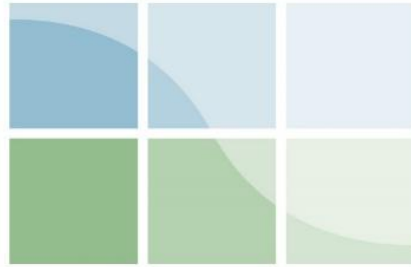




*[TippingPointPlanner.org](http://TippingPointPlanner.org)*

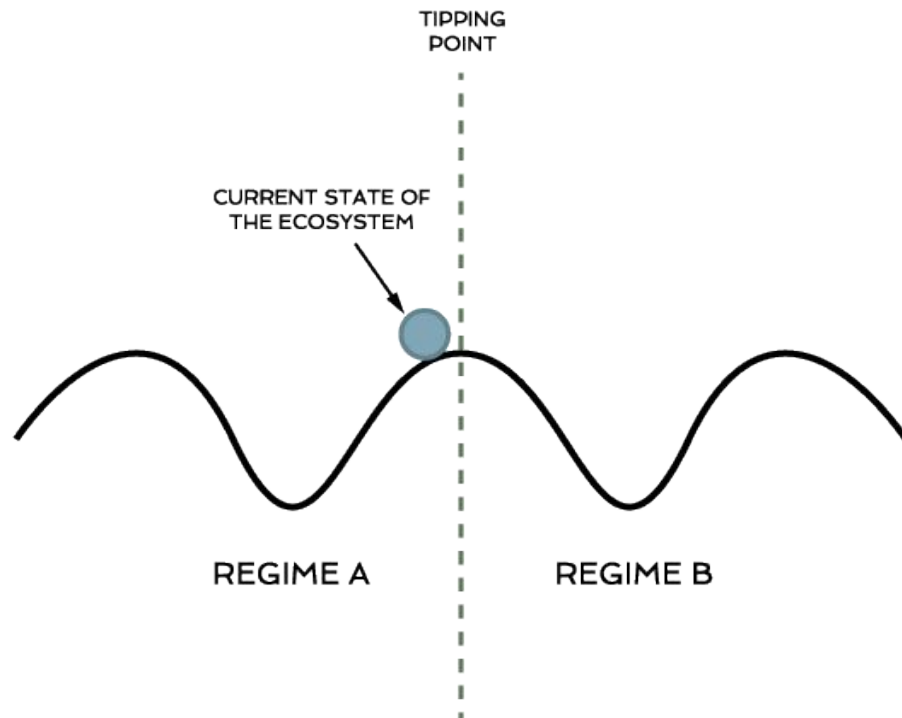
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# TIPPING POINT PLANNER

Supporting Sustainable Communities in Great Lakes States

## What is a tipping point?



## Challenges

Land Use Change










Impervious Surfaces

Nutrient Loading

Stream Health

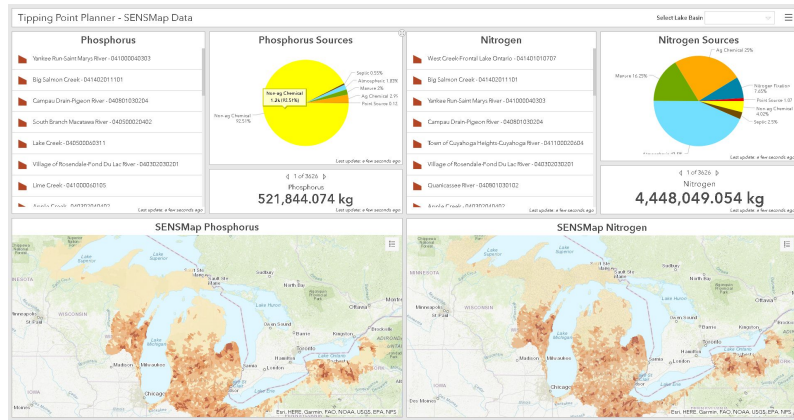
Food Web Health

# Decision Support System Topics

<h3>Stream Health</h3> <p>Determine how close your watershed is to an ecological tipping point now and in the future by examining indicators such as urban land use or agricultural land use within a 150m buffer.</p>  	<h3>Nutrient Loading</h3> <p>Explore present and future modeled loading of phosphorus and nitrogen, and identify the major sources of nutrients in your watershed.</p>  	<h3>Green Infrastructure</h3> <p>Discover the type and location for optimal green infrastructure investment in your watershed.</p> 
<h3>Food Webs</h3> <p>Explore how phosphorus loading from the watershed will affect the biomass of various organisms within the food web.</p>  	<h3>Land Use Change</h3> <p>Through land use modeling, discover what your community may look like under future land use scenarios and how each impacts the health of your watershed.</p> 	<h3>Coastal Wetland Health</h3> <p>Determine how close your watershed is to an ecological tipping point by examining the health of the organisms living in coastal wetlands.</p> 

