

# **Chapter 4**

## **The Management of Home Sewage Treatment Systems, Semi-Public Sewage Disposal Systems, and Small Flow On-site Sewage Treatment Systems**

**This chapter discusses problems associated with the management of home sewage treatment, semi-public sewage disposal systems<sup>1</sup>, and small flow on-site sewage treatment systems<sup>2</sup> in Northeast Ohio and outlines the roles of local and state management agencies in this management system. It presents a series of management system recommendations for implementation by local health districts and other management agencies that would improve the performance of these systems and reduce their impact on water quality in the region. These recommendations are the work of a committee of the seven county health districts from the NOACA and NEFCO regions, Ohio EPA, and NOACA and NEFCO staff. This chapter and recommendations were reviewed and updated in 2011 by a committee of health districts representatives from the NEFCO region. This chapter concludes with a discussion of strategies for implementing these recommendations.**

The previous chapter presented the process whereby local and county jurisdictions have developed plans for wastewater management in currently undeveloped areas of the region. These plans identify areas that are expected to be sewered. They also identify large areas which are intended to remain unsewered.

A number of studies, including the NOACA study funded by the Lake Erie Protection Fund, have shown that on-site systems have a high rate of failure and adversely impact water quality in Northeast Ohio. The reasons for this are complex and are tied to deficiencies in the home sewage management system. If areas of Northeast Ohio are to remain unsewered, it is the responsibility of the local health departments to improve this management system.

### **I. Background**

Owners/operators of publicly-owned wastewater treatment works (POTWs) are designated by the 208 Plan to have the lead authority for sewer-related planning in clearly demarcated facilities planning area (FPA) boundaries. County metropolitan sewer districts will have

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<sup>1</sup>Ohio Revised Code Section 3709.085 defines semi-public sewage systems as “a disposal system which treats the sanitary sewage discharged from publicly and privately owned buildings or places of assemblage, entertainment, recreation, education, correction, hospitalization, housing, or employment, but does not include a disposal system which treats sewage in amounts of more than twenty-five thousand (25,000) gallons per day; a disposal system for the treatment of sewage from single-family, two-family, or three-family dwellings; or a disposal system for the treatment of industrial waste.”

<sup>2</sup>Ohio Administrative Code Section 3701-29-21 defines a small flow on-site treatment system as “a system, other than a household sewage disposal system, that treats not more than one thousand gallons of sewage per day and that does not require a national discharge elimination permit issues under section 6111.03 of the Revised Code or an injection well or operating permit issued under section 6111.043 of the Revised Code.”

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authority in all unincorporated areas, including within FPA boundaries. Local health departments (LHDs) are responsible for wastewater treatment in areas that are not serviced by sewers. These areas include designated areas within FPA boundaries and areas that are not part of any existing FPA. In most cases, these areas are located in unincorporated (township) areas. In some cases there are incorporated areas that are not now nor will be serviced by central sanitary sewers.

Wastewater treatment for unsewered areas is generally regulated and managed by county health districts in unincorporated areas, while city health districts (or their designated health agents) serve unsewered areas that are within corporation limits.

Several problems exist that limit better management of these systems. First, there are a variety of agencies involved in the regulation and management of these sewage disposal systems including, the Ohio EPA, the Ohio Department of Health (ODH), LHDs, municipal, county and township officials, local planning and zoning officials, and county planning commissions. The policies and actions of these agencies are often poorly coordinated. In addition, there is a lack of state enabling legislation and corresponding sewage rules and regulations that clearly mandate effective management forms by LHDs.

To address this shortcoming, the ODH on January 1, 2007, implemented new sewage treatment system rules setting statewide standards for the design, operation, and maintenance of home sewage treatment and small flow on-site treatment systems. However on July 1, 2007, the State Assembly suspended most of the new sewage regulations and directed a Technical Advisory Committee to pursue and consider innovative and cost-effective technologies for household sewage treatment systems. The suspension of the home sewage law ended July 1, 2010. Substitute Senate Bill 110 requires that new statewide rules be written and adopted after January 1, 2012. In the interim, the LHDs in the NEFCO region have adopted home sewage treatment rules similar to the ODH rules released in 2007. However, because those rules were suspended and new rules will not be out until at least 2012, each LHD in the NEFCO region adopted somewhat different versions 2007 rules based on the needs, goals, and resources.

LCD programs that address sewage treatment are often inadequately funded and must often rely on general funds, health levies, and certification funds to support staff. Thus, those homeowners subject to vigorous enforcement and regulation are the same individuals who are asked to vote for levies or support other taxes to provide needed funding for vigorous programs. The result in Northeast Ohio is that each county approaches the design of proper management systems without uniform standards of performance. This lack of uniform regulations includes standards for site and soil evaluations, permitting requirements, fee assessments, system operation and maintenance requirements, mandatory pumping programs, records management and education programs for system owner/operators, installers and inspectors.

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While LHDs have the primary regulation and management role, they must cooperate with two state regulatory agencies, the Ohio EPA and the ODH, which have some overlapping responsibilities. The Ohio EPA has the power to approve or disapprove sewers for an area, but that decision does not consider the fact that if sewers are not approved, the LHDs will often be compelled to approve individual sewage systems that contribute to poorer water quality than would be produced by a sewer option. These agencies must also cooperate with local officials and county planning commissions who have a less visible, although critical, role, through land use planning responsibilities, subdivision regulations, and comprehensive wastewater management planning roles.

## **II. Roles of Agencies within the Management System**

### **LOCAL COUNTY BOARDS OF HEALTH**

The Ohio Revised Code (ORC) Section 3701.56 authorizes Boards of Health of General Health Districts to enforce the sanitary rules and regulations adopted by the Ohio Public Health Council (the governing board of the ODH). ORC Section 3709.21 authorizes Boards of Health to make such orders and regulations as necessary for the public health, the prevention and restriction of disease and the prevention, abatement, or suppression of nuisances. Section 3707.01 also authorizes a Boards of Health of a General Health District to regulate, within its jurisdiction, the location, construction, and repair of water closets, privies, cesspools, sinks, plumbing and drains.

