



Genesee County Phase II Municipalities Annual Report

***November 1, 2014 – October 31, 2015
Reporting Period***

Submitted to:

***the State of Michigan Department of Environmental Quality,
Surface Water Quality Division***

by the Genesee County Drain Commissioner

on behalf of Genesee County and contracted Communities



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LIST OF ACRONYMS

E342C	Contract for services between Communities and Drain Office
Ad hoc	The Ad hoc Committees are formed to work on specific objectives until complete
BMP	Best Management Practice
CAER	University of Michigan – Flint, Center for Applied Environmental Research
CMI	Clean Michigan Initiative
CSO	Combined Sewer Overflow
EPA	Environmental Protection Agency
FRWC	Flint River Watershed Council
GCCD	Genesee County Conservation District
GCDC	Genesee County Drain Commissioner
GCHD	Genesee County Health Department
GCRC	Genesee County Road Commission
GISD	Genesee Intermediate School District
GREEN	Global Rivers Environmental Education Network
HHW	Household Hazardous Waste
IDEP	Illicit Discharge Elimination Plan
M&M	Monitoring and Mapping
MDEQ	Michigan Department of Environmental Quality
MDEQ	Michigan Department of Natural Resources and Environment
MS4	Municipal Separate Storm Sewer System
N/A	Not applicable
NPDES	National Pollutant Discharge Elimination System
O&M	Operations and Maintenance
PEP	Public Education Plan
PPP	Public Participation Plan
PSD	Point Source Discharge
QAPP	Quality Assurance Project Plan
SEMCOG	Southeast Michigan Council of Governments
SESC	Soil Erosion and Sedimentation Control
SSO	Sanitary Sewer Overflow
SWAC	Storm Water Advisory Committee
SWSC	Storm Water Structural Controls
SWM	Surface Water Management
SWPPI	Storm Water Pollution Prevention Initiative
TBD	To be determined
WMP	Watershed Management Plan
WWS	Water and Waste Services
WQI	Water Quality Index

1. NPDES PERMIT REQUIREMENTS AND ADMINISTRATION

This annual report was prepared by Genesee County's engineering consultant, Tetra Tech, for the Michigan Department of Environmental Quality (MDEQ).

PERMIT REQUIREMENTS

This annual report summarizes activities completed for the period from November 1, 2014, to October 31, 2015, by the Genesee County Drain Commissioner's Office and the contracted Phase II Municipalities to meet the requirements of their National Pollutant Discharge Elimination System (NPDES) permit, including:

- Watershed management
- Public education and participation
- New construction standards
- Monitoring and mapping
- Illicit Discharge Elimination Program (IDEP)
- Storm Water Pollution Prevention Initiative (SWPPI)

WATERSHED MANAGEMENT ADMINISTRATION

Storm Water System Service District

To implement the permit requirements and perform watershed management planning, Genesee County established a Storm Water Management System for the entire County under the authority of Michigan Public Act 342 of 1939. Genesee County had designated the Genesee County Drain Commissioner's Office to be their authorized agent. Many of the communities in the County have executed a contract to use the County 342 Storm Water Management System as the lead agency to provide Phase II permitting services, including watershed management planning.

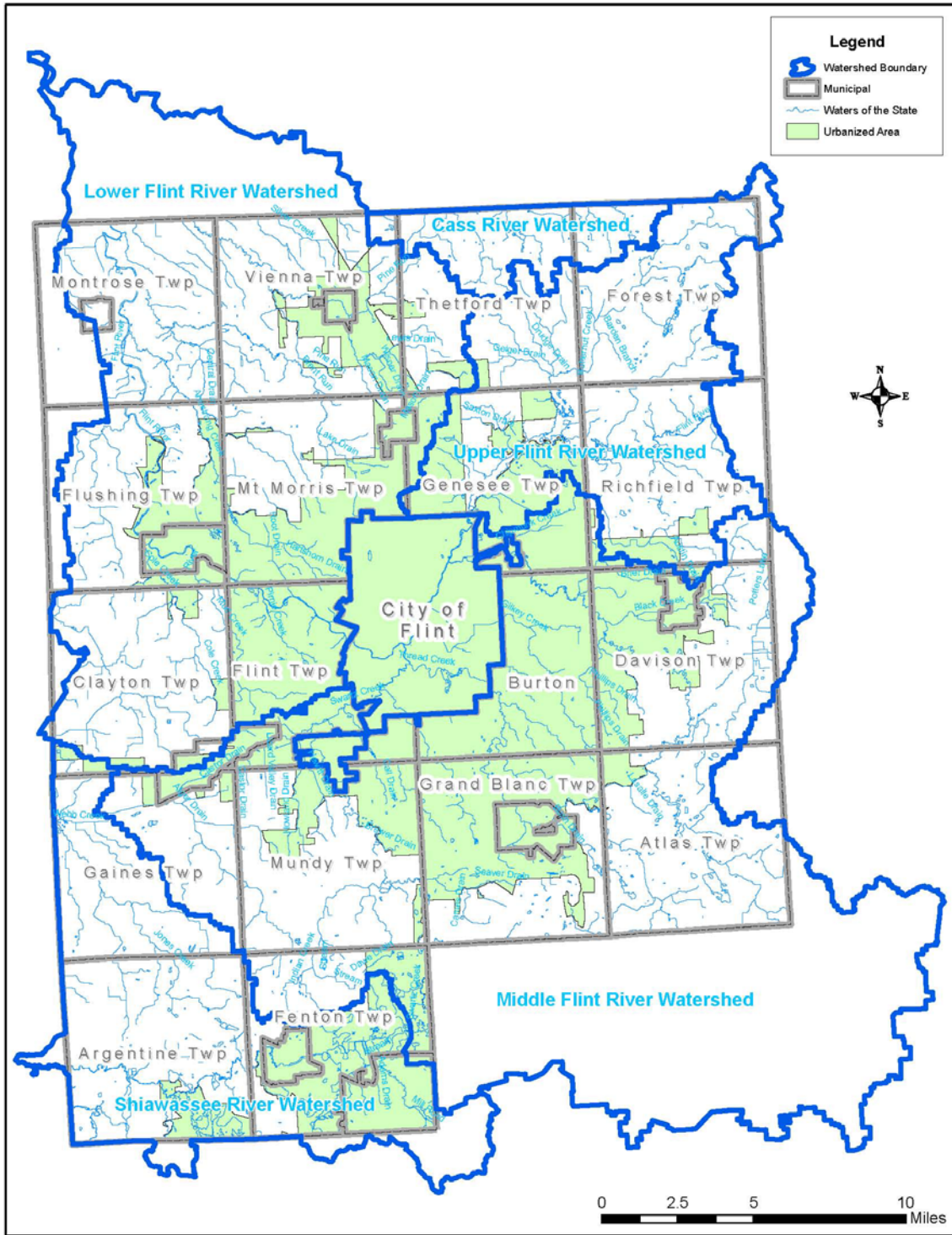
Watershed Delineation

Five major watersheds were delineated in the permit application, including:

- Lower Flint River Watershed
- Middle Flint River Watershed
- Upper Flint River Watershed
- Shiawassee River Watershed
- Cass River Watershed

Figure 1-1 shows the watershed boundaries. The Shiawassee River Watershed boundary was adjusted in 2005 to minimize overlap with Livingston County's efforts. Also, after discussions with MDEQ, the Upper Flint and Lower Flint watershed lines were changed. The five major watersheds listed above were divided into 20 sub-watershed planning areas.

Figure 1-1: Genesee County Watershed Boundaries



Contract Communities

In 2015 The Adhock Committee met, recommending the 3rd amendment to the contract. The Storm Water Advisory Group Passed a motion and those on Table 1-1 have signed a new 2015-2020 342 contract.

Note:

- Of the Phase II communities, Grand Blanc Township is the only Phase II community that does not participate through this contract.
- In the 2013-2014 reporting cycle Mundy Township and Flushing Township were able to opt out of the NPDES Ph II permit, and have chosen to not to sign a new contract.
- The contract for Public Education services between City of Flint and Genesee County ended on September 1, 2014. City of Flint chose not to extend the contract. A letter by GCDC-SWM to the MDEQ was sent 3/26/15 notifying the State that Public Education efforts covered in this report are not being done on behalf of the City of Flint Effective Oct 1, 2014.
- Although Argentine Township is not a Phase II community, they chose to sign the contract for services.

Table 1-1: Contract Communities

Argentine Township	Fenton Township	City of Mount Morris
City of Burton	Flint Township	Mount Morris Township
City of Clio	City of Flushing	City of Swartz Creek
City of Davison	Genesee Township	Vienna Township
Davison Township	City of Grand Blanc	Genesee County
City of Fenton	City of Linden	

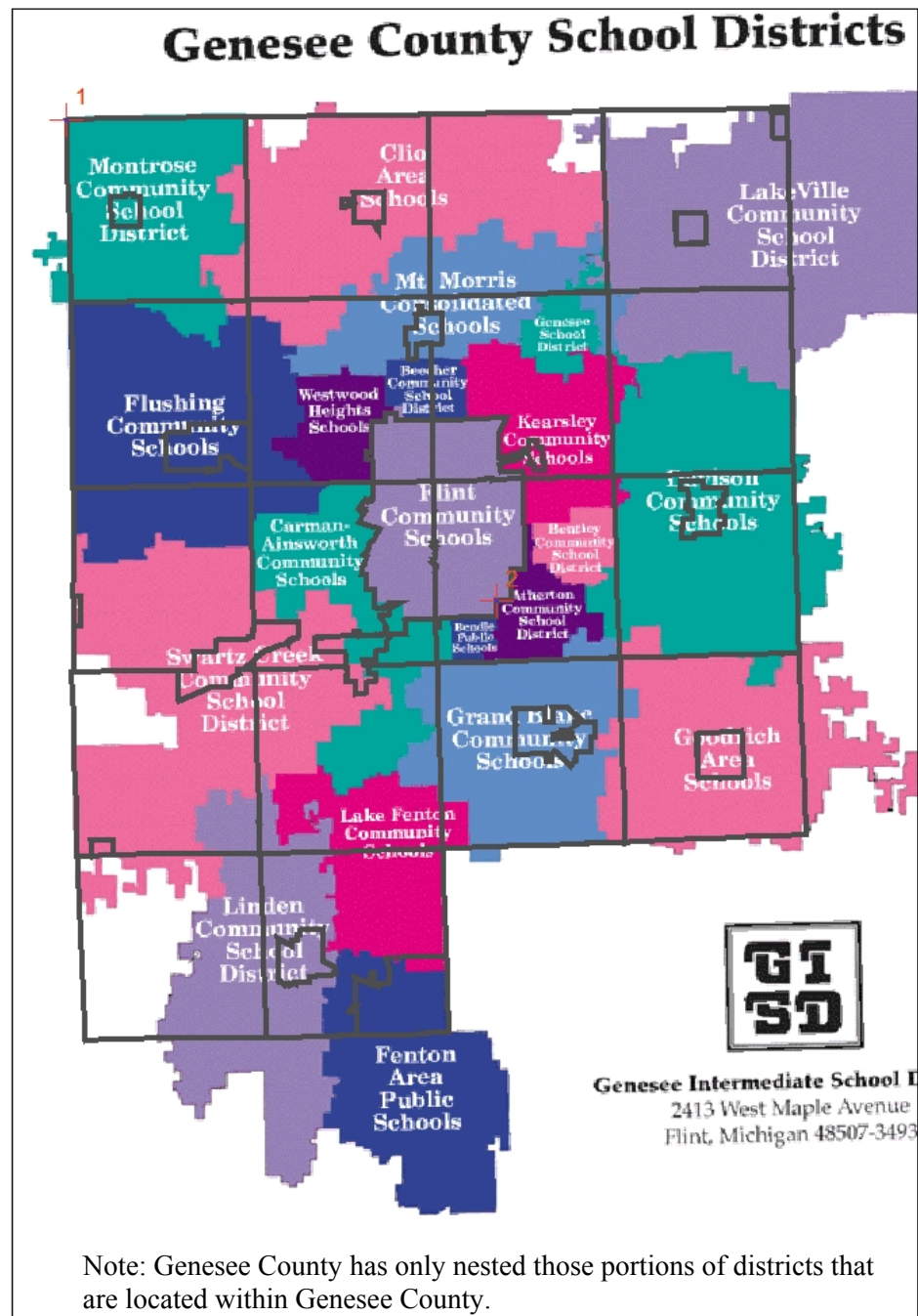
Nested Drainage System Agreements

The county has a nesting agreement with Bishop Airport. & the Schools below. The contracts between the Airport and County of Genesee and Schools and County of Genesee for nesting has been extended by agreement. During the next reporting cycle, amendment 2 of the contract with the airport and schools will be worked on. Below are schools that are currently being nested by Genesee County.

Table 1-2: Nested School Districts

School District	Within an urbanized area
Atherton	Y
Beecher	Y
Bendle	Y
Bentley	Y
Carman-Ainsworth	Y
Clio	Y
Davison	Y
Fenton	Y
City of Flint	Y
Flushing	Y
Genesee Intermediate School District (GISD)	Y
Genesee	Y
Grand Blanc	Y
Kearsley	Y
Lake Fenton	Y
Linden	Y
Mt. Morris	Y
Swartz Creek	Y
Westwood Heights	Y

The nested school districts have requested that the Genesee Intermediate School District (GISD) be their representative in this program. The GISD has been attending meetings and disseminating information to the individual school districts. They have facilitated meetings between the County and transportation and operations staff members, as well as superintendents, to discuss requirements, including staff training, to meet the requirements of the permit. The GISD participates in the county-wide education effort, including the development of grade-level appropriate watershed education curriculum. See chapter 2 for more details of GISD's involvement.



Genesee County Storm Water Advisory Committee

The Genesee County Storm Water Advisory Committee (SWAC) includes Genesee County and Communities with a signed 342 contract. Most, but not all, are Phase II communities with a Certificate of Coverage. In addition, many of the Genesee County communities without a signed 342 contract continue to participate in SWAC activities.

SWAC is guiding implementation of the entire Phase II Program and has three main sub-committees:

- Public Education (PE) and Participation Sub-Committee
- New Construction Standards and Practices (CSP) Sub-Committee
- Monitoring and Mapping (M&M) Sub-Committee

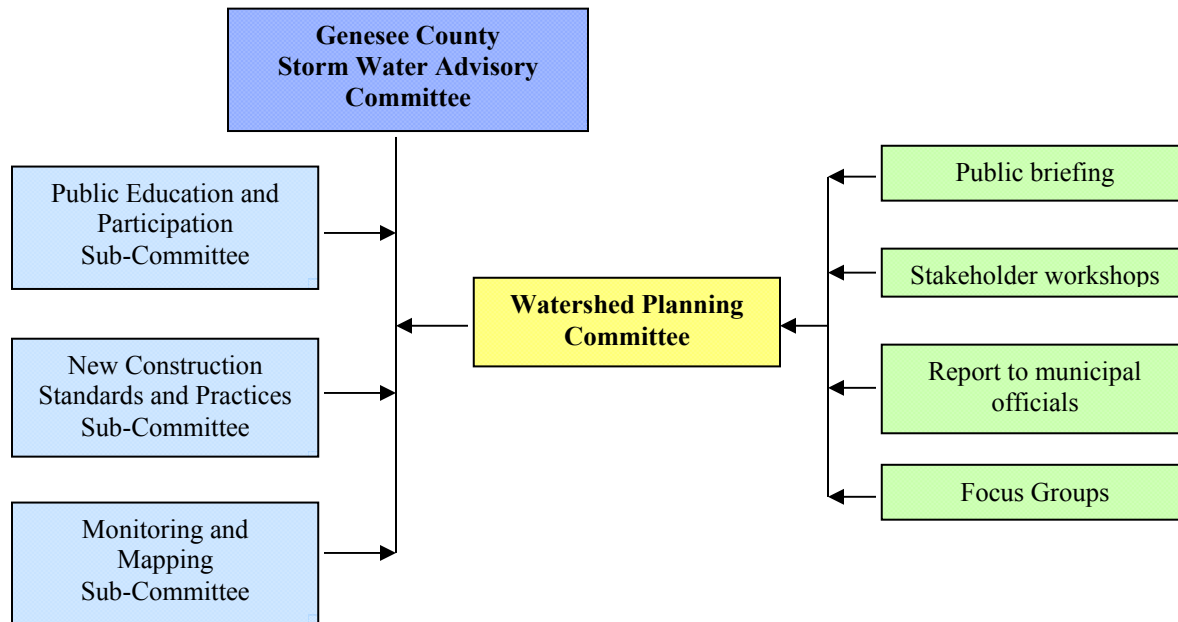
These sub-committees meet as needed along with stakeholders and/or individuals with specific specialized knowledge to implement the watershed plan, education plan and Illicit Discharge Elimination Plan (IDEP). A brief description of sub-committee duties is presented below Figure 1-2. With the new contract, in the next reporting cycle, each subcommittee will be a committee of the whole. This will streamline taking issues to be voted on from the subcommittee to the Storm Water Advisory Committee.

