

Appendix A

# Greater Lansing Regional Committee for Stormwater Management

## Public Education Plan



APRIL 2010

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## INTRODUCTION

This Public Education Plan (PEP) is being prepared for the communities within the Greater Lansing Region to comply with Phase II Storm Water National Pollutant Discharge Elimination System (NPDES) General Watershed Permit requirements and to assist with the watershed management planning process. This creates a concise document for members and the Public Education Program Committee to work from throughout the current permit cycle (2008-2013).

The original PEP was completed in 2003 and updated in 2006; this current version of the PEP will be submitted to MDNRE with the Stormwater Pollution Prevention Initiative on July 1, 2011 as described in the Certificate of Coverage. The PEP was written for all GLRC members, educating on a regional and watershed level. However, each permittee will take their specific watershed and community characteristics into consideration throughout PEP activity implementation. Where applicable each member has included their specific individual efforts throughout the document below.

Permittees, GLRC members participating in the PEP are as follows:

City of DeWitt	Lansing Charter Township
City of East Lansing	Meridian Charter Township
City of Grand Ledge	DeWitt Public Schools
City of Lansing	Lansing Public Schools
City of Mason	Clinton County
Delhi Charter Township	Eaton County
Delta Charter Township	Ingham County
DeWitt Charter Township	Michigan State University

Associate GLRC members include: Windsor Charter Township and Oneida Charter Township.

### A. REQUIRED ELEMENTS

The PEP follows the format recommended by the Michigan Department of Natural Resources and the Environment (MDNRE) and includes the nine topic areas required in the permit.

*An adequate PEP will implement a sufficient amount of educational activities to ensure that the targeted audiences are reached with the appropriate message(s) for the following topics:*

- (1) *Responsibility and stewardship in their watershed*
- (2) *The connection of MS4 catch basins, storm drains, and ditches to area waterways, and the potential impacts these could have on the surface waters of the state*
- (3) *Public reporting of illicit discharges or improper disposal of materials into MS4s*
- (4) *The effects and need to minimize the amount of residential or noncommercial wastes discharged into MS4s, including:*

- Preferred cleaning materials and procedures for car, pavement, and power washing
  - Acceptable application and disposal of pesticides, herbicides, and fertilizers
  - Proper disposal practices for grass clippings, leaf litter, and animal wastes that get flushed into MS4s and the surface waters of the state
- (5) The availability, location, and requirements of facilities for disposal or drop-off of household hazardous wastes, travel trailer sanitary wastes, chemicals, yard wastes, and motor vehicle fluids
- (6) For property owners with septic systems, the proper septic system care and maintenance, and how to recognize system failure
- (7) The benefits of using native vegetation instead of non-native vegetation
- (8) For permittees with riparian land owners, methods for managing riparian lands to protect water quality
- (9) Additional pollutants unique to commercial, industrial, and institutional entities as the need is identified.

## B. PUBLIC EDUCATION PLAN IMPLEMENTATION

Activities listed here correspond directly with the topic areas 1-9 for compliance. Appendix B is the complete action plan table that details the activities below and additional public education activities including a time line, costs and general evaluation mechanisms. More detailed evaluation mechanisms are listed in Appendix C.

<b>Activity No. 1:</b>	Heighten visibility and promote school water resource monitoring.
<b>Topic Area #:</b>	1
<b>Target Audience:</b>	Municipal council or board, school officials and residents in Tri-County Region.
<b>Messages:</b>	Although water quality has improved, pollutants remain in the water through nonpoint source pollution.
<b>Description:</b>	Presentations to city councils, township administrators and school boards encouraging participation in Project GREEN. Contact teachers currently participating in Project GREEN. Prior to presentations, issue press releases to heighten visibility. Coordinate presentations with city and township staff, Mid-Michigan Environmental Action Council, General Motors, teachers and students.
<b>Timetable:</b>	Follow Project GREEN timetable, which includes Spring and Fall field trips. Communication with Project GREEN is ongoing.