The authority of local boards of health over sewage treatment systems is further elaborated in the Ohio Administrative Code (OAC). Chapter 3701-29 of the OAC contains the State of Ohio Household Sewage Regulations. The regulations, and any amendments or revisions of these regulations, are further supported through local health district policies. OAC Section 3701-29-03(B) provides that no person shall install an HSTS in a new subdivision unless a central sewage system is considered to be impractical or inadvisable (as reviewed and determined jointly by the board of health and Ohio EPA).

OAC Section 3701-29-02(B) provides that any dwelling, which is not connected to a sanitary sewage system shall be provided with an approved HSTS prior to being occupied. OAC Section 3701-29-03(A) also provides that any person proposing to create a subdivision shall submit plans to the Board of Health, for approval, which clearly show that the provisions set forth in OAC Section 3701-29-01 to 3701-29-21 can be adequately met before any lots in the subdivision are sold or offered for sale.

Also consistent with OAC Sections 3701-29-02 (L) and 3701-29-02(M), it shall be the responsibility of the LHD to ensure that a HSTS shall be abandoned and the home sewer directly connected to a sanitary sewerage system whenever such a sewerage system becomes accessible to the property. The role of local boards of health in managing and regulating sewage treatment systems is interdependent with two state regulating agencies, the Ohio EPA and the ODH.

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LHDs currently register septage haulers. Each septage hauler must be registered by each county to service a residential septic tank. In several of the seven counties in the study area, there is a mandatory pumping program for individual sewage treatment systems. In those counties, each septage hauler must submit a manifest to the local entity for each load pumped. Currently, there is no registration requirement or mandatory pumping/manifest program for SPSDS pumpers.

## **OHIO DEPARTMENT OF HEALTH**

The ORC Section 3701.02 prescribes that the ODH shall consist of a director of health and a Public Health Council. ORC Section 3701.33 requires that the Council shall consist of seven members: three physicians, one registered nurse, one registered pharmacist, one registered sanitarian, and one member of the general public at least 60 years of age who is not associated with or financially interested in the practice of medicine, nursing, pharmacy, or environmental health. The governor appoints members to seven-year terms, with one term expiring at the end of each June.

ODH is made up of three main divisions: the Division of Prevention, the Division of Family and Community Health Services and the Division of Quality Assurance. The divisions are further broken down into service bureaus. The Bureau of Environmental Health in the Division of Prevention is responsible for providing help to local health districts to provide for public health services. The bureau works with local health departments to assess the needs of their agency and their communities, develop appropriate programs, and evaluate their effectiveness.

Five teams carry out the functions of the bureau: survey and investigation; standards and certification; technical assistance, consultation and training; environmental engineering; and private water and household sewage program improvement. As part of its mission to assist local health departments, the bureau currently surveys LHDs to determine whether the programs meet minimum standards established by law, but absent legislative authority, the bureau is unable to enforce these standards.

## **PUBLIC HEALTH COUNCIL**

The Public Health Council (Council) is the primary rule-making body for the ODH, and its powers and duties are set forth in law. It adopts, amends, and rescinds rules pertaining to public health. It prescribes, by rule, the number and functions of divisions and bureaus and the qualifications of the chiefs of the division and bureaus within the Department, and it advises the director of health on matters affecting public health. The Council has no executive or administrative duties (ORC 3701.34).

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## **RULE ADOPTION PROCEDURE**

As a matter of policy, while drafting rules to be proposed by the Council, the Department solicits input from affected parties in an effort to reach a compromise on issues of controversy. Draft rules are prepared by departmental staff and approved by the director of health prior to presentation to Council for consideration.

Most rules promulgated by Council are subject to ORC 119. Proposed rules are filed with the Secretary of State Legislative Services Commission Joint Committee on Agency Rule Review (JCARR), and the Office of Small Business. A notice of public hearing is published in five newspapers of general circulation, and a copy of the notice of public hearing and a copy of the proposed rules are sent to anyone who wishes to be on the Council mailing list (OAC 3701-1-01).

After Council conducts a public hearing on the rules, the rules are heard by JCARR. No final action is taken on proposed rules until they have been before JCARR. All final rules are sent to those on the Council mailing list and to all local health departments (ORC 3701.35).

## **OHIO ENVIRONMENTAL PROTECTION AGENCY**

As accorded by the ORC, Sections 6111.44 and 6111.45, Ohio EPA has first review responsibility regarding sewage treatment options for all in unsewered areas that do not involve one, two or three family residences and SFOSTS for unsewered areas. The Ohio EPA reviews wastewater treatment options for proposed new buildings or the expansion of existing structures with wastewater design flow over 1,000 gallons per day, and also for proposed changes in prior use. Wastewater options under review may include the extension of sewers to an existing POTW, construction of central sewers to a new private WWTP or POTW or the establishment of an individual sewage disposal system (with or without a discharge) for each lot. (See Ohio EPA Review Process in Appendix 13-3c "Prior to Permit-to-Install (PTI)" Work Group Report).

## **SEMI-PUBLIC INSPECTION PROGRAM / "HOUSE BILL 110 PROGRAM"**

House Bill (HB) 110 became effective as law on May 31, 1984, and it amended Sections 3709.085 and 6111.01 of the ORC. It gives local health districts the authority to perform, on behalf of the Ohio EPA through contractual agreements, preventative operation and maintenance education and inspections and informal enforcement activities at semi-public (on-site and discharging) systems (SPSDS) generating less than 25,000 gallons per day of "sanitary only" waste.

