

# The Flint River Watershed

## GEOGRAPHY

Water from rain and snow falling on an area of land flows downhill across (and under) the ground into lakes and streams. This area that sheds water into waterways is called a “watershed”.

The land that drains into the Flint River is called the “Flint River Watershed”, which covers over 1,359 square miles in parts of Genesee, Lapeer, Oakland, Saginaw, Shiawassee and Tuscola Counties in Michigan (see the maps posted below).

## ENVIRONMENTAL QUALITY

Water pollution is the presence of a substance or heat energy in a lake or stream in an amount that diminishes or impairs its value and potential for use as a natural resource for benefiting and supporting humans, plants, and wildlife. It flows into them from the surrounding watershed. Humans cause water pollution by engaging in harmful land use and waste and wastewater disposal practices. To protect streams and lakes, people need to be careful about what they do in the watershed to prevent pollution.

Water quality throughout the Flint River Watershed is generally good enough for boating and game fishing and even good enough for swimming upstream of the City of Flint, especially in upland areas in Lapeer and Oakland Counties. And lakes and streams in the watershed generally are thriving warm-water fisheries. This is because water quality in them is regulated under Federal and State law to protect them as publically-owned natural resources for plant and animal habitat and human recreation, navigation and water supply. As a result, historical water pollution problems in the last century caused by improper wastewater disposal practices (now illegal) have been effectively reduced by the US Environmental Protection Agency National Pollutant Discharge Elimination System. And decades of effective wastewater treatment, under the program, have helped restore environmental conditions in receiving waters. However, mainly due to past problems, the Michigan Department of Community Health has issued fish consumption advisories for the Flint River Watershed.

Stormwater (rain and snowmelt) runoff from both developed and agricultural areas is a remaining source of sediment, plant nutrient and pesticide pollution. And urban stormwater is known to be laden with various pollutants such as sediment (dirt), plant nutrients, organic matter, litter, feces and pathogens, road salt, oil and grease, and toxic metals and pesticides.

## WATERSHED MANAGEMENT

The Flint River Watershed is primarily managed by various governmental agencies, under Federal, State and local laws, as follows:

	Agency	Role
Federal	Environmental Protection Agency <a href="https://www3.epa.gov/">https://www3.epa.gov/</a>	Regulates lakes and streams, public drinking water, wastewater and waste disposal, environmental cleanups, etc.
	Department of Agriculture <a href="http://www.usda.gov/wps/portal/usda/usdahome">http://www.usda.gov/wps/portal/usda/usdahome</a>	Assists farmers with conservation planning for developing rural green infrastructure
	Fish and Wildlife Service <a href="http://www.fws.gov/">http://www.fws.gov/</a>	Owns and manages green infrastructure
State	Department of Environmental Quality <a href="http://www.michigan.gov/deq">http://www.michigan.gov/deq</a>	Regulates lakes and streams, public drinking water, wastewater and waste disposal, environmental cleanups, etc.
	Department of Natural Resources <a href="http://www.michigan.gov/dnr">http://www.michigan.gov/dnr</a>	Regulates and manages hunting and fishing; owns and manages green infrastructure
	Soil and Water Conservation Districts <a href="http://macd.org/">http://macd.org/</a>	Assist farmers with conservation planning for developing rural green infrastructure
County	Drain Commissions	Regulate and control wastewater and waste disposal, regulate soil erosion and sedimentation, regulate and control surface water drainage and associated green infrastructure
	Health Departments	Regulate on-site wastewater disposal
	Park Departments	Own and manage green infrastructure
Local	Cities, Villages and Townships	Regulate and control wastewater and waste disposal, regulate land use, own and manage green infrastructure, etc.

