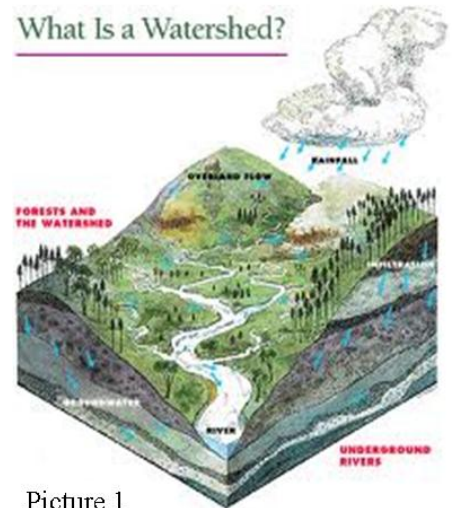


# *What is a Watershed???*

What is a Watershed??? This question gets several different answers, most of them wrong. Some of the answers have been... “where the birds and animals hang-out”, “a place to store water”, “a place to fill water bottles”, or “deals with flooding”. Actually, a *watershed* is the area drained by a river and its tributaries. A watershed is also known as a basin. The picture 1 shows a typical watershed. Precipitation falls on the land and flows into small streams which flow into larger streams and eventually to a main river. The area from which the water flows to the river is the *watershed* for that river.

At the “Leisure Living” show in Findlay, the question was asked on a survey if the person lived in a watershed. 65% of the people that responded state No or they didn’t know if they live in a watershed. Everyone lives in a watershed. In fact a person lives in more than one watershed depending on the level one is looking at. The Blanchard River watershed is the main watershed in Hancock County (71%). If one travels north of Findlay on Main Street (CR 220) towards Van Buren, you will leave the Blanchard River watershed at Mortimer and enter the Cedar-Portage River watershed. Water from this area travels all the way to Port Clinton before entering Lake Erie. The very northwest corner of Hancock County is located in the Lower Maumee watershed. All of these watersheds have been designated as 8-digit watersheds for identification purposes by the United States Geological Survey (USGS). The watersheds are given a hydrological unit code (HUC) based on the size of the watershed.



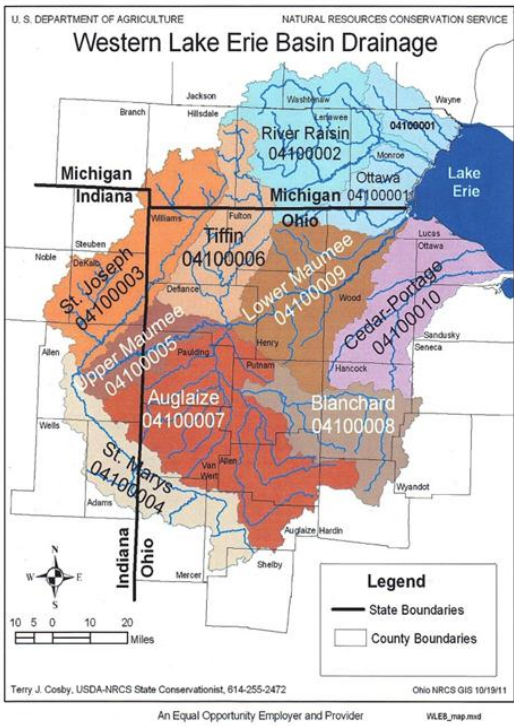
Picture 1

## *What is the Make-up of the Blanchard River watershed???*

There are two major watersheds in Ohio, the Ohio River watershed and the Great Lakes watershed. The next time you travel to Columbus you can see a sign south of Upper Sandusky that states, “Entering Ohio River Watershed”. A sign with the same message can be found south of Wapakoneta when you are going south. This means that all precipitation eventually flows south to the Ohio River from the point southward. If you are heading north on these two roads, the signs will read “Entering the Lake Erie watershed”. This means that all precipitation eventually flows north to Lake Erie from the point northward. The Blanchard River is located in this area. Map 1 shows the make-up and location of the Blanchard River in the Great Lakes watershed. The Great Lakes watershed has an HUC code of 04. The yellow area on the map shows the Lake Erie watershed. The Blanchard River is located in the western part of this region. The HUC for the Western Lake Erie Basin is 0410.



