

**Milton Township Ordinance Annual Report
January - December 2015**



Figure 1: courtesy of <http://www.waterandlandman.com/chain-of-lakes/torch.jpg>

Introduction

Milton Township, located in Antrim County, is a sensitive ecological region due to the vast water resources of Lake Michigan, Elk Lake, Lake Skegmog, and Torch Lake. The richness of these water sources are a driving force behind the local economy, and the protection of these resources are critical to the area. On October 8, 2012, Milton Township took a large step in the recognition of these resources by adopting the Septic Inspection and Property Transfer Ordinance (commonly referred to as Time-Of-Transfer (TOT) or point-of-sale (POS)). The adoption of this ordinance was driven by the desire to protect these natural resources, to provide information to owners and purchasers of properties using on-site water and wastewater systems, and to raise awareness of ways to improve and extend the life expectancies of on-site systems.

The aim of the Ordinance is to, *“protect public health and to prevent or minimize the degradation of groundwater and surface water quality by malfunctioning sewage treatment and disposal systems (STDS) and to assure safe water supplies”*. This is accomplished through inspections of the on-site water supply and on-site wastewater supply by a representative of the Health Department of Northwest Michigan (HDNW). The Health Department of Northwest Michigan entered into an Intergovernmental Agreement (IGA) with Milton Township to conduct all TOT evaluations to assure consistency of inspections and compliance with the District Sanitary Code. As part of Section I, Subsection A (2.) of the IGA, HDNW is responsible for *“providing the Township with an annual report, at no cost to the Township,*

regarding the number of evaluations conducted in the Township the preceding year and the number of evaluations that failed to meet the standards of Section 5 and 7 of the Ordinance.” Section 5 of the Ordinance covers STDS evaluations required and exemptions, and Section 7 covers the evaluation application and fee.

Method

In 2015, the third year the Ordinance has been implemented, 54 homes were evaluated. This is an increase in the number of homes as years one and two had 46 and 43 homes, respectively. Of these 54 homes evaluated in 2015, 32 of the homes (59.25%) were waterfront properties which have a greater chance of potentially contaminating surface water and high seasonal groundwater levels.

Per Section 5 of the Ordinance, a home is not evaluated if a new STDS has been installed within the previous 10 years, if the STDS has been evaluated within the past five years and was found to be functioning properly at that time, or if the seller fulfills an exemption requirement.

Results and Discussion

When reviewing results of the water and wastewater inspections, it is important to keep in mind that the District Sanitary Code was revised in 2007. As of 2007, pressure relief valves are required on all new wells, and high water alarms and risers are required for wastewater systems with pumps. In addition, the 2007 Code increases the amount of absorption area per bedroom from the previous 1966 code. With the introduction of these new requirements, most of the systems installed pre-2007 do not meet current Code requirements. A water supply or wastewater system is only required to come into full compliance with Code at the time changes of use are proposed to the home, most notably with additions or tear-down/rebuild.

Table 1: Results of Water Supply Evaluation (54 evaluations performed in 2015)

Finding	Number of Cases
No well permit	23
No pressure relief valve	18
Pressure tank not available for inspection	12
Coliform present	7
Inadequate isolation	7
Overlapping well cap	4
Well pit	4
Electrical component(s) look suspect	3
Buried well head	2
Direct suction on well casing	1
Water samples not collected	1
Well cap loose	1

Nitrates ranged from <0.1 to 8.65 parts per million (ppm). The Environmental Protection Agency has a Maximum Contaminant Level (MCL) of 10ppm, which was not exceeded in any of the water samples.

Coliform bacteria were present in seven of the bacteriology samples, and all coliform positive water supplies have subsequently tested negative. The positive results could be attributed to well caps that were not securely connected, wells that were not in use (stagnant water), and in one case, an insect nest that was established in the well casing.

In 12 of the homes, the pressure tank and associated water well plumbing was not available for inspection. In the majority of these cases, the pressure tank was located in the crawl space and was not accessible for inspection without an undue burden on the homeowner/realtor to make the crawl space accessible. Overall, the majority of pressure tanks and water plumbing inspected appear to be in good working condition and is not wrong to assume the uninspected tanks and plumbing follow suit.

Table 2: Results of STDS Evaluation (54 evaluations performed in 2015)

Finding	Number of Cases
Outlet not uncovered	33
STDS undersized	29
No permit	21
No high water alarm	19
Riser recommended	12
Inadequate isolation to groundwater	7
Inadequate isolation to surface water	6
Vegetation overgrowth on field	6
Frozen ground conditions	5
Drainfield not identified	4
Site conditions do not meet Code	3
Root intrusion into field	2
Full compliance drainfield area not available on-site	2
Field too deep to probe	2
Landscaping/Deck over field	2
Septic tank not located	1
Driveway over field	1
No room for expansion of STDS	1
100' to surface water not available	1

The high number of septic tank outlets that were not uncovered for inspection is primarily due to two different factors. First, if the septic tank has been pumped within five years of the evaluation, the septic tank is not required to be pumped again. Very few of the septic tanks pumped within this five year span were available for inspection. Second, the inlet of the septic tank was most often left uncovered which does not allow an evaluation of the outlet baffle and filter (if present).

