

**BAY AREA STORM WATER AUTHORITY
PUBLIC EDUCATION PLAN (PEP)**

10.7.05

This Public Education Plan (PEP) is submitted to the Michigan Department of Environmental Quality to fulfill those requirements of the National Pollutant Discharge Elimination System General Permit No. MIG619000 for Storm Water Discharges by the Bay County Urbanized Area. . This PEP is designed exclusively for use by the Bay County Urbanized Area Storm Water Authority (Authority) and its use is limited to the members of the Authority. The Authority is comprised of the following member municipalities:

Bangor Charter Township

Bay County Road Commission

City of Bay City

City of Essexville

County of Bay

Frankenlust Township

Fraser Township

Hampton Charter Township

Kawkawlin Township

Monitor Charter Township

Portsmouth Charter Township

In accordance with the NPDES Municipal Separate Storm Sewer System (MS4) General Permit No. MIG619000 the PEP will be implemented as a part of a Bay Urbanized Area watershed effort to comply with the permit's public education requirement:

To promote, publicize, and facilitate watershed education for the purpose of encouraging the public to reduce the discharge of pollutants in storm water to the maximum extent practicable.

In carrying out the following public education efforts, each Member will take action and respond in a manner consistent with the scope of its current legal authority. If the legal authority necessary to carry out one of the required public education elements within its jurisdiction is vested in whole or in part in another municipal authority, the Member will notify and take appropriate steps to encourage the other municipal authority to satisfy that element. Municipal authorities include but are not limited to the Drain Commissioner and the Road Commission.

OBJECTIVES FOR PUBLIC EDUCATION

1. Build awareness and stewardship of the two Bay County Watersheds and tributaries, the urban storm water system, as well as the daily impact of activities on this resource among municipality residents.
2. Improve the public's understanding of the Saginaw and Kawkawlin Rivers and the Saginaw Bay, to improve their status as natural resources, recreational resources, and valuable community assets (i.e., foster stewardship and enthusiasm for the rivers and Bay).
3. Build awareness and foster stewardship of the local watershed management actions, NPDES General Permit requirements and the municipal partners through dissemination of informational materials and coordination of activities.

THE SIX (6) AREAS OF EMPHASIS REQUIRED IN THE PERMIT AND SPECIFIC ACTIVITIES TO BE TAKEN

1.) Education of the public about their responsibility and stewardship in their watershed will be performed emphasizing pollution prevention and the reduction of the discharge of pollutants in storm water through the following activities:

- A.) Activity: Develop message for the Web Site
- I. Target Audience: Residents of Authority Member Communities, schools, community organizations and visitors to the web site.
 - II. Existing Efforts: A web site currently exists for the County, the Storm

Water Authority Website will piggyback on the site and utilize a number of existing resources.

- III. Future Efforts: Regular maintenance of web site with appropriate seasonal messages.
 - IV. Content of Message: Pollution reduction will be emphasized, with proper methods presented to reduce, prevent, and eliminate pollutants to the storm system.
 - a. Define Watershed
 - b. Educate how public effect's watershed
 - c. Purpose of protecting watershed
 - d. Statement of effect on local watershed
 - V. Delivery Mechanism: Internet, encourage Authority Members to provide links on their own websites.
 - VI. Sustainability: Web site will be maintained indefinitely
 - VII. Timetable
 - a. development—4th quarter 2005
 - b. implementation – 1st quarter 2006
 - VIII. Measure Effectiveness: An internal counter will be incorporated into pages within the web site, on a quarterly basis, percentage growth in the number of hits on the web site will be measured. Correlations with the release of other information as part of the PEP will be factored in to determine if alternative website promotion must be made. A summary of growth will be included in the annual report.
 - IX. Responsible Party –Shared by Authority
 - X. Costs – \$2000.00 will be allocated annually to this activity. Please note the attached budget.
- B.) Activity: Develop message for the Newsletters
- I. Target Audience: Authority member community residents, waterfront property owners, business groups, schools, community organizations and other newsletter outlets that are distributed to our community.

