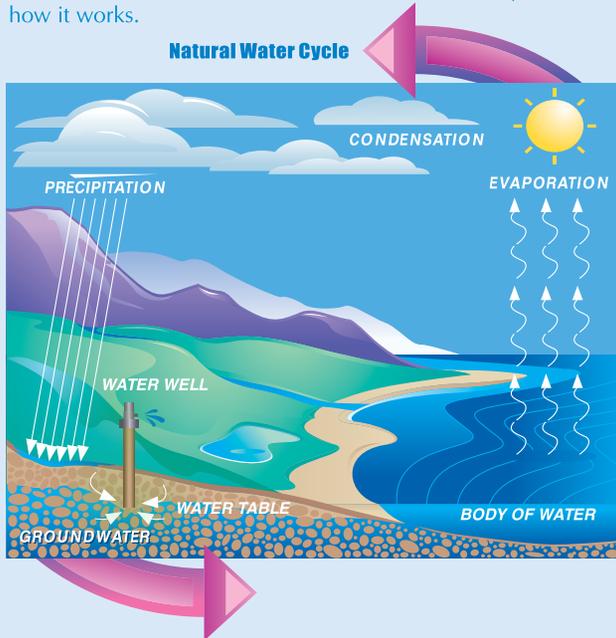


Understanding the water cycle

Water is something we often take for granted. From the lakes and streams we play and fish in, to the water we use every day to clean and nourish our bodies, water plays an important role in our lives. It's a natural resource that we simply can't live without. That's why it's our responsibility to protect our water resources for the next generation. In order to do that, we need to better understand the water cycle and how it works.



What is groundwater?

- Water that collects underground, filling cracks and spaces in layers of sand, gravel, or rock
- Layers of earth that hold enough groundwater to supply a well are referred to as aquifers.
- Rain and snow runoff recharge the groundwater supply
- Pollutants can seep into groundwater making it unsafe to drink
- The City of Battle Creek and Pennfield Township use groundwater from the Marshall Sandstone Aquifer.

What is surface water?

- Rain water and runoff that collects in lakes, rivers, streams, and wetlands on the earth's surface
- Surface water also comes from groundwater
- Surface water provides a natural habitat for wildlife
- A source of recreation for the people of our community
- Interconnected with groundwater—our source of drinking water

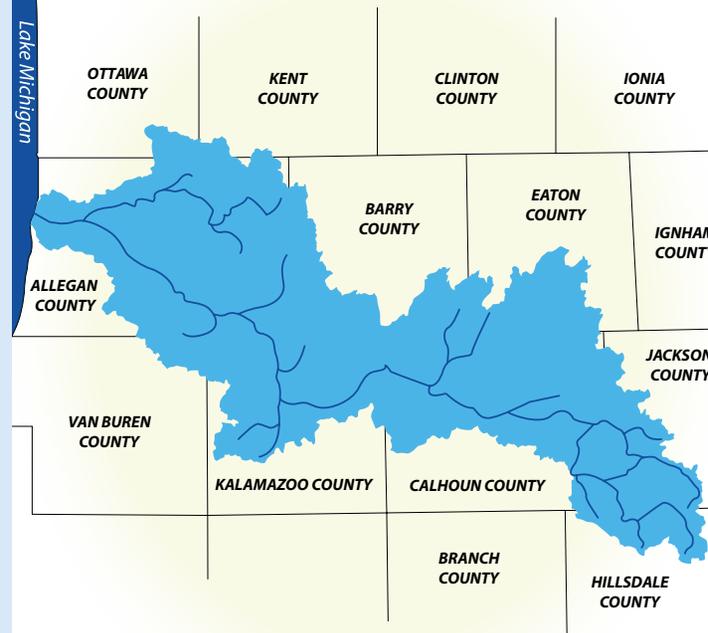
How do pollutants enter surface waters in an urban area?