Figure 1-2 also shows the watershed planning decision-making process and sub-committee relationships. Previously under this permit Genesee County and Communities had a watershed permit. The 2015-2020 permits are all jurisdictional. Reporting will continue to be on a watershed base, but identification of communities represented will be given whenever possible.

SWAC meetings during this reporting period were held on:

- October 15, 2014
- November 19, 2014
- December 17, 2014
- January 21, 2015
- February 18, 2015
- March 18, 2015
- April 15, 2015
- May 20, 2015
- September 16, 2015

Figure 1-2: Watershed Planning Decision Making Flowchart



Public Education (PE) and Participation Sub-Committee

The PE Sub-Committee guides the overall public education and participation process for the watershed management planning effort. PE activities are summarized in Section 2.

New Construction Standards and Practices (CSP) Sub-Committee

The CSP Sub-Committee oversees new construction standards and post-construction practices for Genesee County. This sub-committee is also updating ordinances to ensure compliance with Environmental Protection Agency (EPA) requirements. CSP activities are summarized in Section 3

Monitoring and Mapping (M&M) Sub-Committee

The M&M Sub-Committee oversees organization and implementation of watershed monitoring, field-sampling protocols, and mapping guidelines. In addition to several monitoring programs, they oversee the Illicit Discharge Elimination Plan (IDEP) Program. Local government leaders share their insights and views of the watershed throughout the project at workshops and meetings, as well as at other formal and informal exchanges. M&M activities are summarized in Section 4.

2. PUBLIC EDUCATION AND PARTICIPATION SUB-COMMITTEE ACTIVITIES

The Public Education (PE) and Participation Sub-Committee held one meeting during this reporting period:

PE Membership included:

- **City of Burton – Paula Zelenko**
 - **City of Clio – William Kovl**
 - **City of Davison – Michael Hart**
 - **City of Flint – Daugherty Johnson**
 - Clayton Township – Supervisor
 - **Flint Township – Karyn Miller**
 - Forest Township – Supervisor
 - Mundy Township – Supervisor
 - Thetford Township – Supervisor
 - **Vienna Township – Randy Taylor**
 - Village of Otisville – Supervisor
 - **Genesee Intermediate School District – Keely Mounger**
 - **GCDC-SWM – Susanne Kubic**
 - **GCRC – Fred Pavandi**
 - Flint River Watershed Coalition – Rebecca Fedewa
 - Genesee Conservation District – Angela Warren
- Bolded** members are Phase II communities

The purpose of the PE committee is to implement the Public Education Plan (PEP). This can be found in the Attachment 4 of new Permit Application. The PEP plan was revised to align with the new 2015 permit Application “Public Education Topics”. The actual implementation did not change. The Public Education work is being done on behalf of the following Communities:

- | | |
|------------------------|-----------|
| • *Argentine Twp | No Permit |
| • Davison Township | MIG610089 |
| • Fenton Township | MIG610064 |
| • Flint Township | MIG610066 |
| • Genesee Township | MIG610073 |
| • Mt. Morris Township | MIG610082 |
| • Vienna Township | MIG610088 |
| • City of Burton | MIG610060 |
| • City of Clio | MIG610061 |
| • City of Davison | MIG610063 |
| • City of Fenton | MIG610065 |
| • City of Flushing | MIG610067 |
| • City of Grand Blanc | MIG610075 |
| • City of Linden | MIG610078 |
| • City of Mt. Morris | MIG610081 |
| • City of Swartz Creek | MIG610086 |
| • Genesee County | MIG610072 |

PUBLIC EDUCATION PLAN

Permit Requirements

The planning and implementation of public education is based on EPA-required elements, including:

1. Encourage public reporting of the presence of illicit discharges or improper disposal of materials into applicant's separate storm water drainage system.
2. Educate public on the availability, location, and requirements of facilities for disposal or drop-off of household hazardous wastes, travel trailer sanitary wastes, chemicals, grass clippings, leaf litter, animal wastes, and motor vehicle fluids.
3. Educate public regarding acceptable application and disposal of pesticides and fertilizers.
4. Educate public concerning preferred cleaning materials and procedures for residential car washing.
5. Educate public concerning the ultimate discharge point and potential impacts from the separate storm water drainage system serving their place of residence.
6. Educate public about their responsibility and stewardship in their watershed.
7. Educate public concerning management of riparian lands to protect water quality.

Partnerships

The PE Sub-Committee has coordinated, developed, and implemented several elements of the PEP. Work during this permit cycle included:

- Program implementation through partnerships:
 - Education Booth at various events throughout the County, Public Engagement
 - Maintain the "Our Water" website
 - Presentations throughout the County
 - Get public on the water with canoe trips, education information provided
 - Educate municipal staff through newsletters and involvement in educating the public
 - School age watershed education
 - Through getting students on the water
 - Going into classes and educate on water subjects
 - Use staff and volunteers to post signage
 - Storm drain stenciling and Storm drain markers
 - Creek Crossing signs over major waterways
- Researched events suitable for Phase II education community outreach
- Distributed Our water, Riparian, and septic system maintenance outreach materials
- Coordinated and maintained public education tools (watershed models, etc.)
- Researched "Our Water" campaign public relations and communications strategy

Flint River Watershed Coalition: On behalf of the of the Phase II permittees, the Flint River Watershed Coalition (FRWC) was contracted by the GCDC to provide several services, including:

- *Speaker Materials and Presentations:* PowerPoint presentations on storm water education for adult audiences such as municipal officials, rotary clubs, neighborhood associations, lake associations, etc.
- Hosting *canoe trips* on the Flint River described in the Activities Update.
- *Global Rivers Environmental Education Network (GREEN):* described in the Activities Update. *NOTE although this program is part of Monitoring and Mapping, there are education components to it.*
- *Macroinvertebrate Monitoring Program:* described in the Activities Update. *NOTE although this program is part of Monitoring and Mapping, there are education components to it.*
- The FRWC was involved in the *Storm Drain Stenciling* program described in the Activities Update.

Genesee Conservation District: On behalf of the of the Phase II permittees, the GCD was contracted by the GCDC to provide several services, including:

- The GCD was involved in the *Storm Drain Stenciling* program described in the Activities Update.
- Operate and staff the “Our Water” Information *Display booth* at the County Fair and other events described in the Activities Update.
- The GCD continues to *educate children* on storm water issues using the Enviroscope and craft projects that reinforce storm water messages as described in the Activities Update.
- *Facilitate and staff display booth at public events:* GCD schedules the display booth. Provide staff or training for volunteers.

Activities Update

“Our Water” Campaign Webpage: The development of an easy-to-use webpage with information about the seven storm water elements was identified as critical to the successful implementation of the “Our Water” Campaign. Since 2008, the Drain Commissioner’s Office hosts and updates the www.ClearGeneseeWater.org webpage as needed throughout the reporting period. The “Our Water” webpage has been online since July 2006. In addition www.gcdcswm.com, the Drain Commissioner’s Office website also has content specifically for the NPDES Ph II permittees, including copies of this and past annual reports. Many Ph II permittees that have webpages provide a link to the www.ClearGeneseeWater.org webpage.

“Our Water” Newsletter: Although this publication is available to the public, the purpose of the community updates is to keep the Communities updated with the changes to the permit program. There was only 1 newsletter produced this year. See attachment A. It was about the MI waters new online filing.

Materials and Presentation for Riparian Land Owners: An informational brochure was developed and served as a mail invite to a free workshop. All workshops were completed in the 2012-13 reporting period. A new workshop cycle has not begun during this reporting cycle. Copies of the brochure are made available to the interested communities to distribute. Also, brochures were made available for distribution at the booth events. The brochure contained information on basic stream bank stabilization techniques.

Speaker Materials and Presentations: An educational PowerPoint presentation was developed. The presentation contains appropriate branding for the “Our Water” Campaign. The presentation contains several modules that address various target audiences, including governmental and non-governmental entities. The modules of the presentation can easily be combined to customize a presentation for time or content within the required elements.

GCDC continued its contract with the FRWC to use this modular presentation to educate groups such as municipal officials, rotary clubs, neighborhood associations, and lake associations. The following presentations were made during this permit cycle:

Date	# Participants	Group	Venue	Participants
9-Oct-14	100+	Resource Genesee - Hands On Genesee	University of Michigan - Flint	All of Genesee County
15-Oct-14	20+	Kettering University Community Service Fair	Kettering University	All of Genesee County, young college students
10-Dec-14	200+	Citizens Advisory Group regarding Rover Pipeline. Meeting convened by FERC.	Holiday Inn Gateway	Genesee County Wide
18-Feb-15	20	Carter Middle School	Carter Middle School	Otisville
18-Feb-15	40	Glendale Hills Neighborhood Association	West Court Street Church	City of Flint

14-Mar-15	25	Flushing Walleye Festival	St. Roberts School	All of Genesee County, mostly Flushing residents
March 7,8,9 2015	500 +	Steelheaders show	Flushing	All
Spring 2015	30	Genesee County Metropolitan Planning Commission	Offices of the MTA	
11-Apr-15	125 +	University of Michigan Flint - Earth Day	UM Flint Campus	All of Genesee County, young college students
14-Apr-15	35	Business Networking	Walli's East	Flint, Burton, Davison, Flushing, Owosso.
15-Apr-15	30	Kettering University Community Service Fair	Kettering University	City of Flint
21-Apr-15	27	Flushing Lions Club	Liberty Family Dining	Flushing
11-May-15	10	Trout Unlimited	White Horse Tavern	
8-Jun-15	22	Spring View Elementary	Spring View Elementary School	Flushing
13-Jun-15	85	Fish the Bricks	Riverfront Park	All of Genesee County
27-Jun-15	8	City of Flint, Implementation Task Group, Infrastructure and Community Facilities, Master Planning	Various locations on the UM Flint Campus	City of Flint
29-Jun-15	15	Flint Water Class Action Group	Chevy Commons	City of Flint
16-Jul-15	125	'Love Your Lake' Flint Park Lake Community Event	Lakeside	City of Flint
22-Jul-15	21	Spring Grove, Invasive Removal Work Day	Spring Grove Wetland Restoration Site	Spring Grove residents
23-Jul-15	95	'Love Your Lake' Thread Lake Community Event	Lakeside	City of Flint
12-Sep-15	8	Friends of the Flint River Trail guided tour. 20 mile guided tour of the Flint River trail. In addition, each week the members of the Friends of the Flint River Trail lead a tour on the trail	Flint River Trail	Flushing
25-Sep-15	125	For Mar - Overnight monitoring event for kids - 'BIOBLITZ'	For-Mar	All of Genesee County

Brochures: An educational brochure was developed to provide information about EPA's seven mandated elements of storm water education. 5,000 brochures were printed in November 2006, and 10,000 reprints were made in 2009 and 2013. Over 2000 are handed out per year. The brochures are given away actively at events (see information booth heading below), and many have been passively picked up by the public at local community centers. Each municipality is also given brochures to distribute for public use and will report their activities under separate cover. See attachment A

Newsletter Articles: In 2006 several newsletter articles were composed and compiled in a Word format, placed on CDs, and distributed to permittees and partners for their use. Sometimes permittees, partners, or other publications will print an article on a stormwater topic. Any water related articles during this reporting period are included in attachment A

Time of Sale Septic Brochure: Information to help educate septic system owners on proper maintenance and practices has been compiled into a brochure with the help of Genesee County Health Department. Copies have been given to the Genesee County Health Department, interested communities and 800 were given to the

realtors association to distribute to interested realtors wishing to provide this information to new property owners. (Not all communities have residents with septic systems.) See attachment A

Promotional Giveaways: GCDC purchased an additional 4000 promotional giveaways (premiums) in Sept 2013 and had to reorder 4000 additional promotional giveaways (premiums) in June of 2015. Premiums purchased included water bottles and tote bags; a coloring book was also printed in-house to reach out to children. Premiums are given to the public at the information booth (see below). A person can win a premium if they answer a storm water-related question. This allows the booth staff/volunteers to engage the public in conversation, provide stormwater education and give them an educational brochure. Each premium given represents someone from the public that has received storm water education.

Information Booth: A display booth was developed in 2006. The booth includes a table and a free-standing banner outlining the seven simple steps to clean water. Educational activities were also developed to help engage people at public events.

The booth is staffed by volunteer municipal officials and staff of the GCDC or the Conservation District. Volunteers are trained to conduct the educational activities, which include giving premiums to each person who tries to answer a question on water quality. This approach serves several purposes:

- To educate the elected official
- To allow the communities themselves to teach the public about storm water issues
- To actively involve participants in the learning process



During this reporting period, the booth was used at the events listed below.			
March 28 &29, 2015	Home & Garden show – Perani Arena	County Wide	353 educated
4/11/2015	Earth Day (U of M Flint Campus)	County Wide	191 educated
6/6/2015	Family Science Day- Planitarium	County Wide	99 educated
8/4/15	National Night out- Flint Twp Police Dept	County Wide	144 educated
8/14/15	Hamilton Health Clinic- Family Day	County Wide	143 educated
8/15/15	Back to the Bricks- Downtown Flint	County Wide	126 educated
8/24-8/30/2015	Genesee County Fair- Genesee Twp	County Wide	1171 educated
9/26/15	Applewood Harvest Festival	County Wide	481 educated
9/29/15	Davison’s Farmer’s Market	County Wide	94 educated

Total Educated 2802

*Demographic Data by community in Appendix A

Argentine Township, Mt. Morris Township and GCDC-SWM provided staff to assist with the County Fair

Student Education: GCDC-SWM contracted with the GCD to provide storm water education services to school-aged children on behalf of the Phase II permittees. During 2014-15 GCD reached thousands of students in the Phase II communities. In school presentations which include one or some of the following:

- Online Games (DiscoverWater.org)
- Hands on activities (build your own watershed)
- Games:
 - Water cycle relay race
 - Filter the Pollution
 - A-maze-ing water
 - Water trivia games (who wants to be a millionaire, a watershed game, the environmental council, conservation Style, and environmental jeopardy)
- Enviroscapes



GCDC has four “Enviroscape” interactive models that demonstrate how pollutants can reach bodies of water. The Conservation District keeps one of the Enviroscope models for their own education program (see next section.) The other three models are available to be checked out for use by teachers/educators and available for demonstrations at events. GCDC-SWM staff has met with the Genesee Intermediate School District (GISD) program coordinators to let them know what tools we have available for their teachers including the enviroscope.

Following is a list of the presentations made in 2014-2015:

Table 2-1: Breakdown of GCCD Water Quality Presentations in Fiscal Year 2014-15

Month	Event	School aged children reached:	Parents/adults reached:
Oct/Nov/Dec	Boys and Girls Club	15-20 per class * 12 classes	Unknown
Oct 14'	Genesee STEM Academy (various Schools)	25-30 per class * 1 class	1
Nov 14'	Communities First Inc	25-30 per class * 1 class	2
Dec 14'	Beecher High School (Beecher Schools)	25-30 per class * 1 class	2
Oct/Nov/Dec	Genesee STEM Academy (various Schools)	25-30 per class * 10 classes	6
Oct/Nov/Dec	Durant Turri Mott	25-30 per class * 8 classes	4
Oct/Nov/Dec	Cummings Elementary (Flint Schools)	25-30 per class * 7 classes	3

Month	Event	School aged children reached:	Parents/adults reached:
Jan/Feb/Mar	Boys and Girls Club	15-20 per class * 22 classes	Unknown
1/27, 2/10, 2/24	State Road Elementary (Fenton Schools)	25-30 per class * 3 classes	2
Jan/Feb/Mar	Genesee STEM Academy (various Schools) State Road Elementary (Fenton Schools)	25-30 per class * 16 classes	7
Apr/May/Jun	Boys and Girls Club	15-20 per class * 16 classes	Unknown
4/13, 4/22, 5/7	Northwestern High School	15-25 per class * 3 classes	4
4/20/15	Southwestern High School	15-25 per class * 1 class	1
4/29/15	Beecher Adult High School	15-25 per class * 1 class	Unknown
5/15/15	Kettering University	15-25 per class * 1 class	1
April	State Road Elementary (Fenton Schools)	25-30 per class * 11 classes	2
Apr, May, Jun	Genesee STEM Academy (various Schools) State Road Elementary (Fenton Schools)	25-30 per class * 10 classes	7
Jul, Aug, Sep	Boys and Girls Club	15-20 per class * 32 classes	Unknown
Jul, Aug	U of M Early Childhood Development Center	10-20 per class * 32 classes	Unknown
Jul, Aug	Mott Community College- MDNR summer workers	10-20 per class * 5 classes	Unknown

GCDC-SWM also contracted with the FRWC to support the Project Global Rivers Environmental Network (GREEN) Educational Program. (Program is also discussed in the M&M Sub-Committee -Section 7). Participation from:

26 teachers from 15 school districts

Over 1000 students participated

Testing water at various locations throughout Genesee County

Table 2-2: Breakdown of Project Green Schools in Fiscal Year 2014-15

	School	Teacher	Students located within:
1	Atherton High School	Matt Hyslop	City of Burton
2	Bendle High School	Todd Barden	City of Burton
3	Carman-Ainsworth Middle School	Melissa Warburton	Flint Twp, Mundy Twp
4	Carter Middle School	Ryan Niemi	City of Clio, Vienna Twp, Thetford Twp, Montrose Twp
5	Carter Middle School	Chip McCallum	City of Clio, Vienna Twp, Thetford Twp, Montrose Twp
6	Davison Middle School	Jody Kosiara	Richfield Twp, Davison Twp, City of Burton
7	Grand Blanc East Middle School	Deb Lacki	City of Grand Blanc, Grand Blanc Twp, Atlas Twp
8	Grand Blanc East Middle School	Patricia Nelson	City of Grand Blanc, Grand Blanc Twp, Atlas Twp
9	Grand Blanc East Middle School	Crystal Sobeck	City of Grand Blanc, Grand Blanc Twp, Atlas Twp
10	Grand Blanc West Middle School	Elizabeth Lemerond	City of Grand Blanc, Grand Blanc Twp, Atlas Twp
11	Grand Blanc West Middle School	Victoria Skrisson	City of Grand Blanc, Grand Blanc Twp, Mundy Twp
12	Grand Blanc High School	Suzanne Powers	City of Grand Blanc, Grand Blanc Twp, Mundy Twp
13	Hill-McCloy High School	Jennifer Kahn	Montrose Twp, City of Montrose
14	LakeVille Middle School	Matt Chapin	Forest Twp, Richfield Twp
15	LakeVille Middle School	Josh Henley	Forest Twp, Richfield Twp
16	Linden Middle School	Kim Cornell	Argentine Twp, City of Linden, Fenton Twp
17	Linden Middle School	Charlene Nester	Argentine Twp, City of Linden, Fenton Twp
18	Mt. Morris Junior High School	Nick Carr	Mt. Morris Twp, City of Mt. Morris, Genesee Twp, Vienna Twp, Thetford Twp
19	Mt. Morris Junior High School	Zack Freeman	Mt. Morris Twp, City of Mt. Morris, Genesee Twp, Vienna Twp, Thetford Twp
20	Mt. Morris Junior High School	Kim McCormick	Mt. Morris Twp, City of Mt. Morris, Genesee Twp, Vienna Twp, Thetford Twp
21	Powers Catholic High School	Julie Lawrence	County Wide
22	St. John Vianney Catholic School	Janice Matlon	County Wide
23	Swartz Creek Middle School	Brandolyn Forbes	Clayton Twp, Gaines Twp, City of Swartz Cr, Flint Twp, Mundy Twp
24	Swartz Creek Middle School	Paul Speck	Clayton Twp, Gaines Twp, City of Swartz Cr, Flint Twp, Mundy Twp
25	Westwood Heights - Hamady High School	Arletha Bryant	Mt. Morris Twp

NOTE: many teachers had multiple classes participating

Catch Basin Stenciling Program: The Our Water Program has a catch basin stenciling program. The stencils say “No Dumping - Drains to River”. Since 2006, volunteers and County staff are able to paint approximately 500+ stencils per year on Genesee County Roads, including City owned roads. A printed doorknob hanger is distributed to educate residents adjacent to the stenciling locations. See Attachment A

- As part of preventive maintenance, the Genesee County Drain Commissioner’s Surface Water Maintenance crew cleans and stencils hundreds of catch basins throughout the county each year.
- In 2010 GCDC purchased Storm drain markers like the shown to the right to be installed on catch basin grate covers located within road ditches and rear yards where stenciling is not possible. Markers are installed by GCDC-SWM staff when they are working on storm drains throughout Genesee County.
- In 2012, GCDC purchased an additional 1200 4” metal storm drain markers. At the end of this reporting period all but 100 will have been installed and more will be ordered in the next reporting period. Storm drain markers are anticipated to have a 30 year life expectancy allowing for long term passive education.
- Volunteer stenciling groups were organized by both FRWC and GCD. Also GCDC-SWM staff worked with individual stenciling volunteer groups by providing technical support, supplies and catch basin locations for stenciling. Below is a list of volunteer groups that participated.



GCD: Held 8 Storm drain stenciling events:

<u>Date</u>	<u>Municipality</u>	<u>Volunteer Group</u>	<u>Location of stenciling</u>
7/21/15	Flint 48504	DNR Student Workers	Birchlane Dr, Prestwood Dr, Coralene Dr, Wilshire Dr, Eldred St.
7/22/15	Flint 48504	DNR Student Workers	Highwood Dr, Winwood Dr, Woodhaven Dr, Hampshire Ave

<u>Date</u>	<u>Municipality</u>	<u>Volunteer Group</u>	<u>Location of stenciling</u>
8/3/15	Flint 48504	DNR Student Workers	Kimberly Woods Dr, Kimberly Woods Cir, Millwood Dr.
8/3/15	Burton 48519	Genesee County Residents	Robindale Dr., Shaddycroft Dr, Glenvale Dr, Windywood Dr
8/4/15	Burton 48519	Genesee County Residents	Meadowcroft Dr, Chicory St, Sunnymead Ave
8/11/15	Burton 48519	Genesee County Residents	Yorkbrook, Creekside blvd, Fieldwood, Trumpwood
8/11/15	Flint 48532	Genesee County Residents	S Dyewood Dr, Mapletree Lane, Mapletree Ct.
8/12/15	Flint 48532	Genesee County Residents	N Dyewood Dr, Oaktree Dr, Oaktree Ct, Tuliptree Ct

FRWC: Held 17 Storm drain stenciling events:

<u>Date</u>	<u>Municipality</u>	<u>Volunteer Group</u>	<u>Volunteer Demographic</u>	<u>Adults</u>	<u>Child</u>	<u># homes</u>	<u># drains</u>	<u>Location of stenciling</u>
10/12/2014	Grand Blanc Twp.	Rob and Cathy Cojeen	Grand Blanc Twp	2	0	183	23	Townline Rd, Old Town Ct, Townline Ct, Bush Creek Drive, Pine Row Ln, Birchwood Ln, Bush Creek Drive
10/23/2015	Grand Blanc Twp.	Younglife group, Jake Kirk	Grand Blanc Twp, Fenton Twp, Fenton Twp, Fenton Twp, Linden, Grand Blanc Twp, Argentine	2	7	115	44	Popular Ct, Aspen View Dr, Lodgepole Ct, Larkspur Ln, Perlin Ct, Aster Ct, Shasta Ct, Meadowlane Dr, Daisy Ct, Balsam Ln, Larch Ct,
4/19/2015	Swartz Creek	The Rock Church members	Grand Blanc Twp, Argentine	4	6	174	32	Ironwood Dr, Ponderosa Dr, Grandwood Dr, Cottonwood Dr, Teakwood Dr
5/5/2015	Grand Blanc Twp.	Grand Blanc High School	Grand Blanc Twp	2	13	97	27	Belle Vista Dr, Via Catherine Dr, Joseph Dr, Grace Ct, Thomas Lane
6/4/2015	Flint	Girl Scout Troop Jody, Luke, Kyle Wiloboughy, Cassie Lindsay	Flint, Swartz Creek, Fenton Twp	3	9	127	18	Bristolwood Dr, Willowwood Dr, Peachwood Dr, Cherry Tree, Cramenwood
6/10/2015	Fenton Twp		Fenton Twp	2	2	76	9	Parkwood Dr, Forestview Cir, Woodside Cir, Overlook Ct, Parkview Cir
6/18/2015	Grand Blanc Twp.	Lake Fenton HS students	Fenton Twp	1	5	160	19	Hollyhock Dr, Hollyhock Cir, Rosecliff, Meadowdale, Belle Bluff Dr, Belle Bluff Ct, Holly Spring Lane, Briarfield Cir, Meadowdale Dr
7//5/15	Flint	Girl Scout Troop	Flint, Fenton Twp	2	3	78	9	Ashlawn Dr, Trotwood Lan, Pickwick pl, W. Judd Rd
7/27/2015	Fenton Twp	Jody, Luke, Kyle Wiloboughy, Cassie Lindsay	Fenton Twp	2	2	101	13	Lakeshore Cir, Lake Park Dr, River Ridge Cir, Lakeview Cir, Parklane Cir, Parkside Cir
8/5/2015	Flint	Jaime Welch, Diamonique, Derek	Fenton Twp, Flint, Mt. Morris	2	1	47	11	Garland St, Lyon St, W 2nd Ave, W 1st Ave
8/12/2015	Davison	Lois Tebo, Michael Tebo, family	Davison	1	5	143	29	Oda St, Kay St, Meadow Dr, Village Dr, Maxine Dr, Reed Ave, Wilcox Ave, Oak St, Spruce St, Walnut St, Walker St, Washington Ave
	Mt. Morris	Sondra Severn, Diamonique, Derek	Fenton Twp, Flint, Mt. Morris	2	1	170	37	

<u>Date</u>	<u>Municipality</u>	<u>Volunteer Group</u>	<u>Volunteer Demographic</u>	<u>Adults</u>	<u>Child</u>	<u># homes</u>	<u># drains</u>	<u>Location of stenciling</u>
8/20/2015	Flint	Jaime Welch, Diamonique, Derek	Fenton Twp, Flint	2	1	33	12	W 1st Ave, W 2nd Ave, Mason St, N Grand Traverse St, University Ave, W Water St
8/25/2015	Mt. Morris	Sondra Severn, Diamonique, Derek	Fenton Twp, Flint, Mt. Morris	2	1	105	24	Helen St, Maple St, Elm St, Beach St
8/27/2015	Flint	Girl Scout Troop	Clio	3	7	82	8	Center St, Campbell, Curry St, Darrow St,
9/20/2015	Fenton Twp	Younglife group, Matt & MaryAlice Tanneyhill	Grand Blanc Twp, Fenton Twp, Fenton	3	5	80	Future	South Long Lake Rd, Swanee Beach, Grove Park Rd

GCDC: Stenciled those storm inlets that were cleaned (weather permitting) approx 200+. 1000 Storm drain markers have been placed since 2012 on catchbasins and manhole lids

Canoe Trips on the Flint River. Due to weather there were an additional canoe trips scheduled and advertised this summer. Those that were held are shown below:



Date of Paddle	Name of Paddle	Portion of Watershed Covered	# of Participants	Participant Municipalities
6-Jun-15	Hello Summer Paddle	Flushing Riverview Park to Flushing Township Nature Park	11	Flushing, Metamore, Davison, Flint, Holly, Fenton
20-Jun-15	Lazy Days of Summer	Irish Road to Mott Lake	11	Flint, Holly, Lake Orion, Metamora, Flushing, Fenton
1-Jul-15	Kildee Staff	Irish Road to Mott Lake	6	Flushing, Fenton, Davison, DeWitt
2-Jul-15	CSMott Staff	Irish Road to Mott Lake	16	Fenton, Grand Blanc, Grand Haven, Ann Arbor, Flint
8-Jul-15	Wednesday Evening Paddle	Mitson Landing to Flushing Riverview Park	12	Flint, Davison, Holly, Lake Orion, Burton
13-Jul-15	Genesee County Parks Staff - I	Irish Road to Mott Lake	14	Flint, Mt. Morris, Ortonville, Davison, Columbiaville, Birch Run, Flushing, Grand Blanc, Fenton, Clio
18-Jul-15	Summer Getaway	Holloway Dam to Irish Road	16	Lake Orion, Grand Blanc, Flushing, Ortonville, Holly Columbiaville, Flint, Corunna, Lapeer, Imlay City, Fenton
22-Jul-15	Birch Run Evening Paddle	Morseville to Seymour Road	15	Grand Blanc, Fenton, Flint, Birch Run, Gaines, Montrose, Flushing, Waterford, Lapeer, Corunna, Clarkston
1-Aug-15	Dog Days of Summer	Irish Road to Mott Lake	34	Flint, Grand Blanc, Swartz Creek, Ortonville, Clarkston, Fenton, Holly, Clawson, Davison, South Lyon

19-Aug-15	Genesee County Parks Staff - II	Irish Road to Mott Lake	4	Burton, Davison, Fenton, Flushing
22-Aug-15	Fun Times Picnic	Montrose to Birch Run	11	Flint, Corunna, Grand Blanc, Warren, Imlay City, Lake Orion, Fenton
5-Sep-15	Pedals to Paddle	Bray Road to Vietnam Veteran's Park	11	Flint, Flushing, Lake Orion, Grand Blanc, Corunna, Ortonville, Swartz Creek, Holly, Fenton
19-Sep-15	Experience the Fall Colors	Mitson Landing to River Road		FUTURE
23-Sep-15	Celebrate the Fall Equinox Paddle	Flushing Township Nature Park to Montrose Barber Park		FUTURE
Total			161	

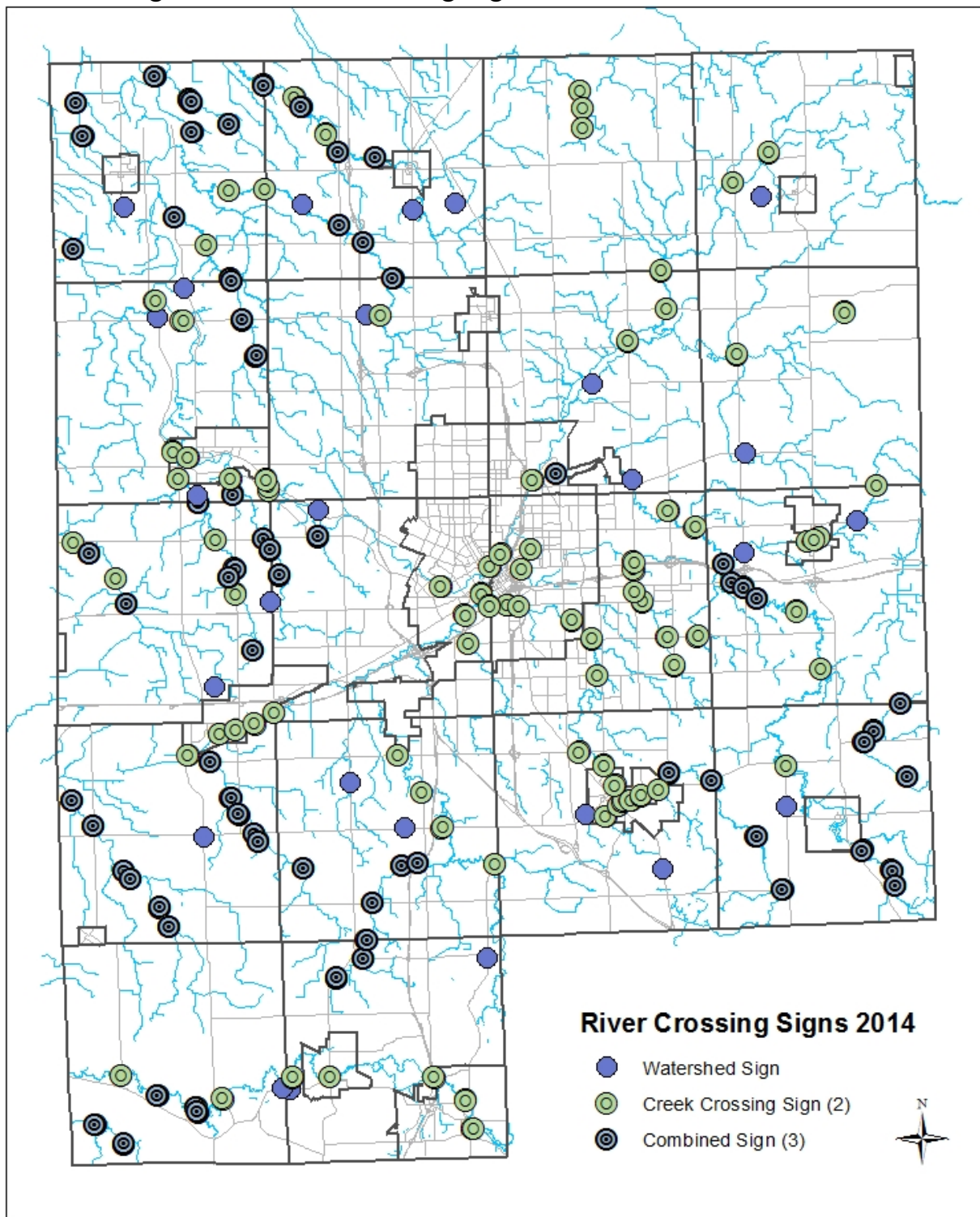
Local Watershed Maps: The PE Sub-Committee has developed educational material for teachers. These materials are intended to meet the new curriculum requirements for grades K-12. The GCDC is working with GISD staff to distribute the watershed maps to the appropriate teachers.

Macroinvertebrate Monitoring Program: Since 1999, the FRWC has executed a bi-annual Benthic-Monitoring Program that has been performed to meet MDEQ requirements. This program has expanded from 18 sites to 30 since its inception. (18 of the 30 are within Genesee County) This program is possible due to volunteers who live in the watershed who give up two days twice a year to be trained to collect and log samples. The data is used to categorize sites as “poor”, “fair”, “good” or “excellent” and provide a good assessment of water quality. **Section 8** provides additional detail on Benthic-Monitoring Program and summarizes findings for each watershed. Many of the Students that participate in GREEN and do chemical testing on the river also perform a Macroinvertebrate survey to show the students what kind of life lives in the Flint River and Shiawassee River.

