



WCOWMA Onsite Wastewater
Management Association of BC

Septic System Capacity and Functionality Briefing Note Considerations for Renal Patients

Septic systems are utilized to treat and disperse sewage or effluent in areas that do not have access to centralized sewer. Approximately 20% of the homes in British Columbia rely on septic systems. These systems are designed to treat and disperse a certain amount of effluent per day (daily design flow). The amount of effluent they can treat daily is dependent upon a variety of factors, the most important factor being the type of soils the effluent will be dispersed to. System size and type is determined by soils type and amount of flow from the residence being served.

Since changes to the Sewerage System Regulation in 2005, septic tanks are sized to hold three days daily design flow. This is in order to allow proper settling of the effluent prior to discharge to the soil treatment component. Settling is necessary to ensure solids are not pumped out into the field where they will clog the soil and cause the system to fail. Prior to 2005, septic tanks were much smaller and could not accommodate the capacities of newer systems.

When considering the use of home dialysis, homeowners on septic systems must know the capacity of their septic tank and field. If a septic tank is too small to accommodate the amount of effluent being flushed into it, there is a high risk that the effluent will just wash through the tank, stirring up and pushing solids through the system and into the soil interface. As noted above, solids in the field will clog off the field. Large amounts of water suddenly introduced into the soils treatment field can cause soils saturation. Saturated soils are unable to treat the wastewater as their air pores are filled with water, causing beneficial bacteria and microbes to drown. Those bacteria and microbes are critical to the effective treatment of the effluent prior to its reintroduction to the water table.

Well designed, installed and maintained septic systems are a viable solution in unsewered communities. They do a very effective job of treating and dispersing effluent, recharging the water table and preserving the hydraulic cycle. Systems that are operated and maintained properly will last for many years (25+). Unmaintained systems and those operating over their capacity are at a higher risk of system failure. Repair and/or replacement of these systems can be expensive.

In order to protect their investment, homeowners should investigate the capacity of their septic system, have the system inspected annually and maintained as necessary. The inspection will identify areas that require attention through the maintenance process. Do not push more water through the system than it was designed to manage; if greater capacity is needed there are additional steps that can be taken to increase system capacity through the use of larger tankage and timed dosing mechanisms.

Follow the best practices for operation and maintenance of septic systems available at www.wcowma-bc.com.

