

SURVEY OF LOCAL HEALTH DEPARTMENT OPERATION INSPECTION PROGRAMS IN OHIO

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Abstract

This paper reports on the 2002 survey results from over 40 local health departments in Ohio currently conducting operation inspection programs on household sewage systems. Information presented in the paper includes detailed survey results and related regulatory issues with a discussion focused on marketing and financing operation inspection programs. Published information on the Ohio experience and other related literature is also discussed.

Survey data collected by the Ohio Department of Health includes the following: startup year; marketing programs; ongoing education; types of systems; frequency of inspection; personnel; service contracts; service provider registration; fee structure; penalties; program costs; number of systems; expansion plans. Survey responses are varied given that each local health department conducting inspections has initiated the program independent of any statewide requirements. Most programs started with inspections of home aeration units, but many have expanded to include other types of household systems and some semi-public systems.

Introduction

An Ohio Department of Health (ODH) survey of all local health departments in the state was initiated in January of 2002 to ascertain both quantitative and qualitative information on local operation inspection programs for household sewage systems. The impetus for conducting this survey was generated at the National Onsite Wastewater Regulators Conference 2000 where Graham Knowles, Project Coordinator for NODP IV, presented a pie chart graphic of preliminary national data on systems under management with Ohio having a significant "piece of the pie" (Knowles, 2000). If Ohio was recognized as having made progress in managing onsite systems, ODH wanted to further explore this progress and properly attribute it to the hard work of many local health departments in Ohio.

Prior to the ODH survey, a general survey of county health department household sewage programs was conducted through the Cuyahoga County Board of Health in July of 1997. This earlier survey indicated that thirty-four county health departments had some form of operation and maintenance program (Stark, 1998). At least two of these county health departments have reported on their individual county experiences in national publications (Ingram et al., 1999) (Novickis, 2001). This paper does not report on the effectiveness of these operation inspection programs in Ohio, as debated by Mancl (2001) and Ingram (2001), and addressed in a recent Northeast Ohio study (NOACA, 2001). Rather, this paper provides a broad overview of the scope and range of Ohio's local health department operation inspection programs.

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Regulatory Background

Those local health departments (LHD) in Ohio that have implemented operation inspection programs have done so through their own initiative with minimal support from the state regulatory structure. Ohio's state level regulations do include a requirement that "No person shall maintain or operate a household sewage disposal system installed after the effective date of this rule without an operation permit obtained from the board of health" (Ohio Administrative Code, 1977). While this language in the administrative code created a regulatory requirement for operation permits, it provided no requirement for operational inspections.

In addition to the absence of a state mandate for operational inspections, ODH has very limited oversight authority for local health department household sewage programs. Unlike other ODH environmental health programs, Ohio statute does not mandate state oversight of local health department household sewage programs. Given this weak state regulatory environment for household systems, it is clear that the development of local operational inspection programs is due to the efforts and responsiveness of the local health departments.

This responsiveness can be attributed in part to the proliferation of home aeration units in Ohio's rural and suburban developments during the later part of the 20th century. Having no household sewage rules prior to 1974, and permissive discharge language in the rules promulgated in 1974, most of these home aeration units were installed with surface discharges. In the absence of state regulations requiring monitoring, maintenance, and incentives for homeowners to extend warranty service agreements, sewage nuisances developed in many residential neighborhoods.

Despite decades of effort, Ohio has yet to resolve the issue of discharging household systems and the NPDES requirements of the Clean Water Act. The resulting high number of discharging systems in Ohio, particularly home aeration units in densely populated areas, has created a strong incentive for many local health departments to establish operation inspection programs. As evidenced by the following survey results, some local health departments took the initiative to use home aeration unit inspections as a springboard to include other types of household systems, and even semi-public systems, in their expanding operation inspection programs.

Survey Results

The following questions were distributed to all 139 local health departments in January of 2002:

1. What year did you begin your operation inspection program?
2. Was an education and/or marketing program conducted prior to startup?
3. Does your program include an ongoing educational component?
4. What types of household systems are included in the program?
5. Do you also contract with Ohio EPA to conduct a program for semi-public systems?
6. What is the frequency of inspection, and does this vary for different types of systems?
7. Who conducts the monitoring (i.e., registered sanitarians, LHD technicians, service providers)?
8. Do you accept service contracts in lieu of inspections by the LHD? If so, do you have a LHD registration requirement for the service providers?

9. What are your fees for the program?
10. Do your fees include a reinspection fee or penalty fee for non-compliance?
11. Are all program costs covered by this fee structure?
12. How many household systems are currently covered under your program?
13. Do you have plans to expand your program?