Watershed Signs: In cooperation with the Genesee County Road Commission (GCRC), the PE committee began installing 24" x 30" watershed signs throughout the Shiawassee and Flint River Watersheds in late 2006 & 2008. An additional 56 were placed in 2013-14 within the Cities. Stream/river crossing identification signs have also been placed to increase public awareness. No additional sign have been placed this reporting period.



Figure 2-1: River Crossing Signs Placed as of Oct 2014



Public Education Plan Evaluation:. The evaluation plan will focus on monitoring outputs and outcomes of the education program. Currently, Tetra Tech and the GCDC staff are working to maintain records of outputs of the education program (number of people addressed at public events, number of presentations conducted, etc.) Tetra Tech, and the PE Sub-Committee are working on a robust evaluation plan to monitor outcomes (changes in behavior, changes in knowledge, etc.) in addition to outputs currently being monitored. Initial areas of success and areas needing improvement are summarized as follows.

Areas of success:

- Educational materials are constantly expanding and available
- Stenciling program delivered
- Brochures delivered
- Booth (for outside events) delivered
- Presentations are made to local groups on an on-going basis
- School age children are educated about storm water impacts on local waterways.
- Road Signs Installed and Maintained

Areas of need:

- Staffing constraints do not allow enough time dedicated solely to education efforts
- Have had contract issues with certain partners
- Implementation of Education efforts taking longer than expectations

Other Education Efforts: There are many education efforts throughout Genesee County that promote the storm water message, but are not directly supported by this program. They may be supported by a local community including Genesee County or a nonprofit group. These efforts are listed below and included in Appendix A to show all efforts of water education within Genesee County and its Communities.

- The FRWC coordinates a river cleanup on the Flint River and its tributaries both within Genesee and Lapeer counties. The Cleanup was on April 25th. Volunteers removed debris/ trash along 10 different locations in Genesee County and 4 locations in Lapeer County on the Flint River and its Tributaries. Staff from the County and local municipalities including the Drain Office, Parks and Rec, City of Flushing, City of Flint and others assisted with the cleanup by provided staff or garbage removal.



- Community walking path along river has free standing watershed signage, between Genesee county parks and City of Flushing Park.
- Park provides education on proper disposal of pet waste at the City of Flushing Park walkway.
- There is an Annual River cleanup on the first week of June along the Shiawassee River, organized by a Fenton council members.
- Friends of the Shiawassee in another

watershed group that is focusing on the health of the Shiawassee River within Genesee County. Drain Office Staff has worked with FRWC to expand the Benthic monitoring program to include 2 sites on the Shiawassee.

- Flint River Corridor Alliance is a community based organization of Government, non-profit and private sector stakeholders, focusing on the Flint River as it goes through the City of Flint. They held a Boats, Bikes & Bricks Triathlon on and around the Flint River.
- Genesee County Parks provides education on many subjects including storm water. (**H2 knOw!**)
- Household Hazardous Waste: The Our Water program supports this program by promoting it but this program is developed and managed by Genesee County Planning Commission, General Motors, UAW Local 599, Goodwill Industries, 5R Processors and Keep Genesee County Beautiful & several communities participate and/or support this program both financially and with staff or letting program use their property. In the spring and fall there are HHW and electronic waste collections. City of Flint hosts a permanent site at their Water service center (centrally located within Genesee County). A second site moves to a new location around the County. This is either hosted at a school or municipal property. In the last couple of years this program has been expanded to include electronic waste.
 - **September 27, 2014: Goodrich MS, Flint Water Service Center, Goodwill Industries, Averill Ave**
 - **April 24 & 25: Community E-Waste Collection, 5th and Saginaw**
 - **May 2, 2015: Carman Ainsworth , Flint Water Service Center**
 - **October 17, 2015: former Showcase Cinema, Flint Water Service Center**

PUBLIC PARTICIPATION PLAN

The PPP was implemented under previous years' annual reports. No PPP meetings were held within this reporting period. They are done on an as-needed basis and typically run concurrent with the updating of WMPs and if there is a significant event where public input is appropriate.

Report to Municipal Officials: Local appointed and elected officials are critical players in adopting the WMPs and allocating resources toward their implementation. Obtaining buy-in and providing education to this group helps to ensure the success of implementing the WMP. Local appointed and elected officials acknowledge their accountability to their constituents and embrace their role in shaping the future vision of the WMPs. As public officials, local government leaders value the advice, concerns, and issues that community residents see in terms of the watershed condition past, present and future.

Municipal officials are given newsletters as needed that provide updates on the status of storm water and watershed planning efforts. Each municipality is given 25-50 newsletters to be passed out to elected officials and planning boards. Municipalities are also given brochures and information packets to dispense to the public. Most recent newsletter was Sept 2015. See attachment A

3. CONSTRUCTION STANDARDS AND PRACTICES SUB-COMMITTEE ACTIVITIES

The Construction Standards and Practices (CSP) Sub-Committee oversees new construction standards and post construction management practices for Genesee County, including storm water Best Management Practices (BMPs). This Sub-Committee also updates ordinances to ensure compliance with Environmental Protection Agency (EPA) requirements. In this reporting period, the CSP Sub-Committee did not hold any meetings. The new permit application was due 4/1/14. In the application the Ordinances (regulating mechanism) and standards are done and provided to permittees.

CSP Membership included:

- **City of Flushing – Dennis Bow**
- **City of Grand Blanc – Matt Wurtz**
- **City of Linden – Scott Fairbanks**
- Atlas Township – Shirley Jones
- **Fenton Township – Bonnie Mathis**
- **Genesee Township – Steven Fuhr**
- Grand Blanc Township – Mikki Hoffman
- Montrose Township – Mark Emmendorfer
- Richfield Township – Joe Mador
- Village of Goodrich –

Bolded members are Phase II communities

The Public Education work is being done on behalf of the following Communities:

- | | |
|------------------------|-----------|
| • *Argentine Twp | No Permit |
| • Davison Township | MIG610089 |
| • Fenton Township | MIG610064 |
| • Flint Township | MIG610066 |
| • Genesee Township | MIG610073 |
| • Mt. Morris Township | MIG610082 |
| • Vienna Township | MIG610088 |
| • City of Burton | MIG610060 |
| • City of Clio | MIG610061 |
| • City of Davison | MIG610063 |
| • City of Fenton | MIG610065 |
| • City of Flushing | MIG610067 |
| • City of Grand Blanc | MIG610075 |
| • City of Linden | MIG610078 |
| • City of Mt. Morris | MIG610081 |
| • City of Swartz Creek | MIG610086 |
| • Genesee County | MIG610072 |

STORM WATER ORDINANCE

The CSP Sub-Committee has been working to establish an approach for developing a Storm Water Ordinance for communities to adopt within Genesee County. After reviewing State requirements and sample ordinances from other counties, Kent County's ordinance was selected as a model. The CSP Sub-Committee reviewed and tailored the ordinance, and has been submitted to the state for their approval. All communities were

encouraged to provide input to the draft ordinance. The final ordinance and Standards and Design Manual were submitted on September 30, 2010, after meeting with the DEQ and negotiating their contents.

The Ordinances (regulating mechanism) and standards are done and provided to permittees. The standards are a combination of State NPDES Ph II requirements and GCDC flood control requirements. The local governments may elect to adopt stricter standards. During the training for the new permit application it was expressed by the State that Townships do not have to pass an actual ordinance. Townships may pass an alternative regulatory mechanism that cites the requirements in the permit application, only for those outfalls under their jurisdiction. Each community will have to adopt an ordinance/regulatory mechanism, whether they choose the Sub-Committee's or another version.

Currently, the only enforcement powers the County has are those given to them from the State (Public Acts that govern SESC, Septic, Road Commissions and the Drain Code). The County cannot pass an ordinance that would affect private property, but will enact policy to govern County-owned property. Individual communities have their own police power to enforce the ordinance. They also have the right to extend those powers to another entity to enforce the ordinance on their behalf.

When the ordinances are adopted, there will be a fundamental change in how development occurs. Currently, the Genesee County Drain Commissioner (GCDC) Surface Water Management (SWM) reviews approximately 70 percent of site plans that are prepared. Either because a County Drain is directly involved and the work on the drain must be permitted, or the local Community has required a review by the Drain Office and it is done as a courtesy to the Community. GCDC-SWM will review to their standards any plans submitted to their Office. With the implementation of a water quality ordinance, all site plans within a community that has a storm water ordinance will be reviewed to those standards either by the Community or their representative. As always, any site plans submitted to the GCDC-SWM will be reviewed to that office's standards.

Items covered by the storm water ordinance are:

- Statutory authority and title
- General provisions
- Storm water permits and permit review procedure
- Storm water system
- Drainage plan
- Construction site runoff controls
- Floodplain and other standards
- Post construction soil erosion
- Applicability and exemptions
- Prohibited discharges (oil and other pollutants from parking lots, etc.)
- Inspection, monitoring, reporting, and record keeping
- Enforcement
- Storm water easements and maintenance agreements (post construction maintenance)
- Performance and design standards
- Storm water map
- Financial guarantee
- Terms and conditions of permits

The following sections of this report provide results for programs the BMP Sub-Committee oversees:

- Section 5 Good Housekeeping

It should be noted that the standards currently in place deal with water quantity. The new standards will also deal with water quality, and any new ordinances will expand the Community's authority as well as specify

development requirements. The Storm Water Ordinance references a BMP Manual (see text below). By keeping the BMP Manual separate, and not including design guidance in the ordinance, changes can be made to the BMP Manual without revising the whole ordinance.

BMP MANUAL

Currently, Genesee County Water & Waste is the County agent (City of Burton is the Municipal Agent in their community) on behalf of Part 91 of Public Act 451 and has construction BMPs for Soil Erosion and Sedimentation Control (SESC). Individual communities may or may not have ordinances that regulate construction and post construction. The CSP Sub-Committee has developed a BMP Manual, which will represent minimum standards for post construction BMPs for water quantity and quality. These BMPs will not be limited to SESC.

Communities will be able to either adopt the CSP Sub-Committee's BMP Manual or create their own. Long-term BMP operation, maintenance, and schedule issues will be addressed in the enforcement portion of the manual.

Each community individually are addressing ordinances/resolutions for post construction and IDEP individually in their Permit Application(s) (due April 1, 2014). They may choose to use the ordinance template and BMP manual that were developed by the subcommittee or use other appropriate ordinances/resolutions. See Permit Application(s) for individual commitments.

4. MONITORING AND MAPPING SUB-COMMITTEE ACTIVITIES

The Monitoring and Mapping (M&M) Sub-Committee did not meet during this reporting period:

M&M Membership included:

- **City of Fenton – Dan Czarnecki**
 - City of Montrose – Everette Persall
 - **City of Mt. Morris – Jake LaFurgey**
 - **City of Swartz Creek – Tom Svrcek**
 - Argentine Township – Bob Cole
 - **Davison Township – Kurt Soper**
 - **Flushing Township – Terry Peck**
 - Gaines Township – Paul Fortino
 - **Mt. Morris Township – Gerald Deloney**
 - Village of Gaines – Thomas Keech
 - Village of Lennon – Larry Widigan
- Bolded** members are Phase II communities

The M&M Sub-Committee oversees organization and implementation of watershed monitoring, field-sampling protocols, and mapping guidelines. As part of their responsibilities, the M&M Work Group oversees several water quality monitoring programs as well as the Illicit Discharge Elimination Plan (IDEP) Program. In addition, they oversee the Hot-spot Water Quality Monitoring Program, which goes beyond IDEP by focusing on known problem areas, such as Blue Bell Beach that is frequently closed due to high E-coli counts.

The work of this sub-committee is being done on behalf of the following Communities:

- | | |
|------------------------|-----------|
| • *Argentine Twp | No Permit |
| • Davison Township | MIG610089 |
| • Fenton Township | MIG610064 |
| • Flint Township | MIG610066 |
| • Genesee Township | MIG610073 |
| • Mt. Morris Township | MIG610082 |
| • Vienna Township | MIG610088 |
| • City of Burton | MIG610060 |
| • City of Clio | MIG610061 |
| • City of Davison | MIG610063 |
| • City of Fenton | MIG610065 |
| • City of Flushing | MIG610067 |
| • City of Grand Blanc | MIG610075 |
| • City of Linden | MIG610078 |
| • City of Mt. Morris | MIG610081 |
| • City of Swartz Creek | MIG610086 |
| • Genesee County | MIG610072 |

The following sections of this report provide results for programs the M&M Sub-Committee oversees:

- Section 6 319 Nonpoint Source Grant Projects
- Section 7 Project GREEN (and its educational aspects discussed in Section 2)
- Section 8 Macroinvertebrate Study
- Section 9 IDEP Program
- Section 10 New Storm Water Point Source Discharges

5. GOOD HOUSEKEEPING

Good Housekeeping is a required and essential part of an effective storm water pollution protection program. Periodic training in Stormwater Good Housekeeping practices is required for all applicable maintenance staff employed in nested municipalities or school districts. Affected personnel must be trained at least once over the course of the permit cycle.

Although no presentations have occurred during this reporting cycle, a copy of the Power Point presentation and the BMP manual developed by this sub-committee are available on the GCDC-SWM website. http://www.gcdcswm.com/PhaseII/SWPPI_SWO/SWPPI_SWO.htm. Also contract participants or nested jurisdictions are able to borrow a disc with the video entitled “Storm Warning: Stormwater Pollution Prevention” by ExCal Visual LLP. The Power Point presentation and the BMP manual explain the importance of preventing contamination from storm water run-off and ways employees can be involved at their facility. Subject matter of written and video material meets the permit requirements for employee training.

Maintenance Staff Training Topics

- Spill prevention
- Spill Control and Response
- Vehicle and Equipment Maintenance
- Vehicle and Equipment Washing
- Material Storage
- Waste Management
- Facility Maintenance
- Landscape and Grounds Maintenance
- Illicit Discharge Detection
- Contracts

In addition, individualized training in preparation for an MDEQ audit was offered to each school district nested under the GCDC general permit. The training focused on establishing and strengthening the Good Housekeeping practices listed above at school facilities. Below is a list of nested schools that chose to participate. One-on-one training for each school was provided by Tetra Tech staff. Training took place during the last reporting period.

Schools Participating in On-Site Training

- Atherton
- Bendle
- Bentley
- Carman-Ainsworth
- Flushing
- Genesee
- Genesee Intermediate School District (GISD)
- Grand Blanc
- Lake Fenton
- Swartz Creek

The MDEQ SWPPP checklist used as a guideline for the audits is available upon request.

6. 319 NONPOINT SOURCE GRANT PROJECTS

In 1987, Congress amended the Clean Water Act to establish the Section 319 Nonpoint Source Management Program because it recognized the need for greater federal leadership to help focus State and local nonpoint source efforts. Under Section 319, State, Territories, and Indian Tribes receive grant money which support a wide variety of activities including technical assistance, financial assistance, education, training, technology transfer, demonstration projects, and monitoring to assess the success of specific nonpoint source implementation projects.

There are three 319-grant projects within Genesee County. All are within the Middle Flint Watershed: the Swartz Creek Watershed Project, Gilkey Creek Watershed Project, and the Kearsley Creek Watershed Project. CAER and FRWC developed the Swartz Creek and Gilkey Creek WMPs and GCDC developed the Kearsley Creek WMP to control nonpoint sources of pollution. Projects may include implementing structural BMPs, non-structural BMPs, and information and education activities to eliminate nonpoint source pollution.

SWARTZ CREEK WATERSHED PROJECT

The Swartz Creek Watershed Plan has been granted 319 status by the MDEQ.

No activity occurred during the reporting period.

KEARSLEY CREEK WATERSHED PROJECT

The Kearsley Creek Watershed Plan has been granted 319 status by the MDEQ.

No activity occurred during the reporting period.

GILKEY CREEK

The Gilkey Creek Watershed Plan has been granted 319 status by the MDEQ. It outlines designated and desired uses for the watershed, historic and present conditions, watershed goals, best management practices recommendations, and an education and evaluation plan.

No activity occurred during the reporting period.

7. GENESEE GREEN

Project Green, now referred to as Genesee GREEN, has grown in Genesee County from approximately 100 students in 1990 to in excess of 1000 in 2014. The ideal is that all of the students visit specific sampling sites along the Flint River Watershed within the same week to conduct a Water Quality Index (WQI) analysis. The data gives a snapshot of that moment in time. As each year is added, comparisons can be made about the quality of the water running through the watershed environment over time. Comparisons can also be drawn between geographical sites.

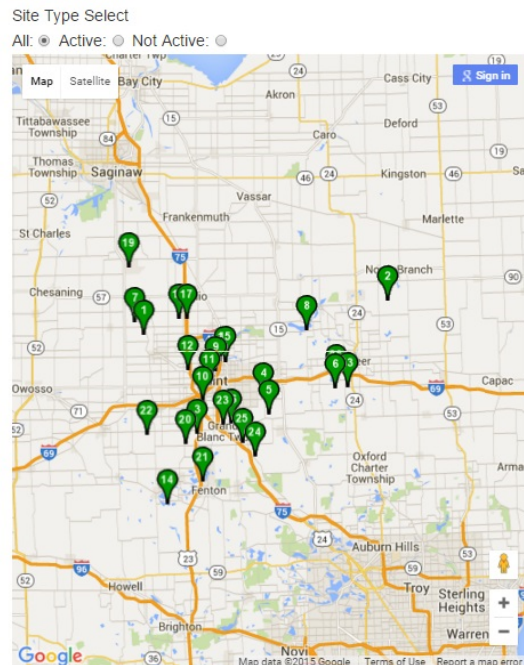
The Global Rivers Environmental Education Network (GREEN) is a curriculum-based, mentored program that seeks to engage young people as active citizens to improve conditions in their watersheds. GREEN empowers young people to learn more about the watersheds they live in and use their findings to create lasting solutions to water quality problems. GREEN has been in existence for twenty years in Genesee County under the direction of the Genesee County Intermediate School District (GISD).

