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PRESS RELEASE

The U.S. Geological Survey is pleased to announce the release of *Relations between Retired Agricultural Land, Water Quality, and Aquatic-Community Health, Minnesota River Basin* by VG Christensen, KE Lee, JM McLees, and SL Niemela, published in this month's issue of the Journal of Environmental Quality. The study demonstrates importance of agricultural land retirement on water quality and aquatic-community health in the Minnesota River Basin. Eighty-two sites were examined in cooperation with the Minnesota Pollution Control Agency and the Minnesota Board of Water and Soil Resources. The study examined nutrient concentrations, measures of aquatic-community health, and environmental factors. The importance of the proximity of agricultural land retirement to streams also was determined by examining land retirement in riparian zones. The index of biotic integrity (IBI), a measure of the health of the fish community in a stream, was not correlated to the percentage of agricultural land retirement at the basin scale, however, IBI was correlated to retired land percentage in the 50- to 400-m riparian zones surrounding the streams, indicating that riparian agricultural land retirement may have more influence on aquatic-community health than does agricultural land retirement in upland areas. Statistical models indicated that other environmental factors (such as drainage area and lake and wetland features) commonly were correlated to aquatic-community health measures, as were in-stream factors (standard deviation of water depth and substrate type). These results indicate that although agricultural land retirement is significantly related to fish communities as measured by the IBI scores, a combination of basin, riparian, and in-stream factors act together to influence IBI scores. The full report can be obtained from the Journal of Environmental Quality. For more information on the study, contact Victoria Christensen (vglenn@usgs.gov).

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