



Genesee County Phase II Municipalities Annual Report

November 1, 2012 – October 31, 2013

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, 2012, to October 31, 2013, 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.

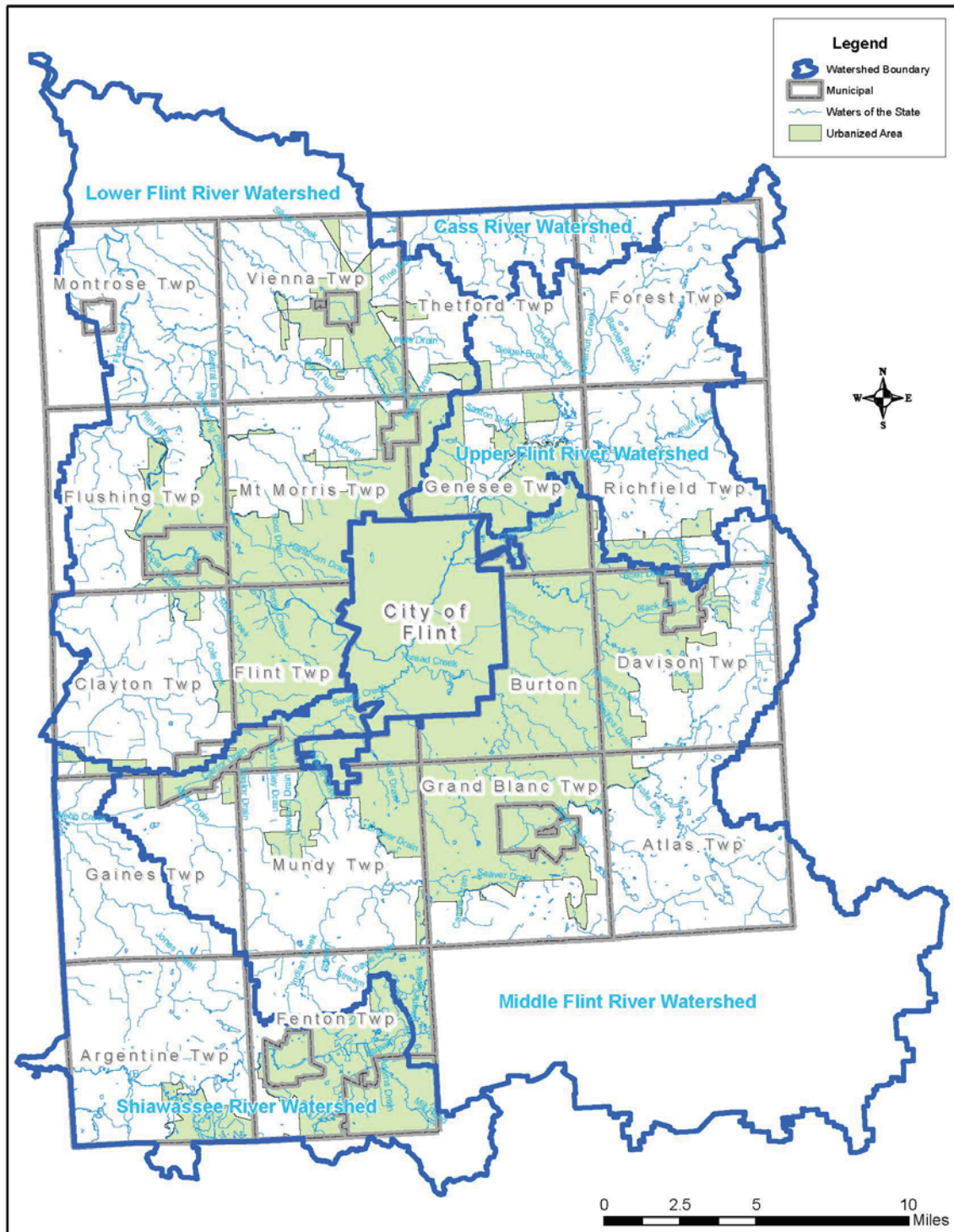
Watershed Delineation

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

Table 1-1 lists the Genesee County watershed-planning communities that have a 342 contract. Note that not all communities within Genesee County have NPDES permits and that Phase II status was realigned during the 2007-2008 reporting period. For the 2008–2013 cycle, some of the non-Phase II municipalities chose not to re-sign the 342 contract. Of the Phase II communities, Grand Blanc Township is the only Phase II community that chose not to re-sign the 342 contract and to provide all their own requirements for the new permit cycle. Although City of Flint was a Phase I community, in March 2010, they signed a 342 contract for public education services only. There are 4 **non Ph II communities** that chose to continue partnering through the contract. In 2013 Both Richfield Township and Clayton Township chose to opt out of the program for financial reasons.

Table 1-1: Contract Communities

Argentine Township	City of Flint (Public Education)	Mount Morris Township
City of Burton	Flint Township	Mundy Township
City of Clio	City of Flushing	Richfield Township
City of Davison	Flushing Township	City of Swartz Creek
Clayton Township	Genesee Township	Vienna Township
Davison Township	City of Grand Blanc	Village of Lennon
City of Fenton	City of Linden	Genesee County
Fenton Township	City of Mount Morris	

Nested Drainage System Agreements

The county has a nesting agreement with Bishop Airport.

The County has a nesting agreement with all but two (*) of the Schools listed below.

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
Goodrich	*No
Grand Blanc	Y
Kearsley	Y
Lake Fenton	Y
Lake Ville	No
Linden	Y
Montrose	*No
Mt. Morris	Y
Swartz Creek	Y
Westwood Heights	Y

*Schools that have been dropped from nesting due to noncompliance (letters sent Sept 2010)

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. After the City of Flint signed a contract in March 2010, they became a member of the SWAC.

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

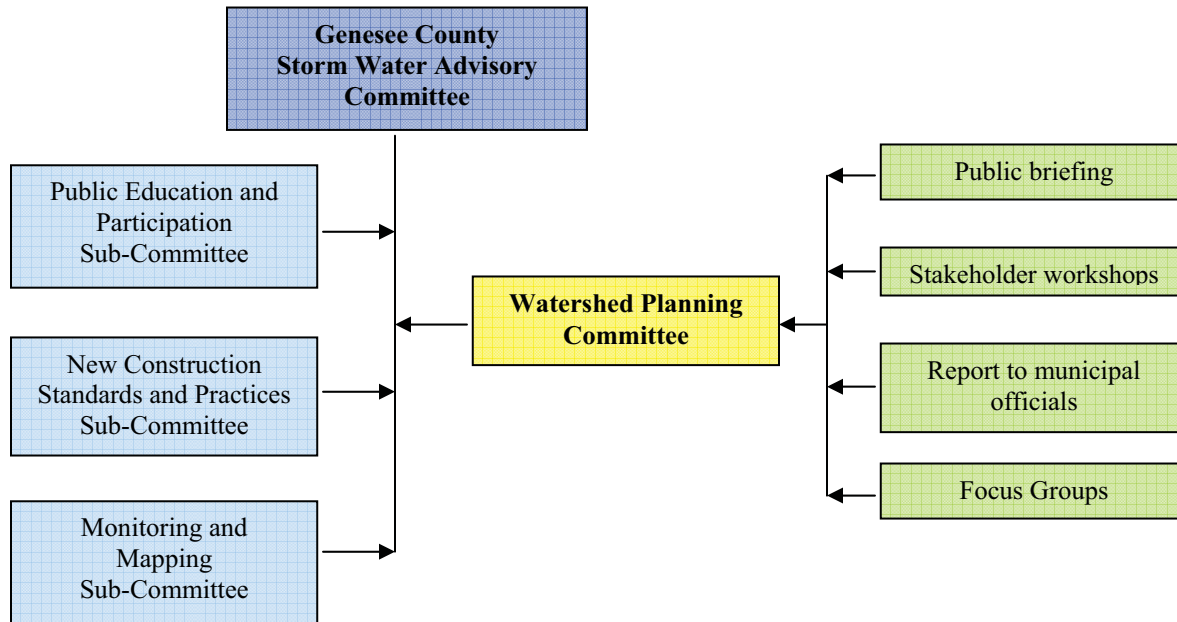
These sub-committees meet as needed along with stakeholders and/or individuals with specific specialized knowledge to implement the watershed plan, education plan and Illicit Discharge Elimination Plan (IDEP). A brief description of sub-committee duties is presented below Figure 1-2.

Figure 1-2 also shows the watershed planning decision-making process and sub-committee relationships. Work conducted by the Watershed Planning Committee(s) is used in development of the Lower Flint, Middle Flint, Upper Flint, and Shiawassee River Watershed Management Plans (WMPs). The Watershed Planning Committee(s) are made up of those communities that are located within a specific watershed. Each community serves on at least one sub-committee.

SWAC meetings during this reporting period were held on:

- October 17, 2012
- November 21, 2012
- December 19, 2012
- January 16, 2013
- February 20, 2013
- March 20, 2013
- April 17, 2013
- May 15, 2013
- September 18, 2013

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.

Watershed Management Plans and Storm Water Pollution Prevention Initiatives

Watershed Management Plans (WMP) for the Upper and Lower Flint as well as the Shiawassee River were submitted and accepted by the DEQ in 2008. In June 2009, permittees submitted their Storm Water Pollution Prevention Initiative (SWPPI) to the DEQ. The SWPPI contains action based on the WMP goals and objectives as well as s from the new NPDES permit requirements. Permittees are committed to undertake these actions.

2. PUBLIC EDUCATION AND PARTICIPATION SUB-COMMITTEE ACTIVITIES

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

December 6, 2011

PE Membership included:

- **City of Burton – Paula Zelenko**
- **City of Clio – William Kovi**
- **City of Davison – Michael Hart**
- **City of Flint – Daugherty Johnson**
- Clayton Township – **Chris Gehringer**
- **Flint Township – Karyn Miller**
- Forest Township – Vacant
- **Mundy Township – Dave Guigear**
- Thetford Township – Eileen Kerr
- **Vienna Township – Randy Taylor**
- Village of Otisville – David Tatro

Bolded members are Phase II communities

The purpose of the PE committee is to implement the Public Education Plan (PEP) and assigned objectives in the action plan (Section 8 of the Watershed Management Plan). The PEP plan was revised to match the withdrawn MDEQ 2008-2013 guidance “Key Messages”. The actual implementation did not change. Implementation Table attached.

The City of Flint has signed a contract for Public Education, and similar to other 342 members, are now receiving the benefits of the SWAC’s public education efforts.

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 through the Drain Commissioner's Office has coordinated, developed, and implemented several elements of the PEP. Work during this permit cycle included:

- Conducted riparian landowner workshops and distributed materials
- Program implementation with drain office
- Recruited volunteers and booth materials for the Genesee County Fair, Earth Day, the Crim and other events
- Planned, wrote, and designed two community updates
- Researched events suitable for Phase II education community outreach
- 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.
- *Materials and Presentation for Riparian Land Owners:* GCD organized and presented at the Workshops described in the Activities Update.

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.

"Our Water" Newsletter: There has been a Community Update published and distributed in October 2012 and September 2013. Although both publications are available to the public, the purpose of the community updates is to keep the Communities updated with the changes to the permit program. Included in Appendix.

Materials and Presentation for Riparian Land Owners: An informational brochure was developed and served as a mail invite to a free workshop within the Middle Flint, Thread Creek Watershed and the Shiawassee Watershed. Literature was sent to 308 land owners within the Thread Creek Watershed (located in City of Flint, City of Burton, Grand Blanc Twp, City of Grand Blanc and Atlas Township) Literature was sent to 453 land owners within the Shiawassee River Watershed (located in Gaines Township, Argentine Township, Fenton Township, City of Fenton, City of Linden) the Residential Riparian landowners were invited to attend one of two Riparian Landowners Workshops were held on:

- August 26, 2013 at the Grand Blanc Township Library (14 Attendees)
- August 28, 2013 at the Camp Copniconic grounds. (7 Attendees)

Genesee Conservation District staff assisted in the coordination and presentations. Besides direct mailing, brochures are made available to each local Communities and at booth events. The brochure contained information on basic stream bank stabilization techniques. For a copy of the brochure mailer, see Appendix A. Working through the county since 2009, we have completed the direct mailings to the residential riparian landowners on the natural watercourses. Now this program has been implemented once within all the Watersheds, the program will be reevaluated for effectiveness to determine if it will be continued or replaced.

Speaker Materials and Presentations: An educational PowerPoint presentation was developed during the last permit cycle. 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:

2012

2012

2012

2012

2013

2013

Brochures: In the last permit cycle, 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 an additional 10,000 were reprinted in 2010. All have been distributed and in September 2013, we are in the process of having another 10,000 printed. The brochures are given away actively at events (information booth, riparian landowner, canoe trips, stenciling, etc...), and many have been passively picked up by the public at local community Halls and other venues. Each municipality is periodically given brochures to distribute for public use and will report their activities under separate cover.

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.

Time of Sale Packets: 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.) A copy of the septic system booklet can be found in Appendix A.

Promotional Giveaways: GCDC purchased an additional 4000 promotional giveaways (premiums) in 2012 to further storm water awareness. 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 and give them an educational brochure. In Sept 2013 an additional 4000 premiums were ordered for 2013-2014 events.

Information Booth: A display booth was developed in 2006 by CAER and the PE committee. 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.

4/6/2013-4/7/2013	Home and Garden Show (Perani Arena)	539 educated
4/13/2013	Earth Day (U of M Flint Campus)	136 educated
6/29/2013	Flint Farmer's Market	136 educated
8/12/2013- 8/18/2013	Genesee County Fair	1173 educated
8/22/2013-8/24/2013	The Crim Expo (Riverfront Conference Center)	834 educated
9/22/2013	Grand Blanc Farmer's Market	71 educated
9/26/2013	Flint Farmer's Market	74 educated
9/28/2013	Applewood Harvest Festival	416 educated

*Demographic Data by community in Appendix A

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 contracted with the GCD to provide storm water education services to school-aged children on behalf of the Phase II permittees. During 2012-13 GCD reached over XXX students in the Phase II communities. In school presentations which may have included the Enviroscapes or an arts and craft project focusing on aquatic habitat and its relation to the storm water system in Genesee County. Kids (approximately) ages 6-12 had an interaction period with staff that focused on the water cycle, watersheds and possible sources of



non point source pollution. They then had a hands on component that reiterated the concepts introduced in previous discussion.

