

Water and Wastewater

March 2021

TOS NEWS by Kim Gebhard

Due to the Covid Pandemic, and our staff's participation in the vaccine clinics, no annual TOS meeting has been planned. Annual re-certification for all current certified TOS inspectors will still be required. There have been no programmatic changes to TOS in the past year. The County fees were not changed for 2021 and remain the same as the 2020 fees. New Time of Sale Inspector training will occur in the future, but nothing is scheduled at this time. The last TOS training was in October 2020.

TOS Inspector Renewal

If you are a current Washtenaw County Time of Sale Inspector, you may still need to renew your certification for 2021. The renewal fee is \$133, and the due date is April 15, 2021. You can submit the application and fee via fax, mail, and/or drop box. The certification is good for one year. Contact Kim Gebhard with questions.

INSIDE THIS ISSUE

- 1** TOS Update / General Update
- 2** Septage Waste Hauling Vehicles / Eljen GSF
- 3** Dioxane Update / PFAS Update
- 4** Soil Evaluation Before Home Demolition
- 4** Hauled Water Systems
- 5** Type II Wells Update / Pollution Prevention Update
- 6** COMP Update / MapWashtenaw
- 7** Well First / Random Updates
- 8** Application for Renewal

General Update by Jaclyn Bates

As of March 2021, we do not intend to hold annual meetings for certified septic installers, OMC providers, or TOS inspectors. We do intend to hold trainings as the COVID-19 guidelines and our building renovation project allows. When trainings are held, we will abide by all protocol to maximize social distancing.

The Zeeb Rd building is under construction. This has been a multi-year project. Water Resources / Soil Erosion are now upstairs. MSU Extension will now be on the first floor. Environmental Health and Building Department are still on the first floor but are now on the north side of the building. The front counter area will look slightly different but is still in the same location. Conference rooms will be found on the first and second floors. There is currently no date to reopen the building to public customers. We are still accepting applications via the drop box, mail, email, and fax. We are still accepting water samples in the white fridge in the lobby; please make sure to complete the water sample form accurately.

Health Department staff, including Environmental Health, have been working at the COVID-19 vaccination clinics. It takes over 70 employees/volunteers to staff the clinics and many of these are Health Department staff. EH staff have been assigned to registration, exit monitoring, greeters, and a variety of other important roles. This additional assignment may cause a delay in staff getting back to customers, but we are still striving for reasonable turnaround times. There are always staff available for coverage of emergencies such as a well out of water or a septic tank collapse.

Certified Septic Installer Renewal

A renewal application is included, on the last page of this newsletter, if you are a current Washtenaw County Certified Sewage System Installation and Repair Contractor. The renewal fee is \$119, and the due date is March 31, 2021. You can submit the application and fee via fax, mail, and/or drop box. The certification is good for 2 years. Contact Randy Spaller with questions.

Septage Waste Hauling Vehicles by Randy Spaller

The Michigan Department of Environment, Great Lakes & Energy's (EGLE) domestic septage program was established in 2004. EGLE sub-contracts the annual septage truck inspections to Local Health Departments. Currently, there are five licensed septage hauling businesses operating in this County, with a total of 10 licensed trucks (another truck to be added soon).

The vehicle inspections are to confirm the following: 1) required signage and seals are provided on both sides of the vehicle; 2) the vehicle and the tools are maintained clean, 3) the driver has a copy of their septage waste hauling vehicle license paperwork; 4) the vehicle VIN and license plate match the EGLE records, 5) verifying the vacuum system and valves work properly and there are no leaks, 6) sight gauges or other devices are installed and functional to determine liquid levels, and 7) that septage pumping volume records are provided. If deficiencies are found, a follow-up inspection is required. In the event something major is wrong, the use of the vehicle is to be immediately suspended. Before EGLE will renew a septage vehicle's license, a satisfactory annual inspection report must be received.

Although there are two septage receiving stations in this County, the Saline WWTP and the Ypsilanti Community Utilities Authority WWTP, only the YCUA receiving facility is currently in operation. The Washtenaw County based septage waste hauling businesses typically off-load their septage waste at the YCUA receiving station. Septage haulers may use an out of county receiving station if more convenient to the driver, but the septage waste must be off-loaded at a receiving station within a 25 mile radius of where the septage waste was pumped.

