

Article #: 75

Title: Recreational and Aesthetic Value of Water Using Hedonic Price Analysis

Authors: Notie H. Lansford Jr. and Lonnie L. Jones

Journal: Journal of Agricultural and Resource Economics; Vol. 20, Issue 2

Date: 1995

Pages: 341-355(12/4/2008 KB)M

Abstract:

This paper provides information regarding recreational and aesthetic (RA) value for Lake Travis, a central Texas lake in the chain called the "Highland Lakes". To capture the complete RA value, the value to property for those who live near the lake, the value to persons living outside the immediate area who travel to the lake for recreation and the existence, bequest, and option values for those who do not use the lake but value it inherently must be calculated. However, this paper uses the hedonic pricing model to determine RA value for local residents by considering how proximity to the lake affects property prices. The other two components of RA value are not considered in the scope of this study. This paper also estimates the marginal value of water for varying lake levels.

The paper finds that waterfront property commands a premium reflected in the property price, but the price decreases rapidly with increasing distance to the lake. The premium paid is estimated by the model to range from \$79,000 to \$102,000. Recreational value is shown to decline at the rate of \$6.19 per foot at 2000 feet from the lake but the rate of decline is significantly higher when closer to the lake (\$56 per foot) and the rate of decline drops with increased distance to the lake (\$5.41 per foot at 3000 feet). The total RA value of property surrounding the lake is over \$49 million, based on 3,672 single family residences located within 2,000 feet of the lake with an average RA price of \$13,389. On average, RA price is estimated at 15 percent of the current location price. Of this 15 percent, 75 percent is captured in the price of waterfront properties, demonstrating the premium paid for these locations. In addition, relatively low lake levels make lakefront properties look less appealing and depresses their value. The marginal RA value declines by \$110-\$136 per acre-foot of water level decrease, depending on the lake level because decreases in water level when the lake is already low has a greater effect. In other words, the average size Lake Travis residence is estimated to be worth \$6,800 more on average if the lake is at its long-term average level rather than six feet below normal. Maintaining normal water levels and avoiding wide fluctuations in water level is important in maintain thousands of dollars of property value.