Due to staff changes the GCD was unable to presentations throughout the entire reporting period. Following is a list of the presentations made in 2012-2013:

Table 2-1: Breakdown of GCCD Water Quality Presentations in Fiscal Year 2012

Month	Event	School aged children reached:	Parents/adults reached:
April 18, 2013	Classroom- Southwestern Academy 10 th -11 th grade	30	1
April 22, 2013	Classroom- Ripley Adult/ Alternative HS age 16-19	33	1
April, May, June 2013	4- weekly classes at the Boys and Girls Club	15-30/week	Unknown
June 2013	3- classes with teens at the Boys and Girls Club	20-30/week	N/A
	2- classes with student age 7-12 at U of M Flint	15-20/week	N/A
	4- weekly classes at the Boys and Girls Club	15-20/week	Unknown
July 2013	3- classes with student age 7-12 at U of M Flint	15-20/week	Unknown
	3 multi class: New Standard Sch 2 nd - 4 th grade		
	2 multi class: Montegue Elem. K - 5 th grade		
	1- classes age 8-12 at Camp Copneconic		
	1- classes age 5-15 at Crim Summer Camp		
	2- classes age 5-12 at Howard Estates		
	2- weekly classes at the Boys and Girls Club	15-20/week	Unknown
August 2013	3- classes with student age 7-12 at U of M Flint	15-20/week	Unknown
	1 multi class: New Standard Sch 2 nd - 4 th grade		
	1- classes age 8-12 at Camp Copneconic		
	3- classes age 5-15 at Crim Summer Camp		
September 2013	5- single classes at the Boys and Girls Club	20-30/week	Unknown
	3- classes with student age 7-12 at U of M Flint	15-20/week	Unknown
	3-multi class: Freeman Elem. 2 nd - 6 th grade		

GCDC also provides an opportunity for classrooms to check out the enviroscape for private class use.

- May 2013: Mt. Morris Middle School checked out the enviroscape
 - Used in 3 classes by 3 teachers. 3 adults and 162 students received a storm sewer lessons.

Genesee County Conservation District (GCCD) Education Program: GCDC contracted with the Genesee County Conservation District (GCCD) to provide storm water education services to school-aged children on behalf of the Phase II permittees. During 2012-13, GCCD reached over 900 participants in Genesee County communities. (see Appendix A for more detailed information).

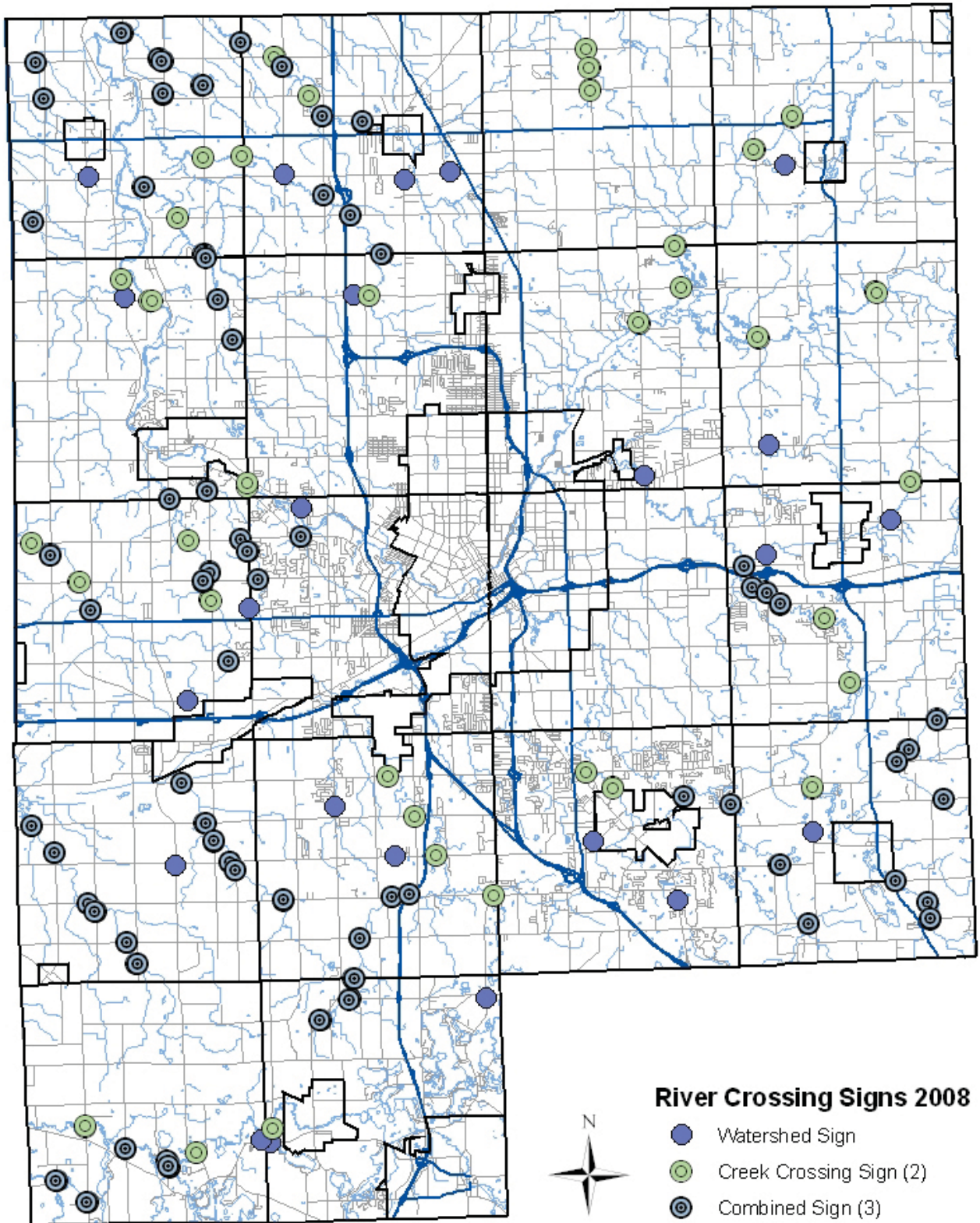
The Enviroscope model is the primary focus of the Conservation District's education program. The program can be taught at any site, but since the Conservation District has been receiving requests for all age groups, they have made modifications to the program to accommodate various age ranges. Also this year Jeff Johnson has added stormwater pins for the kids.



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. Stream/river crossing identification signs have also been placed to increase public awareness. No new signs were added during this reporting period. Existing signs were maintained. 56 additional signs are ordered and being made to be installed by the Cities for 2013-14 fiscal year.



Figure 2-1: River Crossing Signs Placed as of October 2008



Catch Basin Stenciling Program: The GCDC 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.

- 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 2012-2013, GCDC staff purchased an additional 1200 4” metal storm drain markers to be installed over the next several years. Storm drain markers are installed on catch basin grate covers located within road ditches and rear yards.
- Volunteer stenciling groups were organized by both FRWC and GCD. Also GCDC 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: See Appendix A

FRWC: Held 10 Storm drain stenciling events: See Appendix A

GCDC: Stenciled those storm inlets that were cleaned (weather permitting) approx 300
250 Storm drain markers have been placed over the last couple of years on Catch basins
Held 1 Storm drain stenciling events: Provided supplies and training to school.

Canoe Trips on the Flint River. Due to weather there were an additional 6 canoe trips scheduled and advertized this summer. Many were rescheduled and were held as shown below:

June 1, 2013	2 ½ hour paddle	Riverview Park to Flushing	7 attendees
June 15, 2013	3 hour paddle	Flushing to Montrose	14 attendees
July 6, 2013	2 ½ hour paddle	Irish Road To Mott Lake	20 attendees
July 20, 2013	2 ½ hour paddle	Montrose To Birch Run	6 attendees
Aug 3, 2013	2 hour paddle	Bray Road To Vietnam Veterans Park	13 attendees
Aug 17, 2013	2 hour paddle	University Ave to River Rd	11 attendees
Sept 7, 2013	2 ½ hour paddle	Mitson’s Landing to Flushing	8 attendees
Sept 21 2013	4+ hour paddle	Taymouth twp to Flushing	14 attendees



Also the FRWC had videoed a few participants reactions from being on the Flint River after the August paddle and posted the results on youtube.

<http://www.youtube.com/watch?v=iBbvFGOUgpM&feature=plcp>

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. There is a Meeting planned to talk the GISD education coordinators in January 2014.

Global Rivers Environmental Education Network (GREEN): Project GREEN is a curriculum based, mentored program that seeks to engage young people as active citizens to improve conditions in their watersheds now and in the future. As part of this program, students receive classroom education on water quality and testing procedures and are trained to obtain samples at various sites within the watershed. Each year, schools participate in a summit, where the students are able to present their results. Several Genesee County and City of Flint Employees participated in this program as mentors. **Section 7** provides additional detail on Project GREEN. Participation from:

- Beecher Middle School
- Bendle High School
- Carman Ainsworth High School
- Clio Carter Middle School
- Davison Middle School
- Flushing Middle School
- Grand Blanc Middle School (East and West)
- Kearsley Armstrong Middle School
- Lakeville Middle School
- Linden Middle School
- Mt. Morris Jr. High School
- St John Vianney Catholic School
- Swartz Creek Middle School
- Westwood Heights Hamady High School

Many schools had multiple classes and there were over 22 Genesee County school teachers involved.

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.

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

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 or a nonprofit group. These efforts are listed below and included in Appendix A

- 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.
- The FRWC coordinates a river cleanup on the Flint River and its tributaries both within Genesee and Lapeer counties. The Cleanup was on April 27th. 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.
- There is an Annual River cleanup on the first week of June along the Shiawassee River, organized by a Fenton council member.



- Friends of the Shiawassee in another watershed group that is focusing on the health of the Shiawassee River within Genesee County. There have been discussions with Drain Office Staff on expanding the Benthic monitoring program.
- 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.
- 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 including City of Flint participate and/or support this program both financially and with staff. In the spring and fall there are HHW and electronic waste collections. City of Flint hosts a site at their Water service center. 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. The Goodwill Industries will take electronic waste.
 - October 13, 2012: Carter Middle School, Flint Water Service Center, Goodwill Industries, Averill Ave
 - May 18, 2013: Grand Blanc HS, Flint Water Service Center, Goodwill Industries, Averill Ave
 - Oct 26, 2013: Davison HS, Flint Water Service Center, Goodwill Industries, Averill Ave

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.

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 held meetings on the following dates:

- February 19, 2013

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 focus of these meeting was to discuss what has happened to date on the Storm water ordinance and BMP Manual.

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 CSP Sub-Committee is setting the minimum standards for communities to adopt. The standards are a combination of state requirements and GCDC flood control requirements. The local governments may elect to adopt stricter standards, but must use the Sub-Committee's Storm Water Ordinance at a minimum. They may also choose to modify it, although the ordinance was written to be simple to administer, easily understood, and focused on improving water quality. Each community will have to adopt an ordinance, whether they choose the Sub-Committee's or a more stringent 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 the site plans either because a county drain is directly involved and must be

reviewed, 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

It should be noted that the standards currently in place deal with water quantity. The new standards will also deal with water quality, and will expand both the community's and GCDC'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 is developing 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 and are not intended to supersede or contradict construction SESC (Part 91 of Public Act 451).

Communities will be able to either adopt the CSP Sub-Committee's BMP Manual or create their own. The Sub-Committee is also working to address long-term BMP operation, maintenance, and schedule issues.

Since the ordinance template and BMP manual are draft and in the process of being adopted, they are not included in this report. They have been previously submitted to the MDEQ as part of the revised SWPPI submittal.

4. MONITORING AND MAPPING SUB-COMMITTEE ACTIVITIES

The Monitoring and Mapping (M&M) Sub-Committee met only once during this reporting period:

February 11, 2013

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 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. On April 18, 2013, GCDC and Tetra Tech held two training sessions on Stormwater Good Housekeeping practices. Attendees could either attend the morning session or the afternoon session. These sessions explained the importance of preventing contamination from storm water run-off and ways employees can be involved at their facility. Attendance at the sessions met the permit requirements for employee training. In addition to covering the topics below by PowerPoint presentation, a video entitled “Storm Warning: Stormwater Pollution Prevention” by ExCal Visual LLP was presented to reiterate the major topics of discussion.

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

A copy of the Power Point presentation may be obtained upon request. A list of attendees is available on the www.gcdcswm.com website under Our water then training.

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.

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 3,600 in 2013. 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. For this reporting period See Attachment A

Schools are also encouraged to participate in a summit, where students are able to present their findings. On May 17, 2013, a student summit was held at Kettering University where students received additional education and 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- 90 Good, 50- 70 Fair (medium), 25- 50 Poor (bad), 0- 25 Very 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. Sites categorized as “poor” are identified in the table with red font. Two sites out of 43 sites were categorized as either poor or very poor. In 2012-2013, 13 sites were visited and two were added in 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 Golf Course Bridge at hole #6	1993, 1998-2000, 2010-2011	Good
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
<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	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	Frost Gardens	2012-13	Good
<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

ID No	Location	Sampled Years	Water Quality Index (WQI)
<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	Good
3S	Fenton Mill Pond (Shiawassee River)	2009, 2012	Very Poor*
4S	Linden Middle School Grounds	2012-13	Good
<i>Unknown Watershed</i>			
1UNK	Unlisted Location	2009-2012	Good

