2014-2015 MS4 Annual Report

Commonwealth of Pennsylvania

Prepared for:

Antis Township Supervisors
909 North Second Street
Bellwood, PA 16617

Prepared by:

Stiffler McGraw
Engineers • Surveyors • Architects
1731 North Juniata Street
Hollidaysburg, PA 16648

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pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) ANNUAL/PROGRESS REPORT

For the Reporting Period: **03/10/2014** **to** **03/09/2015**

☒ **Annual Report** ☐ **Progress Report** **Due Date:** **06/09/2015**
☐ **New Permittee** ☐ **Renewal Permittee**

GENERAL INFORMATION

Permittee Name:	**Antis Township Supervisors**	NPDES Permit No.:	PA**G133609**
Mailing Address:	**909 North Second Street**	Effective Date:	**03/30/2003**
City, State, Zip:	**Bellwood, PA 116617**	Expiration Date:	
MS4 Contact Person:	**Lucas Marsolf**	Renewal Due Date:	**09/2017**
Title:	**Antis Township Manager**	Admin. Extended?	☒ Yes ☐ No
Phone:	**814-742-7361**	Municipality:	**Antis Township**
Email:	**antismanager@atlanticbbn.net**	County:	**Blair**

Co-Permittees (if applicable): **N/A**

WATER QUALITY INFORMATION

Are there any discharges to waters within the Chesapeake Bay Watershed? ☒ Yes ☐ No

Identify all surface waters that receive stormwater discharges from storm sewers within the MS4 urbanized area and provide the requested information (see instructions).

Receiving Water Name	Ch. 93 Class.	Impaired?	Cause(s)	TMDL?	WLA?
Sandy Run	CWF, MF	NO	N/A	YES	YES
Little Juniata River	TSF, MF	YES	Organic Enrichment/DO	YES	YES
Bells Gap Run	TSF, MF	NO	N/A	NO	N/A
Riggles Gap Run	CWF, MF	NO	N/A	YES	YES
Sugar Run	WWF, MF	NO	N/A	NO	N/A

Identify any Wasteload Allocations (WLAs) identified in TMDLs for the MS4, if applicable. Identify the pollutant(s) and mass load(s)):

Sandy Run (Little Juniatia TMDL) MS4 WLA = 2,036 tons sed./yr, MS4 LA = 6,577 tons sed./yr
Little Juniata River MS4 WLA = 2,036 tons sed./yr, MS4 LA = 6,577 tons sed./yr
Riggles Gap Run (Little Juniatia TMDL) MS4 WLA = 2,036 tons sed./yr, MS4 LA = 6,577 tons sed./yr

GENERAL MINIMUM CONTROL MEASURE (MCM) INFORMATION

Have you completed all MCM activities required by the permit for this reporting period? ☒ Yes ☐ No

Provide current contact name and phone number information for the required MCMs (if same as page 1, leave blank):

MCM	Contact Name	Phone
#1 Public Education and Outreach on Storm Water Impacts	**Lucas Martsolf**	**814-742-7361**
#2 Public Involvement/Participation	**Lucas Martsolf**	**814-742-7361**
#3 Illicit Discharge Detection and Elimination (IDD&E)	**Lucas Martsolf**	**814-742-7361**
#4 Construction Site Storm Water Runoff Control	**Lucas Martsolf**	**814-742-7361**
#5 Post-Construction Storm Water Management in New Development and Redevelopment	**Lucas Martsolf**	**814-742-7361**
#6 Pollution Prevention / Good Housekeeping	**Lucas Martsolf**	**814-742-7361**

MCM #1 – PUBLIC EDUCATION AND OUTREACH ON STORM WATER IMPACTS

BMP #1: Develop, implement and maintain a written Public Education and Outreach Program

Measurable Goal: *For new permittees a Public Education and Outreach Program (PEOP) shall be developed and implemented during the first year of permit coverage and shall be re-evaluated each permit year thereafter and revised as needed. For renewal permittees, the existing PEOP shall be reviewed and revised as necessary. The permittee's PEOP shall be designed to achieve measurable improvements in the target audience's understanding of the causes and impacts of stormwater pollution and the steps they can take to prevent it.*

1. For new permittees only, attach the written PEOP or a summary thereof to the first report submitted to DEP.

2. If you are not a new permittee, did you complete and submit your written PEOP to DEP? ☒ Yes ☐ No
   If Yes, provide the latest submission date: **09/2012**

3. Date of last evaluation of or revision to the PEOP: **2014**

4. What were the plans and goals for public education and outreach for the reporting period?

   The plans and goals for this reporting period included a revision of the PEOP submitted with the 2012 permit renewal submission. The goal for the PEOP was to re-write a specific written document that included additional detail and information outlined in the BMP guidelines and Measurable Goals.

5. Did the MS4 achieve its goal(s) for the PEOP during the reporting period? ☒ Yes ☐ No

   Explain the rationale for your answer:

   The PEOP was re-written based on a compilations of online resources and examples to provide a more thorough plan.

6. Identify specific plans and goals for public education and outreach for the upcoming year:

   Specific plans and goals for the upcoming year include in depth review of the target audience list, launching the community webpage, continuing the newsletters, establishing a streamline system to sendout or advertise stormwater information via billing, permit apps, and any other Township correspondence, continued participation in the Blair County MS4 Work Group and partnership with the Blair County Conservation District, and Blair County Planning Commission.

BMP #2: Develop and maintain lists of target audience groups present within the areas served by your MS4

Measurable Goal: *For new permittees, the lists shall be developed within the first year of coverage under the permit and reviewed and updated as necessary every year thereafter. For renewal permittees, the lists shall continue to be reviewed and updated annually.*

1. For new permittees only, attach your target audience list(s) to the first report submitted to DEP.

2. If you are not a new permittee, did you complete and submit your target audience list to DEP? ☒ Yes ☐ No
   If Yes, provide the latest submission date: **2012**

3. Date of last review or revision to target audience list(s): **2014**

BMP #3: Annually publish at least one educational item on your Stormwater Management Program

Measurable Goal: *For new permittees, stormwater educational and informational items shall be produced and published in print and/or on the Internet within the first year of permit coverage. In subsequent years (and for renewal permittees), the list of items published and the content in these items shall be reviewed, updated, and maintained annually. Your publications shall contain stormwater educational information that addresses one or more of the 6 MCMs.*

1. For new permittees only, attach your published stormwater educational or informational materials to the first report submitted to DEP.

2. If you are not a new permittee, did you complete and submit your published stormwater educational or informational materials to DEP? ☒ Yes ☐ No
   If Yes, provide the latest submission date: **2014**

3. Do you have a municipal newsletter? ☒ Yes ☐ No
   If Yes, how often was it published during the reporting period and what MS4-related material did it contain?
   The Township publishes a monthly e-newsletter. Typical MS4 material included in the e-newsletter includes brush and yard waste pickup schedules (in conjunction w/ Inter-municipal Relations Committee), IRC news (recycling, composting, etc.) street sweeping schedules, Earth Day celebration announcements (in conj. w/ Blair County Conservation District), Township Meeting schedules, water conservation tips, permitting information, fall leaf pickup schedules, water and sewer tips, MS4 related updates, eco-tips, etc.

4. Do you have a municipal website? ☒ Yes ☐ No (URL: **http://www.antistownship.org/**)
   If Yes, what MS4-related material does it contain?
   The Township website includes a page dedicated to the Stormwater Management Program. The Stormwater page includes General permit and background information, tips on preventing stormwater pollution, a section on illicit discharges, including a contact number for incident reporting, current activities, ordinances, MS4 related links (PA DEP, EPA, Blair County Conservation District, brochures, MS4 reports, etc.)

5. Describe any other method(s) used during the reporting period to provide information on stormwater to the public:
   Public outreach activities are also being conducted in partnership with a formed "Blair County MS4 Work Group," including the Blair County Planning Commission, Blair County Conservation District, and other Blair County MS4 municipalities. The Township partners with the Blair County Conservation District via Memorandum of Understanding (MOU) which includes activities conducted by the District that address the BMPs under this MCM. Activities conducted within the year include a billboard advertisement and regularly scheduled public meetings. April 2014 was the ninth annual "Public Water Festival" by the Conservation District and many of its partners. The 2014 event was again held in the Logan Valley Mall Altoona with co-sponsorship by the Altoona Water Authority. Water quality and water quantity events and displays were held for students and adults (estimated at 350 contacts, Distribution of "When it Rains it Drains" Brochure) during the day-long event. In addition, "Blair County, Where the River Starts" Poster Contest participants (just over 200) were displayed for the week preceding the event at the mall location. Standardized "School Water Festival" programs were held during the 2014-2015 school year. 610 Blair County 4th graders in 8 different schools (3 – Altoona Schools; 4 – Hollidaysburg Schools; 1 – Tyrone Schools) were educated with emphasis on Water Quality, Quantity and Land Use as related to the Pennsylvania State Standards for Academics. The District continued with a 5th and 6th Grade program to involve students in an outdoor adventure related to Wildlife, Woods and Wetlands. Just over 740 student and teacher participants from 11 schools (6 – Altoona; 1 – Hollidaysburg; 1 – Claysburg-Kimmel; 1 – Bellwood Antis; 2 – Tyrone) were taken for a daylong adventure at a local industrial manufacturing company's natural area and taught about Woodland, Meadow and Wetland habitat and hydrology; watershed impacts by humans; the differences and values of wetlands. Other Outreach activities varied and included workshops about riparian buffers, water festivals, source water protection, local foods, ag issues and highway maintenance activities. The BCCD also continued to promote stormwater alternatives through rain barrel, rain garden and healthy lawn workshops.

6. Date of most recent review and/or update to published stormwater educational materials: **2014**

7. Identify specific plans for the publication of stormwater materials for the upcoming year:
   Plans for the upcoming year include continued participation with the Township partnerships listed above, developing new materials for inclusions with permits and code enforcement handouts, launching of the new community MS4 website, billboard ads, newsletters, etc.

BMP #4: Distribute stormwater educational materials to the target audiences

Measurable Goal: *All permittees shall select and utilize at least two distribution methods in each permit year. These are in addition to the newsletter and website provisions of BMP #3.*

Identify the two additional methods of distributing stormwater educational materials during the previous year (e.g., displays, posters, signs, pamphlets, booklets, brochures, radio, local cable TV, newspaper articles, other advertisements, bill stuffers, posters, presentations, conferences, meetings, fact sheets, giveaways, or storm drain stenciling).

Additional methods listed under MCM#1, BMP#3, No. 5. The Township is also participating in a MS-4 Public Outreach Focus Group consisting of several members of the Blair County Work Group. This Focus Group will focus on public outreach through the use of media advertisement (i.e. newspaper articles, televised new pieces, etc.) to encourage the public and community to be engaged in Stormwater Prevention and raise awareness regarding SWMPs and the MS4 program.

MCM #2 – PUBLIC INVOLVEMENT/PARTICIPATION

BMP #1: Develop, implement and maintain a written Public Involvement and Participation Program (PIPP)

Measurable Goal: *A new permittee's PIPP shall be developed and implemented during the first year of coverage under this General Permit. All permittees shall re-evaluate the PIPP each permit year and revise as needed. Your PIPP shall include, but not be limited to:*

a. Opportunities for the public to participate in the decision-making processes associated with the development, implementation, and update of programs and activities related to this General Permit.
b. Methods of routine communication to groups such as watershed associations, environmental advisory committees, and other environmental organizations that operate within proximity to the permittee's regulated small MS4s or their receiving waters.
c. Making your periodic reports available to the public on your website, at your municipal offices, or by US Mail upon request.

1. For new permittees only, attach your written PIPP or a summary thereof to the first report submitted to DEP.

2. If you are not a new permittee, did you complete and submit your written PIPP or summary to DEP? ☒ Yes ☐ No
   If Yes, provide the latest submission date: **2012**

3. Date of last review and/or update to the PIPP: **2014**

4. Explain how your PIPP addresses items a, b and c of the Measurable Goal:
   Open meetings held at The Township always encourage public input in the decision-making process(es) of land development activities related to stormwater management. Other opportunities are outlined as part of the partnership with the BCCD as described in the MOU referred to in MCM #1. Open and routine communication to watershed groups and environmental advisory committees and organizations operating in proximity to the permittee's regulated MS4s or receiving waters is encouraged.

BMP #2: Prior to adoption of any ordinance (municipal permittees) or SOP (non-municipal permittees) required by the permit, provide adequate public notice and opportunities for public review, input, and feedback.

Measurable Goal: *Advertise any proposed MS4 Stormwater Management Ordinance or SOP, provide opportunities for public comment, evaluate any public input and feedback, and document the comments received and the municipality's response.*

1. Was an MS4-related ordinance or SOP developed during the reporting period? ☐ Yes ☒ No

2. If Yes, describe how you advertised the draft ordinance and how you provided opportunities for public review, input and feedback:

3. If an ordinance or SOP was enacted/developed or amended during the reporting period, provide the following information:

Ordinance No. / SOP Name	Date of Public Notice	Date of Public Hearing	Date Enacted

BMP #3: Regularly solicit public involvement and participation from the target audience groups. This should include an effort to solicit public reporting of suspected illicit discharges. Assist the public in their efforts to help implement your SWMP. Conduct public meetings to discuss the on-going implementation of your SWMP.

***Measurable Goals**: Conduct at least one public meeting per year to solicit public involvement and participation from target audience groups. The public should be given reasonable notice through the usual outlets a reasonable period in advance of each meeting. During the meetings, you should present a summary of your progress, activities, and accomplishments with implementation of your SWMP, and you should provide opportunities for the public to provide feedback and input. Your presentation can be made at specific MS4 meetings or during any other public meeting. Under this MCM, you should document and report instances of cooperation and participation in your activities; presentations you made to local watershed organizations and conservation organizations; and similar instances of participation or coordination with organizations in your community. You also should document and report activities in which members of the public assisted or participated in your meetings and in the implementation of your SWMP, including education activities or organized implementation efforts such as cleanups, monitoring, storm drain stenciling, or others.*

1. Date of the public meeting(s): **The Board of Supervisors meets on the first Thursday monthly at 7:00 PM, The Planning Commission meets monthly on the third Thursday at 7:00 PM, Public involvement is always encouraged.**

2. How were meeting(s) advertised to the public? **Website, Newsletter, Public bulletins**

3. Indicate where the meeting(s) were held and the number of attendees:
   The meetings are held at the Township Building, 909 North Second Street, Bellwood, PA

4. What types of MS4-related activities did you solicit public involvement and participation for?
   The Township, via the MOU with the BCCD and several local organizations, solicited public involvement for activities such as the Public Water Festival, various educational workshops, volunteer river clean-ups such as the Little Juniata River Association annual clean-up, etc.

5. What MS4-related activities did the public participate in?
   Activities held by the BCCD, such as the Public Water Festival, the various workshops, river clean ups, etc.

MCM #3 – ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDD&E)

BMP #1: You shall develop and implement a written program for the detection, elimination, and prevention of illicit discharges into your regulated MS4s. Your program shall include dry weather field screening of outfalls for non-stormwater flows, and sampling of dry weather discharges for selected chemical and biological parameters. Test results shall be used as indicators of possible discharge sources.

***Measurable Goal**: For new permittees, the IDD&E program shall be developed during the first year of coverage under this General Permit and shall be implemented and evaluated each year thereafter. For renewal permittees, the existing IDD&E program shall continue to be implemented and evaluated annually. Records shall be kept of all outfall inspections, flows observed, results of field screening and testing, and other follow-up investigation and corrective action work performed under this program.*

1. For new permittees only, attach your written IDD&E program to the first report.

2. If you are not a new permittee, did you complete and submit your written IDD&E program to DEP? ☒ Yes ☐ No
   If Yes, provide the latest submission date: **2012**

3. Date of last review and/or update to IDD&E program: **2014**

BMP #2: Develop and maintain a map of your regulated small MS4. The map must also show the location of all outfalls and the locations and names of all surface waters of the Commonwealth (e.g., creek, stream, pond, lake, basin, swale, channel) that receive discharges from those outfalls.

***Measurable Goals**: For new permittees, develop the map(s) of your regulated small municipal separate storm sewer systems and the information on all outfalls from your regulated small MS4 by the end of the fourth (4th) year of permit coverage. For renewal permittees, the existing map(s) of your regulated small MS4 shall be updated and maintained as necessary during each year of coverage under the permit.*

1. Have you completed a map(s) of all outfalls and receiving waters of your storm sewer system? ☒ Yes ☐ No

2. For new permittees only, attach the completed map to the 4th year Annual Report.

3. Date of last update or revision to map(s): **2012**

4. Total number of discharge points in your storm sewer system that:
   Discharge directly to surface waters (outfalls): *****
   Discharge to storm sewers owned by others: *****

5. Total number of outfalls that are mapped at this time: **51***

***Some outfalls listed are owned by others (e.g. PennDOT). Additional work is necessary to verify ownership of mapped outfalls and that all Township owned outfalls within the urbanized boundary have been mapped**

BMP #3: In conjunction with the map(s) created under BMP #2 (either on the same map or on a different map), new permittees shall show, and renewal permittees shall update, the entire storm sewer collection system, including roads, inlets, piping, swales, catch basins, channels, basins, and any other features of the permittee's storm sewer system including municipal boundaries and/or watershed boundaries.

***Measurable Goals**: For new permittees, develop the map(s) by the end of the fourth (4th) year of coverage under the permit and update and maintain the map(s) as necessary each year of permit coverage thereafter. For renewal permittees, update and maintain the map(s) as necessary during each year of permit coverage.*

1. Have you completed a map(s) that includes roads, inlets, piping, swales, catch basins, channels, basins, municipal boundaries and watershed boundaries? ☐ Yes ☒ No

2. If Yes, is the map(s) on the same map(s) as for outfalls and receiving waters? ☐ Yes ☐ No

3. For new permittees only, attach the completed map to the 4th year Annual Report.

4. If you are not a new permittee, did you complete and submit your map to DEP? ☒ Yes ☐ No **(Partially complete)**
   If Yes, provide the latest submission date: **2012**

5. Date of last update or revision to map: **2012**

BMP #4: Following the IDD&E program created pursuant to BMP #1, the permittee shall conduct outfall field screening, identify the source of any illicit discharges, and remove or correct any illicit discharges using procedures developed under BMP #1.

For all permittees, outfall inspections need to be prioritized according to the perceived chance of illicit discharges within the outfall's contributing drainage area. Observations of each outfall shall be recorded each time an outfall is screened, regardless of the presence of dry weather flow. Proper quality assurance and quality control procedures shall be followed when collecting, transporting or analyzing water samples. All outfall inspection information shall be recorded on the Outfall Reconnaissance Inventory/Sample Collection field sheet excerpted from the Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments (CWP, October 2004). Adequate written documentation shall be maintained to justify a determination that an outfall flow is not illicit. If an outfall flow is illicit, the actions taken to identify and eliminate the illicit flow also shall be documented.

The results of outfall inspections and actions taken to remove or correct illicit discharges shall be summarized in periodic reports.

1. For new permittees only, were at least 40% of all outfalls screened during dry weather? ☐ Yes ☐ No

   If Yes for #1, indicate the number screened and the percent of all outfalls it represents. If No for #1, indicate reason(s) why this was not completed:

   Are you on pace to screen all outfalls twice during the permit term? ☐ Yes ☐ No

2. For renewal permittees, indicate the percent of outfalls screened during the reporting period: **0**%

Are you on pace to screen all outfalls once during the permit term? ☒ Yes ☐ No

3. For all permittees, indicate the percent of outfalls screened that revealed dry weather flows: **0**%

4. Did any dry weather flows reveal color, turbidity, sheen, odor, floating or submerged solids? ☐ Yes ☒ No

5. If Yes for #4, attach all sample results to this report with a map identifying the sample location. Explain the corrective action(s) taken in the attachment.

6. Do you use the "Outfall Reconnaissance Inventory / Sample Collection Field Sheet" provided in the permit?

   ☒ Yes ☐ No

   If No, attach a copy of your monitoring form.

BMP #5: Enact a stormwater management ordinance (municipal entities) or develop an SOP (non-municipal entities) to implement and enforce a stormwater management program that includes prohibition of non-stormwater discharges to the regulated small MS4.

***Measurable Goal**: Within the first year of coverage under the permit, new permittees shall enact and implement an ordinance from an Act 167 Plan approved by the Department in 2005 or later, the MS4 Stormwater Management Ordinance; or an ordinance that satisfies all applicable requirements in a completed and signed MS4 Stormwater Management Ordinance Checklist. (For non-municipal permittees, new permittees shall develop and implement a Standard Operating Procedure (SOP) within the first year of coverage).*

Renewal permittees must continue to maintain, update, implement, and enforce a Stormwater Management Ordinance that satisfies all applicable requirements. (For non-municipal permittees, the SOP satisfies this requirement. If no existing SOP exists, it should be developed during the first year of coverage).

