Of the estimated 14,600 homes served by septic systems in Wood County, fewer than 7,000 were installed under permit by the Wood County Health District (WCHD). Other than NPDES and mechanical systems installed after 2007, there was no routine inspection program to ensure adequate maintenance and function of existing systems until the new uniform state wide sewage rules became effective in 2015. Many of the soils in Wood County are not conducive to septic systems such as leaching tile fields and off-lot discharging systems. Systems that illicitly discharge into waters of the state are still used in many cases. In order to address the problem of surface and ground water contamination as well as the possible health threat of untreated effluent, the WCHD has developed this Private Home Sewage Treatment System Operation and Maintenance Program (O&M) in compliance with ORC section 3718.02(A)(7) and OAC section 3701-29-19. Once implemented, this plan will eliminate sources of pollution, reduce the public health and environmental risk associated with inadequate treatment of household sewage waste, and protect surface and groundwater supplies.

The purpose of the O&M Program is to develop a system for identification, inventory, and correction of badly maintained, malfunctioning, and failing home sewage treatment systems in order to protect ground and surface water quality and public health. The Private Home Sewage Treatment System (HSTS) plan will expand the existing O&M program requiring system upgrades or the installation of replacement systems, tracking progress and success, and monitoring the county-wide system by maintaining a HSTS database system. Homeowner education will also be a key component of this plan as required to ensure success of the program. Proper location,
design, installation, monitoring, operation and maintenance are the critical elements to
the success of operating private home sewage systems. This plan discusses the
regulations and policies that directly affect the location, design, installation, monitoring,
operation, and maintenance of household sewage treatment systems in Wood County.

In 2003, the WCHD completed the process of entering all HSTS on file into a
computer database. Records continue be added to the database as new HSTS are
installed, updated and approved within the county. The records include the address of
system, parcel number, permit number, permit issuance date, approval date, type and
size of system, and the point of discharge. These records will eventually be cross-
referenced with our Geographic Information System (GIS) to provide a better
management tool for the inventory of existing systems and all newly installed HSTS.
Paper records are also maintained providing a history of sitting, design, installation,
alteration, operation, maintenance, and abandonment activities. The results of any O&M
monitoring, service contracts, sampling, inspections or reporting required by OAC
chapter 3701-29-19 shall be maintained in the record. O&M in accordance with
manufactures recommendations shall be required as a condition of the operation permit
and WCHD approval. All records and information regarding a system will be required to
be submitted to the WCHD within 60 days. Records shall include but not limited to sign
and dated service reports, septic tank pumping receipts, tank and distribution box
inspections, and cleaning of effluent filters as applicable.

In order to accomplish the goals established in this plan, support will be sought
from many officials, agencies, and organizations. Collaborative efforts have already
been long established with the Ohio Department of Health, other local health
departments, Ohio Environmental Protection Agency, Northwestern Water and Sewer
District, Toledo Metropolitan Area Council of Governments , Army Corps of Engineers,
Wood County Soil and Water Conservation District, Bowling Green State University,
Heidelberg University, Ohio Department of Agriculture, Wood County Commissioners,
Wood County Planning Commission, Wood County Engineers Office just to name a few.
Once implemented, this comprehensive program will further the process of identification and correction of problems of on-site sewage treatment. More will be learned about the HSTS situation in Wood County, monitor and track progress of this program via the HSTS database, and work toward practical, cost effective solutions to improve surface and ground water quality and protect public health.

When researching the number of aging septic systems, systems installed in unsuitable soil, and the systems creating nuisances and impacting water quality, WCHD estimates that approximately thirty to forty percent of home sewage treatment systems in Wood County are not being maintained or functioning properly. In 2010, changes to Chapter 3718 of the Ohio Revised Code became effective establishing statewide minimum standards for sewage treatment system failure. The standards are as follows:

1. A sewage system is not operating properly due to a missing component, incorrect settings, or a mechanical or electrical failure.

2. There is a blockage in a known sewage treatment component or pipe that causes a backup of sewage or effluent affecting the treatment process or inhibiting proper plumbing drainage.