*Improved since previous sampling event

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

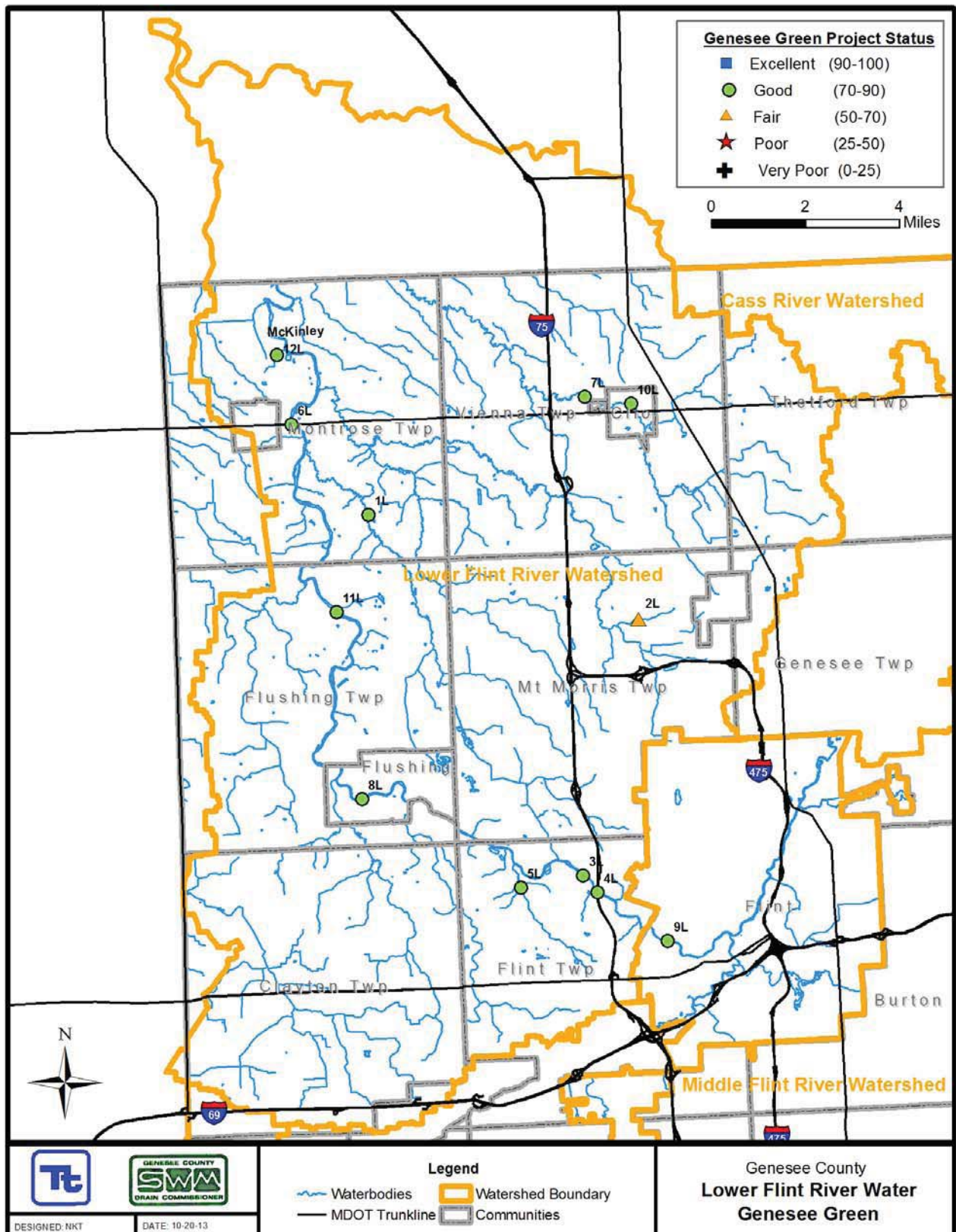


Figure 7-2: Genesee Green Results for the Middle Flint River Watershed

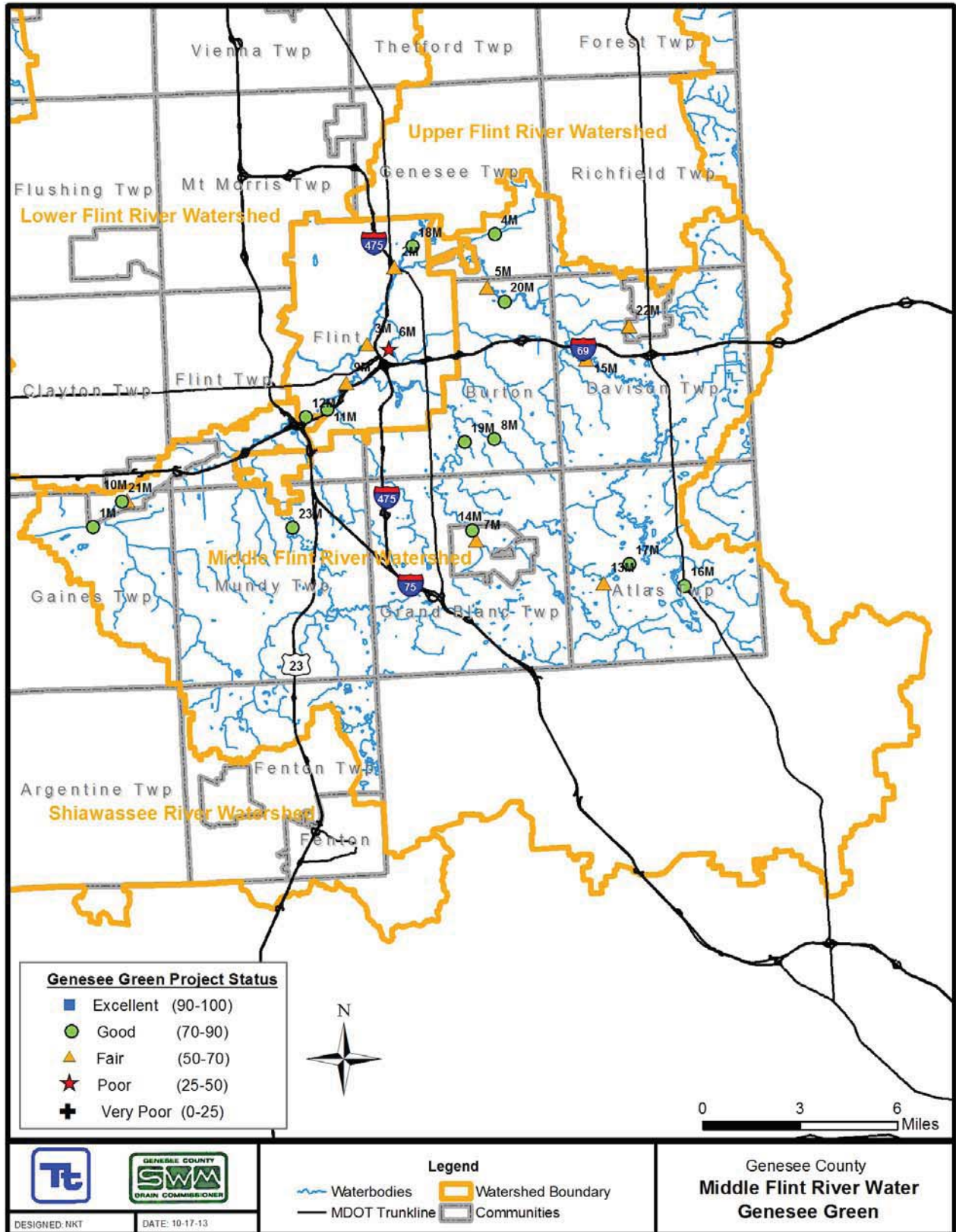


Figure 7-3: Genesee Green Results for the Upper Flint River Watershed

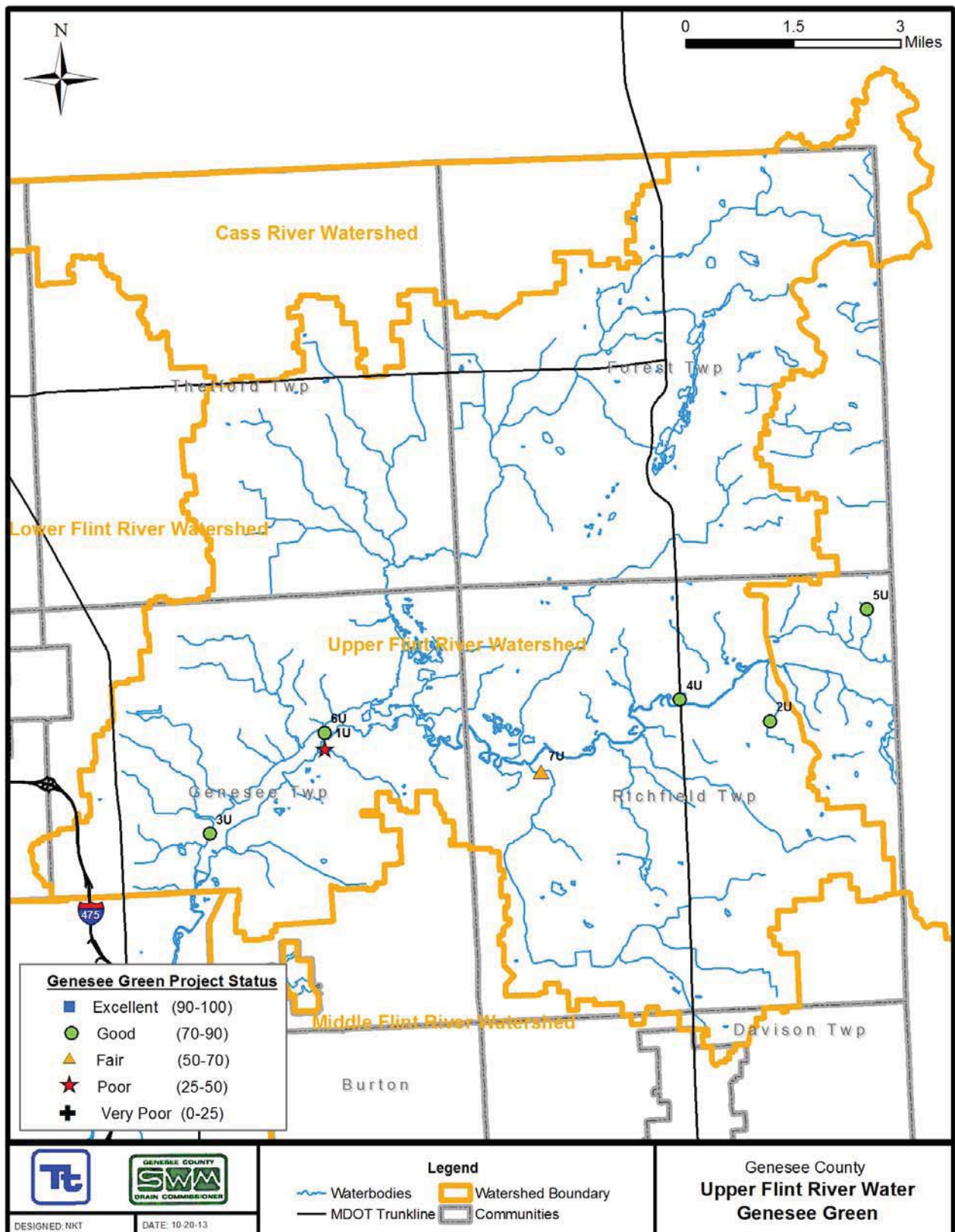
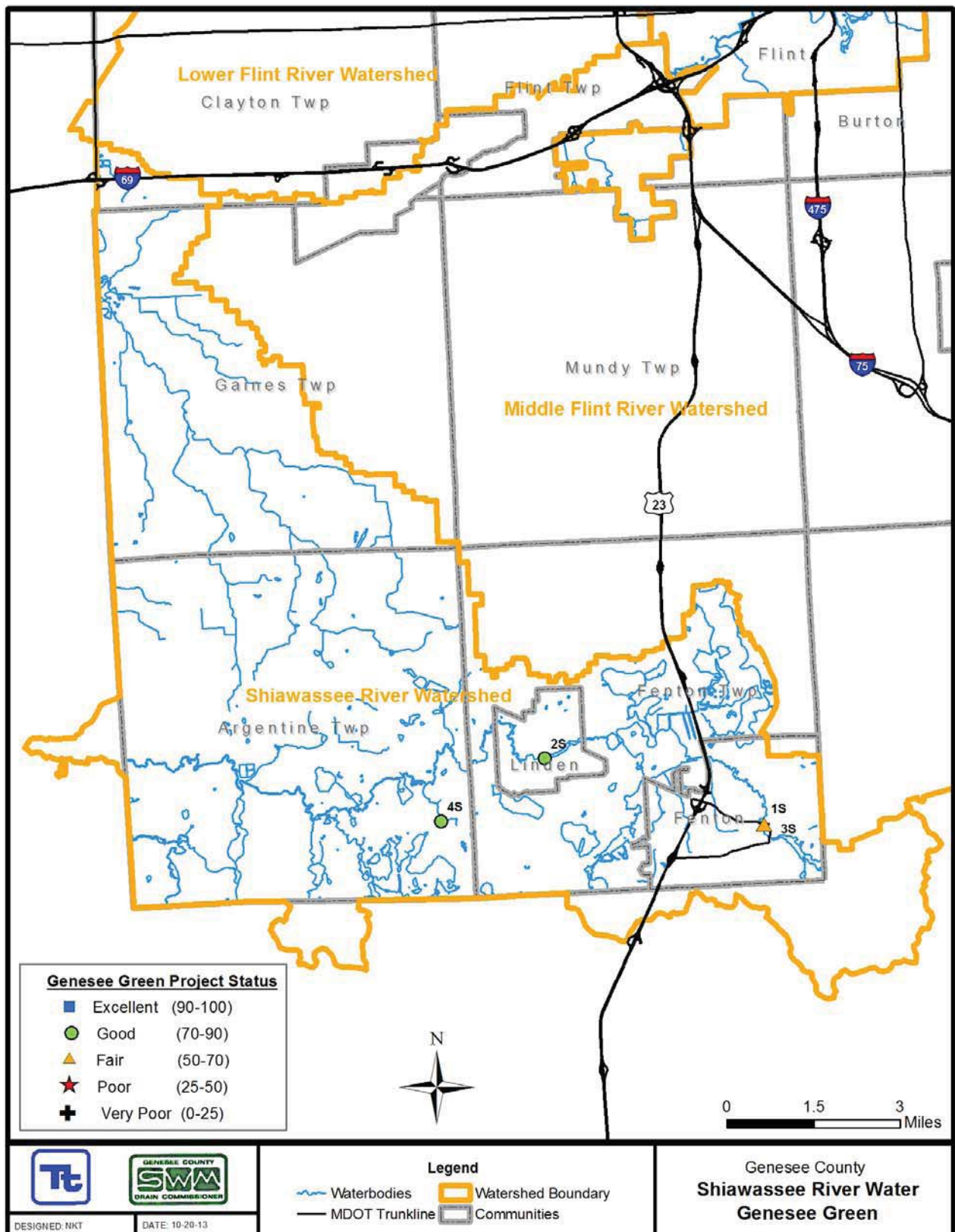


Figure 7-4: Genesee Green Results for the Shiawassee River Watershed



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).

