

Article #: 79

Title: Okoboji Experiment: Comparing Non-market Valuation Techniques in an Unusually Well-defined Market for Water Quality

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Abstract:

This paper compares three different techniques to determine non-market value of water quality for the Okoboji Lakes region of northwest Iowa. The three techniques compared are:

- A site valuation based on differing property values across lakes.
- A market valuation by soliciting realtors' interpretation of observed price differences between properties.
- A contingent valuation of willingness to pay (or be compensated) for water quality changes.

The results for each technique are:

- The site valuation based on inputted property prices was \$12.83 per square foot.
- The market valuation based on realtors' estimate of price differentials was \$14.57 per square foot, based on 46% of the total value (\$31.67 per square foot) being attributed to water quality. When compared between East and West Okoboji (which generally have different water quality values), 46% of the difference in total value between these locations (\$39.12 per square foot) was \$13.58 per square foot.
- The willingness to pay for increased water quality was \$8.20 per square foot and the willingness to be compensated for decreased water quality was \$4.34 per square foot. The willingness to be compensated was particularly low because there was a 60% refusal rate to be compensated.

The results indicate that from 13 to 23% of the residence value (per square foot) can be attributed to water level increasing from a boating/fishing level to a swimming/drinking level. This represents a sizeable benefit if applied aggregately to Iowa or nationally.