***Measurable Goal**: New permittees shall submit a letter signed by a municipal official, municipal engineer, or the municipal solicitor as an attachment to their first year report certifying the enactment of an ordinance that meets all applicable requirements of this permit. Renewal permittees shall update their existing ordinance, if necessary, and submit documentation of completion to the Department. (For non-municipal permittees, submit the SOP to the first report).*

1. Do you have an ordinance (municipal) or SOP or other mechanism (non-municipal) that prohibits non-stormwater discharges? ☒ Yes ☐ No

   If Yes, indicate the date of the ordinance or SOP: **4-2011**

2. For new permittees only, attach an ordinance (or SOP) and letter from an official, engineer or solicitor that prohibits non-stormwater discharges to the first report submitted to DEP.

3. If you are not a new permittee, did you complete and submit your ordinance (or SOP) and letter from an official, engineer or solicitor that prohibits non-stormwater discharges to DEP? ☒ Yes ☐ No

4. Were there any violations of the ordinance during the reporting period? ☐ Yes ☒ No

   If Yes, describe what enforcement actions were taken for each violation:

   N/A

BMP #6: Provide educational outreach to public employees, business owners and employees, property owners, the general public and elected officials (i.e., target audiences) about the program to detect and eliminate illicit discharges.

***Measurable Goals**: During each year of permit coverage, appropriate educational information concerning illicit discharges shall be distributed to the target audiences using methods outlined under MCM #1. If not already established, set up and promote a stormwater pollution reporting mechanism (e.g., a complaint line with message recording) by the end of the first year of permit coverage for the public to use to notify you of illicit discharges, illegal dumping or outfall pollution. Respond to all complaints in a timely and appropriate manner. Document all responses, include the action taken, the time required to take the action, whether the complaint was resolved successfully.*

1. Was IDD&E-related information distributed to public employees, businesses, and the general public during the reporting period? ☒ Yes ☐ No

   If Yes, what was distributed? **The Township participates in the Blair County Work Group and via the MOU with the Blair County Conservation District to carry out activities and distribution information relevant to the IDDE Plan. Examples of distributions include billboard advertisements, Blair County Annual Household Hazardous waste drop-off, brochure distribution, Antis Township Webpage, etc. County-wide Highway and Maintenance Crew Training was held in February at the Logan Township Building.**

2. Is there a well-publicized method for employees, businesses and the public to report stormwater pollution incidents?

   ☒ Yes ☐ No

3. Do you maintain documentation of all responses, action taken, and the time required to take action? ☒ Yes ☐ No

MCM #4 – CONSTRUCTION SITE STORM WATER RUNOFF CONTROL

Are you relying on PA's statewide program for stormwater associated with construction activities to satisfy this MCM?

☒ Yes ☐ No **(If No, complete all remaining questions for this MCM; if Yes, skip to MCM #5)**.

BMP #1: Develop your program consisting of all procedures necessary to comply with the requirements of this MCM. Your program shall provide for construction stormwater permitting, construction inspection, and enforcement of installation and maintenance of the necessary E&S control measures. Your program shall describe clearly how your program will be coordinated with DEP's NPDES Construction Stormwater Permitting program.

Measurable Goals*: For new permittees, the written program for this MCM shall be developed during the first year of permit coverage; nevertheless, you are responsible for implementation of this MCM during entire term of this permit, including the time you are developing your program.*

For all permittees, your program shall be reviewed and updated during each year of permit coverage. The purpose of the written program is to establish clear roles and responsibilities for the implementation of the MCM #4 requirements. An agreement between the permittee, the CCD, and any other resources to be used by the permittee that clearly defines roles for each entity is recommended. If an agreement is made, you shall place and keep a written copy in your file, consistent with the Retention of Records requirements in this Permit. Please note that in accordance with Section A.2.h in Part A of the Authorization to Discharge, as the permittee you are responsible to ensure that implementation of all requirements under this Permit are fulfilled.

1. For new permittees only, attach the written stormwater associated with construction activities program to the first report submitted to DEP.

2. If you are not a new permittee, did you complete and submit your written stormwater associated with construction activities program to DEP? ☐ Yes ☐ No

   If Yes, provide the latest submission date:

3. Date of last update or revision to the stormwater associated with construction activities program:

BMP #2: The permittee shall enact, implement, and enforce an ordinance to require the implementation of erosion and sediment control BMPs, as well as sanctions to ensure compliance.

Measurable Goal*: Within the first year of coverage under the permit, new permittees shall enact and implement an ordinance that meets all applicable requirements of this permit. (Non-municipal permittees shall develop and implement an SOP).*

Measurable Goal*: Permittees shall submit a letter signed by a municipal official, municipal engineer or the municipal solicitor as an attachment to their first periodic report certifying the enactment and implementation of a stormwater management ordinance that meets all requirements of this permit.*

1. For new permittees only, attach an ordinance (or SOP) and letter from an official, engineer or solicitor that addresses stormwater associated with construction activities to the first report submitted to DEP.

2. If you are not a new permittee, did you complete and submit your ordinance (or SOP) and letter from an official, engineer or solicitor that addresses stormwater associated with construction activities to DEP? ☐ Yes ☐ No

   If Yes, provide the latest submission date:

BMP #3: Develop and implement requirements for construction site operators to control waste at the construction site that may cause adverse impacts to water quality. While sediment is the most common pollutant of concern for MCM #4, there are other types of pollutants that also can be a concern and the intent of this BMP is to address these other types of pollutants, such as, but not limited to, discarded building materials, washout from concrete trucks, chemicals, litter, and sanitary waste.

***Measurable Goal**: New permittees shall establish requirements to address this BMP by the end of the first year of permit coverage. Renewal permittees shall continue to implement existing requirements and update as necessary. This could be implemented by written municipal ordinance/code provisions, by standard notes on the site plans, by any other written format that accomplishes the objectives of this BMP, or by any combination of these measures. The goal of this BMP shall be communicated to construction site operators during pre-construction meetings. This BMP shall be implemented during each year of the MS4 permit. Permittees must prepare and maintain records of site inspections, including dates and results and you must maintain these records in accordance with the Retention of Records requirements in this Permit.*

1. Identify the mechanism(s) in place to regulate construction site operators and wastes produced at construction sites:

2. During the reporting period what has been the results of implementing the mechanism(s) described above?

BMP #4: Develop and implement procedures for the receipt and consideration of public inquiries, concerns, and information submitted by the public (to the permittee) regarding local construction activities. The permittee shall demonstrate acknowledgement and consideration of the information submitted, whether submitted verbally or in writing.

***Measurable Goal**: Permittees shall establish and implement a tracking system to keep a record of any submitted public information as well as your response, actions, and results. This BMP shall be implemented during each year of coverage under this General Permit and information should be submitted with the each periodic report.*

Describe the tracking system established for documenting public information concerning local construction activities and describe responses taken during the reporting period:

MCM #5 – POST-CONSTRUCTION STORM WATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT

Are you relying on PA's statewide program for MCM #5 BMPs #1 - #3? ☒ Yes ☐ No

(**<u>If No, complete all remaining questions for this MCM; if Yes, skip to BMP #4</u>**)

BMP #1: Develop a written procedure that describes how the permittee shall address all required components of this MCM. Guidance can be found in the Pennsylvania Stormwater Best Management Practices Manual.

***Measurable Goal**: The written procedure shall be developed by the end of the first year of permit coverage and be reviewed and updated every permit year thereafter, as needed. The intent of BMP #1 is for the permittee to describe how the listed tasks will be accomplished.*

1. For new permittees only, attach your written procedure for post-construction management to the first report.

2. If you are not a new permittee, did you complete and submit your written procedure for post-construction management to DEP? ☐ Yes ☐ No

If Yes, provide the latest submission date:

3. Date of last review or update of post-construction management procedure:

BMP #2: Require the implementation of a combination of structural and/or non-structural BMPs that are appropriate to the local community, that minimize water quality impacts, and that are designed to maintain pre-development runoff conditions. This requirement can be met by ensuring that the selected BMPs comply with the municipal Stormwater Management Ordinance that meets the requirements of the permit.

***Measurable Goal**: All qualifying development or redevelopment projects shall be reviewed to ensure that their post-construction stormwater management plans and selected BMPs conform to the applicable requirements. A tracking system (e.g., database, spreadsheet, or written list) shall be maintained to record qualifying projects and their associated BMPs. In your records, you shall note if there are no qualifying projects in a calendar year.*

1. Number of development or redevelopment projects in urbanized area during reporting period:

2. Describe the tracking system in place:

3. Describe the structural and/or non-structural BMPs that were required for these projects:

BMP #3: Ensure that controls are installed that shall prevent or minimize water quality impacts.

***Measurable Goal**: All qualifying development or redevelopment projects shall be inspected during the construction phase to ensure proper installation of the approved structural PCSM BMPs. A tracking system (e.g., database, spreadsheet, or written list) shall be implemented to track the inspections conducted and to track the results of the inspections (e.g., BMPs were, or were not, installed properly). Permittees not relying on DEP's statewide QLP to satisfy requirements under this BMP shall summarize construction inspections and results in periodic reports. See BMP #6 for requirements related to post-construction inspection and tracking of PCSM BMPs to ensure that the operation and maintenance plan is being implemented.*

If there were development or redevelopment projects during the reporting period, attach documentation of inspections of PCSM BMPs to this report.

BMP #4: The permittee shall enact, implement, and enforce an ordinance (municipal) or SOP or other regulatory mechanism (non-municipal) to address post-construction stormwater runoff from new development and redevelopment projects, as well as sanctions and penalties associated with non-compliance, to the extent allowable under State or local law.

***Measurable Goal**: Within the first year of coverage under this permit, new permittees shall enact and implement a stormwater management ordinance (municipal) or SOP (non-municipal) that meets the requirements of this General Permit.*

***Measurable Goal**: All permittees shall submit a letter signed by a municipal official, municipal engineer or the municipal solicitor as an attachment to their first periodic report certifying the enactment of a stormwater management ordinance that meets the requirements of this General Permit.*

1. Do you have an ordinance (or SOP) to address post-construction stormwater runoff from new and redevelopment projects and does it include sanctions? ☒ Yes ☐ No

   If Yes, indicate the date of the ordinance or SOP: **4-2011**

   For new permittees only, attach a copy of the ordinance or SOP.

2. If you are not a new permittee, has the ordinance (or SOP) been submitted to DEP with a letter from an official, engineer or solicitor that certifies the enactment of an ordinance or SOP for PCSM activities? ☐ Yes ☒ No

3. Do you have authority to take enforcement action for failure to properly operate and maintain stormwater practices/facilities? ☒ Yes ☐ No

BMP #5: Develop and implement measures to encourage and expand the use of Low Impact Development (LID) in new and redevelopment. Measures also should be included to encourage retrofitting LID into existing development. DEP's Pennsylvania Stormwater Best Management Practices Manual provides guidance on implementing LID practices.

***Measurable Goal**: In your inventory of development and redevelopment projects authorized for construction since March 10, 2003, that discharge stormwater to your regulated MS4s, indicate which projects incorporated LID practices and for each project list and track the BMPs that were used.*

***Measurable Goal**: Enact ordinances consistent with LID practices and repeal sections of ordinances that conflict with LID practices. Progress with enacting and updating your ordinances to enable the use of LID practices shall be summarized in the periodic reports.*

1. Identify ordinances enacted or updated during the reporting period to ensure consistency with LID practices:

   None

BMP 6: Ensure adequate operation and maintenance of all post-construction stormwater management BMPs installed at all qualifying development or redevelopment projects (including those owned or operated by the permittee).

***Measurable Goal**: Within the first year of coverage under this permit, new permittees shall develop and implement a written inspection program to ensure that stormwater BMPs are properly operated and maintained. The program shall include sanctions and penalties for non-compliance. All permittees shall review and update the inspection program annually and shall continue to implement this BMP.*

***Measurable Goal**: An inventory of PCSM BMPs shall be developed by permittees and shall be continually updated during the term of coverage under the permit as development projects are reviewed, approved, and constructed. This inventory shall include all PCSM BMPs installed since March 10, 2003 that discharge directly or indirectly to your regulated small MS4s. The inventory also should include PCSM BMPs discharging to the regulated small MS4 system that may cause or contribute to violation of water quality standard. The inventory shall include:*

- *all PCSM BMPs that were installed to meet requirements in NPDES Permits for Stormwater Discharges Associated with Construction Activities approved since March 10, 2003;*
- *the exact location of the PCSM BMP (e.g., street address);*
- *information (e.g., name, address, phone number(s)) for BMP owner and entity responsible for BMP Operation and Maintenance (O&M), if different from BMP owner;*
- *the type of BMP and the year it was installed;*
- *maintenance required for the BMP type according to the Pennsylvania Stormwater BMP Manual or other manuals and resources;*
- *the actual inspection/maintenance activities for each BMP;*
- *an assessment by the permittee if proper operation and maintenance occurred during the year and if not, what actions the permittee has taken, or shall take, to address compliance with O&M requirements.*

1. For new permittees only, attach the written inspection program to ensure that stormwater BMPs are properly operated and maintained.

2. If you are not a new permittee, did you complete and submit your written inspection program to ensure that stormwater BMPs are properly operated and maintained to DEP? ☐ Yes ☒ No **(Inspection program is currently being prepared)**
   If Yes, provide the latest submission date:

3. How do you ensure that stormwater BMPs are properly operated and maintained? Explain if you rely on means other than municipal inspections to ensure adequate O&M (consistent with your stormwater ordinance).
   Annual inspections are performed on BMP's installed after March 2003.

4. Date that inspection program was last reviewed or updated: **2014**

5. Total number of sites with PCSM BMPs installed as of the date of this report: **15**

6. Total number of sites inspected during this reporting period: **11**

7. Number of sites found to have PCSM BMP deficiencies: **5**

8. Number of enforcement actions taken during this reporting period: **0 (Most deficiencies were minor. Antis Township is currently working with the owners to remedy the deficiencies.)**

MCM #6 – POLLUTION PREVENTION / GOOD HOUSEKEEPING

BMP #1: Identify and document all facilities and activities that are owned or operated by the permittee and have the potential for generating stormwater runoff to the regulated small MS4. This includes activities conducted by contractors for the permittee. Activities may include the following: street sweeping; snow removal/deicing; inlet/outfall cleaning; lawn/grounds care; general storm sewer system inspections and maintenance/repairs; park and open space maintenance; municipal building maintenance; new construction and land disturbances; right-of-way maintenance; vehicle operation, fueling, washing and maintenance; and material transfer operations, including leaf/yard debris pickup and disposal procedures. Facilities can include streets; roads; highways; parking lots and other large paved surfaces; maintenance and storage yards; waste transfer stations; parks; fleet or maintenance shops; wastewater treatment plants; stormwater conveyances (open and closed pipe); riparian buffers; and stormwater storage or treatment units (e.g., basins, infiltration/filtering structures, constructed wetlands, etc.).

Measurable Goal*: By the end of the first year of permit coverage, new permittees shall identify and document all types of municipal operations, facilities and activities and land uses that may contribute to stormwater runoff within areas of municipal operations that discharge to the regulated small MS4. Renewal permittees should have completed this list during the previous permit term. For all permittees, this information shall be reviewed and updated each year of permit coverage, as needed. Part of this effort shall include maintaining a basic inventory of various municipal operations and facilities.*

1. Have you identified all facilities and activities owned and operated by the permitee that have the potential to generate stormwater runoff into the MS4? ☐ Yes ☒ No

2. When was the inventory last reviewed? **2012**

3. When was it last updated? **2012**

4. How many new facilities and/or activities were added to this inventory during this reporting period? **N/A**

BMP #2: Develop, implement and maintain a written operation and maintenance (O&M) program for all municipal operations and facilities that could contribute to the discharge of pollutants from the regulated small MS4s, as identified under BMP #1. This program (or programs) shall address municipally owned stormwater collection or conveyance systems, but could include other areas (as identified under BMP #1). The O&M program(s) should stress pollution prevention and good housekeeping measures, contain site-specific information, and address the following areas:

- **Management practices, policies, procedures, etc. shall be developed and implemented to reduce or prevent the discharge of pollutants to your regulated small MS4s. You should consider eliminating maintenance-area discharges from floor drains and other drains if they have the potential to discharge to storm sewers.**
- **Maintenance activities, maintenance schedules, and inspection procedures to reduce the potential for pollutants to reach your regulated small MS4s. You also should review your procedures for maintaining your stormwater BMPs.**
- **Controls for reducing or eliminating the discharge of pollutants from streets, roads, highways, municipal parking lots, maintenance and storage yards, waste transfer stations, fleet or maintenance shops with outdoor storage areas, and salt / sand (anti-skid) storage locations and snow disposal areas.**
- **Procedures for the proper disposal of waste removed from your regulated small MS4s and your municipal operations, including dredge spoil, accumulated sediments, trash, household hazardous waste, used motor oil, and other debris.**

Measurable Goal*: During the first year of permit coverage, new permittees shall develop and implement a written O&M program that complies with BMPs #1 and #2. Renewal permittees shall continue to implement their existing program. All permittees shall review the O&M program annually, edit as necessary, and continue to implement during every year of permit coverage.*

1. For new permittees only, attach the written O&M program to the first Annual Report.

2. If you are not a new permittee, did you complete and submit your written O&M program to DEP? ☒ Yes ☐ No

   If Yes, provide the latest submission date: **2012**

3. Date of last review or update to O&M program: **2012 (review and updated O&M currently in process). The Township has also completed a self-audit/inspection of their facilities to ensure any deficiencies are addressed. The Township plans to have a revised O&M Plan completed and implemented during the next report period.**

BMP #3: Develop and implement an employee training program that addresses appropriate topics to further the goal of preventing or reducing the discharge of pollutants from municipal operations to your regulated small MS4s. The program may be developed and implemented using guidance and training materials that are available from federal, state or local agencies, or other organizations. Any municipal employee or contractor shall receive training. This could include public works staff, building / zoning / code enforcement staff, engineering staff (on-site and contracted), administrative staff, elected officials, police and fire responders, volunteers, and contracted personnel. Training topics should include operation, inspection, maintenance and repair activities associated with any of the municipal operations / facilities identified under BMP #1. Training should cover all relevant parts of the permittee's overall stormwater management program that could affect municipal operations, such as illicit discharge detection and elimination, construction sites, and ordinance requirements.

***Measurable Goal**: During the first year of permit coverage, new permittees shall develop and implement a training program that identifies the training topics that will be covered, and what training methods and materials will be used. Renewal permittees shall continue to operate under their existing program. All permittees shall review the training program annually, edit it as necessary, and continue to implement it during every year of permit coverage.*

***Measurable Goal**: Your employee training shall occur at least annually (i.e., during each permit coverage year) and shall be fully documented in writing and reported in your periodic reports. Documentation shall include the date(s) of the training, the names of attendees, the topics covered, and the training presenter(s).*

1. For new permittees only, attach the written training program to the first Annual Report.

2. If you are not a new permittee, did you complete and submit your written training program to DEP? ☒ Yes ☐ No
   If Yes, provide the latest submission date: **2012**

3. Date of last review or update to training program: **2014**

4. Identify the date(s) of employee training, the names of attendees, the topics covered, and the training presenters:
   Highway and Maintenance Crew Training (Mandatory for Blair County MS4 Communities)
   -Date: Wednesday, February 25, 2015
   -Topics Covered: Illicit Discharge Detection and Illimination, Erosion and Sediment Control
   -Presenters: Donna Fisher, Tom Levine, Scott Campanaro
   Attendence:Lucas Martsolf, Steve Shiffler, Donald Carnell, Art Walters, James Widdman, Joseph Despoy, John Mellot, Lori DelBiondo
   See MCM #6 Appendix -Attachments.

BEST MANAGEMENT PRACTICES (BMPs)

Provide an assessment of the appropriateness of the BMPs implemented to date, and identify any steps that will be taken to address deficiencies in the BMPs or make changes to BMPs or other aspects of the SWMP developed by the permittee.

