Pesticide Concentrations in Wetlands on the Lake Traverse Reservation, South Dakota and North Dakota, July 2006

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During July 2006, water samples were collected from selected wetlands within the historic Lake Traverse Reservation boundary in northeastern South Dakota and southeastern North Dakota as part of a reconnaissance-level assessment by the U.S. Geological Survey (USGS) and Sisseton-Wahpeton Oyate (SWO) Sioux Tribe. The wetlands were sampled by the SWO and USGS personnel after primary pesticide application occurred on the Lake Traverse Reservation. Samples were analyzed for pesticide compounds and physical properties that might help further characterize the water quality of the wetlands.

Water samples were collected from 18 wetlands and were analyzed for 61 widely used pesticide compounds. Pesticides were detected in 17 of the 18 sampled wetlands. In the 17 wetlands in which pesticides were detected, the number of pesticides detected ranged from two to eight. Of the 61 pesticides for which the samples were analyzed, 51 pesticides were not detected in any of the wetland samples. Ten pesticides were detected in water samples from at least one of the wetlands at low concentrations. None of the pesticide concentrations exceeded any U.S. Environmental Protection Agency Maximum Contaminant Levels for drinking water, and concentrations were much less than levels considered toxic for humans or aquatic species. This presentation will provide background information and results of the pesticide sampling in the Lake Traverse wetlands.

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