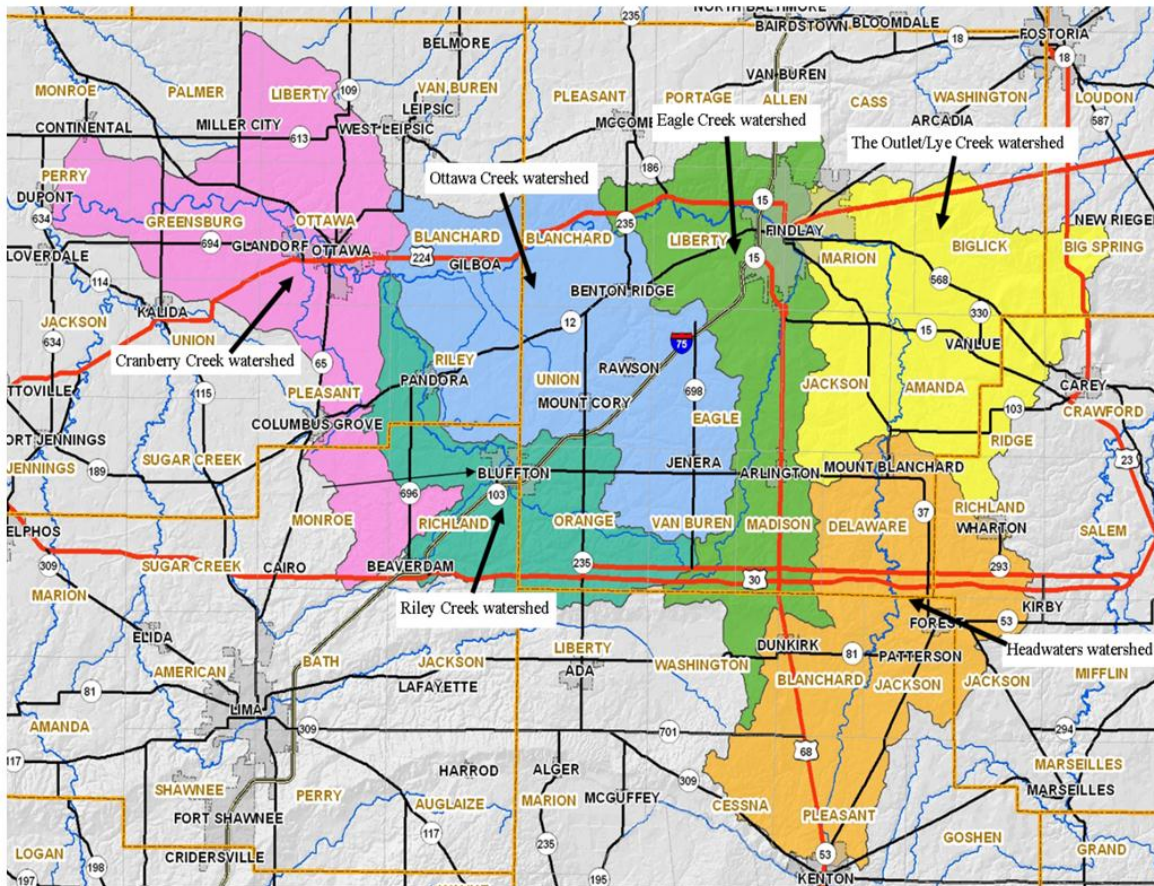
Map 1



Map 2

Map 2 shows the 8-digit HUC watersheds in the Western Lake Erie Basin (WLEB). You can see that the Blanchard River watershed has an HUC of 04100008. This is the identification number for the Blanchard River watershed. Even in the WLEB there are smaller groupings of the watersheds. The Blanchard River flows into the Auglaize River on the west end of Putnam County. From here the Auglaize River flows north to the Maumee River which flows northeast into Lake Erie. All the watersheds that flow into the Maumee River comprise the Maumee River watershed or basin. These watersheds also make up the Maumee River Conservancy District.