Of the 139 local health departments in Ohio, 88 are county level departments or combined districts that include cities. Of the remaining 51 city jurisdictions, where most residences are served by public sewers, it is estimated that only a quarter, or about a dozen, of these local health departments have household sewage programs. With 88 county or combined jurisdictions and an estimated 12 city jurisdictions, there are approximately 100 local health departments in Ohio with household sewage programs.

Forty-two health departments completed the questionnaire. Of these, 36 are county or combined departments and 6 are cities. The distribution of the responding county or combined departments and the list of responding city departments are provided in Figure 1.



Figure 1. Local Health Departments Completing Operation Inspection Program Survey.

From follow up phone calls, it was determined that a minimal number of local health departments conducting operation inspections did not respond to the survey. Given this fact and the estimate of approximately 100 departments having household sewage programs, it appears that almost half of Ohio's local health departments have expanded their household sewage programs to include some form of operational inspections.

Startup Year: From the survey responses to the first question, it is interesting to note that 2 departments started inspecting home aeration units 30 years ago in 1972, prior to the promulgation of the household sewage rules in 1974. Another 6 departments started their programs later in the 1970's, 13 started in the 1980's, 20 in the 1990's, and 1 department started in 2000. The absence of any startups since 2000 may be due to proposed legislation and draft rule revisions causing departments to hold off in anticipation of regulatory changes at the state level.

Education: Only 15 of 42 departments (36% of those responding) indicate that they conducted education or marketing efforts prior to implementing operational inspections. This was surprising given the importance placed on community buy-in for these types of inspection programs. Though just over half (25 of 42) indicate that they have an ongoing educational component in their program, survey comments clearly show that almost all departments provide one-on-one education at the site when homeowners are available during inspections. More information on survey comments in this area of education and marketing is provided in the discussion section.

Types of Systems: As noted earlier, most departments only inspected home aeration units at the start of their programs. A few departments did not just target aeration systems, but started their programs by focusing on systems in new subdivisions, systems installed under variance provisions, or those systems with mechanical components, including aeration units and systems with pumps. Overall, the variety of systems inspected include home aeration units, other discharging systems such as sand filters, electrical/mechanical systems, leach lines, mounds and other types of systems labeled experimental in Ohio, and semi-public systems (<25,000 gpd). The latter are inspected voluntarily by some local health departments through contracts with the Ohio EPA, the agency responsible for issuing installation permits for these semi-public systems.

Frequency of Inspection: Responses range from semi-annual inspections to inspections once every six years. Two-thirds of the departments (28 of 42 responding) conduct annual inspections on home aeration units. Twenty departments inspect other types of systems as described above, and 18 of the 20 inspect some of these annually as well. Many health departments inspecting multiple types of systems have set varying time frames for inspection frequency based on the complexity of the system type or special permitting conditions (i.e. variance or experimental approvals).

Inspection of All Systems: It was impressive to see that 6 departments are inspecting all of their household systems, with 3 of the 6 conducting these as annual inspections. As might be expected, 4 of these 6 are city departments (Cincinnati, Middletown, Sharonville, and Indian Hill) that generally have fewer household systems than county departments. These 4 cities have a combined total of just over 3000 systems, where the 2 county departments (Cuyahoga County and Hamilton County) inspecting all household systems have a tenfold combined total of over 30,000 systems under operational inspection. A 3rd county department (Miami County) will have completed the initial

inspection and inventory of all household systems by 2005. Two other county departments began inspecting all systems installed after a specified date, that being 1989 for Warren County and 1998 for Clermont County.

Inspection / Monitoring Personnel: In Ohio statute, inspections are considered to be the responsibility of sanitarians, so the term monitoring is used when operational reviews are conducted by other personnel. The survey results indicate that sanitarians conduct operational inspections in 37 of the 42 departments, but in close to half of these departments (18 of 37) other personnel monitor systems as well. Ten of these 18 use other department personnel including plumbing inspectors in 2 departments, technicians in 5 departments, and summer interns in 3 departments. Three departments depend solely on department technicians to conduct monitoring under the supervision of a sanitarian.

There are 16 departments allowing private sector service providers to conduct monitoring, but only 2 county departments rely entirely on these service providers to conduct all operational reviews. In 14 of these 16, the department inspection is waived for owners of home aeration units that purchase service contracts. Only 7 departments register service providers and at least 4 of these 7 have bond requirements of up to \$5000.

Fees and Program Costs: Household system operation inspection fees charged by departments range from a low of \$5 to a high of \$360, with the most common fee being \$30 per inspection. Ten departments charge reinspection or penalty fees, ranging from \$10 to \$35 when a system is out of compliance, with one county department having an escalating fee scale for multiple reinspections. It was discouraging, but not unexpected, to find that only 13 of the 42 departments, or less than one-third, report that their fees cover all program costs.