BMPs implemented to date consist of dry and underground detention basins, infiltration trenches and bioretention ponds associated residential and commercial development. Antis Township plans to begin implementing BMPs recommended in the MS4 TMDL and Chesapeake Bay Pollutant Reduction Plan

MS4 TMDL Plan	Chesapeake Bay Pollutant Reduction Plan (CBPRP)
Is the permittee required to develop an MS4 TMDL Plan? ☒ Yes ☐ No	Is the permittee required to develop a CBPRP? ☒ Yes ☐ No
What is the status of the TMDL Design Details (if applicable)? ☐ Under Development (Due Date:) ☒ Submitted to DEP (Submission Date: **2014**) ☐ Approved by DEP (Approval Date:)	What is the status of the CBPRP (if applicable)? ☐ Under Development (Due Date:) ☒ Submitted to DEP (Submission Date: **2014**) ☐ Approved by DEP (Approval Date:)

For permittees with DEP-approved MS4 TMDL Plans and/or CBPRPs, describe progress with implementing BMPs and other activities identified in those plans:

N/A

For permittees with DEP-approved MS4 TMDL Plans and/or CBPRPs, complete the section below. Identify the required pollutant reductions (for those with MS4 TMDL Plans) or pollutant reductions committed to by the permittee (for those with CBPRPs) and the cumulative reductions achieved through implementing the BMPs, as of the end of the reporting period:

N/A

BMP INVENTORY

List all <u>new</u> structural BMPs installed and ongoing non-structural BMPs implemented in the urbanized area <u>during the reporting period</u> that are being used toward achieving load reductions in the permittee's MS4 TMDL Plan and/or CBPRP. Provide a name or description for each BMP, the area, in square feet (sf) that drains to each BMP (drainage area (DA)) (if applicable), the location of the BMP (latitude and longitude), the name of the water body that receives discharges from the BMP (if applicable), the date the BMP was installed or implemented, and whether the BMP was completed pursuant to an NPDES permit for stormwater associated with construction activities or other NPDES permit (check box if done under an NPDES permit).

BMP Name / Description	DA (sf)	Latitude	Longitude	Receiving Waters	Date Installed or Implemented	NPDES Permit?
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OTHER REQUIRED REPORT ELEMENTS

Identify the progress towards achieving the statutory requirements of reducing the discharge of pollutants to the Maximum Extent Practicable (MEP) and complying with water quality standards.

Antis Township's Stormwater Management Program which includes the six MCMs, expects to result in reduction of pollutants discharged into receiving waters. The Township is participating in the Blair County Total Maximum Daily Load and Chesapeake Bay Pollution Reduction Plan which includes a schedule of BMPs that the Township can implement in partnership with other county municipalities.

Provide a summary of stormwater activities planned during the next reporting cycle (not identified previously in this report):

During the 2014-2015 reporting period, the Township started the process of re-evaluating the entire MS4 program due to the new permit requirements. The evaluation includes creation of new project plans created specifically for each Minimum Control Measure consistent with the requirements of the items outlined in the new Annual Report Forms. The Township conducted a facility-wide inspection and self-audit in May 2015 to address any possible deficiencies within the O&M program and plans to implement the recommendations provided in the inspection report. The Township plans to re-write the current O&M plan, the IDD&E Plan and the PEOP to address new permit requirements. All public improvement projects conducted by the Township moving forward will consider the possibilities for improving the quality of stormwater runoff (green infrastructure BMPs, for example). Target audiences will be re-evaluated to target more specific demographics, developers, businesses, etc. and continue to identify opportunities to involve and educate the public.

Provide a summary of notices, intergovernmental agreements and other relevant documents if the permittee is relying on another governmental entity to satisfy any of its permit obligations

The Township relies on PA's statewide program for stormwater associated with construction activities to satisfy MCM #4 - Construction Site Storm Water Runoff Control.

The Township relies on PA's statewide program for stormwater associated with construction activities to satisfy BMP #'s 1 - 3 for MCM #5 - Post-Construction Storm Water Management in New Development and Redevelopment.

The Township will continue its partnership with the Blair County Conservation District (MOU) and participation with the Blair County MS4 Workgroup to collectively address the areas stormwater needs.

The Township is also participating in the Blair County Total Maximum Daily Load and Chesapeake Bay Pollution Reduction Plan.

The Township participates in the Inter-municipal Relations Committee for Recycling which is a council of governments (COG) consisting of the City of Altoona, Logan Township, Tyrone Borough and Hollidaysburg Borough. The IRC addresses the needs of the member municipalities related to recycling and composting required by Pennsylvania Act 101 of 1988.

CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowledge of violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

Lucas Martsolf, Township Manager	
Name of Responsible Official	Signature
(814) 742-7361	
Telephone No.	Date

MCM #1 APPENDIX

1. **MCM #1 Project Plan**

2. **MCM #1 Attachments**

    a. **Newsletters**
    b. **Blair County Conservation District Report**
    c. **Billboard Advertisements**

Public Education & Outreach Program

Antis Township
909 North Second Street
Bellwood, PA 16617
Ph: 814-742-7361
Fax: 814-742-9820
antismanager@atlanticbbn.net

Executive Summary

Antis Township has developed a Public Education and Outreach Program (PEOP) to meet the requirements of the Small Municipal Separate Storm Sewer Systems (MS4) General Permit (PAG-13). The objective of this PEOP is to communicate the appropriate information to target audiences in the Township to educate and inform the community about water pollution prevention and the MS4 Program. The PEOP should also help the community become aware of the actions that individuals, businesses and developers in the area can take to protect and improve water quality locally, as well as within the Chesapeake Bay Watershed.

Contents

Acronyms

BCCD	Blair County Conservation District
BMP	Best Management Practice
CWA	Clean Water Act
EPA	Environmental Protection Agency
PEOP	Public Education and Outreach Program
GP	General Permit
IP	Individual Permit
MCM	Minimum Control Measure
MOU	Memorandum of Understanding
NPDES	National Pollutant Discharge Elimination System
PADEP	Pennsylvania Department of Environmental Protection

Introduction

This Public Education and Outreach Program (PEOP) has been developed and implemented to satisfy the requirements of the of the federal Clean Water Act which is administered under the Pennsylvania Department of Environmental Protection's (PADEP) National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer (MS4) Program. This PEOP is part of the Best Management Practices (BMPs) and Measurable Goals that make up the Township's required Stormwater Management Program. Permittees are required to incorporate six Minimum Control Measures (MCMs) into their Stormwater Management Program. Each MCM includes a series of suggested Best Management Practices and Measurable Goals to guide permit holders in development, tracking and reporting. This PEOP is designed to satisfy MCM#1 "Public Education and Outreach on Stormwater Impacts." The objective of this PEOP is to communicate the appropriate information to target audiences in the Township to educate and inform the community about water pollution prevention and the MS4 Program. The PEOP should also help the community become aware of the actions that individuals, businesses and developers in the area can take to protect and improve water quality locally, as well as within the Chesapeake Bay Watershed. This PEOP shall be re-evaluated on an annual basis and reviewed and revised as necessary.

Minimum Control Measures

- Public Education and Outreach
- Public Involvement and Participation
- Illicit Discharge Detection and Elimination (IDD&E)
- Construction Site Stormwater Runoff Control
- Post-Construction Stormwater Management (PCSM) in New and Re-Developed Activities
- Pollution Prevention and Good Housekeeping for Municipal Operations

MCM #1: Public Education and Outreach on Stormwater Impacts

Requirements for MCM#1 included in the Federal Regulations:

> *Implement a public education program to distribute educational materials to the community or conduct equivalent outreach activities about the impacts of stormwater discharges on water bodies and the steps that the public can take to reduce pollutants in stormwater runoff (40 CFR Part 122.34(b)(1)(i))*

MCM#1: Public Education and Outreach on Stormwater Impacts Summary

BMP #1 Public Education and Outreach Program

Antis Township's PEOP contained herein addresses the distribution of educational materials to the community, outreach programs and activities regarding the impacts of stormwater discharges on water bodies and the actions the target audience can take to reduce pollutants in stormwater runoff. This PEOP was previously developed as part of the 2012 permit submission to the PADEP. This current revision reflects updates and changes to the original format as well as recommendations provided in the EPA document "Getting In Step, A Guide for Conducting Watershed Outreach Campaigns" (EPA 841-B-03-002, December, 2003).

Measurable Goal(s): Annually review and revise the Townships written PEOP. The PEOP must achieve measurable improvements in the target audience's understanding of the causes and impacts of stormwater pollution and the steps they can take to prevent it. This document represents the written Public Education and Outreach Program.

Action Items: Review and revise the PEOP annually to identify deficiencies and establish goals for the upcoming year. Document the annual review using the form included in Appendix 1.1

MCM #1: Public Education and Outreach on Stormwater Impacts

BMP #2 Target Audience

Antis Township's target audience was developed with the four common groupings in mind; geographic location, demographics, occupations or links to certain activities and attitudes and behavior patterns. The current target audience groups consist of township and county residents/homeowners, businesses, developers and contractors, civic organizations, educational institutions and municipal employees.

Measurable Goal(s): Maintain and verify target audience groups within the Township on an annual basis.

Action Items: Review and update the target audience list annually. Document the review using the form on Appendix 1.2.

BMP #3 Publishing

Antis Township publishes and distributes stormwater educational material to contractors and developers by adding pamphlets and brochures to the building permit applications. The Blair County Conservation District (BCCD) also collaborates with the Township by publishing and distributing stormwater related information on the BCCD website as part of the Memorandum of Understanding (MOU). The Township also participates in the Blair County MS4 Workgroup, which utilizes billboards advertisements for this requirement. Note: Although Antis Township maintains a municipal website with MS4 Stormwater information and resources, a county-wide, watershed based website is also in the planning stages through the Blair County MS4 Work Group. The website is being developed by the Alliance for the Chesapeake Bay and the BCCD with funding provided by the National Fish and Wildlife Foundation.

Measurable Goal(s): Publish and produce publications containing stormwater educational information that addresses one or more of the 6 MCMs.

Action Items: Annually review and revise published materials to ensure resources are up-to-date with current PADEP & EPA information. Add new information, as necessary, and document the review using the form included in Appendix 1.3. Additional educational resources are available at: www.depweb.state.pa.us Keyword: Stormwater.

BMP #4 Material Distribution

In addition to the publications listed in BMP#3, Antis Township maintains MS4 related brochures and flyers in the municipal office to educate the general public about stormwater.

Antis Township's partnership with the BCCD also satisfies material distribution via their MOU. Examples of distribution through the BCCD include hosting several themed educational events

where stormwater related material is distributed, maintaining a website with stormwater links and education, electronically distributing erosion and sediment pollution materials to over 50 developers and consultants, utilizing the "Trees Beside the Water" DVD posted on the website and promoting homeowner participation through the BCCDS rain barrel program and rain garden and healthy lawn workshops, newspaper advertisements, training, meetings, etc.

Measurable Goal(s): Utilize at least two distribution methods in each permit year. (In addition to the newsletter/website provisions of BMP#3)

Action Items: Utilize the educational resources and materials available from www.depweb.state.pa.us Keyword: Stormwater, i.e. "When It Rains, It Drains" as wells as customizable material at water.epa.gov, Keyword: Stormwater Outreach Materials and Reference Documents. Add new information, as necessary, and document the review and the items covered under the BCCD MOU and Blair County Workshop Group using the form included in Appendix 1.4

MCM 1: Antis Township Public Education and Outreach Program (PEOP)

Appendix 1.1: Annual PEOP Review

Reviewed: _____
(date)

Responsible Person: _____
(name)

Review the PEOP at least once a year. Describe the review of the program below. Attach additional pages if necessary.

1. Describe any changes made to the PEOP in the past year.

_____

_____

_____

_____

2. Describe any deficiencies identified during your review of the PEOP.

_____

_____

_____

_____

3. Describe actions taken or planned to address deficiencies.

_____

_____

_____

_____

MCM 1: Antis Township Public Education and Outreach Program (PEOP)

4. Describe goals or plans for the PEOP in the next year.

MCM 1: Antis Township Public Education and Outreach Program (PEOP)

Appendix 1.2: Target Audience Lists

Reviewed: _____
(date)

Responsible Person: _____
(name)

Review and update target audience list shown below. Update any mailing lists for each of the target audiences and indicate location where contact information can be found (database, file, etc.)

1. Township/County Residents
2. Businesses
3. Developers
4. Contractors
5. Civic Organizations
6. Educational Institutions
7. Municipal Employees
8. _____
9. _____
10. _____

MCM 1: Antis Township Public Education and Outreach Program (PEOP)

Appendix 1.3: Publishing

Reviewed: _____
(date)

Responsible Person: _____
(name)

Verify that the following brochures/pamphlets were distributed through permit applications. Add any new titles to the list and attach a copy of each brochure. Update target audience as necessary.

Titles:
- "When It Rains, It Drains"
- "Stormwater and the Construction Industry" Poster
- "After the Storm" Brochure
- "Make Your Home the Solution to Stormwater Pollution" Brochure

Target Audiences: Contractors, Developers, Businesses, Homeowners

What is Storm Water?

Storm water is water from precipitation that flows across the ground and pavement when it rains or when snow and ice melt. The water seeps into the ground or drains into what we call storm sewers. These are the drains you see at street corners or at low points on the sides of streets. Collectively, the draining water is called storm water runoff.

Why is Storm Water "Good Rain Gone Wrong?"

Storm water becomes a problem when it picks up debris, chemicals, dirt, and other pollutants as it flows or when it causes flooding and erosion of stream banks. Storm water travels through a system of pipes and roadside ditches that make up storm sewer systems. It eventually flows directly to a lake, river, stream, wetland, or coastal water. All of the pollutants storm water carries along the way empty into our waters, too, because storm water does not get treated!

Pet wastes left on the ground get carried away by storm water, contributing harmful bacteria, parasites and viruses to our water.

Vehicles drip fluids (oil, grease, gasoline, antifreeze, brake fluids, etc.) onto paved areas where storm water runoff carries them through our storm drains and into our water.

Chemicals used to grow and maintain beautiful lawns and gardens, if not used properly, can run off into the storm drains when it rains or when we water our lawns and gardens.

Waste from chemicals and materials used in construction can wash into the storm sewer system when it rains. Soil that erodes from construction sites causes environmental degradation, including harming fish and shellfish populations that are important for recreation and our economy.

Where To Go To Continue the Information Flow

Your community is preventing storm water pollution through a storm water management program. This program addresses storm water pollution from construction, new development, illegal dumping to the storm sewer system, and pollution prevention and good housekeeping practices in municipal operations. It will also continue to educate the community and get everyone involved in making sure the only thing that storm water contributes to our water is . . . water! Contact your community's storm water management program coordinator or the Pennsylvania Department of Environmental Protection for more information about storm water management.

Pennsylvania Department of Environmental Protection
www.dep.state.pa.us

Answers to Test Your Storm Sewer System Savvy:

1. **Ditch** – Part of the storm sewer system. Most people think that the system is just a series of underground pipes. It can also include ditches used to convey storm water from the land to a receiving lake, river, or stream.
2. **Fire Hydrant** – Not part of the storm sewer system. Water sprayed from fire hydrants is not storm water, but is allowed by law to enter the storm sewer system.
3. **Curb with Storm Drain Inlet** – Part of the storm sewer system. Many people do not realize that this is an opening leading to the storm sewer system. Anything going into this inlet (e.g., trash, leaves, improperly disposed of hazardous materials) travel directly to a receiving lake, river, or stream without being treated first. Many communities stencil storm drains with "Do Not Dump" messages to let people know.
4. **Storm Sewer Outfall** – Part of the storm sewer system. An outfall is where storm water drains from the storm sewer system into a receiving lake, stream, or river. If there is a flow from an outfall when it isn't raining, there could be a problem with the system or someone has used a storm drain for illegally disposing of materials.
5. **Toilet** – Not part of the storm sewer system. Wastewater from sinks and toilets in houses and businesses travel through a sewer system constructed to carry sanitary wastes. In some instances, older communities may have a combined sewer system designed to carry both storm water and sanitary waste.
6. **Septic System** – Not part of the storm sewer system. Homeowners use septic tanks to manage sanitary wastes on-site. Improperly maintained septic systems can leak and contribute pollutants to the storm sewer system, as well as directly to lakes, rivers, and streams.
7. **Roads and Other Paved Areas** – Not part of the storm sewer system. Roads and other hardened surfaces such as parking lots and sidewalks can accumulate pollutants (e.g., oil, grease, dirt, leaves, trash, pet wastes) that storm water eventually washes into the storm sewer system.
8. **Storm Drain Inlet** – Part of the storm sewer system. This is another example of what a storm drain may look like. Like the storm drain inlet shown in picture #3, anything that enters this drain will go directly to streams, rivers, and lakes without being treated first. It is important to recognize this as a storm drain to prevent it from being used as a trash can.

When It Rains, It Drains

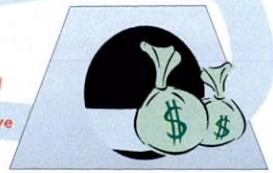
Understanding Storm Water and How It Can Affect Your Money, Safety, Health, and the Environment

What Happens When It Rains?

Rain is an important part of nature's water cycle, but there are times it can do more damage than good. Problems related to storm water runoff can include:

Flooding caused by too much storm water flowing over hardened surfaces such as roads and parking lots, instead of soaking into the ground.

Increases in spending on maintaining storm drains and the storm sewer system that become clogged with excessive amounts of dirt and debris.



Decreases in sportfish populations because storm water carries sediment and pollutants that degrade important fish habitat.

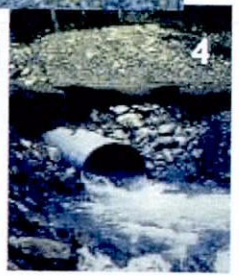
More expensive treatment technologies to remove harmful pollutants carried by storm water into our drinking water supplies.

Closed beaches due to high levels of bacteria carried by storm water that make swimming unsafe.

We can help rain restore its good reputation while protecting our health and environment while saving money for ourselves and our community. Keep reading to find out how. . .

Test Your Storm Sewer System Savvy!

What does the storm sewer system look like in your community? See if you can identify which pictures are part of the storm sewer system. (Answers are on the back.)



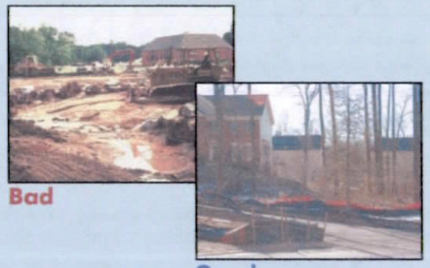
Restoring Rain's Reputation: What Everyone Can Do To Help

Rain by nature is important for replenishing drinking water supplies, recreation, and healthy wildlife habitats. It only becomes a problem when pollutants from our activities like car maintenance, lawn care, and dog walking are left on the ground for rain to wash away. Here are some of the most important ways to prevent storm water pollution:

- Properly dispose of hazardous substances such as used oil, cleaning supplies and paint—never pour them down any part of the storm sewer system and report anyone who does.
- Use pesticides, fertilizers, and herbicides properly and efficiently to prevent excess runoff.
- Look for signs of soil and other pollutants, such as debris and chemicals, leaving construction sites in storm water runoff or tracked into roads by construction vehicles. Report poorly managed construction sites that could impact storm water runoff to your community. (See the back of this brochure for contact information.)
- Install innovative storm water practices on residential property, such as rain barrels or rain gardens, that capture storm water and keep it on site instead of letting it drain away into the storm sewer system.
- Report any discharges from storm water outfalls during times of dry weather—a sign that there could be a problem with the storm sewer system.
- Pick up after pets and dispose of their waste properly. No matter where pets make a mess—in a backyard or at the park—storm water runoff can carry pet waste from the land to the storm sewer system to a stream.
- Store materials that could pollute storm water indoors and use containers for outdoor storage that do not rust or leak to eliminate exposure of materials to storm water.

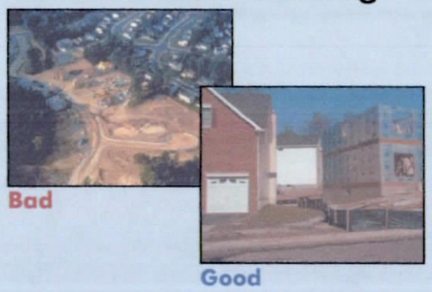
Stormwater and the Construction Industry

Protect Natural Features



- Minimize clearing.
- Minimize the amount of exposed soil.
- Identify and protect areas where existing vegetation, such as trees, will not be disturbed by construction activity.
- Protect streams, stream buffers, wild woodlands, wetlands, or other sensitive areas from any disturbance or construction activity by fencing or otherwise clearly marking these areas.

Construction Phasing

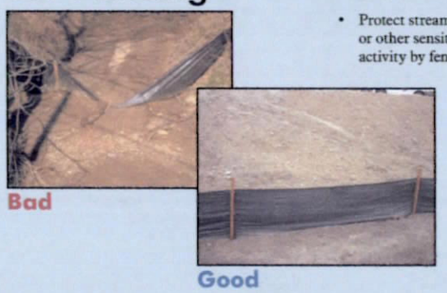


- Sequence construction activities so that the soil is not exposed for long periods of time.
- Schedule or limit grading to small areas.
- Install key sediment control practices before site grading begins.
- Schedule site stabilization activities, such as landscaping, to be completed immediately after the land has been graded to its final contour.

Vegetative Buffers

- Protect and install vegetative buffers along waterbodies to slow and filter stormwater runoff.
- Maintain buffers by mowing or replanting periodically to ensure their effectiveness.

Silt Fencing



- Inspect and maintain silt fences after each rainstorm.
- Make sure the bottom of the silt fence is buried in the ground.
- Securely attach the material to the stakes.
- Don't place silt fences in the middle of a waterway or use them as a check dam.
- Make sure stormwater is not flowing around the silt fence.

