

Watersheds 101: Exploring Big Walnut Creek Watershed

December 16, 2010

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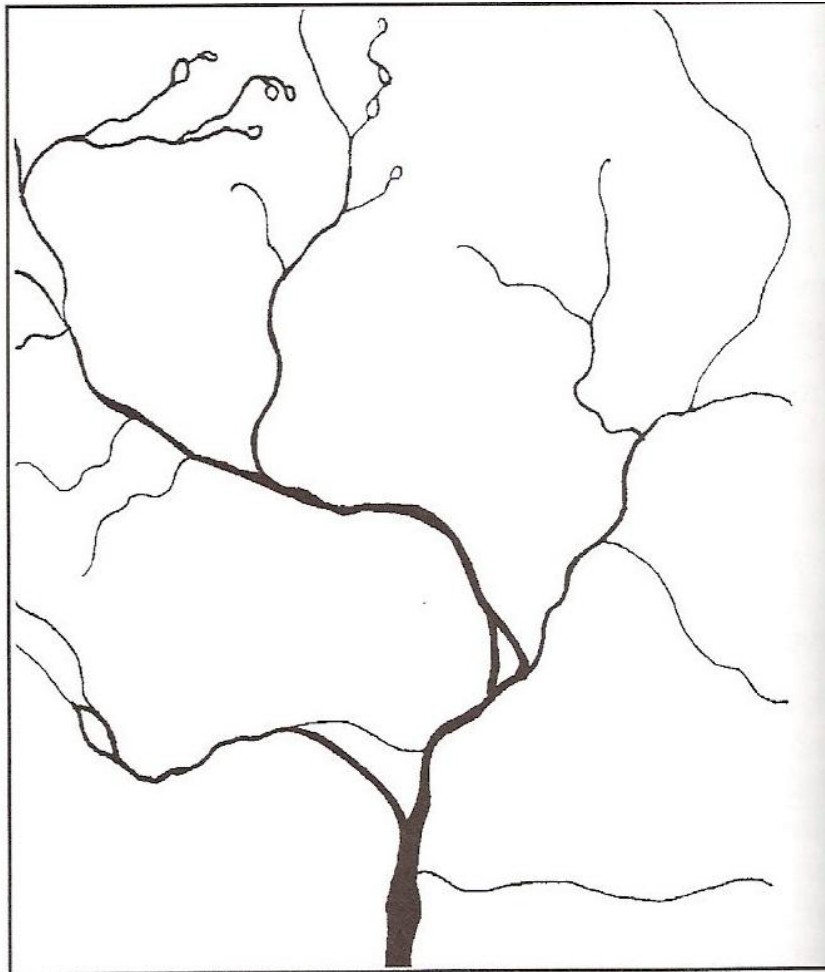
What is a watershed?