Number of Systems in Operation Program / Expansion Plans: The survey responses concerning the number of systems in each department's operation inspection program range from unknown to a very precise highest number of 18,381 reported by Hamilton County. See Figure 2.

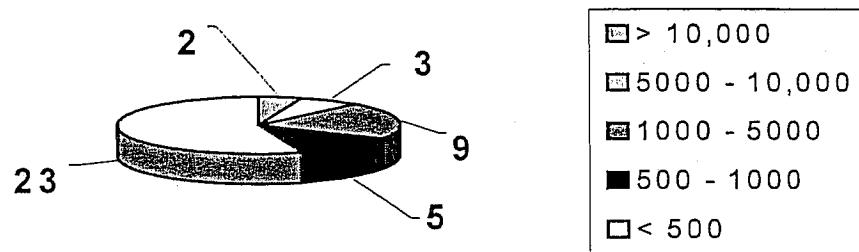


Figure 2. Groupings of 42 Departments and Number of Systems in Operation Programs

The second highest number reported was from Cuyahoga County at 12,972 systems. No other departments topped 10,000 systems, and only 3 (Clermont, Fairfield, and Warren Counties) fall in the range of 5,000 to 10,000 systems. Nine departments reported system numbers between 1000 and

5000. Five departments fall in the range of 500 to 1000. The majority of departments, 23 of 42, reported less than 500 systems under inspection. A grand total of 79,309 systems are reported to be included in these 42 operation inspection programs. Groupings of the same departments by the percentage of total number of systems is provided in Figure 3.

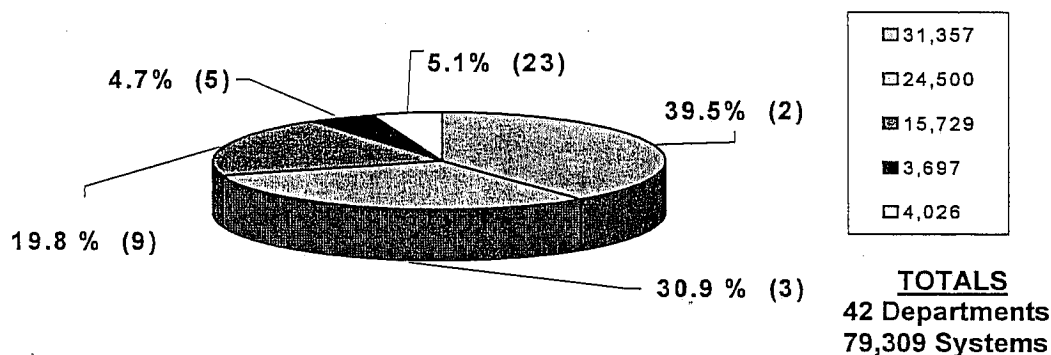


Figure 3. Percentage of Total Number of Systems by Department Groupings in Figure 2.

It is evident that a relatively few departments (5 of 42) account for over 70% of the systems included in operation inspection programs. Almost half of the departments, 20 of the 42, indicate that in the coming years they will be expanding their operational oversight of the systems in their jurisdictions. If this should occur, there would be a significant continuing increase in the number of systems under operational inspection in Ohio.

Discussion

It is estimated that there are at least one million household sewage systems operating in Ohio. Given that the survey data did not include all departments with operation inspection programs, with the number of systems reported by those responding it is reasonable to conclude that approximately 8% of household systems in Ohio receive some level of operational oversight. While this is a small percentage of these one million systems, it is still a significant figure given national reports on the lack of regulated operation and maintenance for individual household systems. The survey results are even more significant when understood in the context of these operation inspection programs being established voluntarily by local departments.

As noted in the background information, state household sewage rules do require operation permits for household systems but do not require operation inspections. Survey results confirmed the fact that almost every local department's operation inspection program was initiated to address discharging home aeration units. It is interesting to note that less than half of the departments indicated that they had conducted advanced marketing prior to program startup, and yet apparently were successful in implementing their program.

Despite the critical steps noted by Mancl (2002) in the development of a successful onsite wastewater management program, there are some inherent factors working in favor of these Ohio programs targeted to home aeration units. Homeowners, neighbors, and community leaders are well

aware of the impacts of inoperable units and can easily see the need for operation and maintenance. In addition, the manufacturers and distributors of these units are almost universally supportive of regulatory requirements for operation and maintenance, especially when these requirements create incentives (or at least no disincentives) for homeowners to purchase service contracts. The combination of an evident public health problem and multiple levels of support allowed many of these programs to succeed without significant advance marketing. Another indirect benefit of targeting home aeration units at program startup is the availability of private sector service personnel, with many trained as authorized manufacturer representatives, to provide maintenance and, in 16 departments, to conduct monitoring requirements for the operation program as well.