- II. Existing Efforts: Member municipalities send out newsletters to their residents and businesses on a variable basis throughout the year and they will be used to promote watershed education.
- III. Future Efforts: The newsletters will include articles and information on watershed principals and practices as well as other storm water education information.
- IV. Content of Message. Articles within the newsletters will inform residents about their responsibility and stewardship in their watershed and the six (6) areas of emphasis will be promoted.
- V. Delivery Mechanism: These newsletters are primarily distributed through direct mail to local residents and they will also be posted or otherwise made available at each member municipality office. The authority will also identify other newsletters to promote its message.
- VI. Sustainability: Newsletter will be on-going, Authority Members have regularly scheduled newsletters distributed to residents and businesses. The newsletters are sent either quarterly or semi-annually depending on the community.
- VII. Timetable
 - a. development- 4th quarter 2005
 - b. implementation – will begin the 4th quarter 2005
- VIII. Measure Effectiveness: A survey will be conducted in late 2006, utilizing mail or phone. It will be designed to measure penetration and retention of Authority messages. Survey results will be compared to a statewide baseline survey developed for the Center for Environmental Policy, completed by Northwestern Michigan College to measure residents understanding of the watershed and storm water pollution prevention as compared to general knowledge of residents of the state.

In addition, all articles will have specific website addresses and contact numbers identified for further information, hits on those specific websites and contacts will be counted and measured against the general website and other specific websites to determine if articles are effective.

Finally, input from residents at municipal offices will be tracked and reported to the Authority Staff. All information will be used to adjust messaging done by the Authority.

- IX. Responsible Party: Shared by the Authority
 - X. Costs: Articles will be obtained from various sources, edited to be community specific and distributed by Drain Commissioner staff so no direct costs are expected.
- C.) Activity: Distribution of Brochures/Tip Cards
- I. Target Audience: Residents of Authority Member Communities, visitors to community information distribution points including; municipalities, attractions, marinas, schools, commercial centers of the Bay Area.
 - II. Existing Efforts: Occasional brochure available at various offices.
 - III. Future Efforts: Coordinated public distribution of printed materials educating residents on six areas of emphasis.
 - IV. Content of Message: Various storm water topics related to the six areas of emphasis.
 - V. Delivery Mechanism: Available at public building locations, attractions & destinations in Bay County. In addition, volunteers will be recruited to do door to door distribution and brochures or tip cards will be inserted into the Bay City Times for distribution.
 - VI. Sustainability: Brochures/Tip Cards will be developed and distributed on a three to five year cycle.
 - VII. Timetable
 - a. development – 1st quarter 2006
 - b. implementation – 2nd quarter 2006
 - VIII. Measure Effectiveness: A survey will be conducted in late 2006, utilizing mail or phone. It will be designed to measure penetration and retention of Authority messages. Survey results will be compared to a statewide baseline survey developed for the Center for Environmental Policy, completed by Northwestern Michigan College to measure awareness as compared to general knowledge of residents across the State.

In addition, each brochure/tip card will have a specific website address identified for further information, hits on those specific websites will be counted and measured against the general website and other specific websites to determine if brochures are effective. A contact number will also be included and specific contacts related to individual brochures/tip cards will be tracked and compared to other similar contacts. All information will be used to adjust messaging done by the Authority.

- IX. Responsible Party: Shared by Authority
 - X. Costs– \$5,500 annually has been allocated for brochure/tip cards development printing and distribution. Note attached budget allocation.
- D.) Activity: Develop Public Service Announcements
- I. Target Audience: Residents of the Authority Member Communities, the general public and visitors to the area.
 - II. Existing Efforts - Incidental
 - III. Future Efforts: Seasonal Public Service Announcement will be developed for television and radio & print medias.
 - IV. Content of Message: Pollution prevention, focusing on the six areas of emphasis.
 - V. Delivery Mechanism – Television, radio & print media
 - VI. Sustainability – Work with the media to develop a cycle of messaging for the various Authority messages rotating every four to five years.
 - VII. Timetable
 - a. development – 3rd quarter 2006
 - b. implementation – 4th quarter 2006
 - VIII. Measure Effectiveness: A survey will be conducted in late 2006, utilizing mail or phone. It will be designed to measure penetration and retention of Authority messages. Survey results will be compared to a statewide baseline survey developed for the Center for Environmental Policy, completed by Northwestern Michigan College to compare the awareness of Authority programs with general knowledge of the residents of the State. In addition, specific website address identified for further

