homeowners

Northwest Indiana Water Planning Initiative

The Water Resource Protection and Conservation Toolkit

This is one of a series of 12 fact sheets developed by the Northwestern Indiana Regional Planning Commission with funding from the Joyce Foundation for the Water Resources Protection and Conservation Toolkit. The toolkit provides background on, and methods to protect and conserve local water resources. These tools are intended to help citizens and local officials to manage and protect water resources for future generations.

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How Can Homeowners Protect and Conserve Water Resources?

Water consumption doubles every 20 years. A single withdrawal of water from an aquifer, lake or river, whether for a single family home or a water bottling company, is usually not a detriment to the water source. But taken together, unlimited residential, commercial, and industrial water withdrawals – along with pollution's depletion of clean water supplies – can weaken a community's ability to sustain residents, businesses, and wildlife.

To make sure our water resources are available for future generations, we need to make water conservation the basis of how we use water in our homes and in our yards and gardens. Additionally, we need to be careful what pollutants, such as pesticides, detergents or sewage, we let enter our water resources. Once water resources are contaminated, they can be unfit for drinking.

Conserving water also makes good economic sense by saving money now on your water bill or related expenses. Conservation also helps keep costs down in the future. As water supplies go down and demand goes up, water supply costs will increase -- whether you get water from a municipal source or from a private well (through the costs for digging your well deeper).

You can start saving money and protecting your local water resources today by making small changes in how you use water in your home and garden.





Water Conservation in the Home

You could save over $115 a year in water supply charges and help protect your water resources by applying simple water conservation tips such as the ones listed below.

HOUSEHOLD SINKS should be equipped with faucet aerators. Although it may not seem like much, a bathroom faucet alone can easily draw more than 2500 gallons of water per year! Aerators conserve water by mixing air and water as the water leaves the spout. Aerators will not reduce the amount of water needed to fill a sink or pitcher, but will reduce the amount of water needed for rinsing.

Faucet aerator
Source: Niagara Conservation

Additionally, don't let run water down the drain while you:

- Brush your teeth;
- Wash and rinse the dishes;
- Wash fruits and vegetables;
- Wait for the water to get cold. Instead, keep drinking water cold in the refrigerator.

BATHING accounts for about 30 percent of total household water use! Here are some conservation tips:

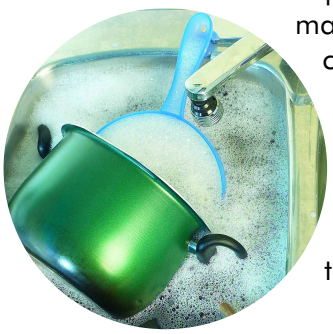
- Take showers instead of baths; showers use less water.
- Take shorter showers.
- Install water-saving showerheads. An average 5-minute shower with a typical non-conserving showerhead sends about 40 gallons of fresh water down the drain and into the sewer. Low-flow shower heads provide a water savings of at least a 44% compared to non-conserving shower heads.

Low flow shower head
Source: Niagara Conservation

TOILET FLUSHING uses more water than any other household use! A typical non-conserving 5.5-gallon flush toilet (many of which are still in use) contaminates 13,000 gallons of fresh water per year to remove 165 gallons of body waste! If you don't have a low flow toilet, displace water in the tank with two half-gallon plastic jugs filled with pebbles.

Low flow toilet
Source: Niagara Conservation

LAUNDRY AND DISHES should only be washed if the loads are full; be sure to use or install low-volume or conservation settings. Front-loading machines use less water per cycle than top-loading machines. For the most common wash cycle (permanent press), a front-loader will use about half of the total water, half of the hot water, and one third of the detergent of a top-loader!



HOT WATER TANKS can be wrapped with insulation to save time and reduce the amount of water wasted waiting for it to get hot. Contact your local utility company for "how to's."

Water Conservation in the Lawn and Garden

USE PLANTS AND GROUND COVER instead of turf grass in hard-to-water locations such as long, narrow areas or steep hills. Use turf grass as part, not all, of your landscape. Note that turf grass requires more frequent watering and maintenance than most plants.

USE SOAKER HOSES rather than sprinklers that spray water high in the air where it evaporates. Also, water in the early morning or late evening when it is less likely to evaporate. This may save 30 to 50 percent on your water bill.

USE MULCH around plants and trees to reduce evaporation and increase water penetration.

