

A single green leaf is shown floating on a surface of water, creating a series of concentric ripples that spread outwards from the point of contact. The background is a light blue gradient.

Flint River *GREEN*

2012 Annual Report

*Partnering to protect, preserve,
and improve the
Flint River Watershed.*

Go GREEN

A Letter from the Executive Director

Flint River Watershed Coalition

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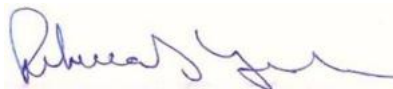
The Flint River Watershed Coalition is proud to have wrapped up our 23rd year of coordinating the Global Rivers Environmental Education Network in Genesee and Lapeer Counties. We've seen the program grow and develop every year, to the point where we are one of the largest GREEN programs in the nation.

This year included a new partnership with Kettering University, the host of the 2012 GREEN Student Summit. This exciting change brought our students to one of the premiere engineering colleges in the country. Many thanks to Kettering for your hospitality!

Flint River GREEN provides hands on learning for area students, helping to build the watershed stewards of the future. Student learning covers the scientific method, critical thinking, and public speaking. In the process, students interact with professionals from a wide array of environmental professions, all while getting directly involved in the health of their community. It's an invaluable experience that simply cannot be replicated in the classroom.

Our many partners, volunteers, and funders listed throughout this report are instrumental in the continued success of Flint River GREEN. We are very thankful for their continued participation and support.

See you in 2013,



Rebecca Fedewa
Executive Director



2012

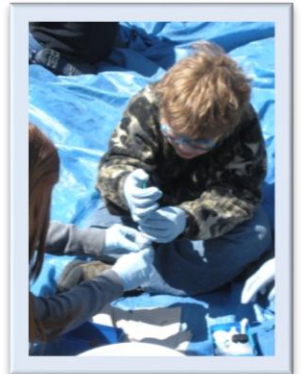
The GREEN Planning Committee works year round to ensure that the GREEN Program is an outstanding success.

The dedication of this committee to GREEN and to its students is exceptional. The committee promotes life-long learning and environmental awareness, so that the students will carry with them the message that they can be heard and make a difference in their environment.

On behalf of the GREEN Committee, thank you to our teachers, mentors, presenters, supporters, and students. GREEN would not be a success without you.



Darren Bagley
Irene Bashore
Larry Casler
James Emmerling
Rebecca Fedewa
Eric Hake
Alyssa Hawkins
Tammie Heazlit
Cheryl Hobson
Lisa Hook
Thomas Hutchings
Teresa Krawczyk
John Maksimchuk III
Ashley Miller-Helmholdt
John Moldovan
Dawn Mosher
Jan Sneddon
Bill Welch
Edythe Westhoff



2012

Our mentors are highly qualified individuals within their respective environmental science fields. GREEN is fortunate to have these dedicated mentors to assist our teachers and students in a variety of ways. They assist in the classroom setting and at their classrooms' selected testing site. Mentors ensure that the water quality tests are performed properly, that safety precautions are followed, and that the data is both accurate and collected within appropriate time parameters. They also help students with career exploration. Mentor assistance is an integral part of the GREEN program, and we thank them for their time and assistance.