**Responsibility:** The GLRC Habitat & Recreation Committee has developed and existing partnership with Project GREEN. We continue to partner on efforts regarding monitoring, student participation, etc.

**Activity No. 2:** Tributary signage at municipality's road and river crossings.

**Topic Area #:** 1

**Target Audience:** Drivers, passengers and citizens

**Messages:** Connection to the river. "You are in the Grand River, Red Cedar River or Looking Glass River Watersheds".

**Description:** Signs have been placed at roadway/river crossings identifying the Grand River, Carrier Creek, Red Cedar River, Sycamore Creek, Mud Lake Drain and Looking Glass River Watersheds.



**Timetable:** 97 signs have been purchased and erected. DeWitt Charter Township continues to work with the road commission to maintain the signage. To this point the Township maintains five signs.

**Responsibility:** DeWitt Charter Township in cooperation with Clinton County Road Commission and Clinton County Drain Commissioner.

**Activity No. 3:** Display Illicit Discharge Educational Materials including hot line for reporting illicit discharges and/or illegal dumping, etc.

**Topic Area #:** 3

**Target Audience:** Communities and citizens

<b>Messages:</b>	How to recognize and report illicit discharges and other improper disposals into the storm sewers.
<b>Description:</b>	Information about illicit discharges, illegal dumping or other pollution and how to report such activities is posted on the GLRC website. Each community's number and the state hotline number are listed. DeWitt Charter Township has listed the reporting number on our website and lobbies.
<b>Timetable:</b>	Currently in place, ongoing activity.
<b>Responsibility:</b>	DeWitt Charter Township in cooperation with GLRC.
 <b>Activity No. 4:</b>	 Distribute existing brochures and implement other incentives to encourage citizens to properly dispose household hazardous wastes and used motor vehicle fluids.
<b>Topic Area #:</b>	2, 4, 5
<b>Target Audience:</b>	Communities and citizens
<b>Messages:</b>	Harmful products can enter the river if not disposed of properly
<b>Description:</b>	Distribute existing brochures or develop and distribute brochures to the entire watershed. Pass out empty containers at drop-off stations to encourage people to continue to participate. Develop and distribute litter bags for people to keep in their autos or boats to discourage littering. Posters and brochures regarding used motor oil (vehicle maintenance), car washing, pet waste, and fertilizer use have been developed and distributed throughout the Grand, Red Cedar, and Looking Glass River watersheds. Posters have been displayed at the Township Hall.
<b>Timetable:</b>	Currently in place, ongoing activity
<b>Responsibility:</b>	DeWitt Charter Township in cooperation with GLRC, Clinton County Drain Office, and Clinton County Department of Waste Management.
 <b>Activity No. 5:</b>	 Publish a series of articles on public responsibility and stewardship.
<b>Topic Area #:</b>	1, 2, 3, 4, 5, 6, 7, 8
<b>Target Audience:</b>	Communities and citizens
<b>Messages:</b>	GLRC for Stormwater Management efforts and the Municipality's goals, household hazardous waste, lawn and

garden care, car washing and maintenance, illicit discharge and illegal dumping and stewardship and volunteer opportunities.

**Description:** Continue to publish the series of articles for publication in the local newspapers, newsletters or websites. Coordinate efforts between city and township administrators and local media. Articles developed include:

What is a watershed	Pet Waste
Riparian Areas	Storm Vs. Sanitary Sewer
Who/What is the GLRC	Car Washing Article
Onsite Septic System	Adopt Your Catch Basin
Fertilizer	Illicit Discharge
Vehicle Maintenance	Wetlands

All articles are published on the GLRC website including links for more information for riparian land owners, recycling and local household hazardous waste. DeWitt Charter Township has published 10 of articles in our Township newsletter. DeWitt Charter Township has provide these brochures on our website ?

