

King County Board of Health Title 13 Code Revision 2024 - Technical Memorandum

Date updated: 3/22/24
Version: 1
Subject: OSS Pumper Certification to Include Inspections of Gravity OSS
Developed by: Alex D. Negrón, OSS Industry Lead
Discussed with TAC: 3/26/24

1. Current code

Summary:

KC BOH Table 13.60-1 allows a property owner, licensed maintainer, or licensed OSS pumper to perform Routine inspections on gravity OSS.

Language:

	Gravity System ⁴	Public Domain Technology ²	Proprietary Technology ^{3,5}	Commercial and Food Establishment	Non-Discharging Toilets ⁶
Initial¹ Inspection	6 months	6 months	45 days	45 days	N/A
Regular Inspection frequency	Every 3 years	Annually	Every 6 months	Annually or 6 months Depending on Technology used	Annually
Who May Perform the Inspection	Owner or Licensed Maintainer or Licensed OSS Pumper	Licensed Maintainer	Licensed Maintainer	Licensed Maintainer	Owner

Table 13.60-1 Explanatory Notes

1. The initial inspection is to be performed at the time interval indicated following occupancy.
2. Public domain technology includes such systems as: mounds, intermittent sand filters and pressure distribution.
3. Proprietary Technology includes such systems as: ATUs, Glendon up-flow filters, Advantex pack bed filters and subsurface drip.
4. At least an annual septic tank maintenance check is required if the structure served is equipped with a garbage grinder waste disposal unit. If a screened outlet baffle is present an annual check is recommended. Pumpers shall report each pumping event to the health officer in accordance with BOH chapter 13.68.
5. Table 13.60-1 specifies the minimum required monitoring frequency. A more stringent monitoring frequency shall be used if recommended by the manufacturer.
6. This monitoring is in addition to that required for the OSS receiving the building's nontilet liquid waste.

2. Proposed change

Summary:

PHSKC proposes to add language to Title 13 to create a new classification of certified pumpers with the ability perform inspections and preventative maintenance to gravity OSS (i.e. clean or replace filters, replace baffles, etc.). No repairs outside of these tank components would be allowed. The inspections would be considered Routine Inspections and would satisfy the requirement for Building Applications. Pumpers would not be allowed to perform Time of Sale inspection reports. Pumpers who wish to inspect and perform preventative maintenance on gravity systems must pass an exam and submit continuing education credits when renewing their certification.

Language: To be developed.

- 3. Reason for change:** PHSKC proposes this to reduce confusion and allow property owners to more easily comply with required routine inspections and preventative maintenance. This change can also reduce costs for property owners as the certified pumper is already on site and may perform the preventative maintenance without a trip fee. Additionally, PHSKC has repeatedly heard from property owners with gravity OSS that they believed they had had their OSS inspected because it had been pumped. PHSKC also seeks to encourage pumpers to take the next step in their careers by providing more opportunities to serve their clients.
- 4. Anticipated impact:** It is anticipated that this rule change will promote economic activity among the OSS industry, reduce costs to property owners, and encourage completion of preventative maintenance which will prolong the useful life of gravity OSS.
- 5. Outstanding questions:**
 - Will requiring an exam and CEUs to inspect and conduct preventative maintenance on gravity systems be worth the time and financial cost?
 - Should the WOSSA Technician 1 exam be accepted for this certification level, or is a new exam required?
 - Will this change result in more OSS getting pumped when they do not need to be, inflating costs to property owners?

6. Technical evaluation and additional information

In order to implement this change, greater differentiation would need to be made between septic pumpers and other liquid waste haulers (e.g. portable toilet, vessel, sewer line vector pumpers, etc). Two certifications would be available: liquid waste haulers and septic pumpers. Because the certification requirements for liquid waste pumpers are already different (for example a class on biological exposure risk and safety is accepted in lieu of the WOSSA Technician 1 exam), this change would provide the further benefit of creating better clarity for liquid waste pumper/hauler certification procedures.

King County Board of Health Title 13 Code Revision 2024 - Technical Memorandum

Date updated: 3/20/24
Version: 1
Subject: OSS Industry Accountability
Developed by: Alex D. Negron, OSS Industry Lead
Discussed with TAC: 3/26/24

1. Current code

Summary: PHSKC provides oversight of OSS professionals in King County including those holding Master Installer (MI), Associate Installer (AI), and On-site system Maintainer (OSM) certifications. KC BOH Title 1 provides for a penalty of \$250 for a commercial entity who violates rules and regulations. Additionally, KC BOH Title 1 provides for suspension or revocation of a permit. In this title, a permit is defined as “any form of certificate, approval, registration, license or other written permission given to any person to engage in any activity as required by law, ordinance or regulation.”

