



Barry-Eaton District Health Department
An Accredited Public Health Agency
www.barryeatonhealth.org

Time of Sale or Transfer (TOST) Program
THE FIRST THREE YEARS

November 1, 2007 through October 31, 2010



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February 8, 2011

Caring for the Community since the 1930s

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Time of Sale or Transfer Program-The First Three Years

✓ What is the TOST Program?

In November of 2007, the Barry-Eaton District Health Department (BEDHD) implemented the time of sale or transfer program, commonly known as “TOST”. **The purpose of this program is to protect Public Health, the quality of water resources, and the environment.** Through this program hazards are identified and corrected on sites served by a well and/or sewage system. Evaluations of these on-site drinking water systems and on-site sewage systems are performed prior to the transfer of a property by registered evaluators—persons in private business and registered by the health department. Transfer evaluation findings are submitted to the health department using a web-based reporting system. After review of this report and visiting the site for confirmation, the health department determines if the condition of the system is in a state of failure, requires maintenance, or requires corrective action to resolve a failure condition(s) as defined in the regulation. Sites where no failure conditions are found are issued an authorization to transfer from the health department. This authorization may reference areas of concern. Sites where a failure condition is confirmed result in a letter to the owner or owner’s representative identifying the condition(s) and, to facilitate the correction of the condition, a suggested method of correction is presented. Corrections are typically completed prior to the transfer of the property. Alternatively, a corrective action plan may be created which identifies how the correction is assured and submitted to the BEDHD for review. After failure conditions are fixed or after an approved method that assures the fix will be completed after the closing, the BEDHD issues an authorization for transfer. In 2008, a report was presented to the community summarizing the activities of the first twelve months of the program. **This 2011 report summarizes the findings of the first three years of the TOST program.**

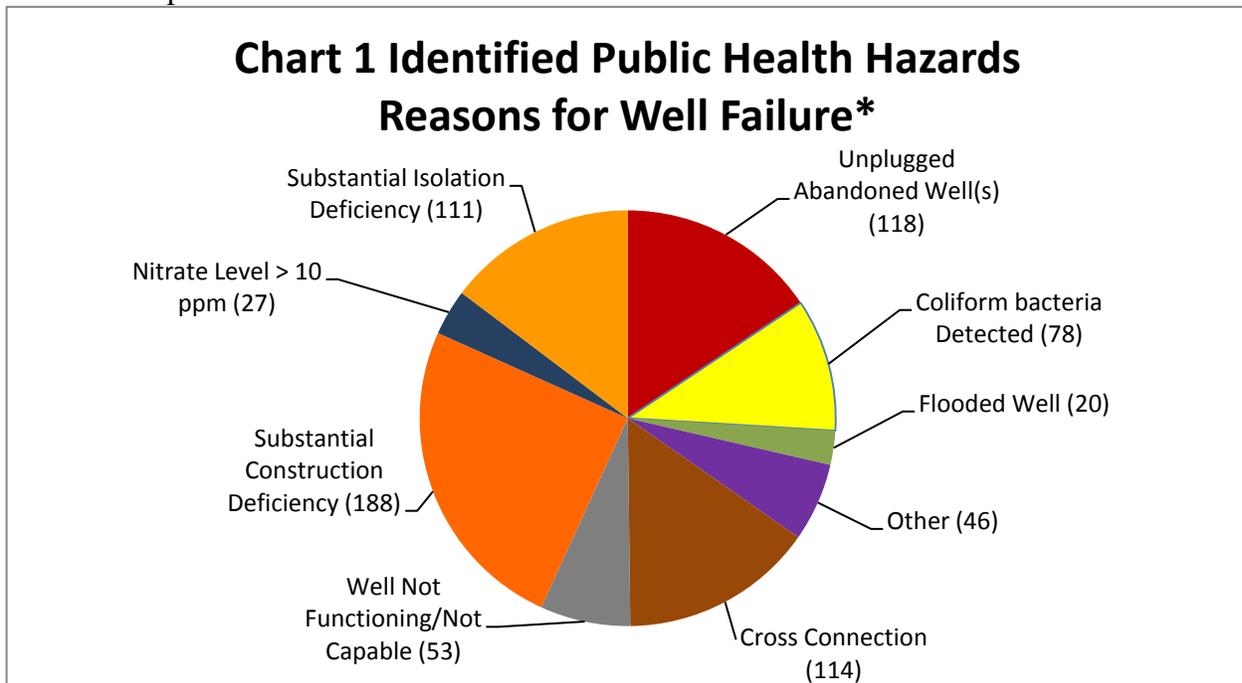
✓ How many evaluations were performed?