In 2003, the Flint River Watershed Coalition (FRWC) was approached by Earth Force Green and General Motors to be the coordinator of GREEN in the Flint River Watershed. FRWC was identified as the primary organization that could help improve program participation and effectiveness because of its focus on water quality monitoring and environmental education. The FRWC Board of Directors has endorsed this vision and is providing administrative control.

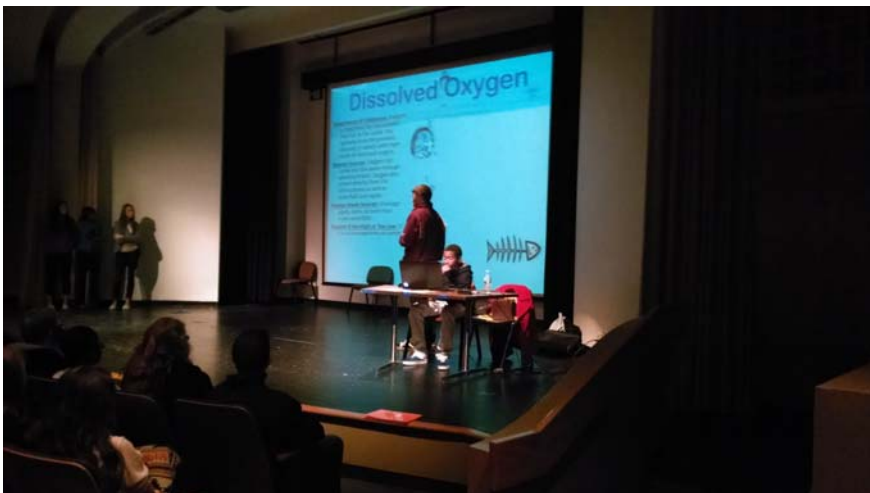
As part of the program, students from local schools learn about water quality and testing procedures by visiting various sites to take water samples and by analyzing the collected data. During the last reporting period, participation included:

25	Participating Educators
1000+	Students
17	Mentors
13	Presenters at the summit

Test Sites



Schools are also encouraged to participate in a summit, where students are able to present their findings. On May 15, 2015, a student summit was held at Kettering University and students from 15 schools presented collected data.



Each site visited is categorized as excellent, good, fair, poor, or very poor based on the National Sanitation Foundation (NSF) WQI analysis. To determine the WQI, nine tests are performed.

Parameters tested include dissolved oxygen, fecal coliform, pH, biochemical oxygen demand (5-day), temperature, total phosphate, nitrates, turbidity, and total solids. After completing the nine tests, results are recorded and transferred to a weighting curve chart where a numerical value is obtained as shown in Table 7-1. For each test, the numerical value or Q-value between 0 and 10 is multiplied by a "weighting factor." For example, dissolved oxygen has a relatively high weighting factor (0.17) and therefore is more significant in determining water quality than the other tests. The nine resulting values are then added together to arrive at an overall WQI. If all nine water quality tests are not available, then the total of those samples available is multiplied by the inverse their total weighting factors.

Table 7-1: Water Quality Index Calculation Chart

Test Parameter	Q-Value	Weighting Factor	Total
1. Dissolved oxygen	Q_{DO}	0.17	$0.17 \times Q_{DO}$
2. Fecal coliform	Q_{FC}	0.16	$0.16 \times Q_{FC}$
3. pH	Q_{pH}	0.11	$0.11 \times Q_{pH}$
4. Biochemical oxygen demand	Q_{BOD}	0.11	$0.11 \times Q_{BOD}$
5. Temperature	Q_T	0.11	$0.11 \times Q_T$
6. Total phosphate	Q_P	0.10	$0.10 \times Q_P$
7. Nitrates	Q_N	0.10	$0.10 \times Q_N$
8. Turbidity	Q_{Turb}	0.08	$0.08 \times Q_{Turb}$
9. Total solids	Q_{TS}	0.07	$0.07 \times Q_{TS}$
Overall WQI			Sum (Q_x)

The WQI ranges are categorized as follows: 90-100 Excellent, 70- 89 Good, 50- 69 Average (Fair), 25- 49 Marginal (poor), 0- 24 Poor.

It should be noted that there was no discernible correlation between the Genesee GREEN Results and the Benthic Monitoring Results. Since the benthic monitoring results reflect the macroinvertebrates' long term exposure to their environment the results are assumed to be more reflective of the overall health of the water body compared to the one-time sampling associated with Genesee GREEN.

[Reference: *Mitchell, Mark K. and William B. Sharp, 2000. Field manual for Water Quality Monitoring: An environmental education program for schools, (twelfth edition), Kendall/Hunt Publishing Company, Dubuque, Iowa*]

Table 7-2 and Figures 7-1 to 7-4 summarize Genesee Green results for the Lower, Middle, and Upper Flint River and Shiawassee River Watersheds. On the Genesee Green Website there was a gap between 2010-2015 sampling years. Our data shows that we recorded data from 2011-2013.

Table 7-2: Genesee Green Results

ID No	Location	Sampled Years	Water Quality Index (WQI)
<i>Lower Flint River Watershed</i>			
1L	Armstrong Creek at Dodge Road	2006-07, 2011-2012	Good
2L	Craven and Benson Drain off Mt Morris Road	2007	Fair
3L	Mill Street Bridge	1993, 1998-2004, 2006-2009	Good
4L	North corner of Flushing and Linden Roads	1991, 1994, 1998-2004, 2007, 2008, 2010	Good
5L	Pirnie Creek at Beecher Road	2006, 2008	Good
6L	Southeast corner of M-57 and Seymour Road	2001-2011	Good
7L	Clio Bike Path at Jennings Road	2007, 2009, 2011, 2012	Good
8L	Flushing Park at Pavilion #2	2001-02, 2005	Good
9L	Mott Park	1993, 1998-2000, 2010-2013	Fair
10L	Pine Run at Clio Park	2006, 2009, 2012-13	Good
11L	North of Flushing at Mt. Morris Bridge	1998	Good
12L	Seymour Rd. North of Farrand Rd.	2009	Good
13L	Flint River @ Barber Memorial Park	2015	Good
14L	Lake Drain @ Randy Wise	2015	Fair
<i>Middle Flint River Watershed</i>			
1M	Swartz Creek at Hill Road Bridge	2005-06, 2009-2010, 2012-13	Good
2M	Behind McDonalds at Dort and Stewart	2003	Fair
3M	Bridge between UM-Flint and Autoworld	1993-94, 1998, 2001	Fair
4M	Crampton Drain at Kearsley Armstrong	2006, 2008-2011	Good
5M	Downstream from For-Mar Nature Center	2005, 2010	Good
6M	Gilkey Creek behind Central High School	1991-92, 1994, 2001-2002, 2009	Poor
7M	Immediately west of the Farmer's Market	2004-06 2012-13	Good
8M	Pierson Drain at Atherton HS	2007, 2015	Good
9M	Swartz Creek at Happy Hollow	1993-94, 2002-2003, 2010-2012	Fair
10M	Swartz Creek at Swartz Creek M.S.	2005-06	Fair
11M	Swartz Creek at Van Slyke Road	2002, 2012	Good
12M	Swartz Creek Golf Course	2001-02	Good
13M	Thread Creek at McCandlish Road	2007-2008	Fair
14M	Thread Creek at Rust Park in Grand Blanc	2005-2006 2012	Good
15M	Timberwolf Turnout off Irish Road	2005	Fair
16M	Kearsley Creek at Goodrich Commons	2004	Good
17M	Kearsley Creek near Goodrich High School	2004-05	Good
18M	Flint River West of Johnson AAA School	2006-2010	Good
19M	Thread Creek at Bristol Rd.	2008-2013	Fair
20M	Upstream of For-Mar Nature Center	2004, 2006-2009, 2011	Good
21M	Swartz Creek at Swartz Creek MS	2012	Good
22M	Black Creek- Abernathy Park	2013	Fair
23M	Swartz Creek @ Frost Gardens	2012-13, 2015	Good
24M	Davison Kearsley Creek	2015	Fair
25 M	Thread Creek @ Perry Road	2015	Good

ID No	Location	Sampled Years	Water Quality Index (WQI)
<i>Upper Flint River Watershed</i>			
1U	Bear Swamp at Genesee Road	2007	Poor
2U	Oak Road North of Stanley	2001	Good
3U	Bluegill Boat Ramp on Mott Lake	2002, 2005	Good
4U	M-15 north of Stanley Road	1997-98, 2002	Good
5U	Holloway Reservoir at Mt. Morris Bridge	1997, 2001, 2003-05	Good
6U	Mott Farm between house and barn	1993-94, 1998, 2001, 2004	Good
7U	Richfield Park	2001, 2003-2010	Fair
8U	Flint River @ Steeping Stone	2015	Good
<i>Shiawassee River Watershed</i>			
1S	Platform south of Main Street Bridge in Fenton	1992, 1996, 1998-2004	Fair
2S	Linden Mill Pond (Shiawassee River)	2007, 2010, 2015	Good
3S	Fenton Mill Pond (Shiawassee River)	2009, 2012	Poor
4S	Linden Middle School Grounds	2012-13	Good
<i>Unknown Watershed</i>			
1UNK	Unlisted Location	2009-2012	Good