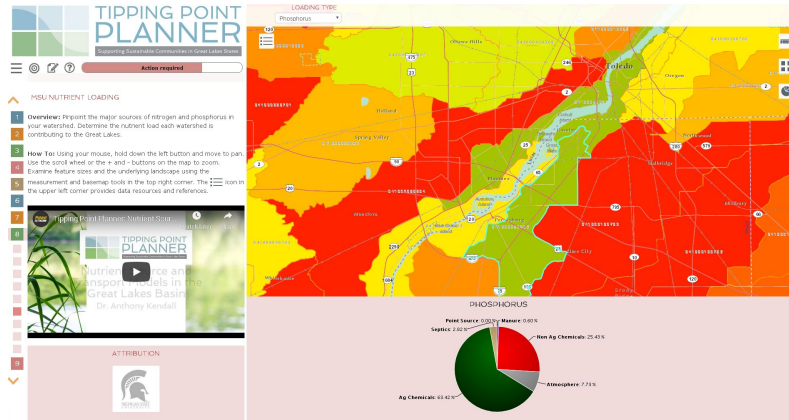
# Planning Scales

Regional



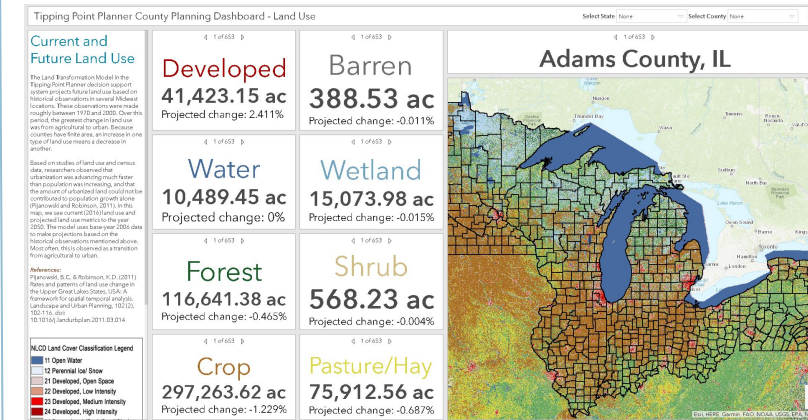
Regional Planning Dashboards

Watershed



Decision Support System Modules

County



County Planning Dashboards

[tippingpointplanner.org/resources/regional-planning](http://tippingpointplanner.org/resources/regional-planning)

# Decision Support System

The screenshot displays the Tipping Point Planner interface. At the top, there's a navigation bar with a 'Complete' status. Below it, the 'OPEN SPACES MAP' section shows a landscape image. The main section is titled 'LAND USE, RUNOFF, AND WATER QUALITY'. It includes an 'Overview' section explaining that future land use changes affect stormwater runoff and water quality. A 'How To' section provides instructions on using the paintbrush tool to expand land use cover. A vertical sidebar on the left contains numbered steps 1 through 5. The central map shows a colorful land use map of an area including 'Lake Macatawa' and 'Holland'. A legend below the map identifies various land use types: Urban (red), Forest (green), Water (blue), Residential Rain Barrel (light blue), Commercial (purple), Agriculture (yellow), Swamp (teal), Green Roof (light green), Residential (pink), Open Field (tan), Marsh (light blue), and Pervious Surface (grey). Below the map, there are six circular gauges showing water quality indicators: Nitrogen (mg/L) at 1.3, Phosphorus (mg/L) at 0.4, Suspended Solids (mg/L) at 26.6, Lead (ug/L) at 4.7, Copper (ug/L) at 7.6, and Zinc (ug/L) at 39.9. At the bottom left, there's a 'LAND USE PLANNING TOOLS DOCUMENT REVIEW' section with a PDF viewer and a 'Review' button.

