Education and Outreach

- Distributed 200 Rain Barrels with an 80% cost share

- Focused on the impact of residential landowners on the lake and nearby streams

Buckeye Lake Nutrient Reduction Project

Our Community partners helped host 10 workshops over two years. Thanks to our hosts at:

- The Village of Thornville
- The Village of Buckeye Lake
- The Buckeye Lake Museum
- The Walnut Township Trustees
- The Buckeye Lake Marina

Rain Barrel Education Overview

- Benefits
- How do they work
- Installation
- Potential Hazards
- Getting water to the plants
- Maintenance/Winterization

Benefits of rain barrels:

- They decrease the amount of rooftop runoff going directly to storm drains or streams

- They provide a backup source of water during times of drought or between rainfall events

- They hold naturally softened water which is ideal for house plants, auto cleaning and window washing

- The chlorine free water helps maintain a healthy biotic community in the soil

- They can save you money on your water bill

- They help keep our streams and rivers clean

Nutrient Education Overview

Nitrogen (N) – helps grass make the chlorophyll that gives a beautiful, healthy lawn its deep color

Phosphorus (P) – Promotes strong root development and winter hardiness

Potassium (K) – reduces transpiration (loss of water through the blades), so grass needs less water when it has enough potassium; it strengthens leaf blades, enabling to recover from heavy foot traffic and helps grass withstand stress

- Keep yard waste away from the stream
- Mow 2 ½ to 3 inches high
- Don’t bag lawn clippings

Buckeye Lake Nutrient Reduction Project

Liebs Island and Fairfield Beach information kiosks

Buckeye Lake Nutrient Reduction Project

Watershed Inventory and Analysis

- A comprehensive review of all streams to compliment water sampling conducted by the Ohio EPA and the Buckeye Lake for Tomorrow/Ohio Farm Bureau Foundation

- Understand the watershed boundary and assure investments are made in areas that are actually connected to the lake

- Separate and identify sources of nutrients, in, around and far removed from the lake

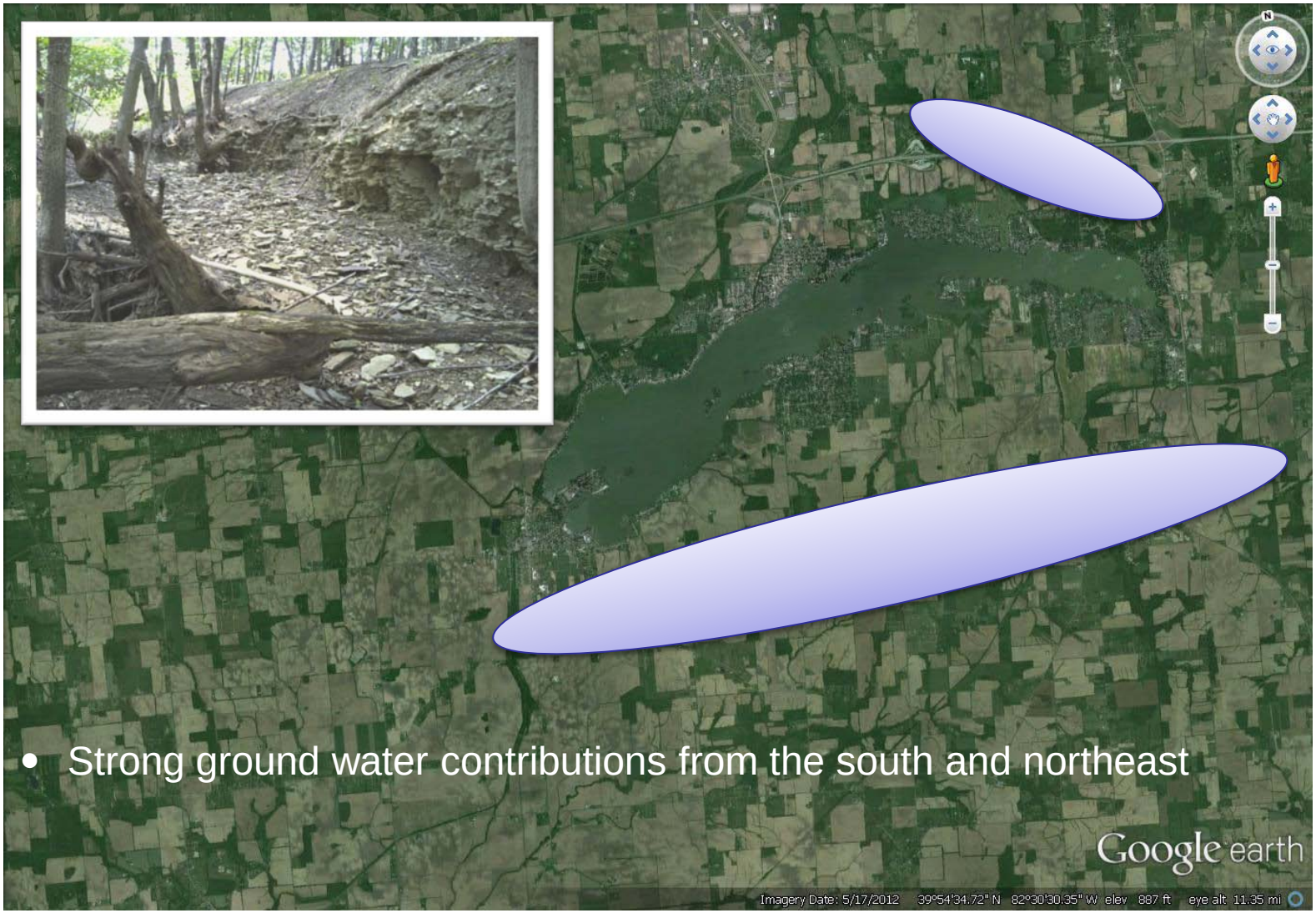
- Visualize realistic locations where improvements could be made as part of a master plan