Figure 7-1: Genesee Green Results for the Lower Flint River Watershed

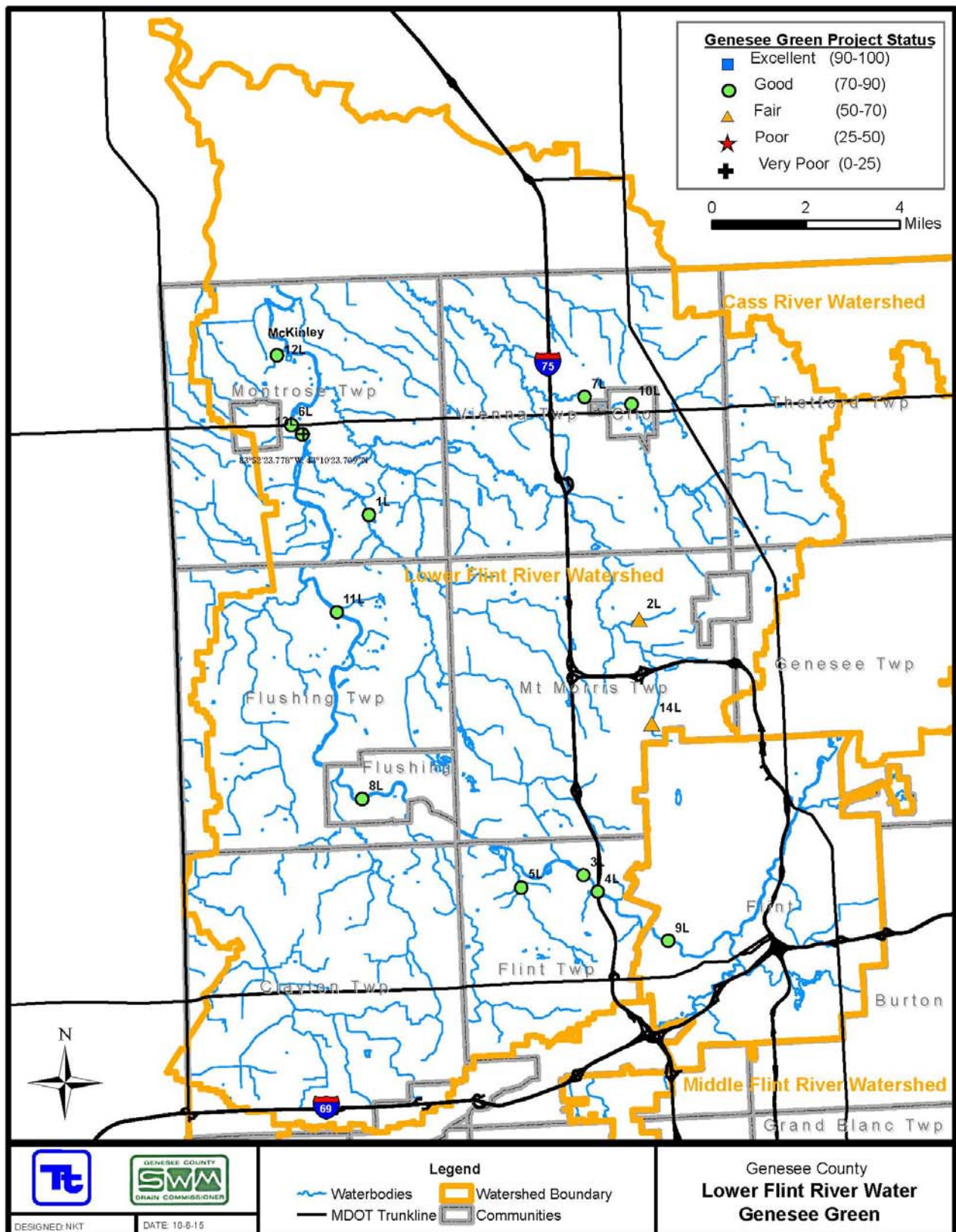


Figure 7-2: Genesee Green Results for the Middle Flint River Watershed

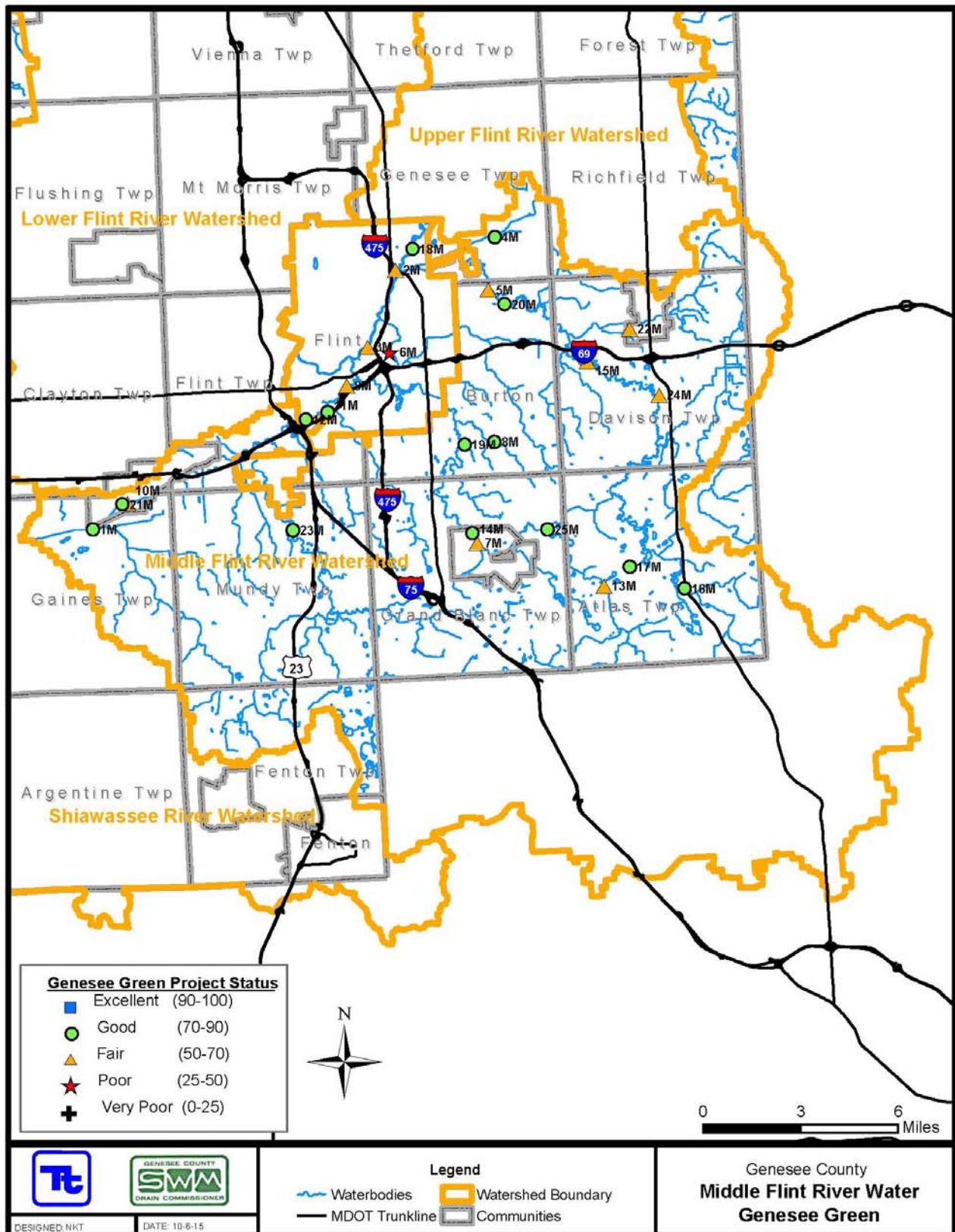


Figure 7-3: Genesee Green Results for the Upper Flint River Watershed

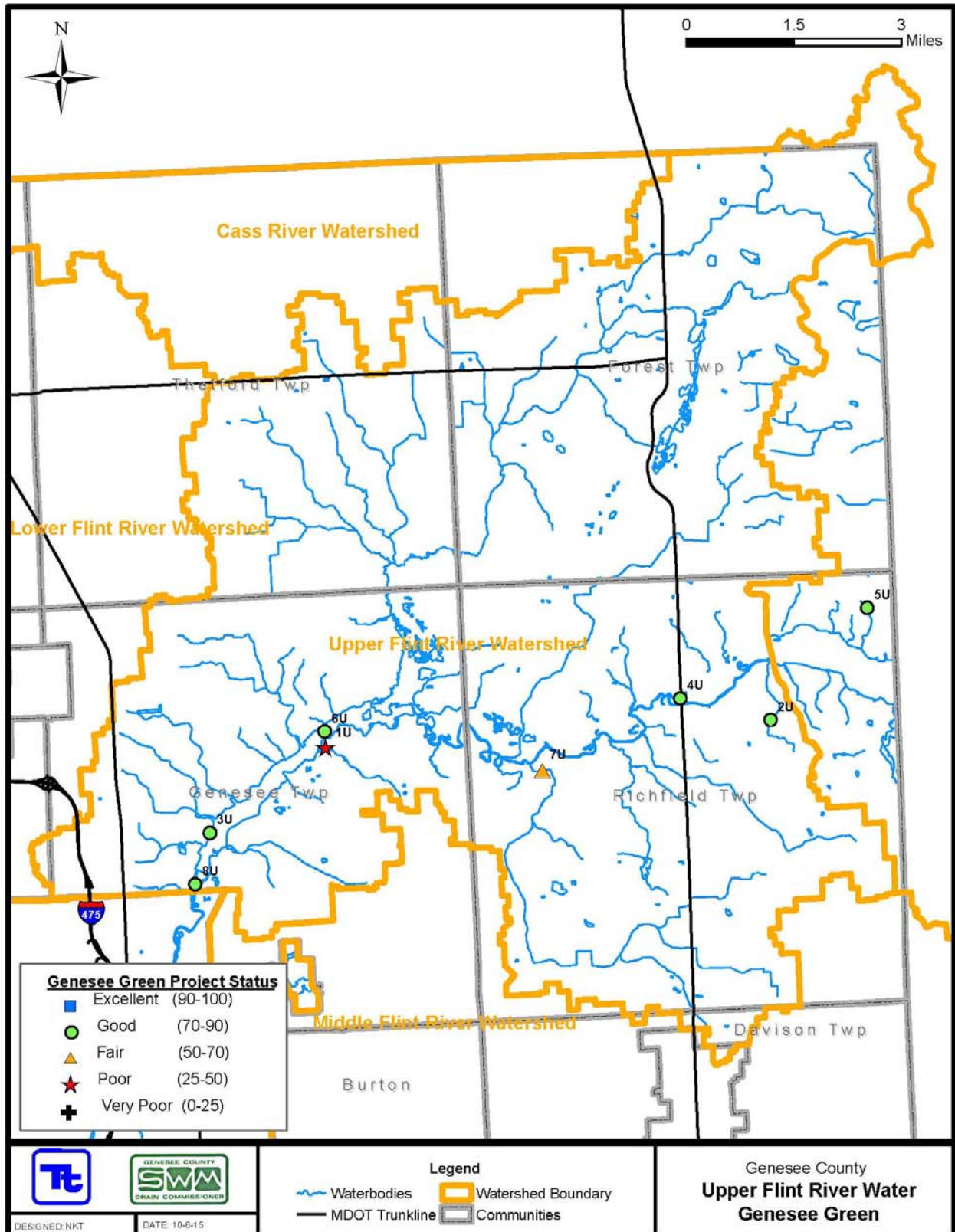
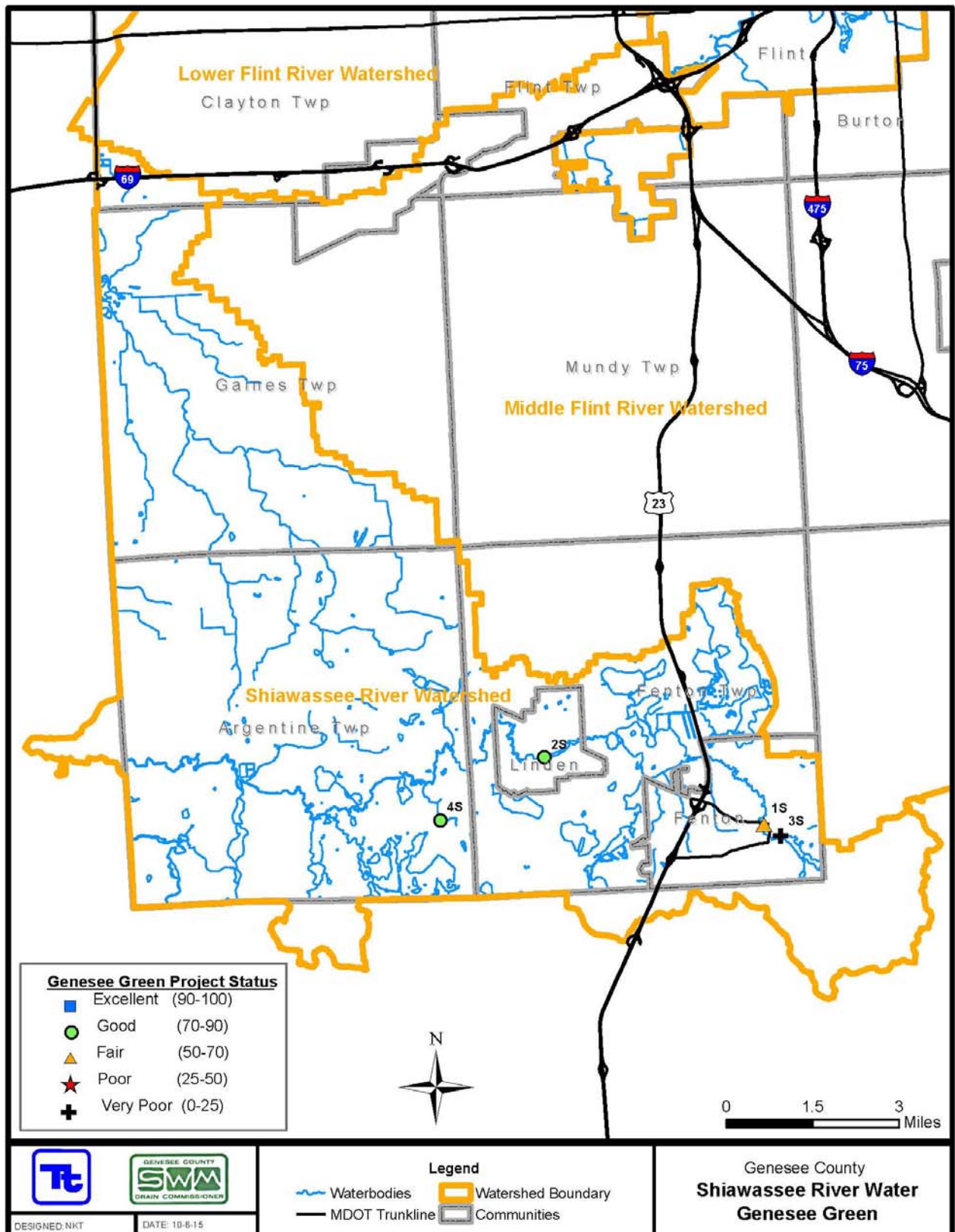


Figure 7-4: Genesee Green Results for the Shiawassee River Watershed





Flint River GREEN

(Global Rivers Environmental Education Network)

The Flint River Watershed Coalition, with our partners, coordinates an applied curriculum for middle and high school students that have a positive impact on the environment, now and into the future.

Using scientific methods, students conduct various tests to assess the health of a local river or stream. Students then work to identify any environmental problems, research the causes of the problem, and develop solutions to improve the health of their stream. Beyond merely identifying the environmental issue, the class works to make positive changes in practices or policies that allowed the problem to emerge in the first place.

Professional mentors from agencies across the watershed contribute to student learning and awareness. Prior mentors have come from General Motors, the Genesee County Drain Commissioner's office, City of Flint, the Center for Applied Environmental Research at UM-Flint, TetraTech, Flint River Watershed Coalition, Sierra Club, and Delphi.

In Genesee, Lapeer, and Oakland counties, the work done in Flint River GREEN compliments the on-going monitoring project that the Watershed Coalition has conducted for several years. It also provides information for use by the Genesee County Drain Commissioner in fulfilling responsibilities relative to storm water runoff concerns and abatement.

Recently the Flint River GREEN committee has updated an interactive website. This will allow teachers to submit information by internet and interested parties can look at data, materials information, test sites and schools that participate. <http://flintrivergreen.is-great.org/>

8. MACROINVERTEBRATE STUDY

Since 1999, the Flint River Watershed Coalition (FRWC) has executed a bi-annual Benthic Monitoring Program that has been performed to meet MDEQ requirements. This program has expanded from 18 to 30 sites since its inception.

This program is successful because volunteers who live in the watershed contribute two days, twice a year for training, sample collection and species identification. The scores for each site visit are averaged over the sample years and categorized as either Excellent (>48), Good (34 – 48), Fair (19 – 33.9), and Poor (<19). These scores not only give an indication of macroinvertebrate community health but also provide a good Water Quality Index value. Table 8-1 and Figures 8-1, 8-2, 8-3, and 8-4 summarize macroinvertebrate sampling results for the Lower, Middle, and Upper Flint River Watersheds and the Shiawassee River Watershed. Sites categorized as “poor” are identified in Table 8-1 with red font.

Two of the study sites received a Water Quality Index rating of “Excellent” while one site of the 21 sites studied showed a decline in water quality from “Fair” to “Poor” (red font). Macroinvertebrate study was last updated in April & May for 2013 which was included in the 2012-2013 Annual Report.

Table 8-1: Macroinvertebrate Study Results

ID_No	Location	Sampled Years	Water Quality Index (WQI)	Water Quality Changes Last Period/Current Period
Lower Flint River Watershed				
A-L	Pine Run Headwaters	1999-2000, 2003-2015	Fair	No Change
B-L	Misteguay Creek Headwaters	1999-2000, 2004-2015	Fair	Good/Fair
C-L	Flint River, Flushing	1999-2015	Excellent	Excellent
D-L	Brent Run	1999-2003, 2005-2015	Good	Fair/Good
E-L	Brent Run Headwaters	1999-2000, 2004-2015	Poor	No Change
Middle Flint River Watershed				
A-M	Swartz Creek	1999-2015	Good	Excellent/Good
B-M	Thread Creek	1999-2015	Fair	Poor/Fair
C-M	Thread Creek Headwaters	1999-2015	Good	No Change
D-M	Kearsley Creek	1999, 2001-2015	Good	Excellent/Good
E-M	Kearsley Creek Headwaters	1999-2003, 2005, 2007-2015	Good	No Change
F-M	Gilkey Creek	1999-2013	Poor	Discontinued
G-M	Gilkey Creek Headwaters	2002-2015	Poor	Fair/Poor
H-M	Gilkey Creek Restoration (Applewood)	2009-2015	Fair	No Change
I-M	Gilkey Creek Restoration (Kearsley Park)	2009-2015	Good	No Change
J-M	Swartz Creek Headwaters	2007-2015	Good	Excellent/Good
Upper Flint River Watershed				
A-U	Butternut Creek Headwaters	2000-2015	Good	Fair/Good
B-U	Flint River, Richfield	2000-2003	Replaced	Replaced with Clark Drain Site
C-U	Clark Drain, Richfield Park	2009-2015	Good	No Change
D-U	Butternut Creek	1999-2015	Good	No Change
Shiawassee River Watershed				
A-S	Argentine	2008-2015	Fair	Good/Fair
B-S	Linden	2008-2015	Good	Fair/Good

It should be noted that there was no discernible correlation between the Project GREEN Results (Section 7) and the Benthic Monitoring results. Since the Benthic Monitoring results reflect the macroinvertebrates' long-term exposure to their environment, the results are assumed to be more reflective of the overall health of the water body compared to the one-time sampling associated with Project GREEN (which is more focused on inspiring youth).

