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## Review of "Nebraska Residents' Perceptions of the State's Water Quality" by S. Kay Rockwell, Ann Ziebarth, DeLynn R. Hay, and Shirley M. Niemeyer

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**Nebraska Residents' Perceptions of the State's Water Quality.** S. Kay Rockwell, Ann Ziebarth, DeLynn R. Hay, and Shirley M. Niemeyer. Lincoln, NE: University of Nebraska Cooperative Extension and the Water Center, 1991. 38 pp. Tables and appendix. \$4.50.

On the basis of national program initiatives, the Nebraska Cooperative Extension staff identified three high priority needs for the 1990s related to agriculture. These needs are to increase agricultural profitability, conserve and manage natural resources, and enhance water quality. This book focuses on water quality, especially with respect to domestic drinking water.

The investigators obtained 877 completed mailed questionnaires from an original sampling frame of 2,000 households stratified by city size. Forty of the questionnaires were returned as nondeliverable or as "addressee deceased." Thus, from the remaining 1,960 potential households, the response rate was 44.7%. This response rate is adequate, but the findings should be interpreted cautiously since the existence or nature of sampling bias is not clear. Responses are weighted by town size for statewide estimates, but are not weighted by other parameters such as age and sex.

In addition to statewide estimates, comparisons are made between farmers and nonfarmers, males and females, and by residential location.

Statistical significance of differences was measured through t- and chi square tests and only bivariate analyses are reported.

Among the many findings, one of the most alarming is that more than three-fourths of the respondents said they disposed of old paint cans and paint, empty chemical and pesticide containers, lawn fertilizer bags, and paint stripper and cleaner by putting them in the trash. Fewer than one in ten reported saving hazardous household waste for a community hazardous waste collector. Perhaps some of this potentially dangerous behavior arises from respondents' lack of information about hydrology. Only 23.2% knew that ground water exists in the "space between oil, sand, and/or gravel particles" (24.3% thought it exists as a "network of underground rivers"). Less than half (42.0%) understood that "most rain and snow enters the soil and either evaporates or is used by plants." A select few (12.7%) knew that ground water in an aquifer moves "about 1 to 3 feet per day."

On the more hopeful side, a majority of Nebraskans recognized that such things as industrial and household chemicals, agricultural and lawn pesticides and fertilizers, medical wastes, and livestock wastes are potential contaminants of ground water. Furthermore, when asked about nitrogen fertilizers and pesticides, large majorities agreed that their use on agricultural lands, public lands (parks, golf courses, roadsides, and so on), and urban lawns and gardens should be regulated. Among the choices presented to them, the preferred forms of regulation were requiring soil and water testing and requiring those who apply these chemicals to complete a short course and become certified.

When asked how likely they were to use various sources of information to learn more about water quality issues, respondents favored newspapers (84%), newsletters (71%), television (60%), discussions with friends, neighbors, relatives (58%), and radio programs (54%). Small percentages said they would use computer networks (3%), recorded telephone messages (8%), and short courses/workshops with prior registration requirements (11%).

Some of the important educational recommendations based on the survey include increasing public knowledge about the movement of ground water and its effect on water quality, domestic water conservation, management practices for household hazardous waste and for water and chemicals on

turf, gardens and agricultural lands, and programming that assists public involvement in regulatory policy formulation. **J. Allen Williams, Jr.**, *Department of Sociology, University of Nebraska-Lincoln.*