LHDs are authorized under HB 110 to collect inspection fees to fund an inspection program. Such fee amounts vary from one district to another and are determined by their boards. Start-up costs can be a barrier for counties to initiate this pollution-prevention

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program. Presently, the Ohio EPA annually inspects less than five percent of these semi-public facilities in counties without HB 110 Programs. Once fees are established, over time sufficient funds are received to permanently put in place an Education Operation and Maintenance Inspection Program to ensure proper maintenance of the thousands of small commercial sanitary systems potentially impacting waters of the state of Ohio.

The HB 110 Programs allow the Ohio EPA to concentrate its efforts on the industrial and larger POTWs dischargers by delegating the inspection oversight of the SPSDS to local health districts by contract. This also allows the counties to identify chronic poorly maintained facilities and refer them to the Ohio EPA for increased enforcement. This is one of the Ohio EPA's initiatives to promote local watershed partnerships to better control nonpoint pollution sources and improve proper operation and maintenance of existing small discharging point sources. Under HB 110, Health Districts may not initiate civil enforcement actions under 6111, but may initiate enforcement under local nuisance laws through local prosecutors. Local prosecutors can also prosecute water pollution violations criminally upon complaint of a local health board. This authority arises from Section 6111.99 of the ORC, which makes water pollution violations criminal violations. However, that authority existed prior to HB 110, and was not changed by its enactment. Although criminal prosecution may be appropriate in some instances, the Agency typically has chosen the civil action route in order to obtain injunctive remedies to bring the violators into compliance. In addition, HB 110 does not give local health boards authority to refer directly to the Office of the Ohio Attorney General (O.A.G.) on enforcement matters. In the absence of a public health nuisance, all enforcement actions recommended by local health boards must therefore be processed through the Ohio EPA Division of Surface Water's enforcement coordinator in the same way that other enforcement matters are handled. Both local and OAC (State) rule authorities may be utilized to force sanitary connections for 1, 2, and 3 family dwellings and SFOSTS, while Ohio EPA governs connection tie-ins of SPSDSs.

The Portage County Health Department, Summit County Health District, Stark County Health Department, and the Wayne County Health Department have established HB110 semi-public wastewater disposal system inspection programs.

#### **NPDES General Permit for Home Discharging Systems**

In 2007, the Ohio EPA began issuing statewide general National Discharge Elimination System (NPDES) permits (OHK000001) to provide coverage of discharges from select replacement and/or new home sewage treatment systems (HSTSs) in situations where on-site wastewater treatment is not an option. The permit is for systems serving single, two, and three family residences. In order to implement the program, a LHD may sign and Memorandum of Understanding (MOU) with Ohio EPA and ODH to administer the permitting program within their jurisdiction. The general NPDES permit for HSTSs may be issued under this MOU. Without the MOU, homeowners must deal directly with Ohio EPA to obtain coverage under an alternative NPDES general permit (OHL000001), created

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at the direction of the State Legislature in 2008. The following provisions are used to determine system eligibility by either LHDs or the Ohio EPA:

- A discharging system is permitted only for replacement sewage systems where soil absorption is not feasible, or for new systems on lots created before January 1, 2007, where soil absorption is not feasible and the discharge will be in a perennial stream with a watershed drainage area of at least five (5) square miles.
- A discharging system is only permitted when public sewers are not available.
- A discharging system is not permitted where that discharge would conflict with a 208 Plan.
- Unless connecting to a public sewer is economically unfeasible, a replacement sewage treatment system is ineligible for a NPDES General Permit if any part of the property is within 400 feet of a public sewer, and that sewer has capacity to accept the sewage system's flow.
- Effluent sampling and reporting is required annually as outlined in Section 3751-1-05 of the Administrative Code.

Discharges not eligible for the general NPDES permit include discharges from new lots, discharges to exceptional quality waters, co-mingled discharge streams, and discharges from industrial facilities.

Section 3718.012 of the Revised Code states that existing systems that were in operation prior September 17, 2010, are deemed approved if the system does not cause a public health nuisance. However, existing discharging systems that are located in areas that fall under USEPA's NPDES Stormwater Phase II program may be deemed "illicit" as part of the illicit discharge and elimination component of the program. Most areas identified as "urbanized" by the US Census Bureau are mandated to implement this program.

The Stark County Health Department, Summit County Health District, Wayne County Health Department, and Portage County Health Department all have signed MOUs with Ohio EPA and ODH to administer this General NPDES permitting program in their jurisdictions.

### **Small Flow On-Site Sewage Treatment Systems (SFOSTSs)**

In 2007, Chapter 3718 of the Revised Codes created a new category of sewage treatment systems called small flow on-site sewage treatment systems (SFOSTSs). SFOSTSs differ from HSTSs in the following ways:

- Existing ones stay under Ohio EPA jurisdiction until a replacement is needed
- Serve an existing or new non-residential structure; or existing or new structure housing more than three families, but only if the system can be an on-site soil absorption (leaching) system at which time jurisdiction of the system serving an existing structure transfers from the Ohio EPA to the LHD
- Treats not more than 1,000 gallons per day of sewage

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- Primary regulatory authority rests with Ohio EPA rather than the ODH
- Multiple dwellings on an on-site system

Section 3701-29-21 of the Administrative Code allows for LHDs to take over jurisdiction from Ohio EPA for SFOSTSs. LHDs can send a letter of notification to Ohio EPA for transfer of jurisdiction to the LHD if the health department agrees to fully implement all applicable provisions of the SFOSTSs rules and is committed to maintaining the necessary resources to support implementation of SFOSTSs rules.

The Stark County Health Department, Summit County Health District, and Wayne County Health Department have taken over implementing the SFOSTSs rules from the Ohio EPA.