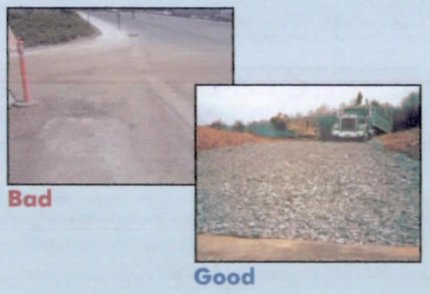
Maintain your BMPs!

www.epa.gov/npdes/menuofbmps

Site Stabilization

- Vegetate, mulch, or otherwise stabilize all exposed areas as soon as land alterations have been completed.

Construction Entrances

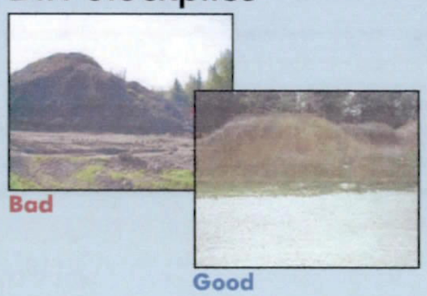


- Remove mud and dirt from the tires of construction vehicles before they enter a paved roadway.
- Properly size entrance BMPs for all anticipated vehicles.
- Make sure that the construction entrance does not become buried in soil.

Slopes

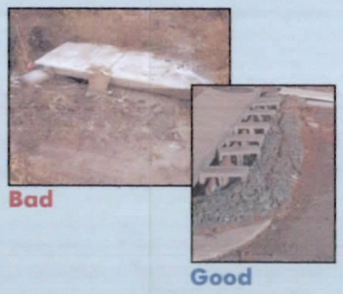
- Rough grade or terrace slopes.
- Break up long slopes with sediment barriers, or under drain, or divert stormwater away from slopes.

Dirt Stockpiles



- Cover or seed all dirt stockpiles.

Storm Drain Inlet Protection



- Use rock or other appropriate material to cover the storm drain inlet to filter out trash and debris.
- Make sure the rock size is appropriate (usually 1 to 2 inches in diameter).
- If you use inlet filters, maintain them regularly.

After the Storm

WHEN IT RAINS IT DRAINS

For more information contact:

Contact name
Contact agency
Address
Address1
Phone number
E-mail address

or visit
www.epa.gov/npdes/stormwater
www.epa.gov/nps

What is stormwater runoff?

Stormwater runoff occurs when precipitation from rain or snowmelt flows over the ground. Impervious surfaces like driveways, sidewalks, and streets prevent stormwater from naturally soaking into the ground.

Why is stormwater runoff a problem?

Stormwater can pick up debris, chemicals, dirt, and other pollutants and flow into a storm sewer system or directly to a lake, stream, river, wetland, or coastal water. Anything that enters a storm sewer system is discharged untreated into the waterbodies we use for swimming, fishing, and providing drinking water.

The effects of pollution

Polluted stormwater runoff can have many adverse effects on plants, fish, animals, and people.

- Sediment can cloud the water and make it difficult or impossible for aquatic plants to grow. Sediment also can destroy aquatic habitats.
- Excess nutrients can cause algae blooms. When algae die, they sink to the bottom and decompose in a process that removes oxygen from the water. Fish and other aquatic organisms can't exist in water with low dissolved oxygen levels.
- Bacteria and other pathogens can wash into swimming areas and create health hazards, often making beach closures necessary.

- Debris—plastic bags, six-pack rings, bottles, and cigarette butts—washed into waterbodies can choke, suffocate, or disable aquatic life like ducks, fish, turtles, and birds.
- Household hazardous wastes like insecticides, pesticides, paint, solvents, used motor oil, and other auto fluids can poison aquatic life. Land animals and people can become sick or die from eating diseased fish and shellfish or ingesting polluted water.
- Polluted stormwater often affects drinking water sources. This, in turn, can affect human health and increase drinking water treatment costs.

A Citizen's Guide to Understanding Stormwater

WHEN IT RAINS IT DRAINS

THE YEAR OF CLEAN WATER

EPA United States Environmental Protection Agency

EPA 833-B-03-002

January 2003

Stormwater Pollution Solutions

Education is essential to changing people's behavior. Signs and markers near storm drains warn residents that pollutants entering the drains will be carried untreated into a local waterbody.

Residential

Recycle or properly dispose of household products that contain chemicals, such as insecticides, pesticides, paint, solvents, and used motor oil and other auto fluids. Don't pour them onto the ground or into storm drains.

Auto care

Washing your car and degreasing auto parts at home can send detergents and other contaminants through the storm sewer system. Dumping automotive fluids into storm drains has the same result as dumping the materials directly into a waterbody.

- Use a commercial car wash that treats or recycles its wastewater, or wash your car on your yard so the water infiltrates into the ground.
- Repair leaks and dispose of used auto fluids and batteries at designated drop-off or recycling locations.

Lawn care

Excess fertilizers and pesticides applied to lawns and gardens wash off and pollute streams. In addition, yard clippings and leaves can wash into storm drains and contribute nutrients and organic matter to streams.

- Don't overwater your lawn. Consider using a soaker hose instead of a sprinkler.
- Use pesticides and fertilizers sparingly. When use is necessary, use these chemicals in the recommended amounts. Use organic mulch or safer pest control methods whenever possible.
- Compost or mulch yard waste. Don't leave it in the street or sweep it into storm drains or streams.
- Cover piles of dirt or mulch being used in landscaping projects.

Septic systems

Leaking and poorly maintained septic systems release nutrients and pathogens (bacteria and viruses) that can be picked up by stormwater and discharged into nearby waterbodies. Pathogens can cause public health problems and environmental concerns.

- Inspect your system every 3 years and pump your tank as necessary (every 3 to 5 years).
- Don't dispose of household hazardous waste in sinks or toilets.

Pet waste

Pet waste can be a major source of bacteria and excess nutrients in local waters.

- When walking your pet, remember to pick up the waste and dispose of it properly. Flushing pet waste is the best disposal method. Leaving pet waste on the ground increases public health risks by allowing harmful bacteria and nutrients to wash into the storm drain and eventually into local waterbodies.

Residential landscaping

Permeable Pavement—Traditional concrete and asphalt don't allow water to soak into the ground. Instead these surfaces rely on storm drains to divert unwanted water. Permeable pavement systems allow rain and snowmelt to soak through, decreasing stormwater runoff.

Rain Barrels—You can collect rainwater from rooftops in mosquito-proof containers. The water can be used later on lawn or garden areas.

Rain Gardens and Grassy Swales—Specially designed areas planted with native plants can provide natural places for rainwater to collect and soak into the ground. Rain from rooftop areas or paved areas can be diverted into these areas rather than into storm drains.

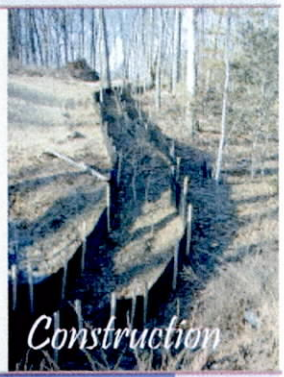
Vegetated Filter Strips—Filter strips are areas of native grass or plants created along roadways or streams. They trap the pollutants stormwater picks up as it flows across driveways and streets.

Commercial

Dirt, oil, and debris that collect in parking lots and paved areas can be washed into the storm sewer system and eventually enter local waterbodies.

- Sweep up litter and debris from sidewalks, driveways and parking lots, especially around storm drains.
- Cover grease storage and dumpsters and keep them clean to avoid leaks.
- Report any chemical spill to the local hazardous waste cleanup team. They'll know the best way to keep spills from harming the environment.

Construction



Erosion controls that aren't maintained can cause excessive amounts of sediment and debris to be carried into the stormwater system. Construction vehicles can leak fuel, oil, and other harmful fluids that can be picked up by stormwater and deposited into local waterbodies.

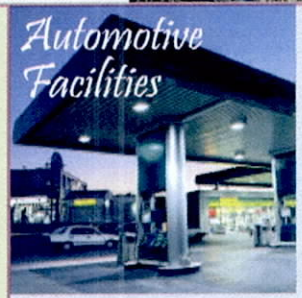
- Divert stormwater away from disturbed or exposed areas of the construction site.
- Install silt fences, vehicle mud removal areas, vegetative cover, and other sediment and erosion controls and properly maintain them, especially after rainstorms.
- Prevent soil erosion by minimizing disturbed areas during construction projects, and seed and mulch bare areas as soon as possible.

Agriculture

Lack of vegetation on streambanks can lead to erosion. Overgrazed pastures can also contribute excessive amounts of sediment to local waterbodies. Excess fertilizers and pesticides can poison aquatic animals and lead to destructive algae blooms. Livestock in streams can contaminate waterways with bacteria, making them unsafe for human contact.

- Keep livestock away from streambanks and provide them a water source away from waterbodies.
- Store and apply manure away from waterbodies and in accordance with a nutrient management plan.
- Vegetate riparian areas along waterways.
- Rotate animal grazing to prevent soil erosion in fields.
- Apply fertilizers and pesticides according to label instructions to save money and minimize pollution.

Automotive Facilities



Uncovered fueling stations allow spills to be washed into storm drains. Cars waiting to be repaired can leak fuel, oil, and other harmful fluids that can be picked up by stormwater.

- Clean up spills immediately and properly dispose of cleanup materials.
- Provide cover over fueling stations and design or retrofit facilities for spill containment.
- Properly maintain fleet vehicles to prevent oil, gas, and other discharges from being washed into local waterbodies.
- Install and maintain oil/water separators.

Forestry

Improperly managed logging operations can result in erosion and sedimentation.

- Conduct preharvest planning to prevent erosion and lower costs.
- Use logging methods and equipment that minimize soil disturbance.
- Plan and design skid trails, yard areas, and truck access roads to minimize stream crossings and avoid disturbing the forest floor.
- Construct stream crossings so that they minimize erosion and physical changes to streams.
- Expedite revegetation of cleared areas.

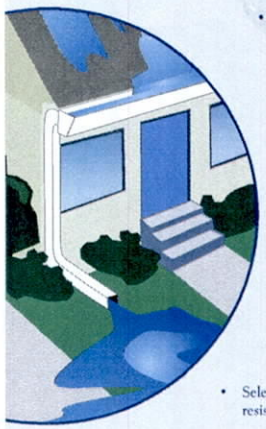
As stormwater flows over driveways, lawns, and sidewalks, it picks up debris, chemicals, dirt, and other pollutants. Stormwater can flow into a storm sewer system or directly to a lake, stream, river, wetland, or coastal water. Anything that enters a storm sewer system is discharged untreated into the waterbodies we use for swimming, fishing, and providing drinking water. Polluted runoff is the nation's greatest threat to clean water.

By practicing healthy household habits, homeowners can keep common pollutants like pesticides, pet waste, grass clippings, and automotive fluids off the ground and out of stormwater. Adopt these healthy household habits and help protect lakes, streams, rivers, wetlands, and coastal waters. Remember to share the habits with your neighbors!

Healthy Household Habits for Clean Water

Vehicle and Garage

- Use a commercial car wash or wash your car on a lawn or other unpaved surface to **minimize** the amount of dirty, soapy water flowing into the storm drain and eventually into your local waterbody.



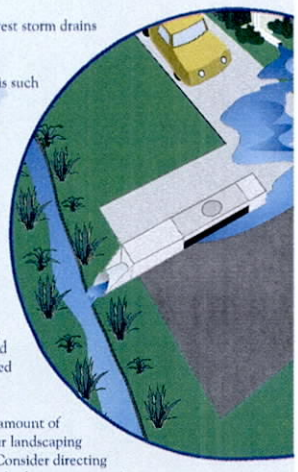
- Check your car, boat, motorcycle, and other machinery and equipment for **leaks and spills**. Make repairs as soon as possible. Clean up **spilled fluids** with an absorbent material like kitty litter or sand, and don't rinse the spills into a nearby storm drain. Remember to properly dispose of the absorbent material.
- **Recycle** used oil and other automotive fluids at participating service stations. Don't dump these chemicals down the storm drain or dispose of them in your trash.

Lawn and Garden

- Use pesticides and fertilizers **sparingly**. When use is necessary, use these chemicals in the recommended amounts. Avoid application if the forecast calls for rain; otherwise, chemicals will be washed into your local stream.
- Select **native** plants and grasses that are drought- and pest-resistant. Native plants require less water, fertilizer, and pesticides.
- **Sweep up** yard debris, rather than hosing down areas. Compost or recycle yard waste when possible.
- Don't overwater your lawn. Water during the **cool** times of the day, and don't let water run off into the storm drain.
- Cover piles of dirt and mulch being used in landscaping projects to prevent these pollutants from blowing or washing off your yard and into local waterbodies. **Vegetate** bare spots in your yard to prevent soil erosion.

Home Repair and Improvement

- Before beginning an outdoor project, locate the nearest storm drains and **protect** them from debris and other materials.
- **Sweep up** and properly dispose of construction debris such as concrete and mortar.
- Use hazardous substances like paints, solvents, and cleaners in the **smallest amounts possible**, and follow the directions on the label. Clean up spills **immediately**, and dispose of the waste safely. Store substances properly to avoid leaks and spills.
- Purchase and use **nontoxic, biodegradable, recycled,** and **recyclable** products whenever possible.
- **Clean** paint brushes in a sink, not outdoors. Filter and reuse paint thinner when using oil-based paints. Properly dispose of excess paints through a household hazardous waste collection program, or donate unused paint to local organizations.



- **Reduce** the amount of paved area and increase the amount of vegetated area in your yard. Use native plants in your landscaping to reduce the need for watering during dry periods. Consider directing downspouts away from paved surfaces onto lawns and other measures to increase infiltration and reduce polluted runoff.

Pet Care

- When walking your pet, remember to **pick up** the waste and dispose of it properly. Flushing pet waste is the best disposal method. Leaving pet waste on the ground increases public health risks by allowing harmful bacteria and nutrients to wash into the storm drain and eventually into local waterbodies.

Swimming Pool and Spa

- **Drain** your swimming pool only when a test kit does not detect chlorine levels.
- Whenever possible, drain your pool or spa into the **sanitary** sewer system.
- Properly store pool and spa chemicals to **prevent** leaks and spills, preferably in a covered area to avoid exposure to stormwater.

Septic System Use and Maintenance

- Have your septic system **inspected** by a professional at least every 3 years, and have the septic tank **pumped** as necessary (usually every 3 to 5 years).
- Care for the septic system drainfield by **not** driving or parking vehicles on it. Plant only grass over and near the drainfield to avoid damage from roots.
- Flush responsibly. Flushing household chemicals like paint, pesticides, oil, and antifreeze can **destroy** the biological treatment taking place in the system. Other items, such as diapers, paper towels, and cat litter, can **clog** the septic system and potentially damage components.

Storm drains connect to waterbodies!

Internet Address (URL) • HTTP://www.epa.gov
Recycled/Recyclable • Printed With Vegetable Oil Based Inks on 100% Postconsumer, Process Chlorine Free Recycled Paper

EPA United States Environmental Protection Agency
EPA 833-B-03-003
January 2003

Remember: Only rain down the drain!

For more information, visit
www.epa.gov/npdes/stormwater
or
www.epa.gov/nps

Make your home

The

SOLUTION TO STORMWATER POLLUTION!

A homeowner's guide to healthy habits for clean water

EPA United States Environmental Protection Agency

MCM 1: Antis Township Public Education and Outreach Program (PEOP)

Appendix 1.4: Material Distribution

Reviewed: _____
(date)

Responsible Person: _____
(name)

1. List brochures/flyers/posters posted and/or available at the Township Office.

_____

_____

_____

_____

2. Describe materials distributed through the Blair County Conservation District partnership/Memorandum of Understanding.

_____

_____

_____

_____

3. Describe any additional methods taken or planned to distribute stormwater educational materials. (Examples: displays, posters, signs, pamphlets, booklets, brochures, radio, local cable TV, newspaper articles, bill stuffers, presentations, conferences, meetings, fact sheets, giveaways, storm drain stenciling)

_____

_____

_____

_____

The Homeowner's Guide to Stormwater

How to develop and implement a stormwater management plan for your property

Photo by Tetra Tech

Purpose of this Guide

If you are simply looking for a way to help protect or improve your watershed or you are doing a small home improvement project that creates new impervious area and you need to manage the stormwater that is generated*, this guide is for you. It will help you better understand:

- what is stormwater, why stormwater runoff can be a problem, and what you can do about it;
- how much stormwater runoff is generated by impervious areas on your property;
- how stormwater flows across and leaves your property; and
- how you can reduce the amount of stormwater runoff leaving your property.

This guide will help you create your own stormwater management plan and select simple stormwater solutions to be implemented on your property.

** Check with your local municipality to find out more about what permits may be required for any building projects.*

Disclaimer

The practices described in the guide are provided exclusively for general educational and informational purposes. The guide is intended to help property owners evaluate and assess current runoff pathways on their properties and identify practices to better manage stormwater. The guide outlines several practices to choose from that are fairly simple to plan and construct.

All efforts have been made to ensure the material in this guide is accurate and up to date. However, the Little Conestoga Partnership and its partner organizations cannot be held responsible for any circumstances resulting from its use, unavailability, or possible inaccuracy.

This guide is not intended to be a substitute for professional design and implementation services. This guide provides you with general information on an "as is" basis. You acknowledge that you assume the entire risk of loss in using this guide and the information provided herein, including without limitation any loss incurred by any end user. You further acknowledge that the management of stormwater is a complex and site specific issue and that the general information contained in this guide may not be sufficient to assess any and all particular site conditions. Any stormwater management practice should be installed with the consultation of an experienced professional who can address specific site conditions.

The Little Conestoga Partnership and its partner organizations make no representations and specifically disclaim all liabilities and warranties, express, implied, or statutory, regarding the accuracy, timeliness, or completeness for any particular purpose of any material contained on this site.

The information presented in this guide does not in any way replace or supersede any municipal, county, state, or federal requirements or regulations related to stormwater management. You should check with all appropriate regulatory authorities before relying upon this guide to plan or implement any and all stormwater management practices on your property.

Table of Contents

Acknowledgments

The development of this guide would not have been possible without financial support from the National Fish and Wildlife Foundation through a Chesapeake Stewardship Fund grant to the Conservation Foundation of Lancaster County, and the additional support of the Little Conestoga Partnership, including:

- Alliance for the Chesapeake Bay
- Brandywine Conservancy
- Chesapeake Bay Foundation
- Habitat MT
- Lancaster County Clean Water Consortium
- Lancaster County Conservancy
- Lancaster County Conservation District
- Lancaster County Planning Commission
- Little Conestoga Watershed Alliance
- Pennsylvania Department of Environmental Protection
- Pennsylvania Department of Conservation and Natural Resources
- Pennsylvania Landscape & Nursery Association
- Penn State University

Special thanks to the drafting team: Kristen Kyler, Jessica Moldofsky, AnnaLiese Nachman and Matt Royer, Penn State; Mary Gattis and Melissa Kelly, Lancaster County Planning Commission; Matt Kofroth, Lancaster County Conservation District; Donna Morelli, Alliance for the Chesapeake Bay; and Gregg Robertson, Pennsylvania Landscape & Nursery Association.

Also, thanks to the following individuals for reviewing drafts of the document and providing comments: Kent Gardner, Lancaster County Clean Water Consortium; Kara Kalupson, Hannah Brubach, and Emily Neideigh Lancaster County Conservation District; Joe Kelly, Pennsylvania Department of Environmental Protection; Mike Kyle, Lancaster Area Sewer Authority; Tom Schueler, Chesapeake Stormwater Network; Drew Siglin and Jacob Baukman, Alliance for the Chesapeake Bay; Vincent Catrone and William Elemendorf, Penn State Extension.

Section 1: Introduction

What is Stormwater Runoff?

Stormwater runoff is precipitation (rain or snowmelt) that flows across the land. Stormwater may infiltrate into soil, discharge directly into streams, water bodies, or drain inlets, or evaporate back into the atmosphere.

In the natural environment, most precipitation is absorbed by trees and plants or permeates into the ground, which results in stable stream flows and good water quality.

Photo by Matt Royer, Penn State

Photo by Matt Kofroth, LCCD

Things are different in the built environment. Rain that falls on a roof, driveway, patio or lawn runs off the surface more rapidly, picking up pollutants as it goes. This stormwater runoff flows into streams or storm drains that discharge into waterways like the Little Conestoga Creek, the Susquehanna River and eventually the Chesapeake Bay.

Photo by Kristen Kyler, Penn State

Why Can Stormwater Runoff Be a Problem?