Language:

KC BOH 1.08.060 Civil penalty.

- A. In addition to or as an alternative to any other judicial or administrative remedy provided in this chapter or by law or other rules and regulations, any person who violates any public health statute, rules and regulations, or rules and regulations adopted under them, or by each act of commission or omission procures, aids or abets such violation shall be subject to a civil penalty.
- B. Any person engaged in the development, management, sale, rental or use of property solely for the purpose of residential occupancy by the person or his or her immediate family shall be deemed to be engaged in noncommercial ventures for purposes of this section. All other persons shall be deemed to be engaged in commercial ventures for purposes of this section.
- C. Civil penalties for violations by persons engaged in commercial ventures shall be assessed at two hundred fifty dollars (\$250.00) per violation. Civil penalties for violations by persons engaged in noncommercial ventures shall be assessed at twenty-five dollars (\$25.00) per violation. Each and every day or portion thereof during which a violation is committed, continued, permitted or not corrected shall be deemed a violation.

KC BOH 1.08.180 Suspension of permits.

- A. The director may temporarily suspend any permit issued under any public health rules and regulations for (1) failure of the holder to comply with the requirements of any public health rules and regulations or rules and regulations promulgated under them, (2) failure to comply with any notice and order issued pursuant to this chapter, or (3) the dishonor of any check or draft used by the permit holder to pay any fees required by law or rules and regulations of the board of health.
- B. Permit suspension shall be carried out through the notice and order provisions of this chapter, and the suspension shall be effective upon service of the notice and order upon the holder or operator. The holder or operator may appeal such suspension as provided by this chapter.

- C. Notwithstanding any other provision of this chapter, whenever the director finds that a violation of any public health rules and regulations or rules and regulations promulgated thereunder, has created or is creating an unsanitary, dangerous or other condition which, in his judgment, constitutes an immediate and irreparable hazard, he may, without service of a written notice and order, suspend and terminate operations under the permit immediately. (R&R 7 §301, 12-1-81).

KC BOH 1.08.190 Revocation of permits.

- A. The director may permanently revoke any permit issued by him for (1) failure of the holder to comply with the requirements of any public health rules and regulations, or rules or regulations promulgated under them, or (2) failure of the holder to comply with any notice and order issued pursuant to this chapter, or (3) interference with the director in the performance of his duties, or (4) discovery by the director that a permit was issued in error or on the basis of incorrect information supplied to him, or (5) the dishonor of any check or draft used by the holder to pay any fees required by law or rules and regulations of the board of health.
- B. Such permit revocation shall be carried out through the notice and order provisions of this chapter and the revocation shall be effective upon service of the notice and order upon the holder or operator. The holder or operator may appeal such revocation, as provided by this chapter.
- C. A permit may be suspended pending its revocation or a hearing relative to revocation. (R&R 7 §302, 12-1-81).

2. Proposed change

Summary: PHSKC is proposing to add a statement in Title 13 which references a Code of Ethics policy and increase penalties for certified and non-licensed individuals who violate the Code of Ethics or any other code requirement. The Code of Ethics would help to clarify actions which would lead to suspension or revocation of an OSS professional certification. PHSKC is seeking to increase fines for certified professionals from \$250 per violation to \$500 per violation, per day with a maximum fine of \$5,000.

Language: To be developed.

- 3. **Reason for change:** PHSKC proposes this change to be better hold certified OSS professionals to a common standard of performance. This will help to protect consumers and discourage dishonest business practices. The downstream effect would protect public health by ensuring OSS are installed, inspected, repaired, and maintained properly. The current penalty does not make a significant enough impact to discourage activities that often cause harm to the customer (i.e. charging for services that are not needed, making undocumented minor repairs, not reporting inspections, or submitting inspections past the 30-day requirement, etc.).
- 4. **Anticipated impact:** Daily accumulation of increased fines will incentivize certified OSS professionals to incorporate ethical business practices which will benefit property owners by not being taken advantage of. This will result in increased trust between the public and the industry and a more consistent standard of service.

5. Outstanding questions

- What activities and how specific will the Code of Ethics be?
- What is the standard of proof?