information, hits on those specific websites will be counted and measured against the general website and other specific websites to determine if PSA's are effective. A contact number will also be included and specific contacts related to PSA's will be tracked and compared to other similar contacts. All information will be used to adjust messaging done by the Authority.

- IX. Responsible Party: Shared by Authority
- X. Costs: Messages will be identified and tailored to our community by Authority Staff. Limited development and layout costs could be incurred if donated services are not available. Note the attached budget.

2.) Education of the public on the location of residential separate storm water drainage system catch basins, the waters of the state where the system discharges, and potential impacts from pollutants from the separate storm water drainage system;

- A.) Activity: Load maps on Web Site
 - I. Target Audience: Residents of Authority Member Communities, the general public of the Bay Area and visitors.
 - II. Existing Efforts: Incidental
 - III. Future Efforts: Information to be maintained on website as well as made available to local offices.
 - IV. Content of Message: Specific reporting data will include outfall monitoring summaries, system and outfall maintenance schedules, and annual monitoring reports.
 - V. Delivery Mechanism – Web site
 - VI. Sustainability – Mapping to be updated as necessary.
 - VII. Timetable
 - a. development – 2nd quarter 2006
 - b. implementation – 3rd quarter 2006
 - VIII. Measure Effectiveness: Internal web counter will measure the number of

inquiries to the site. Feedback will be requested from any local office with the information.

IX. Responsible Party: Shared by Authority

X. Costs: To be determined, this expenditure will fall under our IDEP activities as it is a requirement of our IDEP. Funds are allocated for website maintenance and this activity will fall under those two categories. See the budget attached.

B.) Activity: Develop Storm Drain stenciling

I. Target Audience: Residential, commercial and industrial areas of community.

II. Existing Efforts - incidental

III. Future Efforts – Stenciling will be required in new subdivision developments in Bay County by the Drain Commissioner. In addition, volunteer groups and students will be recruited and coordinated to do the stenciling program.

IV. Content of Message – “Dump No Waste Drains to Stream” will be stenciled on the inlet structures. A brochure will be developed to be distributed door to door explaining the program when volunteers are in the area doing stenciling.

V. Delivery Mechanism – Physical application/delivery

VI. Sustainability – Durability of stenciling will be monitored every 5 years. Evaluation of the need for alternative more permanent markers will be made when the stencils are reviewed.

VII. Timetable:

a. development - 1st quarter 2006

b. implementation - 2nd quarter 2006

VIII. Measure Effectiveness – Total number of marked inlets will be tracked. In addition, a survey will be conducted in late 2006, utilizing mail or phone. It will be designed to measure penetration and retention of Authority messages. A specific question related to the awareness of stenciling and what it means will be asked and measured against areas not yet stenciled.

A tracking survey will be done in 2008 to measure gains. It will be designed to measure penetration and retention of Authority messages and compared to baseline results from the 2006 survey, measuring improvements. Survey results will be used to adjust messaging and activities done by the Authority.

- IX. Responsible Party: Shared by Authority
- X. Costs: \$500 for supplies have been allocated, note the attached budget.

3.) Encouragement of public reporting of the presence of illicit discharges or improper disposal of materials into the applicant's separate storm water drainage system.

