

Clean Water Creates Opportunities

A sustainable Ox Creek Watershed will enhance the quality of life by improving environmental vitality and supporting regional economic growth.

Why Ox Creek?

Ox Creek is a crucial part of a Watershed.

No matter where you live, we all live in a watershed.

But what is it and what is its place in our community?

A Watershed is an area of land that drains rain water or snow into one location such as a stream, lake, or wetland. These water bodies supply our drinking water, water for agriculture and manufacturing, offer opportunities for recreation (canoeing and fishing, anyone?), and provide habitat to numerous plants and animals. Unfortunately various forms of pollution, including runoff and erosion, can interfere with the health of the watershed. Therefore, it is important to protect the quality of our watershed.

How do we keep a watershed area healthy?

Development planning and improvements to control polluted runoff are key... water runoff needs to be slowed down, spread out, and soaked in!

What Areas Are Included?

Ox Creek Watershed is in the far west part of the larger St. Joseph River Watershed. Ox Creek flows into the Paw Paw River, then to the St. Joseph River, and out to Lake Michigan. The Ox Creek Watershed is located in Berrien County with lands in Benton Charter Township, Benton Harbor City, and Sodus and Bainbridge Townships draining to the watershed.



Tips for Protecting Water Quality at Home

Everyone needs to do their part to protect our streams, rivers, inland lakes, and Lake Michigan! We depend on these water resources for our drinking water and for recreation: swimming, boating, and fishing.

How do pollutants enter the water?

In urban and suburban areas, storm drains are a main source of pollutants, draining virtually everything from lawns, streets, and parking lots directly into local streams, rivers, and lakes. Most storm drains do not treat or filter pollutants.

Common pollutants include fertilizers, pesticides, grass clippings, leaves, oil, grease, toxic chemicals, sediment, and pet waste.



DID YOU KNOW?

More than 60% of water pollution comes from things like cars leaking oil, failing septic systems, and fertilizers from lawns, gardens, and farms. All these sources add up to a big pollution problem. But each of us can do small things to help clean up our water—and that adds up to a pollution solution!

BEST PRACTICES AT HOME

- ✓ Only Rain in the Storm Drain. NEVER dump down storm drains!
- ✓ Be sure to remove leaves, trash, and debris from storm drain inlets.
- ✓ Use fertilizers sparingly and sweep up driveways, sidewalks, and roads.
- ✓ Take all unwanted chemicals, paint, oil, etc., to designated collection sites.
- ✓ Check for and fix car leaks and recycle motor oil.
- ✓ Vegetate bare spots in your yard.
- ✓ Direct downspouts away from paved surfaces.
- ✓ Take your car to the car wash instead of washing it in the driveway.
- ✓ Pick up after your pet and throw the waste in the garbage.
- ✓ Have your septic tank system pumped and inspected regularly.
- ✓ Use non-chlorine pool and spa alternatives.
If using chlorine, add a de-chlorination product such as sodium thiosulfate before draining the water, then drain the water onto a permeable surface such as a lawn.
- ✓ Compost your yard waste.
- ✓ Use non-toxic gardening techniques instead of pesticides.

GROW NATURAL PROTECTION

Plant native, drought tolerant, and erosion-controlling ground covers instead of lawns to reduce pesticide, herbicide, and fertilizer use and runoff.

For more information on using native plants visit www.wildflowersmich.org



Water...
slow it down,
spread it out,
soak it in!