## WATERSHED ASSESSMENT TOOLS

US Environmental Protection Agency on-line watershed mapping and assessment tools are at:

- Surf Your Watershed website  
[https://cfpub.epa.gov/surf/huc.cfm?huc\\_code=04080204](https://cfpub.epa.gov/surf/huc.cfm?huc_code=04080204)
- EnviroMapper website  
<https://www.epa.gov/emefdata/em4ef.home>
- Watershed Quality Assessment Report website  
[http://iaspub.epa.gov/tmdl\\_waters10/attains\\_watershed.control?p\\_huc=04080204&p\\_cycle=&p\\_report\\_type=T](http://iaspub.epa.gov/tmdl_waters10/attains_watershed.control?p_huc=04080204&p_cycle=&p_report_type=T)

US Department of Agriculture on-line soils mapping and assessment tools are at:

- <http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>

## MORE INFORMATION

More information pertaining to the Flint River Watershed is available online at:

- US Environmental Protection Agency Watershed Academy:  
<https://www.epa.gov/watershedacademy>
- US Environmental Protection Agency National Pollutant Discharge Elimination System  
<https://www.epa.gov/npdes>
- US Environmental Protection Agency Green Infrastructure approach  
<https://www.epa.gov/green-infrastructure>
- US Department of Agriculture Environmental Quality Incentives Program  
<http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/eqip/>
- US Department of Agriculture conservation planning approach  
<http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/technical/cp/>
- US Fish and Wildlife Service Shiawassee National Wildlife Refuge  
[http://www.fws.gov/refuge/Shiawassee/what\\_we\\_do/conservation.html](http://www.fws.gov/refuge/Shiawassee/what_we_do/conservation.html)
- Michigan Department of Environmental Quality Surface Water Information Management System  
[http://www.michigan.gov/deq/0,4561,7-135-3313\\_3681\\_3686\\_43375---,00.html](http://www.michigan.gov/deq/0,4561,7-135-3313_3681_3686_43375---,00.html)
- Michigan Department of Environmental Quality watershed management planning guide  
[http://www.michigan.gov/documents/deq/ess-nps-watershed-planning\\_210637\\_7.pdf](http://www.michigan.gov/documents/deq/ess-nps-watershed-planning_210637_7.pdf)
- Michigan Department of Natural Resources Flint River Assessment report  
<http://www.michigandnr.com/PUBLICATIONS/PDFS/ifr/ifrilibra/special/reports/sr27/SR27text&tables.pdf>
- Michigan Department of Community Health fish eating advisory  
[http://www.michigan.gov/documents/mdch/MDCH\\_EAT\\_SAFE\\_FISH\\_GUIDE\\_-\\_SOUTHEAST\\_MI\\_WEB\\_455358\\_7.pdf](http://www.michigan.gov/documents/mdch/MDCH_EAT_SAFE_FISH_GUIDE_-_SOUTHEAST_MI_WEB_455358_7.pdf)
- Michigan Agriculture Environmental Assurance Program  
<http://www.maeap.org/>
- Michigan Water Stewardship Program  
<http://www.miwaterstewardship.org/>
- Michigan State University Institute of Water Research  
<http://www.iwr.msu.edu/>
- Michigan State University Land Policy Institute Shiawassee/Flint River project  
[http://landpolicy.msu.edu/program/pzc\\_great\\_lakes\\_restoration\\_initiative\\_saginaw\\_bay\\_watershed\\_project/pzc\\_glri\\_current\\_project\\_2012\\_2014](http://landpolicy.msu.edu/program/pzc_great_lakes_restoration_initiative_saginaw_bay_watershed_project/pzc_glri_current_project_2012_2014)
- Saginaw Valley State University Saginaw Bay Environmental Science Institute  
<http://www.svsu.edu/sbesi/>
- Genesee County Community Water Quality Consortium Our Water Program  
<http://www.cleargeneseeewater.org/>
- Flint River Watershed Coalition stream stewardship programs  
<http://flinriver.org/blog/>
- Flint River Corridor Alliance Chevy Commons project  
<http://www.frcalliance.org/chevy-commons/>
- Tip of the Mitt Watershed Council A Citizen's Guide to Water Quality Permitting book  
[http://www.watershedcouncil.org/uploads/7/2/5/1/7251350/npdes\\_ebook.pdf](http://www.watershedcouncil.org/uploads/7/2/5/1/7251350/npdes_ebook.pdf)
- Water Environment Federation wastewater treatment technology public education program  
<http://www.wef.org/PublicInformation/page.aspx?id=90>