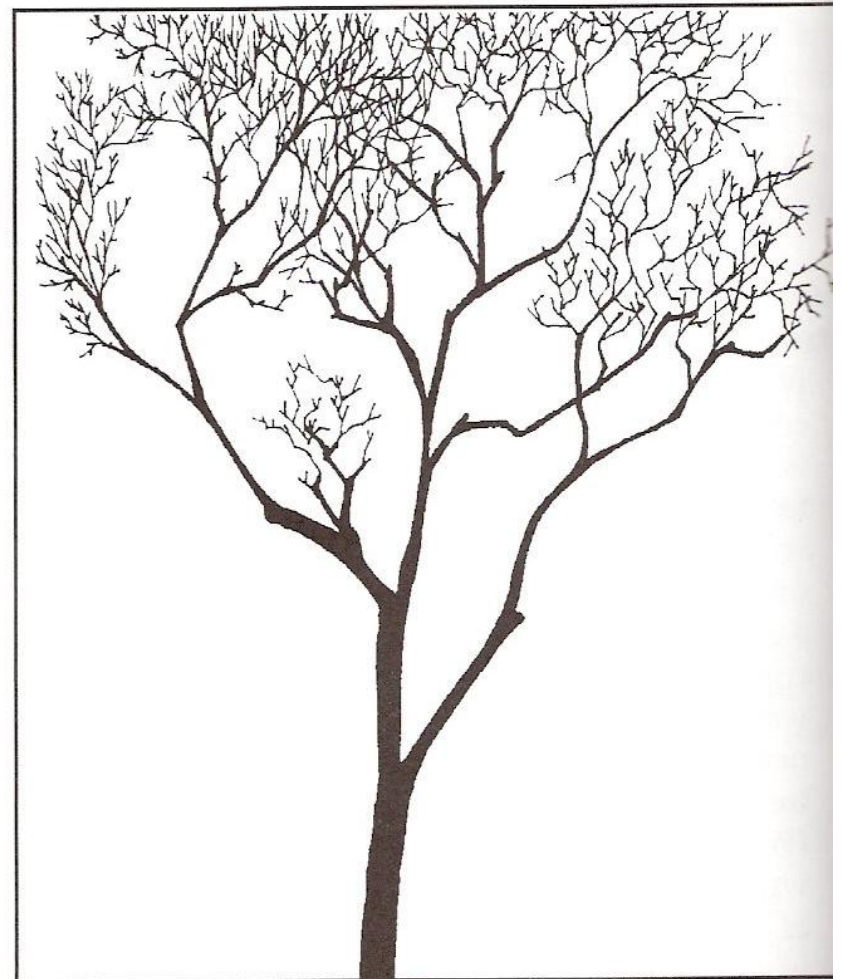
Produced by Lane Council of Governments





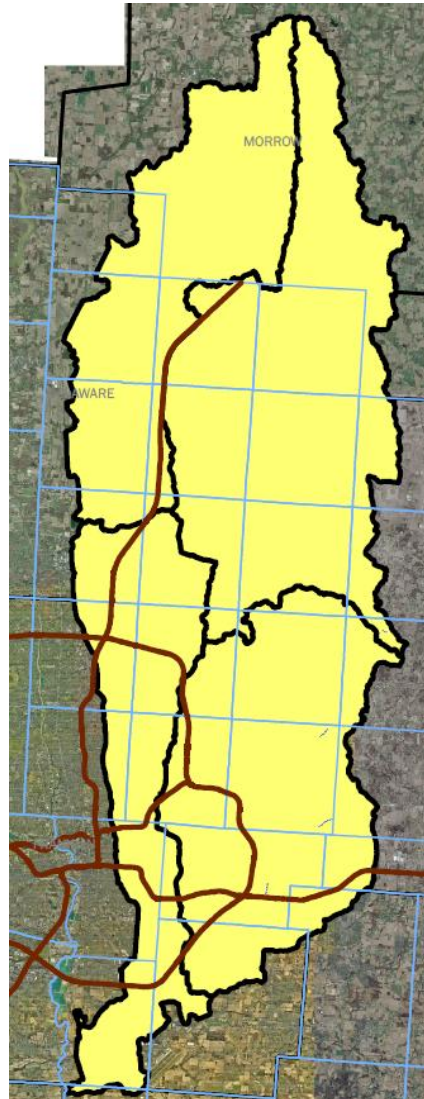


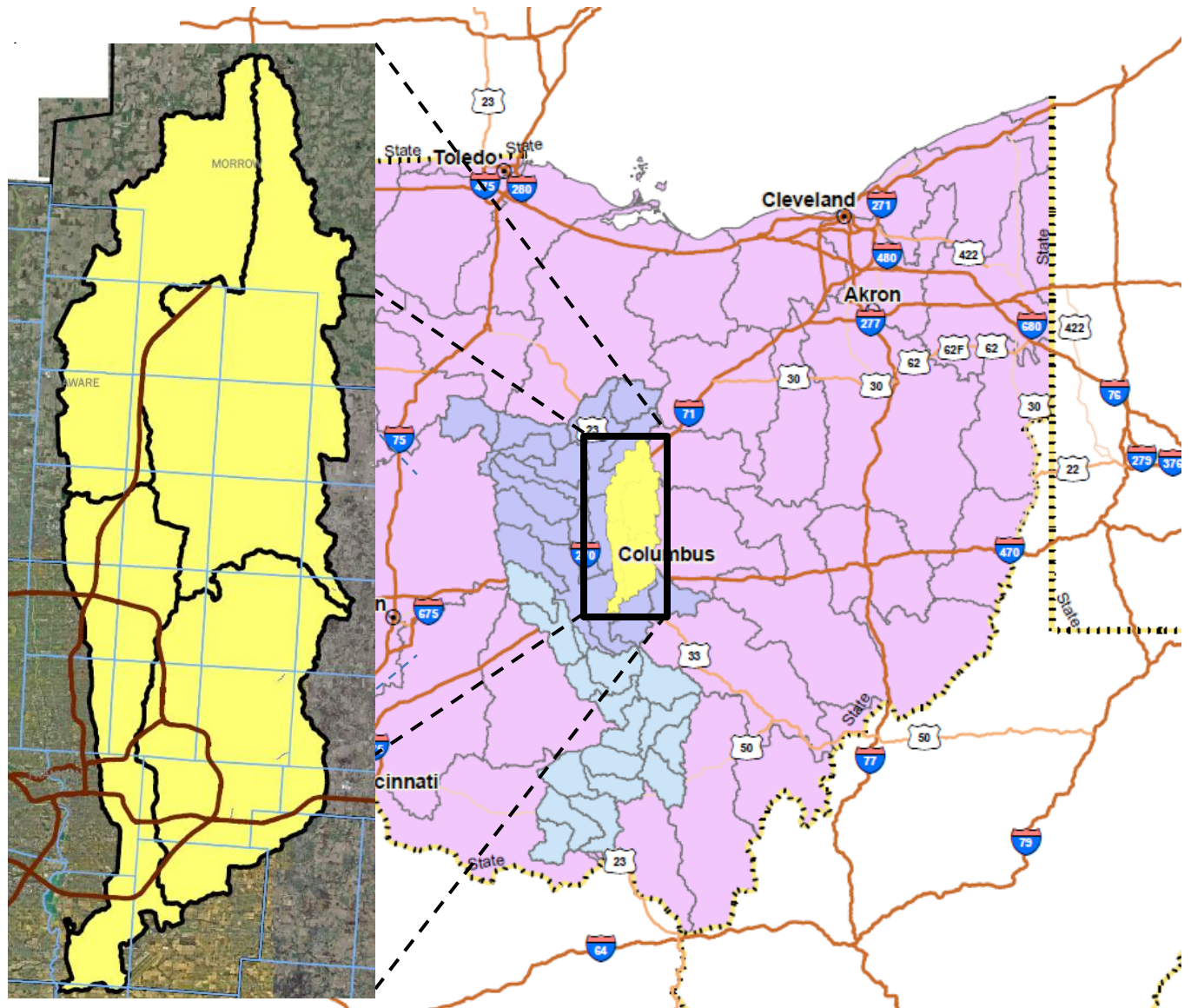