Figure 8-1: Macroinvertebrate Study Results for the Lower Flint River Watershed

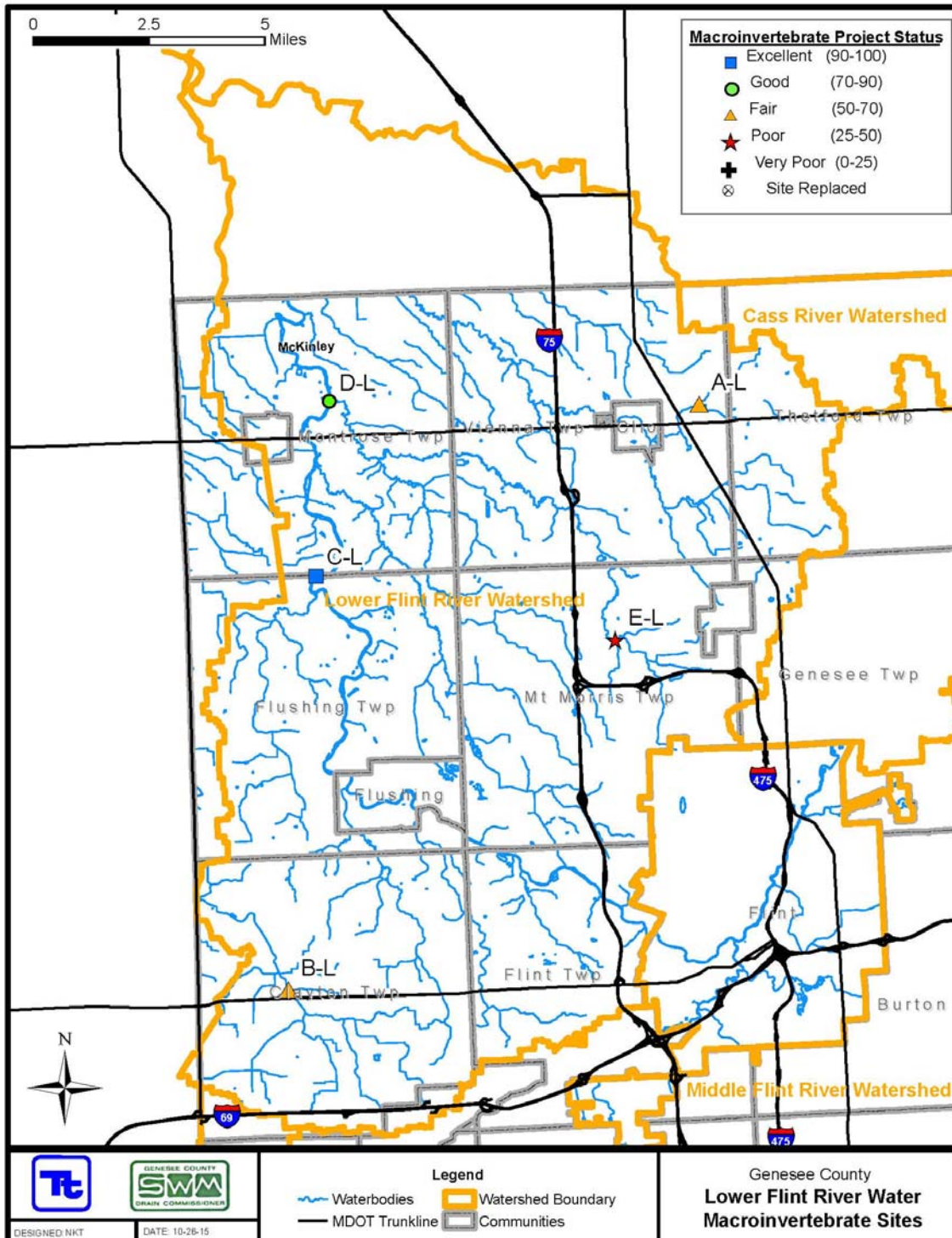


Figure 8-2: Macroinvertebrate Study Results for the Middle Flint River Watershed

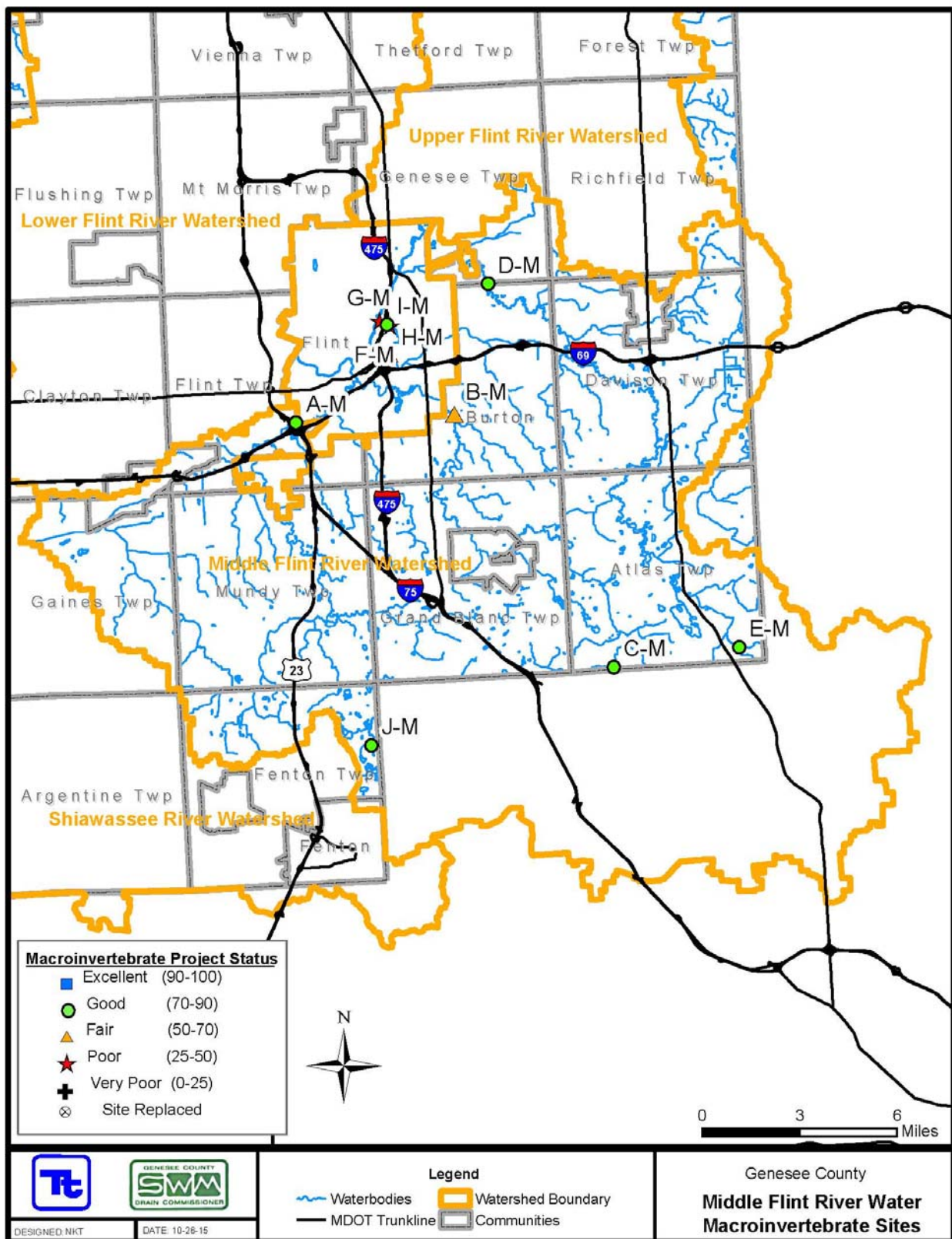


Figure 8-3: Macroinvertebrate Study Results for the Upper Flint River Watershed

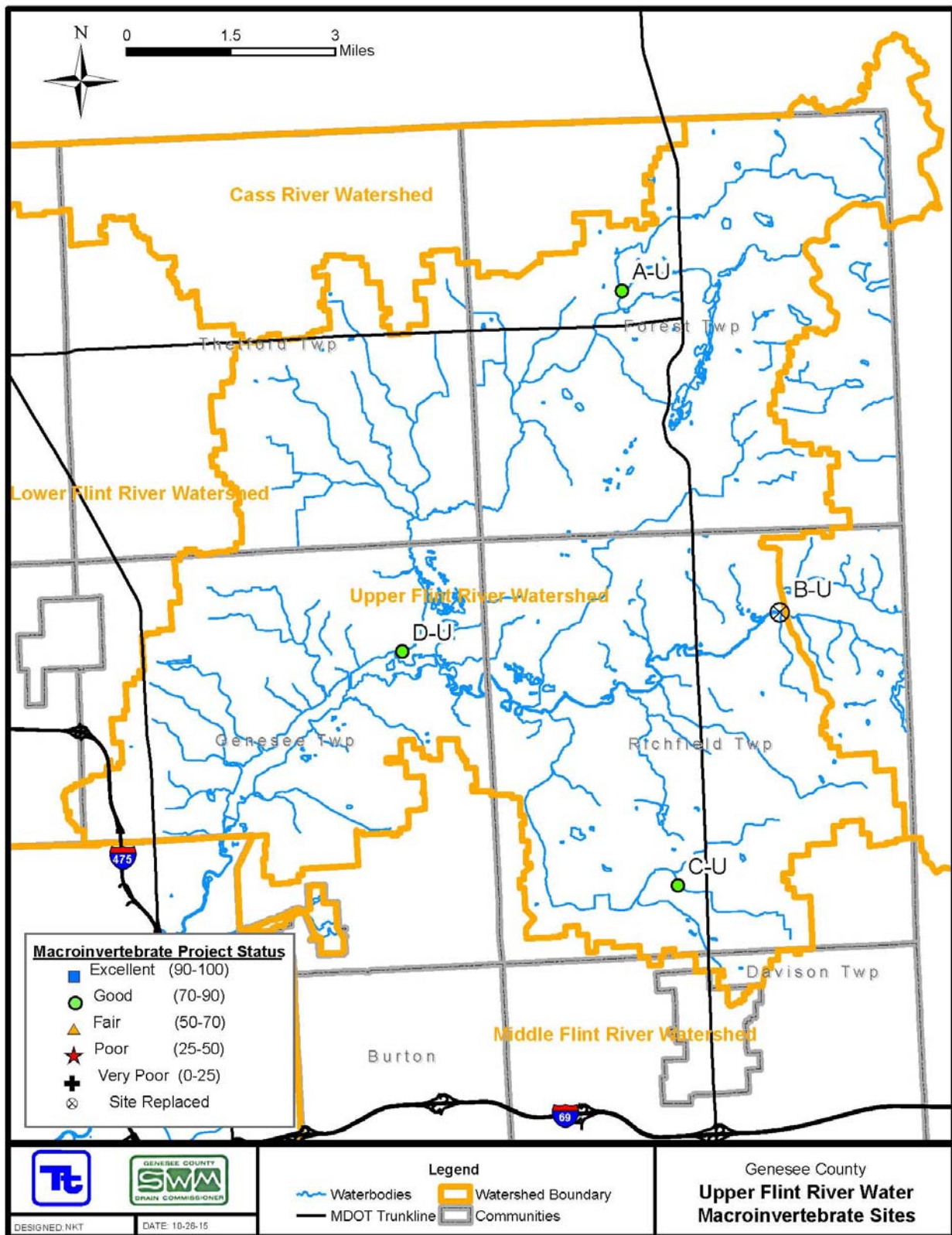
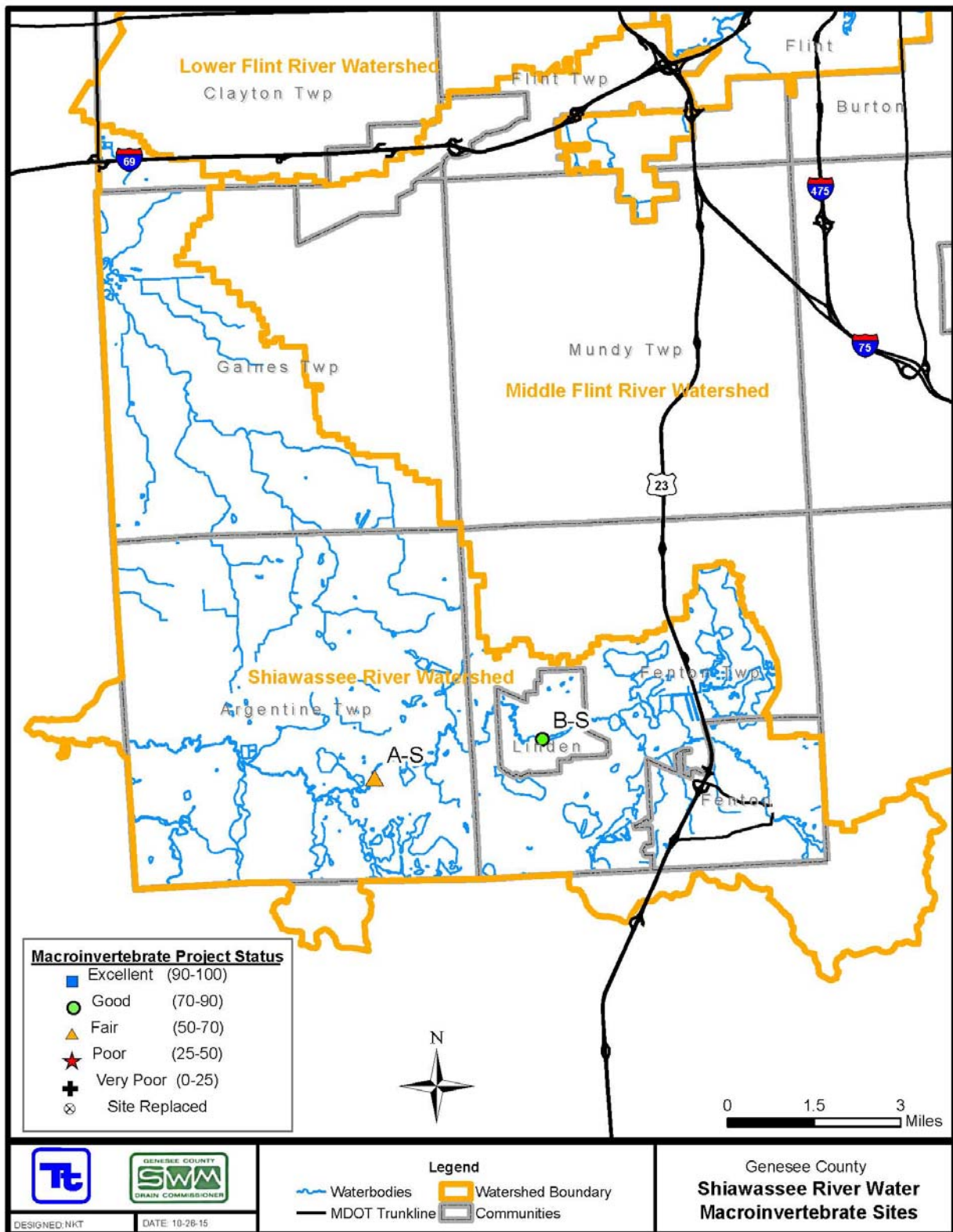


Figure 8-4: Macroinvertebrate Study Results for the Shiawassee River Watershed



9. ILLICIT DISCHARGE ELIMINATION PLAN (IDEP)

The purpose of the Illicit Discharge Elimination Plan (IDEP) is to establish a program to eliminate illicit discharges and connections, including the discharge of sanitary wastewater, to Genesee County's separate storm water drainage system. The County is required to conduct dry weather screening of all municipal separate storm sewer system (MS4) outfalls, also referred to as point source discharges (PSDs), to comply with their National Pollutant Discharge Elimination System (NPDES) permit.

This Section summarizes the IDEP activities including the illicit connections identified within each watershed and a list of PSDs identified during 2013-2014 IDEP field investigations. Also included are Phase II Permit application maps and tables showing PSDs for each municipality investigated.

Figure 9-1 shows the illicit discharge notification system process. During field investigations, crews investigate MS4 outfalls and private drains within the County drainage system. Each outfall is mapped and investigated at least once every five years. If dry weather flow is present at an outfall, the flow is sampled, analyzed, and tracked upstream to its source. When the pollution source is isolated, Genesee County works with the responsible party to eliminate the discharge.

During 2013-2014, IDEP field investigations of the local communities had been complete, except for Burton and Genesee County due to the number of outfalls. Efforts were focused on County owned outfalls:

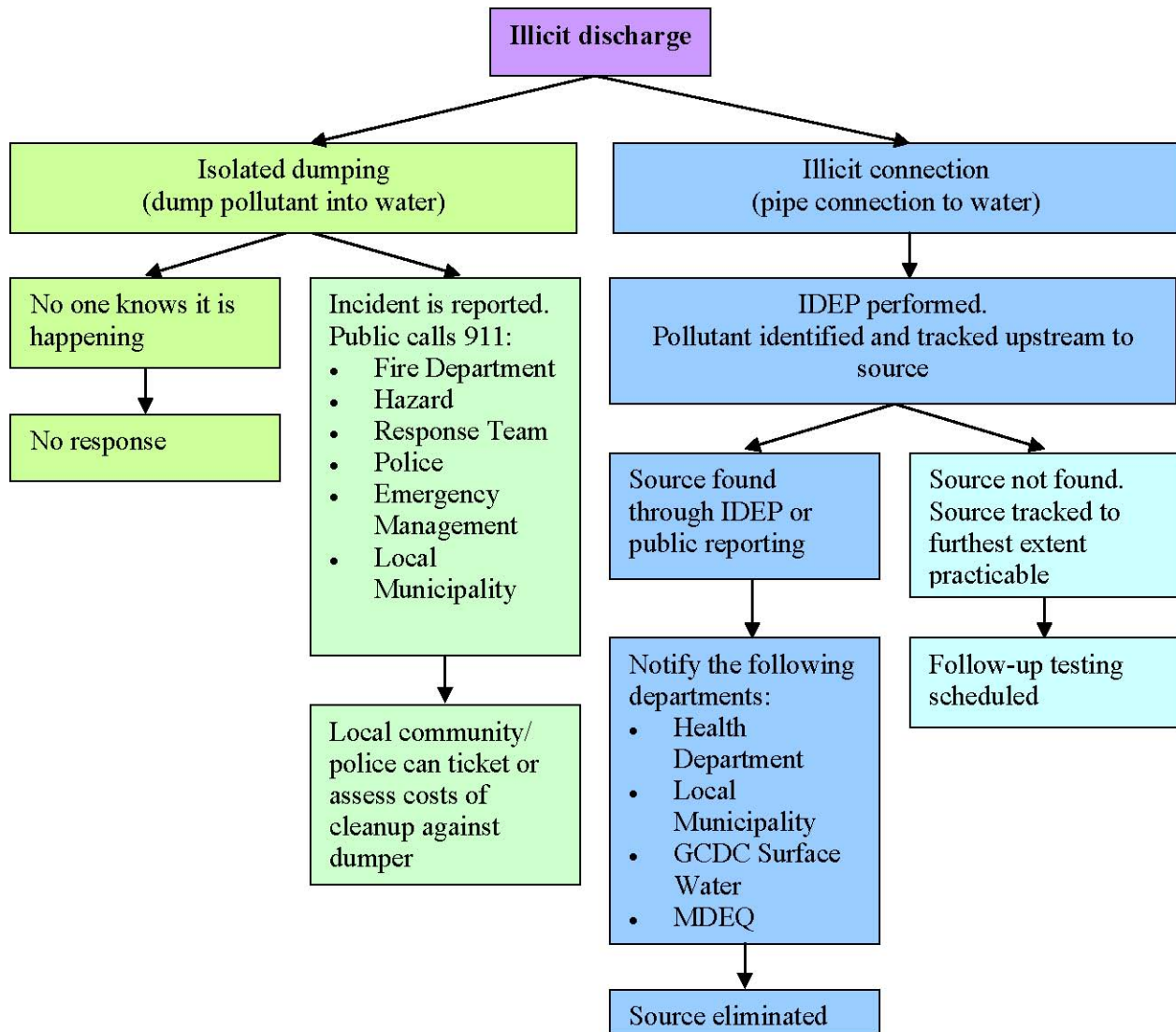
Genesee County received a SAW grant to perform an asset management plan on the structures belonging to the Genesee County Road Commission. So the Road storm systems and outfalls can be mapped quicker and more accurately. Much of the Field efforts in Summer 2015 were focused on this work.

Table 9-1: Total Number Outfalls Investigated
October 2014- September 2015

Need to be investigated	Total outfalls	Already Investigated	New Outfalls	Total Outfalls Investigated 2014-2015
GCDC	11/3/2014	13		13
GCDC	12/2/2014	19	1	20
GCDC	12/3/2014	16	2	18
GCDC	12/29/2014	9	6	15
	Total	57	9	66

Outfalls Investigated in 2014-2015

Figure 9-1: Illicit Discharge Notification System Process



The following tables and figures show the outfalls investigated that required follow up. The section concludes with a summary of the follow-up investigations undertaken in 2014-2015.

These discharges were found during SAW Grant inspections of the GCRC drainage system.

5282 North Vassar Rd, Flint

During our investigation of the GCRC drainage system along North Vassar Rd, we observed intermittent dry-weather flow entering the roadside ditch coming from a 4 inch PVC pipe (**photo 1**) on the north side of the driveway to 5282 North Vassar Rd (**photo 2**). The discharge water smelled heavily of petroleum. It is recommended that GCDC contact the home owner at 5282 North Vassar to determine the source of the discharge.



