

Central Michigan District Health Department Promoting Healthy Families, Healthy Communities

Isabella County Time of Transfer Program First Twelve Months January to December 2018



Submitted by

Steve King, R.S. Director of Environmental Health Central Michigan District Health Department

June 18, 2019

What is the Isabella County Time of Transfer Program?

The TOT is a regulation of the Central Michigan District Health Department (CMDHD) Sanitary Code. It states that properties in Isabella County with onsite wells and/or onsite sewage treatment systems need to be evaluated when the property is sold or transferred to a new owner. These evaluations are done to make sure that wells and septic systems are working properly and do not require important maintenance.

Why was this program put in place?

The purpose of the TOT program is to protect the health of our community, the quality of our water resources, and the natural environment. Through this program, the current condition and operation of wells and septic systems are evaluated. Wells or septic systems that are a potential public health threat, or environmental health danger, or that need maintenance are improved.

When did this program begin?

The Central Michigan District Health Department (CMDHD) Time of Transfer (TOT) program for Isabella County began January 5, 2018. The program is authorized by Article 8 of the CMDHD Sanitary Code. Letters were sent to real estate agents, home inspectors, and title companies announcing the program requirements. A press release was also sent out in December 2017. Prior to implementation CMDHD held a certification class so that private inspectors could inspect properties as authorized by Article 8. So far 26 people have gone through the certification class and a list has been started for another training class.

What has CMDHD done to get stakeholder input?

Prior to adoption, CMDHD staff met with several real estate companies and participated on the Isabella County E. coli ad-hoc committee. Feedback from these groups were vital in shaping the final regulation. Since implementation, CMDHD staff have participated in multiple meetings with real estate professionals to receive additional feedback for program improvement.

How many evaluations were completed in the first year?

In 2018, a total of 489 properties were assessed under the Time of Transfer program. Fourteen properties were granted exemptions from evaluation, leaving 475 properties evaluated.

	Total Number	Percentage of Total
Both well and sewage system compliant	342	72%
Well compliant	409	86%
Sewage system compliant	380	80%
Neither well or sewage system compliant	29	6%
Total less exempt properties	475	
Number completed by certified inspectors	281	60%

Drinking water wells were found in substantial compliance and not a public health hazard in 86% of sites evaluated. Sewage systems were found in substantial compliance in 80% of sites evaluated. The compliance findings in the first year of the program are consistent with projections based on similar

programs throughout Michigan and data from Secord Township in Gladwin County. It should be noted that several property owners came to get repair permit(s) before having a TOT evaluation done. Some owners have had an evaluation done but chose to get repair permit(s) without submitting the TOT report until after repairs were made. The numbers above do not reflect systems that had corrections completed prior to a TOT evaluation.

Who makes these corrections?

The property owner is notified if a property is identified as having a problem that requires a correction. While the property seller is responsible for having an evaluation completed, the repairs can be negotiated between the buyer and seller. It is important to point out that many needed repairs do not include complete replacement of the drinking water well or onsite sewage treatment system and would not require a permit from CMDHD. Some minor repair examples include; properly venting a well, bringing a well above grade, removing a water softener discharge line from the sewage system, or rerouting a laundry discharge line into the sewage treatment system.

What failure conditions did the program identify?

The following charts show the reasons for failure. The reasons for the issuance of a failure letter were categorized, documented, and tracked by CMDHD staff. There were many sites with more than one reason for failure.

Onsite Sewage Treatment Systems		
Public health hazard	Total Number	Percentage of Total
Illicit discharge	7	7%
Isolation	15	16%
Maintenance	3	3%
No system identified	12	13%
Other	28	29%
Septic tank failure	18	19%
Sewage back up	11	12%
Substandard system	6	6%
System bypass	7	7%
Total sewage system failures	95	

Note: There may be more than one reason for failure on an individual site. Total failures are 95 with 107 reasons for failure.