6. Technical evaluation and additional information:

PHSKC will develop a policy that outlines a clear procedure for implementing these industry oversight activities. We recognize that there is a large burden of proof on PHSKC because the situation on a property can change quickly. The OSS industry oversight approach will incorporate progressive enforcement strategies, so that certified professionals will not receive fines or other disciplinary measures due to misunderstanding a memo or being unclear about code requirements.

Code of Ethics Guidelines Examples:

Professionals shall not perform work that is not necessary. PHSKC has noticed a recurring instance of OSS professionals performing work when it is not needed (such as replacing a D-box when a recent inspection shows that the D-box is in acceptable condition). OSM professionals shall correct Time of Sale inspection reports reviewer request within 10 days of receipt. PHSKC has observed many occurrences of Time of Sale inspections being placed on hold and requested an edit or clarification from the OSS professional with very little compliance.

Professionals shall not bill for services not performed. PHSKC has observed inspection reports that have stated that the tanks were pump, but the property owner will protest that the service never took place. Professionals shall not perform repairs with no permits.

PHSKC has documented occurrences of OSS professionals making a repair on a septic system but did not apply for a permit.

Professionals shall not misrepresent OSS conditions to consumers.

Professionals shall not misrepresent OSS requirements to consumers.

King County Board of Health Title 13 Code Revision 2024 - Technical Memorandum

Date updated: March 22, 2024
Version: 1
Subject: Inspection Frequency Requirements
Developed by: Lara Brezina, Lynn Schneider
Discussed with TAC: March 26, 2024

1. Current code

Summary: Routine preventative maintenance/performance monitoring inspections of on-site septic systems (OSS) are critical to ensure proper operation and to prolong the life of the OSS. Current Title 13 code requires OSS with proprietary technology to be inspected under a two-year service contract beginning 45 days after occupancy and then every six months during the initial two years of use. After that two-year period, the OSS is required to undergo routine inspections every six months, but a service contract is not required.

Language:

13.60.010 Monitoring of residential, community or commercial systems.

A. The owner shall cause monitoring of the performance of any OSS at a frequency and by a qualified person as specified in Table 13.60-1.

Table 13.60-1
Minimum Frequency of Preventive Maintenance/Performance Monitoring

	Gravity System ⁴	Public Domain Technology ²	Proprietary Technology ^{3,5}	Commercial and Food Establishment	Non-Discharging Toilets ³
Initial¹ Inspection	6 months	6 months	45 days	45 days	N/A
Regular Inspection frequency	Every 3 years	Annually	Every 6 months	Annually or 6 months Depending on Technology used	Annually
Who May Perform the Inspection	Owner or Licensed Maintainer or Licensed OSS Pumper	Licensed Maintainer	Licensed Maintainer	Licensed Maintainer	Owner

Table 13.60-1 Explanatory Notes

1. The initial inspection is to be performed at the time interval indicated following occupancy.
2. Public domain technology includes such systems as: mounds, intermittent sand filters and pressure distribution.
3. Proprietary Technology includes such systems as: ATUs, Glendon up-flow filters, Advantex pack bed filters and subsurface drip.
4. At least an annual septic tank maintenance check is required if the structure served is equipped with a garbage grinder waste disposal unit. If a screened outlet baffle is present an annual check is recommended. Pumpers shall report each pumping event to the health officer in accordance with BOH chapter 13.68.
5. Table 13.60-1 specifies the minimum required monitoring frequency. A more stringent monitoring frequency shall be used if recommended by the manufacturer.
6. This monitoring is in addition to that required for the OSS receiving the building's nontilet liquid waste.

2. Proposed change

Summary: PHSKC proposes that following the first two years after installation, the minimum routine inspection frequency for OSS with proprietary technology be changed to the frequency recommended by the manufacturer, except no less than annually. This is consistent with the WAC.

Language: To be developed.

3. Reason for change:

Current Title 13 code is more restrictive than can be reasonably implemented. WAC requirements have shown to be sufficient to ensure on-going operation of OSS. In the case of proprietary technology where the manufacturer recommends more frequent maintenance inspections, that schedule would still be required.

4. Anticipated impact:

- This section needs work
- PHSKC does not currently track and implement the increased inspection frequency requirement for proprietary systems.
- Reduced inspection frequency would reduce costs to those who have been having their OSS inspected every 6 months.