- A.) Activity: Develop message and disseminate information to the community
 - I. Target Audience: Residents of Authority Member Communities, public employees, organized labor groups, the construction industry, agriculture, schools and riparian property owners..
 - II. Existing Efforts: Incidental
 - III. Future Efforts: As part of the Authority IDEP, a coordinated tracking and reporting of illicit discharges will be developed. The program will provide contact information for reporting. Publicizing the contact points and other relevant information will be completed.
 - IV. Content of Message
 - a. Contact points for reporting illicit discharges including the website address and contact numbers.
 - b. How to Identify potential illicit discharges.
 - c. What to look for with failing on-site sewage disposal systems
 - d. Consequences & penalties associated with illicit discharges and illegal waste disposal.
 - V. Delivery Mechanism: All available methods including; brochures, tip cards, newsletters, public service announcements and the web site.
 - VI. Sustainability: This message will be part of the ongoing cycle of messages

the Authority will promote. Frequency of messaging will be determined based on complaints received and a survey completed in 2006. If measurable goals are not achieved in this area, for instance, the message would be repeated more frequently than the anticipated 3 to 5 years.

- VII. Timetable
 - a. development – 2nd quarter 2006
 - b. implementation 3rd quarter 2006
- VIII. Measure Effectiveness: The number of complaints/reports received will be tracked and compared to the total number found. In late 2006, a survey will be conducted by phone or by mail, a specific question will be asked as to the knowledge of how to report an illicit discharge. Those results will be used as a baseline for future surveys. A goal of 15% awareness of the program will be set. Messaging will be altered based on complaints and surveys.
- IX. Responsible Party: Shared by Authority
- X. Costs: Costs for this activity will be absorbed within the PSA and brochure distribution budgets. Please note the attached budgets.

4.) Education of the public on the need to minimize the amount of residential or non-commercial wastes washed into nearby catch basins, county drains and road ditches;

- A.) Activity: Develop message and disseminate information to the community
 - I. Target Audience: Residents of Authority Member Communities, realtors, mortgage companies, lawn care & nursery companies, automobile care facilities, facilities that allow and groups that sponsor non-profit car washes, the general public of the Bay Area and visitors.
 - II. Existing Efforts: Incidental
 - III. Future Efforts: Implement an education campaign with the intention of stressing the best management practices (BMP's) to limit pollutants

washed into catch basins. The campaign will compliment the stenciling program efforts.

- IV. Content of Message
 - a. The preferred cleaning materials and procedures for car, pavement, or power washing;
 - b. The effects caused by grass clippings, leaf litter, and animal wastes that get flushed into the waterway as well as suggestions on better management, and;
 - c. The acceptable application and disposal of pesticides and fertilizers.
 - d. The use of residential de-icers.
 - e. The benefits of using native vegetation versus turf grass.
- V. Delivery Mechanism: All available methods including; brochures, tip cards newsletters, public service announcements, public access television and the web site.
- VI. Sustainability: This message will be part of the ongoing cycle of messages the Authority will promote. Frequency of messaging will be determined based on complaints received and a survey completed in 2006. If measurable goals are not achieved in this area, for instance, the message would be repeated more frequently than the anticipated 3 to 5 years.
- VII. Timetable
 - a. development – 1st quarter 2006
 - b. implementation -- 2nd quarter 2006
- VIII. Measure Effectiveness: A survey will be conducted in late 2006, utilizing mail or phone. It will be designed to measure penetration and retention of Authority messages. It will be compared to a statewide baseline survey developed for the Center for Environmental Policy, completed by Northwestern Michigan College to measure the awareness of Authority Area residents. A tracking survey will be done in 2008 to measure gains. It will be designed to measure penetration and retention of Authority

messages and compared to baseline results from the 2006 survey. The goal would be a 15% awareness in 2006 and increases in 2008.

- IX. Responsible Party: Shared by Authority
- X. Costs: Costs for this activity will fall within the brochure distribution and website maintenance categories. Please note the attached budget.

