

Welcome to Your Watershed!

What is a watershed?

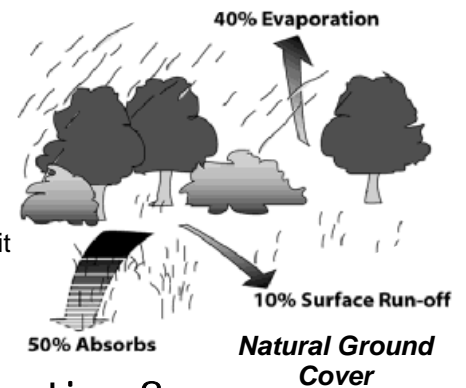


Watershed = The land that water flows over and through on its way to a stream, river or lake.

Wherever you live, you are a part of a watershed. A large watershed, such as the Mississippi River, has many **subwatersheds** where each subwatershed is the land that drains to a specific waterbody. The Illinois River watershed is a subwatershed of the Mississippi watershed. The Fox River watershed is a subwatershed of the Illinois watershed. The Nippersink Creek watershed is a subwatershed of the Fox watershed and so on to the smallest creek's watershed.

How do watersheds work?

Under natural groundcover, most of the rain and snow soaks into the ground with little surface runoff. Water that soaks into the ground is cleansed as it travels through vegetation and surface soils and replenishes aquifer sources of well water. Streams, lakes and wetlands are fed by groundwater from this infiltration. Water is cleansed as it travels overland through vegetation and wetlands before entering streams and lakes. Abundant wetlands provide storage during times of high rainfall, preventing flooding.



How does development affect watershed function?

Vegetative Buffers are Removed

The replacement of natural vegetation diminishes the ability of the land to absorb water and remove pollutants. Studies show a lawn of turfgrass with its shallow roots produces three times as much runoff as an area planted with deep-rooted native plants. (Source: Northeastern Illinois Planning Commission)

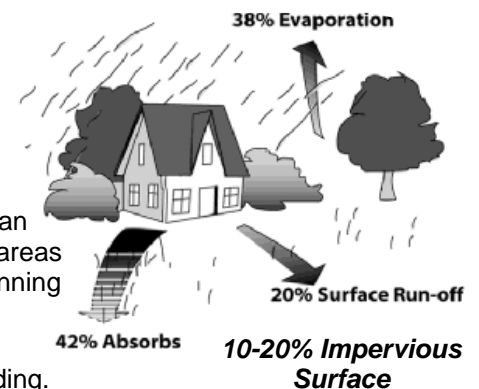
Wetlands Are Destroyed

Illinois has lost 90% of its original wetlands. With their disappearance, their ability to remove pollutants, store flood waters and provide critical wildlife habitat is lost.

There are More Impervious Surfaces

Impervious surface = Structures such as roofs, parking lots, driveways and streets where water cannot soak into the ground.

- Impervious surfaces cause more surface runoff. The introduction of as little as 10-20% impervious cover can double the amount of surface runoff as compared to areas with natural cover. (Source: Northeastern Illinois Planning Commission)
- Increased surface runoff can overwhelm creeks and streams, causing bank erosion and downstream flooding.
- Oil, dirt and pollutants accumulate on paved surfaces and are washed into streams with the increased surface runoff.
- Curbs, gutters and storm drains dump polluted runoff directly into streams.



INSIDE — Make Your Property Watershed-Friendly

- Stabilize Your Shoreline
- Buffer Water Bodies
- Naturalize Your Yard
- Minimize use of Salt
- Maintain Your Septic
- Manage Wastes Well
- Preserve Your Floodway
- Protect Wetlands
- Remove Invasive Plants
- Minimize Use of Garden Chemicals
- Watchdog Your Watershed

Make Your Property Watershed Friendly

Whether you live at the top of the hill, beside a lake or wetland, or alongside a river or stream, you can manage your property to protect the waters of your watershed.

Dispose of Hazardous Waste Properly

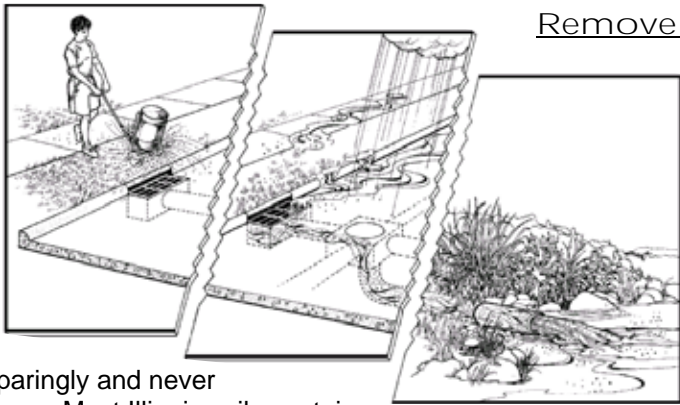
Household hazardous wastes and automotive fluids should be saved and turned in for proper disposal and recycling. **Never pour anything down a storm drain. Storm sewers flow directly to the water, without any treatment.** Toxic chemicals can damage the operation of septic systems and sewage treatment works so they should also not be poured down drains. Pouring toxics on the ground can contaminate groundwater.