**Timetable:** Members are requested to publish the entire series annually.

**Responsibility:** DeWitt Charter Township in cooperation with GLRC.

**Activity No. 6:** Distribute educational materials about septic tank maintenance and travel trailer sanitary waste disposal.

**Topic Area #:** 5, 6

**Target Audience:** Communities and citizens

**Messages:** Leaking septic tanks and improper disposal of waste can affect water quality and wildlife habitat.

**Description:** Continue to distribute and post on GLRC website existing materials discussing harmful effects of leaking septic tanks and proper maintenance guidelines. Maintain the link from GLRC website to information from local health departments. Publish news article for septic systems.

**Timetable:** Currently in place, ongoing activity. News article should be published annually.

**Responsibility:** DeWitt Charter Township in cooperation with GLRC.

**Activity No. 7:** Work with local Adopt-A-River programs to remove trash and debris from river.

<b>Topic Area #:</b>	1, 8
<b>Target Audience:</b>	Communities and citizens
<b>Messages:</b>	Bring awareness and ownership of the river to citizens through clean up efforts.
<b>Description:</b>	Continue to work with local participating organizations to promote and participate in Adopt A River program activities. Continue to advertise and volunteer at local Adopt A River programs in regional and community newsletters.
<b>Timetable:</b>	Continue semi-annual program participation for existing programs.
<b>Responsibility:</b>	DeWitt Charter Township in cooperation with GLRC. Also work with the Friends of the Looking Glass River.
<b>Activity No. 8:</b>	Collaboration with the local agricultural community.
<b>Topic Area #:</b>	1, 7, 8
<b>Target Audience:</b>	Communities, citizens and agricultural community
<b>Messages:</b>	Bring education and awareness to backyard conservation techniques.
<b>Description:</b>	Continue to partner with NRCS and local Conservation Districts to incorporate annual community meeting on water quality friendly agricultural practices. Topics include best management practices for agricultural operations to reduce pollution. Continue to post educational materials on GLRC website.
<b>Timetable:</b>	Continue and increase correspondence during the current permit cycle.
<b>Responsibility:</b>	DeWitt Charter Township in cooperation with GLRC.
<b>Activity No. 9:</b>	Educate local businesses about environmental friendly practices.
<b>Topic Area #:</b>	1, 2, 4, 9
<b>Target Audience:</b>	Local businesses
<b>Messages:</b>	Local businesses can operate in an environmental friendly way, reducing pollution and protecting water quality.



**Description:** Work with local businesses to identify companies that conduct their business in an environmentally responsible way. Mid-MEAC and chamber or commerce are good starting points. Develop educational information for businesses. Continue to link GLRC website to local Health Department Restaurant Inspection information including reduction of fats, oils and greases in the sewers.

**Timetable:** Begin/continue correspondence during the current permit cycle.

**Responsibility:** DeWitt Charter Township in cooperation with GLRC, Clinton County Road Commission, and SCCMUA.

**Activity No. 10:** Develop curb markers and door hangers that state “No Dumping: Flows to Waterways”.

**Topic Area #:** 1, 2, 3

**Target Audience:** Communities and citizens

**Messages:** Bring awareness to the general public that storm drains flow to waterways of the state, to not dump pollutants into the drains.

**Description:** Continue to maintain existing curb markers and door hangers programs throughout the region. Curb Marker/Door Hanger Volunteer Program Instructions are posted on the GLRC website, will be updated as necessary. Having volunteer conduct placement of the curb markers and door hangers helps raise awareness around the community. Some markers have been installed and will work with the Clinton County Drain Commissioner to install additional Curb Marker/Door Hanger.

**Timetable:** Continue to implement and maintain existing programs in the community.

**Responsibility:** DeWitt Charter Township in corporation with Clinton County Drain Office

**Activity No. 11:** Continue to and increase activities of the plan to bring awareness to homeowners and citizens regarding pollution prevention.