Marv Ashbury, General Motors, CCA Swartz Creek

Darren Bagley, Michigan State University Extension, 4-H

Aaron Bagwell, Quaker Chemical

Irene Bashore, General Motors, Flint Assembly

Eric Brubaker, City of Flint- Water Pollution Control Division

Craig Buike, Quaker Chemical

Thad Domick, City of Flint- Water Pollution Control Division

Rebecca Fedewa, Flint River Watershed Coalition

Rob Fenn, General Motors, Flint Engine Operations

Heather Griffin, Naturalist, University of Michigan Flint

Tom Hutchings, City of Flint- Water Pollution Control Division

Tom Jones, Genesee County Drain Commission

Susan Kubic, Genesee County Drain Commission

John Maksimchuk III, General Motors, Flint Metal Center

Rick McAvinchey, Forestry Specialist

Renee Mietz, General Motors

Ashley Miller-Helmholdt, Earth Force

John Moldovan, General Motors Retiree

Al Putney, Delphi Flint

Pat Schultz, General Motors

Brent Wilson, General Motors, Flint Tool & Die



Participating Schools of GREEN

2012

Atherton High School

Teacher: Matt Hyslop

Beecher Middle School

Teacher: Don Hammond

Bendle High School

Teacher: Todd Barden

Birch Run-Marshall Greene Middle School

Teachers: Tammy Daenzer & Roger Rothe

Brandon Middle School

Teacher: Dave Green

Carman-Ainsworth High School

Teacher: Julie Lawrence

Chatfield School - Lapeer

Teachers: Annette Young, Lori Raymond & Karla Pretty

Clio-Carter Middle School

Teachers: Chip McCallum & Ryan Nemi

Flint Classical Academy

Teacher: Robert Ryan

Flint Northern High School

Teacher: Chris Ochodnicki

Flint Northwestern High School

Teachers: Nadina Aversa & Tina Natale

Flushing High School

Teacher: Paul Taylor

Genesee School

Teacher: Wendy Watson

Genesee High School

Teacher: Kendra Moore

Goodrich Middle School

Teachers: Cindy Rivet & Cheri Youngs

Grand Blanc Middle School – East

Teachers: Deb Lacki, Deb Wilson & Pat Nelson

Grand Blanc Middle School – West

Teachers: Elizabeth Lemerond & Vicki Skrisson

Kearsley-Armstrong Middle School

Teachers: April Yorks & Cindy Sierra

LakeVille Middle School

Teachers: Josh Henley & Andrea Thelen

Linden Middle School

Teacher: Charlene Nester

Montrose Kuehn-Haven Middle School

Teacher: Linda Jordan

Mt. Morris Junior High School

Teachers: Bekah D'Haene, Kim McCormick & Scott Smith

North Branch High School

Teacher: Carrie Wenta

North Branch Middle School

Teacher: Julie Tumblin

Rolland-Warner Middle School – Lapeer

Teachers: Anne Prill & Wyatt Stevens

St. John Vianney Catholic School

Teacher: Elizabeth Petrides

Swartz Creek Middle School

Teacher: Brandolyn Forbes

Westwood Heights – Hamady High School

Teacher: Tammy Wylie

2012

The culmination of the student's hard work is the annual Student Summit. The summit was held at Kettering University. The Summit is an opportunity for the students to present their water quality findings to their peers. The students prepare high quality and informative presentations that detail the results from their many tests.

Students also are invited to participate in a number of fun and educational "Break Out" sessions. These sessions included demonstrations, activities, and lectures focused on the many exciting things of their environment.

Break-Out sessions are led by community members who are passionate about what they do and are equally passionate about educating our GREEN students. They graciously donate their time to make GREEN an even more exciting event!



Students learn what may be lurking in their water with Darren Bagley.

Student Presentations Emcee, Tom Jones, Genesee County Drain Commission

Rats in your Drinking Water, Darren Bagley, Michigan State University Extension

Bees, Bee Keeping & Honey, Jim Dodder, Genesee County Bee Keeper

Become a Junior Naturalist, Nicole Ferguson, Genesee County Parks

Walking Tour of "Chevy in the Hole", Steve Montle, Center for Community Progress & Matthew Didier, Environmental Protection Agency-Region 5

Sewer CSI, Thad Domick, Dawn Welsh, Eric Brubaker, Tom Hutchings, City of Flint Water Pollution Control Specialists

Meeting Macro-Invertebrates, Flint River Watershed Monitors, Mike Haley, Teresa Krawczyk & Denny Crispell

Paddling the Flint River, Riley McLincha, Watershed Enthusiast

Edible Plants, Peter McCreedy, Ecology Director, Chatfield Schools

He Heard! Be an Environmental Citizen, Ashley Miller-Helmholdt, Earth Force

Bike Hike! A Cycling Demonstration, Jack Minore, Board Member-Flint River Watershed Coalition & Cycling Enthusiast

Tour Kettering, John Maksimchuk III, General Motors , Kettering Alumnus



GREEN Student Summit Sessions & Presenters

2012



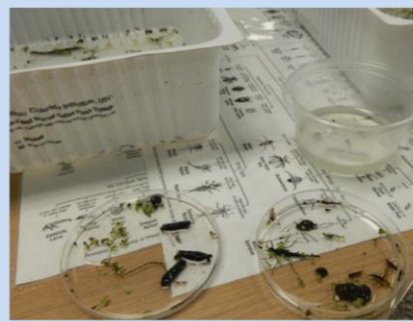
Student
presenters
from Kearsley.



Mr.
Dodder
gets
students a
buzz about
bees.



Students identify
macro-invertebrates!



A Beecher
student makes
a suet cake for
the birds.



Students
travel to their
next session.

GREEN Student Survey Results

2012

Before Project Green

Answer Options

The Flint River is clean and healthy.
I can make a difference in the health of the Flint River.
I understand how a river may become polluted.
I want to do things to help the environment.
I know about jobs in the environment field.

Strongly DISAGREE	DISAGREE	AGREE	Strongly AGREE
19%	49%	27%	5%
13%	19%	34%	35%
8%	23%	38%	30%
5%	24%	35%	36%
29%	35%	21%	15%

After Project Green

Answer Options

The Flint River is clean and healthy.
I can make a difference in the health of the Flint River.
I understand how a river may become polluted.
I want to do things to help the environment.
I know about jobs in the environment field.