Watershed drainage pattern

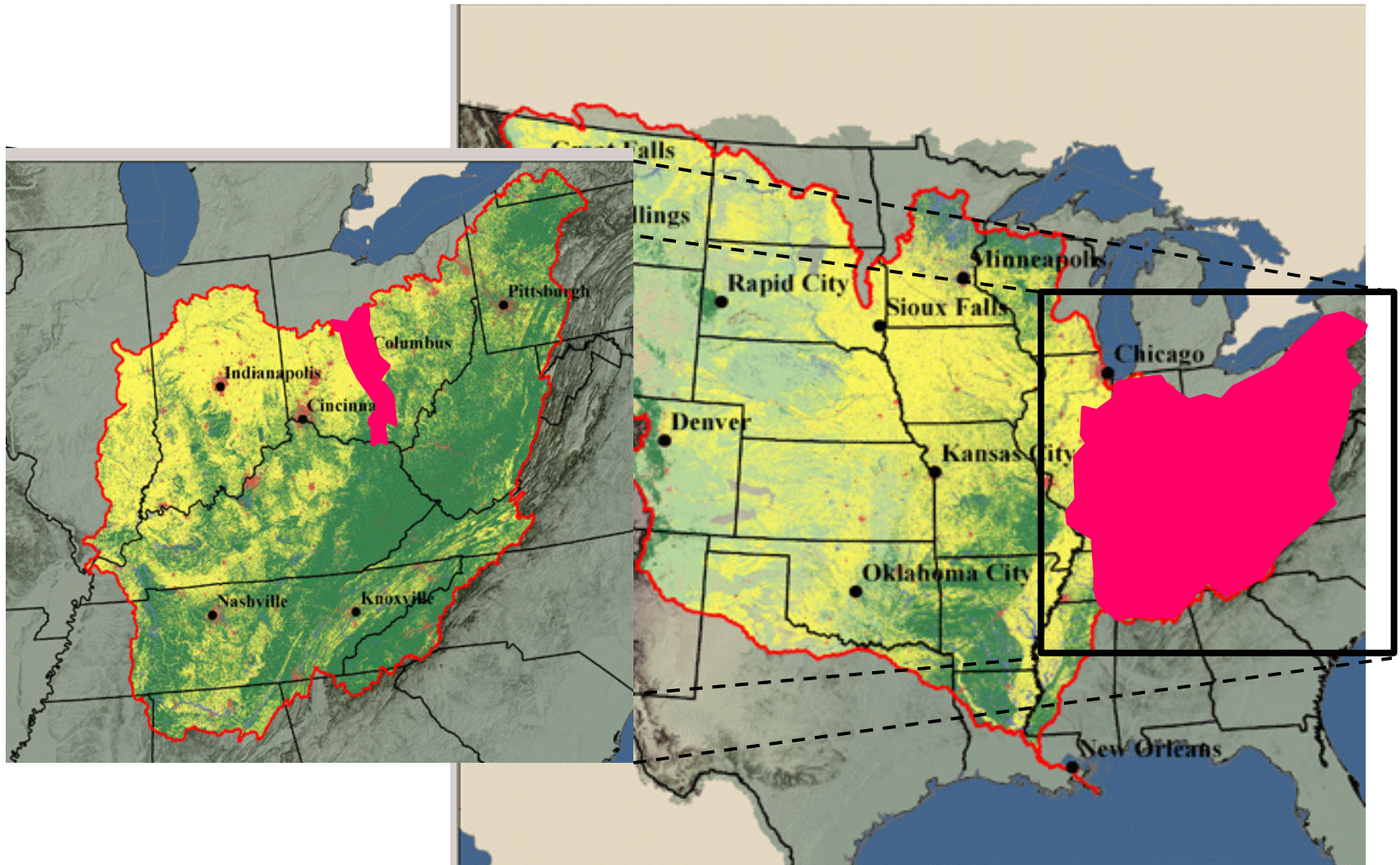


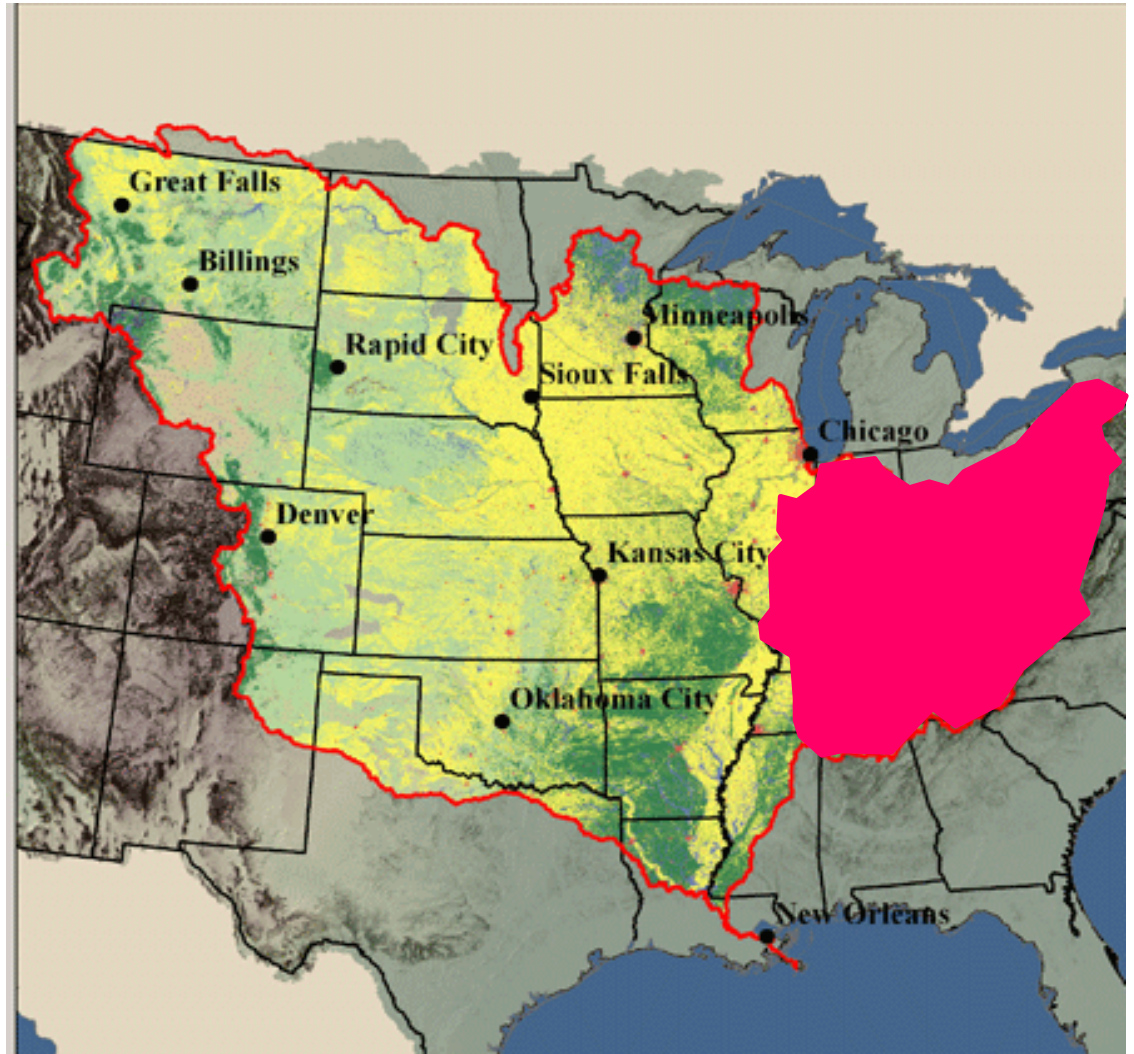
Tree in winter