**Topic Area #:** 1, 4, 5, 7, 8

**Target Audience:** Homeowners and citizens

<b>Messages:</b>	Bring awareness to homeowners and citizens about basic changes they can make to help reduce pollution to the local waterways.
<b>Description:</b>	Summarize existing homeowner education efforts in the watersheds and develop a plan to address the gaps. Continue to promote the news articles, informational brochures and posters that have been developed, the topic include: reducing pet waste, reducing fertilizer use, vehicle maintenance (no dumping oil), and proper car washing methods. See activity 5 for list of news articles.
<b>Timetable:</b>	Continue to promote educational materials, ongoing activity.
<b>Responsibility:</b>	DeWitt Charter Township in cooperation with GLRC and Clinton County Drain Commissioner.
<b>Activity No. 12:</b>	Continue to promote educational materials regarding low or no phosphorus fertilizer.
<b>Topic Area #:</b>	1, 2, 4
<b>Target Audience:</b>	Homeowners, citizens, businesses
<b>Messages:</b>	Bring awareness to homeowners and citizens about using low or no phosphorus fertilizer to help protect water quality.
<b>Description:</b>	Continue to distribute low or no phosphorus brochures, tip cards, posters and news articles. Provide to businesses and residents. Continue to promote lawn care events and support local businesses that promote phosphorus free fertilizers, like our local Meijer stores. See activity no 5.
<b>Timetable:</b>	An informational brochure, poster, and news article regarding lawn care has been developed and distributed throughout the Grand, Red Cedar, and Looking Glass River watersheds.
<b>Responsibility:</b>	DeWitt Charter Township in cooperation with GLRC and Clinton County Drain Commissioner
<b>Activity No. 13:</b>	Increase volunteer efforts and public participation in reducing pollution and improving water quality throughout the watersheds.
<b>Topic Area #:</b>	1, 3
<b>Target Audience:</b>	Communities and citizens
<b>Messages:</b>	Bring awareness to the public that their efforts are needed in order to improve water quality. Longevity of their efforts can make a difference in our waterways.

**Description:** Continue to support volunteer monitoring initiatives within the watersheds and identify/prioritize needed projects. Seek external funding sources, both in kind, grants, and donation from communities and sponsors. Current partnerships include volunteer stream monitoring with Mid-Michigan Environmental Action Council and the Children's Water Festival. The GLRC exhibit display also provides an opportunity for volunteers to sign up for clean up efforts in their watershed.

**Timetable:** This is an ongoing effort with MidMEAC and it is anticipated to continue throughout the permit cycle. The local annual Children's Water Festival also utilizes several volunteer student and citizen groups.

**Responsibility:** DeWitt Charter Township in cooperation with GLRC.

**Activity No. 14:** Riparian vegetation and wetland education

**Topic Area #:** 1, 7, 8

**Target Audience:** Communities and citizens, specifically riparian land owners

**Messages:** Educate riparian land owners about best management practices for them to adopt to improve water quality.

**Description:** Determine the best media to reach riparian landowners and develop a campaign based on municipal experience. Educational brochure and articles are posted on the GLRC website.

**Timetable:** Throughout the current permit cycle.

**Responsibility:** DeWitt Charter Township in cooperation with GLRC and Clinton County Drain Commissioner. Additionally, the Township will try to work with the Friends of the Looking Glass

**Activity No. 15:** Youth Education – environmental curriculum.

**Topic Area #:** 1, 2

**Target Audience:** School district officials, students, parents

**Messages:** Educate our youth about how the importance of water quality and how to reduce pollution, increase pollution prevention practices.

**Description:** Maintain database of school districts and contact list of teachers. Continue to notify local school districts about the free MDNRE curriculum: Michigan Environmental Education

Curriculum Support. Maintain this information on GLRC website. Work with teachers one on one and with schools to implement curriculum. Continue working with the Grand Learning Network on place-based education efforts.