Table 8-1: Macroinvertebrate Study Results

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

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

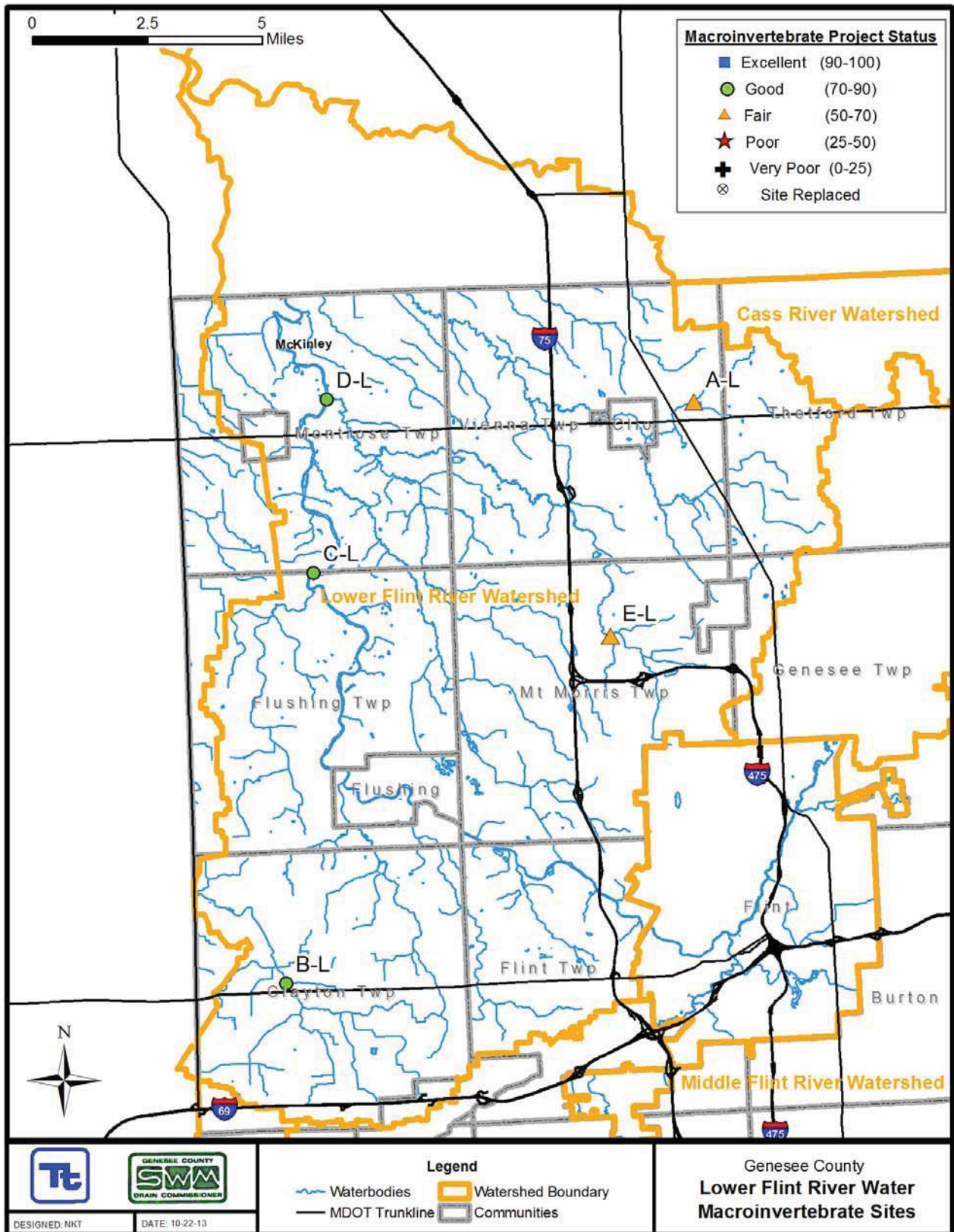


Figure 8-2: Macroinvertebrate Study Results for the Middle Flint River Watershed

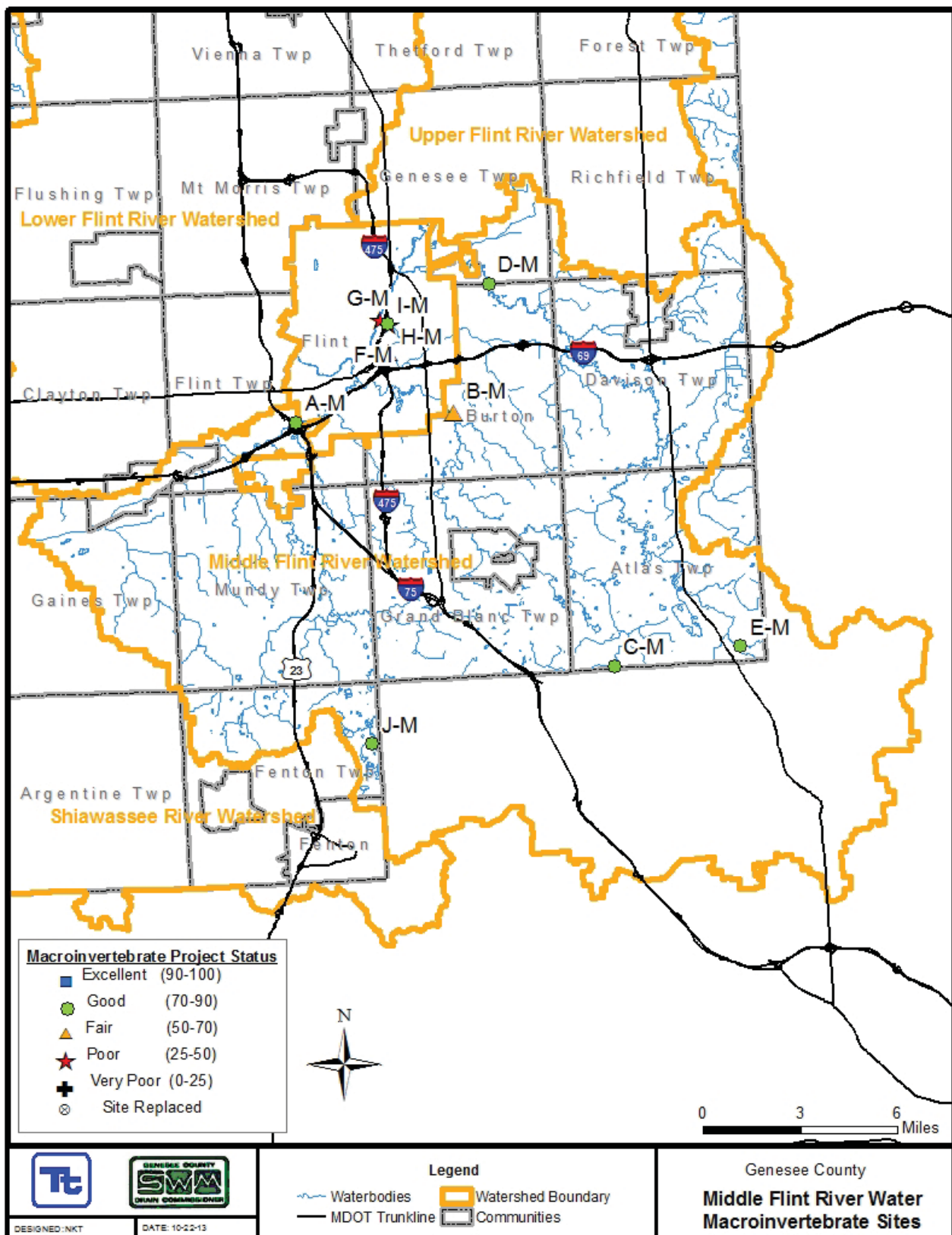


Figure 8-3: Macroinvertebrate Study Results for the Upper Flint River Watershed

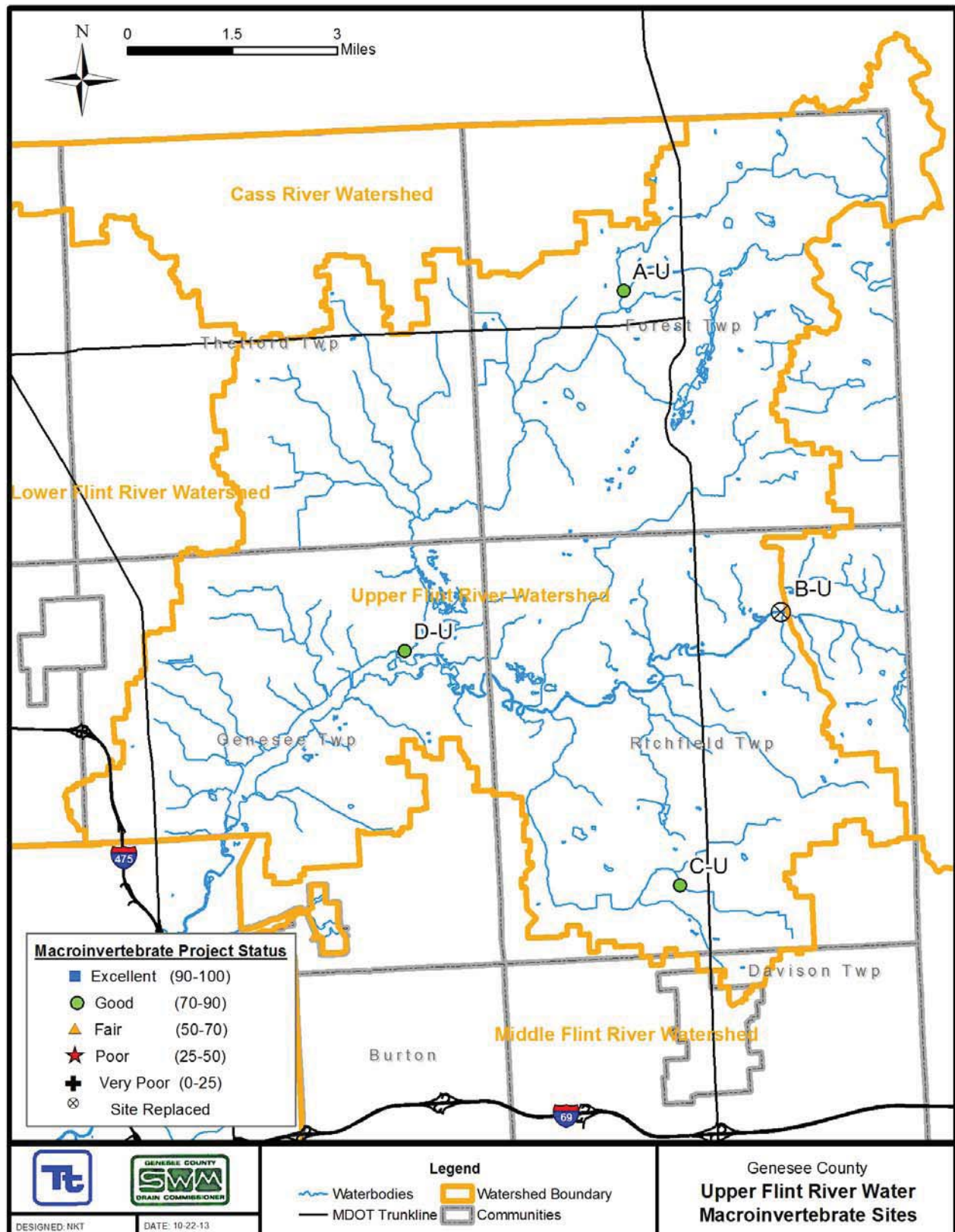
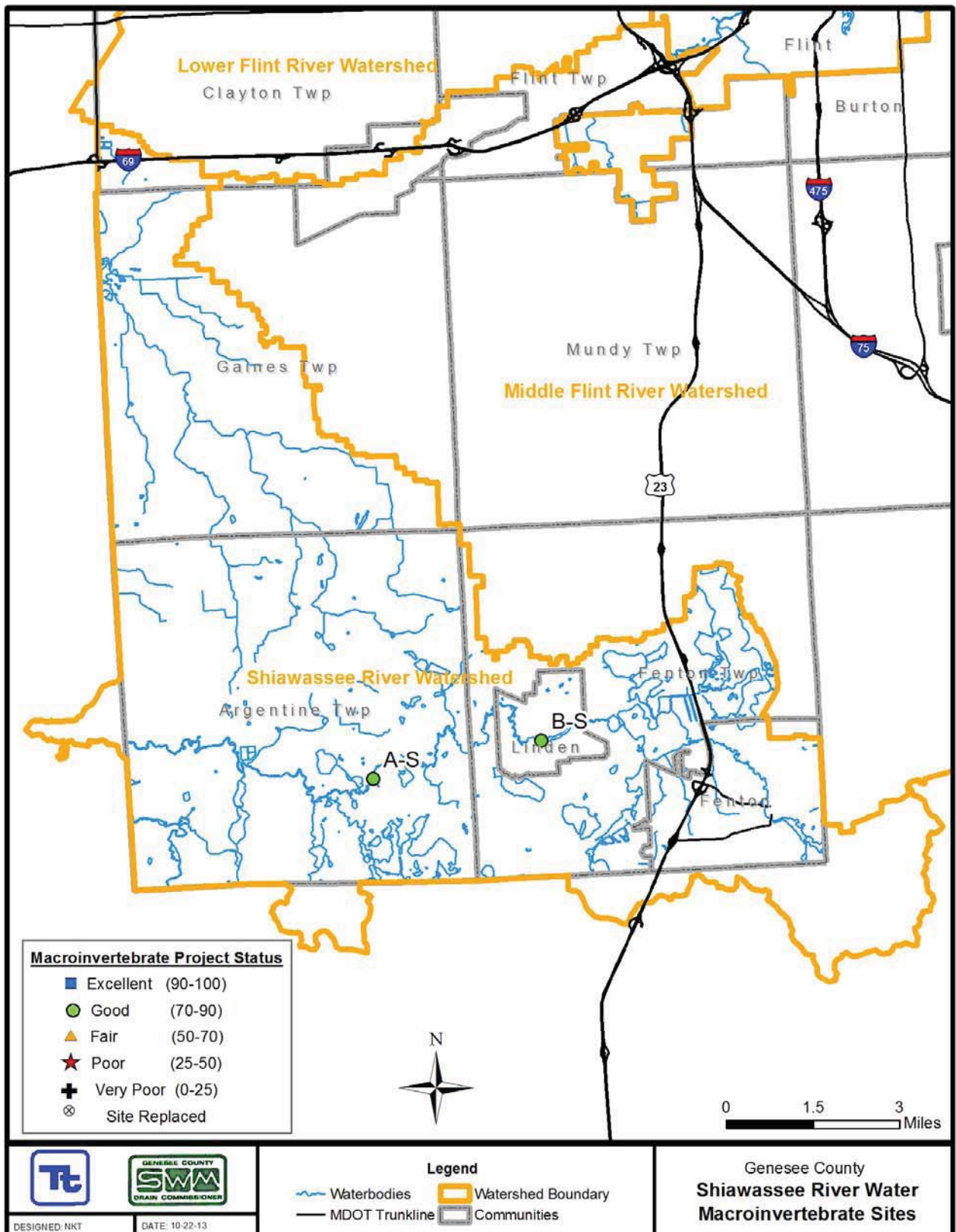


Figure 8-4: Macroinvertebrate Study Results for the Shiawassee River Watershed



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 2010-2011 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 2012-2013, IDEP field investigations were conducted in the following communities in addition to sites within the county owned by the Genesee County Drain Commission (GCDC):

- City of Burton
- Fenton Township
- Flushing Township
- Genesee County Drain Commission

City of Burton

In 2012-13, 2 outfalls were investigated. No illicit discharges were found during this investigation period.

Flushing Township

In 2012-13, 1 outfall was investigated. No illicit discharges were found during this investigation period.

City of Flushing

In 2012-13, 10 outfalls were investigated and one illicit discharge was found during this investigation period.

Genesee County Drain Commission

In 2012-13, 265 outfalls were investigated and seven outfalls were not found. No illicit discharges were found during this investigation period.

City of Swartz Creek

In 2012-2013, 1 illicit discharge was found during this investigation period.