A total of **2804** evaluator submittals have been received. There were **2297** sites with sewage evaluations performed and **2716** sites with well evaluations performed. Not all properties have both a well and sewage system due to city water &/or sewer and because some systems may be exempt from evaluation. There were **507** well only evaluations and **79** sewage only evaluations. Sites may have more than one sewage system and/or multiple wells. There were over **5013 well and/or septic systems evaluated**. During the report period there were **602** sites with a **sewage failure condition(s)** as defined in the Regulation and there were **601 well failure** sites. The overall failure rate was 24% --with 26% of the sites having a sewage failure condition(s) and 22% of the sites having a well failure condition(s).

✓ 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 BEDHD staff. There were many sites with more than one reason for failure. Reporting these reasons for failure allows for tracking of any trends and refocusing of BEDHD’s environmental health programming and outcomes. Appendix A includes a compilation of pictures taken by BEDHD staff and/or registered evaluators identifying various failing conditions. These pictures are “worth a thousand words” and show the hazards and conditions that are being identified. [\(Click here to view pictures-Appendix A\)](#) – Note: Large file will take several minutes to open.

Chart 1 below depicts the reasons for well failure in the District.

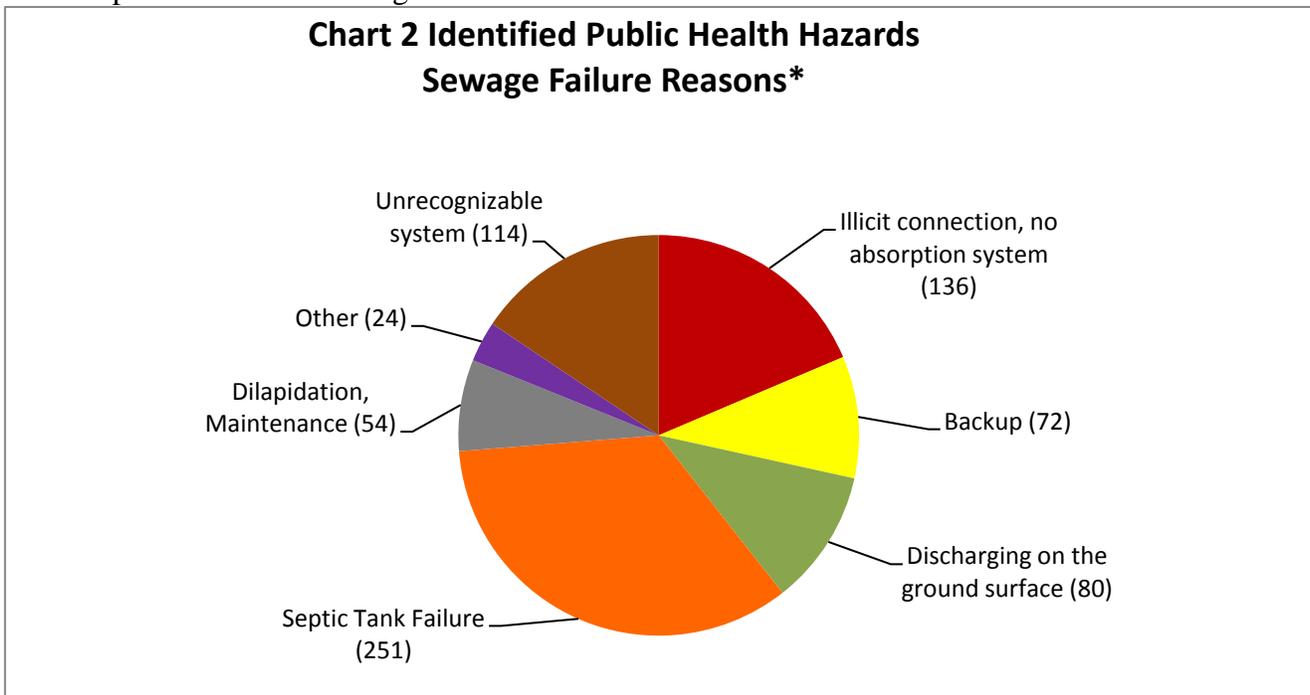


*Note: There may be more than one reason for failure on an individual site. Thus there are more total reasons for well failure (755) than the total number of sites with well failures (601)

What does this mean? Reasons for Well Failure Key:

- Unplugged abandoned well refers to sites where old wells that are no longer in use were found. These old wells are a substantial risk because they provide direct access for contaminants to enter our drinking water if left unplugged.
- Coliform Bacteria detected is a condition found through sampling of the well for coliform bacteria. Coliform bacteria are not found naturally in our groundwater. Detecting coliform bacteria is an indication of surface contamination in the well and/or contamination within the structure’s plumbing system. This includes sites where *e-coli* was detected indicating contamination from sewage. http://www.cdc.gov/ecoli/qa_ecoli_sickness.htm
- Flooded Well is a condition found typically in well pits or buried well heads that are found to be submerged under surface water or shallow groundwater. This condition increases the risk of contamination of the well and/or aquifer.
- Other is a compilation of conditions such as sites where no on-site well existed or other water quality parameters exceeding drinking water standards (such as elevated lead N=1) was identified.
- Cross-connection is a condition where the drinking water plumbing is cross connected with the sewage plumbing and/or another source of contamination and there is no backflow prevention. This condition can lead to contamination of the drinking water supply.
- Well not functioning/ well not capable refers to wells that were not operational and/or wells not capable of meeting the intended use.
- Substantial construction deficiency is a deficiency of the physical well that substantially increases the risk of contamination in the drinking water, the casing extends less than 25’ below ground surface, dug/crock wells, damaged wells.
- Substantial isolation deficiency is a well that is located substantially closer to sources of contamination than any recognized standard or rule allows.
- Nitrate > 10 parts per million is a condition found through sampling the well for nitrates. Nitrate levels above 10 ppm or greater present a risk to humans, especially pregnant woman and young children and is associated with methemoglobinemia or “Blue Baby Syndrome”. <http://www.cdc.gov/healthywater/drinking/private/wells/testing.html>

Chart 2 depicts reasons for sewage failure in the District.



*Note: There may be more than one reason for failure on an individual site. Thus there are more total reasons for failure (731) than the total number of sites with sewage failures (602).

What does this mean? Reasons for Sewage Failure Key:

- Illicit Connection/no absorption system refers to sites where there is no absorption system, or raw sewage leaves the septic tank and is connected to a pipe, or other method directing the sewage away to an unapproved location such as a field tile, county drain, river, lake, or other water body.
- Sewage Back up is a condition found where raw sewage is backing up into the home, pressurized above the tank’s operating level, or pressurized liquid level above the absorption system’s maximum operating level.
- Sewage on the ground is a condition where raw sewage is being deposited directly on the ground surface.
- Septic Tank Failure includes a condition that does not provide proper initial treatment of raw sewage and/or a septic tank that is an imminent safety hazard. This includes tanks with corroded or missing outlet baffles, no sanitary outlet tee, leaking tanks, bottomless tanks, collapsed/cracked septic tanks and/or uncovered/open septic tanks.
- Dilapidation, Maintenance includes systems filled with roots and/or soil, collapsed/broken piping, where present, pump and/or pump controls not functional, and/or excessive solids/scum accumulation in the tank(s).
- Other refers to various unique conditions such as systems located on neighboring property, sites without a septic tank, sites where the septic tank is bypassed and/or portions of the sewage system have been removed.
- Unrecognizable system refers to a “system” that is not recognized under any standard, rule or law to provide proper treatment and disposal. Examples include 55 gallon drums, seepage pits or rock piles, debris filled pits, single (graveless) tiles.

http://www.epa.gov/owm/septic/pubs/homeowner_guide_long.pdf

✓ **How are these well and septic failures fixed?**

It is important to point out that the fixes don't always require full system replacement. Common minor well repairs range from plugging an abandoned well or disinfecting an existing well to removing a fuel oil tank or cross connection. Common minor sewage repairs range from re-plumbing sewer lines to direct all sewage wastewater to an existing sewage system to replacing a septic tank sanitary tee that has broken off.

✓ **Must all failures be fixed before the property can be transferred—before the closing?**

The short answer to this question is “no, however an authorization to transfer is required before the closing”. Various options exist for the correction of the failure conditions that were identified as a result of the TOST program. The Notices of Failure issued by BEDHD identify three options for remedial action to the owner. The first option consists of the corrective action that the BEDHD considers to be an acceptable plan. Acceptance of this option by the owner involves correcting the hazard prior to the transfer. When a closing is desired prior to making the corrections, a process exists that will assure correction after transfer. This option typically involves providing to BEDHD a good faith estimate for the corrections and the creation of an escrow account that is held by a bank or title company. Another option is for the owner to request an administrative hearing to contest the findings in the notice of failure.

✓ **Who is responsible for fixing the failures?**

Although the seller is the required party in the regulation to obtain a plan approved by BEDHD prior to any property transfer (i.e. prior to closing), corrections can be completed by either party--- the buyer or the seller.