Minimize Use of Fertilizers and Pesticides

Excess fertilizers and pesticides can make their way into groundwater or flow with stormwater into lakes, wetlands and streams. Pesticides in water bodies will kill aquatic insects, important members of a stream or lake's food chain. Too many nutrients are

unhealthy for water bodies. They promote excessive growth of algae which deplete the amount of oxygen available for fish and other aquatic life.

Apply fertilizers and pesticides sparingly and never apply before a storm. Most Illinois soils contain sufficient nutrients. Homeowners with lake or streamside property can often use a low or no-phosphorus fertilizer. Contact your local University of Illinois Extension Office about how to get a soil test of your property.



Manage Yard Wastes Wisely

Grass clippings, animal wastes and burn piles should never be dumped into a water body or be placed where they can be washed into the water. Like chemical fertilizers, the high level of nutrients in these items are unhealthy for water bodies.

- Leave grass clippings on the lawn for a natural, slow-release fertilizer.
- Brush piles provide cover for wildlife.
- Fall leaves can be used as mulch for garden beds or can be mowed into your lawn.
- Animal wastes, if in large quantities compared to the size of your property, need a management plan which can be developed with the help of your local Soil & Water Conservation District staff.

Minimize Use of Salt

Fish, other aquatic organisms and sensitive wetland plants cannot survive under high salt conditions. Salts used to melt snow run off into water bodies with spring snowmelts. Limit salt use on driveways. Water softener salts can contaminate groundwater through septic fields. Sewage treatment works also do not remove salts. Minimize softener salt use by setting your system to recharge based on water use rather than on a set time schedule.

Use Your Yard to Keep the Water Clean

Yards can be valuable tools to protect a lake, stream or wetland in your watershed. By directing water runoff from driveways, sidewalks and downspouts onto your lawn or other vegetated area, pollutants can be removed from the water before it reaches the waterbody. Rock or concrete-lined swales and ditches do not provide this function.

Remove Invasive, Exotic Plants

Some plants not native to North America have no natural pests to limit their spread. These are called **invasive exotics**.

- Invasive, non-native plants like buckthorn, Asian honeysuckle, and garlic mustard shade out other ground vegetation, leaving soil bare and subject to erosion.
- In wetlands, invasives like purple loosestrife and reed canary grass crowd out native species, reducing the habitat diversity of the wetland.

Permitted burns, hand pulling and selective use of herbicides can be used to control exotics.

Buffer Water Bodies

Retention or restoration of native plantings along the edge of a lake, stream or wetland provides a 'buffer' with multiple benefits for the water body.

- Buffer vegetation captures pollutants and sediment from runoff.
- Buffers of deep-rooted native plants hold soil in place.
- Buffer vegetation provides a refuge for waterfowl and other wildlife.
- Buffers of diverse vegetation enhance the beauty of one's property.

Buffer strips of any width will benefit the water body. However, a 25-30 foot minimum buffer of native plants is recommended. Wider buffers up to 100-200 feet are needed to protect high quality water bodies and where steep slopes and drainage way soils are present. Because of its shallow root structure, unmowed turf grass does not provide the buffer which native plants do.

Mowed turf grass to the water's edge provides no buffer at all.

Make Your Property Watershed Friendly

Many actions that are good for the watershed can also save you time and money, while protecting your drinking water and your family's health. (Source: The Fleming Creek Watershed)

Naturalize Your Yard

Using native plants in your landscaping offers multiple benefits.

- Native plants' deep roots improve absorption of rain water and snow melt into the ground.
- Native plants don't require fertilizers and pesticides.
- Native plants don't need mowing.
- Native plants provide a diversity of habitat for birds, butterflies and other wildlife.



Stabilize Shorelines & Streambanks

Streambank erosion is a natural process but excessive erosion pollutes waterways with sediment and can mean loss of property. Highly eroded banks are characterized by nearly vertical banks, exposed roots, and lack of vegetation. Biotechnical bank protection using living plant material holds soil and stabilizes slopes.

Biotechnical bank protection = The use of plants with other materials to stabilize streambanks and lake shorelines.

