

Septic Regulation Success Stories in Northern Michigan



Situated between northern shores of Lake Michigan and Lake Huron, Northern Michigan has picturesque inland lakes, blue-ribbon trout streams, towering coastal dunes, and an adventure around every corner. Northern Michigan's waters are the backdrop for our communities.

However, our northern waters continue to be threatened by improperly maintained and failing septic systems due to the lack of a statewide septic code. Public health officials in Michigan believe reported septic system failures represent only a fraction of the total number of failures statewide, and many go undetected or remain unreported for years. In fact, once installed, most on-site septic systems in the state are never inspected again. This poses not only an environmental hazard, but a public health and safety risk.

A failing or improperly-maintained septic system can introduce nutrients, bacteria, viruses, pharmaceuticals, and other pollutants to our lakes, streams, and wetlands, which can lead to increased algae blooms, unhealthy ecosystems, and unsafe swimming conditions. The pollutants found in septic leachate also have the potential to contaminate groundwater, presenting significant public health concerns.

The good news is that we can look to successful examples of local governments in Northern Michigan that have acted to protect healthy drinking water, maintain our high-quality surface water, and ensure the general health and welfare of their citizens by adopting septic ordinances.

Overview of the Programs

Milton Township, the Village of Elk Rapids, and Kalkaska and Manistee Counties have all adopted septic time-of-transfer (TOT) or point-of-sale (POS) ordinances to protect the vast, rich water resources that are vital to our Northern Michigan economy and way of life.

These programs require inspections and evaluations of septic systems and wells to be conducted in connection with the sale or transfer of property. Milton Township and Elk Rapids have signed an intergovernmental agreement to have the Health Department of Northwest Michigan conduct the inspections, while Kalkaska and Manistee Counties give homeowners the option of going through the Health Department District #10 or a certified third-party inspector, who then reports findings to the health department. The inspections result in a detailed assessment of the condition and functionality of wells and septic systems on the property. These assessments confirm whether the systems are in compliance with current regulations, provide recommendations to improve the existing systems, and identify where threats to environmental or human health exist and require corrections.





The turnaround for these evaluations depends on the capacity of the health departments and the number of applications being filed. However, they can often take around three weeks and property owners are encouraged to plan accordingly.

Motivations for these programs include protecting the environment and public health, providing oversight throughout the lifetime of the septic system, sharing important information with owners and purchasers of properties containing septic systems, and raising awareness about best management practices that can improve and extend the life of septic systems.

Here are their success stories, looking at the most recent data from 2020.



Village of Elk Rapids

The Village of Elk Rapids passed its Septic Inspection and Property Transfer Ordinance in 2018.

Since 2018, five properties have been evaluated prior to the sale or transfer of a property. Two of those properties were found to be non-compliant under the sanitary code.

In 2020, only one property was evaluated. A septic permit had been issued in 2002 for the property and the system was adequately sized for the number of bedrooms and soil conditions, and was in good working condition at the time of the evaluation.



Milton Township

Milton Township adopted its Septic Inspection and Property Transfer Ordinance in 2012. Since the adoption of the ordinance, 366 evaluations have been performed.

In 2020, 46 evaluations were performed. In 21 of the evaluations (46%), the existing sewage treatment and disposal system was found to be undersized for the home. This can be attributed to several different reasons, with the primary factor being changes to the absorption area standards in the 2007 District Sanitary Code, which dictates the size of drainfields required under the code. In addition, several of the homes had been renovated to include an increased number of bedrooms, exceeding the limits of their permits. Finally, several of the systems were not adequately sized for the soil conditions found onsite at the time of inspection.

Waterfront properties comprised 18 evaluations of the total 46, or 39%. These properties have a greater potential of contaminating surface water and generally have a higher seasonal groundwater level than non-waterfront properties. Of the 18, five were improperly isolated from groundwater, with four feet being the minimum required separation distance. Four other non-waterfront lots were also found to be improperly isolated from the groundwater. In many cases, the groundwater elevation level noted on the original permit differs from what was measured onsite. Overall, the Health Department of Northwest Michigan has found that groundwater and surface water levels have been increasing in the past several years as compared to the last decade.

Of the 46 wastewater systems evaluated in 2020, 15 (33%) were found to have no records of permitting or installation. Of the systems where records exist, the average age of systems evaluated was 27 years. Assuming the systems without records represent those that were installed prior to the first sanitary code in 1964, the continued operation of these systems would suggest that these systems are greater than 50 years old.

Overall, 23 (50%) of the homes evaluated had associated recommendations to extend the life expectancy of the water supply or wastewater systems. Recommendations included updating pump chambers with approved

lids, installing high-water alarms, conducting an annual bacteriology water sampling due to reduced well isolation to a contamination source, investigating a suspect pipe coming out of a home, and more. Of the 46 evaluations conducted, three (7%) sites had restricted future use. In two of these cases, the soils evaluated were unsuitable for on-site wastewater due to clay, and backhoe cuts were recommend for further property evaluation. Due to an appeal, the third site is restricted in the number of

bedrooms it can support. The identification of restricted future uses for the site provides information for the buyer and seller on limitations to changes of use to the existing home (changes of use include remodeling greater than 50%, adding bedrooms to an existing dwelling, construction of garages and/or outbuildings, and tear down/rebuild).