✓ **What are the results of the program thus far?**

The **number one purpose of the program is to protect public health, the quality of water resources, and the environment.** During development of the TOST program, BEDHD identified several objectives and/or anticipated outcomes of the program. The measured results of the first three years are evident and reported in this summary.

The objectives and/or anticipated effects of the program identified in 2007 include:

- **Objective:** Identify public health hazards and threats to our water resources and the environment. **Results of TOST:** Twelve hundred public health hazards and/or threats significant enough to require correction were found.
- **Objective:** Correct failing sewage systems, illicit sewage connections that contaminate our rivers, ditches, drains, and other surface waters. **Results of TOST:** Stopping the illegal discharge of sewage from the 136 illicit discharge/no system sites alone equates to an estimated reduction of 26.7 million gallons* of sewage that is no longer flowing improperly into our lakes, streams, rivers and wetlands. (*based on 2000 census of 2.56 people per household x EPA estimated 70 gallons of wastewater per person/day x 365 days/yr x 3 yrs.)
- **Objective:** Proper closure of abandoned unplugged wells. **Results of TOST:** More than 117 sites had unplugged wells—many sites with multiple unplugged wells—that were identified for proper closure. Once plugged these old wells can no longer serve as a conduit to contaminate our groundwater aquifers.

- **Objective:** To implement an organized process for the inspection and reporting of the well and/or sewage system evaluations. **Results of TOST:** The transfer evaluations submitted by the private evaluators and the corresponding health department report, including the findings, are posted for ready access online at <http://tost.barryeatonhealth.org/tost>.
- **Objective:** Provide for the credentialing, training, and the oversight of private inspection services. **Results of TOST:** Since the program began, 41 individuals in private business have been registered to perform evaluations under the oversight of BEDHD. There are currently 24 active registered evaluators.
- **Objective:** Role of Environmental Health will evolve from providing on-site inspection service to reviewing, planning, assessment, educating, collaboration & enforcement. **Results of TOST:** BEDHD acts as the reviewing agency. Decision making (relative to failure determination), reviewing the proposed corrective action (to address the failures), enforcement and education remain key roles of the BEDHD.
- **Objective:** Providing information and tools for sister agencies' use in planning, assessment, and local decision-making. **Results of TOST:** The information obtained from the TOST program has not only found and corrected hazards but also serves to enhance information and collaboration with other agencies. It is anticipated that the information provided in this report will be used by other agencies in their planning and decision making.
- **Anticipated Outcome:** The implementation of the TOST program was anticipated to result in the need for business services from septic pumpers, sewage system installers, well drillers, registered evaluators and the need for well & septic permits. **Result of TOST:** Business services were in demand for each of the above listed businesses, as well as demand for the services of plumbers, electricians, heating and ventilation contractors, licensed building contractors, property alteration and maintenance contractors, and the demand for products sold by retail and/or wholesale equipment suppliers. The annual number of sewage replacement permits did not increase above that of the preceding fifteen year average. This is due to the fact that many of the failures are fixed by actions that do not require a permit.
- **Anticipated Outcome:** To develop a public health water supply and/or sewage system program that is consistent with various community strategies for the protection of groundwater and surface water, i.e. well head protection plans, Community Planning Master Plans, Watershed Management Plans, (Grand River, Coldwater River, Battle Creek, Thornapple, & Kalamazoo) **Result of TOST:** The implementation of the program has identified and corrected illegal sewage discharges to all of the surface water watersheds in the district and has resulted in the plugging of abandoned wells that existed in established wellhead protection zones for municipal water wells servicing thousands of residents.
- **Anticipated Outcome:** Increased public awareness of wastewater systems: Temper a negative perception of on-site systems. Sewage systems must be present (must exist) and must be maintained to sustain our long-term wastewater handling needs. Sewage systems are not a temporary system until sewers are extended out to rural areas-as this is not common. **Result of TOST:** The topic of on-site sewage systems and of on-site water systems has been a topic of discussion at public meetings, newspaper articles and within the community.

The TOST program has served as the single most effective tool in identifying and correcting public health environmental hazards that BEDHD has implemented. The types of conditions identified represent a hazard to the community as a whole and to those who live “downstream”. The nature and scope of the public health hazards identified in the past three years has varied, yet it is those hazards with significant risk that have been addressed. Education and awareness within the community continues to build at the same time that BEDHD continues to assess the results of the program, and redirect the programs focus where needed. **While it can be stated that the TOST program effects each individual differently, this initial three years has served the overall purpose and mission of protecting public health in our community now and for generations to come.**