

2.4 Assessment of Portable Toilet Impacts to Receiving Water Quality

Potential pollutants that are generated by portable toilet use and their typical concentrations are listed in Table 2-1. These potential pollutants are generally only a concern if a unit leaks or otherwise spills effluent from the holding tank. Typical uses of the units do not introduce these pollutants into the storm drain system because the storage tanks in portable toilets are kept covered and contained.

Table 2-1 Constituents and Indicators in Portable Toilet Holding Tanks and Typical Values

Constituent	Concentration
TSS	7,000 mg/L
BOD ₅	9,700 mg/L
COD	33,000 mg/L
Total Coliform	83,000 MPN/100mL
Fecal Coliform	81,000 MPN/100mL
pH	7.7 - 8.2
TKN	160,000 mg/L
Total Phosphorus	4,500 mg/L
Copper	230 mg/L
Lead	31 mg/L
Zinc	410 mg/L*

* Results from zinc based disinfectant used.

Source: "Portable Sanitation Industry Certification Program"

Pollutants from portable toilets could be introduced into the storm drain system should a unit tip over either by accident or by vandalism or wind and other weather conditions. Tipped portable toilets are often promptly up-righted and the supplier is called for cleanup of area and portable toilet. A full portable toilet holds 40 gallons. If a portable toilet is tipped over with the door closed, the contents of the toilet would escape through the 4-inch vent pipe. A maximum of 20-25 gallons would escape before the vent pipe would become clogged with solids. Approximately 50% of spills from portable toilets are solid waste that can easily be swept or shoveled up. The liquid portion of the portable toilet waste typically only travels 4-5 feet from the portable toilet, based on statements made by various suppliers and users of portable toilets.

A query of the County Public Facilities & Resources Department's pollutant spill response database revealed that since 1996 only three incidents where portable toilets were referenced in a complaint. Of these, one incident included a peripheral reference to a toilet in the description, and involved not portable toilet waste but rather plant material. The other two complaints were due to vandals tipping over portable toilets and high winds blowing one into the local river. An informal query of PFRD inspectors identified three additional incidents over this same period, which were either unreported or reported without reference to toilets. These consisted