

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

Date updated: February 23, 2024
Version: 1
Subject: Restriction of decks over tanks
Developed by: Lara Brezina, Interim Supervisor OSS O&M Program
Discussed with TAC: February 27, 2024

1. Current code

Summary: Horizontal separations (setbacks) are distances between on-site sewage system (OSS) components and items on a property. Minimum setbacks are used to ensure the OSS is not damaged and does not cause pollution due to its proximity.

Requirements to ensure access to the OSS tank for inspection, maintenance, and repair purposes state decks which are less than 6 feet above the ground may not be constructed over or within 5 feet of an OSS tank.

Language:

Table 13.28-2 Minimum Horizontal Separations (Setbacks)

Items Requiring Setback	Edge of soil dispersal component trench or reserve area	Septic tank, holding tank, containment vessel, pump chamber, and distribution box	Building sewer, collection, and nonperforated distribution line ¹
Decks (first floor) with post and pier supports	5 ft.	5 ft.	N/A ¹⁵
Decks - post and block (2nd Floor at least 6 ft. high)	2 ft. Outside a line from any pier supports	Not under any pier supports	N/A
Decks Cantilevered (at least 6 ft. high)	0 ft.	0 ft.	N/A

Table 13.28-2 Explanatory Notes

- "Building sewer" as defined by the most current edition of the Uniform Plumbing Code. "Nonperforated distribution" also includes pressure sewer transport lines.
- Any sewer clean-out shall be accessible for OSS maintenance or repair.

2. Proposed change

Summary: PHSKC proposes that decks less than 6 feet above the ground may be constructed over an OSS tank, provided access to the OSS tank is preserved for inspection, maintenance, and repair activities. The requirement to protect the OSS are and reserve area from cover by structures or impervious materials will remain. The requirement that OSS components may not be under deck or pier supports will also remain.

Language: To be developed.

3. Reason for change: Current code is likely unnecessarily restrictive. The intent of ensuring access to the tank for inspection, maintenance, and repair activities can be achieved without requiring such a setback.

4. Anticipated impact:

- a. Additional flexibility for owners when designing use of outdoor space.
- b. Deck over tank will not be identified as a deficiency on Time of Sale Inspection reports, which is a deficiency that often causes confusion and is not aligned with true public health risk.
- c. OSS professionals may be impacted in the way they need to conduct their inspections/pumping/repairs/replacements.

5. Outstanding questions:

- a. Should specific criteria be included? If so, what?
- b. What impact will this have on OSS industry professionals?

6. Technical evaluation and additional information:

There are no setbacks or access requirements for decks specified in the WAC or among neighboring Local Health Jurisdictions.

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

Date updated: February 16, 2024
Version: 1
Subject: Holding Tank Management Requirements
Developed by: Meagan Jackson, Interim Assistant Division Director
Discussed with TAC: February 27, 2024

1. Current code

Summary: Holding tanks are on-site sewage systems (OSS) that collect the wastewater in a tank, which must be pumped for septage disposal. There is no soil absorption area. Holding tanks are allowed in limited circumstances for nonresidential settings and as an interim method to correct problem systems.

Requirements to promote effective management of septage include a \$5,000 bond filed with the health officer to use for cleanup of potential spill and a pumping contract with a certified pumper.

Language:

13.52.010 Holding tanks.

- A. Sewage holding tanks may be permitted only for controlled, nonresidential usage or as an interim method to handle emergency situations or to correct existing problem systems; provided, that an on-site system management program satisfactory to the health officer has been established to assure on-going operation and maintenance.
- B. In addition, the applicant must provide a no-protest agreement with the sewerage authority or a signed petition supporting formation of a ULID if the property is within a sewer service area.
- C. Design plans shall be submitted to the health officer for review. The design and operation shall be in accordance with this title and with Guidelines for Holding Tank Sewage Systems, July 2007, Washington State Department of Health, as amended. The application shall include specifications for the anticipated daily sewage load, the tank capacity, the alarm device, the overflow elevation, the location of the tank, and any other information pertinent to the installation.
- D. A minimum bond of five thousand dollars must be filed with the health officer or management authority to guarantee cleanup in case of accidental spill and/or repair of the system.
- E. A copy of a pumping contract with a certified OSS pumper must be filed with the department.
- F. An OSS installation permit must be obtained prior to installation of the tank.
- G. Monitoring and maintenance shall be in accordance with BOH 13.60.010. (R&R No. 08-03 § 124, 2008: R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 6 § 1, 12-19-86).

2. Proposed change

Summary: PHSKC proposes to eliminate the bond requirement and add a requirement to install an auto-dialer to notify property owner and pumper on contract when the tank is 90% full.

Language: To be developed.

