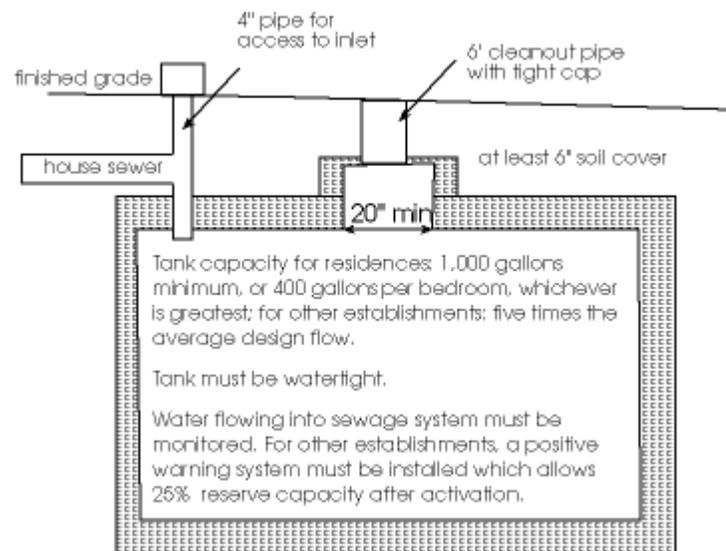


Holding Tanks

While holding tanks are not recommended for installation on newly developed lots, there are some developed lots which do not have adequate area for a sewage treatment system. In some instances, a holding tank may be the only alternative. The figure below shows a schematic diagram of a holding tank, together with the tank capacity as recommended by Chapter 7080. Holding tanks are constructed of the same materials and by the same procedures as septic tanks. For a single family dwelling, not located in a flood plain, holding tank capacity should be 1,000 gallons or 400 gallons times the number of bedrooms, whichever is greater. In floodplain areas, the capacity is 100 times the number of bedrooms, times the number of days the site is flooded during a ten-year flood, or 1,000 gallons, whichever is greater. Information regarding the number of days of flooding is available from the 100-year hydrograph or by contacting the local planning and zoning agency. For other establishments, the capacity should be based on measured flow rates or estimated flow rates. The tank capacity should be at least five times the average design flow.



Holding tanks may be allowed by the local unit of government as replacements for existing failing systems which pose an imminent threat to public health and safety, or on existing lots. Holding tanks are prohibited for new construction unless approved by the local unit of government. A monitoring and disposal plan must be submitted, signed by the owner and a licensed pumper. A contract for disposal and treatment of the sewage wastes should be maintained by the homeowner or pumper with a municipality, agency or firm established for that purpose. Holding tanks can only be installed:

- in an area readily accessible to the pump truck under all weather conditions,
- at least ten feet from property lines, buried pipe distributing water under pressure, and occupied buildings at least 50 feet from any source of domestic water supply or buried water suction line, and
- where accidental spillage during pumping will not create a nuisance.



The tank should be protected against flotation under high water table conditions by weight of tank, earth anchors or shallow bury depth. A cleanout pipe of at least six inches diameter shall extend to the ground surface and be provided with seals to prevent odor and to exclude insects and vermin. A cleaning access of at least 20 inches least dimension shall extend through the cover to a point within 12 inches, but no closer than six inches below finished grade. The cleaning access cover shall be covered with at least six inches of earth. Holding tanks must be monitored to minimize the chance of accidental sewage overflows. A mechanical or electrical alarm must be activated when the tank has reached 75 percent capacity.

The cost of hauling the sewage can be excessive. Costs of pumping septic tanks are \$50.00 to \$120.00 for approximately 1,000 gallons. Costs may differ somewhat for holding tanks since they are usually readily accessible. A family of four is likely to generate at least 200 gallons of sewage per day. At a cost of \$50 per 1,000 gallons, the annual cost to remove the sewage would be \$3,650. Cost will vary with amount of sewage and hauling fees. Water conservation will reduce sewage flow and hauling costs. The liquid level in the holding tank will need to be continuously monitored in order to prevent an overflow. A water meter should be used to measure all flow except to the outside sillcocks. Water meter readings can be used to determine the amount of sewage pumped and hauled. Weather conditions or road restrictions may prevent hauling when necessary and require that the plumbing systems not be used until the holding tank has been pumped. A continuous contract must be maintained to be sure that pumping service is available and that the sewage can be treated and disposed of.