

LAKE MONROE WATERSHED MANAGEMENT PLAN



Maggie Sullivan,
Lake Monroe Watershed Coordinator



Lake Monroe



- Constructed 1964
- Largest Lake in Indiana
- Purposes
 - Recreational destination
 - Drinking water source
 - Wildlife habitat
 - Flood control

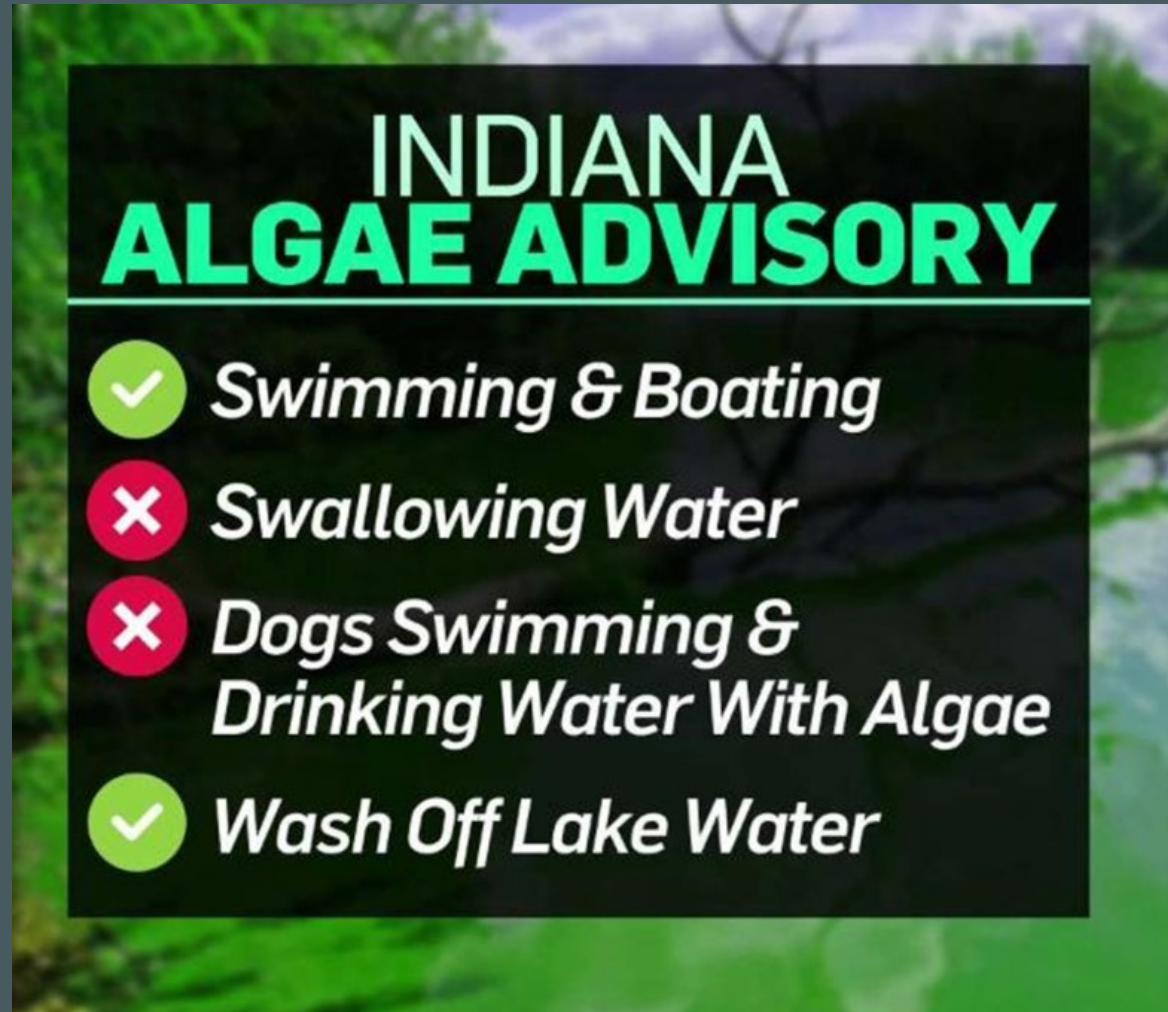


Water Quality Concerns

Floods, Erosion, Algae: Is Lake Monroe A Sustainable Source Of Drinking Water For Bloomington?