In addressing the impairments caused by Nonpoint Source Pollution (NPS), the Blanchard River Watershed Partnership is writing watershed action plans (WAP) that are endorsed by the Ohio EPA and Ohio Department of Natural Resources (ODNR). These WAPs are being written at the 10-digit watershed level. The WAP focuses on the smaller 12-digit watershed in each of the 10-digit watersheds. Map 3 shows the 10-digit watersheds in the Blanchard River watershed.



Map 3

Table 1 summarizes the 10 and 12-digit watersheds.

Table 1

**Blanchard River Watershed - 10 & 12-digit watersheds**  
(HUC 0410008) 771 sq. miles, 493,434 acres

**Headwaters Watershed** (HUC 0410008 01) 140.8 sq. miles, 90,095 acres

- ◆ *Cessna Creek Watershed* (HUC 04100008 01 01) 23.2 sq. miles, 14,855.2 acres
- ◆ *Headwaters Blanchard River Watershed* (HUC 04100008 01 02) 19.7 sq. miles, 12,582.6 acres
- ◆ *The Outlet-Blanchard River Watershed* (HUC 04100008 01 03) 34.1 sq. miles, 21,821.9 acres
- ◆ *Potato Run Watershed* (HUC 04100008 01 04) 27.8 sq. miles, 17,822.5 acres
- ◆ *Ripley Run-Blanchard River Watershed* (HUC 04100008 01 05) 36.9 sq. miles, 23,639.4 acres

**The Outlet/Lye Creek Watershed** (HUC 0410008 02) 133.4 sq. miles 85,384 acres

- ◆ *Brights Ditch Watershed* (HUC 04100008 02 01) 28.4 sq. miles, 18,200 acres
- ◆ *The Outlet Watershed* (HUC 04100008 02 02) 38.3 sq. miles, 24,542.5 acres
- ◆ *Findlay Upground Reservoirs-Blanchard River Watershed* (HUC 04100008 02 03) 22.5 sq. miles, 14,393 acres
- ◆ *Lye Creek Watershed* (HUC 04100008 02 04) 27.5 sq. miles, 17,631.1 acres
- ◆ *City of Findlay Riverside Park-Blanchard River Watershed* (HUC 04100008 02 05) 16.2 sq. miles, 10,377.5 acres

**Eagle Creek Watershed** (HUC 04100008 03) 115.0 sq. miles 73,601 acres

- ◆ *Upper Eagle Creek Watershed* (HUC 04100008 03 01) 26.4 sq. miles, 16,874.6 acres
- ◆ *Lower Eagle Creek Watershed* (HUC 04100008 03 02) 34.0 sq. miles, 21,763.9 acres
- ◆ *Aurand Run Watershed* (HUC 04100008 03 03) 18.0 sq. miles, 11,534.4 acres
- ◆ *Howard Run-Blanchard River Watershed* (HUC 04100008 03 04) 36.3 sq. miles, 23,212.2 acres

**Riley Creek Watershed** (HUC 04100008 04) 85.6 sq. miles 54,814 acres

- ◆ *Binkley Ditch-Little Riley Creek Watershed* (HUC 04100008 04 01) 14.4 sq. miles, 9,193.9 acres
- ◆ *Upper Riley Creek Watershed* (HUC 04100008 04 02) 14.4 sq. miles, 9185.0 acres
- ◆ *Marsh Run-Little Riley Creek Watershed* (HUC 04100008 04 03) 16.3 sq. miles, 10,404.6 acres
- ◆ *Middle Riley Creek Watershed* (HUC 04100008 04 04) 15.6 sq. miles, 9,995.5 acres
- ◆ *Lower Riley Creek Watershed* (HUC 04100008 04 05) 25.1 sq. miles, 16,094.6 acres