In 29 of the 54 evaluations (53.7%), the existing STDS was undersized for the home. This can be attributed to several different factor with the primary factor is the change in the Sanitary Code in 2007. In addition, several of the homes had an increased number of bedrooms from when the system was

originally permitted. And finally, several of the systems were not adequately sized for the soil conditions found on-site at the time of inspection.

Several of the evaluated systems were improperly isolated to groundwater and/or surface water. In many of these groundwater cases, the groundwater height noted on the original permit differs from what was measured on-site. Overall, HDNW has found that groundwater and surface water levels have been increasing in the past several years compared to the last decade. In addition, several of evaluated STDS could have been replacement systems. If an existing home is present, a replacement system can be issued with variances to groundwater and surface water levels if Code cannot be met.

In light of the number of STDS that were unable to be evaluated due to frozen ground conditions, HDNW has spoken with local realtors and encouraged the evaluation to be applied for prior to the winter season. The evaluation is good for five years and this suggestion should not interfere with the process of buying and selling properties.

Table 3: Number of Required, Recommended, and Restricted Actions (54 evaluations performed in 2015)

Finding	Number of Cases
Required	0
Recommended	32
Restricted	11

Overall, 32 (59%) of the homes evaluated had associated recommendations. These recommendations ranged from installing a high water alarm to alert homeowner of pump failure, to trimming vegetation to reduce root intrusion into the drainfield, and installing risers on septic tanks and pump chambers for ease of maintenance. Specific recommendations were made for each home evaluated, along with a general comment for all homes that HDNW recommends pumping the septic tank every 3 to 5 years. The recommended pump-out for STDS maintenance was not commonly known among homeowners and regular pump-outs can help maintain longevity of the system.

Out of the 54 evaluations conducted, 11 sites (20.4%) had restricted future use. In these cases, there were site factors that did not allow the expansion of the existing home or tear down/rebuilt without a suitable off-site drainfield location. The site factors included high groundwater tables, unavailable isolation to surface water, and suitable drainfield area located on-site. The restricted future use of the site only comes into play where changes to the use of the existing home are proposed – the existing home and STDS are operationally functional and there is no requirement upgrade/replace the system at this time.

Regarding functional status, the majority of homes inspected under this ordinance are not year-round, full-time residences. That is an important factor in determining functionality of the existing wastewater disposal system. Many of the homes inspected had not been occupied for quite some time, or had only seen seasonal, weekend occupancy for the life span of the septic system. A full functional analysis of the STDS cannot be completed for a system that has not been utilized, or has not seen peak demand use.

Conclusion

One of the biggest benefits to come out of the TOT evaluations is looking at the future use of the property. On some sites, the existing structure cannot be torn down/rebuilt or added on to due to non-compliance of the parcel through soil conditions, or isolation to seasonal high groundwater and/or surface water. 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. Per one local realtor, *“The ordinance has been well received in my opinion by buyers and sellers. . . . Sellers are ok with the process as long as it’s not brought up at the last minute and buyers generally like the idea since it puts the burden on the sellers.”*

Through feedback from stakeholders involved in the process, HDNW and Milton Township can do a better job on informing homebuyers and sellers of the TOT evaluation and what it entails. It has become apparent through multiple inquiries regarding the evaluation that there has been some misinformation circulated – the evaluation is not a pass or fail, rather it is a snapshot of the functional status of the existing on-site water and wastewater supply, recommendations to eliminate safety concerns, reduce vulnerabilities, extend system life expectancies, and provide information to future use options on-site. The evaluation form used has three forms of action: required, recommended, and restricted. The only time an action would be required is if the existing STDS is considered failed, and failed per HDNW means sewage is backing up into the house, is noted on the ground surface, or is noticeably impacting surface water. In any of the scenarios, it is in the interest of public health and the homeowner that the STDS be replaced. Restricted actions refer to site conditions. On some sites, tear down/rebuilt or additions are not permissible due to available drainfield area, soil conditions, seasonal high groundwater, surface water, and neighboring structures. In restricted cases, future use of the site is clearly stated so all parties are informed of what can, and cannot, happen.

In order to address the misinformation regarding the evaluation and to help guide homeowners through the process, HDNW is taking several measures to increase awareness regarding the evaluation. First, a page has been created on HDNW’s website (<http://www.nwhealth.org/tot.html>) to explain the Milton Township TOT and frequently asked questions to interested parties. Links to the annual report and the application are also provided. Secondly, the application has been modified with a checklist to ensure all required information is submitted at the time of application. Submitting a complete application allows HDNW staff to process and complete the evaluation in a timely manner, which can take up to two weeks from the time the application is received. Be advised this time frame can potentially increase if the first bacteriology water sample is positive for coliform or *E. coli* bacteria.

A third change to the process has become apparent at the end of the third year of the Ordinance. Historically, if the first bacteriology water sample was positive for coliform bacteria or *E. coli*, a second bacteriology sample was taken at no charge. As of 2016, if a second bacteriology water sample is need, there will be a nominal fee assessed to reflect the laboratory and staffing time involved.

Without the support of a network of township officials, HDNW staff, realtors, land surveyors, and homeowners, this program would not be effective. Thank you for your continued support of an

ordinance that aims to protect this ecological gem. And thank you to potential homebuyers who realize the environmental importance of this area and strive to keep it beautiful for generations to come.