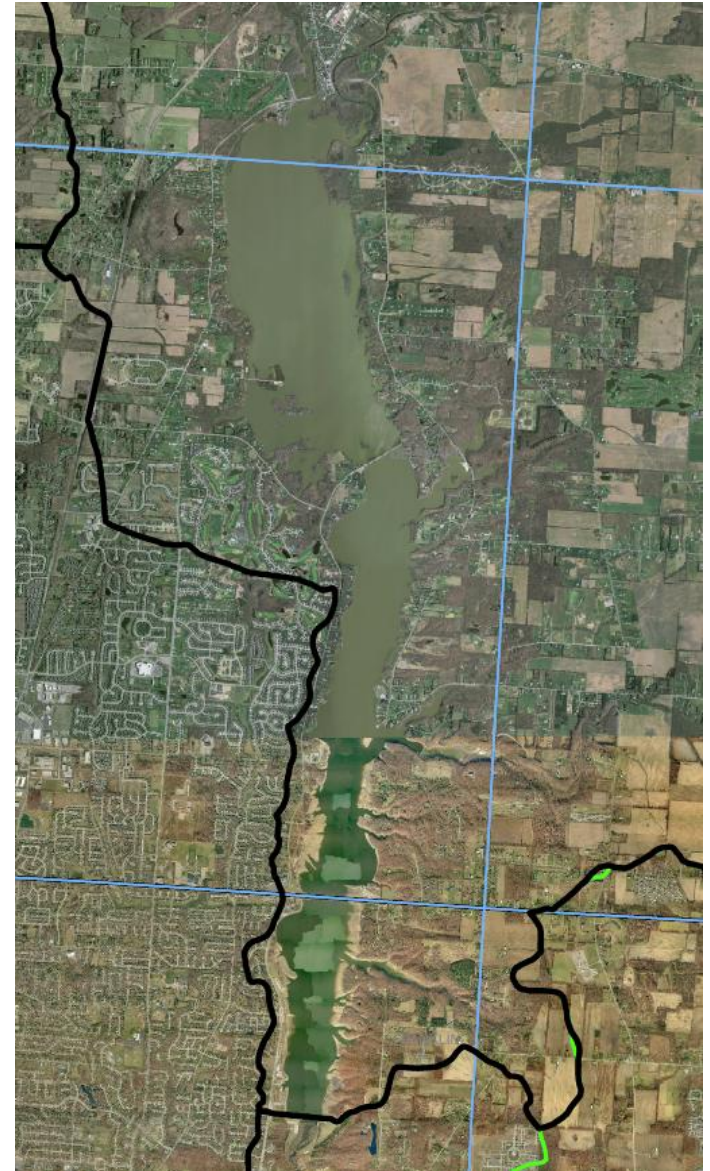
Reasons to Care About Creeks

- Human health
- Protecting economic interests
- Quality of life
- Wildlife values
- Concern for future generations
- Ethical considerations

Human Health

Hoover Reservoir provides nearly 60% of the drinking water for the Columbus metropolitan area.