**Ottawa Creek Watershed** (HUC 04100008 05) 148.9 sq. miles, 95,286 acres

- ◆ *Tiderishi Creek Watershed* (HUC 04100008 05 01) 19.2 sq. miles, 12,267.1
- ◆ *Ottawa Creek Watershed* (HUC 04100008 05 02) 44.9 sq. miles, 28,747.5 acres
- ◆ *Moffitt Ditch Watershed* (HUC 04100008 05 03) 13.5 sq. miles, 8,663.4 acres
- ◆ *Dukes Run Watershed* (HUC 04100008 05 04) 15.0 sq. miles, 9,613.7 acres
- ◆ *Dutch Run Watershed* (HUC 04100008 05 05) 14.8 sq. miles, 9,449.5 acres
- ◆ *Village of Gilboa-Blanchard River Watershed* (HUC 04100008 05 06) 41.2 sq. miles, 26,364.6 acres

**Cranberry Creek Watershed** (HUC 04100008 06) 147.3 sq. miles, 94,258 acres

- ◆ *Cranberry Creek Watershed* (HUC 04100008 06 01) 45.3 sq. miles, 28,969.4 acres
- ◆ *Pike Run-Blanchard River Watershed* (HUC 04100008 06 02) 28.6 sq. miles, 18,329.1 acres
- ◆ *Miller City Cutoff Watershed* (HUC 04100008 06 03) 22.6 sq. miles, 14,492.3 acres
- ◆ *Bear Creek Watershed* (HUC 04100008 06 04) 12.7 sq. miles, 8112.3 acres
- ◆ *Deer Creek-Blanchard River Watershed* (HUC 04100008 06 05) 39.4 sq. miles, 25,196.5 acres

# *Watershed Impairments*

The Ohio EPA completed the water quality study of the Blanchard River watershed in 2005. The final report was released in 2009 as the *Total Maximum Daily Loads (TMDL) for the Blanchard River Watershed*. The entire report can be found at:

[http://www.epa.ohio.gov/portals/35/tmdl/BlanchardRiverTMDL\\_final\\_may09\\_wo\\_app.pdf](http://www.epa.ohio.gov/portals/35/tmdl/BlanchardRiverTMDL_final_may09_wo_app.pdf). The report identified the impairments and the sources of these impairments in the watershed. In 2010 the Ohio EPA released the *Ohio 2010 Integrated Water Quality and Assessment Report on the Blanchard River Watershed*. The assessment report can be found at:

<http://www.epa.ohio.gov/dsw/tmdl/2010IntReport/2010OhioIntegratedReport.aspx>. The reports present a complete summary of each 12-digit watersheds within the Blanchard River watershed. The report includes assessments for Aquatic Life Use, Recreation Use, Public Drinking Water Supply, and Fish Tissue. *Land Use* has the greatest influence in impairments in the Blanchard River watershed. By far the largest land use (80%) is agricultural cropland. Portions of the Blanchard River watershed were once a part of the Great Black Swamp. In order to farm the land, channelization of the land was needed. Originally, clay tile was used, but now plastic tile is being used. The system of drainage has allowed the very fertile land to be used to grow mainly wheat, corn, and soybeans. Installing of the drainage tile and maintenance contracts on many of the tributaries has resulted in a channelization of the tributaries and direct habitat alteration. Table 2 the causes and sources of impairments in the Blanchard River watershed.