**Timetable:** Continue throughout the current permit cycle.

**Responsibility:** GLRC in cooperation with DeWitt Charter Township

**Activity No. 16:** Develop a “tag line” to be used in multi media materials.

**Topic Area #:** 1, 2, 4, 5, 9

**Target Audience:** Communities, citizens, businesses

**Messages:** Tag line created “It all ends up in the Grand River” to promote pollution prevention and water quality awareness.

**Description:** The universal line will continue to be used through many multi-media avenues including billboards, social networking sites, website, etc.

**Timetable:** Currently in place, ongoing activity.

**Responsibility:** GLRC in cooperation with DeWitt Charter Township

**Activity No. 17:** Design information display table for GLRC member administrative building lobbies and as an exhibit and for community events.

**Topic Area #:** 1, 2, 4, 7

**Target Audience:** Communities, citizens, businesses

**Messages:** Our actions affect our local watersheds, now is the time to protect our local rivers and streams.

**Description:** The display is used at many local events including the Quiet Water Symposium, Adopt A River, Lawn Care Events, and many individual community events. Brochures, stickers, bookmarks, etc. are used with the display. GLRC members use the display in their local libraries, lobby, etc. Interested parties also have the opportunity to sign up for volunteer work in watershed.

**Timetable:** Currently in place, ongoing activity.

**Responsibility:** GLRC in cooperation with DeWitt Charter Township

**Activity No. 18:** Use “tag line” for billboard and newsprint advertising.

**Topic Area #:** 1, 2, 4, 5

**Target Audience:** Community, citizens, businesses

**Messages:** To promote our website and the tag line: “It all ends up in the Grand River”. Promotes pollution prevention and water quality awareness and provides an opportunity for many educational topics listed on our website.

**Description:** The graphic is used for the billboard and newsprint ads in the local community newspapers for several weeks at a time.



**Timetable:** It is anticipated that the billboard can be on display for a minimum of 60 days, 5 locations in the urban area each year. This is a minimum (and current) level of exposure that is anticipated. Newspaper ads will be purchased as revenue allows.

**Responsibility:** GLRC in cooperation with DeWitt Charter Township

**Activity No. 19:** Update and maintain GLRC website and social networking sites.

**Topic Area #:** 1, 2, 3, 4, 5, 6, 7, 8, 9

**Target Audience:** Community, citizens, businesses, local governments

**Messages:** Protect our rivers, streams, lakes, community.

**Description:** The GLRC website hosts educational materials related to everything listed in this plan, including a specific section for PEP materials (brochures, newsletters, etc.). Social networking sites are used to promote environmental events, meetings, ideas about pollution prevention and water quality protection.

**Timetable:** Currently in place, ongoing activity.

**Responsibility:** GLRC in cooperation with DeWitt Charter Township. DeWitt Charter Township community website is linked directly to the GLRC website.

**Activity No. 20:** Pet waste reduction signage at municipality's parks and trails.

**Topic Area #:** 1, 4

**Target Audience:** Community and citizens

**Messages:** Picking up pet waste helps reduce pollution (nutrients and pathogens) in our local rivers and lakes.

**Description:** Signs have been placed at many parks and river/walking trails.



**Timetable:** 84 signs have been purchased and erected, will continue to maintain them. DeWitt Charter Township has installed signs at the few park locations where we allow dogs.

**Responsibility:** DeWitt Charter Township

**Activity No. 21:** Youth Education – Children's Water Festival.

**Topic Area #:** 1, 2, 3, 6

**Target Audience:** Students, parents, teachers

**Messages:** Educate our youth about how the importance of water quality and how to reduce pollution, increase pollution prevention practices.

**Description:** The Children's Water Festival focuses on groundwater protection but includes many topics related to surface water protection as well. The festival is an annual one-day free event for 4, 5, 6 graders. The festival is in its 15<sup>th</sup> year and has educated nearly 30,000 students thus far. TCRPC coordinates

this event separately from the GLRC but permittees do participate.