By GEORGE HALE
Posted June 11, 2020

Water Quality Concerns - Recreation



**INDIANA
ALGAE ADVISORY**

- ✓ *Swimming & Boating*
- ✗ *Swallowing Water*
- ✗ *Dogs Swimming & Drinking Water With Algae*
- ✓ *Wash Off Lake Water*

Water Quality Concerns – Drinking Water



- 130,000 customers + IU + businesses
- Bad taste from algae blooms in late summer
- Concerns about sustainability

Who Is Responsible?



Potential Solution – Watershed Management Plan

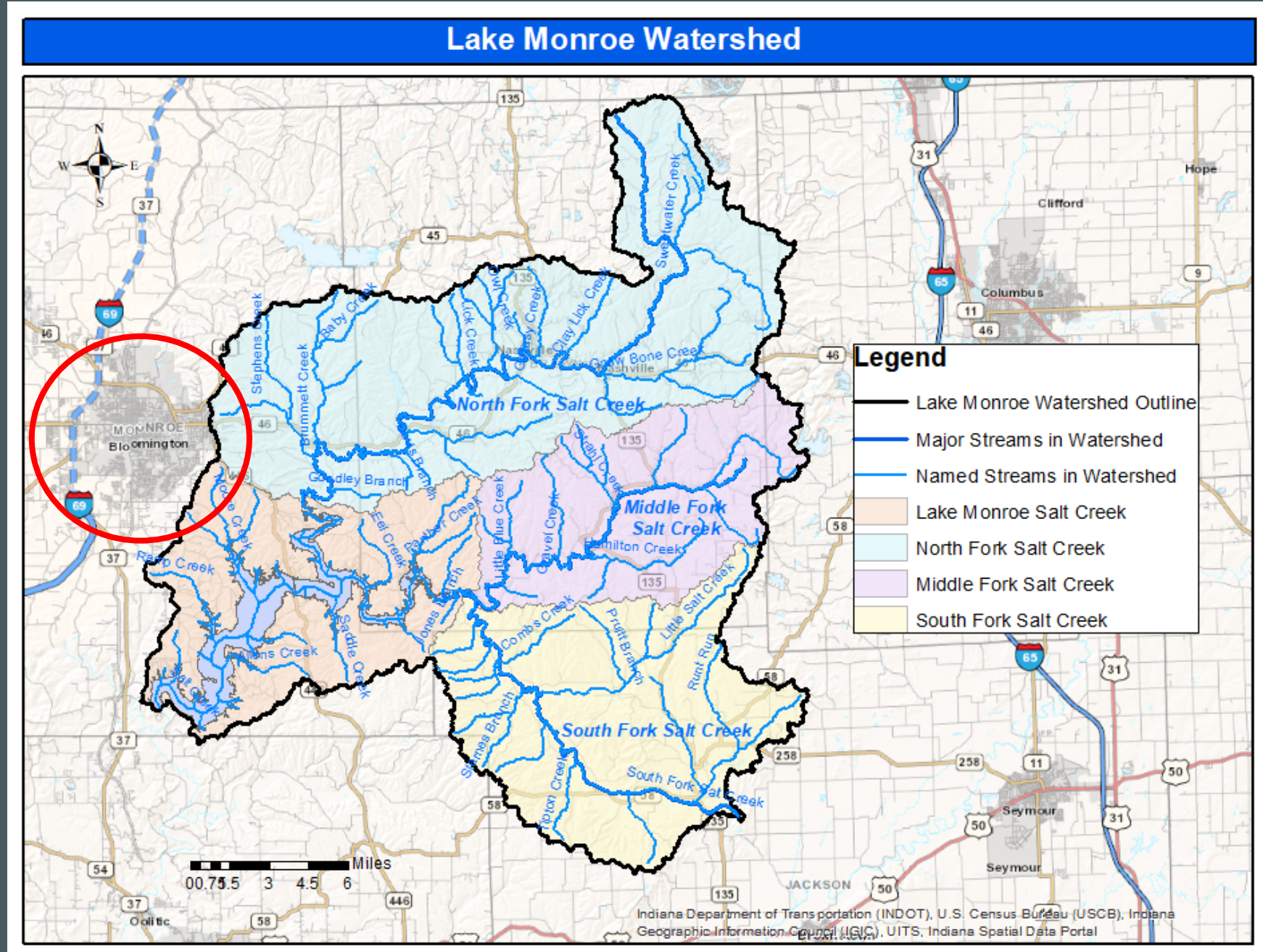
- Clear plan of action for addressing water quality goals
- Identifies problems and proposes solutions
- Considers the water body AND its watershed