3. An inspection conducted by, or under the supervision of, the Ohio EPA or a Sanitarian registered under the requirements of Chapter 4736 of the Ohio Revised Code documents that there is ponding of liquid or bleeding of liquid onto the surface of the ground or into surface water and the liquid has a distinct sewage odor, a black or grey coloration, or the presence of organic matter and any of the following:

   (a) The presence of sewage effluent identified through a dye test;

   (b) The presence of Fecal Coliform at a level that is equal to or greater than five thousand colonies per one hundred milliliters of liquid as determined in two or more samples of the liquid when five or fewer samples are collected or in more than twenty percent of the samples when more than five samples of the liquid are collected;

   (c) Water samples that exceed one thousand thirty e-coli counts per one hundred milliliters in two or more samples when five or fewer are collected or in more than twenty percent of the samples when more than five are collected;

4. When a NPDES system exceeds the effluent discharge limits in the permit.
Often, the premature failure or malfunction observed can be attributed to lack of homeowner knowledge, which leads to improper maintenance, accidental physical damage to the sewage system, construction of buildings over the system, water overuse and farming/damaging activity over the system as well as addition of clean water connections and water overuse which floods the system. WCHD provides educational resources to the public including homeowners, realtors, installers and service providers emphasizing their role in maintaining and maximizing the efficiency and lifespan of their system.

In 2003, the WCHD implemented several components of this program in order to assure compliance with existing codes and regulations within Wood County. WCHD has already identified all critical sewage disposal areas where population density and local limiting conditions have resulted in failing systems, many of which are on small lots that do not have room for replacement systems. In the past 12 years most of these areas have been sewered and over 10,000 septic systems have been eliminated.

The Wood County Board of Health regulations and Ohio Administrative Code Section 3701.29 regulate the sewage treatment requirements for HSTS including permitting, operation, engineering and design specifications as well as registration of installers, service providers and sewage tank cleaners. WCHD also oversees the abandonment of HSTS when public sewers become available and issues variances if circumstances warrant the same. These rules give the Wood County Board of Health authority to enforce these rules and regulations and the power to abate nuisances. The Board of Health also has the authority of Ohio Revised Code 3709.21 to adopt rules and regulations.

All new and replacement HSTS installed or altered are issued an installation or alteration permit under the authority of Ohio Administrative Code Section 3701-29-04 and the WCHD Home Sewage System Disposal Regulations. All septic tank cleaners are registered annually with the WCHD under the authority of Ohio Administrative Code
Section 3701-29-06 and Wood County Board of Health Regulations. Land application of septage continues to be allowed in Wood County but is very limited because of the availability of municipal treatment plants that accept the waste stream and limitations placed on the application of the septage effluent.

Identification of suspected and failing HSTS in Wood County is through nuisance complaints filed with the health district, realty transaction inspections and visual inspections conducted by division staff. Conditions that constitute a public health nuisance are outlined and defined in Ohio Revised Code Section 3718.011, Ohio Administrative Code Section 3701.29, 3707.01 and the Wood County Board of Health Regulations. Failure to comply will result in criminal charges being filed against the property owner(s) through the Wood County Prosecutors Office. Documentation of any enforcement activity will be maintained in the record file relating to the sewage treatment system.

The quality of septic effluent is initially determined by visual observation and detectable odors. In order to confirm and document the initial observations, samples are analyzed for Fecal Coliform and E-Coli bacteria. Additional parameters may include Biological Oxygen Demand (BOD), and Total Suspended Solids (TSS). Samples are analyzed by Jones and Henry Laboratory in Northwood, Ohio. For all samples, Ohio EPA “Water Quality Standard Guidance 3 – Sampling Methods For Documentation Of A Public Nuisance under Ohio Administrative Code Rules 3705-1-04 (F) and (G) Ohio Administrative Code Section 3745-1-04 Criteria applicable to all waters, and 40 CFR, Subpart D Water Programs, Part B guidelines establishing test procedures for the analysis of pollutants protocol is followed when obtaining samples. All water sample results and related correspondence will be maintained in the homeowners sewage treatment system file.

When replacing an existing failed system, an on-lot, soil absorption, non-discharging septic tank and leaching tile field is the first system of choice. The second system of choice will be an on-lot NPDES discharging system with a partial soil
absorption system where soil conditions allow. The third choice is an on-lot NPDES discharging system where soil conditions allow. The fourth choice is an off-lot NPDES discharging system with a partial soil absorption system and the final choice is an off-lot NPDES system. If an existing property has lot size limitations, the only option available would be an NPDES discharging system approved through the OEPA which are included in the current O&M program. The WCHD requires that all NPDES systems installed since 2007 be sampled annually and have a service contract with a licensed provider. Systems that fail to meet the effluent quality standards established by the Ohio EPA will be required to bring the system into compliance. Upgrades and alterations shall be required as part of this program when needed. Yearly reports for both NPDES and mechanical systems must be submitted to the WCHD. As required, WCHD prepares annual NPDES reports and they are submitted to the Ohio EPA in January. Failure to submit the required information will result in the file being forwarded to the Wood County Prosecutors office for litigation.