### **RESIDENTIAL SUBDIVISION REVIEW**

For residential land use development, the Ohio EPA is required to review sewerage options for any proposed subdivisions.<sup>2</sup> For proposed residential subdivisions of one, two and three family residences without access to public sewer, LHDs have first review responsibility to determine whether public sewer is available, practical, or advisable based on the 208 Plans FPA; and, if not, to determine whether individual, onsite soil absorption-type HSTs are feasible based on specific site and soil conditions.

### **TOWNSHIP AND COUNTY PLANNING OFFICIALS**

Township officials determine their community's future through local comprehensive land use planning initiatives that involve public participation in the development and maintenance of current land use plans that are supported by updating zoning ordinances and maps. County Planning Commissions assist townships in their planning and zoning efforts through the review of proposed development to ensure that local zoning and subdivision regulations are met. County Planning Commissions also provide limited staff support to townships throughout local comprehensive planning processes. Also, in developing the wastewater management plans presented in Chapter 3, township officials have been afforded an opportunity to offer input and comment on sewer planning decisions that affect their community.

### **III. Recommended Management Practices for Home Sewage and Semi-Public Sewage Disposal Systems**

The following series of recommendations were developed by a committee of health department officials from each of the seven counties in the Lake Erie Basin 208 planning areas with support from NEFCO, NOACA, the Ohio EPA and the ODH, who were charged with the task of identifying a series of implementable strategies to ensure better

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<sup>2</sup>Ohio EPA Subdivision Review Authority, ORC 711.

management of home sewage treatment, small flow on-site sewage treatment and semi-public disposal systems. The recommendations were reviewed and updated in 2011 by a committee consisting of LHDs in the NEFCO region. The recommendations that follow have been organized in a “cradle-to-grave” fashion that begins with system owner/operator education and site evaluation and continues through system installation and inspection, on-going inspections and maintenance, pumping, septage disposal and assessment of water quality. These recommendations address issues of sewage management approval for subdivisions and commercial/industrial lots where responsibility lies with the Ohio EPA.

## **Recommendation 4-1: Site and Soil Evaluations**

Throughout the Northeast Ohio (NEFCO) 208 Planning Area, it is recommended that every site and soil evaluation (whether for individual lots or subdivision plats) be authorized via a uniform site and soil evaluation documentation form. Such a form was developed by, and is available from, the ODH.

### **4-1a: Contents of Site and Soil Evaluation Form**

To allow for thorough site and soil evaluations, the site evaluation application form should incorporate all of the specific information pertinent to the property and its potential to support a HSTS. This information should include the owner’s name and signature, permanent parcel number, general location or address, lot dimensions, lot topography, lot soil characteristics, etc.

More detailed information on the suggested contents of the site evaluation form can be found in Appendix 4-1, which contains a document produced by the Home Sewage Management Strategy Work Group entitled, “Recommended Best Regional Management Practices (BRMPs) for Individual Sewage Disposal Systems.”

### **4-1b: Site Evaluation Fees**

Local Boards of Health should establish site and soil evaluation application fees at a rate that is reflective of the actual cost to the LHD of the evaluation.

### **4-1c: Site Evaluation**

During a typical site evaluation, local health district representatives or a certified soil scientist should document their findings during the evaluation. This information should include the date of the evaluation, weather conditions, land features, man-made structures identified on the site, watercourses and drainage features, soils characteristics, etc.

More detailed information on the suggested contents of the site evaluation can also be found in Appendix 4-1.

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#### **4-1d: Provision of Site and Soil Evaluation Documentation to the Property Owner**

Documentation regarding the results of the site evaluation should be provided to the property owner from the LHD official who performed the evaluation. The documentation should include the evaluator's findings and recommendations including: the limitations of the site; possible means of overcoming the limitations; indication of the design criteria to be considered; and the associated operation and maintenance procedures for the system design.

### **Recommendation 4-2: Pre-installation Procedures**

#### **4-2a: Installation Permit**

An installation permit application should include the site evaluation information as described in 4-1a and 4-1c above and Appendix 4-1.

#### **4-2b: Installation Fees**

Installation permit application and inspection fees should be set at a rate that enables the local health district to recover all costs associated with inspection of the system during installation.

#### **4-2c: Comprehensive Site Plan**

A comprehensive site and installation plan, which includes the proposed system design, system location, and proposed location of the system reserved replacement area, should be submitted along with the installation permit application.

#### **4-2d: System Approvals**

##### **4-2d-1: Approval of Appropriate Systems**

Sewage treatment systems, which utilize soil for the treatment and dispersal of wastewater should not be approved for use in soils that are not capable of providing adequate treatment through absorption of sewage system effluent.

##### **4-2d-2: System Denial of Off-Lot Discharging Systems**

LHDs should discourage the installation of any system which produces an off-lot discharge for any new development. This type of system should only be allowed in cases of failure and/or in repair or replacement cases where no other alternative is technically or economically available.

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The Ohio EPA is working with the General Assembly to develop an effective and efficient (NPDES) permitting process that will apply to residential off-lot discharging systems. All LHDs must conform their own permitting policies to Ohio EPA requirements and should adhere to all instructions forwarded to them by the Ohio EPA.

#### **4-2d-3: Improve Effluent Quality and Minimize Effluent Quantity**

Alternative practices should be encouraged to improve the quality of effluent when utilizing off-lot discharging systems. It is also recommended that LHD officials exhaust all possible means to minimize the quantity of effluent from off-lot discharging systems.

#### **4-2d-4: Utilization of Alternative Systems**

The Ohio EPA and ODH are encouraged to consider alternative systems, which are proven to operate efficiently in soils and weather conditions similar to Northeast Ohio, in order to protect water quality

#### **4-2e: Permit Disclaimer**

LHDs are encouraged to include as a means of educating the system owner/operator a disclaimer on the installation permit to the effect that while the system meets the local health and state codes, meeting these code does not guarantee that the system will never fail.