During the calendar year of 2020 there were 3.6 million gallons of septage off-loaded by Washtenaw County based septage hauling businesses at YCUA. When the septage volumes of the five other businesses which off-load at YCUA are added in, a total of 4.94 million gallons of septage waste was received last year.



Demonstration Wastewater Disposal System: Eljen Geo-Textile Sand Filter by Randy Spaller

Eljen Geo-Textile Sand Filter (GSF) is allowed for use as a Demonstration Wastewater Disposal System (DWDS). Eljen GSF pre-treatment pods were reviewed and approved for DWDS use in 2019. The pods are constructed of a thin, wavy plastic matrix with a medium weight geo-textile fabric wrapped among and around them. The pods are 7" tall, 4' long and can be ordered in 2 or 3' widths. These systems are gravel less, but require 2NS sand below and around the rows of pods. A standard 4" perforated drainfield pipe is laid on top of the pods (for pressure distribution applications, a small diameter pressure pipe with orifices is installed within the 4" pipe) and then a thin geo-textile fabric is draped over the system.

In this County, the Eljen GSF pod applications would take the form of a shallow trench system, or a "bed" type system (either laid horizontally, or on a slope in a tiered configuration). To date, four Eljen GSF systems have been permitted. Of those, two have been fully installed (one trench style and one tiered system installed on a site with a Modified Fill-Type approval), and one is under construction.

DWDS systems require a deed restriction, and an operating permit to ensure they are inspected annually. The purpose of the DWDS category is to allow a number of systems utilizing new treatment technology to be installed and monitored over a period of time to ensure they are performing as intended. If a DWDS performs well over time, the system will be allowed to change from the DWDS category to the Alternative Wastewater Disposal System category.

A few benefits of the Eljen GSF systems are the following: 1) they utilize a passive style of treatment (no aeration or wastewater recirculation necessary); 2) the pods are light-weight; 3) no drainfield stone; 4) since the pods are self-contained and are modular, the system can be installed above grade, unlike a typical shallow gravel based trench, to achieve the required 2' vertical separation to a shallow seasonal water-table. Since the septic tank effluent is pre-treated, the vertical separation from the seasonal water table can be reduced from 3' to 2'. <https://eljen.com/eljen-gsf>

Dioxane Update by Jennifer Conn

1,4-Dioxane is a manmade compound that mixes easily in water. It is a solvent, stabilizing agent for other solvents, and an impurity found in consumer products (such as cosmetics, detergents, deodorants, and shampoos). 1,4-dioxane is considered likely to be carcinogenic to humans because it is a known carcinogen in animals.

Dioxane was used from the mid-1960s to the mid-1980s in the manufacturing processes at Gelman Sciences, Inc. on Wagner Road in Scio Township. Gelman's wastewater, containing dioxane, was disposed onsite during that time. In the mid-1980s dioxane was discovered offsite, in nearby surface waters and groundwater. The groundwater in underground aquifers that is carrying dioxane is referred to as a plume. Multiple plumes have been spreading west in Scio Township and northeast then east into Ann Arbor, moving towards the Huron River.

In 1992, the Washtenaw County Circuit Court entered a Consent Judgment regarding Gelman's dioxane contamination. Three amendments to the original Consent Judgment have been approved by the Court and are in effect. The Consent Judgment and its amendments dictate the obligations of Gelman to investigate, clean up, contain, and monitor the contaminated groundwater, under the direction of the Michigan Department of Environment, Great Lakes and Energy (EGLE).

Following EGLE's approval of a reduction of the groundwater cleanup criterion for dioxane from 85 parts per billion (ppb) to 7.2 ppb in October 2016, **a proposed fourth amendment to and restatement of the Consent Judgment has been under negotiation** between Gelman, the State of Michigan (EGLE), the City of Ann Arbor, Washtenaw County and its Health Department, Scio Township, and the Huron River Watershed Council since the spring of 2017.

Washtenaw County Public Health is contracted by EGLE to collect dioxane samples from 217 drinking water wells every two years (wells are tested twice per year, once per year, or every-other year). There have been low-levels detections in six of those wells. Currently there are no residential-scale treatment systems available that can effectively remove dioxane. Dioxane testing is not required as part of Washtenaw County's Time of Sale Program. Dioxane testing is available through the EGLE laboratory. More information on 1,4-dioxane is available at www.washtenaw.org/dioxane.