Lake Monroe Watershed by County

- 56% Brown
- 21% Monroe
- 21% Jackson
- 2% Bartholomew
- <1% Lawrence

~440 square miles





Land Use in Lake Monroe Watershed

Forested: 82%

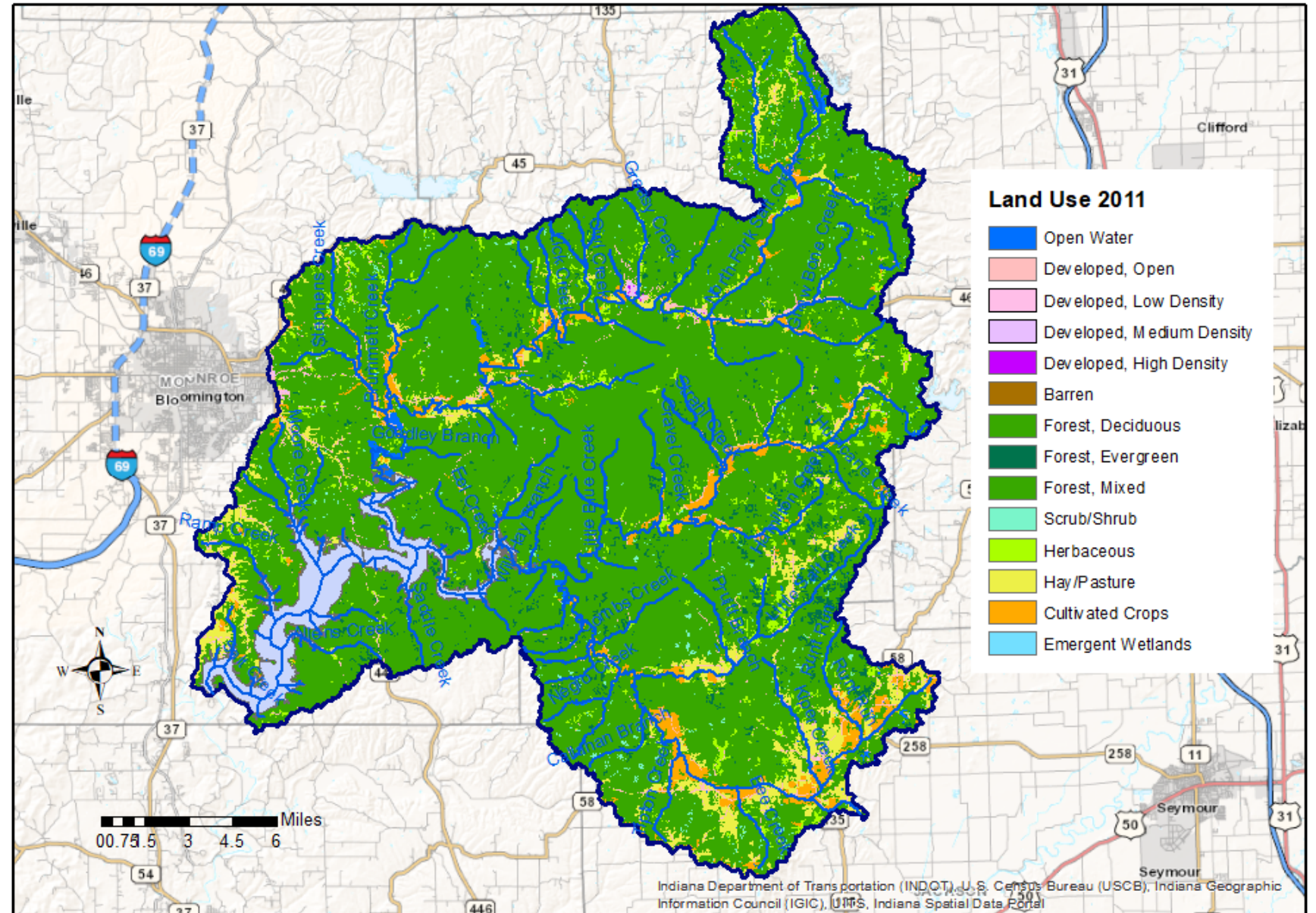
Pasture: 4%

Crops: 4%

Herbaceous: 3%

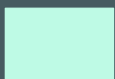
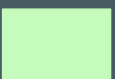

