

# PRESSURE DISTRIBUTION SYSTEMS



SEPTIC SYSTEM CARE  
BEGINS WITH YOU



Produced by:  
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Thank you to Clallam County for providing graphics.

## A TYPICAL PRESSURE DISTRIBUTION SYSTEM HAS THREE PARTS:

- 1 **Septic tank**
- 2 **The pump chamber and pump.**
- 3 **The drainfield and replacement area.**

Septic tanks and drainfields have been used for many years but not all soil and site conditions work well for gravity septic systems.

The pressure distribution system is one alternative that provides:

- Dosing and resting cycles.
- Uniform distribution of wastewater.
- Shallow placement of the drainfield.

The following information will help you understand your pressure distribution system to keep it operating safely at the lowest possible cost.

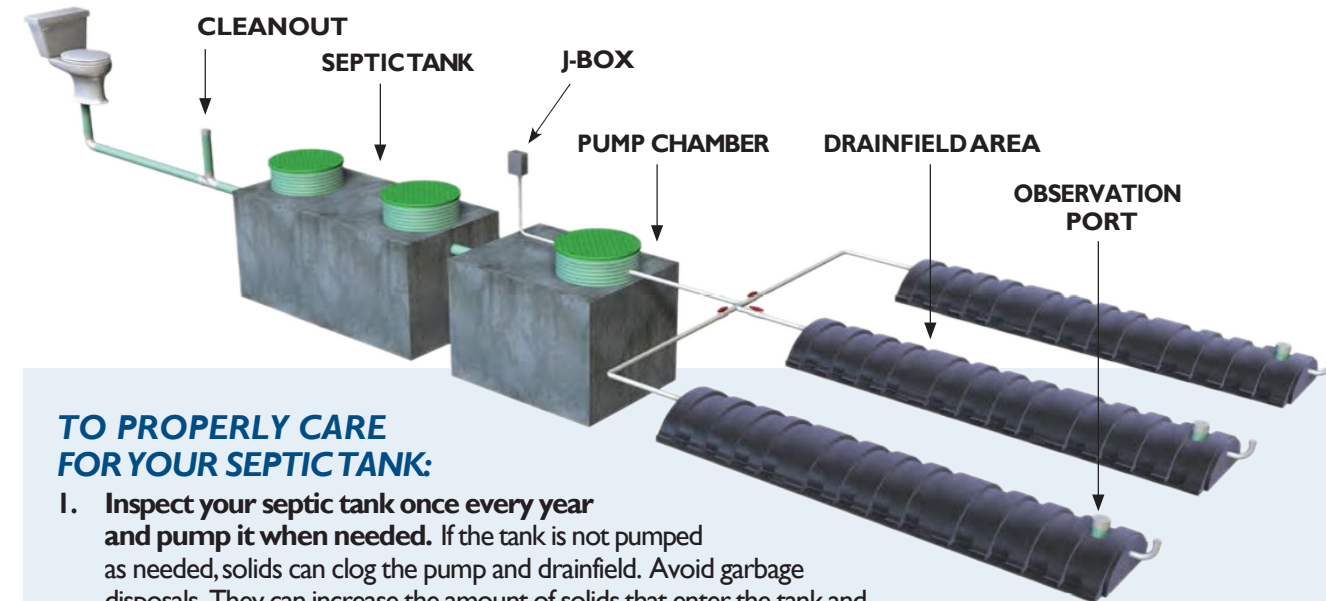
## THE SEPTIC TANK

The purpose of the septic tank is to separate solids from liquids and prevent solids from reaching the drainfield. A typical septic tank is a large rectangular or round container made of concrete, fiberglass, or plastic. It may have one or two compartments, depending on how old it is.

All of the wastewater from the toilets, baths, kitchen and laundry flow into the septic tank. A properly working septic tank is full of wastewater. Once in the tank, heavy solids settle to the bottom where bacteria breaks them down to form a sludge layer. Lighter materials such as fats, oils and greases float to the top to form a scum layer. The liquid portion of the wastewater moves through the middle, or clear zone of the tank and flows out of the outlet pipe, into the pump chamber, then to a drainfield. For every gallon of water that enters the tank from the home, a gallon of water is pushed out of the tank through the outlet baffle and enters the pump chamber.