- Dilapidation, Maintenance: Includes systems filled with roots, broken pipes, malfunctioning pumps.
- Illicit discharge includes systems connected to field tiles, ditches, waterways.
- Isolation includes systems that are located too close to water wells, surface waters, or groundwater resulting in inadequate treatment of the effluent before it can impact surface and groundwater.
- No system means a sewage disposal system could not be found.
- Other includes minor items such as water softener connected to the sewage system. These items are typically easy to fix and do not cause a property not to transfer.

- Septic tank failure includes a minor item like a cracked lid to more problematic items such as missing baffles, cracked or damaged tanks, or other conditions that could create an imminent safety hazard.
- Sewage back up includes sewage backing up into home, sewage coming back into septic tank when it is pumped, or field tile saturated with effluent, blackened stonebed.
- Substandard system includes systems that don't meet 50% of code requirement for intended use, steel drums for tanks or disposal, discharge to rock piles.
- Surface discharge is effluent surfacing on the ground.
- System bypass includes wastewater from laundry, kitchen, or other sources that are not tied into a sewage treatment system and are discharged on the ground.

Drinking Water Wells		
Public health hazard	Total Number	Percentage of Total
Buried Well	10	14%
Coliform bacteria detected	11	15%
Isolation	7	9%
Nitrate > 10 ppm	4	5%
No water sample	3	4%
Other	28	38%
Substantial construction deficiency	7	9%
Unplugged abandoned well	4	5%
Total drinking water well failures	66	

Note: There may be more than one reason for failure on an individual site. Total failures are 66 with 74 reasons for failure.

- Coliform bacteria detected means this indicator organism was present in the water sample. Coliform bacteria should not be present in drinking water. Retesting is required, possibly including chlorination of the well.
- Isolation means the water well is located too close to a sewage system or other source of contamination, which increases the likelihood of the well and/or the groundwater becoming contaminated.
- Nitrates > 10 ppm is a maximum contaminant level established by the EPA. At or above this level human health can be impacted, especially young children and infants. When nitrates are elevated the preferred solution is to deepen the well or drill a new well into a deeper formation.
- Other includes minor items such as missing sample taps or pressure relief valves. Items that are higher hazards requiring correction include unvented wells and buried suction lines.
- Substantial construction deficiency includes items that can substantially increase the risk of well contamination. This can include wells that have less than 25 feet of casing, missing well caps, and damaged wells.
- Unplugged abandoned wells, if not properly plugged, act as direct conduits to the groundwater, bypassing any natural ability of the soil to clean the contaminant before it enters our drinking water.
- Buried wells are well heads that are cut off below ground. The connections made at these wells tend to corrode, allowing surface water into the drinking water. By the time the corrosion is so bad that soil particles or air is noticeable in the drinking water, property owners may have been drinking contaminated water for months or years.

What are the next steps?

CMDHD will continue to meet with interested stakeholders. A recent meeting with the board members of the Central Michigan Association of Realtors was very productive in identifying areas to improve the program. CMDHD will continue to track properties where violation of the Sanitary Code were identified to ensure the proper corrections are completed.

CMDHD is working with Amalgam, a GIS solutions provider based in Mt. Pleasant, Michigan, to develop a data gathering layer in the Fetch GIS platform. Fetch GIS will allow timely data analysis, tracking, and information sharing of Time of Transfer evaluations.



Laundry waste discharge to ground.



Buried well head under water at stake. Site also had a sewage system recently installed without a permit.



Dark green area result of sewage surfacing.



Blackened soil above drainfield evidence of system failure.



Septic tank with wastewater above outlet. Indicates drainfield is not taking water.



Black field tile discharging wastewater to ground surface.



End of a drainfield. Someone placed a sump pump in a hole and discharged wastewater to road ditch. Pump was removed before inspection.



Laundry waste by-passing the sewage treatment system by discharging to ground surface.



White PVC sewer line discharging wastewater to ground surface.