Developed: 2%

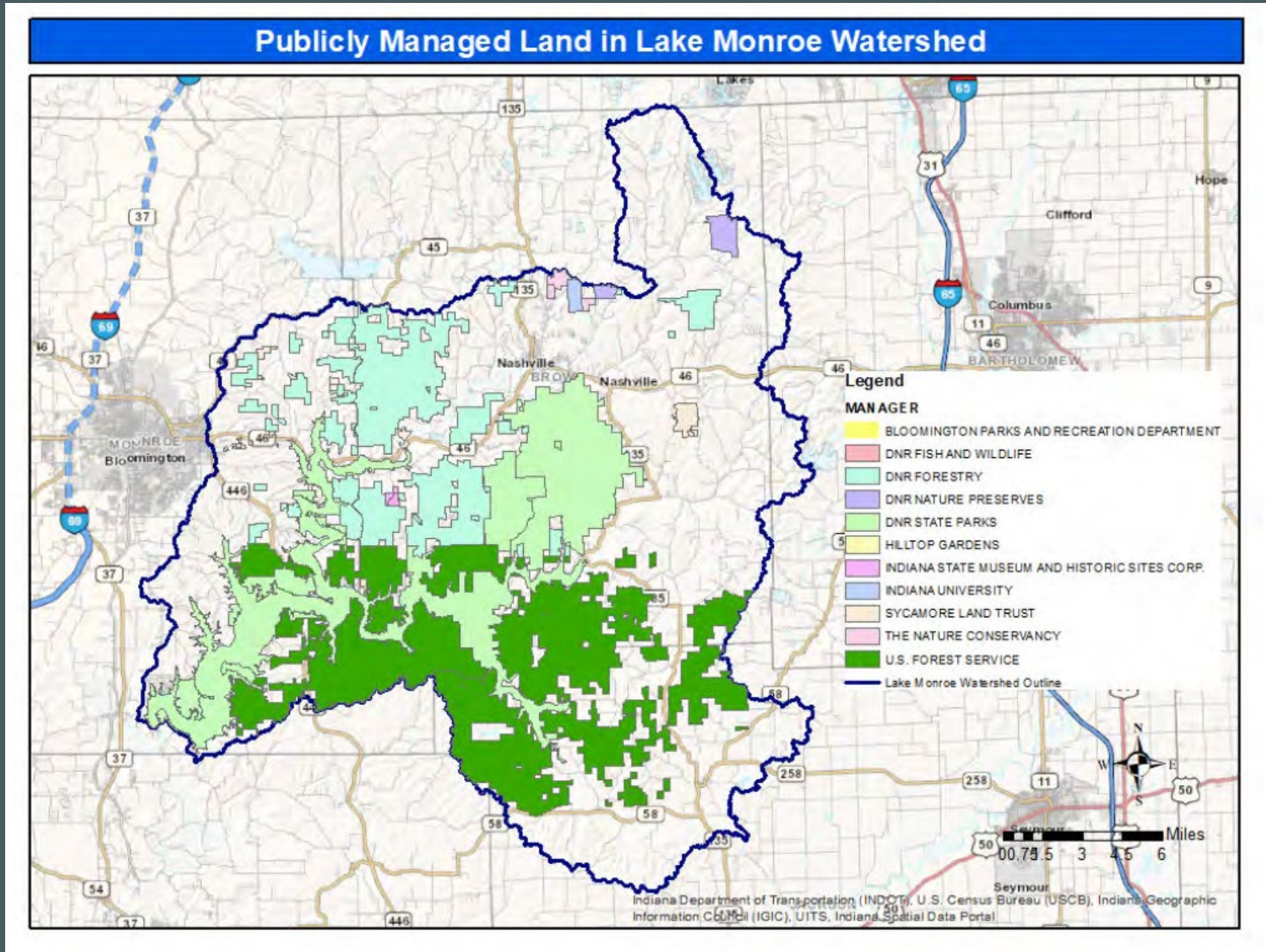
Water: 5%





Over 40% of
Watershed is
Public Land

-  DNR Forestry
-  DNR Parks
-  US Forest Service



What Makes a Good Watershed Management Plan?