Number of Required, Recommended and Restricted actions of 2020

Finding	Number of Cases	Percentage Total
Required	0	0%
Recommended	23	50%
Restricted	3	7%



Kalkaska and Manistee Counties

In collaboration with the District 10 Health Department, Kalkaska and Manistee Counties both adopted the same point-of-sale program in 2009, which is the longest running program in Northern Michigan. The POS program mandates the evaluation of the water supply and the wastewater disposal system for any property that is sold. The counties pursued a POS program on a county-wide basis in order to avoid a piece-meal township-by-township approach.

Available exemptions from the required evaluations include transfers to immediate family members, new homes (less than two years old), property that has been evaluated within the past two years, foreclosed properties, and properties obtained by the counties due to nonpayment of taxes.

During the first year of the program, a total of 314 septic/well systems were evaluated. In 2020, with increased development in the area, as well as increased awareness of the program among realtors, title companies, and lending institutions, evaluations increased to 635. Private contractors have conducted 100% of the evaluations for the last 6 years.

Results of 2020 Milton Township Septic Inspection and Property Transfer Ordinance

Finding	Number of Cases	Percentage Total
Drainfield undersized for current number of bedrooms	21	46%
Septic permit not available	15	33%
Drainfield <4' to groundwater	9	20%
Drainfield dimensions not confirmed	7	15%
Suspected drywell or block trenches	5	11%
Replacement system to be Advanced Treatment System	2	4%
Limited replacement area	1	2%
Drainfield <100' to surface water	1	2%

Over the past eight years, the evaluation process has been generally well received by buyers, sellers, and realtors. One of the positive outcomes of the ordinance has been an increased awareness of septic system regulations and maintenance requirements among homeowners. Additionally, the evaluation findings serve as a broad indicator of the overall status of on-site systems in Milton Township. The determinations of compliance with the current District Sanitary Code and restrictions on future uses of the property have put relevant information in the hands of buyers and sellers. This information is critical to buyers wanting to establish a home in Antrim County, and it also encourages the home to be advertised and priced accordingly.

The program places systems into the following six categories:

- **In compliance**
- **Failed system:** one that presents an immediate health issue and must be corrected as soon as possible
- **Priority 1 -Substantial Hazard:** the septic system is in a serious state and a "failure" is likely to occur in the near future (generally within 2 years)
- **Priority 2 -Potential Hazard:** the septic system may not be creating any problems at the time of the evaluation, but conditions are considerably different than the current code or construction standards. Owners are often advised to update the septic system, increase maintenance or to limit use. If not the conditions of the septic system may seriously deteriorate
- **Priority 3 -Minimal Hazard:** the septic systems are not in danger of a failure, but conditions exist that the homeowner should be aware of and monitor
- **Priority 4 -Deviation:** no problems exist with the condition of the septic system, but no records or information is available on the installation

As this data demonstrates, few failed systems and serious violations of the sanitary code are being found through the POS program. Most homes that are undergoing sale have their septic and well systems corrected before the POS evaluation since they know it will not pass if a failure is found. Therefore, the primary advantage of the POS program is to educate the new owner as to the location, present condition, and needed maintenance of the septic and well systems.

Septic System Risk Categories for Kalkaska and Manistee County in 2020

Finding	Kalkaska County	Percentage of Total	Manistee County	Percentage of Total
Complies with Existing Sanitary Code	46	13%	67	23%
Priority 1- Substantial Hazard	33	10%	13	4%
Priority 2 - Potential Hazard	84	25%	37	13%
Priority 3 - Minimal Hazard	113	35%	148	50%
Priority 4 - Deviation	63	18%	25	9%
Failed System	2	1%	4	1%

Conclusion

Statewide, the Michigan Association for Local Public Health estimates that local jurisdictions with time-of-transfer or point-of-sale programs find on average 17 – 25% of systems evaluated need repair. Depending on the average age of septic systems in a given community or watershed, the actual number of inadequate systems will vary, but the consequences of not having a time-of-transfer ordinance in place are likely to grow more severe as existing systems age.

Local governments are charged with maintaining general health, safety, and welfare, and ensuring the proper maintenance of septic systems is an important part of that work. Without state level regulation, local governments are the best option for taking action to address local concerns about septic system performance. Septic inspection and regular maintenance are vital tools for protecting water quality and public health.

Local governments in Michigan can look to examples of the successful implementation of time-of-transfer and point-of-sale ordinances right here in Northern Michigan. We hope these success stories will inspire local governments to pursue septic ordinances to help protect our Northern Michigan communities and the waters we love.

For more information, please visit the Watershed Council's website: <https://www.watershedcouncil.org/septic-systems>.



Protecting Northern Michigan's
water resources since 1979.

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