New Outfalls

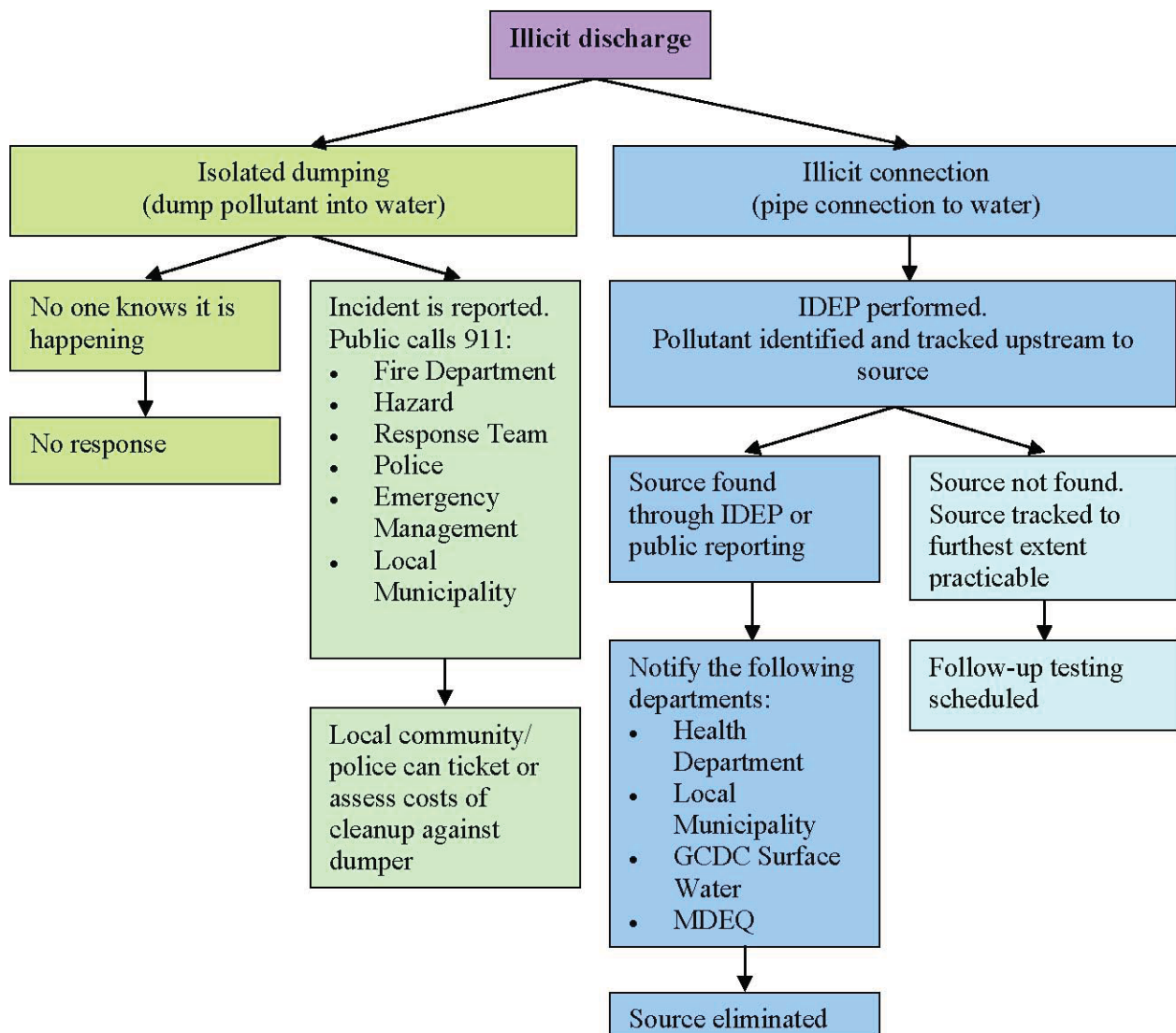
In April 2013, 281 new outfalls were authorized for investigation in 2012-2013 which are county outfalls. 143 were investigated, two were not found and 136 still need to be investigated.

Table 9-1: Total Number Outfalls Investigated Per Community
June 2011-October 2013

Total number of outfalls per community				
Community	Total outfalls	Already Investigated	Not Found/Abandoned	Need to be investigated
GCDC	24	22	1	1
City of Fenton	80	71	9	0
City of Flushing	83	70	6	7
City of Mt. Morris	48	45	3	0
Fenton Twp	5	5		0
City of Clio	25	22	3	0
City of Linden	32	29	3	0
Genesee Twp	3	3		0
Mt. Morris Twp	3	3		0
Mundy Twp	2	2		0
Vienna Twp	7	7		0
GCDC-Sept 2011	65	62	2	1
City of Burton-Sept 2011	14	14		0
GCDC-April 2012	109	100	2	7
City of Burton-April 2012	94	90	2	2
City of Swartz Creek-April 2012	85	80	3	2
Fenton Twp-April 2012	1	1		0
Flint Twp-April 2012	6	6		0
Flushing Twp-April 2012	1	1		0
City of Burton-2012Fall	3	2		1
GCDC-2012Fall	177	122	1	54
GCDC-2013Spring	281	143	2	136
Total	1148	900	35	211

Note: Colors separate out when Tetra Tech received new outfalls to investigate from GCDC.

Figure 9-1: Illicit Discharge Notification System Process



City of Flushing Illicit Discharge

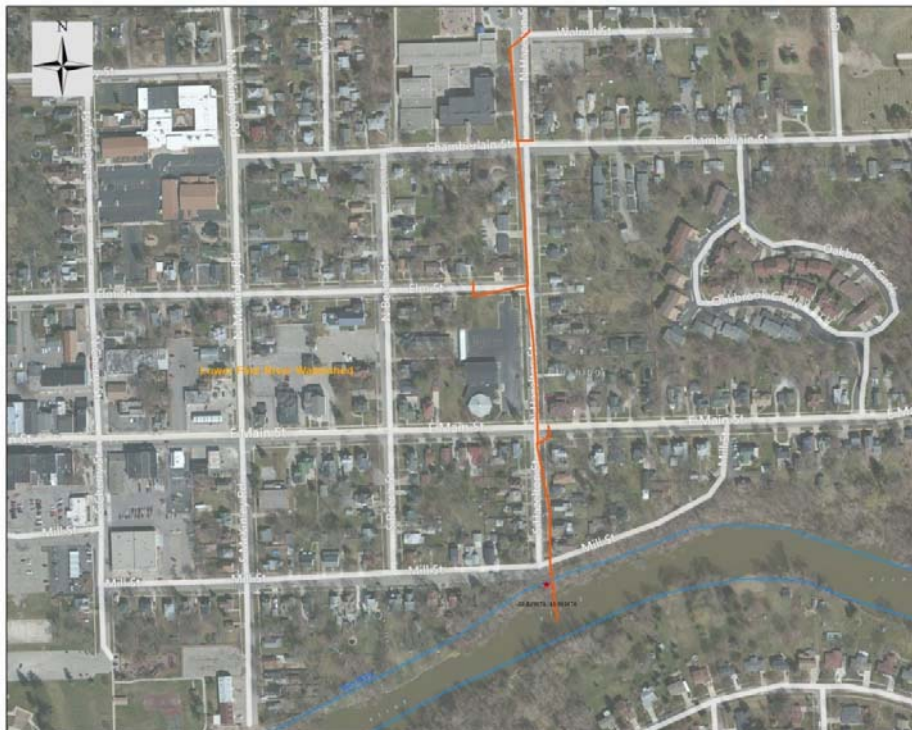
City of Flushing: Outfall # 8526503

Latitude: 43.061676 Longitude: -83.849074

On September 18, 2013, investigators visited the City of Flushing as part of the Genesee County Illicit Discharge Elimination Program. Dry weather flow was observed at outfall 8526502 at the end of Hazelton St. about 15ft down the embankment on the north bank of Flint River. The field crews observed sewage odor, bacterial sheen and sewage slime fungus in the pipe. Laboratory testing revealed elevated levels of *E.coli* of >10,000 ml/L in the sampled water.

Status

Based on our observations and laboratory testing, it is recommended that Genesee County Drain Commission inform the City of Flushing of the illicit discharge entering the Flint River.



City of Swartz Creek Illicit Discharge

Tetra Tech observed a milky-white substance coming from the Swartz Creek Middle School building, possibly soap, that was coming into the upstream manhole shown on the map and then flowing to West Branch of Swartz Creek at the outfall shown. The discharge was observed flowing into Swartz Creek for approximately 10 minutes before the flow out of the outfall pipe became clear and the plume dissipated.

On 8-14-13, Tetra Tech field staff notified us about soapy discharge into West Branch of Swartz Creek from Swartz Creek Middle School. On 9-12-13, we have conducted a dye test at cleaning room of the school. Dye test confirmed that waste water line from cleaning room is connected to storm sewer and then goes to West Branch of Swartz Creek. Swartz Creek School eliminated the illicit connection and re-routed waste water line from cleaning room to sanitary sewer. On 10-9-13, we have conducted a follow-up dye test and inspection and confirmed that illicit connection has been eliminated.



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

The following tables and figures show the outfalls investigated. The section concludes with a summary of the follow-up investigations undertaken in 2012-2013. Outfalls investigated in previous reporting periods are summarized in past annual reports.

Summary of the follow-up investigations undertaken in 2012-2013.

The Drain Office Continues to do follow up work on dry weather flow testing this reporting cycle.

- 8727756 or 8727759 video storm line. Investigation ongoing

The Drain Office was contacted with X events of an illicit discharge to a storm system.

Sample ID & Location	BACKGROUND & FOLLOW-UP INSPECTION RESULTS & COMMENTS
11355 E. Potter Rd Richfield Twp #35	On 3-14-13, Jeff Wright, Drain Commissioner was at the property and observed that owner using residential lot as automotive garage. On 3-25-13, BP inspected the site and walked along Black Creek and did not observe any trace of "oil sheen" in that section of drain. Also BP did not find any outlet pipe coming into drain. FILE CLOSED
5040 N. Dort Hwy Genesee Twp Sec-20	On 5-29-13, GCDC received a complaint from Stephanie Kammer, MDEQ about odor of gasoline from a storm sewer manhole at 5040 N. Dort Hwy. On 7-9-13, GCDC conducted a dye test and confirmed that floor drain of Martin Trucking Co. connected to on-site storm sewer and

	<p>then flows to county drain.</p> <p>On 9-11-13, GCDC conducted a follow-up inspection and confirmed that the floor drain has been plugged with cement mortar at the manhole. Illicit connection eliminated.</p> <p>FILE CLOSED</p>
6045 Lancaster Dr. Flint Twp Sec-18	<p>On 8-5-13, neighbor complained that stagnant water from basement of house at 6045 Lancaster Dr discharged into roadside drain.</p> <p>On 8-13-13, GCDC wrote to homeowner notifying that this is not acceptable practice and also indicate that in the future if similar situation arise then stagnant water has to be discharged into sanitary sewer. Twp was also notified.</p> <p>FILE CLOSED.</p>
Swartz Creek Middle School, City of Swartz Creek	<p>On 8-14-13, Tetra Tech Field staff notified GCDC about soapy discharge from a storm sewer originated from Swartz Creek Middle School into West Br of Swartz Creek drain. On 9-12-13, GCDC conducted a dye test and confirmed illicit connection to county drain. On 10-9-13, GCDC conducted a follow-up inspection and confirmed that illicit connection from storm sewer re-routed to sanitary sewer.</p> <p>FILE CLOSED</p>
8024 Seneca Rd Village of Goodrich	<p>On 9-13-13, GCDC conducted site inspection and dye test and confirmed that washing sink and floor drain connected to county drain. GCDC wrote a letter to homeowner to eliminate illicit connection from county drain and re-route to sanitary sewer.</p> <p>ON-GOING</p>
5199 Highwood Dr Mt. Morris Twp Sec-22	<p>On 9-23-13, GCDC conducted a site inspection and confirmed that Modern Concrete discharged cleanout water from a concrete truck mixer to a roadside curb basin. On 10-2-13, GCDC wrote to Modern Concrete not to discharge concrete truck cleanout into county drain in future.</p> <p>FILE CLOSED</p>
715 S. State Rd City of Davison	<p>6/5/2013 received call from City Davison. Concerned citizen reported an employee of a restaurant dumping a bucket of brown liquid into a storm drain. 6/5/2013 GCDC office visited site and spoke to manager. No evidence of dumping nor any odor.</p> <p>FILE CLOSED</p>
10286 W. Calkins Road Clayton #16	<p>7/18/2013: Resident called that someone ran ditch to septic tank dumping sewage into ditch. 7/18/13: Investigated. Swale/ditch dug. Ditch has been seeded and mulched. No evidence of connection to sanitary.</p> <p>FILE CLOSED</p>
Crystalwood Drive Davison #17	<p>10/4/2012: Resident reported he could smell sewage; odor coming from curb CB. 10/5/2012: investigated. Could smell sewage.</p> <p>10/25/2012: video's storm line. Narrowed to a possible 5 residences.</p> <p>INVESTIGATION ONGOING</p>
10133 Lapeer Rd Davison #15	<p>1/15/2013:Twp Called. Residence complaint about a car parked over a drain and leaking oil into the system. GCDC provided Technical information. Twp to do investigation. STATUS UNKNOWN</p>