- Data-Driven
- Addresses Stakeholder Concerns
- Supported by Community
- Clear Actionable Goals





Friends of Lake Monroe

- Non-profit Organization
- Founded 2016
- Developed Watershed Management Plan 2019-2022





Steering Committee

- Over 20 organizations
- 13 committee meetings
- 5 outings





Primary Supporters and Funders

- City of Bloomington Utilities
- City of Bloomington Office of Economic and Sustainable Development
- Monroe County Stormwater Board
- Indiana Department of Environmental Management (319 Grant)



Local Governments

- Monroe County
- Brown County
- Jackson County
- Bloomington
- Nashville



Key Conservation Groups

- Monroe County SWCD
- Brown County SWCD
- Jackson County SWCD
- Natural Resources Conservation Service
- The Nature Conservancy



Large Property Owners/Managers

- DNR Division of State Parks
- DNR Division of Forestry
- U.S. Forest Service
- U.S. Army Corps of Engineers



Other Partners

- Visit Bloomington
- Greater Bloomington Chamber of Commerce
- League of Women Voters
- Indiana University
- Indiana Geological and Water Survey
- Brown County Regional Sewer District

Hosting Public Forums – League of Women Voters



Watershed Observations





Water Quality Monitoring – Indiana University, Conservation Law Center, The Nature Conservancy





Shared Water Quality Data



- City of Bloomington Utilities
- US Army Corps of Engineers
- DNR Beach Monitoring
- Brown County Regional Sewer District

Outreach



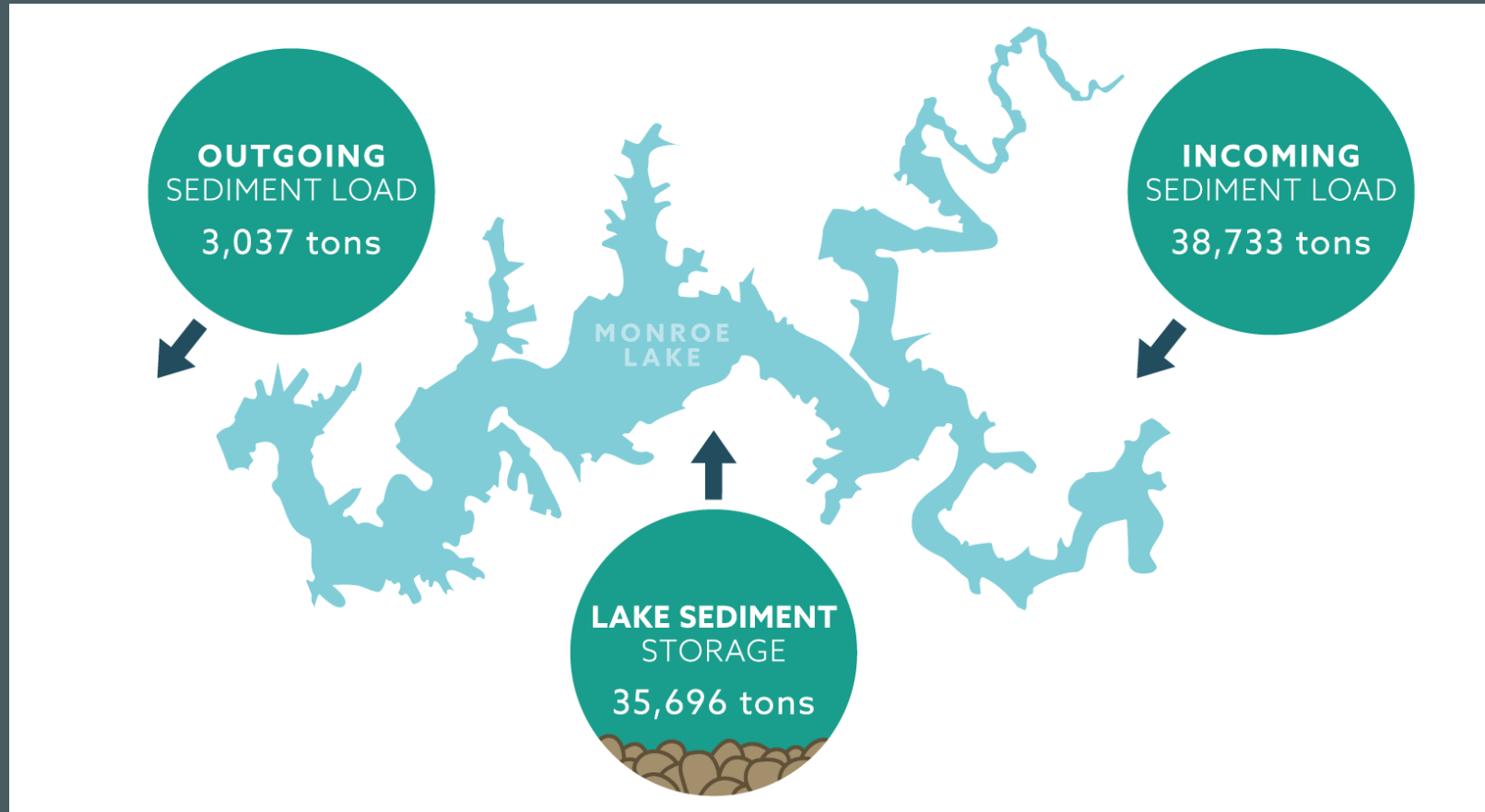
- Monroe County SWCD
- Brown County SWCD
- Jackson County SWCD
- Greater Bloomington Chamber of Commerce
- League of Women Voters



