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10-16-1981

# Impacts of Rural Water System Development on Households and Rural Properties

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## Recommended Citation

Janssen, Larry, "Impacts of Rural Water System Development on Households and Rural Properties" (1981). *Economics Commentator*. Paper 169.

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# Economics Newsletter

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No. 173 October 16, 1981



Impacts of Rural Water System Development on Households and Rural Properties  
by  
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Rural water system development in South Dakota continues at a fast pace, with over 70,000 South Dakota residents being served by large-scale rural water systems in 1981. Most current and proposed systems involve low-interest federal loans and grants. Consequently, the general taxpaying public has an interest in the development and impacts of the state's rural water systems.

Household and property impacts of large-scale rural water system development were examined in a 1979 case study of the Brookings-Deuel Rural Water System (BDRWS). This system, constructed during 1976-1978, serves over 1,150 individual farm, rural acreage, village and lakefront households. The system serves almost one-half of all rural households in its service territory. The residents in lake households are seasonal, while residents in most other rural households are permanent.

## Household Impacts

Rural water system member and non-member households living in the service territory were compared to determine if rural water systems attract retired families, non-farm families, younger families with more children per family and/or residents with higher income and education levels. Member/non-member comparisons were made after controlling for the effects of length of residence and location. Results are based on responses from 272 township households and 70 lake households.

## Township Households

Only one-eighth of BDRWS member households were retired families com-

pared to 30% for non-member households. The numbers of retired farm and retired non-farm households were about the same.

For actively employed households, similar proportions of BDRWS members and non-member were farm families. The proportions of farm families receiving off-farm income, farm operators with non-farm employment and women with non-farm employment did not differ between member and non-member households.

Married couples or widowed individuals lived in 94% of the households. One-seventh of the households were occupied by only one person. The number of adult residents did not vary between BDRWS members and non-members. However, the median adult age was 10 years younger in member households. The median age of adults in BDRWS households was 47 years compared to 57 years in non-member households.

A much higher proportion of BDRWS households reported children living at home--55% compared to 29% for non-members. The number of children per household with children did not vary much between BDRWS members and non-members.

Rural water system member households had much higher annual incomes than non-member households. This finding holds for both actively employed and retired households. Sixty-eight percent of member households and only 44% of non-member households reported annual income levels exceeding \$10,000 in 1978.

## Lake Households

The profile of lake households differed from that for other rural residents. Few lake households were involved in farming, compared to three-fifths of township households. Lake households had much higher annual incomes, more education, and different family age patterns than township households. As with township households, BDRWS lake households had much higher incomes than non-member households.

incomes than non-member households. Members generally lived in newer lake homes and used their lake residence more days per year. Otherwise, there were no major differences between lake household BDRWS members and non-members.

### Overall Findings

This study shows BDRWS members to have higher incomes than non-member families. BDRWS member families (except for seasonal lake residents) are younger and a higher proportion have children than non-members. Most members (except lake household users) did not rely on the rural water system for their entire water needs. Less than one-sixth of farmer members, one-half of township households and 85% of lake household members relied on the system for all of their rural water needs.

### Property Impacts

Local realtors, active in rural real estate markets, were interviewed to obtain their judgment on the relative influence of rural water system development on farm, rural acreage, and lakefront real estate values.

Realtors indicated that about one-half of prospective buyers inquire about the availability of rural water system hookups. Larger proportions of buyers inquire about other factors such as school districts, access to paved roads and distance from nearby towns. Overall, rural water hookups were considered as positive marketing points for selling rural properties. Conve-

nience, reliability and assurance of good quality water were considered as the strongest marketing points in favor of the rural water system.

Most realtors indicated rural water hookups had no impact on farmstead property values if sufficient good quality well water is available for household and livestock use. For rural acreage and lakefront lots with existing wells and good quality water, realtors estimate a rural water hookup increased property values from \$500 to \$2,000. If poor quality water or poor condition wells are present, however, realtors estimated rural water system hookups to increase property values from \$2,000 to \$5,000.

### Conclusion

Overall, a rural water system is only one of several factors involved in rural social and economic development. This case study of the Brookings-Deuel Rural Water System shows little evidence that initial rural water system development was a major factor in location and housing-related decisions of members and new residents. Rural water systems, however, increase water source options and improve the quality of life for many rural residents. These and other benefits should be carefully considered relative to the rising costs of public subsidies for rural water systems.

2500 printed for educational purposes at an estimated cost of 2¢ each

Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the USDA, Hollis D. Hall, Director of Cooperative Extension Service, SDSU, Brookings. Educational programs and materials offered without regard to age, race, color, religion, sex, handicap or national origin. An Equal Opportunity Employer.

Cooperative Extension Service  
U. S. Department of Agriculture  
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