Solids remain in the septic tank and gradually build up over time. If not removed by regular pumping, solids can overflow out of the tank and into the drainfield where they clog the soil and cause the septic system to fail.

The wastewater leaving the septic tank is a liquid called effluent. It has been partially treated but can still contain disease-causing bacteria and other pollutants. From the tank, the effluent flows by gravity to the pump chamber.



## TO PROPERLY CARE FOR YOUR SEPTIC TANK:

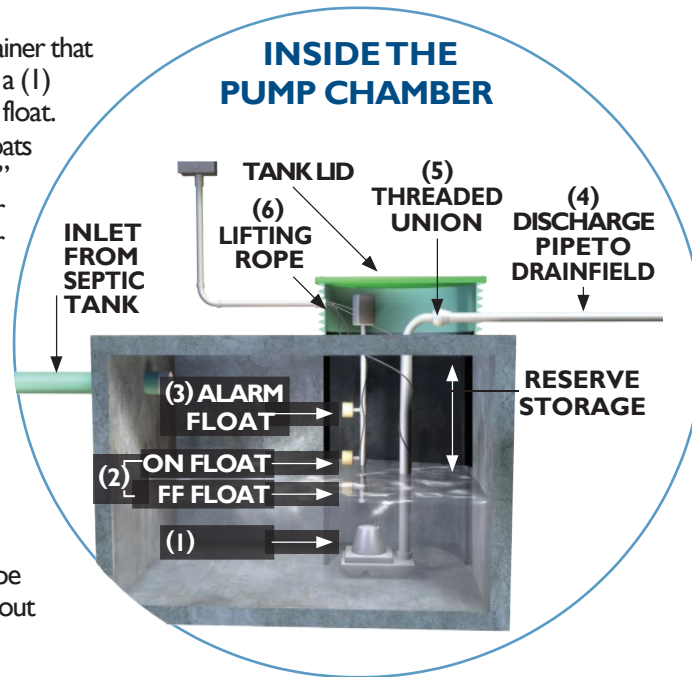
1. **Inspect your septic tank once every year and pump it when needed.** If the tank is not pumped as needed, solids can clog the pump and drainfield. Avoid garbage disposals. They can increase the amount of solids that enter the tank and require more frequent pumping.
2. **Don't flush harmful material into the septic tank.** Never put materials such as grease, cooking oil, newspaper, paper towels, cigarettes, coffee grounds, sanitary napkins, wipes, solvents, oils, paint, or pesticides into the tank. For information on the proper disposal of hazardous household waste, call (360) 867-2674 or see our website at: <http://bit.ly/2utoVvT>
3. **Avoid using any type of septic tank additive.** Such products are not necessary for the proper functioning of a septic tank, can actually harm the system and do not reduce the need for routine tank pumping.

## THE PUMP CHAMBER

The pump chamber is a concrete, fiberglass, or plastic container that collects the waste water from the septic tank. It contains a (1) pump, (2) pump control floats, and a (3) high-water alarm float. The pump can be controlled either by the use of control floats or by timer controls. Control floats turn the pump “ON” and “OFF” to pump a specific amount of wastewater. Timer controls are set to control the amount of the wastewater and the rest period between doses.

The high water alarm float starts an alarm to warn you of any pump malfunction. The alarm can also warn you of too much water use in the home. The float is set to start when the wastewater in the pump chamber rises above the “ON” float. The alarm should have a buzzer and an easily visible light. It should be on an electrical circuit separate from the pump.

The (4) pump discharge pipe should have a (5) union and valve for easy removal of the pump. A piece of (6) nylon rope should be attached to the pump for lifting the pump in and out of the chamber.