Poorly managed stormwater runoff can cause a host of problems. These include:

- **Flooding.** As stormwater runs off roofs, driveways and lawns, large volumes quickly reach streams, causing them to rise quickly and flood, instead of a natural slow and steady water rise. When more impervious surfaces exist, flooding occurs more rapidly and can be more severe, resulting in damage to property and people.
- **Pollution.** Stormwater running over roofs, driveways, roads and lawns will pick up pollutants such as oil, fertilizers, pesticides, dirt/sediment, trash, and animal waste. These pollutants "hitch a ride" with the stormwater and flow untreated into local streams, polluting our waters.
- **Stream Bank Erosion.** When stormwater flows into streams at unnaturally high volumes and speeds, the power of these flows can cause severe stream bank erosion. Eroding banks can eat away at streamside property, create dangerous situations, and damage natural habitat for fish and other aquatic life. This erosion is another source of sediment pollution in streams.

Photo by Matt Kofroth, LCCD

- **Threats to Human Health.** Stormwater runoff can carry many toxic pollutants, such as toxic metals, organic compounds, bacteria, and viruses. Polluted stormwater can contaminate drinking water supplies and hamper recreational opportunities as well as threaten fish and other aquatic life.

What Can I Do to Help?

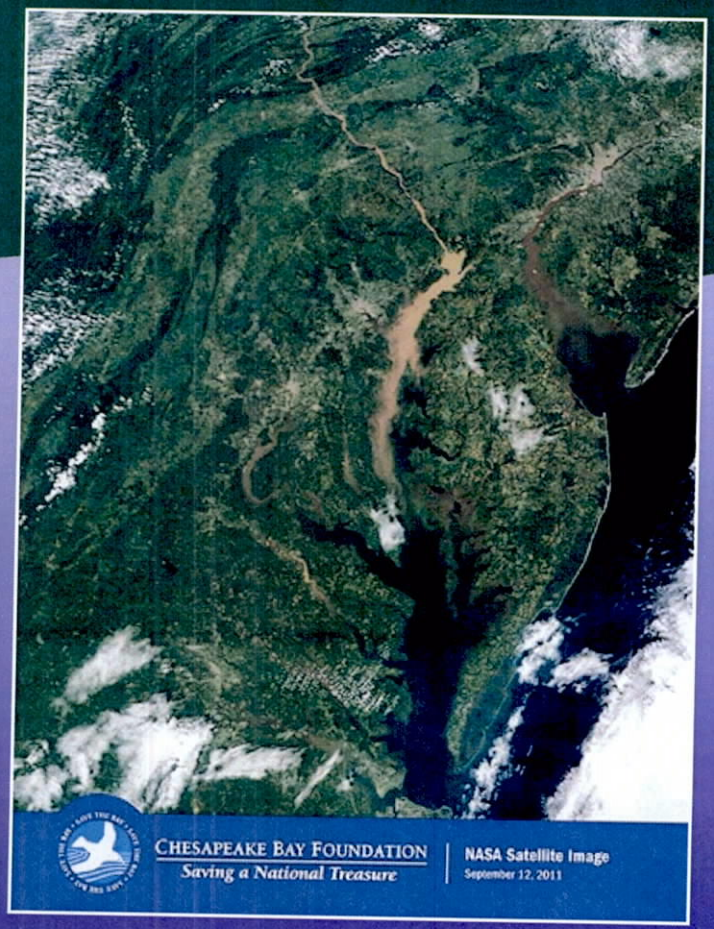
As a homeowner, you can help avoid the problems associated with stormwater runoff by:

- reducing impervious areas so that the rain soaks into the ground
- planting native trees and plants which help infiltrate stormwater and increase evaporation and transpiration
- following the lawn care practices described in this guide
- managing stormwater on-site with rain gardens, rain barrels and similar practices
- doing many small things, you have a big impact on improving stormwater management

impervious surface

permeable pavers

Photos by Matt Kofroth, LCCD



Managing stormwater on your property will not only help protect local streams, but will also help clean up downstream waterways including the Chesapeake Bay.

"As of 2011, 17.5 million people were estimated to live in the Bay watershed, up from 17.4 million in 2010. Experts predict the watershed's population will increase to more than 20 million by 2030." *(Chesapeake Bay Program)*

Section 2: Assessing Stormwater on Your Property

In order to better manage stormwater on your property you should first understand how stormwater is generated and flows on your property. Follow these simple steps to figure out where stormwater is generated, how it flows, and approximately how much stormwater comes from your property.

1. Walk your property and map your boundaries and basic features.

Step 1: Draw your property boundaries.

Draw the boundaries of your lot. If you are not sure of your boundaries, you may be able to look this up on your property tax assessment, deed to your house, or at your county's tax office.

Map created by Kara Kalupson, LCCD

Step 2: Draw buildings and other features of your property.

Draw and label the buildings and other features of your property. These include:

Map created by Kara Kalupson, LCCD

- **Impervious areas.** These are hard surfaces on your property that prevent stormwater from soaking into the ground. They include buildings, driveways, parking areas, walkways, decks, patios, or other hard surfaces.
- **Lawn and landscaped areas.** These include any areas with grass or landscaping that you regularly maintain.
- **Natural vegetation.** These are areas of woods, meadow, or other naturally vegetated areas that are allowed to grow natural on your property.
- **Water features.** These could be streams, wetlands, ponds or swimming pools.

You can determine the approximate size of each area by using a tape measure and calculating the square footage of each. Depending on the overall size of your property, you may want to calculate these areas in square feet or convert to acres (1 acre = 43,560 square feet). If your property has no natural vegetation, such as woods or meadows, or water features on it, you can simply subtract the impervious areas from your total lot size to get your total lawn and landscaped area.

Photo by Matt Royer, Penn State

2. Assess and map your stormwater flow.

The next step is to show how and where runoff flows on your property and identify any problems it may be causing. Common stormwater problems may include large puddles ("ponding"), damp basements, soil erosion, and collapsing stream banks. The ideal time to assess stormwater flow would be during or immediately after a rain storm. Look for and map the following:

- **Roof downspouts.** Indicate the location of roof downspouts and the direction stormwater flows from the downspouts.
- **Stormwater flow paths.** Using arrows, show the direction of stormwater flow off of impervious surfaces. If you have any areas where stormwater collects, such as drainage swales or ditches, show this and label them as such.
- **Areas of ponding.** Indicate locations of standing water or ponding on the map.
- **Gullies or ditches from soil erosion.** Indicate any areas of soil erosion which have resulted in gullies or ditches. This may appear within existing drainage swales or channels, and would be good to note on your assessment.

Map created by Kara Kalupson, LCCD

If you have multiple downspouts, drainage channels, ponding areas etc., organize your map and assessment plan by numbering them.

Photo by Matt Kofroth, LCCD

3. Estimate how much stormwater is generated on your property.

The amount of stormwater runoff generated from your property depends on how long and how hard it rains, the slope of your property, the type and quality of the soils, the amount of impervious surface on your property, and other factors. Nevertheless, there is a simple calculation you can use to estimate how much stormwater runoff your property generates during a typical rainstorm.

Photo by Margaret Kyler

The majority of annual rainfall in south-central Pennsylvania comes in the form of small storms of one inch or less. These small storms carry most of the pollutants that impact water quality, and thus the stormwater generated by your property for the one inch storm is a good measure of typical stormwater runoff. Use the following chart to determine how much stormwater is generated by the impervious area on your property:

Square Feet of Impervious Area	Gallons of Runoff to be Managed
500 or less	less than 312
501 – 1,000	312 – 624
1,001 – 2,000	624 – 1,246
2,001 – 3,000	1,246 – 1,869
3,001 – 4,000	1,869 – 2,492
4,001 – 5,000	2,492 – 3,115
5,001 – 10,000	3,115 – 6,231
10,001 – 20,000	6,231 – 12,462
20,001 – 43,000	12,462 – 26,793

The above numbers were calculated using the following formula:

(Total square feet of impervious area) x 0.0833 x 7.48 = _____ gallons of runoff

Use this formula if you want a more accurate calculation of the runoff generated from your impervious area.

0.0833 is to covert feet to inches • 7.48 = number of gallons per cubic foot

Section 3: Developing Your Stormwater Management Plan

Now that you know what areas of your property generate stormwater when it rains, how the runoff flows, and what areas generate the most amount of runoff, you can start thinking about adding stormwater management practices to your property to better manage runoff.

1. Types of stormwater best management practices.

Many management practices exist for handling stormwater runoff. This guide suggests six of the simpler, easier to implement practices. Each practice is introduced briefly in this section so you can consider which ones are right for you.

Rain Garden

A depressed garden that uses mulch, soil, and deep-rooted native plants to capture, absorb, and infiltrate stormwater.

Photo by Matt Kofroth, LCCD

Benefits
- Manages stormwater and filters pollutants
- Wildlife habitat
- Little maintenance
- Adds beauty

Negatives
- Plants can take 2-3 years to establish
- More maintenance required in first few years

Cost
$$

Maintenance
- Low once plants established
- Weeding and watering in first two years.
- Some thinning in later years

Aesthetic appeal
- Ranges from medium to high
- Can customize based on plant selection.

Implementation Considerations
- Construct downslope of runoff to be captured
- Plant in spring or fall
- Locate at least 10 feet from building foundations

Riparian Buffer

Planting native trees and shrubs along streams and wetlands to restore the streamside area to forested conditions. These "riparian buffers" filter runoff and have numerous water quality benefits.

Photo by Matt Kofroth, LCCD

Benefits
- Increases infiltration and groundwater recharge
- Improves water quality
- Controls erosion & sedimentation
- Provides wildlife habitat

Negatives
- Not as effective on steep slopes
- More difficult to implement than some other practices

Cost
$

Maintenance
- Low once native plants are established
- Weeding and watering in first two years
- Some plant thinning in later years
- Regularly remove debris and excessive sediment accumulation

Aesthetic appeal
- Ranges from medium to high
- Higher aesthetic appeal than conventional stormwater conveyances

Implementation Considerations
- Plant in spring or fall
- Locate at least 10 feet from building foundations

Tree Planting

Planting native trees and shrubs to restore a portion of your property to forested conditions.

Photo by Matt Royer, Penn State

Benefits

- Increases infiltration and evapotranspiration of storm-water
- Filters pollutants
- Requires little maintenance
- Provides wildlife habitat
- Large canopy of native trees maximizes benefits

Negatives

- Takes many years before trees grow to provide maximum benefit
- Regular maintenance is required where invasive plant species exist
- Must guard against deer browsing and vole damage

Cost

$/$$

- Varies, depending on species, size, and type of tree planted

Maintenance

- Maintain tree tube/stakes or cages
- Spray and mow between trees at least twice a year during first 4 to 5 years

Aesthetic appeal

- High aesthetic appeal, as trees add interest, structure, color, and wildlife to property

Implementation Considerations

- Plant in spring or fall
- Watering may be necessary after planting during dry weather (25 gallons/week)

"A Wharton School of Business study found that new tree plantings in a Philadelphia neighborhood increased surrounding property values by approximately 10%."

(Wachter 2004)

Native Meadow

An area planted with native grasses and wildflowers and maintained as a natural area. "No mow" areas can also develop into meadow areas.

Photo by Dick Brown

Benefits

- Increases infiltration and evapotranspiration of stormwater
- Filters pollutants
- Requires little maintenance
- Provides wildlife habitat

Negatives

- Site preparation (including turf grass removal) is required before planting
- Meadows may conflict with local weed ordinances

Cost

$

- Native seed mixes vary depending on type of species and amount of variety desired

Maintenance

- Mow twice a year for first two years
- Mow annually
- Control invasive plant species

Aesthetic appeal

- High aesthetic appeal, as tall grasses and wildflowers add interest, structure, color and wildlife to property

Implementation Considerations

- Plant in spring
- Monitor and control invasive species

Appendix A: Stormwater Management Plan Template

You can use this template to create your stormwater management plan.

Map

First, use the grid paper provided to hand draw your stormwater management plan map. Or, follow the tutorial provided in **Appendix B** to create a computer generated aerial map.

If you hand draw your map, it is suggested you use one ink color to draw existing conditions and a different color to draw your proposed stormwater management practices.

Plan Details

Second, fill in the template to create the details of your plan. For both existing conditions and proposed stormwater management practices, be sure to label all features on your map with numbers that correspond to the plan template.

Stormwater Management Plan

Property Owners Name: _____

Property Address: _____

Municipality: _____ County: _____

Watershed: _____ (example: Little Conestoga)

Name of stream into which stormwater flows: _____ (example: Swarr Run)

EXISTING CONDITIONS

IMPERVIOUS AREAS		
Buildings		
Number	Description (house, shed, etc)	Square Feet
Driveways and Walkways		
Number	Description (driveway, back walkway, front walkway, etc)	Square Feet
Other Hard Surfaces		
Number	Description (patio, deck, etc)	Square Feet
Total Impervious Area:		

LAWN AND LANDSCAPED AREAS		
Number	Description (front yard, back yard, flowerbed, etc)	Square Feet
Total Lawn and Landscape Area:		

NATURAL AREAS		
Woods		
Number	Description (back woodlot, side woods, etc)	Square Feet
Meadow		
Number	Description (back meadow, front meadow, etc)	Square Feet
Total Natural Area:		

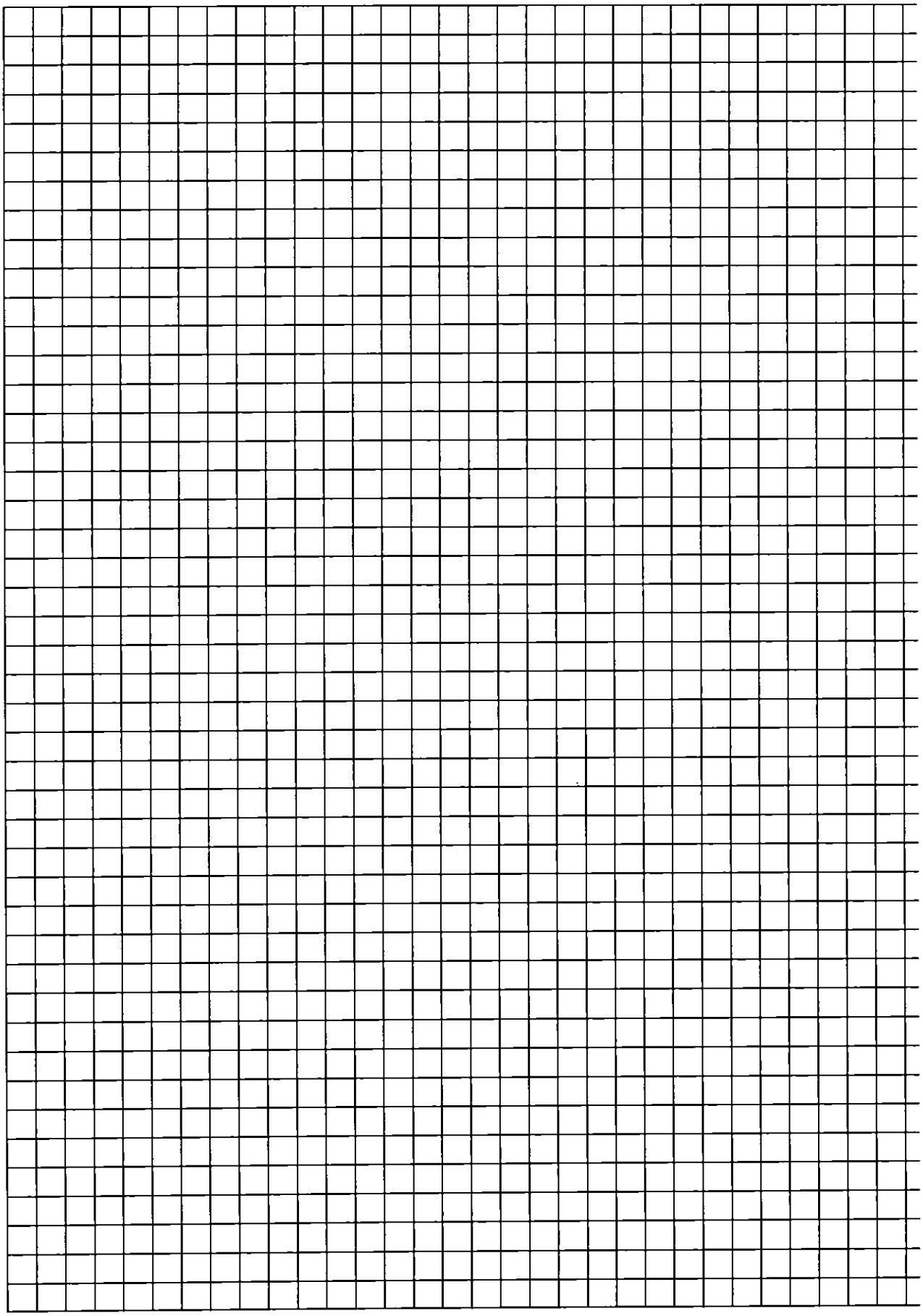
Note any water features (streams, wetlands, ponds, etc) on your property:

Total Stormwater Generated in a 1 inch rainstorm:
(Total Impervious Areas x 0.0833 x 7.48)

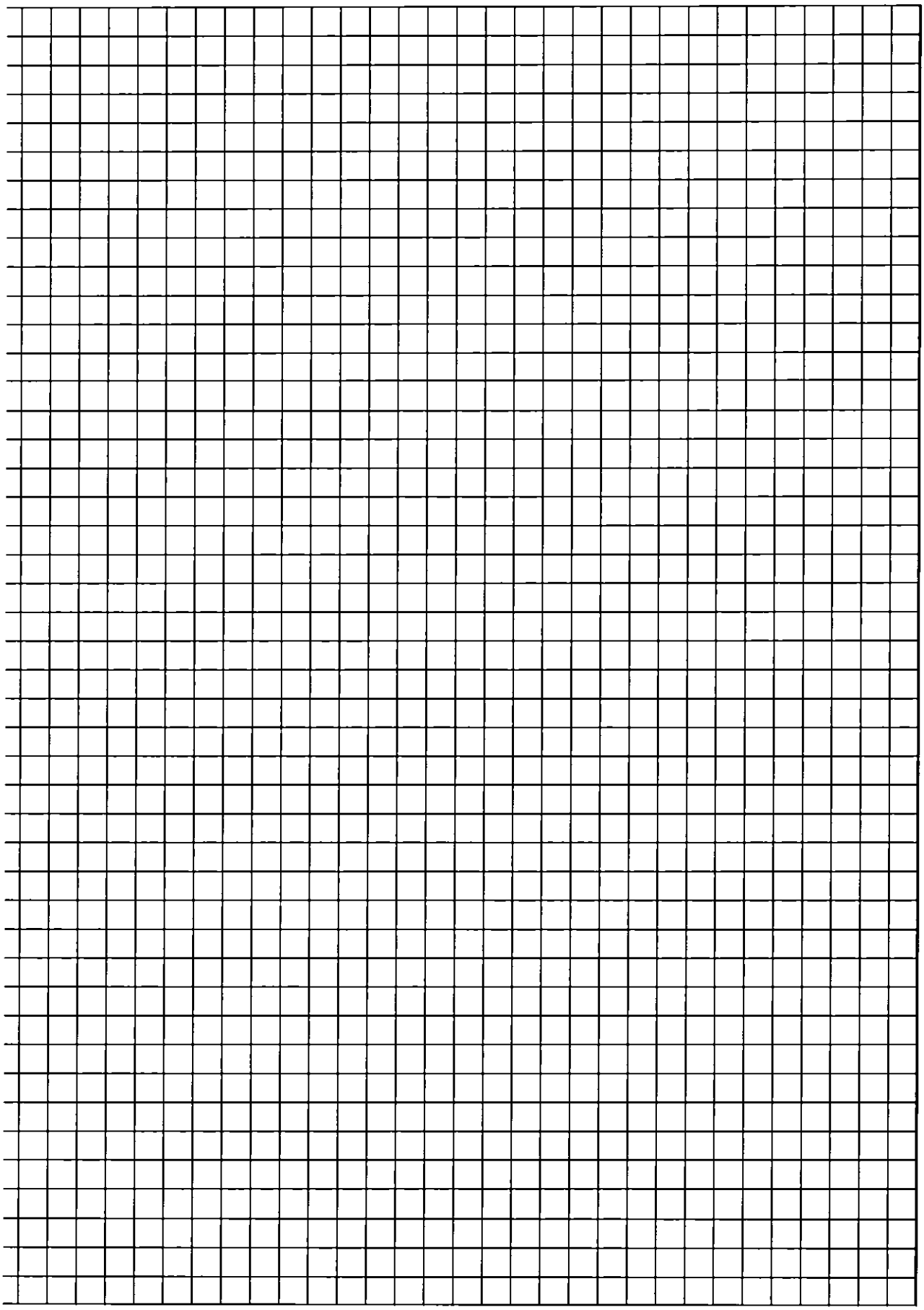
_____ ft^2 x 0.0833 ft x 7.48gal./ft^3 = _____ gallons

STORMWATER FLOW	
Downspouts	
Number	Description (front house, back house, shed, etc)
Drainage Swales	
Number	Description (side yard swale, back yard swale, etc)
Areas of Ponding	
Number	Description (side yard ponding, back yard ponding, etc)

Note any areas of gullying or erosion or any other areas of concern:



gement Plan Map



Proposed Stormwater Best Management Practices

Rain Garden		
Number	Description (front yard, back yard, etc)	Square Feet
Riparian Buffer		
Number	Description (tributary, main stem of creek, wetland, etc)	Linear Feet
Tree Planting		
Number	Description (backyard woods, side woods, etc)	Square Feet
Native Meadow		
Number	Description (side yard meadow, back yard meadow, etc)	Square Feet
Pervious Pavers		
Number	Description (front walkway; back patio etc)	Square Feet
Rain Barrel		
Number	Description (side house barrel, shed barrel, etc)	Gallons

Appendix B: Computer Mapping Tutorial

1. Open Internet Explorer.
   Go to Google maps (www.google.com/maps) or Bing maps (www.bing.com/maps) to access an aerial map of your property.