Conservation Practitioner Survey – The Nature Conservancy



Graphic Design Assistance – Visit Bloomington



Watershed Management Plan January 2022



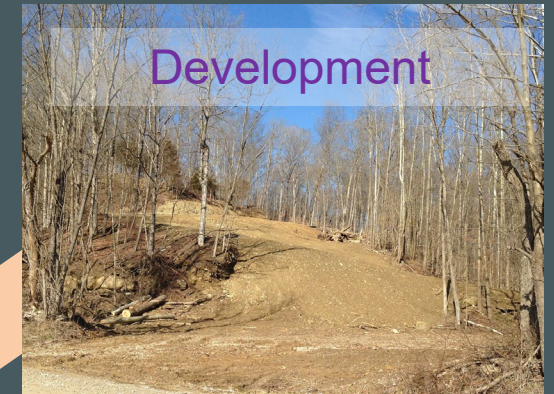
Top Water Quality Threats

- Sediment
- Nutrients
- E Coli

Goal: Good Water Quality



Sediment – Potential Sources



Nutrients – Potential Sources



Sediment



Business Fertilizer



Animal Manure



Human Manure



Crop Fertilizer



Lawn Fertilizer

Sources of E. Coli



Livestock Manure



Wildlife Manure



Human Manure
(Leaking Septic
Systems)

Action Plan

- Address pollution at the source
- Voluntary adoption
 - Incentives
 - Education
- Engage partners
 - Original partners + new ones





Lake Monroe Community Action Initiative (Feb – Nov 2022)

- Promote the Lake Monroe Watershed Management Plan
- Host a Watershed Summit
- Launch Pilot Septic System Maintenance Cost-Share Program in Monroe County
- Community Foundation of Bloomington and Monroe County
- Monroe County Stormwater Board



2022 Watershed Summit



- 27 organizations
- 41 participants
- Reviewed and prioritized activities in Lake Monroe Watershed Management Plan



Septic Maintenance Voucher Program



- Direct mailings to over 3,000 Monroe County residents
- 78 households assisted with septic tank pumping
 - 50% reimbursement of pumping cost up to \$100



319 Grant Conservation Cost-Share Program 2022 - 2025

LAKE MONROE WATERSHED CONSERVATION COST-SHARE PROGRAM

Covering portions of Monroe,
Brown, and Jackson Counties



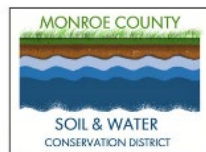
Eligible Practices Include:

- Cover Crops
- Filter Strips
- Conservation Tillage
- Heavy Use Area Protection
- Roof Runoff Structures

www.friendsoflakemonroe.org/cost-share

- \$90,000 Cost-Share Available
- Agricultural and Forestry Best Management Practices
- Field Days & Workshops

- SWCDs
- NRCS
- Indiana Department of Ag
- Purdue Extension
- DNR – Forestry
- IDEM





Restore and Preserve Floodplains



- DNR – State Parks
- SWCDs
- NRCS
- Indiana Department of Ag



Create Wetlands Along Main Tributaries as Sediment Traps



- DNR – State Parks
- US Army Corps of Engineers
- Southern Indiana Sentinel Landscapes



Engage and Activate Community



Future Projects

- Stabilize Sections of Lakeshore and Streambanks
- Promote Green Boating
- Develop Waste Management Plan
- Expand Water Quality Monitoring
- Address Logjams



Anticipated Benefits

- Increased awareness
- New grant money for the region
- Increased collaboration between organizations
- Improved water quality (long-term)





Long-Term Implementation

- Build and Maintain Partnerships
- Identify Projects
- Acquire Funding
- Engage Community Members
- Educate, Educate, Educate





Thank You

Questions? Comments? Concerns?

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