**OX CREEK
WATERSHED**
URBAN | RURAL | EXIT 29
www.sustainoxcreek.org

OUR PARTNERS

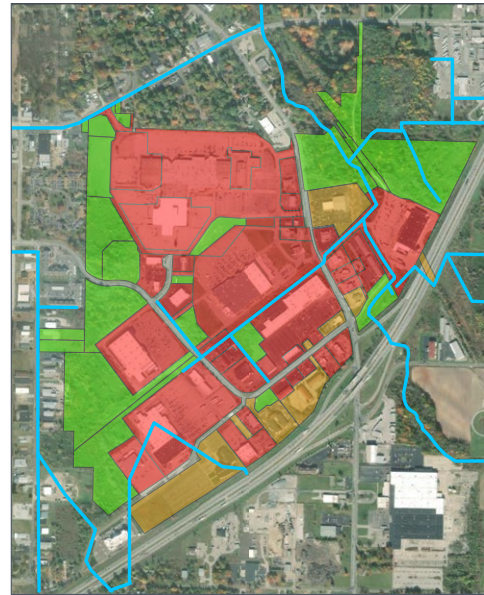


MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY



Remedy Large Areas of Impervious Surfaces

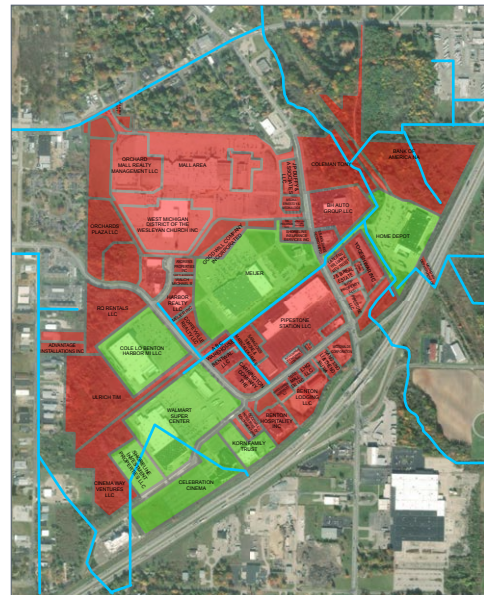
The Orchards Mall/Pipestone commercial corridor is a priority area for implementing practices that can slow down the water, spread it out, and soak it in.



SITE IMPERVIOUS SURFACE MAP

Properties that are covered with large amounts of “impervious surfaces” (parking lots and rooftops) are a high priority for Best Management Practices (BMP) due to the large amount of water leaving the site without being cleaned before entering Ox Creek and its tributaries. Properties with less impervious surface are able to infiltrate and filter more water before entering Ox Creek and its tributaries.

- Highest priority properties for BMPs (66–100% impervious surface)
- High priority properties for BMPs (33–66% impervious surface)
- Medium priority properties for BMPs (0–33% impervious surface)



SITES LACKING STORMWATER TREATMENT

The Orchards Mall/Pipestone commercial corridor area was analyzed to determine which sites are currently detaining polluted runoff before it enters the Yore-Stouffer Drain and ultimately Ox Creek.

- Sites which do not currently have any stormwater detention or treatment and are highest priority for BMPs.
- Sites which currently have some type of stormwater detention or treatment and are high priority for BMPs

Best Management Practices (BMPs) to Improve Ox Creek

The goals of these practices are to improve water quality by filtering and reducing polluted runoff that degrades habitat and flow in nearby streams, rivers, and lakes.



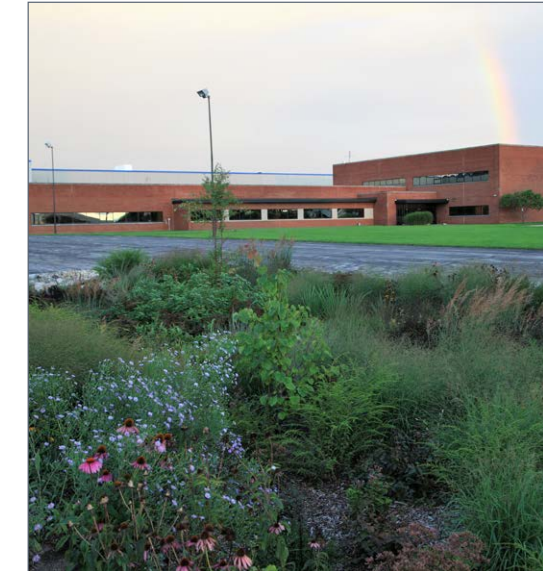
RAIN GARDENS or BIORETENTION BASINS

An excellent example of adding beauty with a purpose. Native plants are planted in small depressions to temporarily hold, soak in, and filter runoff that flows from parking lots and rooftops.



VEGETATED SWALES

These are shallow channels which are densely planted with a variety of native grasses, shrubs, and/or trees designed to slow, filter, and infiltrate runoff.



BMPs in Action WIGHTMAN RAIN GARDEN 2303 Pipestone Road, Benton Harbor, MI

This large rain garden is planted with native shrubs, perennials, and flowers, which not only improve Ox Creek, but also this business’s curb appeal. Employees were involved in designing and planting the garden. This rain garden was partially funded with state grant dollars by a company committed to a cleaner and healthier Ox Creek.



RIPARIAN BUFFERS

Areas of land that exist between rivers, streams, lakes, and wetlands, and higher, dry upland areas planted with native plants, shrubs, and/or trees. These plants slow and filter runoff before it reaches the waterbody or wetland.



RAIN BARRELS or CISTERNS

These structures are designed to intercept and store runoff from rooftops allowing for its reuse. They provide a supplemental water supply often used for irrigation.



PERMEABLE PAVING

Alternatives to traditional pavement include pervious asphalt, pervious concrete, interlocking pavers, and plastic grid pavers, which allow rain and snowmelt to seep through the surface down to underlying layers of soil and gravel.



GREEN/VEGETATED ROOFS and WALLS

Roofs and exterior walls can be designed to support living vegetation. The vegetation slows and filters runoff and also provides heating and cooling energy benefits, increases lifespan, reduces heat island effect, and enhances aesthetics.

SHARED OVERALL BENEFITS:

- Slows and filters runoff
- Reduces runoff with infiltration
- Recharges groundwater
- Enhances aesthetic value
- Provides habitat
- Offers many other environmental benefits

DO YOU NEED ASSISTANCE WITH GRANT RESOURCES?

The Southwest Michigan Planning Commission regularly researches grants for clean water.
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