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Title: The Effect of Water Quality on Rural Nonfarm Residential Property Values

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Abstract:

This study is an early effort to measure the demand for and value of improvement of water quality in streams, specifically small rivers and streams in Pennsylvania. This study utilizes the hedonic pricing model and uses real estate prices to attain its values. Specifically, the objectives of the study were:

- To estimate the relationship between water quality and the value of residential properties adjacent to small rivers and streams
- To estimate the effect of various components of water quality, such as acidity, dissolved oxygen, biochemical oxygen demand, and nitrate and phosphate levels, on the value of properties adjacent to small streams

This study shows that water quality, when measured as an index of measured characteristics or based on owners' perceptions, significantly affects the value of adjacent residential properties.

Of the various individual factors of water quality, only acidity was consistently a factor when properties are adjacent to clean streams but has no effect when properties are adjacent to polluted streams, which is probably due to the need for pH increases to already be within a certain range to have any effect. This study also accounted for several characteristics related to the property and house itself that expectedly have impacts on the value of the property.