



WATER RESOURCES RESEARCH GRANT PROPOSAL

Title: A Study of the Effect of Lake-Water Quality on the Prices of Lake-Front Property in Maine, New Hampshire and Vermont

Duration: September 1, 1997 - August 31, 2000

Funding: Total -\$51,822 -\$34,560 -\$86,382-Maine-New Hampshire-Total

Cost Share: -\$103,728 -\$70,134 -\$173,862

Principal Investigators:

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Congressional Districts: Maine 2nd, New Hampshire 2nd

Problem:

Protecting lake-water quality is an important issue in northern New England from recreational and aesthetic perspectives, as well as an economic perspective. A one meter improvement in lake-water clarity, using secchi disk measurements of transparency, can increase the price of a lake-front property by \$11 to \$200 for each foot of frontage on selected Maine lakes (Michael, Boyle and Bouchard, 1996). The research proposed here is to expand the Maine study to include lakes in New Hampshire and Vermont, and to include weed growth as a second environmental variable.

The proposed research will estimate the impact of lake-water clarity on the sale prices of lake-front properties in New Hampshire and Vermont, and the impact of weed (macrophyte) growth on sale prices of lake-front properties in Vermont. Extending the Maine study to include New Hampshire and Vermont lakes has several advantages beyond providing value estimates that are unique to each state. For example, New Hampshire has water-quality data primarily for lakes under 1000 acres of surface area and Maine has data primarily for lakes greater than this size. The joint model will provide more reliable estimates for large lakes in New Hampshire and small lakes in Maine. Vermont and New Hampshire have relatively fewer lakes than does Maine, and using

data from all three Northeast states provides opportunities for estimation that would not exist if Vermont or New Hampshire were studied independently.