Buckeye Lake Nutrient Reduction Project

- 73% of typical stream beds have a riparian corridor
- 27% of typical stream beds do not have a riparian corridor

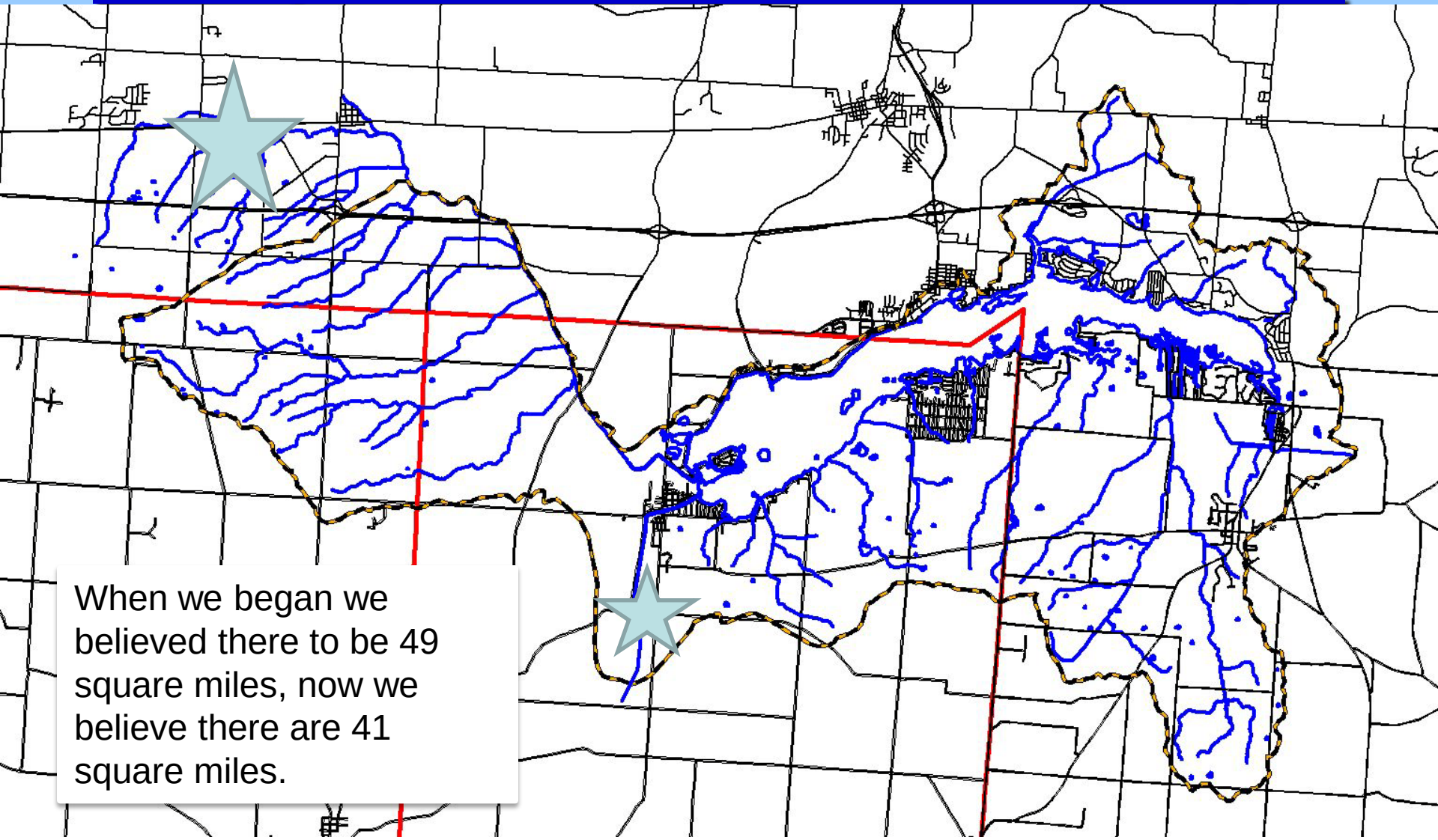
June-October 2012 and April-June 2013

Buckeye Lake Nutrient Reduction Project



- Strong ground water contributions from the south and northeast

Buckeye Lake Nutrient Reduction Project



Revised Watershed Understanding

Buckeye Lake Nutrient Reduction Project

* It is interesting to note that the mile inside Millersport along the Deepcut contains 10.6 tiles/pipes per mile, while the average in agricultural areas is 11.2 tiles/pipes per mile.

98 flowing tiles/pipes

518 non-flowing tiles/pipes

24 septic systems being reviewed/monitored

3 areas of interest being monitored

Tile/Pipe Inventory

Buckeye Lake Nutrient Reduction Project

182 moderate–severe erosion
100 moderate-severe log jams

Debris Jam and Erosion Inventory

Buckeye Lake Nutrient Reduction Project

- In Fairfield County most streams originate in sod waterways
- In Licking County most streams originate in wooded or impounded locations
- In Perry County most streams in the east originate in wooded locations, and sod waterways in the west

Buckeye Lake Nutrient Reduction Project