Biotechnical bank protection:

- is an economical and ecologically safe alternative to other bank stabilization materials like rock, concrete and steel which are expensive to build and repair, reflect erosive waves and provide no habitat.
- uses site specific combinations of rock, fabrics, natural fiber products and plants adapted for moist near shore and dryer slope conditions.
- anchors soils, dissipates the water's energy, provides habitat and enhances the beauty of banks.

Bank stabilization requires special expertise to select the techniques that will work best with a site's conditions.

Contact your local Soil and Water Conservation District for guidance.

Maintain Septic Systems

Unmaintained septic systems can pollute groundwater which feeds other water bodies. Septic systems should be cleaned out every 2-3 years. In-home water conservation practices including toilet dams, sink aerators, and low flow shower heads help septic systems function better.

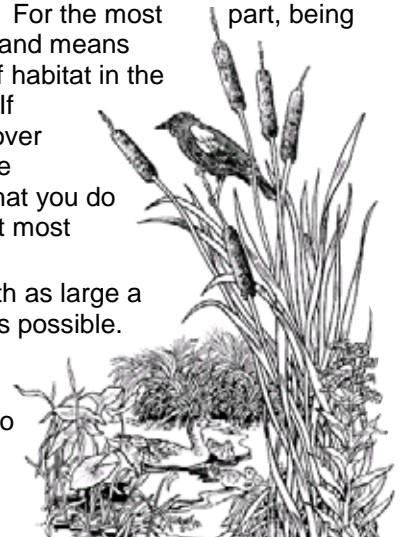
Preserve Your Floodplain

Floods are a natural part of the water cycle. In times of heavy rains, water overflows streambanks into the floodplain where it is held and slowly released back into the river system. Keeping floodplains free of man-made structures not only preserves this function, it also prevents the loss of property.

Protect Wetlands

With most of Illinois original wetlands gone, a wetland is a rare and precious resource. For the most part, being a good steward to your wetland means letting it be. The diversity of habitat in the wetland will attract wildlife. If invasive exotics are taking over your wetland, they should be removed. Otherwise it is what you do on your upland property that most benefits your wetland:

- Protect your wetland with as large a buffer of native plants as possible.
- Direct runoff from your driveway or downspouts over land so much of it can soak into the ground before reaching your wetland.



Watchdog Your Watershed-- While making your own property watershed-friendly is one of the most important things you can do, you can also help stop threats from becoming major problems by being alert to poor practices by others.

- Report your concerns to the proper authorities.
- Construction and earth moving without silt fences or other erosion control measures should be reported to your county's Planning Department, Stormwater Management Commission or Soil & Water Conservation District.
- Illegal dumping or discharge of materials into any waterbody can be reported to an Illinois EPA field office. The field office for your region and a water pollution complaint form can be found at www.epa.state.il.us/water/field-ops/water-pollution-field-operations.html.
- The filling or draining of wetlands is discouraged due to the already widespread loss of wetlands in Illinois. Such activities require a permit from the Army Corps of Engineers and/or your county government. Contact the Army Corps of Engineers (www.usace.army.mil/faq.html) with your questions about activities in wetlands.
- Share the information from this brochure with your neighbors and community leaders.

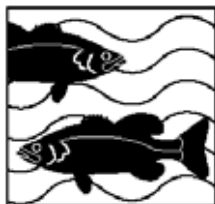
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Welcome to Your Watershed!... *We all live downstream...*

To learn more about watershed-savvy living, contact:

- Native Plants & Landscaping:**
- your county's Soil & Water Conservation District- see www.aiswcd.org for link to your county
 - McHenry County Defenders- see www.mcdef.org
 - McHenry County Conservation District- see www.mccdDistrict.org/PlantIntroduction.htm
 - USEPA- see www.epa.gov/greenacres/
- Exotic Plant Removal:**
- Invasives on the Web- see tncweeds.ucdavis.edu
- Hazardous waste disposal/ Recycling:**
- your county's Solid Waste Management Dept.
 - Illinois EPA- see www.epa.state.il.us/land/citizen-involvement
 - McHenry County Defenders- see www.mcdef.org
- Septic systems/Drinking water quality:**
- your county's Dept. of Public Health- see www.idph.state.il.us/local for link to your county
- Streambank/shoreline buffers & stabilization:**
- your county's Soil & Water Conservation District- see www.aiswcd.org for link to your county
 - Illinois EPA *Lake Notes- Shoreline Stabilization and Lake Notes- Shoreline Buffer Strips* call 217-782-3362 to request a copy
- Wetlands:**
- USEPA- see www.epa.gov/Region5/publications/wetneighbor/index.htm
 - The Wetlands Initiative- see www.wetlands-initiative.org
- Wise Use of Fertilizers/ Pesticides:**
- University of IL Extension- see www.extension.uiuc.edu for link to your county



This brochure was produced by:

Friends of the Fox River

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...citizens working for a healthy environment
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