 Community Information Overview

 Tipping Points and Indicators

 Community Planning Tools

# Community Engagement

Enable diverse stakeholder participation in land use decisions and natural resources management strategies to plan and maintain projects.

## Target audience examples

- Plan commissioners
- Government office staff
- Parks board members
- Watershed managers
- Consulting groups
- Nonprofit organizations
- Elected officials



## Project examples

- Watershed management plans
- Comprehensive plan updates

# Action Planning Process



Format follows community development and facilitation best practices for strategic planning and community engagement

Meeting sessions include the assembly of a steering committee, community visioning workshops, and working group meetings

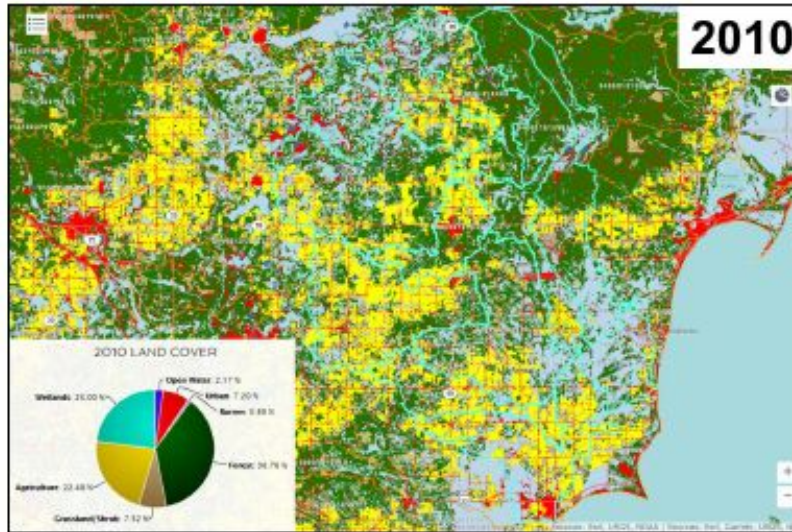
# Action Plans

## Technical Maps and Data Session



Current Land Use

The following map displays the land use and land cover during 2010 using the National Land Cover Dataset (NLCD) published in that year. These watersheds are comprised of mainly rural and forested cover types; these cover types make up 60 percent of the land use in this area. As of 2010, just 7.2 percent of the watershed was classified as urban, and 22 percent is comprised of agricultural land uses.



### Goal 1: Reduce and/or Mitigate Impervious Surfaces

Strategy	Action Item	Schedule			Responsible Party	Notes	
		2018-2019	2020-2023	2024-2029			
Comprehensive Plan	Collaborate on municipal planning efforts (stormwater assessment)	✓			City of Au Gres, Huron Pines		
	Expand or highlight best practices and education efforts				City of Au Gres, Huron Pines, Others		
Watershed Plan	Rain garden project on Au Gres-Sims campus	✓			Au Gres-Sims Schools, NGOs	- 319 may not be best fit for two HUC 10 watersheds (not high priority for funding)	
	Watershed inventory <ul style="list-style-type: none"> <li>- Road-stream crossing index</li> <li>- Desktop inventory of agriculture (sent mailing in 2014)</li> <li>- Build relationships with Ag community (create outreach strategy)</li> </ul>	✓	✓		Huron Pines, Au Gres-Sims, SWCDs, Others	- DEQ can review the plan to make sure to meet nine element criteria - EPA focuses on impaired water bodies; Au Gres and E. Branch Au Gres River are focused on protection	
	Clean Marina practices	✓	✓		MI Sea Grant, City of Au Gres, Michigan DNR	- Receiving investment from number of sources to prioritize projects	
	Identify key areas for protection (forest, wetlands, open space, erosion areas, recreation, etc.)	✓					- Focus on implementation project – high quality watershed
	Funding next steps: <ul style="list-style-type: none"> <li>- 319 implementation plans (is plan development best approach due to time &amp; resources?)</li> <li>- Better to work on actionable projects in logical order?</li> </ul> Other funding: GLRI, GLPF, Saginaw WIN, Great Lakes Commission, CZM program	✓	✓				



Coming August 31, 2020

# TIPPING POINT PLANNER

SUPPORTING SUSTAINABLE  
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Extension

*FREE ONLINE COURSE*





*[TippingPointPlanner.org](http://TippingPointPlanner.org)*

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