<http://www2.nbc4i.com/news/2010/nov/09/hoover-reservoir-very-low-levels-ar-285479/>



Natural Infrastructure

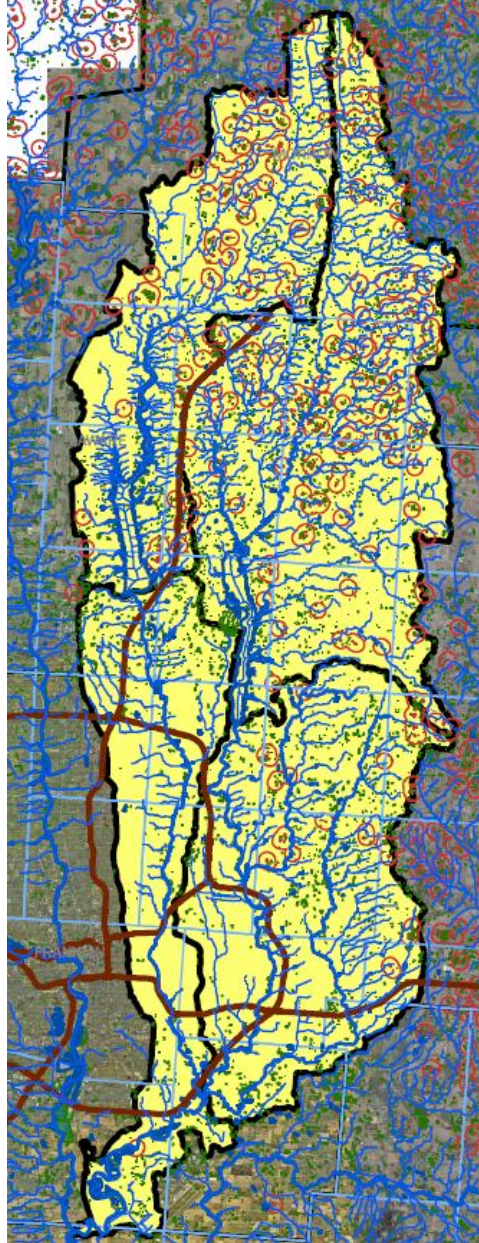
Wildlife Values

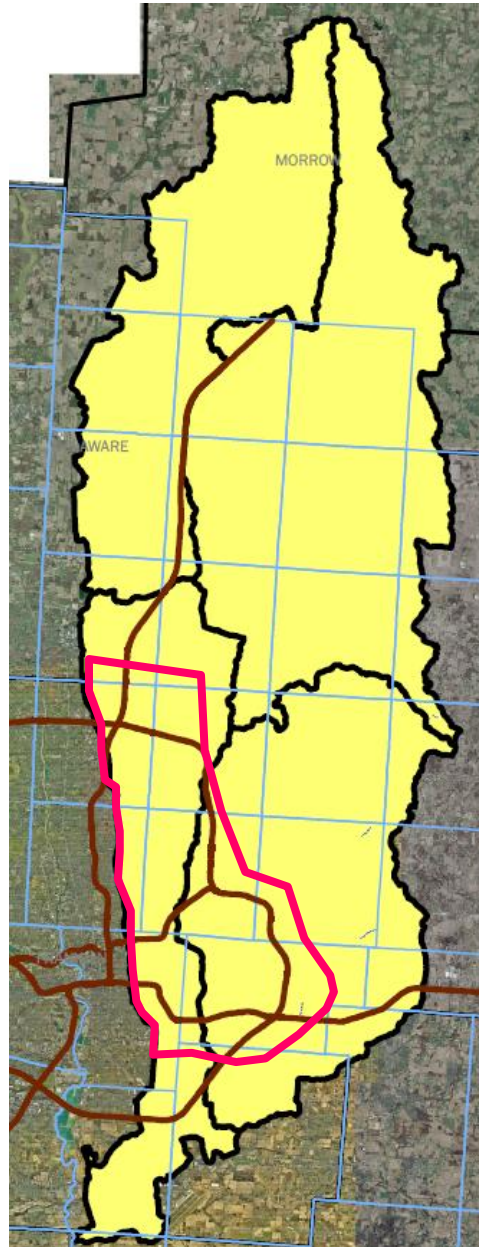
- Vernal Pools
 - Small, temporary wetlands
 - Form in the spring
 - Dry up in the later summer
 - Normally found in forests
 - Crucial habitat for amphibians