### **Recommendation 4-3: System Installation Procedures**

#### **4-3a: Registration of Installers**

LHDs are encouraged to enforce regulations that permit the revocation of installer registration based on unsatisfactory work and/or deviation from county and state regulations. LHDs are encouraged to forward revocation of installer registrations to adjoining county health departments.

#### **4-3b: Installation Inspection Program**

LHDs should utilize existing installation programs as means of documenting deviations from the system installation design as approved by the installation permit. LHDs are encouraged to require the installer to furnish an “as-built” sketch of the system design and location on the site as part of each system’s records. Computerized records management files are encouraged.

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## **Recommendation 4-4: Operation and Maintenance Programs**

It is recommended that Operational and Maintenance Programs (O&M) be adopted, funded, staffed and enforced in each LHD or county/city in conjunction with local “Septage Management and Disposal Plans” that identify and provide acceptable septage disposal facilities. The O&M Programs should encompass owner education, operational permitting process, regular system inspection, adequate staffing and fees, system records management and mandatory pumping programs. These programs should be designed to comprehensively address existing and new systems.

### **4-4a: Educate Sewage System Owners**

Education of the system owner should be undertaken starting with permit approval, and continuing with installation/operational inspections, required pumping notifications, and maintenance, nuisance and point of sale inspections, utilizing the distribution of educational materials, for example, “Dollars Down the Drain.”<sup>3</sup>

### **4-4b: Inspection of Systems**

Systems should be inspected regularly to ensure maximum effectiveness in treating wastewater. The O&M Program should be staffed at a level to ensure that each system is inspected at least every five years.

### **4-4c: Inspection of Systems**

Systems records should be comprehensive and computerized to assist in system management and evaluation. Up-to-date records should be maintained, and an effort initiated to computerize existing data for all systems. A records file should be kept for each system including Site Evaluation application and corresponding documentation, as well as the approved Permit application and comprehensive site plan. LHDs are encouraged to utilize computerized records to remind system owners/operators to have their tank pumped and to enforce mandatory pumping programs. Up-to-date records will assist in the notification of pumping program schedule requirements.

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<sup>3</sup>“Dollars Down the Drain-Caring for Your Septic Tank” is a homeowner’s video guide to operation and maintenance of on-site sewage treatment systems. This video was produced by the Friends of the Crooked River in partnership with Cuyahoga River Remedial Action Plan (RAP), Cuyahoga County Board of Health, Geauga County Health District, Lorain County General Health District, Portage County General Health District, Summit County General Health District, the Ohio Department of Health, the City of Akron, Kent State University and the University of Akron (1997).

#### **Recommendation 4-5: Establish and Enforce Mandatory Pumping Programs**

A mandatory Septage Pumping Program may be implemented that educates, tests, registers, and regulates pumpers/haulers, maintains pumping records, and determines pumping schedules for each system, in conjunction with local septage management and disposal plans that provide for septage disposal (Recommendation 4-8). LHDs and the ODH are encouraged to keep computerized records management files.

#### **Recommendation 4-6: Transfer of Semi-Public and Small Flow On-Site Treatment Systems Management Responsibility**

LHDs should continue to contract with Ohio EPA for semi-public systems program management through HB 110 programs, while also pursuing and securing additional management responsibilities for these systems. LHDs should also consider taking over jurisdiction for small flow on-site treatment systems from Ohio EPA to improve the management of these systems.

#### **Recommendation 4-7: Utilization of Recommendations 4-1 through 4-5 for Management of Semi-Public Sewage and Small Flow On-Site Treatment Systems**

Legislative changes should be encouraged to allow LHDs to employ management practices parallel to those recommended for HSTS program management when managing of semi-public domestic sewage disposal small flow on-site treatment systems. These would include adopting local regulations to require licensed installers, installation inspection, contracts for operational inspections, licensed septage/sludge haulers, and mandatory pumping/manifest programs.

#### **Recommendation 4-8: County Septage Management and Disposal Plans**

It is recommended that “Septage Management and Disposal Plans” be developed with leadership by city or village mayors/managers and/or the Board of County Commissioners (or County Executive), in each city/county to address the issue of septage disposal. Each plan will be unique unto the city/county it is designed to assist, but in general, “septage disposal plans” should include a series of activities, programs, and procedures that will help to address the treatment of septage over at least a twenty-year period.

Adequate septage disposal opportunities must be available in order to properly implement mandatory pumping programs. Proper disposal of septage can be a hurdle because most wastewater treatment facilities in the NEFCO region do not now accept septage and land application can be politically and technically challenging. It is further recommended that the County “Septage Management and Disposal Plans” focus on increasing approved

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septage disposal sites at existing wastewater treatment plants. The disposal plans should also strengthen land application guidance and regulations to assure protection of local water resources. The disposal plans should include educational components on proper septage management for land application.

### **Recommendation 4-9: State Enabling Legislation**

On September 17, 2010, Substitute Senate Bill 110 from the Ohio General Assembly became effective resulting in changes to several portions of the sewage law found in Section 3718 of the Revised Code. These changes include:

- New definitions for public health nuisance, bedrock, gray water recycling, infiltrative surface, soil, vertical separation distance, water table, and inspection.
- Automatic continued approval of sewage systems that are not creating a public health nuisance.
- New statewide rules be written and adopted no sooner than January 1, 2012.
- Applications for installation permits accepted prior to January 1, 2012, are valid for three years from the date of submission of a complete application.
- An installation permit issued by a LHD prior to January 1, 2012, will be valid for January 1, 2013 unless extended six months by the LHD. Permits issued after January 1, 2012, will be valid for the period of time to be specified in the new rules.
- The establishment of a sewage treatment system appeals board by December 17, 2010, as an alternative to going through the court of common pleas process.