5. Outstanding questions:

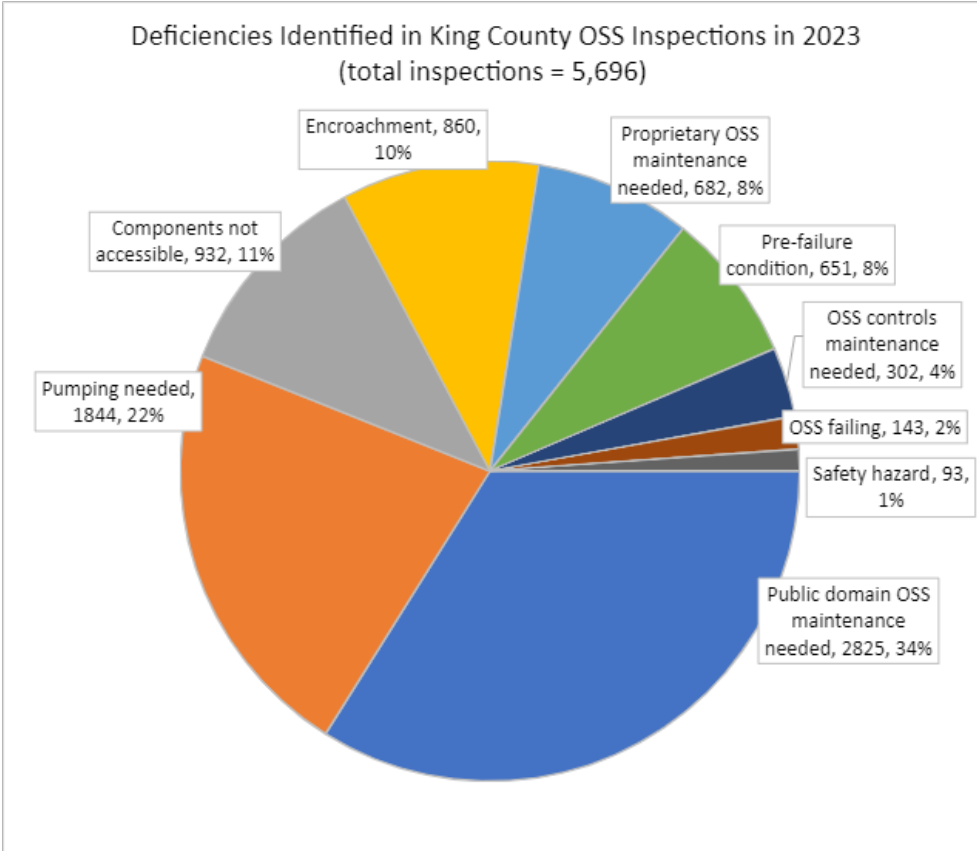
- Are any other considerations/requirements needed to ensure that property owners and certified professionals are supported in implementing this?
- Public Health needs to do further data analysis on the inspection trends for proprietary systems in King County.

6. Technical evaluation and additional information:

Proprietary technology is a sewage treatment and distribution technology, method, or material which is subject to a patent or trademark. The Washington Department of Health (DOH) reviews and lists proprietary treatment products based upon detailed information demonstrating that the proprietary treatment product meets or exceeds performance testing requirements. This review process requires the manufacturer of a proprietary technology to provide comprehensive and detailed operation and maintenance instructions including a maintenance schedule for all critical components.

After initial installation, a 2-year initial service policy must be furnished to the owner by the installer. This service policy must contain provisions for four inspection/service visits (scheduled once every 6 months over the 2-year period) during which electrical, mechanical, and other applicable components are inspected, adjusted, and serviced.

In 2023, a total of 5,696 OSS inspections were reported to Public Health. Of these, 2,998 (53%) reported at least one deficiency, and there were a total of 8,332 deficiencies reported. The graph below shows the breakout of which deficiencies were most prevalent. It is important to note that many of these deficiencies (e.g. pumping needed, maintenance needed for controls) could result in premature failures if not addressed.



WA DOH RS&G for Proprietary On-Site Wastewater Treatment Products provides the following general guidance:

Table 3.
Relationship Between Site Limitations and System Complexity for Conventional and Alternative On-Site Sewage Treatment Systems

Issue	Characteristics / Level of Limitation and Complexity		
	Lower	←←←←←←←←	→→→→→→→→ Higher
Site Limitation	Meets state rules for <i>conventional gravity system</i>	Meets state rules for <i>conventional pressure distribution system</i>	Limitation increases with - <i>less</i> vertical separation, smaller lot sizes, less horizontal separation, and, <i>greater</i> surface slope, wastewater flow, wastewater strength, etc.
System Complexity	Gravity-flow (no pumps, controls, etc.)	Pressurized distribution (requires pumps & controls)	Complexity increases with - <i>increasing</i> reliance upon, or combinations of: pumps; blowers; motors; mechanical, electronic, or computer-operated controls & warning devices; disinfection (materials & equipment); reduction in drainfield size; quality control of artificial (non-original soil) treatment media, etc.