Strongly DISAGREE	DISAGREE	AGREE	Strongly AGREE
8%	25%	49%	18%
3%	0%	34%	63%
1%	2%	24%	72%
1%	5%	31%	63%
0%	18%	56%	26%



“Anything else you’re interested in doing is not going to happen if you can’t breathe the air and drink the water. Don’t sit this one out. Do something.”

- Dr. Carl Sagan

The Water Quality Index, or **WQI**, is the grade received for the tested body of water. The scores of the various tests are tabulated and weighted, resulting the WQI. The scores are then measured against the Q-Value rubric to determine the overall health of the water.



Q-Value Rating

100-90:	Excellent Water Quality
89-70:	Good Water Quality
69-50:	Average Water Quality
49-25:	Marginal Water Quality
24-0:	Poor Water Quality

Field Tests

Dissolved Oxygen
Fecal Coliform
pH
B.O.D.
Temperature
Total Phosphate
Nitrates
Turbidity
Total Solids



A GREEN Note: A * may be assigned to a particular school in the area of WQI results. This means that complete values were not available. This may be the result of adverse weather conditions on the testing day, calculation errors, or testing errors. Trial and error is all part of the scientific process. Students were able to learn about what factors may have played a role in their results and correct these issues for the next testing time. GREEN is a valuable and continuous learning experience.

Water Quality Index

2012

GREEN School	Testing Location	WQI
Atherton High School	Thread Creek at Bristol Rd.	81.7
Beecher Middle School	Kalamazoo River at Talmadge Creek	71.92
Bendle High School	Thread Creek at Bristol Rd.	71.7
Birch Run Marshall-Greene Middle School	Silver Creek	59.86
Brandon Middle School	Unidentified Location	*
Carman-Ainsworth High School	For-Mar Nature Preserve	80.04
Chatfield School-Lapeer	Farmer's Creek	76.92
Clio Carter Middle School	Pine Run at Clio Park	84.98
Fenton Middle School	Fenton Mill Pond	9.35
Flint Classical Academy	Swartz Creek at Happy Hollow	59.57
Flint Northern High School	Flint River, Western Rd.	*
Flint Northwestern High School	University of Michigan-Flint Campus	*
Flushing High School	Armstrong Creek at Dodge Rd.	81.67
Genesee School	Mott Lake	*
Genesee High School	Mott Lake	*
Goodrich Middle School	Thread Creek, Burpee & Vassar Rd.	82.24
Grand Blanc East Middle School	Armstrong Creek at Dodge Road	92.8
Grand Blanc West Middle School	Frost Gardens	84.62
Kearsley Armstrong Middle School	Thread Creek, Grand Blanc	75.8
Lakeville Middle School	Swartz Creek, near school.	n/a
Linden Middle School	Linden Middle School Grounds	83.63
Montrose Kuehn-Haven Middle School	Hunters Creek at McCormick Dr.	*
Mt. Morris Junior High School	Farmer's Creek	*
North Branch High School	Unidentified Location	*
North Branch Middle School	Gravel Creek, North Branch	74.02
Rolland Warner Middle School, Lapeer	Undisclosed location	92.73
Swartz Creek Middle School	Swartz Creek, Hill Road Bridge	72.85
Westwood Heights-Hamady High School	Clio Bike Path	82.35
The Valley School	Swartz Creek at Van Slyke Rd.	74.8

“A river is the report card for its watershed.”

— (Alan Levere Connecticut Department of Environmental Protection)

GREEN partner, [Earth Force](#), has made some exciting announcements:

- Flint River GREEN lead Mentor, **John Maksimchuk III**, received the [Michigan Governor's Service Award Certificate of Recognition](#) for his outstanding work as lead mentor for Flint River GREEN!
- Kearsley Armstrong Middle School won **1st** place at the [Michigan Future Problem Solving State Bowl](#)! In working with their school's storm water permitting process, their project involved illicit discharge testing and storm drain stenciling. The students also brought their project to showcase at the Student Summit this past May!



- Flint River GREEN veteran and teacher at Kearsley Armstrong Middle School, **April Yorks**, received the [Chevrolet GREEN Educator Award](#)!



Flint River GREEN wishes to acknowledge and thank our financial and in-kind supporters. Your generosity makes it possible for GREEN to continue its mission to educate young people on their watershed, the environment, and the difference they can make. Your support will have a lasting impact for generations to come.

City of Flint, Water Pollution Control Department

Dort Federal Credit Union, Community Involvement Committee

Earth Force

Flint River Watershed Coalition

Flint River Steelheaders Foundation, Inc.

Genesee County Drain Commission

Genesee County Michigan State University Extension

Genesee County Parks and Recreation Commission

Genesee Intermediate School District

General Motors Foundation

Lapeer County Intermediate School District

Kettering University

University of Michigan-Flint

“All the water that will be, is.”

-Anonymous



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