



**Targeted Constituents**

● Significant Benefit		▸ Partial Benefit		○ Low or Unknown Benefit	
○ Sediment	○ Heavy Metals	○ Floatable Materials	● Oxygen Demanding Substances		
● Nutrients	○ Toxic Materials	○ Oil & Grease	● Bacteria & Viruses	○ Construction Wastes	

**Description** Prevent or reduce the discharge of pollutants to stormwater system and natural streams from sanitary and septic waste. Provide convenient and well-maintained restroom facilities or portable toilets. Arrange for permanent connections to the sanitary sewer system or schedule for regular service and disposal. This management practice will significantly reduce nutrients, bacteria and viruses, and oxygen demanding substances.

- Approach** Sanitary and septic waste includes:
- Human wastes
  - Wastewater from toilets, sinks, dishwashers, washing machines and other indoor plumbing fixtures
  - Wastewater from kitchens and restaurants
  - Wastewater from industries and commercial establishments

These types of wastes, as well as animal and pet wastes, carry harmful viruses and bacteria that spread disease. It is important to prevent direct and indirect human contact with these types of waste flow.

**Application** Sanitary or septic wastes must be treated and handled in accordance with Knox County Health Department and Knoxville Utilities Board (KUB) requirements. Untreated or inadequately treated wastewater must never be discharged to a storm drain, open ditch, waterway, natural stream, sinkhole, well, or other location where it can potentially contact humans or natural wildlife.

The municipal sanitary sewer system, including the wastewater treatment plants, are owned and operated by KUB. Some sewer lines are believed to be more than 50 to 75 years old and are likely to need replacement. Old or improperly constructed sewer lines may allow infiltration of groundwater into the system. Excess groundwater or stormwater in the sanitary sewer system can overload the pipe network, potentially causing sewage to leak through pipe breaks, bad pipe joints, or even manhole lids.

In addition to properly disposing of sanitary waste, it is very important to protect the existing sanitary sewer system. Protect existing sanitary cleanouts from damage. Do not operate heavy equipment or compact soils over an existing sanitary sewer line or lateral. See RH-07 for additional information on protecting sanitary sewer laterals.

***Temporary Sanitary Facilities***

- Construction sites, as well as other temporary activities, may use stand-alone portable toilets or temporary offices that utilize holding tanks for sewage. Portable toilets and holding tanks should be installed and serviced regularly by a licensed contractor well in advance of the holding tank reaching full capacity.
- Temporary offices or shower trailers may choose to connect to the municipal sanitary sewer system using the same standards as a permanent connection, which involves inspection and permitting by the City of Knoxville plumbing inspector (215-2999).
- Arrange for regular waste collection by a licensed hauler before holding tank reaches capacity and overflows. Maintain and protect temporary facilities to prevent leaks and spills. Anchor portable toilets from blowing over or being turned over by vandals. Maintain and protect portable toilets from damage by traffic or equipment.

***Permanent Connection to Sanitary Sewer System***

- See RH-07 (Sanitary Sewer Laterals and Septic Tanks) for a discussion of repair and maintenance issues for sanitary sewer laterals, particularly for residential connections. Sanitary laterals must be regularly inspected to ensure proper function. Repair broken sanitary laterals promptly.
- Do not install an onsite disposal system (such as a septic tank) within the city limits without written permission from the City Engineering Department and Knox County Health Department. Septic tanks are not allowed in the city, unless no municipal sanitary sewer system connections are available and sufficient hardship exists to warrant a variance.
- Existing privately-owned septic facilities must be maintained in good working order. If a private septic system fails to function properly, the owner must hook into the municipal sanitary sewer system.
- All temporary and permanent connections to the municipal sanitary sewer system must be inspected and approved by City of Knoxville plumbing inspector prior to installation. Contact the Inspections Office (215-2999) for construction procedures and testing requirements.

**Maintenance**

- Inspect facilities regularly to verify that sanitary and septic waste is not being discharged inadvertently. Inspection is normally done during dry weather to determine whether a discharge occurs; see IC-01 (Non-Stormwater Discharges to Storm Drains) for methods to detect illicit discharges to the storm drainage system or to natural streams.
- Inspect sanitary sewer manholes and cleanouts during dry weather and rainy weather. Determine if excess groundwater or stormwater is entering the sanitary sewer system. Document the inspection results for future reference.

**References**

**30, 31, 33, 34, 35, 43, 137** (see BMP Manual Chapter 10 for list)