5.) Education of the public on the availability, location and requirements of facilities for disposal or drop-off of household hazardous wastes, travel trailer sanitary wastes, chemicals, yard wastes, and marine/motor vehicle fluids;

- A.) Activity: Develop message and disseminate information to the community
 - I. Target Audience: Residents of Authority Member Communities, marinas, boat dealerships, automobile repair shops/parts stores, RV parks, rest areas, home improvements stores, dumps and the general public of the Bay Area and visitors.
 - II. Existing Efforts: Various household hazardous waste collections exist, including motor oil drop off points and a county hazardous waste collection program.
 - III. Future Efforts: Implement an education campaign with the intention of promoting the utilization of drop off points and uses that minimize the impacts on waters of the state.
 - IV. Content of Message
 - a. Identification of household hazardous wastes and available alternatives.
 - b. Availability of disposal opportunities as well as locations and requirements for the hazardous materials.
 - c. Disposal locations for marine and motor vehicle fluids.
 - d. Pump stations for RV and boat grey water.
 - e. Impacts of wastes on the Waters of the State.
 - V. Delivery Mechanism: All available methods including; brochures, tip cards, newsletters, public service announcements, public access television and the web site. Participation in area environmental programs.

- VI. Sustainability: This message will be part of the ongoing cycle of messages the Authority will promote. Frequency of messaging will be determined based on a survey completed in 2006. If measurable goals are not achieved in this area, for instance, the message would be repeated more frequently than the anticipated 3 to 5 years. This message will be part of the ongoing cycle of messages the Authority will promote.
- VII. Timetable
 - a. development – 2nd quarter 2006
 - b. implementation – 3rd quarter 2006
- VIII. Measure Effectiveness: Increases in the amount of material collected at drop off sites will be tracked. In addition, a survey will be conducted in late 2008, utilizing mail or phone. It will be designed to measure penetration and retention of Authority messages and compared to baseline results from the 2006 survey, measuring improvements. In addition, brochures, articles and PSA will have a specific website address identified for further information, hits on those specific websites will be counted and measured against the general website and other specific websites determine if brochures are effective. A contact number will also be included and specific contacts related to individual brochures will be tracked and compared to other similar contacts. A goal of 15% awareness of the program in the 2006 survey will be established, with increases required in future years.
All results will be used to adjust messaging of the Authority.
- IX. Responsible Party: Shared by Authority
- X. Costs: Costs for this activity will be included in the brochure distribution, website maintenance and survey categories. Please see the attached budget.

6.) Education of the public concerning management of riparian lands to protect water quality.

- A.) Activity: Develop message and disseminate information to the community.
Promote and be involved in activities that enhance riparian corridors.
- I. Target Audience: Riparian landowners, the agriculture community, construction industry, landscapers, lawn and garden maintenance companies as well as residents of Authority Member Communities, the general public of the Bay Area and visitors.
 - II. Existing Efforts: There are various programs, including CREP (Conservation Reserve Enhancement Program) that promote creation of filter strips. In addition, the Kawkawlin River Watershed has signage identifying its boundaries and a River clean-up day happens each year on the Kawkawlin River.
 - III. Future Efforts: Implement an education campaign discussing the importance of riparian activity and its impact on water quality. Work with ongoing entities to maximize participation in programs that improve riparian corridors
 - IV. Content of Message
 - a. Importance of riparian areas.
 - b. Proper septic tank maintenance.
 - c. Practices and opportunities that enhance the quality and functioning of riparian corridors, including; lawn maintenance and landscaping for water quality, proper maintenance of grass, yard & animal wastes, shoreline stabilization techniques and the availability of contracts for conservation easements to more permanently protect riparian lands
 - V. Delivery Mechanism: All available methods including; brochures, tip cards newsletters, public service announcements, public access television and the web site. Additional efforts will be made to engage the agricultural community by targeting farm related meetings and publications. Contacts with landscaping and lawn care maintenance companies will be made for education purposes. Additional promotion will be done through property owners groups and conservation groups by attending meetings and using their mailing lists for distribution of material.

