



The State of Michigan has identified the on-site water supply program as a “required” program that Public Health Muskegon County (PHMC) must participate in, making it a core program. The legislation delegating authority for regulation comes from the Michigan Public Health Code. There are more than 20,000 households and approximately 200 businesses in Muskegon County that utilize well water, with new ones being constructed daily. The Environmental Health Division is responsible for each one of these through permitting, inspections and approving each individual water supply location and construction. Safe drinking water is vital to the health and safety of our community. Ensuring water quality is not jeopardized in Muskegon County and protecting one of our greatest resources is a primary function of the Environmental Health Division.

Victoria Webster, RS, MPA
Environmental Health Supervisor

Staff and Roles

Environmental Health Supervisor
Victoria Webster, RS, MPA

Environmental Quality Sanitarians
Adam Rosema, BS
Kathleen Gardner, BS

Clinic Clerk
Penny Boynton

Environmental Health Coordinator
David Baldwin, RS

Stefanie Freeland, BS
Josh Maitner, BS

Basis for Program

The Environmental Health Division oversees the On-Site Water Supply Program. The legislation delegating authority for regulation and oversight of onsite water supply systems for both homes and businesses in Muskegon County comes from the Michigan Public Health Code. The State of Michigan has identified the on-site water supply program as a required program. Mandatory program requirements include permitting of new and replacement well installations and investigation of all complaints regarding well construction and ground water quality.

There are more than 20,000 households and businesses in Muskegon County utilizing ground water as their drinking water supply. The Public Health concerns associated with well water usage are twofold. First, Sanitarians work to reduce the risk of disease to water users stemming from improperly constructed water supply wells. Second, Sanitarians work to reduce the threat of contamination to the source of the drinking water supplies.

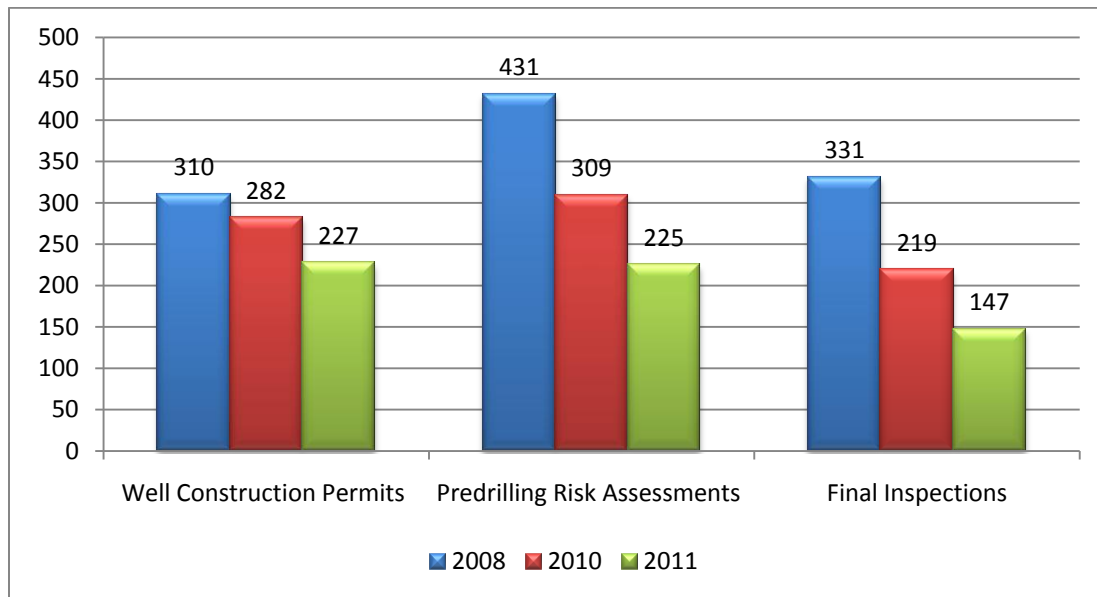
Purpose of the Program

The purpose of the Onsite-Water program is to prevent use of high risk use of contaminated water supplies.

Community Data

Sanitarians work closely with our partners to identify potential areas of ground water contamination and eliminate contamination sources. Residents are urged to contact us if their water quality changes. There are many potential sources of contamination so any change in odor; taste or consistency is taken very seriously.

227 Well Construction Permits issued in fiscal year 2011. 58 Public Water Supplies inspected. 810 water quality reports downloaded to the state database and evaluated to ensure the public water supplies were in compliance. 3 public water supplies had contaminant violations in fiscal year 2011. All three of the supplies were seasonal, and had violations prior to putting the supply in use for the season. One supply was permanently taken out of service; the other two were chlorinated, flushed and resampled according to federal protocol. The sets of confirmation samples had no detectable bacterial colonies, and the supplies were put into service.



Community Value

There is the potential for disease transmission from improperly constructed well installations. There is the potential for ground water contamination to the supply. PHMC has completed a source water assessment survey (SWAS) for every public, non-community water supply in the county. According to these surveys, the predominant geology of Muskegon County provides moderately high-risk source susceptibility. This risk is present due to the well-drained, unconsolidated glacial til (i.e. sand) found throughout Muskegon County. Protective barriers are not common. Generally, chemicals, fertilizers and pesticides applied at the ground surface will eventually leach to the relatively shallow water table, where many residents obtain their drinking water. This same geology provides the majority of Muskegon County residents with high quality, aesthetically pleasing water in large quantities. Because the drinking water aquifers are so shallow, Muskegon County residents can extract water at very low cost.

The federal interstate commerce laws make local regulatory oversight of the sale of potential contaminants, and unsafe well construction supplies illegal. The Environmental Health Inspectors (Sanitarians) inspect water well construction on every new drinking water well, irrigation and supply well in the county. The construction inspection is to ensure that all state regulations are met to prevent contamination of the water supply AND contamination to the ground water. Well permits are issued AFTER a complete risk assessment is completed. The risk assessment includes research on potential and known sources of contamination and aesthetic water quality. Minimum construction standards are included as permit conditions. The Sanitarian cannot always predict what exists 30 to 300 feet below the ground surface. There are areas of Muskegon County where clay extends from just below the ground surface to shale deposits and brine 500 feet below grade. The Sanitarians make every effort to assist the property owner and/or resident in obtaining the highest quality water supply at sufficient capacity for the intended use without expending unnecessary resources.

Concerns faced by Sanitarians, and by extension Muskegon County Residents include:

- Moderately High Risk aquifers, with no protective overburden. What is applied at the surface will leach to the water. Nitrates, gasoline and oil are all common contaminants in area wells.
- It is difficult or impossible to get legal or safe well construction in some parts of the county. These areas are relatively well mapped, so test wells are often required before an applicant can obtain a building permit.
- Oil and gas well exploration was extensive in the county. This adds another layer of complexity to issuing well permits and applying minimum construction requirements. The well construction requirements for

a well installed in the vicinity of an old oil well are drastically different from typical construction criteria. The Sanitarian must do a risk-based analysis to determine the best course of action to obtain a safe drinking water supply.

Fiscal Year 2011 Financial Information (Unaudited)

Revenues:	FY 2011 Actual	FY 2011 Percentage
Intergovernmental Revenue	\$89,464	47.91%
Medicaid	\$0	0.00%
Fees	\$72,042	38.58%
Access Health	\$0	0.00%
Transfers In	\$25,222	13.51%
Total Revenues	\$186,728	100.00%
Expenditures		
Program Salaries/Fringes	\$138,008	73.91%
Other Program Expenditures	\$48,720	26.09%
Total Expenditures	\$186,728	100.00%