The development of new rules is ongoing by ODH which has created a rule advisory committee to assist with the process. The committee contains a wide variety of stakeholders including LHDs, industry, trade and professional associations, other state agencies, and the public. These rules when created will:

- Require a site and soil evaluation (review of soils, topography, lot size, etc.) for a proposed installation of a sewage treatment system.
- Allow for the progressive alteration or repair of a failing system.
- Include specifications for vertical separation distances (VSD) or the thickness of soil required at a site beneath the soil absorption component (leaching, mound, drip tubing, etc.) to the first limiting layer for adequate sewage effluent treatment.
- Allow the ability to reduce the required VSD using soil credits and the use of different types of system engineering.
- Allow LHDs to petition ODH to approve an increase in the VSD
- Establish requirements for the reasonable maintenance of systems.
- Require statewide bonding for installers, service providers, and septage haulers as a condition of registration, and require a cost methodology in rules to set the bond and local registration fee amounts.
- Require standards for the inspection of septage hauling tanks.

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- Ensure that all types of septic and related tanks are structurally sound and watertight.
- Require LHDs to give notice and opportunity for hearings regarding LHD actions.
- Will require that LHD rules and programs established will remain in effect until the new state rules are adopted after January 1, 2012.

**IV. Designation of Management Agencies for Home Sewage, Small Flow On-Site Sewage Treatment and Semi-Public Domestic Sewage Disposal Systems**

The City/County Boards of Health listed below in Policy 4-1 are requested to review and consider the recommendations presented in the preceding section for adoption. This Clean Water Plan provides for the designation of local health districts as management agencies (MAs) to undertake the implementation of these recommendations.

**Policy 4-1:** The following city/county health districts are recommended as MAs for implementation of the recommendations for management of home sewage systems and semi-public system in the NEFCO region.

Ravenna Health Department	Portage County General Health District
Kent Health Department	Summit County Health District
City of Alliance Health Department	City of Canton Health Department
City of Massillon Health Department	Wayne County Health Department
Stark County Health Department	

**Policy 4-2:** Management agencies designated under this chapter agree to undertake the following:

- A. The agency adopts the Recommendations 4-1 to 4-6 as program management goals, and agrees to pursue the implementation of these goals in a five year time frame.
- B. The agency agrees to pursue the implementation of these recommendations as a priority in areas identified in Chapter 6 of this plan as tributary to critical regional water resources.
- C. The agency agrees to cooperate with the facility planning process outlined in Chapter 3 of this plan.
- D. The agency agrees to participate in major watershed planning groups recognized in Chapter 8 of this plan.

**V. Strategies for Implementing Recommendations in this Chapter**

This section outlines the roles of other agencies and a series of recommended strategies that will directly support LHDs in the implementation of the recommendations of Chapter 4.

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## **TOWNSHIP OFFICIALS**

Township officials are encouraged to consider their community's sewer future as part of local land use planning and zoning update initiatives. In the event that a community deems that its future does not include or limits the existence of central sanitary sewers, local township officials and county planning commissions can ensure that wastewater is treated effectively by supporting LHDs in the adoption and implementation of the recommendations presented in this chapter on management practices for individual sewage treatment systems and semi-public sewage disposal systems.

## **CITY AND COUNTY PLANNING COMMISSIONS**

City and County Planning Commissions can assist townships in their planning and zoning efforts through planning staff support and alterations to subdivision review regulations to require a Clean Water Plan consistency review by Ohio EPA and NEFCO to ensure that wastewater from new development will be adequately treated. County Planning Commissions can also assist the LHD by informing and educating township officials as to the performance status of existing sewage treatment systems and the environmental and water quality problems associated with failing and malfunctioning systems.

City and County Planning Commissions can also play a role in facilitating planning and zoning discussions based upon soil characteristics and water quality.

## **COUNTY COMMISSIONERS (COUNTY EXECUTIVE), CITY AND VILLAGE MAYORS**

County Commissioners (the County Executive) and City and Village Mayors should provide support to the LHD's adoption of recommendations, provide leadership in establishing county-wide septage disposal plans, and actively participate in the 208 continuing planning process as a means of supporting local and county planning efforts concerning wastewater management issues.

## **AREAWIDE AGENCIES**

NEFCO should continue to support regionally-oriented technical studies that address the impact of home sewage, small flow on-site, and semi-public sewage disposal systems on the region's water quality. They should assist in identifying possible funding sources for program start-up monies, for O&M requirements, or for failing systems replacement. The areawide and MAs should continue to support state enabling legislation concerning local authority for home sewage management.

NEFCO should continue to provide a regional forum in which local health districts consider water quality management strategies.

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## **OHIO DEPARTMENT OF HEALTH**

The ODH should work with the Ohio EPA and LHDs to establish clear residential subdivision review authority concerning wastewater management issues.

The ODH should develop and adopt new rules in accordance with the state legislation to reinforce the implementation of these recommendations especially to enhance LHD authority to enforce and finance O&M Programs and authority to implement funding mechanisms to implement the recommendations outlined in this chapter. The new sewage rules should take into consideration funding assistance for both LHDs and homeowners. Implementing new sewage rules will likely strain LHDs' budgets, many of which are already facing funding difficulties. Assistance programs to aid LHDs would help ensure the new rules are properly and uniformly implemented in the NEFCO region. Also, assistance programs and incentives for homeowners would also improve implementation of the new sewage rules.

The ODH should support the efforts of LHDs in establishing better regional management programs for long-term O&M of systems including the utilization of alternative technology treatment systems, e.g., constructed wetlands, etc.

## **OHIO ENVIRONMENTAL PROTECTION AGENCY**

The Ohio EPA should work with the ODH and LHDs to establish a clear demarcation of residential subdivision review authority concerning wastewater management issues.

The Ohio EPA should compare the likely impact of HSTS performance in proposed residential subdivisions versus the impact of package sewage treatment plants in currently unsewered areas given the likelihood that HSTS are in many cases permanent installations. Further, the Ohio EPA should encourage the consideration of alternative community public sewage systems when performing subdivision review.