PFAS Update by Jennifer Conn

Perfluoroalkyl & polyfluoroalkyl substances (PFAS) are a group of chemicals used globally in manufacturing, firefighting, and household & consumer products. Certain PFAS chemicals accumulate and stay in the body and the environment for long periods of time. PFAS are linked to thyroid & auto-immune disorders, reproductive problems, increased cholesterol levels, kidney disease, cancers, and low birth weight.

Michigan established health-based Maximum Contaminant Levels (MCLs) for seven PFAS chemicals in August 2020. Washtenaw County has seven groundwater PFAS sites that exceed these new criteria, as well as the Huron River Watershed surface water site. Residential drinking water wells near the groundwater PFAS sites have been tested. Most wells had no detections of PFAS chemicals and those with detections were very low and not a health concern. We are not aware of any location in the watershed where contaminated surface water is infiltrating nearby wells. Due to the PFAS contamination in the Huron River, there is a Do Not Eat Fish Advisory and an Avoid Swallowing Foam Advisory. It is still safe to swim, boat and enjoy recreation on the Huron River, as body contact with water containing PFAS is not a health concern. Ongoing efforts to eliminate sources of PFAS to the Huron River have been successful in reducing the levels of PFAS in the River. More information on PFAS and PFAS sites in Michigan can be found by visiting www.michigan.gov/pfasresponse.

While Washtenaw County does not have wide-spread groundwater contamination from PFAS, we encourage homeowners concerned about their well water quality to speak with an Environmental Health staff member so that we can provide them with information about the susceptibility of their well to contamination.

Homeowners wanting to test their wells can order a PFAS kit from EGLE for \$290 by calling 517-335-818.



Importance of a Soil Evaluation prior to demolition of a home by Jonathan Pelukas

When considering the demolition of an existing home that is serviced by an onsite septic system, there are several items to keep in mind. Once the current residence located on the property is demolished, the owner must meet all current site criteria necessary for a conventional or alternative onsite sanitary sewage disposal system should a new structure/dwelling be proposed. The owner must understand that to reconstruct a residential structure on the property, the approval of the Washtenaw County Health is required.

During the early planning stages of a home demolition project, one of the first steps should be to contact the Sanitarian responsible for the Township in which the residence is located. They can assist in determining what septic system (and well) are currently in place. If the intent is to simply demolish the residence and leave the parcel vacant, the septic tank must be pumped by a licensed pumper then properly abandoned with documentation submitted to this Department (and the well would need to be properly abandoned by a registered well driller). If the intent is to reconstruct a residential structure, a discussion with the Sanitarian is warranted to see if the existing septic system can be reused. In instances where there are no records of the septic system or the records show the septic system is undersized, unpermitted, and/or lacking an identified reserve area, a soil evaluation shall be conducted. The soil evaluation is to ensure the parcel will meet all site criteria for an onsite sewage disposal system.

Failing to properly address the onsite septic system status prior to demolition of a residence could result in the creation of a non-buildable parcel. In these instances, a non-buildable parcel would be due to the site not meeting any conventional or alternative onsite sewage disposal criteria. At this point, the Health Department has no obligation to find a sewage disposal system solution for this parcel. To avoid this situation, prior to making final plans for the parcel, consult the area Sanitarian and then execute your plan based on the feedback/direction received from the Sanitarian.



Water, water everywhere, but not a drop to drink!
By Todd Alcock

When many people think of Michigan, they think of the Great Lakes State. Pure Michigan typically has abundant amounts of fresh water available and utilizes two primary sources of drinking water. *Surface water* is gathered from rivers, lakes and streams and is treated or disinfected, for example a Type I water supply like the City of Ann Arbor. *Groundwater* lies beneath the earth surface in aquifers consisting of sand, gravel or bedrock and is brought to the surface for consumption by openings drilled into the earth called wells. Even with vast amounts of water available to the residents of Michigan, there are areas in our State and County that do NOT have access to either of the above-mentioned water supplies. The lack of an identifiable drinking water source is an increasing problem for existing homes.

In recent years, the WCHD has established minimum construction requirements for the design and installation of “hauled water systems” for **existing** homes. Board of Health approval is granted on a case-by-case basis, allowing for permitting and installation of such a system. *A “hauled water system” cannot be approved for a new home and is only utilized as a last resort for an existing home lacking an approvable water source.*

A hauled water system typically consists of an insulated above ground building with a concrete floor and a permanent heat source. Inside the structure are 2-3 (preferably black) vented plastic water storage tanks capable of storing 3,000 to 5,000 gallons of water. The black water tanks help to prevent algae growth by limiting the amount of sunlight that penetrates. A jet pump and pressure tank are installed close to the water tanks, enabling water to be pumped from the tanks and delivered to the residence for use. The water utilized for these tanks is **hauled** by an approved water hauler (licensed by the State of Michigan), from an approved source such as a local municipality. A small amount of chlorine is used as a disinfectant to keep bacteria from entering the water system. A deed document, notifying a future owner, will be recorded for properties with a hauled water system.

