

PULLMAN HEALTH SY Pullman Health Systems, Inc. Water Quality Project  
- 1987 : summary report  
Water Quality Pro

**\*\* SUMMARY REPORT \*\***

The Pullman Health Systems, a Community and Migrant Health Center, located in Pullman, Michigan conducted a water quality assessment project of water from migrant and seasonal wells serving this population in the summer of 1987. The majority of support for the project's expenses came from a \$7,000.00 Grant received from the National Water Demonstration Project in Washington, D.C. The project was a cooperative effort that involved the Pullman Health Center staff, local migrant education agencies, Cooperative Extension Service, the Michigan Department of Public Health, area growers and migrant and seasonal workers.

The following is a brief description of the project design and findings related to the actual well testing component of this project.

In early June of 1987 a total of fourteen (14) area growers, migrant and seasonal homeowners and three (3) institutions serving migrant families were recruited as participants in the study. By mid June each participant's well had been sampled by collecting three (3) specimens. The first specimen collected was analyzed for nitrate, iron, sodium, hardness, chloride, fluoride and conductivity; the second specimen collected was analyzed for bacteria and the third for P.C.B.'s, pesticides and organic volatiles. Well sites were selected from areas of known contamination or at risk for contamination due to geologic, demographic and land use practices. The contaminants

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tested for were based on routine measures used to determine potable water and the most frequently used agricultural chemicals.

The Michigan Department of Public Health tested the specimens collected for partial chemistry and bacteria. Muskegon Waste Management Services, a private laboratory tested the specimens collected for P.C.B.'s, pesticides and organic volatiles. Both labs are E.P.A. approved.

An evaluation of the test results indicated that some wells posed potential health hazards with either short or long term use. Specific contaminants are listed below that were of concern.

<u>Contaminant</u>	<u>Contaminant Range</u>	<u>Safety Limit</u>	<u>% of Wells Contaminated</u>
Nitrate	.8 - 7.4 ppm	10 ppm	50%
Chloride	22 - 102 ppm	250 ppm	36%
Sodium	12 - 86 ppm	250 ppm	14%
Bacteria	0 - 84 MF Coliform Count/100 ml	0 MF Coliform Count/100 ml	29%
Pesticides	0	.02 - .14 ppb	0%
P.C.B.'s	0	0 - 4.0 ppb	0%
Volatile Organics	0 - .28mg/L	0 - 280 mg/L	1 well

All well owners were mailed their individual results and informed of appropriate action to be taken if needed. The Michigan Department of Public Health was notified of all results with a district sanitarian conducting needed follow-up testing in licensed migrant camps.

The Pullman Health Systems Board of Director's evaluated the water project's progress toward meeting the goal of assessing quality in fourteen (14) selected sites on July 13th, 1987. The Board also determined policy and guidelines for the release of specific well sites and results and recommendations to project participants. They concluded that the goal had been satisfactorily met, that abnormal

results would be reported to participants as soon as possible and that discretion would be used in releasing specific data about individual wells. The Board discussed the well results and supported a plan to test wells for increasing nitrate contamination on a yearly basis. They recommended that the Pullman Health Systems request funds from the National Water Demonstration Project again in 1988 to accomplish this task, as well as explore other possible funding sources to maintain annual monitoring of especially non-licensed housing used by migrants that provide well water.