Table 0-1: Genesee County Assigned Outfalls for 2012-2013

Outfall Number	Owner	Outlets To	Receiving Waterbody	Date Tested	Investigated (Yes/No)	Date Investigated
5506001	GCDC 0240	WOS/Open Drain	Burns & Vernon 0196	2013Spring	No	
5507505	GCRC	WOS/Open Drain	Lum & Ext 0069	2013Spring	Yes	7/1/2013
5512251	GCDC 0326	WOS/Open Drain	Porter Dr 0193	2013Spring	No	
5525251	GC Schools	WOS/Open Drain	Hogan Drain Tributary 0969	2013Spring	No	
5525751	GC Schools	WOS/Open Drain	Hogan Drain Tributary 0672	2013Spring	No	
5609501	GCRC	WOS/ Nat H2O	Indian Creek Tributary	2013Spring	Yes	9/10/2013
5613001	GCDC 1589	WOS/ Nat H2O	Swartz Cr	2013Spring	Yes	9/10/2013
5613002	GCDC 1589	WOS/ Nat H2O	Swartz Cr	2013Spring	Yes	9/10/2013
5613003	GCDC 1690	WOS/ Nat H2O	Swartz Cr	2013Spring	Yes	9/10/2013
5613004	GCRC	WOS/ Nat H2O	Swartz Cr	2013Spring	No	
5613005	GCDC 1589	WOS/ Nat H2O	Swartz Cr	2013Spring	No	
5613006	GCDC 1589	WOS/ Nat H2O	Swartz Cr	2013Spring	No	
5615251	GCRC	WOS/ Nat H2O	Lake Fenton	2013Spring	Yes	9/10/2013
5615252	GCDC 1418	WOS/ Nat H2O	Lake Fenton	2013Spring	Yes	9/10/2013
5616001	GCDC 1607	WOS/Lake	Loon Lake- Shiawassee	2013Spring	Yes	9/10/2013
5616251	GCDC 1607	WOS/Lake	Loon Lake- Shiawassee	2013Spring	Yes	9/10/2013
5616252	GCDC 0058	WOS/Lake	Loon Lake- Shiawassee	2013Spring	Yes	9/10/2013
5634251	GCDC 0867	WOS/Open Drain	Egyptian 0867	2013Spring	No	
5634252	GCDC 0867	WOS/Open Drain	Egyptian 0867	2013Spring	No	
5634754	GC School	WOS/Open Drain	Egyptian 0867	2013Spring	No	
5634755	GC School	WOS/Open Drain	Egyptian 0867	2013Spring	No	
5634756	GC School	WOS/Open Drain	Egyptian 0867	2013Spring	No	
5634757	GC School	WOS/Open Drain	Egyptian 0867	2013Spring	No	
5634758	GC School	WOS/Open Drain	Egyptian 0867	2013Spring	No	
5634759	GC School	WOS/Open Drain	Egyptian 0867	2013Spring	No	
6507755	GCRC	WOS/Open Drain	Terry Drain 0175	2013Spring	Yes	10/10/2013
6507756	GCRC	WOS/Open Drain	Terry Drain 0175	2013Spring	Yes	10/10/2013
6507757	GCDC 0657	WOS/Open Drain	Terry Drain 0175	2013Spring	Yes	10/10/2013
6508508	GCRC	WOS/Open Drain	Terry Drain 0175	2013Spring	Yes	10/10/2013
6508511	GCRC	WOS/Open Drain	Terry Drain 0175	2013Spring	Yes	10/10/2013
6508512	GCRC	WOS/Open Drain	Terry Drain 0175	2013Spring	Yes	10/10/2013
6508513	GCRC	WOS/Open Drain	Terry Drain 0175	2013Spring	Yes	10/10/2013
6511752	GCDC 0200	WOS/Open Drain	Alger Creek 0141	2013Spring	Yes	10/10/2013
6512501	GCDC 1043	WOS/Open Drain	Lum & Ext 0069	2013Spring	Yes	7/1/2013
6512502	GCRC	WOS/Open Drain	Lum & Ext 0069	2013Spring	Yes	7/1/2013
6512765	GCRC	WOS/Open Drain	Lum & Ext 0069	2013Spring	Yes	7/1/2013
6512766	GCRC	WOS/Open Drain	Lum & Ext 0069	2013Spring	Yes	7/1/2013
6512768	GCDC 1506	WOS/Open Drain	Lum & Ext 0069	2013Spring	No	
6516502	GCRC	WOS/Open Drain	Terry Drain 0175	2013Spring	Yes	10/10/2013
6516753	GCRC	WOS/Open Drain	Terry Drain 0175	2013Spring	Yes	10/10/2013
6517001	GCRC	WOS/Open Drain	Terry Drain 0175	2013Spring	Yes	10/10/2013

6517757	GCRC	WOS/Open Drain	Terry Drain 0175	2013Spring	Yes	10/10/2013
6521251	GCRC	WOS/Open Drain	Terry Drain 0175	2013Spring	No	
6521270	GCDC 0175	WOS/Open Drain	Terry Drain 0175	2013Spring	Yes	10/10/2013
6521272	GCRC	WOS/Open Drain	Terry Drain 0175	2013Spring	Yes	10/10/2013
6534756	GCDC 0984	WOS/Open Drain	Jones Creek 0984	2013Spring	No	
6607501	GCRC	WOS/Open Drain	Lum & Ext 0069	2013Spring	Yes	7/1/2013
6607809	GCRC	WOS/Open Drain	Lum & Ext 0069	2013Spring	No	
6607810	GCRC	WOS/Open Drain	Lum & Ext 0069	2013Spring	Yes	7/1/2013
6618304	GCRC	WOS/Open Drain	Lum & Ext drain 0069	2013Spring	Yes	7/1/2013
6618754	GCDC 0069	WOS/Open Drain	Lum & Ext 0069	2013Spring	No	
6618758	GCRC	WOS/Open Drain	Lum & Ext 0069	2013Spring	Yes	7/1/2013
6618759	GCRC	WOS/Open Drain	Lum & Ext 0069	2013Spring	Yes	7/1/2013
6624751	GCDC 1595	WOS/ Nat H2O	Swartz Creek	2013Spring	No	
6705022	GCRC	WOS/Open Drain	Gibson Drin 0423	2013Spring	No	
6710522	GCDC 0899	WOS/ Nat H2O	Thread Cr	2013Spring	No	
6710523	GCDC 1061	WOS/Open Drain	Thread Cr via 1061 ditch	2013Spring	No	
6713501	GCDC 1618	WOS/Open Drain	Bush 0007	2013Spring	No	
6717751	GCDC 0522	WOS/Open Drain	Gibson 0423	2013Spring	No	
6717753	GCDC 0150	WOS/Open Drain	Gibson 0423	2013Spring	No	
6717754	GCDC 0937	WOS/Open Drain	Gibson 0423	2013Spring	No	
6719513	GCDC 1221	WOS/Open Drain	Seaver Drain 0043	2013Spring	Yes	7/1/2013
6719514	GCDC 1221	WOS/Open Drain	Seaver Drain Br of 1218	2013Spring	Yes	7/1/2013
6719515	GCDC 1221	WOS/Open Drain	Seaver Drain Br of 1218	2013Spring	Yes	7/1/2013
6719523	GCDC 1221	WOS/Open Drain	Seaver Drain Br of 1218	2013Spring	Yes	7/1/2013
6719524	GCDC 1221	WOS/Open Drain	Seaver Drain 0043	2013Spring	Yes	7/1/2013
6719525	GCDC 1221	WOS/Open Drain	Seaver Drain 0043	2013Spring	Yes	6/24/2013
6719526	GCDC 1221	WOS/Open Drain	Seaver Drain 0043	2013Spring	Yes	6/24/2013
6719527	GCDC 1221	WOS/Open Drain	Seaver Drain 0043	2013Spring	Yes	6/24/2013
6719528	GCDC 1221	WOS/Open Drain	Seaver Drain 0043	2013Spring	Yes	6/24/2013
6719529	GCDC 1221	WOS/Open Drain	Seaver Drain 0043	2013Spring	Yes	6/24/2013
6719754	GCDC 1221	WOS/Open Drain	Seaver Drain 0043	2013Spring	Yes	7/1/2013
6719755	GCDC 1667	WOS/Open Drain	Seaver Drain 0043	2013Spring	Yes	7/1/2013
6719756	GCDC 1667	WOS/Open Drain	Seaver Drain 0043	2013Spring	Yes	7/1/2013
6723007	GCDC 1132	WOS/Open Drain	Perry Drain 1132	2013Spring	No	
6723501	GCDC 0710	WOS/Open Drain	Layman, Crosby Br of 0710	2013Spring	No	
6724001	GCDC 1558	WOS/Open Drain	Bush 0007	2013Spring	No	
6724751	GCRC	WOS/Open Drain	Bush 0007	2013Spring	Yes	6/24/2013
6724752	GCDC 1541	WOS/Open Drain	Bush 0007	2013Spring	No	
6724753	GCDC 1541	WOS/Open Drain	Bush 0007	2013Spring	No	
6725251	GCDC 1581	WOS/ Nat H2O	Bush 0007 (via watercourse)	2013Spring	No	
6729005	GCDC 1584	WOS/Open Drain	Eames 0864	2013Spring	No	
6729007	GCDC 1638	WOS/Open Drain	Eames 0864	2013Spring	No	

6729014	GCDC 1584	WOS/Open Drain	Seaver 0043	2013Spring	No	
6729015	GCDC 1584	WOS/Open Drain	Seaver 0043	2013Spring	Yes	7/2/2013
6729016	GCDC 1584	WOS/Open Drain	Seaver 0043	2013Spring	Yes	7/2/2013
6729017	GCDC 1584	WOS/Open Drain	Seaver 0043	2013Spring	Yes	7/2/2013
6729101	GCDC 1573	WOS/Open Drain	Seaver 0043	2013Spring	Yes	7/2/2013
6729102	GCDC 1573	WOS/Open Drain	Seaver 0043	2013Spring	Yes	7/2/2013
6729103	GCDC 1522	WOS/Open Drain	Seaver 0043	2013Spring	Yes	7/2/2013
6729104	GCDC 1522	WOS/Open Drain	Seaver 0043	2013Spring	Yes	7/2/2013
6729509	GCRC	WOS/Open Drain	Eames 0864	2013Spring	No	
6730251	GCRC	WOS/Open Drain	Seaver Drain 0043	2013Spring	Yes	Not Found
6730302	GCDC 1612	WOS/Open Drain	Seaver 0043	2013Spring	No	
6732001	GCRC	WOS/Open Drain	Eames 0864	2013Spring	No	
6732002	GCRC	WOS/Open Drain	Eames 0864	2013Spring	No	
6735251	GCDC 1637	WOS/Open Drain	Groat 0681	2013Spring	No	
6735252	GCDC 1637	WOS/Open Drain	Groat 0681	2013Spring	No	
6735253	GCDC 1637	WOS/Open Drain	Groat 0681	2013Spring	No	
6735254	GCDC 1637	WOS/Open Drain	Groat 0681	2013Spring	No	
6735255	GCDC 1637	WOS/Open Drain	Groat 0681	2013Spring	Yes	7/15/2013
6735256	GCDC 1461	WOS/Open Drain	Groat 0681	2013Spring	No	
6735257	GCDC 1461	WOS/Open Drain	Groat 0681	2013Spring	No	
6735258	GCDC 1461	WOS/Open Drain	Groat 0681	2013Spring	No	
6735259	GCDC 0681	WOS/Open Drain	Groat 0681	2013Spring	No	
6736001	GCDC 1637	WOS/Open Drain	Slack Lake 0063	2013Spring	Yes	7/16/2013
6736002	GCDC 1637	WOS/Open Drain	Slack Lake 0063	2013Spring	Yes	7/16/2013
6736003	GCDC 1637	WOS/Open Drain	Slack Lake 0063	2013Spring	Yes	7/15/2013
6736004	GCDC 1637	WOS/Open Drain	Slack Lake 0063	2013Spring	Yes	7/15/2013
6736005	GCDC 1637	WOS/Open Drain	Slack Lake 0063	2013Spring	Yes	7/15/2013
6736251	GCDC 1637	WOS/Open Drain	Slack Lake 0063	2013Spring	Yes	7/16/2013
6736501	GCDC 1637	WOS/Open Drain	Slack Lake 0063	2013Spring	Yes	7/15/2013
6736502	GCDC 1637	WOS/Open Drain	Slack Lake 0063	2013Spring	Yes	7/15/2013
6736503	GCDC 1637	WOS/Open Drain	Slack Lake 0063	2013Spring	Yes	7/15/2013
6736504	GCDC 1637	WOS/Open Drain	Slack Lake 0063	2013Spring	Yes	7/15/2013
6736505	GCDC 1637	WOS/Open Drain	Slack Lake 0063	2013Spring	Yes	7/15/2013
6736506	GCDC 1637	WOS/Open Drain	Slack Lake 0063	2013Spring	Yes	7/15/2013
6736507	GCDC 1637	WOS/Open Drain	Slack Lake 0063	2013Spring	Yes	7/15/2013
6736508	GCDC 1637	WOS/Open Drain	Slack Lake 0063	2013Spring	Yes	7/15/2013
6736751	GCDC 1637	WOS/Open Drain	Slack Lake 0063	2013Spring	Yes	7/16/2013
6736752	GCDC 1637	WOS/Open Drain	Slack Lake 0063	2013Spring	Yes	7/16/2013
6736753	GCDC 1637	WOS/Open Drain	Slack Lake 0063	2013Spring	Yes	7/16/2013
6736754	GCDC 1637	WOS/Open Drain	Slack Lake 0063	2013Spring	Yes	7/16/2013
6736755	GCDC 1637	WOS/Open Drain	Slack Lake 0063	2013Spring	Yes	7/16/2013
7502003	GCRC	WOS/Open Drain	Cole Creek 0764	2013Spring	Yes	10/1/2013