While a hauled water system is a last resort for existing homes, they are also costly. There is a significant cost to construct a hauled water system and a reoccurring cost to buy water on a bi-weekly or monthly basis. Owner’s report costs over 2-3 years are similar to the cost to drill a well.

Type II Wells Update by Lizzie Rock

In the last year, EGLE has added a new testing requirement of PFAS for all Type II Nontransient facilities in Michigan. Nontransient facilities are defined as a noncommunity water supply that serves the same 25 people or more, for at least 180 days of the year. Schools, childcare centers, and manufacturing plants are examples and serve some of our most vulnerable age groups. PFAS chemicals have several applications, such as firefighting foam, water resistant sealants, and food related items including microwave popcorn and Teflon products.

Sampling for all existing Type II Nontransient facilities in Michigan began in 2020 with testing for seven different PFAS chemicals. A Maximum Contaminant Level (MCL) for each compound has been established by the State of Michigan under the new monitoring guidelines. Currently, no Nontransient facilities in Washtenaw County have exceed the MCL for the seven regulated PFAS compounds. Facilities will continue to monitor on a quarterly to annual basis.



Natural Rivers Program by Jeff Leighton

Passed in 1970, The Michigan Natural Rivers Program authorizes the MDNR to regulate certain stretches of rivers and tributaries in a variety of ways. The Huron River, from the Washtenaw/Livingston County line to the start of Barton Pond, is the only river in Southeast Michigan in the program. Also regulated are the lower stretches of Arms Creek and Mill Creek in Webster, Dexter, and Scio Townships.

In general, Natural Rivers Program zoning regulations are more stringent than State or County rules along these riverine corridors. The zoning regulations cover a wide range of topics from wetlands, bridges and more notably; placement of homes, septic tanks and drainfields on vacant lots and replacement systems. For example, drainfields (and homes) shall be a minimum of 125 feet from the stream high water mark and septic tanks shall be no closer to the river than the house. This can be problematic at times, but some variances are available through MDNR.

While vacant land is rare in these locales, replacement septic systems come up from time to time and this regulation should not be ignored. The regulation can be found at: http://www.michigan.gov/documents/dnr/2010-026_Natural_Rivers_Zoning_Rules_438073_7.pdf.

Pollution Prevention Update by Jacob Gerke

The Pollution Prevention Program continues to move forward during the COVID-19 Pandemic. Within the scope of resuming site visits during COVID-19, significant collaboration occurred among management and Sanitarians to determine which types of facilities to inspect based on COVID-19 exposure risk. Higher risk industries such as health care, dialysis centers and assisted living facilities with an elderly population are on-hold for now.

The most significant rule changes to Hazardous Waste Management in 40 years became effective August 2020, with the new "Integrated Assessment Program." Although most regulatory changes were focused on eliminating redundancy and filling in gaps within the regulations, the Washtenaw County Pollution Prevention Program has accordingly advised affected facilities of any additional regulations they need to follow, which is based on a progressive scale of volume of monthly hazardous waste generated. One example is that any facility which is classified as a Small Quantity Generator of hazardous waste must re-notify the State of their status every four years. The Integrated Assessment Program takes a holistic look at both regulatory and non-regulatory aspects of facility operation such as forming ideas to improve water usage, reduce heating costs, and how to involve employees in workplace safety initiatives. This program involves a 2-3 hour multi-disciplinary site visit to form recommendations. The response has been overwhelmingly positive during Pollution Prevention site visits.

A specific success story during the COVID-19 pandemic occurred at a manufacturing company. A facility was found to have multiple full pails of various chemicals stored outside and a diesel fuel nozzle leaking onto the ground. The issues repeated on subsequent site visits. The facility hired an employee responsible for chemical hygiene practices. During the most recent site visit, the fuel tank in question was removed from the facility, the discharged fuel on the ground was properly managed, and no chemicals were stored outside. The new employee told the Sanitarian on-site that both the inspection reports and fees provided motivation for corrective action.