Table 4.
Suggested Monitoring Frequency Based Upon Site Limitations and System Complexity for Conventional and Alternative On-Site Sewage Treatment Systems

	Level			
Site Limitation	Low	Low	High	High
System Complexity	Low	High	Low	High
Monitoring Frequency	<i>Low = Annually</i>	<i>Medium = Semi-annually</i>	<i>High = Quarterly, or greater</i>	

King County Board of Health Title 13 Code Revision 2024 - Technical Memorandum

Date updated: 3/22/2024
Version: 1
Subject: Unpermitted Septic System Installations
Developed by: Alex D. Negron, OSS Industry Lead
Discussed with TAC: 3/26/2024

1. Current code

Summary: KC BOH Chapter 1 provides for a penalty of \$250 for a commercial entity which installs an unpermitted OSS and a \$25 penalty for a property owner who installs an unpermitted OSS.

Language:

KC BOH 1.08.060 Civil penalty.

- A. In addition to or as an alternative to any other judicial or administrative remedy provided in this chapter or by law or other rules and regulations, any person who violates any public health statute, rules and regulations, or rules and regulations adopted under them, or by each act of commission or omission procures, aids or abets such violation shall be subject to a civil penalty.
- B. Any person engaged in the development, management, sale, rental or use of property solely for the purpose of residential occupancy by the person or his or her immediate family shall be deemed to be engaged in noncommercial ventures for purposes of this section. All other persons shall be deemed to be engaged in commercial ventures for purposes of this section.
- C. Civil penalties for violations by persons engaged in commercial ventures shall be assessed at two hundred fifty dollars (\$250.00) per violation. Civil penalties for violations by persons engaged in noncommercial ventures shall be assessed at twenty-five dollars (\$25.00) per violation. Each and every day or portion thereof during which a violation is committed, continued, permitted or not corrected shall be deemed a violation.

2. Proposed change:

Summary: PHSKC proposes to add a fine specific to installing, modifying, and repairing any OSS component without permit as required by Title 13. Penalties include increasing fines for licensed contractors including OSS contractors in King County or other counties in Washington state and licensed contractors from other industries (such as plumbers or general contractors). who perform work on a septic system without a permit from \$250 to \$10,000 per violation.

Language: To be developed

3. **Reason for change:** The reason for this change is to overall protect public health and promote ground water quality by ensuring that sewage is treated properly. The current penalty amount

is insufficient to deter commercial ventures and property owners from installing unpermitted OSS. The short-term financial benefit far outweighs the penalty. Unpermitted OSS are almost always installed incorrectly and provide insufficient treatment. This can lead to premature failure and increased pollution. Additionally, commercial ventures who install unpermitted OSS take business away from licensed OSS professionals who must charge more to install approved OSS and take advantage of property owners who pay money for a system that does not meet requirements and may result in future costs.

4. **Anticipated impact:** PHSKC expects a higher rate of compliance from businesses and individuals who would have installed septic systems without permits. The financial impacts towards licensed and non-licensed professionals are expected to better incentivize good business operations in line with appropriate regulation.

5. **Outstanding questions:**

- What is an appropriate dollar amount for a fine for an unpermitted OSS installation?
- How can PHSKC further discourage unpermitted OSS installation?
- How can PHSKC further support property owners who cannot afford a permitted OSS?

6. **Technical evaluation and additional information**

King County's OSS program seeks to address unpermitted septic system installations from licensed contractors (septic industry, plumbing industry, general contractors etc.) in King County and surrounding counties, and non-licensed individuals (property owners, private homeowners, etc.). Currently, licensed contractors who install unpermitted OSS can profit while risking only a small fine if caught. The fine is sometimes considered the "cost of doing business" and fails to discourage future unpermitted installations. The property owner will often be left with an OSS that does not meet standards (such as not meeting treatment levels that the property requires) and may not effectively treat sewage.

OSS installed without a permit are thoroughly evaluated to determine compliance with current codes. The property owner will be required to hire a designer to evaluate level of treatment and propose upgrades to the installed OSS as needed to meet current codes. If an unpermitted OSS is identified at TOS, the property can transfer before this work occurs. In this case, the new owner will take on the responsibility of addressing this code violation.