2. Type in your property address.
   Use the zoom functions to zoom in as close as you can to your property, making sure your entire lot is shown on the map. Make sure the "Satellite" or "Aerial" function is turned on so that the map is shown in aerial photography format.

3. Press "Print Screen", Paste.
   In the upper right corner of your keyboard press "Print Screen." Paste the screen shot in the program of your choice to crop and edit. We recommend Power Point, Microsoft Word or Paint.

4. Use drawing tools to add your different elements.
   Using the "shapes" or other drawing tools available you can add your areas affected by stormwater and your new BMPs. The arrows and freeform tools are particularly useful. Be sure to use different colors for different elements of your map. Text boxes can be used to add labels or a legend.

5. Save and print your map.
   When you are done, you can save your map as a .pdf or print it to go with your written stormwater management plan.

Notes:

Pervious Pavers

Impervious building materials, such as stone, concrete or brick, laid with space in between to allow for pervious areas (gravel, sand or vegetation) in driveways, parking areas, or walkways.

Photo by Matt Kofroth, LCCD

Benefits

- Increases infiltration and groundwater recharge
- Reduces volume and rate of runoff

Negatives

- More labor intensive to install than other practices
- Nonconventional option to pavement

Cost

$$

- Can save by installing permeable pavers
- May need to excavate and install sub base, increasing costs

Maintenance

- Moderate to high maintenance
- Grass between pavers may have to be mowed
- Inspect for signs of clogging
- Pressure wash and replace pea stone as needed

Aesthetic appeal

- Ranges from low to medium
- Artistic designs with layout can increase aesthetic appeal

Implementation Considerations

- Need to install permeable sub base
- Locate at least 10 feet from building foundations

Rain Barrel/Cistern

A barrel that captures rainwater from a roof and stores it for later use, such as watering plants or gardens. A cistern is a larger container that does the same thing.

Photo by Fritz Schroeder, Live Green

Benefits

- Conserves water
- Captures and reuses stormwater

Negatives

- Minimal volume captured
- Poor construction or maintenance can result in mosquitoes

Cost

$

- Very minimal cost as DIY project
- Can save dollars because of reduced potable water usage

Maintenance

- Clean screen/filter regularly
- Clean gutters twice annually
- Monitor during severe storms to avoid overflow
- Empty before winter months

Aesthetic appeal

- Ranges from low to medium depending on type of barrel used

Implementation Considerations

- Place on level surface
- Full rain barrel weighs 400 lbs

3. Choose where to locate the stormwater best management practices on your property.

Now that you know about your property and the type of practices you would like to install, it's time to choose the right location for the practices. Some considerations in your planning are:

- **Ponding Water.** Many stormwater practices encourage water to infiltrate into the soil (such as rain gardens and pervious pavers). Where water ponds on your property, water is unable to infiltrate. Areas that are often saturated are not appropriate places to put these practices.

(Note- if you have an on-lot sanitary septic disposal system and an area is permanently wet near this system, the septic system may be failing. The disposal system should be evaluated and fixed before any other practices are installed.)

- **Depth to bedrock.** You do not want to construct infiltration practices where bedrock is visible or is close to the surface.
- **Proximity to foundations.** You should also avoid constructing infiltration practices within 10 feet of building foundations.
- **Location of underground utilities.** Do not construct infiltration practices near septic systems or drinking water wells. Also avoid any utilities like electric, cable, water, sewer, and gas lines. (make sure to use the PAONE-CALL system to locate underground utilities)
- **Slope.** Depending on the practice, a steeper slope may prohibit siting, or it may be something that needs to be taken into account during the design stage. Consult the chart on the next page for guidance.
- **Soil percolation.** Since rain gardens and pervious pavers are designed to infiltrate stormwater into the ground, the soil in the location of the rain garden or pervious pavers must be able to drain. When considering these practices, you should conduct a simple percolation test where you would like to locate them:
  - Dig a 1 foot deep hole and fill with water.
  - Allow the water to moisten soil and drain completely. If water is still in the hole after 24 hours, choose a different location.
  - Fill the hole with water a second time and place a ruler in the hole. Note the water level and time.
  - After 15 minutes, re-measure the water level. Multiply the change in water level by 4 to get the number of inches of infiltration per hour.

Photos by Kristen Kyler, Penn State

Section 4: Implementing Your Stormwater Plan

Congratulations! Your stormwater management plan is complete! You have taken an important step in managing stormwater on your property to help clean up your local stream and the Chesapeake Bay.

Now you are ready to start implementing your plan. If you are a do-it-yourselfer, there are several online resources that provide detailed design and implementation guidance for the six practices discussed in this guide. *Note: Please refer to the disclaimer at the beginning of this guide.*

The Chesapeake Stormwater Network (www.chesapeakestormwater.net) is in the process of developing a homeowner rain garden guide that will provide excellent step-by-step guidance on designing, constructing and maintaining rain gardens and other practices. Refer to the Chesapeake Stormwater Network's website often for updates as this guide is finalized.

In the meantime, here are some other online guides you can reference:

RAIN GARDENS

Rain Gardens: A How-To Manual for Homeowners (University of Wisconsin Extension)
http://learningstore.uwex.edu/assets/pdfs/GWQ037.pdf
Rain Gardens in Connecticut: A Design Guide for Homeowners (UConn Cooperative Extension System)
http://nemo.uconn.edu/publications/rain_garden_broch.pdf
Rain Garden Templates for the Chesapeake Bay Watershed (Low Impact Development Center)
http://www.lowimpactdevelopment.org/raingarden_design/templates.htm

RIPARIAN BUFFERS

Riparian Forest Buffer Guidance (PA Department of Environmental Protection)
http://www.elibrary.dep.state.pa.us/dsweb/Get/Document-82308/394-5600-001.pdf

TREE PLANTING

Planting and After Care of Community Trees (Penn State Extension)
http://pubs.cas.psu.edu/freepubs/pdfs/uh143.pdf
PATrees.org: The Free Resource Guide
http://www.patrees.org

NATIVE MEADOWS

Meadows and Prairies: Wildlife-Friendly Alternatives to Lawn (Penn State Extension)
http://pubs.cas.psu.edu/FreePubs/pdfs/uh117.pdf

Pervious Paver

PERVIOUS PAVERS

New Hampshire Homeowner's Guide to Stormwater Management Do-It-Yourself
Stormwater Solutions: Pervious Walkways & Patios (NH Department of Environmental Sciences)
http://des.nh.gov/organization/divisions/water/stormwater/documents/perv-walkw-patios-fs.pdf

RAIN BARRELS AND CISTERNS

Rain Barrel Installation Instructions (Rutgers Cooperative Extension)
http://water.rutgers.edu/Stormwater_Management/rainbarrelbrochure.pdf
Build Your Own Rain Barrel (Chesapeake Bay Foundation) http://www.cbf.org/Document.Doc?id=30
Rainwater Harvesting: Guidance for Homeowners (North Carolina Cooperative Extension)
http://www.ces.ncsu.edu/depts/agecon/WECO/documents/WaterHarvestHome2008.pdf

Here are the EPA Expert Panel's recommendations for growing and maintaining a Bay-friendly lawn:

Lawn Care Practice 1. Consult with the local extension service office, certified plan writer or applicator to get technical assistance to develop an effective urban nutrient management plan for the property, based on a soil test analysis.

The precise lawn care prescription should be based on site-specific recommendations that take into account soil properties, the type of grass species, the age of the lawn, and other factors. Professional expertise is essential to develop an effective plan. Look for professionals who are Pennsylvania Certified Horticulturists or Landscape Industry Certified.

Lawn Care Practice 2. Maintain a dense vegetative cover of turf grass to reduce runoff, prevent erosion, and retain nutrients.

Dense vegetative cover helps to reduce surface runoff which can be responsible for significant pollution from the lawn, regardless of whether it is fertilized or not.

If your lawn does not have a dense turf grass cover, identify the factors responsible for the poor turf cover, and implement practices to improve it (e.g., tilling, soil amendments, fertilization or conservation landscaping).

Lawn Care Practice 3. Per the plan developed by your local extension agent or your lawn care professional, follow one of three fertilizer application strategies: (1) choose not to fertilize; (2) reduce rate and monitor; or (3) apply less than a pound of nitrogen per 1000 square feet per each individual application.

In order to reduce nutrient runoff from fertilizing your lawn, employ one of three fertilizer application strategies, depending upon the condition of your lawn and your needs and preferences.

First, elect not to fertilize at all. Some lawns, due to their age or natural soil fertility may be able to maintain a healthy, dense cover without additional fertilization. (However, if your lawn is thin, is weed infested or has bare spots, you should consider fertilizing to restore a thick turf grass cover, using one of the other two strategies.)

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NFWF

Partners involved in this publication and the Little Conestoga Watershed Partnership include:

Alliance for the Chesapeake Bay

Brandywine Conservancy
Preserving art and the environment in the Brandywine Valley since 1967.

PLNA
PENNSYLVANIA LANDSCAPE & NURSERY ASSOCIATION

HabitatMT

Lancaster County Conservancy
SAVING NATURE

Chesapeake Bay Foundation
SAVE THE BAY®

PENNSTATE
College of Agricultural Sciences

Little Conestoga Watershed Alliance

pennsylvania
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

- Lancaster County Planning Commission
- Lancaster County Clean Water Consortium

Produced by:

Lancaster County Conservation District

Lancaster County Conservation District
1383 Arcadia Rd., Room 200
Lancaster, PA 17601
Phone: 717-299-5361 ext. 5
Fax: 717-299-9459
www.lancasterconservation.org

Don't Let Storm Water Run Off With Your Time and Money!

What the Construction Industry Should Know About Storm Water In Our Community

The construction industry plays an important role in improving our community's quality of life by not only providing new development, but also protecting our streams and rivers through smart business practices that prevent pollution from leaving construction sites.

Storm water runoff leaving construction sites can carry pollutants such as dirt, construction debris, oil, and paint off-site and into storm drains. In our community, storm drains carry storm water runoff directly to local creeks, streams, and rivers with no treatment. Developers, contractors, and homebuilders can help to prevent storm water pollution by taking the following steps:

What is Storm Water?

Storm water is water from precipitation that flows across the ground and pavement when it rains or when snow and ice melt. The water seeps into the ground or drains into what are commonly called storm sewers. These are the drains you see at street corners or at low points on the sides of streets. Collectively, the draining water is called **storm water runoff**.

1. Comply with storm water permit requirements.
2. Practice erosion control and pollution prevention practices to keep construction sites "clean."
3. Conduct advanced planning and training to ensure proper implementation on-site.

The remainder of this fact sheet addresses these three steps.

Storm Water Permit Requirements for Construction Activity

Planning and permitting requirements exist for construction activities. These requirements are intended to minimize storm water pollutants leaving construction sites.

- Pennsylvania's Erosion and Sediment Pollution Control Program (25 Pa. Code, Chapter 102) requires Erosion and Sediment Control Plans for all earth disturbing activities.
- The National Pollutant Discharge Elimination System (NPDES) Permit Program (25 Pa. Code, Chapter 92) requires that construction activities disturbing greater than one acre submit a Notice of Intent for coverage under a general NPDES permit.

Knowing your requirements before starting a project and following them during construction can save you time and money, and demonstrate that you are a partner in improving our community's quality of life. For more information about these programs, contact your local county conservation district office or the Department of Environmental Protection.

Erosion Control Practices:

- Perimeter controls (e.g. silt fence)
- Sediment traps
- Immediate revegetation
- Phased, minimized grading
- Construction entrance
- Protection of streams and drainage ways
- Inlet protection

An Ounce of Prevention

Rain that falls onto construction sites is likely to carry away soil particles and other toxic chemicals present on construction sites (oil, grease, hazardous wastes, fuel). Storm water, if not properly managed, carries these pollutants to streams, rivers, and lakes. Erosion and sediment control practices can serve as a first line of defense,

Pollution Prevention Practices:

- Designated fueling and vehicle maintenance area away from streams.
- Remove trash and litter.
- Clean up leaks immediately.
- Never wash down dirty pavement.
- Place dumpsters under cover.
- Dispose of all wastes properly.

minimizing clean up and maintenance costs, and the impacts to water resources caused by soil erosion during active construction. Erosion controls can reduce the volume of soil going into a sediment control device, such as a sediment trap, therefore, "clean out" frequencies are lower and maintenance costs are less. When possible, divert water around the construction site using berms or drainage ditches.

In addition, use pollution prevention and "good housekeeping measures" to reduce the pollution leaving construction sites as well. This can be as simple as minimizing the pollution source's contact with rainwater by covering it, maintaining a "clean site" by reducing trash and waste, and keeping vehicles well maintained.

The Best Laid Plans

Plans such as erosion and sediment control plans and storm water pollution prevention plans are important tools for outlining the erosion control and pollution prevention practices that you will use to manage storm water runoff prior to breaking ground. Developing good plans allows for proper budgeting and planning for the life of the project. Proper installation and maintenance of erosion and storm water controls is essential to a plan that works. Training for on-site staff helps to ensure the proper installation and maintenance of erosion controls and pollution prevention practices. Inspect controls and management techniques regularly to ensure they are working, especially after storm events. If polluted storm water is leaving the site, you may need to repair or add additional storm water controls.

The Bigger Storm Water Picture

Your community is preventing storm water pollution through a comprehensive storm water management program. This program addresses storm water pollution from construction, but it also deals with new development, illegal dumping to the storm sewer system, and municipal operations. It will also continue to educate the community and get everyone involved in making sure the only thing that storm water contributes to our streams is . . . water! Contact your community or the Pennsylvania Department of Environmental Protection for more information about storm water management.

For more information:

Blair County Conservation District
1407 Blair St.
Hollidaysburg, PA 16648
814-696-0877
www.blairconservationdistrict.org

Pennsylvania Association of Conservation District's:
http://www.pacd.org/default.html

Pennsylvania Handbook of Best Management Practices for Developing Areas:
http://www.pacd.org/products/bmp/bmp_handbook.html

Storm Water Manager's Resource Center:
http://www.stormwatercenter.net

Pennsylvania Department of Environmental Protection:
http://www.dep.state.pa.us

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If you're on a sanitary sewer system...

What you flush from your home affects the streams, lakes, and coastal waters in our community.

- ✓ **Don't pour household products such as cleansers, beauty products, medicine, auto fluids, paint, and lawn care products down the drain.**
  Wastewater treatment facilities are designed to treat organic materials, **not hazardous chemicals**.
- ✓ **Don't put excess household grease (meat fats, cooking oil, butter and margarine, etc.), diapers, condoms, and personal hygiene products down a drain or flush them.**
  These materials can clog pipes, and cause raw sewage to overflow in your home or yard, or in public areas.
- ✓ **Don't pour used motor oil down the drain.**
  Used motor oil can diminish the effectiveness of the treatment process and might allow contaminants to be discharged into local waterways.

When the wastewater flushed from your toilet or drained from your household sinks, washing machine, or dishwasher leaves your home, it flows through your community's sanitary sewer system to a wastewater treatment facility. The wastewater is treated by the wastewater treatment facility to reduce or remove pollutants.

Flush Responsibly!

For more information, contact:

U.S. Environmental Protection Agency,
www.epa.gov/owm

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If you have a septic system...

Septic systems can provide long-term, effective treatment of household wastewater if properly designed, constructed, and maintained.

Things to keep in mind:

- ✓ Inspect your system (every 1 to 3 years) and pump your tank (as necessary, generally every 5 years).
- ✓ Use water efficiently.
- ✓ Don't dispose of household hazardous wastes in sinks and toilets.
- ✓ Plant only grass over and near your septic system. Roots from nearby trees or shrubs might clog and damage the drainfield.
- ✓ Don't drive or park vehicles on any part of your septic system. Doing so can compact the soil in your drainfield or damage pipes, tank, or other septic system components.

Not in My Septic System!

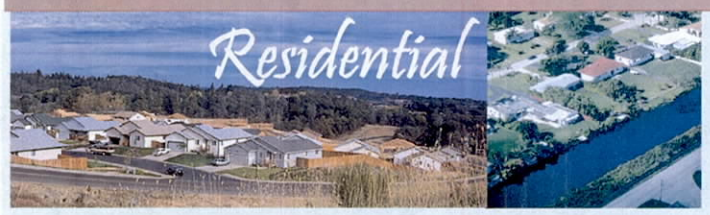
X Cloggers
diapers, cat litter, cigarette filters, coffee grounds, grease, feminine hygiene products, etc.

X Killers
household chemicals, gasoline, oil, pesticides, antifreeze, paint, etc.

For more information, contact:

U.S. Environmental Protection Agency,
www.epa.gov/owm/onsite

Stormwater Pollution Solutions



Recycle or properly dispose of household products that contain chemicals, such as insecticides, pesticides, paint, solvents, and used motor oil and other auto fluids. Don't pour them onto the ground or into storm drains.

Lawn care

Excess fertilizers and pesticides applied to lawns and gardens wash off and pollute streams. In addition, yard clippings and leaves can wash into storm drains and contribute nutrients and organic matter to streams.

- Don't overwater your lawn. Consider using a soaker hose instead of a sprinkler.
- Use pesticides and fertilizers sparingly. When use is necessary, use these chemicals in the recommended amounts. Use organic mulch or safer pest control methods whenever possible.
- Compost or mulch yard waste. Don't leave it in the street or sweep it into storm drains or streams.
- Cover piles of dirt or mulch being used in landscaping projects.

Septic systems

Leaking and poorly maintained septic systems release nutrients and pathogens (bacteria and viruses) that can be picked up by stormwater and discharged into nearby waterbodies. Pathogens can cause public health problems and environmental concerns.

- Inspect your system every 3 years and pump your tank as necessary (every 3 to 5 years).
- Don't dispose of household hazardous waste in sinks or toilets.

Auto care

Washing your car and degreasing auto parts at home can send detergents and other contaminants through the storm sewer system. Dumping automotive fluids into storm drains has the same result as dumping the materials directly into a waterbody.

- Use a commercial car wash that treats or recycles its wastewater, or wash your car on your yard so the water infiltrates into the ground.
- Repair leaks and dispose of used auto fluids and batteries at designated drop-off or recycling locations.

Pet waste

Pet waste can be a major source of bacteria and excess nutrients in local waters.

- When walking your pet, remember to pick up the waste and dispose of it properly. Flushing pet waste is the best disposal method. Leaving pet waste on the ground increases public health risks by allowing harmful bacteria and nutrients to wash into the storm drain and eventually into local waterbodies.

Education is essential to changing people's behavior. Signs and markers near storm drains warn residents that pollutants entering the drains will be carried untreated into a local waterbody.

Residential landscaping

Permeable Pavement—Traditional concrete and asphalt don't allow water to soak into the ground. Instead these surfaces rely on storm drains to divert unwanted water. Permeable pavement systems allow rain and snowmelt to soak through, decreasing stormwater runoff.

Rain Barrels—You can collect rainwater from rooftops in mosquito-proof containers. The water can be used later on lawn or garden areas.

Rain Gardens and Grassy Swales—Specially designed areas planted with native plants can provide natural places for rainwater to collect and soak into the ground. Rain from rooftop areas or paved areas can be diverted into these areas rather than into storm drains.

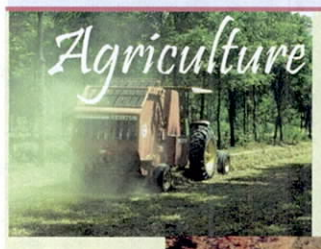
Vegetated Filter Strips—Filter strips are areas of native grass or plants created along roadways or streams. They trap the pollutants stormwater picks up as it flows across driveways and streets.

Dirt, oil, and debris that collect in parking lots and paved areas can be washed into the storm sewer system and eventually enter local waterbodies.

