

Onsite Wastewater Training Center

UNDERSTANDING FUNCTIONAL INSPECTIONS

The New England Onsite Wastewater Training Center often receives phone calls about the proper inspection procedures for conducting functional inspections. Functional inspections are usually performed when a property transfers, as a means to protect the consumer and identify systems in need of upgrade or repair.

The Rhode Island *Septic System Check-Up Handbook* published by RIDEM, contains State recommended inspection procedures for functional inspections. We urge all wastewater inspection professionals to follow these standardized guidelines when conducting a functional inspection. One of the important components of a functional inspection is to accurately determine the hydraulic capacity of a system. This is typically done by conducting a flow trial.

The *Septic System Check-Up Handbook* contains a procedure for performing a flow trial that was developed and agreed to by a large number of wastewater professionals. A flow trial should be conducted by metering half of the daily design flow volume (this is also referred to as peak one-hour flow volume) into the outlet end of the septic tank. If the prescribed amount of wastewater is accepted by the drainfield, then it passes the hydraulic flow trial.

If wastewater begins to back up into the septic tank (i.e. wastewater rises more than two inches above the outlet pipe bottom lip) before accepting the full flow-trial volume, the system is in hydraulic failure. In this situation and assuming no other underlying conditions that would produce wastewater back-up, the inspector should recommend that the homeowner consult with a RIDEM Licensed Designer to design a system repair.

The handbook notes that the flow test procedure may give unreliable results if the house was vacant for an extended period of time, or if the system has had recent hydrogen peroxide treatment. In both these instances, a drainfield would more likely accept the peak one-hour flow volume of wastewater, because resting (house vacancy) or oxidizing organic material in a drainfield (hydrogen peroxide treatment) would normally help increase flow through the drainfield into surrounding soil. This could be the case even if there are other underlying problem(s). If the drainfield does not accept the flow under these circumstances, it most likely indicates a hydraulic failure problem warranting design of a system repair.

The septic system check-up handbook is available on the web at:

<http://www.dem.ri.gov/pubs/regs/regs/water/isdsbook.pdf>

If residents or real estate professionals have any questions regarding inspection procedures, please feel free to contact the New England Onsite Wastewater Training Center @ URI at 401-874-5950.