When the WCHD documents a malfunctioning HSTS, the property owner is required to obtain an application for a replacement permit. Once the application is completed and fee paid, an evaluation is performed by a Registered Sanitarian. Soils information is obtained by referencing the Ohio Department of Natural Resources Soil Survey of Wood County or by digging a test hole 4 feet deep with a backhoe. Other resources such as Wood County Soil and Water Conservation District, Wood County Engineers Office and Ohio Department of Health may also be utilized for consultation.

Once the Site Evaluation is completed, a scale drawing of the system, with specifications on the type, size and location is sent to the property owner. All contractors installing or altering sewage systems in Wood County need to be registered through the health district per section 3701-29-05 of the Ohio Administrative Code. The only exception to this rule is if the system will be installed by the property owner under auspices of a waver release form. Once completed, the WCHD performs an onsite inspection to assure compliance with Ohio Administrative Code Section 3701.29. Failure to comply with the permit requirements will result in the denial of the permit or a
Notice of Violation issued to correct the deficiencies. If the corrections are not made within the specified time period, a warning letter will be issued which may result in the file being forwarded to the Wood County Prosecutors office for litigation. If non-compliance is the result of actions by the registered installer or service provider, the Wood County Board of Health may take action to suspend or revoke their registration.

The WCHD will identify and actively pursue sources of funding for homeowners to repair or replace their HSTS. When funding is available, residents can contact the W.S.O.S. Community Action Commission or Community Housing Improvement Program for assistance. Other funding sources are the United States Department of Agriculture Rural Development 504 Grant for home repairs, Section 319 non-point source programs including Ohio Water Pollution Control Loan Fund, Community Development Block Grant Program (CDBG) and Ohio EPA Division of Environmental and Financial Assistance. The WCHD will provide information on financial assistance resources to the homeowner upon request. WCHD actively pursues and has been extremely successful in obtaining sewer tap funding assistance through the CDBG Program and the Wood County Planning Commission.

Educational information will be proactively provided to promote compliance with this operation and maintenance program. Information will be posted on the health districts website and onsite training is provided to registered HSTS installers and service providers upon request. A contractors meeting is held annually during the month of February to provide educational materials, address concerns, answer questions and provide the installers with information on any proposed rule changes for the year. Staff will also available to answer questions on a daily basis to provide homeowners information on the type of system they own, how it functions, how to manage, maintain and care for to ensure proper performance and sustainability. Homeowners, installers and service providers will also be provided with directions on how to access the Ohio Department of Health and manufactures internet sites as required by ORC section 3718.05 (F), or by written request, directly provide a copy of the O&M instructions.
Emphasis will be placed on known critical areas in an effort to eliminate the chances of further contributing to existing nuisance areas.

Operation and maintenance inspections will be conducted with the frequency determined by the type of system installed:

1. Mechanical and NPDES systems are being and will continue to be inspected on an annual basis. Alternative design systems will also be inspected annually.

2. Public health nuisance complaints will be investigated within seventy-two hours. Once the inspection is conducted and a nuisance condition is verified, orders will be issued to repair or replace the system. At this point the system will be placed under the operation and maintenance program with inspections conducted every five years.

3. Reality inspections will be conducted once a request for an inspection is made and the system will be inspected every five years thereafter.

4. All other systems including discharging aeration systems, non-permitted systems, permitted discharging systems, sub-surface sand filters and a septic tank with a leaching tile field will be placed under the operation and maintenance program and will be inspected every five years.

If the system is operating properly at the time of inspection and there are no sewage nuisances or code violations observed, an operational permit will be issued and the homeowner will be charged a $50.00 assessment fee to cover the cost of the inspection. Again, systems found to be failing will be required to be repaired or replaced. Failing systems will be charged the $30.00 assessment fee and then a $30.00 reassessment fee for each additional visit required to ensure the system is operating properly.

When conducting private home sewage inspections under this program, the homeowner will be provided information on how to properly operate and maintain their HSTS. After contacting the homeowner and obtaining permission, an onsite inspection will be conducted documented with photos. If necessary, sampling will be conducted at the owner’s expense if there is a discharging system. All inspection reports and sampling results will be added to the HDIS database.
This O&M plan will be reviewed annually and revised if necessary to reflect changes in the new rules.