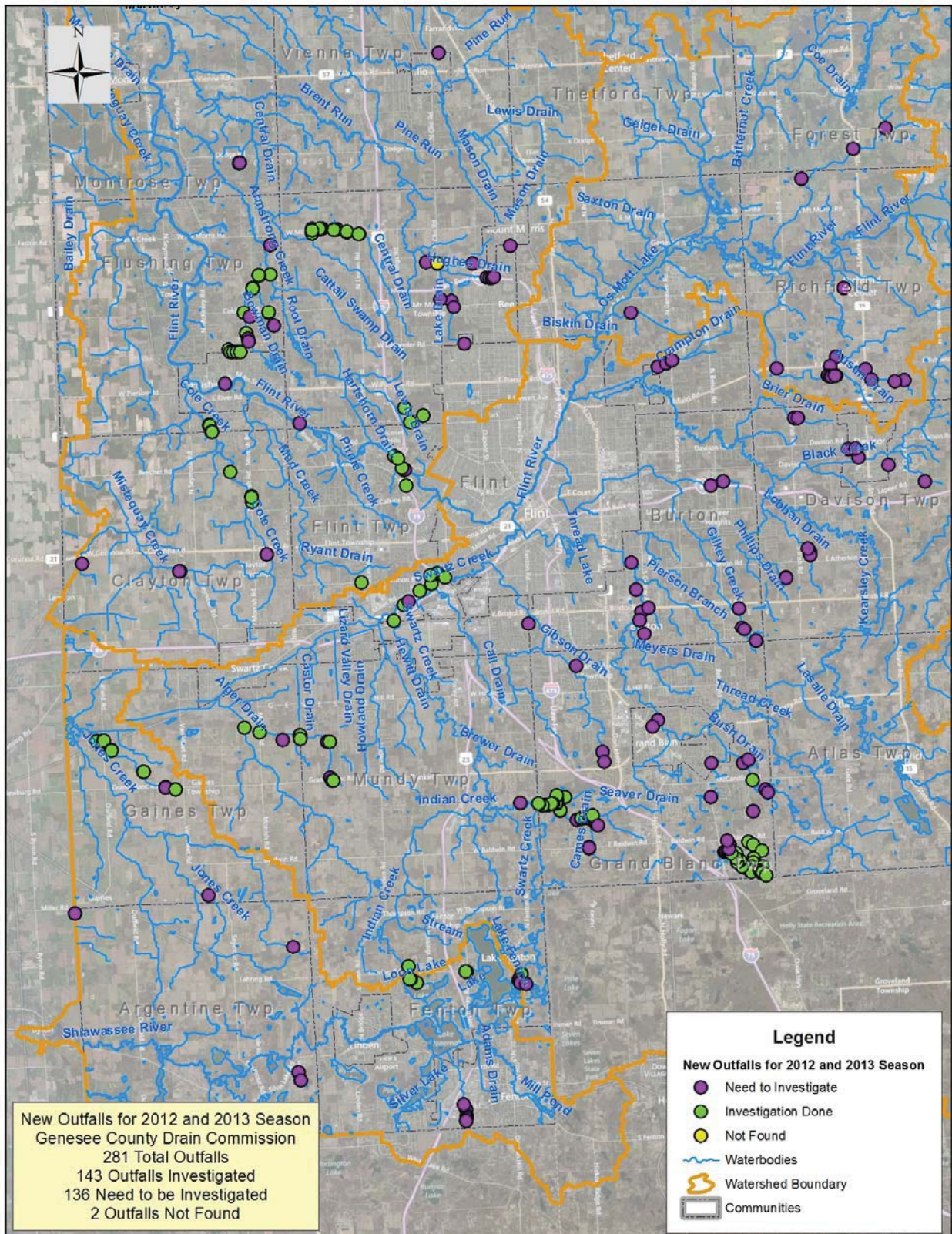
7502004	GCRC	WOS/Open Drain	Cole Creek 0764	2013Spring	Yes	10/1/2013
7511001	GCRC	WOS/Open Drain	Cole Creek 0764	2013Spring	Yes	10/10/2013
7511003	GCRC	WOS/Open Drain	Cole Creek 0764	2013Spring	Yes	10/10/2013
7511753	GCRC	WOS/Open Drain	Cole Creek 0764	2013Spring	Yes	10/10/2013
7511755	GCRC	WOS/Open Drain	Cole Creek 0764	2013Spring	Yes	10/10/2013
7512501	GCRC	WOS/Open Drain	Cole Creek 0764	2013Spring	Yes	10/10/2013
7519251	GCDC 0619	WOS/Open Drain	Misteguay Creek	2013Spring	No	
7522003	GC Schools	WOS/Open Drain	Smith Clayton Dr 0516	2013Spring	No	
7522012	GC Schools	WOS/Open Drain	Smith Clayton Dr 0516	2013Spring	No	
7524001	GCDC 0861	WOS/Open Drain	Cole Creek 0764	2013Spring	No	
7604754	GCRC	WOS/ Nat H2O	Flint River	2013Spring	Yes	10/1/2013
7604756	GCRC	WOS/ Nat H2O	Flint River	2013Spring	Yes	10/1/2013
7609256	GCDC 0439	WOS/ Nat H2O	Flint River	2013Spring	No	
7609257	GCDC 0600	WOS/ Nat H2O	Flint River	2013Spring	No	
7609751	GCRC	MDOT	Flint River Via MDOT/ GCDC	2013Spring	Yes	10/2/2013
7610004	GCDC 0166	WOS/ Nat H2O	Flint River	2013Spring	Yes	10/2/2013
7620751	GCDC 1434	WOS/Open Drain	Ryant Drain 0509	2013Spring	Yes	7/1/2013
7622751	GCDC 1396	MDOT	Swartz Creek	2013Spring	Yes	6/18/2013
7622752	GCDC 1396	MDOT	Swartz Creek	2013Spring	Yes	6/18/2013
7622753	GCDC 0398	WOS/Open Drain	Swartz Creek	2013Spring	Yes	6/19/2013
7627001	GCDC 1497	WOS/Open Drain	Swartz Creek	2013Spring	Yes	6/6/2013
7627251	GCDC 0445	WOS/Open Drain	Swartz Creek	2013Spring	Yes	6/18/2013
7628751	GCDC 1387	WOS/ Nat H2O	Swartz Creek	2013Spring	Yes	6/6/2013
7628752	GCDC 1413	WOS/ Nat H2O	Swartz Creek	2013Spring	Yes	6/6/2013
7628753	GCDC 1423	WOS/ Nat H2O	Swartz Creek	2013Spring	No	
7636252	GCDC 0040	C Burton pipe	Gibson drain 0423	2013Spring	No	
7711760	GCDC 0017	WOS/Open Drain	Gilkey Creek 0017	2013Spring	No	
7712505	GCDC 1139	WOS/Open Drain	Gilkey Creek 0017	2013Spring	No	
7721758	GCDC 0637	WOS/ Nat H2O	Thread Creek	2013Spring	No	
7727504	GCDC 1357	WOS/Open Drain	Thread Creek, howe Br 1357	2013Spring	No	
7728755	GCDC 0337	WOS/ Nat H2O	Thread Creek	2013Spring	No	
7733254	GCDC 0375	WOS/ Nat H2O	Thread Creek	2013Spring	No	
7733258	GCDC 0375	WOS/ Nat H2O	Thread Creek	2013Spring	No	
7733752	GCDC 0434	WOS/ Nat H2O	Thread Creek	2013Spring	No	
7736009	GCDC 0592	WOS/Open Drain	Gilkey Creek 0017	2013Spring	No	
7736503	GCDC 1524	WOS/Open Drain	Gilkey Creek 0017	2013Spring	No	
7736761	C Burton	WOS/Open Drain	Gilkey Creek 0017	2013Spring	No	
7736786	GCDC 1531	WOS/Open Drain	Gilkey Creek 0017	2013Spring	No	
7805007	GCDC 0736	WOS/Open Drain	Brier Creek 0130	2013Spring	No	
7805010	GCDC 0736	WOS/Open Drain	Brier Creek 0130	2013Spring	No	
7809303	GCDC 0631	WOS/Open Drain	Harvey Drain 0631	2013Spring	No	
7809304	Gc School	C of Davison	Harvey Drain 0631	2013Spring	No	

7809305	Gc School	C of Davison	Harvey Drain 0631	2013Spring	No	
7809306	Gc School	C of Davison	Harvey Drain 0631	2013Spring	No	
7810751	Gc School	C of Davison	Hock & Walterhouse 0091	2013Spring	No	
7814001	GCDC 0064	WOS/Open Drain	Black Cr, Cummings br of 0064	2013Spring	No	
7820509	GC School	WOS/Open Drain	Lobban Drain #0300	2013Spring	No	
7820511	GCDC 1515	WOS/Open Drain	Lobban Drain 0300	2013Spring	No	
7820514	GCDC 1515	WOS/Open Drain	Lobban Drain 0300	2013Spring	No	
7830255	GCDC 1426	WOS/Open Drain	Phillips drain 0319	2013Spring	No	
7830256	GCDC 1426	WOS/Open Drain	Phillips drain 0319	2013Spring	No	
7830257	GCRC	WOS/Open Drain	Phillips drain 0319	2013Spring	No	
7830258	GCRC	WOS/Open Drain	Phillips drain 0319	2013Spring	No	
8512251	GCDC 0227	WOS/ Nat H2O	Armstrong Creek	2013Spring	No	
8512509	GCRC	WOS/Open Drain	Bowman 0062	2013Spring	Yes	7/22/2013
8512780	GCRC	WOS/Open Drain	Root 0185	2013Spring	Yes	7/22/2013
8513000	GCRC	WOS/Open Drain	Bowman 0062	2013Spring	Yes	7/22/2013
8513001	GCRC	WOS/Open Drain	Bowman 0062	2013Spring	Yes	7/22/2013
8513002	GCRC	WOS/Open Drain	Bowman 0062	2013Spring	Yes	7/22/2013
8513003	GCRC	WOS/Open Drain	Bowman 0062	2013Spring	Yes	7/22/2013
8513504	GCRC	WOS/Open Drain	Bowman 0062	2013Spring	Yes	7/22/2013
8513505	GCRC	WOS/Open Drain	Bowman 0062	2013Spring	Yes	7/22/2013
8513751	GCRC	WOS/Open Drain	Cottrell 0601	2013Spring	Yes	7/22/2013
8513753	GCRC	WOS/Open Drain	Cottrell 0601	2013Spring	Yes	7/22/2013
8523754	GCDC 1540	WOS/Open Drain	Bowman, firman Br 0195	2013Spring	Yes	9/4/2013
8523755	GCDC 1540	WOS/Open Drain	Bowman, firman Br 0195	2013Spring	Yes	9/4/2013
8523756	GCDC 1540	WOS/Open Drain	Bowman, firman Br 0195	2013Spring	Yes	9/4/2013
8523757	GCDC 1540	WOS/Open Drain	Bowman, firman Br 0195	2013Spring	Yes	9/4/2013
8523758	GCDC 1540	WOS/Open Drain	Bowman, firman Br 0195	2013Spring	Yes	9/4/2013
8524001	GCRC	WOS/Open Drain	Bowman 0062	2013Spring	Yes	7/22/2013
8524002	GCRC	WOS/Open Drain	Bowman 0062	2013Spring	Yes	7/22/2013
8524003	GCDC 0566	WOS/Open Drain	Bowman, Johnson Br of 0566	2013Spring	No	
8524251	GCRC	WOS/Open Drain	Cottrell 0601	2013Spring	Yes	7/22/2013
8524252	GCRC	WOS/Open Drain	Cottrell 0601	2013Spring	Yes	7/22/2013
8524253	GCDC 0601	WOS/Open Drain	Cottrell 0601	2013Spring	No	
8524507	GC-School	WOS/Open Drain	Bowman 0062	2013Spring	Yes	7/22/2013
8524508	GC-School	WOS/Open Drain	Bowman 0062	2013Spring	No	
8526516	GC Schools	WOS/Open Drain	Bomen Drain 0062	2013Spring	No	
8534759	GCRC	WOS/Open Drain	Cole Creek 0764	2013Spring	Yes	10/1/2013
8534761	GCRC	WOS/Open Drain	Cole Creek 0764	2013Spring	Yes	10/1/2013
8535501	GCRC	WOS/Open Drain	Cole Creek 0764	2013Spring	Yes	10/1/2013
8535503	GCRC	WOS/Open Drain	Cole Creek 0764	2013Spring	Yes	10/1/2013
8535505	GCRC	WOS/Open Drain	Cole Creek 0764	2013Spring	Yes	10/2/2013
8535507	GCRC	WOS/Open Drain	Cole Creek 0764	2013Spring	Yes	10/2/2013

8605597	GCRC	WOS/Open Drain	Central Drain 0109	2013Spring	Yes	7/17/2013
8605599	GCRC	WOS/Open Drain	Central Drain 0109	2013Spring	Yes	7/17/2013
8605601	GCRC	WOS/Open Drain	Central Drain 0109	2013Spring	Yes	7/17/2013
8605609	GCDC 1440	WOS/Open Drain	Central Drain 0109	2013Spring	No	
8605611	GCRC	WOS/Open Drain	Central Drain 0109	2013Spring	Yes	7/17/2013
8605613	GCRC	WOS/Open Drain	Central Drain 0109	2013Spring	Yes	7/17/2013
8605614	GCRC	WOS/Open Drain	Central Drain 0109	2013Spring	Yes	7/17/2013
8605615	GCRC	WOS/Open Drain	Central Drain 0109	2013Spring	Yes	7/17/2013
8606751	GCRC	WOS/Open Drain	Central Drain 0109	2013Spring	Yes	7/17/2013
8606753	GCRC	WOS/Open Drain	Central Drain 0109	2013Spring	Yes	7/17/2013
8606757	GCDC 1645	WOS/Open Drain	Central Drain 0109	2013Spring	Yes	7/18/2013
8606761	GCRC	WOS/Open Drain	Central Drain 0109	2013Spring	Yes	7/18/2013
8606763	GCRC	WOS/Open Drain	Central Drain 0109	2013Spring	Yes	7/18/2013
8606764	GCDC 1645	WOS/Open Drain	Central Drain 0109	2013Spring	Yes	7/18/2013
8607251	GCRC	WOS/Open Drain	Central Drain 0109	2013Spring	Yes	7/18/2013
8607253	GCRC	WOS/Open Drain	Central Drain 0109	2013Spring	Yes	7/18/2013
8608251	GCRC	WOS/Open Drain	Central Drain 0109	2013Spring	Yes	7/17/2013
8608252	GCRC	WOS/Open Drain	Central Drain 0109	2013Spring	Yes	7/17/2013
8608253	GCRC	WOS/Open Drain	Central Drain 0109	2013Spring	Yes	7/17/2013
8609242	GCRC	WOS/Open Drain	Central Drain 0109	2013Spring	Yes	7/17/2013
8609244	GCRC	WOS/Open Drain	Central Drain 0109	2013Spring	Yes	7/17/2013
8610751	GCDC 0315	WOS/Open Drain	Lake 0057	2013Spring	No	
8610752	GCDC 1012	WOS/Open Drain	Lake 0057	2013Spring	Not Found	Not Found
8611762	GCDC 0110	WOS/Open Drain	Hannan 0110	2013Spring	No	
8612751	GCRC	C of Mt. Morris	?	2013Spring	No	
8613103	GCDC 0360	WOS/Open Drain	Hughes Dr 0024	2013Spring	No	
8613105	GCDC 0975	WOS/Open Drain	Hughes Dr 0024	2013Spring	Not Found	Not Found
8613106	GCDC 0024	WOS/Open Drain	Hughes Dr 0024	2013Spring	No	
8613247	GCDC 1159	WOS/Open Drain	Hughes Dr 0024	2013Spring	No	
8613248	GCDC 0349	WOS/Open Drain	Hughes Dr 0024	2013Spring	No	
8614503	GCDC 0462	WOS/Open Drain	Lake 0057	2013Spring	No	
8614504	GCDC 0420	WOS/Open Drain	Daily Drain 0420	2013Spring	No	
8623001	GCRC	WOS/Open Drain	Lake Drain 0067	2013Spring	No	
8623751	GCDC 0057	WOS/Open Drain	Lake Drain 0057	2013Spring	No	
8623752	GCDC 0057	WOS/Open Drain	Lake Drain 0057	2013Spring	No	
8631501	GCDC 0005	WOS/ Nat H2O	Flint River	2013Spring	No	
8633751	GCDC 0927	WOS/Open Drain	Hartshorn & Ext 0458	2013Spring	Yes	10/1/2013
8634501	GCDC 0334	WOS/Open Drain	Hartshorn & Ext 0458	2013Spring	Yes	10/2/2013
8634502	GCDC 0435	WOS/Open Drain	Hartshorn & Ext 0458	2013Spring	Yes	10/2/2013
8722001	GCRC	WOS/Open Drain	Carpenter Dr 0050	2013Spring	No	
8726501	GCDC 0171	WOS/Open Drain	Crampton Drain 0012	2013Spring	No	
8726502	GCRC	WOS/Open Drain	Crampton Drain 0012	2013Spring	No	

