



Michigan's
Nonpoint Source
Program

**Federal Clean Water Act
Section 319 Grant**



Clinton River Watershed Council

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Measuring Educational Successes for Protection of the Stony/Paint

Oct. 1 2013-Sep. 30, 2015

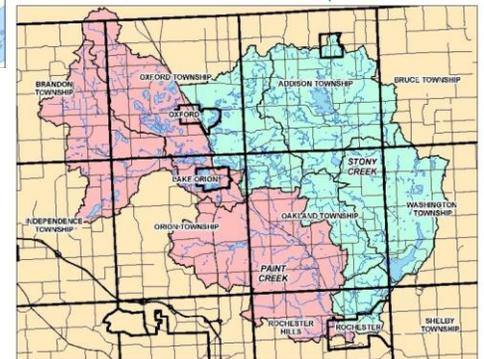
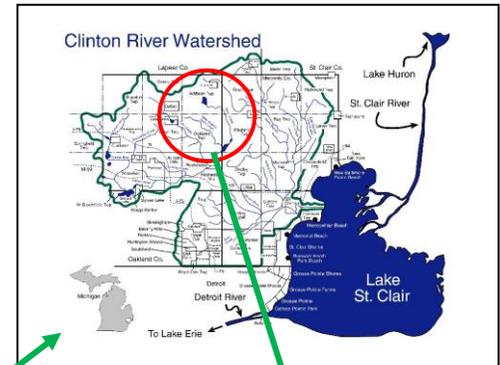
This unique project utilized the Social Indicator Planning and Evaluation System (SIPES) protocols to measure willingness of citizens within the Stony and Paint Subwatersheds to use healthy lawn practices, and other BMP's to help protect water quality. The top land uses in the Stony/Paint Creek subwatershed are low and medium-density residential development, vacant land, and recreation and conservation lands. The valuable information gathered by the survey was used to create an educational campaign to result in long term protection in the target area. The overall grant was a great learning experience and this program will serve to help shape future programs and education efforts. In the future we would expand the education outreach to include:

- More social media
- Distribute printed materials via community programs and venues such as senior centers and libraries.
- Consider newspaper and bulk mailings to residents
- Use billboards or other large scale media

Grant Amount:	\$18,400.00
Match Funds:	\$9,923.00
Total Amount:	\$28,323.00

I&E Activities:

- Pre-survey to measure awareness and attitudes.
- Healthy Lawn fertilizer sticker program.
- Presentations on native plants, recreation and lawn care.
- Post-survey to measure awareness and attitudes



Map of Stony and Paint Subwatersheds



Sticker used on fertilizer bags

A Citizen's Guide to Stormwater

The Clinton River and its tributaries stretch across more than 760 square miles of land in southeast Michigan, including portions of Oakland, Macomb, Lapeer, and St. Clair counties. The river carries rain and snowmelt runoff, or stormwater, into Lake St. Clair. The quantity of stormwater entering our rivers, lakes, and streams can degrade aquatic habitats. Simple steps to reduce stormwater are the cheapest way to stop pollution.

What is stormwater and where does it come from?
Actually, it comes from all of us. Everyday actions add to stormwater runoff: down roads, roadways, sidewalks, and lawns, pet waste, fertilizer, grass clippings, and more. Stormwater flows down streets, sidewalks and streets. It then flows into storm drains. In most areas with curbs, stormwater flows into storm sewers that carry it to the river without being treated. Stormwater is different than wastewater from toilets and sinks, which goes to a treatment plant before being discharged into the river.

What else is pollution and Lake St. Clair?
Bacteria is also a serious problem. People hear about most, because disease-causing bacteria, E. coli, and salmonella, and is found in sewage treatment plants. Cracks and leaks also allow stormwater to get into sanitary sewers during major storms, overwhelming our treatment plants and causing sewage overflow. Fixing these problems is expensive and time-consuming, but our communities are working hard to correct them.

*This project has been funded wholly or in part through Michigan Department of Environmental Quality's Regional Stormwater Program by the Clinton River Watershed Council.

5 SIMPLE WAYS YOU CAN HELP THE CLINTON RIVER AND LAKE ST. CLAIR

Use a pooper scooper. Bacteria, parasites and viruses from pet waste can easily wash into ground.

A Citizen's Guide to Cold Weather Practices

Winter brings with it lots of fun activities, like sledding, ice skating and skiing. But winter also means mounds of snow to shovel and layers of ice to remove from our sidewalks. Applying deicers like salt, calcium magnesium acetate, and urea can help melt snow and ice. However, these chemicals can be harmful to the environment. Urea, in particular, is highly soluble and can be carried into water bodies. Calcium magnesium acetate is more environmentally sensitive and can be harmful to aquatic life. Urea can also contribute to pollution year-round.

Help prevent stormwater pollution:

- Try an alternative!** Calcium magnesium acetate has fewer adverse environmental impacts than urea. Although CMA is more expensive, it is more environmentally sensitive and can be harmful to aquatic life.
- Reduce your salt use.** By limiting the amount of salt you use, you can reduce the amount of salt that enters the environment.
- Use De-icing Products Carefully.** Before applying a deicer to your sidewalk, check for sun exposure, and how long it will be on the sidewalk. Apply more than you need.
- For Dry, Powdery Snow:** Spread salt in a thin layer.
- For Wet, Heavy Snow:** Apply salt in a thin layer.
- For Sleet & Freezing Rain:** Apply salt in a thin layer.
- For Significant Snowfall:** Wait until the snow has melted and then use a deicer. The most important step is applying salt. Use a shovel to remove snow from your sidewalk. Adding more salt to a sidewalk that is already covered in snow is over-application, meaning you can also reduce salt use every doorway that is not used.