- Sweep up litter and debris from sidewalks, driveways and parking lots, especially around storm drains.
- Cover grease storage and dumpsters and keep them clean to avoid leaks.
- Report any chemical spill to the local hazardous waste cleanup team. They'll know the best way to keep spills from harming the environment.

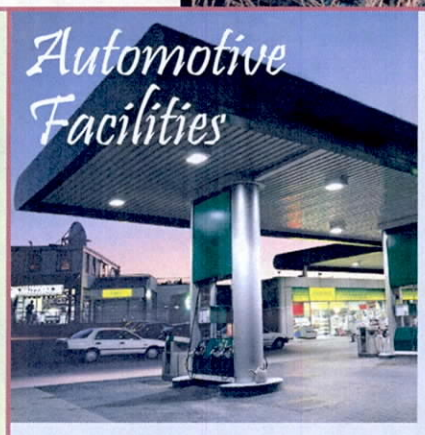
Erosion controls that aren't maintained can cause excessive amounts of sediment and debris to be carried into the stormwater system. Construction vehicles can leak fuel, oil, and other harmful fluids that can be picked up by stormwater and deposited into local waterbodies.

- Divert stormwater away from disturbed or exposed areas of the construction site.
- Install silt fences, vehicle mud removal areas, vegetative cover, and other sediment and erosion controls and properly maintain them, especially after rainstorms.
- Prevent soil erosion by minimizing disturbed areas during construction projects, and seed and mulch bare areas as soon as possible.



Lack of vegetation on streambanks can lead to erosion. Overgrazed pastures can also contribute excessive amounts of sediment to local waterbodies. Excess fertilizers and pesticides can poison aquatic animals and lead to destructive algae blooms. Livestock in streams can contaminate waterways with bacteria, making them unsafe for human contact.

- Keep livestock away from streambanks and provide them a water source away from waterbodies.
- Store and apply manure away from waterbodies and in accordance with a nutrient management plan.
- Vegetate riparian areas along waterways.
- Rotate animal grazing to prevent soil erosion in fields.
- Apply fertilizers and pesticides according to label instructions to save money and minimize pollution.



Uncovered fueling stations allow spills to be washed into storm drains. Cars waiting to be repaired can leak fuel, oil, and other harmful fluids that can be picked up by stormwater.

- Clean up spills immediately and properly dispose of cleanup materials.
- Provide cover over fueling stations and design or retrofit facilities for spill containment.
- Properly maintain fleet vehicles to prevent oil, gas, and other discharges from being washed into local waterbodies.
- Install and maintain oil/water separators.

Improperly managed logging operations can result in erosion and sedimentation.

- Conduct preharvest planning to prevent erosion and lower costs.
- Use logging methods and equipment that minimize soil disturbance.
- Plan and design skid trails, yard areas, and truck access roads to minimize stream crossings and avoid disturbing the forest floor.
- Construct stream crossings so that they minimize erosion and physical changes to streams.
- Expedite revegetation of cleared areas.

A Citizen's Guide to Understanding Stormwater

THE YEAR OF CLEAN WATER

EPA 833-B-03-002

January 2003

United States Environmental Protection Agency

Internet Address (URL) • HTTP://www.epa.gov
Recycled/Recyclable • Printed With Vegetable Oil Based Inks on 100% Postconsumer, Process Chlorine Free Recycled Paper

WHEN IT RAINS IT DRAINS

After the Storm

For more information contact:

or visit
www.epa.gov/npdes/stormwater
www.epa.gov/nps

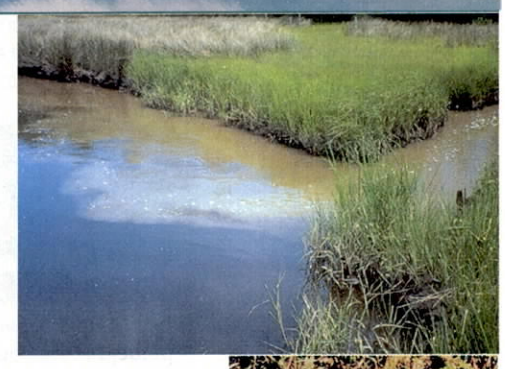
What is stormwater runoff?

Stormwater runoff occurs when precipitation from rain or snowmelt flows over the ground. Impervious surfaces like driveways, sidewalks, and streets prevent stormwater from naturally soaking into the ground.

Why is stormwater runoff a problem?

Stormwater can pick up debris, chemicals, dirt, and other pollutants and flow into a storm sewer system or directly to a lake, stream, river, wetland, or coastal water. Anything that enters a storm sewer system is discharged untreated into the waterbodies we use for swimming, fishing, and providing drinking water.

The effects of pollution



Polluted stormwater runoff can have many adverse effects on plants, fish, animals, and people.

- Sediment can cloud the water and make it difficult or impossible for aquatic plants to grow. Sediment also can destroy aquatic habitats.
- Excess nutrients can cause algae blooms. When algae die, they sink to the bottom and decompose in a process that removes oxygen from the water. Fish and other aquatic organisms can't exist in water with low dissolved oxygen levels.
- Bacteria and other pathogens can wash into swimming areas and create health hazards, often making beach closures necessary.
- Debris—plastic bags, six-pack rings, bottles, and cigarette butts—washed into waterbodies can choke, suffocate, or disable aquatic life like ducks, fish, turtles, and birds.
- Household hazardous wastes like insecticides, pesticides, paint, solvents, used motor oil, and other auto fluids can poison aquatic life. Land animals and people can become sick or die from eating diseased fish and shellfish or ingesting polluted water.
- Polluted stormwater often affects drinking water sources. This, in turn, can affect human health and increase drinking water treatment costs.

Trim line

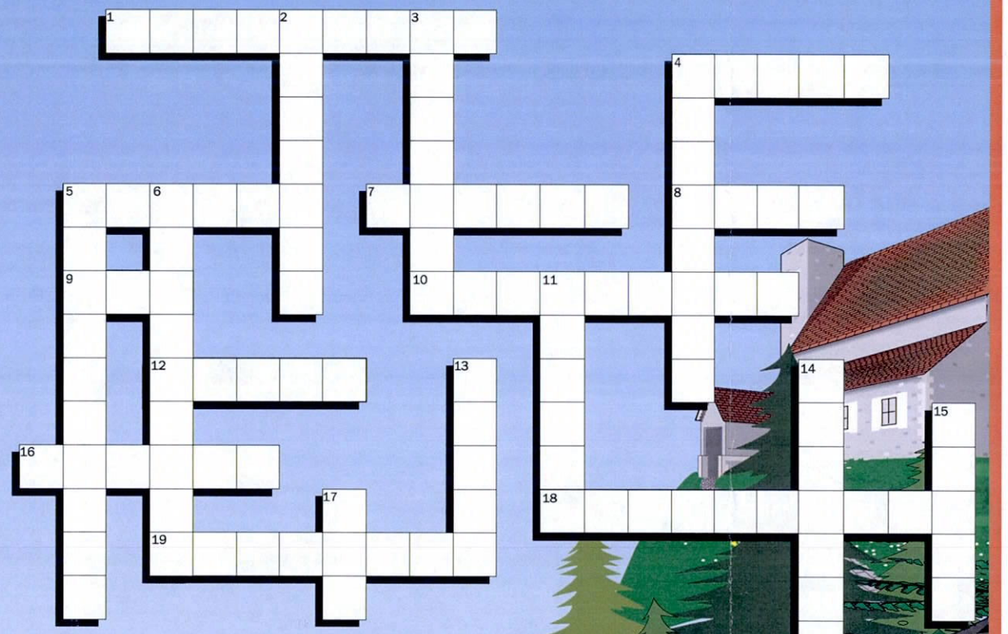
Take the Stormwater Runoff Challenge

Across:

1) The area of land that drains into an estuary, lake, stream, or groundwater is known as a _____.
4) The _____ of speeding boats can erode shorelines.
5) Maintaining your _____ tank will help to prevent bacteria and nutrients from leaking into groundwater and surface waters.
7) Wetland plants act like a natural water _____, removing harmful pollutants from stormwater runoff.
8) Leave your grass clippings on your _____ to reduce the need for commercial fertilizers.
9) A single quart of motor _____, if disposed of improperly, can pollute 2 million gallons of water.
10) Fertilizers and animal wastes contain _____ that "feed" algae and other aquatic plants harmful to water quality.
12) Polluted runoff from both rural and _____ sources has a significant impact on water quality.
16) Storm _____ don't always connect to sewage treatment plants, so runoff can flow directly to rivers, lakes, and coastal waters.
18) Follow directions carefully when applying _____ on your lawn—more isn't always better.
19) Polluted runoff (also called_____ source pollution) comes from so many places that it's hard to "pinpoint" a source.
20) Yard and vegetable food waste are suitable additions to a _____ pile.

Down:

2) Don't dump used motor oil into storm drains. _____ it!
3) _____ of soil from barren land can cloud nearby streams.
4) _____ prevent flooding, improve water quality, and provide habitat for waterfowl, fish, and wildlife.
5) Marking "Do Not Dump, Drains to Bay" on a _____ is one way to educate people about polluted runoff.
6) Excess sediment, nutrients, toxics, and pathogens are all types of runoff _____.
11) Polluted _____ is the nation's #1 water quality problem.
13) The cattail is one wetland _____ that helps purify polluted runoff.
14) Too much _____ in water can harm aquatic life.
15) Proper crop and animal management on _____ helps to control water pollution.
17) _____ impact development helps control stormwater pollution through conservation approaches and techniques.



Choices:

compost	nonpoint	sediment
drains	nutrients	septic
erosion	oil	storm drain
farms	plant	urban
fertilizer	pollution	wakes
filter	recycle	watershed
lawn	runoff	wetlands
Low		

EPA United States Environmental Protection Agency

For more information, please visit EPA's Polluted Runoff web site at www.epa.gov/nps

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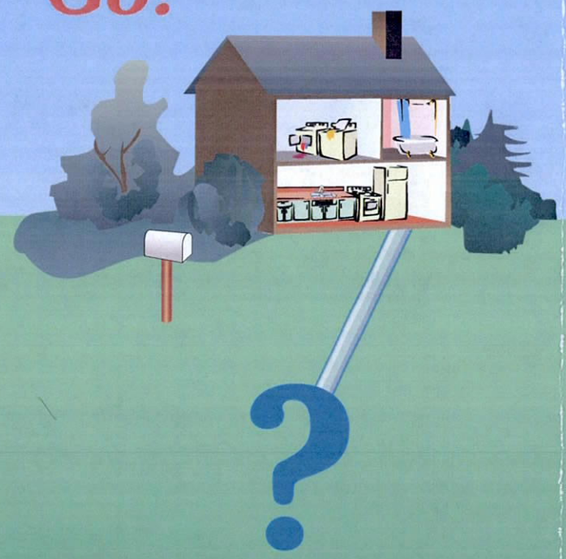
Trim line

Not Down My Drain!

- ✗ cleaners
- ✗ beauty products
- ✗ medicine
- ✗ auto fluids
- ✗ paint
- ✗ lawn care products
- ✗ grease
- ✗ diapers
- ✗ condoms
- ✗ feminine hygiene products
- ✗ motor oil
- ✗ photographic chemicals

Where Does All the Dirty Water Go?

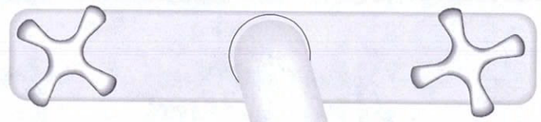


For more information on the wastewater treatment process, please contact your local health or public works department. Please visit www.epa.gov/owm for more information on wastewater treatment.

EPA
United States Environmental Protection Agency

EPA 832-F-03-008
December 2002

Protect the Environment in Our Community



What You Flush or Pour Down Your Drain Affects the Rivers, Lakes, and Coastal Waters in Our Community

Where does the water go after you flush the toilet or drain the sinks in your home?

When the wastewater flushed from your toilet or drained from your household sinks, washing machine, or dishwasher leaves your home, it flows through your community's sanitary sewer system to a wastewater treatment facility. The wastewater from homes, along with wastewater from businesses, industries, and other facilities, is treated by a variety of processes (see inside for more information) to reduce or remove pollutants.

What happens to the treated water when it leaves the wastewater treatment plant?

The treated wastewater is released into local waterways where it's used again for any number of purposes, such as supplying drinking water, irrigating crops, and sustaining aquatic life.

What Can You Do to Protect Local Waterways?

Wastewater Treatment 101

- Many communities have a wastewater treatment plant that incorporates a series of processes to remove pollutants from water used in homes, small businesses, industries, and other facilities. All wastewater first goes through the **primary treatment process**, which involves screening and settling out large particles.
- The wastewater then moves on to the **secondary treatment process**, during which organic matter is removed by allowing bacteria to break down the pollutants. The treated wastewater is then usually disinfected with chlorine to remove the remaining bacteria.
- Some communities go one step further and put the wastewater through an **advanced treatment process** to reduce the level of pollutants of special concern to the local waterbody, such as nitrogen or phosphorus. After this step, the treated water finally flows through pipes back to a local water body.

Flush Responsibly!

Don't pour household products such as cleansers, beauty products, medicine, auto fluids, paint, and lawn care products down the drain. Properly dispose of them at your local household hazardous waste facility.

Wastewater treatment facilities are designed to treat organic materials, **not hazardous chemicals**. If you pour hazardous chemicals down the drain, they might end up in your local rivers, lakes, and coastal waters.

Dispose of excess household grease (meat fats, lard, cooking oil, shortening, butter and margarine, etc.) diapers, condoms, and personal hygiene products in the garbage can.

These materials can clog pipes, and could cause raw sewage to overflow in your home or yard, or in public areas. Overflows often occur during periods of high rainfall or snowmelt and can result in basement backups, overflows at manholes, or discharges directly to rivers, lakes, and coastal waters.

Don't pour used motor oil down the drain.

Used motor oil can diminish the effectiveness of the treatment process, and might allow contaminants to be discharged. The contaminants could pollute local waterways or harm aquatic life.

If you're a dark room hobbyist, dispose of spent fixer, developer, and other photographic chemicals in separate containers and transport them to a hazardous waste facility.

Like household hazardous wastes and used motor oil, photographic chemicals can interfere with the wastewater treatment process and could result in pollutants being discharged into local waterways.

ANTIS TOWNSHIP NEWSLETTER

FROM THE MANAGER'S DESK

www.antistownship.org

BOARD OF SUPERVISORS
Meets the 1st Thursday at 7:00pm

- Chairman Robert Smith
- Vice Chairman Kenneth Hostler
- Supervisor Charles Caracciolo
- Supervisor Leo Matuszewski
- Supervisor David Worthing

CAPITAL IMPROVEMENT COMMITTEE
Meets the 3rd Thursday at 6:00pm

- Supervisor Robert Smith
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PLANNING COMMISSION
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- Chairman Norman Saylor
- Vice Chairman Robert Smith
- Secretary Sherree Johannes
- Commissioner Charles Taylor
- Commissioner Thomas DelMastro

All meetings are held at the Antis Township Municipal Building located at 909 North Second Street Bellwood, PA 16617

MESSAGE FROM THR BOARD OF SUPERVISORS

We know many of you are turning your thoughts to fall so we have provided a few informational topics to assist you and your families with some of our initiatives, fall services and regulations.

RECENT PLANNING COMMISSION RECCOMENDATIONS

- Recommended approval of the Denny Himes Lot Line Change.
- The Commission is reviewing revisions to the Sub-Division and Land Development Ordinance in an effort to better accommodate the citizens of Antis Township.

CAPITAL IMPROVEMENT PROJECTS/PROGRAM UPDATES

- **Antis-Fostoria Compost Facility –** Improvements to the facility are well under way. So far the Township Public Works Department has successfully re-aligned and widened the roadway providing better access to the facility. We have also widened and extended the yard itself as well as the pick-up and drop-off areas. Remaining improvements include installing an electronic gate, a security camera and landscaping. At the last Antis Township Board of Supervisors meeting the Board awarded, through competitive bidding, these last few site improvements. These final improvements will began soon and we would like to again apologize for any inconvenience these improvements have on the neighbors of the facility and the users of the facility. I would also like to personally thank those citizens, which were many, who took the time to stop by the office to provide positive feedback on the improvements.

- **Antis Township Tree Cutback Program** - Township staff will be recommending to the Capital Improvement Committee to continue this program every year until all Township roadways have been cleared of potentially dangerous vegetation. The purpose of the service is to remove overgrown tree limbs that hang over township highways which can pose risk to motorist, utilities, and private property. The risk of overgrowth is increased during severe storms and the winter season when heavy snow laden branches can fall due to the weight of precipitation and high winds. If you would like to make us aware of any overgrowth that you would like to see addressed please contact the Township office.

- **Municipal Website Upgrade** – Although not yet online Township staff is excited about the progress so far. Staff has been working

diligently to create a site that captures the essence of the community and one that will serve you well.

- **River Road Embankment Stabilization** - The Antis Township Capital Improvement Committee with the assistance of our Township Engineer are still preparing the final details to manage the erosion occurring along River Road. There are several segments of the road in need of repair. The project is slated to now start in the fall however it is possible this time line can change and we will make every effort to keep YOU informed of our progress.

- **North 9th Street Bridge Repair** - The Township Engineer has secured all necessary permits to begin the reconstruction. The Township is currently attempting to secure funding for this project through the Community Development Block Grant program. This project was expected to begin this summer however a few environmental and historical issues have forced us to temporarily postpone moving towards construction. Once these issues have been resolved we will be in a better position to provide you with dates for completion.

- **Locke Street Extension and Flood Mitigation Project -** The Township is currently attempting to secure funding for this project through the Community Development Block Grant program. This project was expected to begin this summer however a few environmental and historical issues have forced us to temporarily postpone moving towards construction. Once these issues have been resolved we will be in a better position to provide you with dates for completion.

- **2015 Capital Improvement Budget -** The Antis Township Capital Improvements Committee has begun discussions for capital improvements for the fiscal year 2015. The committee was provided a preliminary proposal by Township staff that consists of approximately $740,000 worth of improvements. The following projects, equipment and programs will be discussed thoroughly by the committee before they make a final recommendation to the Antis Township Board of Supervisors:

    - $6,500 has been proposed for tree trimming along Township Right-of-Ways.
    - $12,000 has been proposed to evaluate local bridges to determine the need for repairs or replacement.
    - $20,000 has been proposed for paving at the Antis Township Compost facility.
    - $25,000 has been proposed to perform a Township wide comprehensive park plan. The Township has filed for a grant through the Department of Conservation and Natural Resources to assist in paying for the plan.
    - $245,000 has been proposed to replace two Township vehicles which are utilized for snow removal during the winter months.
    - $400,000 has been proposed for the paving of Township roads. This amount typically permits us to pave approximately nine (9) lane miles.
    - $15,500 has been proposed to install six new hydrants along Grazierville Road. However, installation of new hydrants is contingent upon the Altoona Water Authority 2015 fiscal year budget.

  The Antis Township Capital improvement committee has asked me to remind the public they are encouraged to participate in these discussions. The Capital Improvement Committee meets the third Thursday of each month at 6:00pm at the Antis Township Municipal Building.

- **Leaf Collection-** Leaf collection will tentatively begin around October 21st, and run through November 15th.

SCHEDULE FOR LEAF PICK UP – STARTING AT 7:00 A.M.
MONDAY – BELLMEADE AND PINECROFT
WEDNESDAY – TIPTON
FRIDAY – BELLWOOD AND RIGGLES GAP AREA

Every effort will be made by the Township to keep to the schedule, but in the event that large amounts of leaves fall over a short period of time actual collection days could vary.

Due to the rising cost of fuel, the Township encourages residents to bag their leaves and place them along the edge of their property by 7 a.m. on their collection day.

Anyone choosing not to bag their leaves should simply rake them to the edge of their property by 7 a.m. on the regular collection day.

Please be reminded of the following:

 Leaves and/or bags of leaves should not be placed in storm water ditches as driveway pipes could become clogged resulting in flooding.

 Those bagging their leaves should use paper bags only. Large paper yard bags are available for purchase at local stores.

 Limbs and brush will not be collected at this time. Residents that have limbs and brush for disposal may drop them off at the Township compost site.

- **Antis Township Composting Yard** - The Township operates a Yard Waste Composting Facility that is open year round to residents of Antis Township. To get to the site from the municipal building, you will travel northeast on North Second Street approximately 9/10ths of a mile. The facility is located at the end of a short dirt road just past Oswald Road and before the Fostoria rail crossing.

The site accepts yard waste, including trimmings from bushes, trees, leaves, and grass clippings all at no charge! Those making a drop off at the yard should be aware that all contaminants, such as metals, plastics, rocks, lumber, and refuse, should be eliminated from the brush, as they could damage our equipment. This “waste” is converted into compost and mulch that is ready for your planting beds.