DON'T WATER TOO OFTEN. This can leach nutrients deep into the soil away from plant roots that need them and contribute to groundwater contamination.

USE RAIN BARRELS to capture fresh, untreated rainwater that would otherwise be lost to runoff for your watering needs. This will lower water costs, reduce harmful impacts to water resources, and provide high quality water for your plants.

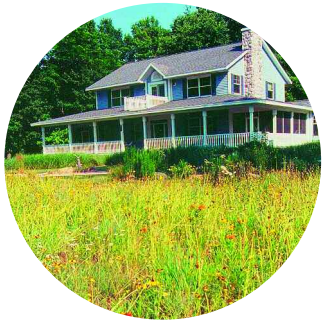
Source: Rain Gardens of West Michigan

INCORPORATE NATIVE PLANTS into your yard and garden. Native plants are plants that have evolved over thousands of years in a particular region. They have adapted to the geography, hydrology, and climate of that region and provide habitat for a variety of native wildlife species such as songbirds and butterflies. This will give you an attractive, drought resistant, and low maintenance landscape while benefiting the environment. Because they have deep roots that help filter and clean water, native plants also improve the quality of local water resource (groundwater, rivers, streams, lakes) and the aquatic life in them.

Source: Rain Gardens of West Michigan

NATIVE PLANTS SAVE MONEY. A study by Applied Ecological Services (Brodhead, WI) estimates that over a 20 year period, the cumulative cost of maintaining landscaping with native plants versus non-native turf grass could save you as much as $17,000 per acre!

NATIVE PLANTS REQUIRE LESS WATER THAN LAWNS. The modern lawn requires significant amounts of water to thrive. In urban areas, lawn irrigation uses as much as 30% of the water consumption. The deep root systems of many native plants increase the soil's capacity to store water. Native plants can significantly reduce water runoff and, consequently, flooding. Once established, native plants do not need watering.



Source: Rain Gardens of West Michigan

NATIVE PLANTS REQUIRE FEWER PESTICIDES THAN LAWNS. Nationally, over 70 million pounds of pesticides are applied to lawns each year. Pesticides run off lawns and can contaminate rivers and lakes. Since native plants have adapted to local conditions, they are more resistant to pest problems. Once native plants are established, pesticides are seldom needed.

NATIVE PLANTS DO NOT REQUIRE FERTILIZERS. Enormous amounts of fertilizers are applied to lawns. Excess phosphorus and nitrogen (the main components of fertilizers) run off into lakes and rivers contaminating water and causing excess algae growth.

Properly operate and maintain septic systems

Septic systems are significant sources of groundwater contamination leading to disease outbreaks that render water supplies unusable. Always be sure to:

- Locate septic systems a safe distance from drinking water sources to avoid potential contamination.
- Provide adequately sized drain fields to handle anticipated wastewater flows.
- Have septic tanks inspected annually.
- Reduce wastewater volumes through water conservation to extend the life of the drain field.
- Have your septic tank pumped out every 2 to 5 years. If an excessive amount of sludge is allowed to collect in the bottom of the tank, wastewater will not spend enough time in the tank before flowing into the drain field.
- Do not allow household chemicals such as solvents, drain cleaners, oils, paint, pharmaceuticals, and pesticides to enter the system. They can interfere with the proper operation of the septic system and cause groundwater contamination.
- Keep vehicles and heavy equipment off the drain field area and avoid construction over it to prevent soil compaction and damage to pipes. Additionally trees should not be planted over the drain field because the roots can enter the perforated piping and lead to back-ups.
- Avoid additives containing solvents or petrochemicals. They can cause groundwater contamination.

Sources

Purdue University and United States Environmental Protection Agency. Home *A* System and Healthy Homes Web site: www.ecn.purdue.edu/SafeWater/farmasyst/IFHhas.htm

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United States Environmental Protection Agency: Source Water Protection Practices Bulletin: Managing Septic Systems to Prevent Contamination of Drinking Water. USEPA Web site: www.epa.gov/safewater/protect/pdfs/septic.pdf

United States Agency for International Development: USAID Investments and Related Activities to Improve Drinking Water Supplies, A Report to the U.S. House and Senate Appropriations Committees, May 2003. Integrated Water and Coastal Resources Management Web site: www.wateriqc.com/PDFS/USAID_Investments.pdf

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