- Only a few miles of streams, primarily at the far east end appear to be natural. All others show signs of influence by canals, railroads, roads or realignments .

STATION, ENTRANCE AND LOOP OF THE OHIO ELECTRIC RAILWAY AT BUCKEYE LAKE PARK.

Buckeye Lake Nutrient Reduction Project

What is in the soil?

- EPA funds have:
  -Planted 100 acres of cover crops
  -Tested soils on row crop farmland (200 acres)

- Broughton Natural Resource Funds have tested:
  -Livestock farmland soils (60 acres)

- Farm Bureau Funds have tested:
  -Biosolids application sites (20 acres)
  -Residential lawns (3 acres)
  -Golf courses (15 acres)
  -State Park lawns (7 acres)
  -Row crop farmland (100 acres)

  -Lake sediment
  -Goose manure

Summary to date

Land Use 2012

- Row crop with limited livestock — 70 lbs P/acre
- Lawns and recreation fields — 57 lbs P/acre
- Park land, subject to geese and historic dredge dep. — 32 lbs P/acre
  (West side 14 lbs P/acre-Eastside 47 lbs P/ acre)

Lake Sediments 2012

- Feeder Creek (all the western watershed) — 6.2lbs P/100CF
- Liebs Island (State Park and active boat launch) — 2.4lbs P/100CF
- Brooks Park (State Park limited Watershed) — 12lbs P/100CF

Goose manure 2012 — 4.8 lbs P/100CF

The Ohio EPA has also conducted sediment sampling in previous years.