Certified Operation & Maintenance Providers by Denise Bernbeck

All certifications for O&M COMP's are current and carry an expiration date of April 22, 2022. No need to renew this year. Yay! One less thing! 2020 saw an 89% rate of compliance in annual inspection/reporting rates. Thank you all for providing great service and timely report submittal.

O&M Report submittal fee for 2021 is still \$59. No change from last year. Please check out the O&M Inspection Report template on our website (see web address below) as there is one small change to the report under Residential Property; instead of "Age of home", it has been changed to "Age of system" which I thought more appropriate and helpful. Please refer to the previous year's report review letter to ensure that any outstanding issues are inspected and corrected/facilitated during the next inspection and documented on the 2021 inspection report.

There has been a lag in getting all COMP's their copies of the 2020 report review letters I have written. I am in the process of providing that information to all COMP's. If, after you receive your copies of the report review letters, I have missed a report review letter for an account that you completed, please let me know.

Please check out the website for any information and templates regarding the O&M Program at: <https://www.washtenaw.org/1656/Operating-Permits-for-Onsite-Sewage-Syst> Or you can also just go to Washtenaw.org and put "Operating Permits" in the top right search bar – it will take you to the O&M page.

Congratulations on Retirement!

Denise Bernbeck

After 27 years of being a Sanitarian and now Senior Sanitarian for Washtenaw County, I am announcing my retirement to be effective July 31, 2021. It has been my great honor and pleasure to be a part of Environmental Health, and I thank you all for the great friendships I have made, along with many memories. I have great respect for our contractors, and I wish you all the best in the future.

Kim Gebhard

I will be retiring on September 1st of this year.

We will miss them both and are very thankful for their many years of patience and expertise.

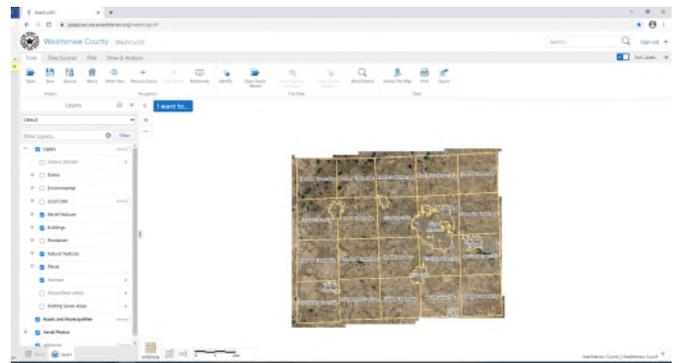
How Using MapWashtenaw Aerial Photos Can Help Your Business by James Glide

Washtenaw County has an amazing online GIS software called "MapWashtenaw" that we rely on daily to glean information otherwise impossible to find. Most of you will be familiar with using the most current aerial photos to get an overhead view of sites before you step foot on them, but these photos are a snapshot of what is currently happening onsite and are not the whole picture of what has happened through time. Most do not know that if you click on the little tab in the bottom left corner of the screen named "Hillshade" you can also select "Historic Aerial Photos" that date back to the 1940's. Using these historic photos, you can see the full history of changes or events that have taken place on any site. Two major uses of these historic photos are locating drainfields, and the ability to tell if any major earthmoving has been done onsite over the years.

To do this you will want to use the slider bar and go through the years until you find a year close to when the home was built, normally you can slide between a few years close to that timeframe and find an area of disturbed soil where the drainfield was installed. You can also use this to see if any major earthmoving, or old building foundations have been covered up by moving through the years of photos looking for any major changes. One last use that I have found is using the older black and white aerial photos is to locate farm field tiles, all you need to do is look for the darker lines running across the fields.

Once you know what you are looking for, this is a very quick process that can cut down the amount of time you need to spend onsite, and give you a much better understanding of any sites' history. If you have any questions about how to use the MapWashtenaw site we are here to help, just give us a call and we can walk you through it!

<https://www.washtenaw.org/1197/MapWashtenaw>



Well First Areas by Steve Aquinaga

In many areas of Washtenaw County there are townships or sections of townships designated as “Well First” for permitting purposes. These areas are where groundwater quantity or quality are in question, therefore a well must be drilled prior to issuing a septic permit or building permit. Low well water quantity areas have low yielding water production, for example 1 to 6 gallons per minute or no water production at all. If groundwater is not encountered when drilling a well below 25 feet, it is documented as a “Dry Hole” on a well log.