3. Reason for change

Due to increased OSS failures in King County, it is becoming more common for a holding tank to be the only feasible, code-conforming option to replace failing OSS on difficult sites. However, our current management program has not proven to effectively address concerns with holding tanks

overflowing or being used improperly. Additional management tools are needed to address concerns with public health risk while also allowing holding tank systems.

The bond requirement that currently exists for holding tanks is very difficult to track, is rarely renewed, and has not proven to provide a benefit when issues with holding tanks arise. Auto-dialers have been successfully used for other high-risk scenarios where it is vitally important to pump tanks in a timely manner.

4. Anticipated impact

- Prevention of unpermitted discharges, leading to better protection of public health and water quality.
- Potential increased cost to holding tank owners due to cost of auto-dialer and pumping at the frequency required.
- More holding tanks approved to address failing OSS on difficult sites, allowing for maintained use of developed properties.

5. Outstanding questions

- Is OSS industry prepared to implement this requirement? (e.g. installers who can install auto-dialers, pumpers receiving notifications, etc)
- Who should be included on the auto-dialer notification? Property owner, pumper? Public Health? Others?
- Do you have other recommendations for how to effectively ensure that holding tanks are pumped in a timely manner?

6. Technical evaluation and additional information

The primary need for holding tank management is to ensure that tanks are pumped as needed to prevent sewage backups and surfacing sewage. When holding tanks are not managed properly, the results can be severe. For example, PHSKC has received two complaints in the last three years about holding tanks. They both had fairly comprehensive information about holding tank contents being dumped into surface water, one into a stream and one into Puget Sound. Because of the difficulty of documenting such dumping, PHSKC was not able to ensure that tanks were being pumped, despite a high amount of resources invested (20+ hours, \$6,000+ per case). Different tools are needed than currently exist.

Many local health jurisdictions, including PHSKC, utilize pumping contracts as a tool for management. The contract generally specifies the following information:

- Certified pumper on contract to pump tank contents
- Frequency of pumping, determined based on expected water use and tank size
- Payment agreement
- Agreement that property owner is responsible to maintain active pumping contract at all times and acknowledgement that owner will be in violation of KCBOH Title 13 if no pumping contract is in place

This tool is helpful in providing routine service to pump the holding tanks, but it does not account for periods of high water use or other changes that may cause the tank to need to be pumped at a different time. To address this need, we propose using auto-dialers.

The Washington Large On-site Sewage System (LOSS) Program regularly requires auto-dialers for LOSS around Washington State. The auto-dialers typically call during high-level alarms or any other conditions that may result in a sewage overflow event. The auto-dialer contacts the operator on contract and some combination of owner, engineer, and maintenance staff. Washington State Department of Health is not included on the auto-dialer call list due to liability issues.

Auto-dialers cost approximately \$1,000¹. Compared to the total cost of xxx for a holding tank system, this represents an approximately x% total project cost increase.

The success of using these two tools (contracts and auto-dialers) to effectively manage holding tanks depends on PHSKC's ability to enforce current contracts. PHSKC is building a contract management and reminder system into the new Environmental Health Services permitting software.

There are just over 100 holding tanks on record in King County. Of these, just over 30 have been pumped in the last month, and 40 have been pumped in the last 6 months (as of Feb 21, 2024). There is a remaining 60 holding tanks that have not been pumped recently. Because of the limitations in our current management structure, we do not know whether these tanks should have been pumped more recently.

¹ <https://www.wholesalesepticssupply.com/products/cellular-auto-dialer-panel;>
https://www.septicproducts.com/upload/price_sheets/spi_price_sheet_-_oct_2022xlsx.pdf

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

Date updated: February 21, 2024
Version: 1
Subject: Failure reporting requirements
Developed by: Corrina Marote, Equitable Wastewater Program Manager
Discussed with TAC: February 27, 2024

1. Current code

Summary: Operations and maintenance/performance reports shall be submitted to the property owner and health officer within 30 days of the inspection.

Language: 13.60.010(G) The person conducting the maintenance and performance monitoring inspection shall submit a system operation and maintenance/performance monitoring report, on forms provided by the health officer, to the owner at the time of the inspection and to the health officer accompanied by a filing fee as specified in the fee schedule within 30 days of the inspection.

2. Proposed change

Summary: If failure is observed during the maintenance/performance inspection, the report shall be submitted within 24 hours.

Language: To be developed.

3. Reason for change: Failures are considered a public health emergency and notification of a failure would ensure that Public Health can respond immediately as necessary.

4. Anticipated impact

- a. Prevention of sewage discharges, leading to better protection of public health and water quality.
- b. Change in staff workflow as staff will prioritize following up on failures over other work.

5. Outstanding questions

- a. What impact will this requirement have on OSS industry professionals?
- b. What impact will this requirement have on staff workflow and other priority work?

6. Technical evaluation and additional information: This requirement exists in policy currently but is not followed. Codifying the requirement will ensure timely responses to public health emergencies.