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Sample Outreach materials

A Citizen's Guide to Lawn Fertilizer

Over-fertilizing is a problem contributing to stormwater pollution in the Clinton River. Without realizing it, many homeowners are applying fertilizers and pesticides when their lawns don't even need them! While applying an appropriate amount of fertilizer is usually okay, it's important to take care when adding chemicals to your lawn so that we can improve water quality!

How Often, How Much?
It is possible to have a beautiful lawn by fertilizing only two or three times a year. Apply twice a year, in late spring (late April or early May) and fall (September or October). Or apply three times a year, in late spring (Memorial Day), early fall (Labor Day) and late fall (Thanksgiving).

Points to Not Forget:
Correct watering, mowing and fertilizing habits can reduce many pest problems. But if you do decide to treat for insects, it is essential that you know your enemy before you apply pesticides. If possible, hand-pick the little bugs off the plants and identify the pest. The important part is to identify and treat only for the pests you have, at their most vulnerable stage.

For help identifying the bug that's been bugging you, check out the Michigan State University Pest Diagnostic website: www.pestid.msu.edu/
A general spraying of insecticide is ineffective, costly and may do more harm than good.

Don't Guess... Soil Test!
Don't assume your plants need fertilizer. Perform a soil test. You'll save money and reduce the chance of over-applying. Michigan State University Extension offers soil test kits and nutrient testing boxes, and recommends a soil test every two or three years. To find out more, check out: <http://www.maes.msu.edu/extension/> and Oakland County (<http://www.oakcountymichigan.org/extension/>) or <http://www.crcw.org/>

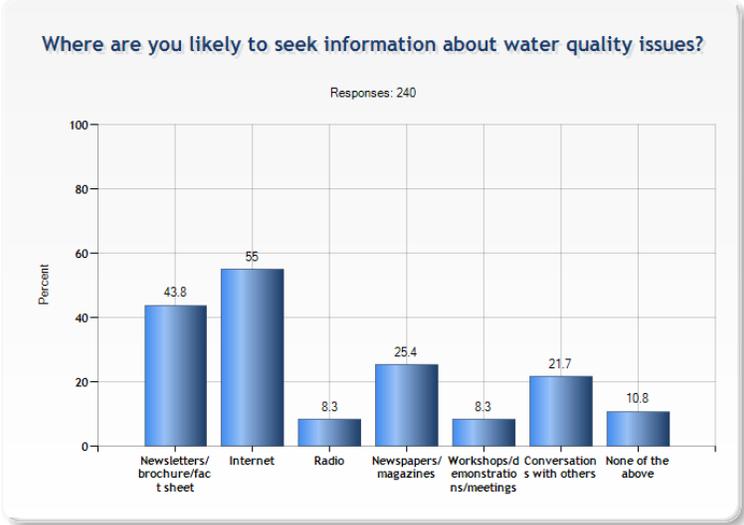
Choose the Correct Fertilizer
Use a slow-release nitrogen fertilizer that provides a slow, steady source of nutrients for plants as well as low or no phosphorus fertilizers to help improve water quality. This also prevents the big spurt of growth common with synthetic fertilizers. Avoid "weed-and-feed" products. These contain herbicides to control weed growth and are often applied where they aren't needed.

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Information Sources

People get information about water quality from a number of different sources. To what extent do you trust those listed below as a source of information about soil and water?

Question #	Not at all (1)	Slightly (2)	Moderately (3)	Very much (4)	Am not familiar (9)	Mean (SD)	Valid Responses / Total Responses
1. Local watershed project	4.1	9.5	19.8	45.5	21.1	3.35 (0.89)	191 / 242
2. Local government	10.2	20.8	40	23.3	5.7	2.81 (0.93)	231 / 245
3. U.S. Environmental Protection Agency	15.1	19.7	28.5	30.1	6.7	2.79 (1.07)	223 / 239
4. University Extension	7.8	8.6	16.9	44.4	22.2	3.26 (1.01)	189 / 243
5. State agricultural agency	10	13.8	27.5	32.1	16.7	2.98 (1.02)	200 / 240
6. State environmental agency	13.8	16.7	30	27.1	12.5	2.8 (1.05)	210 / 240
7. Environmental groups	18.9	22.3	29.8	18.5	10.5	2.54 (1.04)	213 / 238
8. Local garden center	9.5	23.7	36.9	24.5	5.4	2.81 (0.94)	228 / 241
9. Lawn care company	32.9	29.2	23.8	6.7	7.5	2.05 (0.95)	222 / 240
10. Local community leader	19.6	34.6	30	5.4	10.4	2.24 (0.86)	215 / 240
11. Neighbors / friends	7.6	25.2	48.7	14.3	4.2	2.73 (0.81)	228 / 238
12. State natural resources agency	8.4	13.4	31	34.7	12.6	3.05 (0.97)	209 / 239



Survey Results