- VI. Sustainability – This message will be part of the ongoing cycle of messages the Authority will promote.
- VII. Timetable
 - a. development – 2nd quarter 2007
 - b. implementation – 3rd quarter 2007
- VIII. Measure Effectiveness: Increases in lands included in trusts or reserve programs for filter strip corridors will be tracked. Additional clean-up or other activities will be monitored and reported in the Authority annual report. In addition, a survey will be conducted in late 2008, utilizing mail or phone. It will be designed to measure penetration and retention of Authority messages and compared to baseline results from the 2006 survey, a 15% improvement in awareness will be the goal. Survey results will be used to adjust messaging of the Authority.
- IX. Responsible Party: Shared by Authority
- X. Costs: Because this program will not be implemented until 2007, costs are to be determined.

INTEGRATED COORDINATION EFFORTS

It is important to note that throughout the term of the permit, combinations of these disseminating mechanisms will be utilized emphasizing relevant seasonal information and promoting other links to include information presented in community newsletters, cable TV programs and advertisements, brochures/flyers in public facilities, public facility displays, and direct communications. The coordinated effort by the member municipalities will serve as an integrated promotion of public education for reduction of pollutants in storm water as well as target special groups. The effort will inform and educate residents and visitors on how their activities impact water quality in Bay County watersheds, how to reduce pollutants, and how the storm water system works.

Upon adequate notice being provided, The Authority will promote and support public involvement programs and other public events which have a shared goal such as annual river clean ups and/or volunteer monitoring programs, Bay Sail, Partnership for Saginaw

Bay, community water quality initiatives, Master Gardener Program, and Saginaw Bay WIN grant funded initiatives, such as the Saginaw Bay Greenways Program. The Authority will use its web site, public service announcements, public access television and publications to promote these activities.

RELATIONSHIP TO WATERSHED MANAGEMENT PLANNING

Based on discussions with representatives of neighboring Phase II communities, effective public education regarding storm water management will need to be a specific goal of the up-coming required Watershed Management Plan for the Bay County Urbanized Area. This PEP is recognized as simply the beginning and more details will be developed as part of the watershed management planning process. With experience gained as watershed management progresses, appropriate modifications will be made to the PEP. During the watershed management planning process, goals for the watershed will be developed and these will be integrated into the PEP. The need to evaluate the success or impact of the PEP will be further reviewed.

METHOD FOR DETERMINING ACTIVITY EFFECTIVENESS

The Bay County Urbanized Area is required through the permit to “describe a method for determining the effectiveness of the various public education activities.” The PEP activities will consistently convey messages which encourage the public to reduce the discharge of pollutants in storm water. The variety of identified activities and tools described within the PEP will be monitored on an annual basis in order to evaluate their effectiveness. As our standard, we will use the level of public participation and involvement in the various activities and the numerical demand for public information. Specifically we will track the public informational brochure distribution rates, keeping track of the numbers of brochures distributed by request; the number of newsletter articles

published and any follow up inquiries; the number of related public meetings and events and the number of persons attending or participating; an internal counter will measure web-site hits. Each publication will have contact numbers for additional information and those contacts will be tracked.

A survey will be developed and conducted in late 2006 to determine the effectiveness of the messages and delivery mechanisms. It will be done using phone or mail. Depending on responses, the Public Education Plan or specific messages and delivery methods will be adjusted. Similar surveys will occur every two years, followed by appropriate modifications.

DATE FOR ANNUAL PROGRESS REPORT

A date for presenting an annual progress report will be on January 1st of each year.

BUDGET

Members of the Authority have pledged up to \$5000.00 annually for activities of the Authority. Approximately \$10,000 will be budgeted each year for the Public Education Plan implementation. The Authority will base the number of publications developed, distribution, etc. on this budget.

Although annual budgets will vary, our proposed allocations will generally follow the guidelines outlined below:

Revenue Available: \$ 10,000.00

Expenditure Categories:

Website Development/Maintenance	\$ 2,000.00
Brochure Development/Printing	3,500.00
Brochure Mailing Distributing	2,000.00
Supplies, (stenciling etc.)	500.00
Annual Survey allocation	2,000.00
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	\$ 10,000.00