



Anchorage Office

Natural Resources & Community Development

# Water Quality

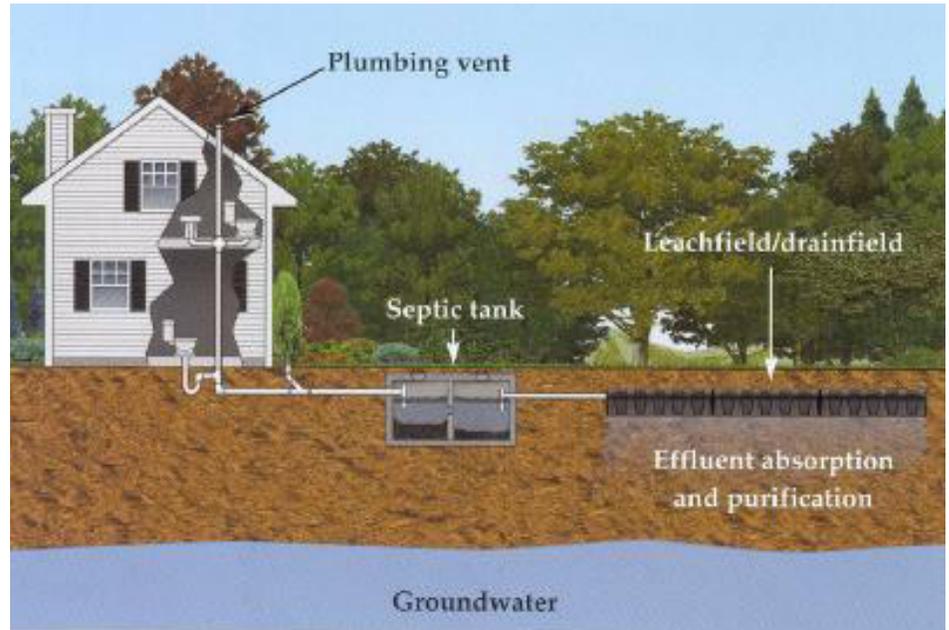
## On-site, out of sight

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Water Quality Coordinator

At least 50 to 100 gallons of water a day per person gets flushed down the drain, half that amount from toilets alone. For most Alaskans this wastewater stays on the property in a septic system. Out of sight sometimes means out of mind, especially when the system is working. But, when that system fails, it not only affects your health and property but the entire neighborhood's health and property.

A standard septic system has two main components, both underground. The first is the septic tank. This initial collection site biologically breaks down and separates large particles and floating materials such as greases. Depending on the size of the system and the amount of use (number of people in the house, and their water use habits), this tank will need to be regularly pumped out by a professional. The best way to determine when is to have it inspected annually. Once a pattern is determined, the pumping schedule can be set up. In general a two-year cycle is recommended.

Next, wastewater minus the majority of the solids flows into



a leach field, a system of underground perforated pipes. As the wastewater filters through the soil below the pipes, soil organisms clean it. State regulations require at least 4 feet of soil between the leach field pipes and the high mark water table. There are also distance requirements of 100 feet from wells, wetlands, streams, and other water bodies.

Because of these requirements, the system requires quite a bit of land. The temptation is to use it for other purposes. But, the leach field only works if it is left alone to do what comes naturally. Regulations (and common sense) require that you do not build on leach fields. Do not park your car or other vehicles on the field since this compacts the soil and eliminates water and air from penetrating the soil. Only

plant shallow rooted plants since deeper roots will plug the leach system pipes. Some areas even require enough land to install a backup leach field, since a failed leach field can't be repaired or re-used.

But innovative septic systems exist to cut down the size of the leach field. They are more costly and require closer maintenance but they are more efficient at removing contaminants in the tank stage and need less space for the field.

Another fact to consider: Don't flush a wide variety of household chemicals into a septic system since they kill the natural organisms necessary for the system to work. Paints, solvents, acids, drain cleaners, oils, and pesti-

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cides pass untreated through the system and can damage the soil. Pharmaceuticals, like anti-bacteria medication, kill beneficial organisms. Even chemical products that claim to “sweeten” the system can be harmful and do not replace regular pumping.

*Don't flush a wide variety of household chemicals into a septic system since they kill the natural organisms necessary for the system to work.*

Remember that the leach field water eventually reaches the ground water and can contaminate it and your wells if the wrong solutions are added or the natural processes are shut down or killed.

Reducing the amount of water use also helps the system. Do not empty hot tubs or other large-volume containers into the system. Flooding the system will flush solids before they can break down, plugging the system. Installing low-flow toilets reduces as much as 50% of the water use. Spread out washdays, take shorter showers, repair leaky faucets and toilets, and scrape scraps from dishes rather than pre-rinsing.

Finally, check the local regulations before making any changes. In older housing, there may have been regulatory

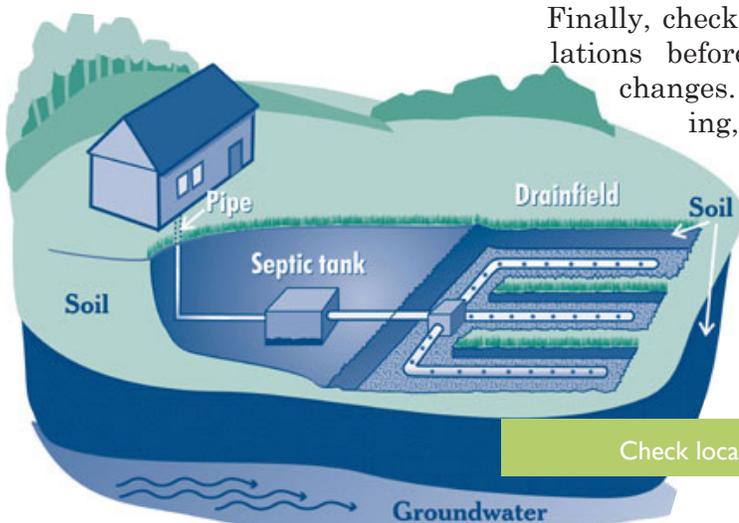
changes since the initial system installation.

The cost of maintaining (annual inspections and regular pumping) is far less than replacement if replacement is even possible. Keep records of installation dates and all inspections and maintenance actions. When

*When things go wrong in a septic system, they can be costly in time, energy, money, and health.*

things go wrong in a septic system, they can be costly in time, energy, money, and health. It can affect the whole community. So even if they are easily ignored because they are out of sight, an understanding of the system and regular monitoring is essential.

For more information contact Fred Sorensen at (907) 786-6311 or [dfes@uaa.alaska.edu](mailto:dfes@uaa.alaska.edu).



courtesy U.S. Environmental Protection Agency

Check local regulations before making any changes to the system.

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