### CARE FOR YOUR PUMP SYSTEM:

- Check the pump chamber, pump, and floats every year and replace or repair worn or broken parts.** Pump maintenance should follow the manufacturer's recommendations. Electrical parts and conduits should be checked for corrosion. If the alarm panel has a “push-to-test” button, it should be checked regularly.
- Install a septic tank filter if your system does not have one.** Filter wastewater from the tank to help keep solids from clogging the pump and drainfield pipes. Inspect filters and clean as needed to prevent costly damage from solids entering the system.
- In case of prolonged power outage or pump failure: Protect the drainfield from overloading.** Wastewater will continue to collect in the pump chamber until the pump starts operation. With additional wastewater in the chamber, the pump may dose an amount more than the drainfield can handle. If all of the reserve storage in the chamber is used, the plumbing in your home can backup. When the pump is controlled by float controls and is off for more than 6 hours, the following measures can help protect the drainfield (timer controls will automatically correct this problem):
  - Reduce your water use to a minimum.
  - Turn off the pump at the control panel.
  - After power is restored or pump service is completed, switch the pump on and let it run for 5 minutes maximum, and turn it off again. Repeat this manual switching every 6 hours until the effluent drops to the “OFF” float level and the pump turns off automatically. If there is little water used during the outage, the pump may automatically turn off during the first manual switching.

## THE DRAINFIELD

The drainfield receives wastewater from the pump chamber in doses. Each dose is designed to control the amount of water entering the drainfield at once.

The drainfield is made up of a network of perforated pipes laid in gravel filled trenches (2-3 feet wide) or beds (up to 10 feet wide) in the soil. Wastewater trickles out of the pipes, through the gravel layer, and into the soil for final treatment.

The size and type of the drainfield depends on the estimated amount of daily water use from the home and the soil.

Every new drainfield is required to have a designated replacement area. It must be maintained as a reserve in case the existing drainfield ever needs to be replaced.

### CARE FOR YOUR DRAINFIELD:

- Know where your system and replacement areas are located and protect them.** Before you plant a garden, construct a building, or install a deck or patio, know the location of your system and replacement area.
- Practice water conservation and spread out water use throughout the week to keep from overloading the system.** The more wastewater you produce, the more wastewater the soil must treat and dispose. An example of spreading out water use over the week is, one-two loads of laundry per day rather than several in one day.
- Direct water from surfaces such as roofs, driveways, or patios away from the drainfield and replacement area.** Soil over your system should be slightly mounded to help surface water run off.
- Keep traffic, such as vehicles, heavy equipment, or livestock off the drainfield and replacement area.** The pressure can compact the soil or damage pipes.
- Landscape your system properly.** Do not place materials that don't drain well over your drainfield or replacement area. Materials such as concrete or plastic reduce evaporation and the supply of air to the soil needed for proper wastewater treatment. Grass is the best cover for your entire system.
- Periodically inspect the drainfield and downslope areas for odors, wet spots, or surfacing sewage.** If your drainfield has inspection pipes, check them to see if there is a liquid level continually over 6 inches. This may be an early indication of a problem. Call the septic help line at (360) 867-2669 for assistance.

### IN CASE OF AN ALARM:

**CAUTION:** Always turn off the power supply at the circuit breaker and unplug all power cords before handling the pump or floats.

An alarm float will trigger an alarm light to come on and a buzzer to sound if the water level inside the pump chamber gets too high. This could be caused by: a faulty pump, float, or circuit, excessive water use, or other reasons. Use as little water as possible by avoiding baths, showers, and clothes washing. The reserve storage in the pump chamber should allow you enough time to get the problem corrected. To silence the alarm, push the reset light on the alarm panel. Before calling for service or repair, check to see if the problem could be:

- A tripped circuit breaker or blown fuse.** The pump should have a separate circuit with its own breaker or fuse. If it's on a circuit with other equipment, that equipment can cause the breaker to trip.
- An unplugged power cord to the pump or float switch.** If electrical connections are plug-in, be sure switch and pump plugs are making good contact in the outlet.
- Control floats that are tangled by other parts in the chamber such as the electric power cord, lifting rope, or pump screen.** Be sure floats operate freely in the chamber.
- Debris on floats or support cable that is causing the pump to switch off.** Lift the floats out of the chamber and clean.

Do not enter the pump chamber. Gases inside pump chambers are poisonous and the lack of air can be fatal. If the problem cannot be located with the above steps, call your pump service person or septic professional for service or repair. The service or repair of pumps and other electrical equipment must be done by a professional.