Groundwater quality issues can be caused by natural or non-natural sources. High sodium and elevated arsenic are common naturally occurring contaminants. Nitrates, which may be from a failing septic system or farming practices, are not naturally occurring contaminants. These contaminants have found their way into the groundwater supply. These are just a few groundwater conditions and issues that warrant Well First policies and practices. Drilling and testing a well prior to building a home or investing in a parcel of land, will provide some assurance that safe drinking water is available or can be treated to safe levels.

The Washtenaw County Health Department has the ability for the public to seek out and obtain information regarding well first areas. The County GIS system identifies well first areas. Visit MapWashtenaw (see link below), go to the Layers in the lower-left corner, and then check on the Environmental layer group. The Well First areas will be outlined in blue with a small dot hatching.

<https://www.washtenaw.org/1197/MapWashtenaw>



Random Updates by Jennifer Conn & Jaclyn Bates

Subdivision Blurb:

Washtenaw County is currently reviewing onsite systems for seven new developments for a total of 174 individual well-only units that are served by a community sewage system and 159 units that are served by both individual wells and individual onsite septic systems.

MDOT Blurb:

In September 2020, the replacement sewage system for the MDOT Chelsea Rest Area on I-94 E was completed. The original system was not sized for the actual flows that the rest area had experienced. The facility’s groundwater discharge permit had been increased over the years. The new septic system utilizes an equalization storage tank to better accommodate flows up to 9,500 gallons per day. The drainfield is sized at 13,500 square feet with pressure distribution.

EnerGov Blurb:

A new computer system called EnerGov will be utilized by Environmental Health, Building Department, and Soil Erosion starting in June 2021. This has been a multiyear project that will replace multiple aging computer systems such as Tidemark, Accela, Sword, and others. There will be, at some point, a customer portal for submitting applications, plot plans, payments, etc. There should be more information on our website about it closer to go live, including training information for customers.

Online Records Blurb:

As a reminder, completed well, septic, TOS, and other records can be easily accessed on line at <https://www.washtenaw.org/2773/Search-Permit-Records> or internet search “Washtenaw well septic”. Then enter the numerical portion of the address, click search, and scroll down to the address you are looking for. (Do not enter the street name in the search – it makes the program angry.) There you will find a variety of information. Active files, such as permits not completed, are not yet scanned into the online records because we are still working on them. TOS authorization letters are available almost immediately. We are trying to enter more OMC reports into the online records for access.



Environmental Health Division
 705 N. Zeeb Road • Ann Arbor, MI 48103
 Phone: (734) 222-3800 • Fax: (734) 222-3930
www.washtenaw.org/envhealth

ONSITE SEWAGE SYSTEM INSTALLATION & REPAIR CERTIFICATION 2021 RENEWAL APPLICATION

Due by March 31, 2021 for certification April 1, 2021 through March 31, 2023.

*Washtenaw County Certified Onsite Sewage System Installation/Repair Contractors are required to renew their certification with Washtenaw County every **two** years.*

| | | | | |
|--------------------------|------------------|-------------------|-------|----------------|
| Applicant Last Name | | First Name | | Middle Initial |
| Applicant Street Address | | City | State | Zip Code |
| Legal Business Name | | | | |
| Business Street Address | | City | State | Zip Code |
| Phone [] | Fax [] | Cell [] | | |
| Email Address | | | | |

Contractors applying **before** March 31, 2021, will be placed on the contractor list published by Washtenaw County in random order. Contractors applying **after** March 31, 2021, will be placed at the bottom of the contractor list. Bids from installation contractors who have not renewed their certification will not be accepted for Time of Sale escrowing. Inspections will not be conducted for uncertified contractors after April 1st of their expiration year. Installers who have let their certification lapse may be required to retake the certification exam depending on the amount of time since their certification expired and the quantity of work successfully installed in the past.

Signature: _____

Certification Number: _____

Title: _____

Date: _____

| | |
|-------------|----------------|
| FEES | RECEIPT |
|-------------|----------------|

Please complete this form and submit to the Environmental Health Division with a payment of **\$119**. Make check or money order payable to W.C.E.H.

Washtenaw County
Environmental Health Division
 705 N. Zeeb Rd.
 Ann Arbor, MI 48103

If you have any questions, please contact Randy Spaller at spallerr@washtenaw.org or (734) 222-3938.