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A home along a lake or stream can provide both peace of mind and a beautiful view. Homeowners near lakes and streams have a responsibility to maintain this beauty by minimizing their environmental impact. Below are common sources of pollution and steps that homeowners can take to minimize their environmental impact and improve water quality.

### Septic systems

A home not connected to a centralized sewer system has its own wastewater treatment system.

An onsite wastewater treatment system (septic system) collects, treats, and disperses wastewater on the property. To prevent a septic system from polluting the waterways, the homeowner must maintain it regularly and prevent system overloads:

- Avoid excessive wastewater loading, such as washing all the laundry on one day. This can flood the system, send solid waste to the drain field or spray field, and/or discharge to the lake.
- Have a professional pump out the septic tank every 2 to 3 years.
- Do not use septic system additives to enhance its operation. Typically, natural bacteria decompose the waste very well without these additives.

### Graywater

Composed of bath, shower, and laundry water, graywater makes up 50 percent of the wastewater from most homes. If graywater is separated from toilet and kitchen sink waste, it can be treated and used on site for irrigation, which will also reduce the burden on the septic system. However, graywater must be dispersed on the property and prevented from reaching any nearby waterways.

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# Living on the Water's Edge

Sunset over Lake Granbury.

Source: Texas Water Resources Institute

### Pet and wildlife waste

Pet waste left on the ground near streets, drainage areas, and waterways can be washed into storm drains or directly to surface water. It can carry diseases and parasites, which can harm human health. Clean up after pets, and flush, throw away, or bury the waste.



Don't forget to carry baggies for pet waste.

Also, dense populations of wildlife such as deer in neighborhoods can add significant amounts of waste pollution to waterways. Help keep wildlife in their natural areas by not feeding them. Planting a buffer strip of vegetation between the water and areas with waste can also reduce bacterial runoff.

### Lawn maintenance activities

- **Mowing:** Although lawn clippings seem harmless, they contain a soluble form of phosphorus that is a primary cause of algae growth in lakes. Direct the clippings away from bodies of water and any hard surfaces—such as sidewalks, streets, and gutters—that lead to storm drains.



Source: Ramsey-Washington Metro Watershed District

A strip of plants can buffer the water from excess nutrients that can pollute it.



Source: Texas Water Resources Institute

Take extra care with lawn chemicals along the water's edge.

- **Irrigation:** Excessive watering can saturate a lawn, and the resulting runoff can carry pollutants to waterways. Give the lawn only the amount of water it needs. To determine those needs, consider the type and depth of the soil and the water requirements of the landscape plants. Adjust the irrigation timer based on those requirements. A rain and freeze sensor can also help by preventing unnecessary irrigation during rainfall or freezing events.
- **Fertilization:** Applying extra fertilizer can pollute a lake, harm plants, and waste money. Have the soil tested every 2 to 3 years to determine the landscape's fertilizer needs. For information on soil testing, contact the local Texas AgriLife Extension Service office.

- **Pesticide use:** As with fertilizer, applying too much pesticide, including weed killer, can pollute nearby water bodies. Read the label and apply only what it recommends.

#### Stormwater/rainwater management

Impervious surfaces such as roofs and driveways channel water to a low point and send it off the property. This runoff carries much of the pollution mentioned earlier. To slow and reduce runoff, harvest the rainwater, create rain gardens, and/or plant buffer strips. Rain gardens and buffer strips can also break down harmful chemicals and add aesthetic appeal.

#### Household hazardous materials

Handle paints, batteries, cleaners, and motor oil properly. Do not pour anything down a drain unless the product label allows it. If the material cannot be used up, store it in a safe place, and check with local authorities about when and where to dispose of the hazardous waste.

#### Trash or wood debris

Not only can trash directly pollute the water in the lake, but it also becomes an attractive nuisance to vermin if left in the open. Secure and remove trash to prevent it from entering a lake, and pick up any garbage found on the ground.

#### For more information

These Texas AgriLife Extension Service publications are available at <https://agrilifebookstore.org/>:

- L-5227, *Onsite Wastewater Treatment Systems: Septic Tank/Soil Absorption Field*
- L-5347, *Onsite Wastewater Treatment Systems: Operation and Maintenance*
- B-6176, *Graywater*
- L-5503, *Pet Waste Management*
- B-6125, *Lawn Water Management*
- E-436, *Fertilizing Texas Lawns*
- L-5510, *Lawn Fertilization: Environmental Impacts*
- B-6153, *Rainwater Harvesting*
- L-5482, *Rainwater Harvesting: Rain Gardens*

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