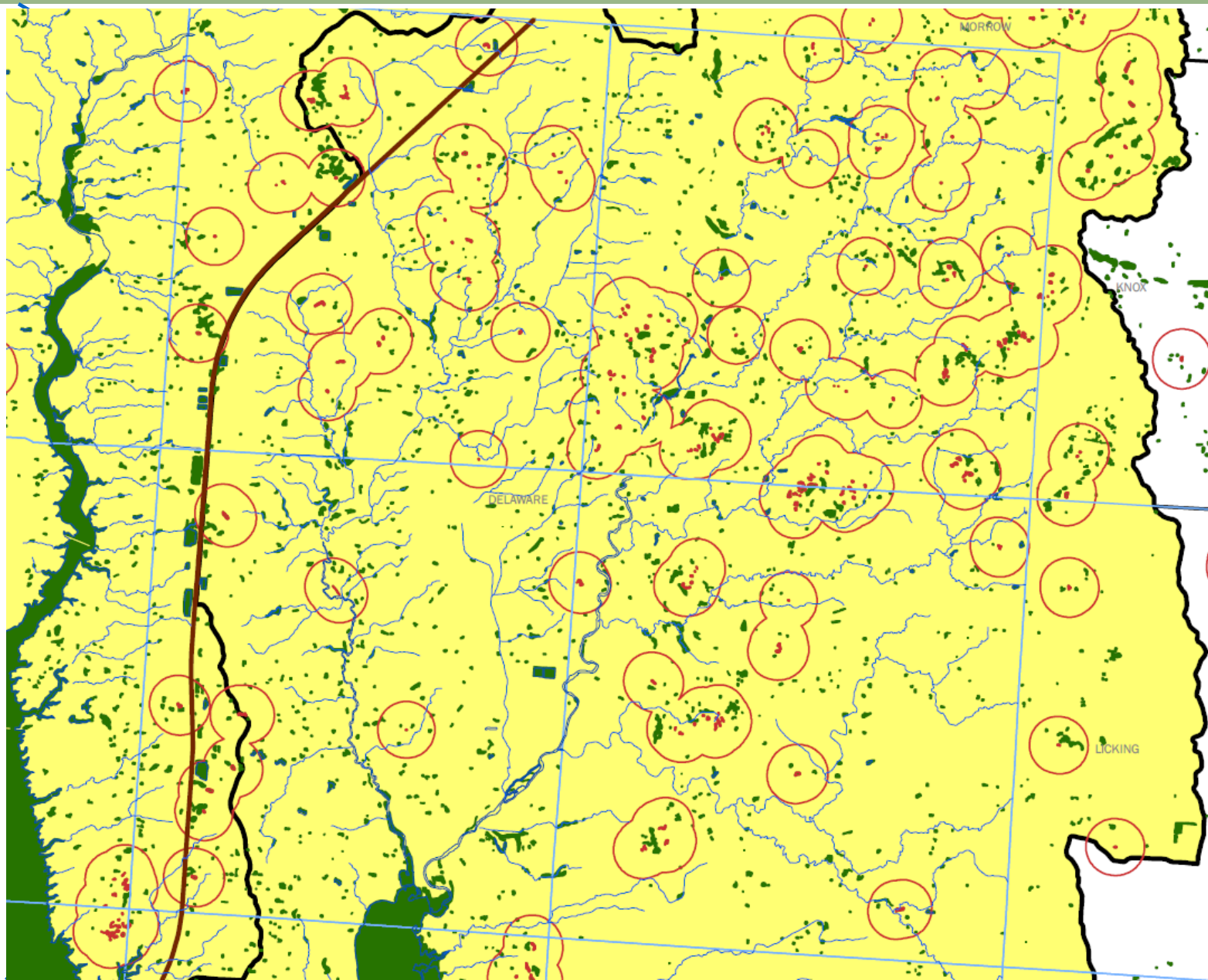


Healthy Watersheds

- Rain water infiltration
 - Adequate vegetated area
 - Wetlands/seeps/springs
- Areas along streams protected/naturalized
 - Buffer strips
 - Trees and shrubs
 - Native plants
- Pollution inputs minimized
 - Point pollution
 - Nonpoint pollution