Table 2

## **Summary of the Impairments - Blanchard River watershed**

### *Causes of Impairments*

- ◇ direct habitat alterations
- ◇ nitrate/nitrite
- ◇ organic enrichment (sewage)
- ◇ total phosphorus
- ◇ water temperature (too high)
- ◇ low flow alterations
- ◇ nutrient/eutrophication\*
- ◇ ammonia
- ◇ low dissolved oxygen
- ◇ sedimentation/siltation

### *Sources of Impairments*

- ◇ channelization
- ◇ crop production with subsurface drainage
- ◇ combined sewer overflows
- ◇ failing Home Septic Treatment Systems
- ◇ streambank modification/destabilization
- ◇ municipal point source pollution
- ◇ dam or impoundment
- ◇ urban stormwater
- ◇ upstream impoundments
- ◇ package plant or other permitted small flow discharges

# What Can You Do?

The sources for all the impairments are man related activities. So, by stopping all the man related activities, the sources of the impairments would be eliminated. But that does not make any sense nor is it possible. **What can you do then???** More than you would think and with very little effort. Several of the things you can do will not be done directly by you, but by officials and agencies in the area. Your influence is needed on these officials and agencies with your input and membership. Take pictures and record sites of impairments. Let the people in charge know your findings. Other things you can do are listed in the Table 3.

Table 3

**Suggestion of things You can do....**

***Urban Areas***

- ◇ Use Phosphorus Free Fertilizer - your grass will be fine
- ◇ Use Rain Barrels - plant a rain garden
- ◇ Direct downspouts away from paved surfaces
- ◇ When living by a stream - create a buffer
- ◇ Never dump anything down storm drains or in streams
- ◇ Wash your car in the yard or at a car wash
- ◇ Pick up after your pet
- ◇ Check your car for leaks and recycle your motor oil
- ◇ Recycle all medicines - do not flush or dump down the drain
- ◇ Have your septic tank pumped and system inspected regularly

***Agriculture Areas***

- ◇ Develop a Nutrient Management Plan for your farm
- ◇ Use **Cover Crops** every year
- ◇ Conservation Crop Rotation
- ◇ Drainage Management Plan
- ◇ Filter Strips/Riparian Buffers
- ◇ Residue/Tillage Management Plan - No Till, Mulch Tillage, and Conservation Tillage
- ◇ Wetland Creation/Restoration
- ◇ Have your septic tank pumped and system inspected regularly

Practice(s). The local Soil Water Conservation Districts (SWCD), local Natural Resources Conservation Services (NRCS), and the Blanchard River Watershed Partnership (BRWP) have specialist that will be happy to meet with you and go over the Best Management Practices (BMPs) that is best for your farm or home. Some of these programs are Lake Erie CREP, EQIP, CRP and others.

# *What of the Benefits of Clean Water???*

The primary benefit of reducing pollution loads to the streams of the Blanchard River Watershed to meet water quality standards is cleaner water. ***But, how will Citizens and the Communities in the watershed benefit?*** Benefits of clean water to the stakeholders of the watershed include:

- ◇ Improved public health: one of the major pollutants found in the waterways is pathogens or fecal bacteria. The source(s) of these pathogens are failing home septic systems, animal waste, and combined sewer overflows (CSO). Reducing pathogens will make the water safer for living organisms and for drinking.
- ◇ Conservation of natural resources - soil and nutrients: Sediment and nutrient loadings into the waterways creates many problems in maintaining the water quality. Algal Blooms are the direct result of phosphorus loading. The problem with harmful algal blooms in Lake Erie, are partially due to phosphorus loading from the Blanchard River watershed. High levels of nitrates in the drinking water can cause problems for pregnant women. High sediment levels require more treatment to remove the sediment and make the water safe to drink. High sediment levels also destroy aquatic habitat.
- ◇ Improved riparian habitat
- ◇ Improved aquatic habitat
- ◇ Reductions in the amount of flood damage
- ◇ Improved recreational opportunities - cleaner water in the Blanchard River
- ◇ Greater direct economic benefits - improved agricultural benefits and tourism
- ◇ Greater indirect economic benefits - enhanced real estate values for farms and homes. Business more likely to build in an area with high water quality