**Timetable:** Annual event

**Responsibility:** TCPRC in cooperation with GLRC and DeWitt Charter Township.

**Activity No. 22:** Presentation series on Low Impact Development (LID) Techniques.

**Topic Area #:** 7, 8, 9

**Target Audience:** Communities, elected officials, government staff, developers, contractors, citizens

**Messages:** Learn about building/development techniques that support infiltration on-site, water quality improvements and pollution prevention.

**Description:** Educational presentations on LID techniques. Topics reviewed thus far or are scheduled include: rain water harvesting, pervious concrete, rain barrel and composting programs, Towar Garden project, native planting and biodiversity, and salt BMPs.

**Timetable:** Currently in place, ongoing activity

**Responsibility:** GLRC in cooperation with DeWitt Charter Township

**Activity No. 23:** Youth Education – Large Groundwater Flow Model developed.

**Topic Area #:** 1, 2, 3, 6

**Target Audience:** Students, parents, teachers

**Messages:** Educate our youth about how the importance of water quality/drinking water and how to reduce pollution, increase pollution prevention practices.

**Description:** A life-size groundwater flow model has been developed by the Groundwater Management Board and is on display at Impression 5 Science Museum. It includes interactive dyes for wells, rain gardens, catch basins, etc.

**Timetable:** Model will be on display indefinitely.

**Responsibility:** Groundwater Management Board and TCPRC.

## **C. PLAN FOR EVALUATING IMPACTS**

The GLRC conducted a water quality survey during the Fall of 2006. The purpose of the survey was to provide a benchmark to gauge the effectiveness of regional and local public outreach campaigns on water quality issues in the Greater Lansing Region. A four-page survey and cover letter were mailed to a stratified random sample of 1,800 households in the Greater Lansing region, which includes the Looking Glass, Red Cedar and Grand River watersheds; 600 households were selected at random from each of the three watersheds. Approximately 10 days after the surveys were mailed; residents who received the survey were contacted by phone. Those who indicated that they had not returned the survey were given the option of completing it by phone. Of the 1,800 households in the Greater Lansing Region that received a survey, 403 households returned the survey by mail and 273 completed the survey by phone for a total of 676 completed surveys.

The survey results provided a baseline for evaluating the effectiveness of regional and local water quality initiatives over time. These results will be used by the GLRC and other organizations in the region to implement public education programs to meet federal stormwater regulations. Overall, this survey shows that residents are concerned about the quality of the rivers and lakes in Greater Lansing Region. The survey points out that while many residents understand that their actions at home affect water quality, more education is needed. Most importantly, there is a willingness in the Greater Lansing Region to make some adjustments in daily habits to protect the water resources. Thus, there is value added in protecting water quality that can be achieved with public education efforts that tap the “willingness” to help expressed in this survey.

Since a baseline for evaluating the effectiveness of current (and past) water quality initiatives has been completed, an additional survey will need to be executed to see the level of progress that has been achieved in the region. This will be completed towards the end of the permit cycle to evaluate progress within the longest time frame possible. GLRC members will pay approximately \$30,000 for the survey. Survey costs are calculated according to the Memorandum of Understanding: 50% of the cost is split equally among members and the remaining 50% is divided based on population (excluding the counties and school districts). It is anticipated that the survey will be conducted during the first and second quarter of 2012. This will allow for the results to be included in the watershed management update, which will be completed by July 2013.

Additional evaluation mechanisms are essential to gauge implementation status and assess the effectiveness of the overall program. Identification of quantifiable measures provides both measurability and accountability within the program. These mechanisms are described in Appendix C



## **Appendix B Action Plan**

## **Appendix C**

### **Evaluation Mechanisms**

**Appendix D**  
**Maps of Township complexes**