The Ohio EPA should strive to give LHDs complete management authority for SPSDSs, including enforcement and fine recovery.

The Ohio EPA should work with county and local management agencies to develop a county-wide septage disposal plan in each of the seven counties within the Lake Erie Basin 208 planning area. The Ohio EPA is encouraged to help local septage receiving facilities deal with the pass through of toxic materials that inhibit the biological processes in the WWTP and to work with local leadership in establishing a tracking system of loads through the documentation of work performed by pumpers. The Ohio EPA is also encouraged to provide leadership for septage receiving facilities in addressing the liability enforcement issues caused by a violation of mercury limits.

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## **OHIO LEGISLATURE**

In 2010, the Ohio General Assembly enacted enabling legislation that requires that the Public Health Council adopt rules of general application throughout the state and that ODH conduct surveys of LHD sewage treatment system programs to determine substantial compliance. The legislation provides the authority to adopt fees depicted in this chapter to ensure that they comply with state standards and federal Clean Water Act requirements.

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## **Appendix 4-1**

### **Recommended Management Practices for Home Sewage**

**(“Recommended Best Regional Management Practices for Individual Sewage Disposal Systems” as Submitted by the Home Sewage Management Strategies Work Group)**

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The Home Sewage Management Strategies Work Group was charged by the 208 Water Quality Management Task Force to identify a series of implementable strategies that could be incorporated into the 208 Plan. The Work Group was asked to identify barriers to those strategies; to research existing alternative strategies which overcome the barriers and then to develop transferable models that can be implemented throughout each county in the 208 planning area. As a means to accomplish their charge, the Work Group identified five management issues around which they would explore existing and possible barriers, research alternative strategies, and then develop regional models. These issues included discussions around the following:

- 1) Site & System Evaluations;
- 2) Regulations & Policies Resulting in Off-lot Discharge Approval;
- 3) Maintenance of Home Sewage Systems;
- 4) Sewage Disposal and System Design Approval in Unsewered Areas with Severe Soil Limitations; and
- 5) Septage Handling & Disposal.

The Work Group included representation from each of the county health departments within the 208 planning area, including representation from Cuyahoga, Geauga, Lake, Lorain, Medina, Portage, and Summit County Health Departments. The Work Group met on a monthly basis to discuss and debate management practices and programs throughout Northeast Ohio. The Work Group, through their discussion of barriers, alternative practices and the development of transferable models, arrived at a series of best or better regional management practices (BRMPs). The following BRMPs are supported by the seven county health departments and are recommended for consideration and incorporation throughout the development of the 208 Plan Update.

The BRMPs are recommended by the Work Group for application in the approval, installation, management, and evaluation of home sewage treatment systems (HSTS), which are the responsibilities of the local health departments. With input from Ohio EPA, these BRMPs were drafted also to be applicable and effective in the approval, installation, management, and evaluation of semi-public sewage disposal systems (SPSDS), which are regulated by the Ohio EPA through the House Bill 110 program. The HB 110 program allows Ohio EPA to contract with the local health departments to manage and evaluate the semi-public systems once they have been approved and installed.

The recommended BRMPs are offered from a “cradle-to-grave” fashion that begins with system owner/operator education and site evaluation and continues through system installation and inspection, on-going inspections and maintenance, pumping, septage disposal and assessment of water quality.

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In addition, as part of a series of recommended BRMPs, this document is supplemented by a report entitled “Prior to PTI” that outlines the steps prior to Permit to Install (PTI) approval or disapproval and provides additional recommendations for BRMPs regarding the subdivision systems approval process.

### **Site & System Evaluations:**

As indicated in the “Prior to PTI” document, any newly proposed residential development for 1, 2, or 3 family dwelling units of ten or more lots (or a smaller number as defined) are to be first reviewed and subsequently disapproved by the Ohio EPA before local health department officials may review the proposed subdivision for on-site systems. It is recommended that administrative procedures be established that will encourage all land developers to first contact their local health department officials for information regarding the development process and where (what agency) to begin their application and approval process. These policies will provide local health department officials with information regarding possible development, residential and commercial, for which they will ultimately be responsible. Disapproval of the extension of sanitary sewers or the installation of a package plant for residential subdivisions by the Ohio EPA allows the local health department officials to review, approve, and continue to regulate and have responsibility for on-site residential systems. In addition, approval of on-site systems for commercial development in counties with House Bill 110 programs increases inspection responsibilities for local health department officials.

The following recommended BRMPs can be utilized and applied for minor subdivision lots, within a major subdivision, and commercial/industrial lots where responsibility lies with the Ohio EPA.

Throughout the 208 Planning Area, it is recommended that every site evaluation (whether for individual lots or subdivision plats) be authorized via a site evaluation application form that requires the property owner’s signature.

Site evaluation application forms should incorporate the following standard contents:

- owner’s name and signature
- permanent parcel number
- general location
- street address (if available)
- dimensions of lot (proposed acreage)
- proposed location and type of sewage system to be used (if available)
- topography
- water courses
- drainage description
- north orientation arrow
- proposed use, i.e., 1, 2 or 3 family dwelling, number of bedrooms, commercial
- square footage of proposed dwelling
- any easements, including those for utilities

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- existing structures or old foundations
- any former land/building uses
- location of existing structures (features that would interfere with system placement)
- set of instructions to facilitate field checks (staked corners, street address etc.)
- drawing of house location and house plans
- rough sketch of property
- excavator's name and address (if known)
- who prepared application
- disclaimer
- proposed water supply
- date of last transfer
- soils information (if available)

The Work Group recommends that local health officials have the ability to establish site evaluation application fees at a rate that covers all costs associated with the evaluation.

Prior to site evaluation, a site plan drawing (preferably scaled) should be submitted.

