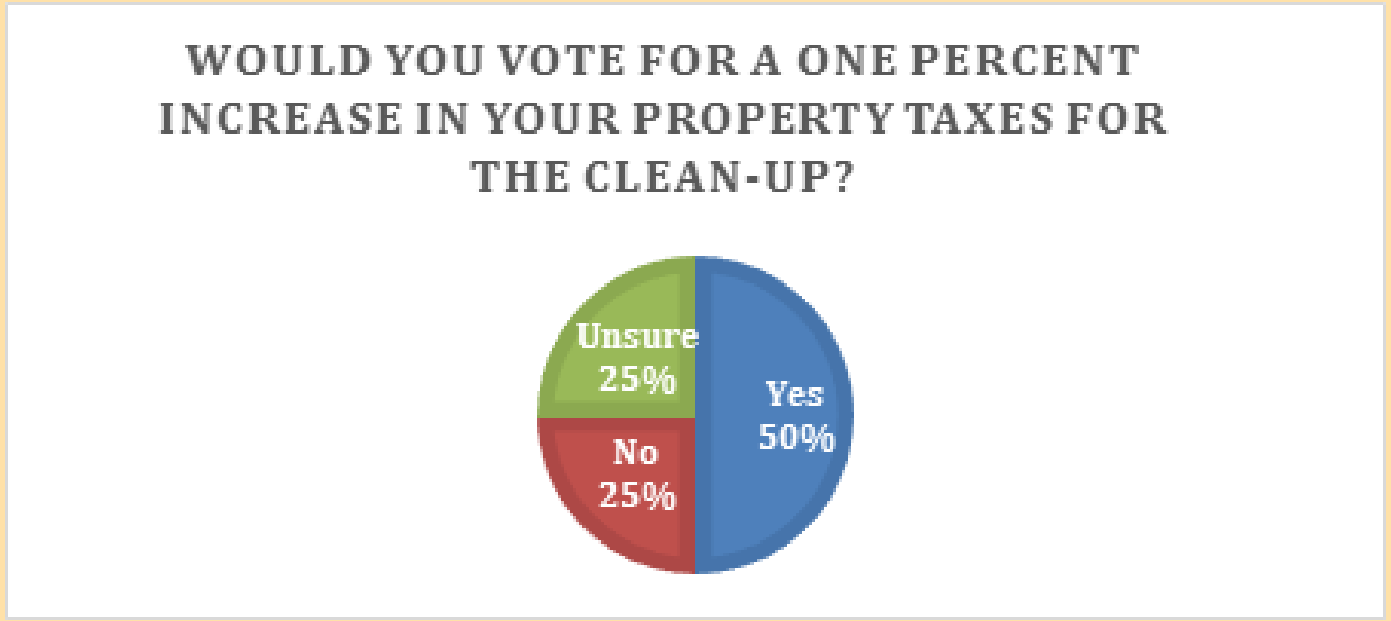
Results of Burlington Interviews

- Interviewed eight local business owners/managers in Burlington
- Perception of water quality evenly distributed
- Local perception differs from tourist perception
- Most effective technique for raising funds be direct-mail campaign, to not alienate tourists

Quotes

- “Our vision of what’s floating around in there is not always the best”
- “I have never really been disgusted with the Lake at any point.”

Results of Burlington Interviews



- "One percent:" arbitrary benchmark value
- Generally mixed
- Hypothetically agreeing to a tax is easier than actually paying it
- Remember: these are results in Burlington
- What about areas that do not border Lake Champlain?

Results of Town Manager Interviews

- Interviewed four town managers: Norwich, Westminster, Bethel, and Wilmington
- Recognize importance to State, but struggle to see importance to respective towns
- Act 64: Point of frustration
- Suggests that any statewide tax increase would face less opposition if based on proximity to the Lake

Annual Value & Property Values

Aspect Related to Lake Champlain	Annual Value
Drinking Water	$75,000,000
Tourism	$300,000,000
Lake Champlain State Parks	$629,000
Fishing	$205,000,000
Current Estimated Total	**$580,629,000**
Seasonal Property Value Increase if Cleaned	+$183,000,000
Minimum Value of a Clean Lake Champlain	**$763,629,000**

Annual Losses & Lost Property Value

Aspect of the Lake Affected by Pollution	Loss in Annual Value
Seasonal Property Value Decrease	-$159,000,000
Recent Decrease in Georgia Property Values	-$1,850,000
Lodging (one-meter water clarity decrease)	-$221,088
Tourism (one-meter water clarity decrease)	-$16,800,000
Total Decrease in Value of Lake Champlain	**-$177,871,088**

Moving Forward

- Tourism, Fishing, and Property main drivers of value
- Although we give Lake Champlain a "value," cannot capture what the Lake means to many people in monetary terms
- That said, Vermonters that are removed from the Lake may have to be taxed less
- Direct-mail campaign may be most effective way to notify Vermont public without harming tourism industry