8726503	GCDC WWS	WOS/Open Drain	Crampton Drain 0012	2013Spring	No	
8727756	GCDC 0311	WOS/Open Drain	Crampton Drain 0012	2013Spring	No	
8727759	GCDC 0311	WOS/Open Drain	Crampton Drain 0012	2013Spring	No	
8727760	GCRC	WOS/Open Drain	Crampton Drain 0012	2013Spring	No	
8727761	GCRC	WOS/Open Drain	Crampton Drain 0012	2013Spring	No	
8727762	GCDC 0256	WOS/ Nat H2O	Crampton outlet	2013Spring	No	
8805251	GCDC 1247	WOS/Open Drain	Parker & Scothan 0036	2013Spring	No	
8816751	GCRC	WOS/Open Drain	Zufelt Drain 0100	2013Spring	No	
8828501	GCDC 0576	WOS/Open Drain	Cullen and Powers 0014	2013Spring	No	
8828502	GCRC	WOS/Open Drain	Cullen and Powers 0014	2013Spring	No	
8830751	GCRC	WOS/Open Drain	Cullen & Powers #0014	2013Spring	No	
8830752	GCRC	WOS/Open Drain	Cullen & Powers #0014	2013Spring	No	
8833008	GCDC 0127	WOS/Open Drain	Austin Drain 0160	2013Spring	No	
8833016	GCDC 0127	WOS/Open Drain	Austin Drain 0160	2013Spring	No	
8833018	GCDC 0127	WOS/Open Drain	Austin Drain 0160	2013Spring	No	
8833019	GCDC 0160	WOS/Open Drain	Austin Drain 0160	2013Spring	No	
8833020	GCDC 0127	WOS/Open Drain	Austin Drain 0160	2013Spring	No	
8833021	GCDC 0127	WOS/Open Drain	Austin Drain 0160	2013Spring	No	
8834004	GCDC 1343	WOS/Open Drain	Cullen and Powers 0014	2013Spring	No	
8834005	GCDC 0813	WOS/Open Drain	Cullen and powers #0014	2013Spring	No	
8834501	GCDC 1590	WOS/Open Drain	Cullen and Powers 0014	2013Spring	No	
8835501	GCDC 0014	WOS/Open Drain	Cullen and Powers 0014	2013Spring	No	
9535497	GCRC	WOS/Open Drain	Morrish & Francis Rd 0034	2013Spring	No	
9535499	GCRC	WOS/Open Drain	Morrish & Francis Rd 0034	2013Spring	No	
9536005	GCRC	WOS/Open Drain	Morrish & Francis Rd 0034	2013Spring	No	
9536007	GCRC	WOS/Open Drain	Morrish & Francis Rd Dr 0034	2013Spring	No	
9614532	GCDC 0816	WOS/Open Drain	Collins 0025	2013Spring	No	
9805001	GCDC 0857	WOS/Open Drain	Frost IC 0054	2013Spring	No	
9827758	GCRC	WOS/Open Drain	Parker Scothan Br 1 0437	2013Spring	No	
9833251	GCDC 1125	WOS/Open Drain	Parker & Scothan 0036	2013Spring	No	

Figure 0-1: Genesee County Assigned Outfalls for 2012-2013



11. SCHOOL STORMWATER DRAINAGE INVESTIGATIONS (Genesee County Nested Jurisdiction)

Field crews investigated schools stormwater drainage areas to identify school districts outfalls. Field crews would visit the school within school district and map out their catchbasins, open channels, detentions basin and figure out where the system would outlet to county drain, road ditch and municipal storm system. Table 11-1 shows the schools that were investigated during 2012-2013 reporting period.

Schools districts were investigated included:

- Atherton Community Schools
- Beecher Community Schools
- Bendle Public Schools
- Bentley Community Schools
- Carman Ainsworth Schools
- Clio Area Schools
- Fenton Area Schools
- Flint Community Schools
- Flushing Community Schools
- Genesee Intermittent Schools
- Grand Blanc Community Schools
- Linden Community Schools
- Mt. Morris Consolidated Schools
- Swartz Creek Community Schools
- Westwood Heights

Table 11-1: School Outfalls for 2012-2013

Owner	School Name	Notes	School ID	Urbanized Area
Atherton Comm Schools	Atherton Middle & High School		104	Yes
Atherton Comm Schools	Vern Van Elementary		103	Yes
Beecher Comm Schools	Undeveloped	Vacant Property	N/A	N/A
Beecher Comm Schools	Harrow Elementary	Vacant Building	42	
Beecher Comm Schools	Beecher Unknown Building	No Storm System	43	Yes
Beecher Comm Schools	Vacant parking lot & demo building	Vacant-No Storm System	41	Yes
Beecher Comm Schools	Undeveloped	Vacant Property	N/A	N/A
Beecher Comm Schools	Beecher High School		29	Yes
Beecher Comm Schools	Admin Building		29	Yes
Beecher Comm Schools	Beecher Tucker Elementary		32	Yes
Beecher Comm Schools	Beecher Bus Garage	Vacant Building	31	Yes
Beecher Comm Schools	Undeveloped	Vacant Property	N/A	N/A
Beecher Comm Schools	Undeveloped	Vacant Property	N/A	N/A
Beecher Comm Schools	Undeveloped	Vacant Property	N/A	N/A
Beecher Comm Schools	Library & Parking	Vacant Building	30	Yes
Beecher Comm Schools	Undeveloped	Vacant Property	N/A	N/A

Beecher Comm Schools	Beecher-Reiley Adult Education		28	Yes
Beecher Comm Schools	Beecher Middle School		27	Yes
Beecher Comm Schools	Dailey Elementary		27	Yes
Bendle Public Schools	South Bendle Elementary		99	Yes
Bendle Public Schools	Bendle High School & Admin		101	Yes
Bendle Public Schools	West Bendle Elementary		97	Yes
Bendle Public Schools	Special Education		102	Yes
Bendle Public Schools	Bendle Middle School	Vacant-No Storm System	100	Yes
Bendle Public Schools	Friel Elementary	No Storm System	98	Yes
Bentley Comm Schools	Middle & High School		106	Yes
Bentley Comm Schools	Barhitte Elementary		105	Yes
Carman Ainsworth	Ranking Elementary	Not in Urbanized Area	117	No
Carman Ainsworth	Undeveloped	Vacant Property	N/A	N/A
Carman Ainsworth	Undeveloped	Vacant Property	N/A	N/A
Carman Ainsworth	Carman Ainsworth MS & GIS E Knopf Learning Cen		116	Yes
Carman Ainsworth	Fenton Lawn Resource Center		76	Yes
Carman Ainsworth	Randels Elementary		79	Yes
Carman Ainsworth	Dye Elementary		59	Yes
Carman Ainsworth	Woodland Elementary		78	Yes
Carman Ainsworth	Admin Building		60	Yes
Carman Ainsworth	Stalker Community Cen- Pre K	No Storm System	61	Yes
Carman Ainsworth	Gladys Dillon Elementary		96	Yes
Carman Ainsworth	Carman Ainsworth High School		58	Yes
Carman Ainsworth	Carman Park School		75	Yes
Clio Area Schools	AC Edgerton Elementary		1	Yes
Clio Area Schools	Clio High School		2	Yes
Clio Area Schools	Admin/adult Ed/MS		3	Yes
Clio Area Schools	Bus Garage		4	Yes
Clio Area Schools	GA Lacure Elementary	Not in Urbanized Area	6	No
Clio Area Schools	GE Garner Elementary		5	Yes
Fenton Area Schools	Tomek Eastern Elementary		133	Yes
Fenton Area Schools	Fenton High School & Admin Building		136	Yes
Fenton Area Schools	State Road Elementary		135	Yes
Fenton Area Schools	Fenton Middle School		134	Yes
Fenton Area Schools	North Road Elementary		132	Yes
Flint Community Schools	Flint Head Start formerly Manley Elementary		92	Yes
Flint Community Schools	Northern HS & Anderson Elementary		62	Yes
Flint Community Schools	Civic Park Elementary	Vacant Building	63	Yes
Flint Community Schools	King Elementary	Vacant Building	64	Yes
Flint Community Schools	Dort Elementary	Vacant Building	65	Yes
Flint Community Schools	Cook Elementary	Vacant Building	66	Yes
Flint Community Schools	Summerfield Elementary & Longfellow MS		67	Yes

Flint Community Schools	Durant - Tuuri - Mott Elementary		68	Yes
Flint Community Schools	Coolidge Elementary	Vacant Building	69	Yes
Flint Community Schools	Mott Adult Ed		70	Yes
Flint Community Schools	Eisenhower Elementary		71	Yes
Flint Community Schools	Southwestern Classical Academy		72	Yes
Flint Community Schools	Private-Christian Outreach	New Ownership	73	Yes
Flint Community Schools	Nethercut Elementary		74	Yes
Flint Community Schools	Private	New Ownership	77	Yes
Flint Community Schools	Doyle Ryder Elementary		83	Yes
Flint Community Schools	Homedale Elementary	Vacant Building	84	Yes
Flint Community Schools	Washington Elementary	Vacant Building	85	Yes
Flint Community Schools	Sarvis Cultural Conference Center		86	Yes
Flint Community Schools	Central Kitchen		86	Yes
Flint Community Schools	Central HS & Whittier MS	Vacant Building	87	Yes
Flint Community Schools	Pierce Elementary		88	Yes
Flint Community Schools	Bus Garage		89	Yes
Flint Community Schools	Scott Elementary & Unknown Facility		90	Yes
Flint Community Schools	Stewart Elementary	New Ownership-Church	91	Yes
Flint Community Schools	McKinley MS		94	Yes
Flint Community Schools	Cody Elementary	Vacant-No Storm System	93	Yes
Flint Community Schools	Freeman Elementary		95	Yes
Flint Community Schools	Unknown Facilities		95	Yes
Flint Community Schools	Admin Building		138	Yes
Flint Community Schools	Holmes MS & Brownell Elementary		36	Yes
Flint Community Schools	Merrill Comm Elementary	Vacant Building	40	Yes
Flint Community Schools	Carpenter Rd Elementary		45	Yes
Flint Community Schools	Wilkins Elementary	Vacant Building	34	Yes
Flint Community Schools	Garfield Edison School	Vacant Building	46	Yes
Flint Community Schools	Potter Elementary		48	Yes
Flint Community Schools	Bunche Community Elementary		39	Yes
Flint Community Schools	Northwestern High School		33	Yes
Flint Community Schools	Bryant Center	Vacant Building	37	Yes
Flint Community Schools	Williams Edison School	Vacant Building	47	Yes
Flushing Comm Schools	Undeveloped	Vacant Property	N/A	N/A
Flushing Comm Schools	Seymour Elementary		16	Yes
Flushing Comm Schools	Undeveloped	Vacant Property	N/A	N/A
Flushing Comm Schools	Flushing Jr High School		10	
Flushing Comm Schools	Flushing Middle School		9	
Flushing Comm Schools	Springview Elementary		15	Yes
Flushing Comm Schools	Elms Elementary		8	
Flushing Comm Schools	Undeveloped	Vacant Property	No	No
Flushing Comm Schools	Central Elementary		13	Yes

Flushing Comm Schools	Flushing Admin Building		12	Yes
Flushing Comm Schools	Flushing Jr HS & Adult Ed		14	Yes
Flushing Comm Schools	Bus Garage		11	Yes
Genesee School District	Genesee High School & Haas Elementary & Admin		56	Yes
GISD	Knoph Learning Center		116	Yes
GISD	Special Education Services		115	Yes
GISD	Skill Center S#03260	Was part of Flint now GISD	114	Yes
GISD	GISD Admin Building		114	Yes
GISD	Special Ed Skill Center		80	Yes
GISD	Legon		7	No
GISD	Marion Crouse Inst Center-Sp Ed		17	Yes
Grand Blanc Comm Schools	Cook Elementary		125	Yes
Grand Blanc Comm Schools	Grand Blanc Middle/High School/Admin		122	Yes
Grand Blanc Comm Schools	Transportation Building		118	Yes
Grand Blanc Comm Schools	Reid Rd Middle School		121	Yes
Grand Blanc Comm Schools	Anderson/McGrath Elementary		119	Yes
Grand Blanc Comm Schools	Reid Rd Elementary		121	Yes
Grand Blanc Comm Schools	Indian Hill Elementary		120	Yes
Grand Blanc Comm Schools	Undeveloped	Vacant Property	N/A	N/A
Grand Blanc Comm Schools	Grand Blanc Middle School		124	Yes
Grand Blanc Comm Schools	Middle School		124	Yes
Grand Blanc Comm Schools	Myers Elementary		123	Yes
Lake Fenton Comm Schools	Lake Fenton Middle School/Admin Building		130	Yes
Lake Fenton Comm Schools	Lake Fenton High School		129	Yes
Lake Fenton Comm Schools	Torrey Hill & West Shore Elementary		131	Yes
Linden Community Schools	Linden High School & Central Elementary		127	Yes
Linden Community Schools	Argentine Elementary		126	Yes
Linden Community Schools	Linden Elementary & Middle School		128	Yes
Mt. Morris Consolidated	Monetgue Elementary		19	Yes
Mt. Morris Consolidated	Central Middle School		21	Yes
Mt. Morris Consolidated	Admin Building		22	Yes
Mt. Morris Consolidated	Mt. Morris Jr High School		22	Yes
Mt. Morris Consolidated	Ball Fields		20	Yes
Mt. Morris Consolidated	Pinehurst Elementary		20	Yes
Mt. Morris Consolidated	Undeveloped	Vacant Property	N/A	N/A
Mt. Morris Consolidated	Johnson High School		18	Yes
Swartz Creek Comm Schools	Gaines Elementary	Not in Urbanized Area		No
Swartz Creek Comm Schools	Undeveloped	Vacant Property	N/A	N/A
Swartz Creek Comm Schools	Undeveloped	Vacant Property	N/A	N/A
Swartz Creek Comm Schools	Syring Elementary		111	Yes
Swartz Creek Comm Schools	Swartz Creek Middle School & Admin Building		112	Yes

Swartz Creek Comm Schools	Alternative High School & Admin Building		112	Yes
Swartz Creek Comm Schools	Dieck Elementary	Not in Urbanized Area	82	No
Swartz Creek Comm Schools	Elms Elementary		81	Yes
Swartz Creek Comm Schools	Morrish Elementary		113	Yes
Swartz Creek Comm Schools	Swartz Creek High School & Admin Building		112	Yes
Westwood Heights	Hamady Elementary	Part of GISD	24	Yes
Westwood Heights	Alt High School & Westwood Elementary	Part of GISD	23	Yes
Westwood Heights	Hamady High School & Middle School	Part of GISD	26	Yes
Westwood Heights	Gillespie Elementary	Part of GISD	25	Yes
Westwood Heights	Undeveloped	Part of GISD	N/A	N/A
Westwood Heights	Undeveloped	Part of GISD	N/A	N/A

Map of schools available in GIS upon Request.