A+ Self Storage & U-Haul on Fenton Road

During our investigation of the GCRC drainage system along Maple Ave., we observed intermittent dry-weather flow entering the roadside ditch coming from a 12 inch concrete pipe (**photo 3**) on the north side of the Maple Ave just west of the culvert going underground to the south. The culvert is just west of Fenton Rd. The discharge water contains concrete wash off coming from the A+ Self Storage & U-Haul on Fenton Road. It is recommended that GCDC send Stormwater Management Construction Site Operator to A+ Self Storage & U-Haul to investigate.



7025 Coldwater Rd, Flushing

During our investigation of the GCRC drainage system along Coldwater Road, we observed dry weather flow coming from a small, partially concealed, corrugated plastic pipe inside the upper southeast corner of a catch basin (**photo 4**) on the west side of the driveway to 7025 Coldwater Road (**photo 5**). The catch basin smelled strongly of sewage and contained gray sanitary fungus staining. No sample was taken of the flow but observations point to an illicit discharge entering the Genesee County MS4 system. It is recommended that GCDC sample the dry weather flow for E. coli, ammonia, and surfactant to confirm the illicit discharge followed by a dye test at 7025 Coldwater to confirm the source.



10. NEW STORM WATER POINT SOURCE DISCHARGES (PSD)

In the 2008 annual report, PSD points were identified on the permit application map by municipality. These maps have been updated in the 2010 report to reflect the change in management of the MS4 areas in the second permit cycle. In the past, PSD's were tracked by watershed. In 2009, municipal ownership (city, township, etc.) of PSD's was assigned by GCDC. Municipalities that were designated by GCDC as containing MS4 outfalls include:

- City of Burton
- City of Clio
- City of Davison
- City of Fenton
- City of Flushing
- City of Grand Blanc
- City of Linden
- City of Mt. Morris
- Davison Township
- Fenton Township
- Flint Township
- Flushing Charter Township
- Genesee Charter Township
- Mt. Morris Charter Township
- Mundy Charter Township
- Vienna Township
- Genesee County
 - Agencies
 - Nested Jurisdictions

A complete copy of outfalls in a GIS Layer has been provided periodically to the MDEQ at their request. The Permit Application- Table 1 (submitted April 2014) was a list of all the outfalls identified (as of April 2014) for the above communities. There have been 248 additions to the Permit Application- Between April 1 and Oct 1, 2014. That complete list was provided in the last reporting cycle. , Below is the outfalls that have changed since Oct 1, 2014

GCDC

OutfallNum	Latitude	Longitude	StructureT
5623005			Outfall
8725254			Outfall
8612001			Outfall
8612002			Outfall
7622251			Point of Discharge

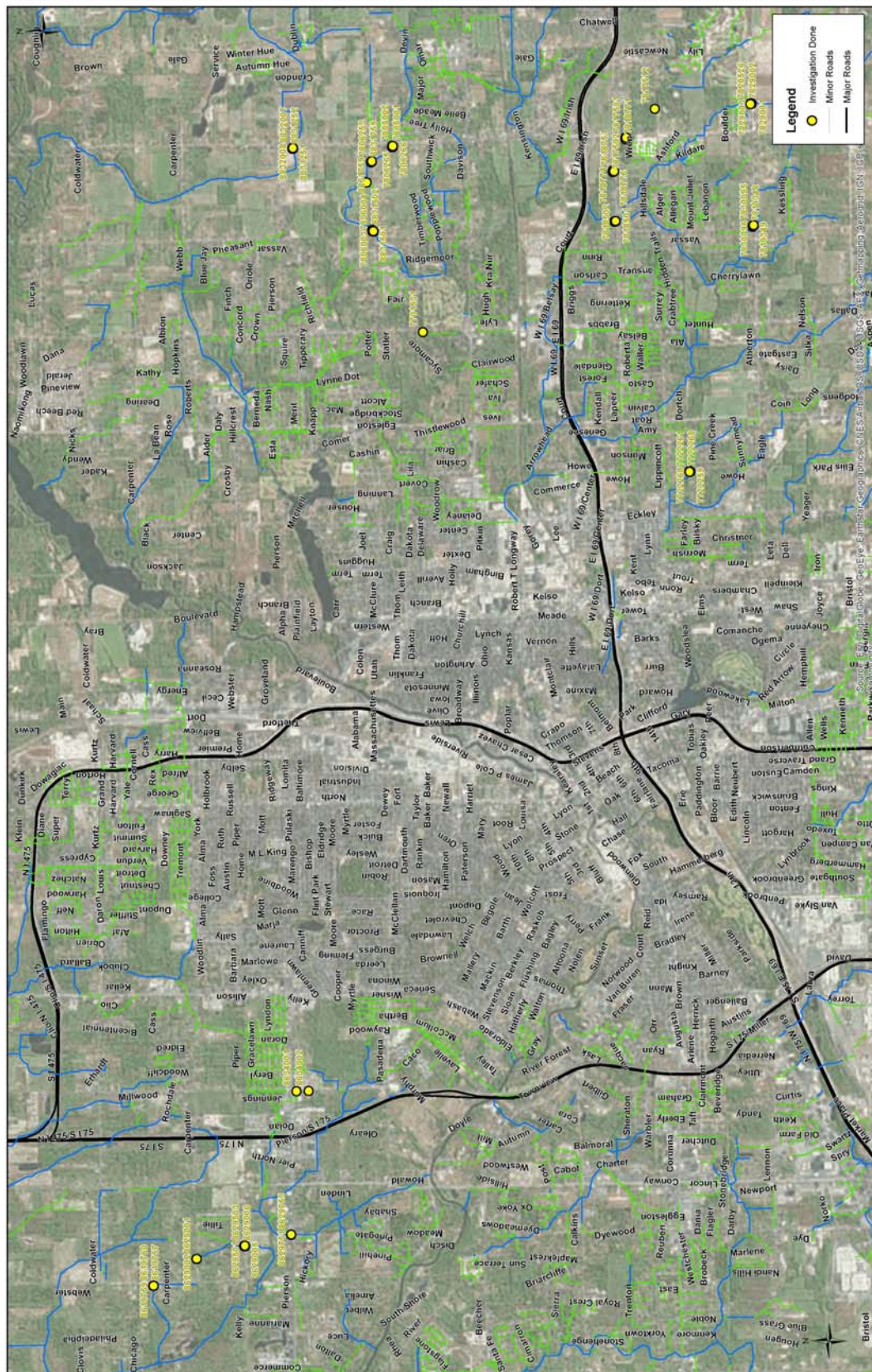
Due the large number of outfalls for Genesee county and City of Burton, ongoing efforts to map outfalls is being done. Genesee County received an Asset management grant that will assist our ability to map the Road Commission storm water infrastructure. This will allow us to locate and map outfalls more efficiently.

Table 10-1: Genesee County Assigned Outfalls for 2014-2015

Outfall #	Owner	Receiving Water Body	Date Investigated	Sampled Yes_No	Comments
7701531	C of Burton	Kearsley Creek	12/3/2014	No	
7722252	GCDC 1182	Robinson & Curtis 0344	12/29/2014	No	
7722253	GCDC 1182	Robinson & Curtis 0344	12/29/2014	No	
7722254	GCDC 1182	Robinson & Curtis 0344	12/29/2014	No	
7722255	GCDC 1182	Robinson & Curtis 0344	12/29/2014	No	
7722256	GCDC 1182	Robinson & Curtis 0344	12/29/2014	No	
7722257	GCDC 1182/0344	Robinson & Curtis 0344	12/29/2014	No	
7722258	GCDC 1182	Robinson & Curtis 0344	12/29/2014	Yes	
7722752	GCDC 0811	Robinson & Curtis 0344	12/29/2014	Yes	
7722753	GCDC 0344	Robinson & Curtis 0344	12/29/2014	No	
7805001	GCRC	Brier Creek Drain 0130	12/3/2014	No	
7805002	GCRC	Brier Creek Drain 0130	12/3/2014	No	
7806003	GCRC	Brier Drain 0130	12/3/2014	No	
7806004	GCDC 1510	Brier Drain 0130	12/3/2014	No	
7806252	GCRC	Brier Creek Drain 0130	12/3/2014	No	
7806265	GCRC	Brier Creek Drain 0130	12/3/2014	No	
7806266	GCRC	Brier Creek Drain 0130	12/3/2014	No	
7817501	GCRC	Kearsley Creek	12/2/2014	No	
7817502	GCRC	Kearsley Creek	12/2/2014	No	
7817512	GCRC	Kearlsey Creek	12/2/2014	No	
7818501	GCRC	Phillips Drain 0080	12/2/2014	No	
7818502	GCRC	Phillips Drain 0080	12/2/2014	No	
7818507	GCRC	Phillips Drain 0080	12/2/2014	No	
7818508	GCRC	Phillips Drain 0080	12/2/2014	No	
7818751	GCRC	Kearsley Creek	12/2/2014	No	
7818771	GCRC	Kearsley Creek	12/2/2014	No	
7818774	GCRC	Kearsley Creek	12/2/2014	No	
7818775	GCRC	Kearsley Creek	12/2/2014	No	
7819348	GCRC	Phillips, East Branch of 0319	12/2/2014	No	
7819349	GCRC	Phillips, East Branch of 0319	12/2/2014	No	
7820525	GCRC	Lobban Drain 0300	12/2/2014	No	
7829001	GCRC	Lobban Drain 0300	12/2/2014	Yes	

7829002	GCRC	Lobban Drain 0300	12/2/2014	No	
7829003	GCRC	Lobban Drain 0300	12/2/2014	No	
7830095	GCRC	Phillips, East Branch of 0319	12/2/2014	No	
7830096	GCRC	Phillips, East Branch of 0319	12/2/2014	Yes	
8619757	GCRC	Monroe Branch 0323	11/3/2014	No	
8619759	GCRC	Monroe Branch 0323	11/3/2014	No	
8619760	GCDC 0323	Monroe Branch 0323	11/3/2014	No	
8629001	GCRC	Root Drain 0185	11/3/2014	No	
8629002	GCRC	Root Drain 0185	11/3/2014	No	
8629005	GCRC	Root Drain 0185	11/3/2014	No	
8629006	GCRC	Root Drain 0185	11/3/2014	No	
8629501	GCRC	Root Drain 0185	11/3/2014	No	
8629503	GCRC	Root Drain 0185	11/3/2014	No	
8629751	GCRC	Hartshorn Drain 0458	11/3/2014	No	
8629753	GCRC	Hartshorn Drain 0458	11/3/2014	No	
8634001	GC Schools	Hartshorn, Branch #1	11/3/2014	No	
8634002	GC Schools	Hartshorn,	11/3/2014	No	
8831251	GCRC	Powers-cullen Drain 0014	12/3/2014	No	
8831252	GCRC	Powers-cullen Drain 0014	12/3/2014	No	
8831501	GCRC	Brier Drain 0130	12/3/2014	No	
8831502	GCRC	Brier Drain 0130	12/3/2014	No	
8831754	GCDC 1510	Brier Drain 0130	12/3/2014	Yes	
8831758	GCRC	Brier Drain 0130	12/3/2014	No	
8832007	GCRC	Powers-cullen Drain 0014	12/3/2014	No	
8832008	GCRC	Powers-cullen Drain 0014	12/3/2014	No	
7820526	GCRC	Lobban Drain 0300	12/2/2014	No	New outfall 2014
8831759	GCRC	Brier Drain 0130	12/3/2014	No	New outfall 2014
7806253	GCRC	Brier Drain 0130	12/3/2014	No	New outfall 2014
7722259	GCDC 1182	Robinson & Curtis 0344	12/29/2014	No	New outfall 2014
7722260	GCDC 1182	Robinson & Curtis 0344	12/29/2014	No	New outfall 2014
7722261	GCDC 1182	Robinson & Curtis 0344	12/29/2014	No	New outfall 2014
7722254 A	GCDC 1182	Robinson & Curtis 0344	12/29/2014	No	New outfall 2014
7722257 A	GCDC 1182/0344	Robinson & Curtis 0344	12/29/2014	No	New outfall 2014
8534770	GCDC	Crooked Creek outlet	12/30/2014	No	New outfall 2014

Figure 110-2: Genesee County Assigned Outfalls for 2013-2014



Follow up from Incident Reports from Tetra tech
or illicit discharges reported from public

Sample Location	Background & Follow-up Inspection	Results & Comments
Lake Fenton Middle School Fenton Twp Sec-9	On 1-12-15, ROWE Engineering evaluated arsenic removal system in boiler room. It was found that backwash water from arsenic removal system directed to floor drain which is connected to storm sewer. On 1-30-15, GCDC-SWM to Lake Fenton School to re-route floor drain to sanitary sewer. On 9-1-15, Floor drain was re-routed to sanitary sewer.	File Closed
GM Truck Plant 6060 W. Bristol Rd Flint Twp Sec-30	On 2-21-15, GM informed GCDC-SWM about overflowing of paint shop cooling tower and flows to parking lot and storm sewer catch basin and then discharges to West Branch of Swartz Creek. GM took action to stop flow. GM also notified MDEQ.	File Closed
Speedway Station 6533 Pierson Road Mt. Morris Twp Sec-31	On 4-15-15, GCDC-SWM staff observed that Speedway employee cleaning sidewalk with soapy water. Staff spoke with store manager and asked not to use soap to clean in the future and suggested to use hot water.	File Closed
Spray My lawn 5289 N. Genesee Road Genesee Twp Sec-22	On 5-1-15, Anonymous called PEAS and complained that the facility wash trucks & equipment outside the building and fertilizer and pesticide washed out into storm sewer. On 5-8-15, GCDC-SWM inspected the facility and observed no evidence of dumping residual fertilizer and pesticide outside the building. In 2014, we received similar complaints for this facility.	File Closed.
7025 Coldwater Road Flushing Twp Sec-24	On 6-11-15, Tetra Tech conducted dry weather flow investigation and observed a catch basin located on west side of drive way gray sanitary fungus staining and also noticed smell of sewage. GCDC-SWM conducted inspection in two occasions and found no flow at all. Staff also did not smell of raw sewage.	File Closed This can be an isolated incident.
8209 Linden Rd Mt. Morris Twp Sec-5	8209 Linden complained Genesee County Health Dept. that our storm sewer located south of her property is connected to wasteline. Our maintenance cleaned the old tile this summer. On 10-13-15, we have conducted dry weather investigation and found no sign of dry weather flow in the tile downstream of her property. We also informed about our findings to GCHD	File Closed

7216 N. Saginaw Rd Genesee Twp Sec-7	On 7-29-15, GCDC-SWM received a complaint from Genesee Twp that the facility doing power wash to its exterior wall. As a result, dry paint chips deposited around catch basin behind 7216 Saginaw Rd. GCDC-SWM staff visited and asked its contractor to stop power washing and clean dry paint chip around catch basin. On 7-31-15, GCDC-SWM wrote to its contractor not use similar practice in future.	File Closed
6086 & 6094 Saginaw Rd Genesee Twp Sec-15	On 8-27-15, MDEQ received a complaint about leaking liquid waste from garbage truck around these businesses. GCDC-SWM staff conducted a site inspection around these two businesses and found no evidence of liquid waste dumped into ground. Provide inspection report to MDEQ	File Closed
5357 Southway Drive Flint Twp Sec-32	On 9-1-15, Tetra Tech informed GCDC-SWM that a pipe from 5357 Southway Dr. discharges laundry water into a catch basin which is a part of county drain. On 10-1-15, GCDC-SWM conducted a dye test and confirmed an illicit connection. On 10-2-15, we wrote a letter to re-route the line to sanitary sewer. On 10-27-15, GCDC-SWM conducted a follow-up inspection and confirmed illicit connection is eliminated	File Closed.
1389 Woodnoll Drive Mundy Twp Sec-12	On 9-25-15, PEAS made a complaint regarding a cement truck dumped waste water from concrete mix truck residue cleaning into a catch basin in front of 1389 Woodnoll Dr. GCDC-SWM staff inspected the site and verified waste water from concrete truck residue cleaning inside the sump of catch basin. Concrete truck was working to pave driveway at 1358 Woodknoll Dr. GCDC staff meet contractor and asked not to discharge waste water from concrete truck into storm sewer. He told that he will not use similar practice in the future.	File Closed
1535 Lambden Road Flint Twp Sec-16	On 8-31-15, PEAS complained tthat contractor pumping contaminated water into roadside ditch. On 8-31-15, GCDC-SWM inspected that site and found no sign of discharge on the ground and ditch. However, neighbors told that they stopped driver pumping into roadside ditch. On 8-31-15, GCDC-SWM called contractor and explained the requirements of NPDES Phase II program and contaminated water from basement not allowed to go to county drain. On 9-1-15, GCDC wrote a letter to contractor mentioning that if water in the basement seems contaminated it must go to sanitary sewer for treatment. Contractor told that she will work on getting a memo out to the field crew not to pump contaminated basement water on ground or roadside ditch. Contractor wiil work with GCDC-WWS to receive necessary permit if contaminated basement water will be pumped to sanitary sewer line.	On-going