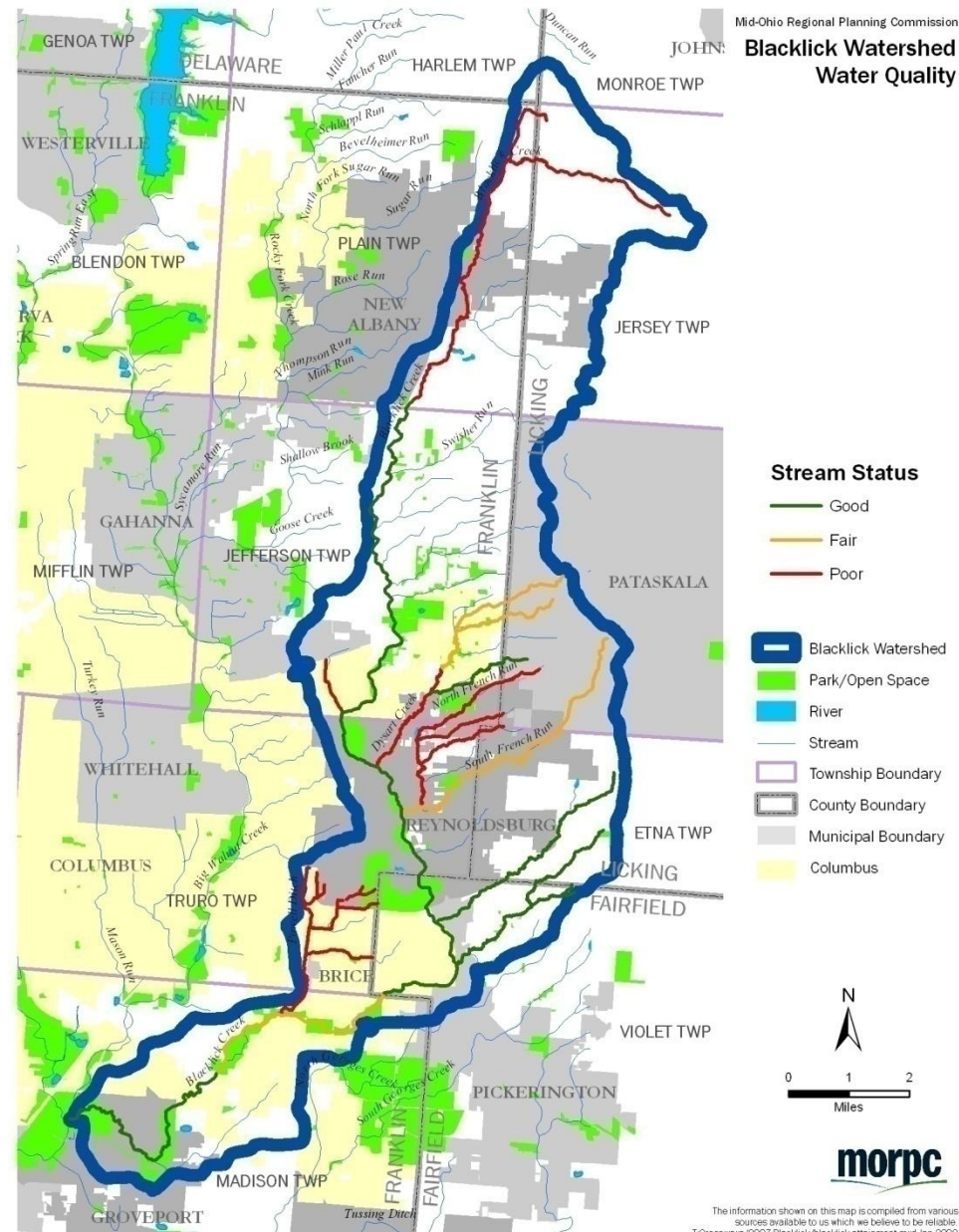






How clean is the water in Blacklick Creek?

- 47% rated as fair or poor for fish and bugs
- All streams not meeting requirements for swimming due to bacteria levels
- Land development has altered the streams leading to increased flows, polluted runoff, erosion, and sedimentation that buries the stream bottom
- Agricultural runoff contributes to high nutrient levels that contribute to algal growth and low dissolved oxygen levels
- Failing home septic systems dump bacteria and nutrients into the creek.



Problems

- Agricultural practices –inflow of nutrients, bacteria and sediment
- HSTSs –inflow of nutrients and bacteria
- Stormwater – reduced infiltration capacity of the watershed
- Lack of functional flood plain/protected corridors
- Creek channelization
- WWTPs

Lessons

- Creeks are profoundly affected by the land uses around them.
- Natural corridors are crucial to stream health
 - Flood control
 - erosion reduction
 - pollution protection
 - shade and organic inputs
- Impervious surfaces are a major threat to stream health.
- Natural infrastructure
- Waste water management is a significant issue for creeks.