- Storm sewers are the main source of pollutants, draining virtually everything from lawns, streets, and parking lots directly into local surface waters.
- Storm water is not cleaned and is known as Nonpoint Source pollution. Common contaminants include: fertilizers, pesticides, grass clippings, leaves, oil, grease, toxic chemicals, sediment, and livestock and pet waste.
- As a matter of fact, too much phosphorus is making its way into the Kalamazoo River Watershed causing increased algal blooms and lower oxygen levels affecting aquatic life

Our surface water – our watershed.

What is a watershed? It is an area where all water drains into the same surface source based on topography and elevation. In our case, it is the Kalamazoo River. The Kalamazoo River watershed covers an area of 2020 square miles with many tributaries draining into the Kalamazoo River from overland or in the ground.

Kalamazoo River Watershed



Watershed Protection.

The problem of Nonpoint Source pollution (NPS) is not a small one. The United States Environmental Protection Agency (USEPA) reports it as the leading remaining cause of water quality problems. We all play a part and may not realize it. Each and every one of us contributes to the problem because it results from human activity on the land. It is our responsibility to do all we can to protect our surface water as individuals, and as a community.



The Battle Creek Area Clean Water Partnership was formed with the common goal of protecting the waterways in the Greater Battle Creek Area. The group is helping to lead efforts to control NPS by the following measures:

- Storm water ordinance
- Illicit discharge elimination programs
- Efforts to eliminate failing on-site septic system
- Sound land use
- Wellhead, or drinking water, protection programs
- Storm water control projects
- Phosphorus reduction efforts

How can you help?

De-icing. Shovel snow early and often in the winter. Try an alternative to salt.

Properly dispose of household hazardous waste. Never dump items such as used motor oil, fuel products, cleaners, paints, pharmaceuticals, and pesticides on the ground or down the drain. They can contaminate groundwater and surface water.

Use non-phosphorus fertilizer. During watering or rainstorms, unnecessary phosphorus applied to lawns is washed into street storm drains, which empty directly into local waterways. The City of Battle Creek and Calhoun County have ordinances against the use of fertilizers containing phosphorus.

Septic System. If you have a septic system, have it checked every 2-3 years to insure it is working properly.

Fuel Storage Tanks. Leaking above and underground storage tanks are a major source of contamination. Check both regularly for leaks.

Abandoned Wells. Close any abandoned wells on your property. They can act as conduits for contamination of groundwater.

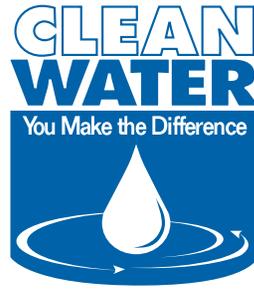
Only snow and rain in the storm drain. Rainwater and snow melt are the only things that should wash down our storm drains. Anything else—grass clippings, leaves, motor oil, even fertilizer—is considered an ILLICIT DISCHARGE.

Pet waste. Be a responsible pet owner and prevent contamination of the surface water and groundwater we all share by cleaning up anything—"left behind" on your walk.

Leaves and grass clippings. The next time you mow your lawn, mulch, bag, or compost your grass clippings, but keep them out of the storm drains. All that grass can end up in our lakes and rivers and release nutrients, which make weeds and algae grow.

Travel Trailer Waste. During the camping season, remember to properly dispose of your black water tank waste at a designated RV sanitary dump station. Improper disposal of waste contaminates the ground and water and leaves the "great outdoors"—not-so-great!

Car washing. Wash cars at a commercial car wash or on the lawn so that wash water can be absorbed and naturally filtered, avoiding streets and storm drains.



Protecting our surface water is everyone's responsibility.

Battle Creek Area Clean Water Partners

The Battle Creek Clean Water Partnership is the City of Battle Creek; the City of Springfield; Calhoun County Road Commission; the Calhoun County Water Resources Commissioner; the townships of Bedford, Emmett, Leroy, Newton, and Pennfield, the Hart-Dole-Inouye Federal Center, Kellogg Community College, and Battle Creek Area Schools joining together with the common goal of protecting the waterways in our area.

Visit us at www.bcwater.org

Don't take our water for granted



Do your part! Help protect our surface water from dangerous pollutants.