Marketing and educational mechanisms were listed by departments responding to the survey. These mechanisms include direct mail notices, news articles, videos, brochures, and meetings with community leaders, realtors, neighborhood groups, installers, service providers, and other interested parties. At an earlier NOWRA Conference, this author reported on an extensive marketing and education campaign conducted in Clermont County prior to a planned expansion of the department's operation inspection program (Caudill, 1998). The financial resources and staff resources required to conduct an operation inspection program, much less an extensive education and marketing effort, are often listed as barriers to program implementation or expansion.

Less than a third of the departments reported that program fees covered program costs. Obviously fee levels can influence public acceptance of a program but it is reasonable to expect user fees, versus tax-based general revenue, to cover a significant portion of program expenses. It was discouraging to see only 10 departments charging reinspection or penalty fees. Homeowners maintaining their systems should not be expected to bear the burden of higher fees needed to conduct enforcement for non-compliant systems. In fact, the presence of penalty or reinspection fees can reduce the time spent on enforcement by serving as an incentive for non-compliant homeowners to make corrective measures in a timely manner.

Time spent on fee collection and income loss from delinquent fees are frequently reported as a reason for income not meeting expenses in operation inspection programs. To address this issue, a law was passed in Ohio to allow departments to collect operation inspection fees by having the county auditor place the amount due and any penalties on the general tax list and a lien on the property (Ohio Revised Code, 1998). Most health departments use other methods such as collection agencies or multiple delinquent notifications prior to going to the auditor, but having this option as a last resort serves to support operation inspection efforts in Ohio.

General information related to financing operation inspection programs and the subsequent repair and replacement costs associated with required corrective measures are provided through other resources (Pipeline, 2001). Details on a linked-deposit program available in Ohio are presented in the literature by staff from two county departments that took the lead in utilizing these state revolving loan fund resources (Novickis, 2001) (Stefanak et al., 2001). Many local health departments in Ohio have also accessed Clean Water Act Section 319 funds to support development of their operation inspection programs. Ohio Environmental Education Fund resources have been used for marketing and education efforts. All of these funding options are available through the Ohio EPA.

Conclusion

From survey results it is estimated that about 8% of Ohio's household sewage systems are currently included in operation inspection programs conducted by close to half of the local health departments having household sewage program responsibilities. This 8% represents approximately 80,000 household systems under some form of routine inspection or monitoring. When looked at simply as a total number, it is impressive to see so many individual household systems having operational oversight. However, when considered as a small percentage of the total household systems in Ohio, it demonstrates the need for further expansion and development of operation inspection programs.

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LHD	Contact	Title
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Athens County	Charles Hammer	Administrator
Auglaize County	Marv Selhorst	Environmental Health Director
Butler County	Robert Krinov	Sanitarian
Champaign County	Joe Sargeant	Environmental Health Director
Cincinnati City	Lowery Clark	Supervising Sanitarian
Clermont County	Robert Wildey	Director of Water & Waste
Columbus City	Dale Harmon	Public Health Sanitarian III
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Delaware County	Steve Burke	Environmental Health Director
Fairfield County	Ron Elble	Health Commissioner
Franklin County	Paul Rosile	Assistant Health Commissioner
Gallia County	Steve Swatzel	Sanitarian
Greene County	Mark Isaacson	Program Manager
Hamilton County	Tim Ingram	Health Commissioner
Highland County	Mary Ann Webb	Environmental Health Director
Holmes County	Maurice Mullet	Health Commissioner
Huron County	Jack Jump	Environmental Health Director
Lake County	James Boddy	Environmental Health Director
Lorain County	Laura Kramer Kuns	Supervisor, Liquid/Solid Waste & Water
Lucas County	Michael Oricko	Environmental Health Director
Mahoning County	Christine Frankford	Chief, Waste Control Programs
Meigs County	Keith Little	Environmental Health Director
Miami County	Jeff Koehl	Supervising Sanitarian
Middletown City	Duane Stansbury	Chief Sanitarian
Morrow County	Scott Pauley	Environmental Health Director
Newark City	Harry Ballinger	Environmental Health Director
Noble County	Shawn Ray	Health Commissioner
Ottawa County	Scott Young	Environmental Health Director
Pike County	Sandy Colegrove	Environmental Health Director
Portage County	Stan Carlisle	Inspector
Preble County	Jim Douglass	Administrator
Ross County	Stuart Lentz/Kathryn Madden	EH Director / Field Supervisor
Sandusky County	Mary Anne Koebel	Environmental Health Director
Sharonville City	Michael Brune	Health Commissioner
Shelby County	Robert Mai	Health Commissioner
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Union County	Curtis Reams	Program Manager Sewage & Water
Village of Indian Hill City	Bill Rooney	Health Commissioner
Warren County	Daniel Collins	Environmental Health Director
Wayne County	Loretta Firis	Environmental Health Director