For each site evaluation performed, local health districts throughout the 208 planning area are encouraged to document as much of the following standard evaluation information as possible:

- date of inspections
- all associated weather conditions before and during site evaluations
- vegetation, e.g., wooded, open, wetland indication
- land features, e.g., fill, roadways,
- existing structures or easements that might interfere with system placement
- oil & gas pipelines
- disturbed soils
- structures
- ponds
- identification of soils to the satisfaction of the local health official, i.e., test hole and professional soils analysis
- study submission
- soil identification
- curtain interceptor drain outlet

Documentation regarding the results of the site evaluation should be provided to the property owner from the local health department official who performed the evaluation. The documentation should include the evaluator's findings and recommendations including the limitations of the site; possible means of overcoming the limitations; indication of the required system design to be installed; and the recommended operation and maintenance procedures for the system.

An installation permit application should state similar information that has previously been recommended to be included on the site evaluation application.

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It is recommended that the installation permit application fee be set at a rate that enables the local health district to recover all costs associated with inspection of the system during installation and subsequent operation.

Require a comprehensive site and installation plan (that includes a replacement area).

Deny system designs based on their performances in certain soils.

The installation permit should contain a disclaimer that indicates the system meets the code, but that meeting the code does not guarantee the system will never fail.

Require installers to be registered locally; implement policies and practices that support the revocation of registration based on unsatisfactory work and/or deviation from local health department regulations.

Implement and enforce an installation inspection program to ensure the system is installed as designed and indicated in the comprehensive site plan.

An operational permit should be utilized in conjunction with a system O & M Program with appropriate fee that will allow the local health districts to recover all costs associated with the adoption of an operational permit.

### **Recommended Practices or Programs for Sewage Disposal and System Design Approvals in Unsewered Areas with Severe Soil Limitations**

With the establishment of the NPDES general permit from Ohio EPA, it is recommended that local health department officials and regulations should discourage the installation of off-lot discharging systems for any new development; and only allow off-lot discharging systems in system repair or replacement cases when necessary, and only when there is an approvable discharge point.

Require alternative practices to improve the quality of effluent when utilizing off-lot discharging systems.

It is also recommended that local health department officials exhaust all possible means to minimize the quantity of effluent from discharging systems.

In the event an entire Operational Maintenance inspection program cannot be adopted, funded, staffed, or enforced for all systems, resources should be utilized to establish a program specifically for off-lot discharging systems.

Encourage Ohio EPA to consider alternative systems, proven to operate efficiently in soils and weather conditions similar to northeast Ohio, in order to protect critical resources.

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## **Maintenance of Sewage Systems**

It is recommended regionally that Operational and Maintenance Programs be adopted, funded, staffed and enforced in conjunction with local “Septage Management and Disposal Plans” that identify and provide acceptable septage disposal facilities. Those programs should:

Educate the sewage disposal system owner/operator; as to the proper operation and maintenance of their specific system;

Distribute educational materials when site evaluation application is made, i.e., “Dollars Down the Drain” video, pamphlets, brochures, etc.; and

Continue to educate the system owner from the point of permit approval, during installation/operational inspections, required pumping notifications, and maintenance, nuisance and point of sale inspections;

Inspect systems regularly to ensure maximum effectiveness in treating wastewater;

The operation and maintenance program should be staffed to ensure that each system is inspected at least every five years. Inspections should also continue for nuisance complaints and when requested by mortgage lenders (point of sale inspections);

Operational Permit and pumping fees should be established and set at a rate that enables the local health department to recover all costs associated with the hiring of staff to perform five-year inspections and maintain all associated record-keeping;

Maintain up-to-date records (computerized if possible) for all systems; a records’ file should be kept for each system including Site evaluation application and corresponding documentation, and the approved Permit application and comprehensive site plan. (Up-to-date records will assist in the notification of septage pumping schedule requirements);

Utilize a Septage Pumping Program, in conjunction with local “septage management & disposal plans,” that educates, tests, registers, and regulates pumpers/haulers; and maintains pumping records; determines pumping schedules for each system. This idea is addressed in a supplemental document entitled “Septage Management & Disposal Strategies”, which cites:

1. Pumper registration to allow:
  - enforcement
  - education
  - revocation/suspension of license
  
2. Meetings for pumper education to show:
  - how to fill out pump receipts
  - incentives
  - proper cleaning procedures
  - how to determine if contents of septic tank is non-toxic

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3. The Pumping record (standard form) should contain:
  - address of sewage disposal system
  - owner's name and mailing address
  - pumper's name and address
  - total gallons of septage pumped
  - where the septage was dumped/land applied
  - date pumping record was returned to the local health department that has jurisdiction over the pumped system
  
4. The pumping schedule should also:
  - explain the pumping requirements
  - indicate the required frequency (determined by measuring sludge and scum levels per gallon of tank capacity or more realistically, as accorded by number of occupants) that the system must be pumped
  - provide notification as to the systems pumping needs status

Address pumping programs and schedules, record-keeping requirements, repair/replacement needs with:

Stiff, enforced fines for haulers who falsify pumping records, including removal of haulers from the POTW acceptance list;

A disposal plan that includes: 1) points for receiving new volumes of septage; a) land application sites; b) plants that will accept septage; 2) ideas as to how to deal with new volumes of septage;

Establish revolving or low interest rate loan program to financially assist owners in repairing, replacing, or to tie into sanitary sewers to mitigate water quality impacts from poorly performing/failing systems; and

Work with local officials, i.e., POTWs, city mayors, county executives, county commissioners, sanitary engineers, etc. to resolve the issues of treating septage, such as computerized record keeping and enforcement of pumping schedules, the travel economics for haulers when disposing of septage, and the liability issues for those wastewater treatment plants that accept septage, via a "Septage Management and Disposal Plans."

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