Compost and mulch may be picked up during regular operating hours (Monday through Friday 8:00 a.m. until 2 p.m.). There is no charge if you shovel and load yourself. If we load it please call the Township office to set up a time, the cost is $15.00 per scoop.

Please be courteous to the neighbors living in the area and watch your speed as you enter and exit the site.

THINGS TO CONSIDER

- **Recycling** - Citizens are reminded that the Township has a curbside recycling collection program. Solid waste haulers are required to collect Act 101 recyclables. Aluminum cans, bi-metal cans, glass bottles and jars (clear, brown, and green), plastic bottles and jugs, newspapers, magazines, catalogs and other printed paper are all collected at the curbside by haulers.

  Township residents are encouraged to separate recyclables from solid waste and prepare them for collection. All trash haulers providing service within the Township are required to collect recyclables. If your hauler is not keeping recyclables separate from other solid waste you should contact the Inter-municipal Relations Committee (IRC) Council of Governments (942-7472) and notify them of the problem. Curbside bins and informational pamphlets regarding recycling are also available at the Township Office.

  Reminder: State law (The Covered Device Recycling Act of 2010) now prohibits the disposal of televisions, computers, computer monitors and most computer peripherals. All these electronic devices must be recycled. The IRC offers free recycling of these products at their recycling and composting facility in the village of the Buckhorn on Blacksnake Road.

- **Litter Bugs BEWARE** – The Township, in conjunction with the Intermunicpal Relations Committee and the Pennsylvania Fish and Boat Commission, has been successful in the identification and prosecution of those who dump their trash along roadways and river banks. This thoughtless behavior reflects badly on all of us. Join the effort to keep our community a clean and pleasant place to live. Residents can contact the Intermunicipal Relations Committee (IRC) Council of Governments (942-7472) and notify them of illegal dumping activity.

Additional information regarding Antis Township is available on the Township website (www.antistownship.org)

Lucas L. Martsolf, Manager

ANTIS TOWNSHIP NEWSLETTER

FROM THE MANAGER'S DESK

www.antistownship.org

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- Commissioner Charles Taylor
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MESSAGE FROM THR BOARD OF SUPERVISORS

Well here we are. Spring has finally sprung. This was a challenging winter season and once again our Public Works Department did an amazing job keeping our roads clear.

As is always a part of the Spring ritual, the youth in our township are beginning to hit the streets as the weather cooperates so PLEASE be sure to obey our posted speed limits on our roadways and Recreational Parks (10 MPH speed limit), and keep a watchful eye for our children. Please be particularly careful in the morning and afternoon hours when the school buses are most active.

We have provided a few informational topics to assist you and your families with some of our initiatives, spring services and regulations.

RECENTLY ADOPTED ORDINANCES AND RESOLUTIONS

Resolution #3-2014 Adoption of the Comprehensive Plan Update

Resolution #4-2014 Resolution authorizing Berkheimer Tax Collection to collect delinquent Per Capita taxes for the year 2013

Resolution #5-2014 Public Participation Policy

Resolution #6-2014 DCNR 2014-C2P2 Grant Application

RECENT PLANNING COMMISSION RECCOMENDATIONS

- Recommended approval of the McKnight Lot Line Change.
- Recommended approval of the Bellwood Sheetz Land Development.
- Recommended approval of the Harold & Bernese Fleig Small Flow Treatment Facility.
- Recommended approval of a waiver to the Briggs/Bougher Minor Subdivision.
- Recommended approval of the DelGrosso's Lot Line Change.
- Recommended approval of the Denny Himes Land Development.
- Recommended approval of the Balfurd Healthcare and Linen Rentals Final Land Development and Preliminary Plan.

CAPITAL IMPROVEMENT PROJECTS/PROGRAM UPDATES

- **Street Improvement Program -** Although the Board of Supervisors

are not planning any contracted paving projects this year we want to share with you our five year plan that includes approximately $1,200,000 which has been scheduled for contracted paving projects over the next five years. This is an increase of $300,000 from our last five year plan. This increase is due to the Commonwealth's passage of the $2.3 billion dollar transportation bill. The Board of Supervisors currently has plans for paving projects in years 2015, 2017, and in 2019. In addition, the Board of Supervisors has also set aside approximately $1,100,000 in our five year capital improvement program to make improvements to two bridges in the Township. The two bridges our Becker Bridge and MacFarland Bridge. Currently these bridge projects are slated for reconstruction in the year 2018.

- **Antis-Fostoria Compost Facility -** Last year the Antis Township Capital Improvement Committee recommended to the Board of Supervisors to appropriate $40,000 in the 2014 Capital Budget to make substantial improvements to the Township's compost facility. Recommended improvements to the Board of Supervisors included: re-aligning the roadway that provides access to the facility so to better accommodate the facilities neighbors while widening the road to provide easier access to the public. Installing an electronic gate in order to extend the hours the facility is open to the public as well as improved signage at the facility. The Public Works Department recommended the Board also consider widening and extending the loading area so to provide better ease of access to materials for residents. These improvements will began in early spring and we would like to apologize now for any inconvenience these improvements have on the neighbors of the facility and the users of the facility.

- **River Road Embankment Stabilization** - The Antis Township Capital Improvement Committee with the assistance of our Township Engineer is preparing the final details to manage the erosion occurring along River Road. There are several segments of the road in need of repair. The project is slated to start in the early summer however it is possible this time line can change and we will make every effort to keep YOU informed of our progress.

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- **Locke Street Extension and Flood Mitigation Project -** The Township is currently attempting to secure funding for this project through the Community Development Block Grant program. This project is expected to begin this summer pending fund availability and final approval from the Board of Supervisors.

- **Antis Township Tree Cutback Program** - The Antis Township Board of Supervisors completed our first cutback program in 2013. Township staff will be recommending to the Capital Improvement Committee to continue this program every year until all Township roadways have been cleared of potentially dangerous vegetation. The purpose of the service is to remove overgrown tree limbs that hang over township highways which can pose risk to motorist, utilities, and private property. The risk of overgrowth is increased during severe storms and the winter season when heavy snow laden branches can fall due to the weight of precipitation and high winds. If you would like to make us aware of any overgrowth please contact the Township office.

- **Municipal Website Upgrade** - The Antis Township Board of Supervisors has requested that staff begin to research and put together a plan for their consideration to improve our municipal website. The primary requests to staff were to improve the website's user ability and to provide more transparency and accountability about our operations. With that direction Staff has solicited proposals from several

vendors of which we have narrowed it to two potential vendors. In the coming months the Antis Township Capital Improvement Committee will be reviewing the two proposals in detail prior to making a recommendation to the Board of Supervisors.

- **Comprehensive Park and Recreation Plan** – The Antis Township Capital Improvement Committee has requested that Township Staff begin researching available grants to assist the Township in completing a Township Park & Recreation Plan. The benefit of completing such a plan is twofold. First it would provide the Township and our neighboring municipalities as well as our local non-profit organizations with a blue print of how we can work together to better maintain and or expand our park & recreational opportunities. In addition, in order to secure any substantial State grant money for construction related cost usually requires such a plan.

TOWNSHIP SERVICES

- **Antis Township Composting Yard** - The Township operates a Yard Waste Composting Facility that is open year round to residents of Antis Township. To get to the site from the municipal building, you will travel northeast on North Second Street approximately 9/10ths of a mile. The facility is located at the end of a short dirt road just past Oswald Road and before the Fostoria rail crossing.

  The site accepts yard waste, including trimmings from bushes, trees, leaves, and grass clippings all at no charge! Those making a drop off at the yard should be aware that all contaminants, such as metals, plastics, rocks, lumber, and refuse, should be eliminated from the brush, as they could damage our equipment. This "waste" is converted into compost and mulch that is ready for your planting beds.

  Compost and mulch may be picked up during regular operating hours (Monday through Friday 8:00 a.m. until 2 p.m.). There is no charge if you shovel and load yourself. If we load it please call the Township office to set up a time, the cost is $15.00 per scoop.

  Please be courteous to the neighbors living in the area and watch your speed as you enter and exit the site.

TOWNSHIP REGULATIONS

- **Building Code** - Even though the Statewide Building Code has now been in effect for a few years, it is still useful to periodically review a few things that many people may not be aware of regarding this mandatory state law.

  1. Most decks, patios and sunrooms have required building permits in the Township for many years. Now, in addition to requiring a permit, many of these structures will also require inspections under the building code. This is dependent on size and other factors.

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THINGS TO CONSIDER

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  Reminder: State law (The Covered Device Recycling Act of 2010) now prohibits the disposal of televisions, computers, computer monitors and most computer peripherals. All these electronic devices must be recycled. The IRC offers free recycling of these products at their recycling and composting facility in the village of the Buckhorn on Blacksnake Road.

- **Litter Bugs BEWARE** – The Township, in conjunction with the Intermunicpal Relations Committee and the Pennsylvania Fish and Boat Commission, has been successful in the identification and prosecution of those who dump their trash along roadways and river banks. This thoughtless behavior reflects badly on all of us. Join the effort to keep our community a clean and pleasant place to live. Residents can contact the Intermunicipal Relations Committee (IRC) Council of Governments (942-7472) and notify them of illegal dumping activity.

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Lucas L. Martsolf, Manager

ANTIS TOWNSHIP NEWSLETTER

FROM THE MANAGER'S DESK

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BOARD OF SUPERVISORS
Meets the 1st Thursday at 7:00pm

- Chairman Kenneth Hostler
- Vice Chairman Charles Caracciolo
- Supervisor Leo Matuszewski
- Supervisor David Worthing
- Supervisor Robert Smith

CAPITAL IMPROVEMENT COMMITTEE
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- Commissioner Charles Taylor
- Commissioner Thomas DelMastro

All meetings are held at the Antis Township Municipal Building located at 909 North Second Street Bellwood, PA 16617

MESSAGE FROM THE BOARD OF SUPERVISORS

We know many of you are turning your thoughts to spring particularly after our snowy winter so we have provided a few informational topics to assist you and your families with some of our capital improvement projects and regulations.

As is always a part of the Spring ritual, the youth in our township are beginning to hit the streets as the weather cooperates so PLEASE be sure to obey our posted speed limits on our roadways and Recreational Parks (10 MPH speed limit), and keep a watchful eye for our children. Please be particularly careful in the morning and afternoon hours when the school buses are most active.

RECENTLY ADOPTED ORDINANCES AND RESOLUTIONS

ORDINANCES

Ordinance #1-2015 Updated Health Trust Agreement (PSATS)
Ordinance #2-2015 Updated Unemployment Compensation Trust

RESOLUTIONS

Resolution #5-2014 Public Participation Policy
Resolution #6-2014 DCNR 2014-C2P2 Grant Application
Resolution #7-2014 Agility Agreement with PennDOT
Resolution #8-2014 Resolution to adopt the Blair County Mitigation Plan
Resolution #9-2014 MMO for 2015
Resolution #10-2014 Bank Resolution-electronic banking
Resolution #11-2014 Blair County TMDL & Chesapeake Bay Reduction Plan to DEP
Resolution #12-2014 Health Insurance Trust (PSATS)
Resolution #13-2014 CDBG 2014 Application
Resolution #14-2014 Fair Housing Resolution
Resolution #15-2014 Adoption of 2014 Budget
Resolution #16-2014 A tax levy resolution fixing the rate for the year of 2015 at 4.5 mills
Resolution #17-2014 Budgetary Transfers

2015

Resolution #1-2015 Appointment of Auditors for year ending 2014 audit
Resolution #2-2015 Act 44 Resolution
Resolution #3-2015 Resolution authorizing Berkheimer Tax Collection Agency to collect delinquent Per Capita taxes for the year 2014

RECENT PLANNING COMMISSION RECCOMENDATIONS

- Recommended conditional approval of the Del Grosso Water Park Expansion Land Development.
- Recommended conditional approval of the Pinecroft Medical Center Land Development.
- Recommended approval of the McCartney Rentals Lot Consolidation.

CAPITAL IMPROVEMENT PROJECTS/PROGRAM UPDATES

- **Street Improvement Program -** The Township recognizes the benefits of having well maintained streets and is committed to a regular schedule of street repairs. In December the Board of Supervisors approved the appropriation of $400,000 for paving Township roadways. The Board of Supervisors has also asked staff to monitor market trends of fuel prices to see what if any affect the low cost of oil will have on paving cost. The Board is hopeful to take advantage of current prices and how this could assist the Township in expanding the paving program.

  The annual street improvement program is funded by our Liquid Fuels Tax Fund from which the Township allocates funds for the paving of roads and bridge construction. The State Liquid Fuels Tax Fund revenue is derived from the State of Pennsylvania's gasoline tax. A percentage of the State's proceeds of the gasoline tax are distributed to the Township based on the total miles of improved roads and population.

  The Township Road Foreman is tasked with creating a list of roads in need paving. Once this list is completed the Road Foreman provides it to the capital improvement committee who further review the Road Foreman's recommendation. Township officials are always interested to hear your thoughts and concerns in regards to the condition of roads and bridges utilized by you. Please contact the Township office if you have concerns with Township roads or bridges so that our public works department can conduct field inspections.

- **Antis-Fostoria Compost Facility –** Improvements to the Compost facility are nearly complete. The remaining improvements consist of paving the roadway entrance and the facility's loading areas. The Antis Township Board of Supervisors have budgeted $20,000 for the paving and will be completed during this year's paving program. The cost of the paving will be covered by a state grant which the Township was successful in securing. The grant also covered the total cost of the improvements which have been done during the past year. The total grant award amount totaled $77,000.

- **North 9th Street Bridge Replacement** - The Township Engineers are in the final stages of the plan development. The D.E.P. Permit for the bridge repair has been secured. A schedule for construction is underway. Anyone who is interested in this project and wish to obtain updates on the project are encouraged to attend the Township's monthly capital improvement committee meetings.

- **Locke Street Extension and Flood Mitigation Project -** The Township is in the process of securing construction and drainage easements along the project area. The D.E.P. Permit for the repairs to the culvert on N. Seventh is still pending. The timbering of the wooded area on Lock Street between N. Seventh and N. Ninth Streets is in the planning process. A schedule for construction is underway.

Anyone who is interested in this project and wish to obtain updates on the project are encouraged to attend the Township's monthly capital improvement committee meetings.

- **Antis Township Tree Cutback Program** - The Antis Township Board of Supervisors completed our second cutback program in 2014. The public works department will be preparing soon for another cutback this year. The purpose of the service is to remove overgrown tree limbs that hang over township highways which can pose risk to motorist, utilities, and private property. If you would like to make us aware of any overgrowth please contact the Township office.

- **Municipal Website Upgrade** - Antis Township staff has completed the site plan and has written new content for the website. We are currently waiting for our website developer to complete the final development. We will notify residents once the site is live and available for use.

- **Comprehensive Park and Recreation Plan** – We are happy to report that the Township has successfully secured a $12,500 grant from the Pennsylvania Department of Conservation and Natural Resources to secure services to prepare a comprehensive Park and Open Space plan. The Township staff will be working with consultants, once selected, over the next year assisting them with completing the plan.

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- **Off Road Vehicles** – Spring is here and people are getting out of the house to participate in their favorite activities. For some, that means riding an ATV or other motorized vehicle (mini-bike, miniature motorcycle, go-cart, etc.). Please be advised that not only is it unsafe to ride such vehicles on a public road, but that it is also a violation of the Pennsylvania Motor Vehicle Code. This law applies to ALL public roads (both State and local). For everyone's safety, the Township is working very closely with the State Police to get these vehicles off the road.

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We know many of you are turning your thoughts to summer particularly after our snowy winter so we have provided a few informational topics to assist you and your families with some of our summer projects and regulations.

RECENTLY ADOPTED ORDINANCES AND RESOLUTIONS

Resolution #1-2014 Appointment of Auditors for year ending 2013 audit
Resolution #2-2014 Banking Resolutions and Signature Cards
Resolution #3-2014 Adoption of the Comprehensive Plan Update
Resolution #4-2014 Resolution authorizing Berkheimer Tax Collection Agency to collect delinquent Per Capita taxes for the year 2013

RECENT PLANNING COMMISSION RECCOMENDATIONS

- Recommended approval of the Lloyd Gummo & Loganbell Farms Lot Line Change.
- Recommended approval of the Steinbauer and McCulloch Lot Line Change.
- Recommended conditional approval of the Johnson Minor Subdivision.
- Recommended conditional approval of the Balfurd Healthcare and Linen Rentals Final Land Development (Boiler room addition)

CAPITAL IMPROVEMENT PROJECTS/PROGRAM UPDATES

- **Antis-Fostoria Compost Facility –** Our public works department has begun site improvements and we apologize for any inconveniences this may cause but the improvements will be well worth it once completed. Improvements should be completed by mid-summer. We would like to say thank you to members of the Inter-municipal Relations Committee whom have provided advisory comments on our proposed improvements.

- **River Road Embankment Stabilization** - The Antis Township Capital Improvement Committee with the assistance of our Township Engineer continue preparing the final details to manage the erosion occurring along River Road. Originally this project was slated to start in early summer however it now appears we will begin in the fall and we will make every effort to keep YOU informed of our progress.

- **North 9th Street Bridge Repair** - The Township is happy to report that it appears we have secured funding through the Community Development Block Grant program which will fully fund the proposed improvements. Project planning is underway but actual construction of the project is still being considered.

- **Locke Street Extension and Flood Mitigation Project -** The Township is also happy to report that it appears we have secured funding through the Community Development Block Grant program which will fully fund this project as well. Project planning is underway but actual construction of the project is still being considered.

- **Antis Township Tree Cutback Program** - The Antis Township Board of Supervisors completed our first cutback program in 2013. The public works department will be preparing soon for another cutback for this year. The purpose of the service is to remove overgrown tree limbs that hang over township highways which can pose risk to motorist, utilities, and private property. If you would like to make us aware of any overgrowth please contact the Township office.

- **Municipal Website Upgrade** - Antis Township staff have been working very hard to prepare a site plan as well as writing site content that provides more information about what our community has to offer current and future residents. We would also like to say thank you to those community organizations that have assisted Township staff in writing and collecting content to provide on the website.

- **Comprehensive Park and Recreation Plan** – We are happy to report that the Township has successfully applied for the DCNR Open Space and Recreation grant. Many groups and organizations provided us with support letters that will make securing the grant more likely. We would like to specifically thank the Borough of Bellwood who also supported this effort and who will also benefit from the grant once secured. If secured, the grant would provide the Township and our neighboring municipalities, as well as, our local non-profit organizations with a blue print of how we can work together to better maintain and or expand our park & recreational opportunities.

TOWNSHIP SERVICES

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RECENTLY ADOPTED ORDINANCES AND RESOLUTIONS

ORDINANCES

Ordinance #1-2015 Updated Health Trust Agreement (PSATS)
Ordinance #2-2015 Updated Unemployment Compensation Trust Agreement (PSATS)

RESOLUTIONS

Resolution #1-2015 Appointment of Auditors for year ending 2014 audit
Resolution #2-2015 Act 44 Resolution
Resolution #3-2015 Resolution authorizing Berkheimer Tax Collection Agency to collect delinquent Per Capita taxes for the year 2014
Resolution #4-2015 Resolution amending the Antis Township Building/Assessment Permit Fee Schedule

RECENT PLANNING COMMISSION RECCOMENDATIONS

- Recommended approval of the Dwayne Young Minor Subdivision
- Recommended approval of the Fink / Thompson Side Lot Addition
- Recommended approval of the Jonathan Jones Lot Merge

CAPITAL IMPROVEMENT PROJECTS/PROGRAM UPDATES

- **Antis-Fostoria Compost Facility –** We are happy to inform you that most improvements to the Compost facility have been completed. The only remaining improvements yet to be completed are paving and the placement of recycling containers. Many of you have expressed your gratitude about the improvements and we appreciate your feedback.

- **River Road Embankment Stabilization** - The Antis Township Capital Improvement Committee with the assistance of our Township Engineer continue preparing the final details to manage the erosion occurring along River Road. This project has been delayed due to important discussions about what is the best course of action to ensure the correct action is taken to balance cost with the projected life span of improvements.

- **North 9th Street Bridge Repair** - The Township has secured all the necessary easement and permits for the construction. The project is planned to be bid with the Locke Street Extension Project in May of this year.

- **Locke Street Extension Project -** The Township had to consider removing plans for flood mitigation to allow the project to move forward in a timely manner. Constructions of Locke Street may begin as early as July of this year.

- **The Forshey Street Water Line Extension –** Bids for the project were open at the March 5th Supervisors Meeting. The Construction Contract is scheduled to be awarded in April 2015 and construction should begin during May and be completed by the end of July 2015.

- **Municipal Website Upgrade** – Over the past year Antis Township staff worked diligently to provide you with an updated website. We are happy to report that the hard work has paid off and the site is live for your review at www.antistownship.org. We intend to, over the next month, make improvements to the Township calendar and news pages so to better advise you of current Board actions and community events.

- **Comprehensive Park and Recreation Plan** – We are happy to report that the Township has been awarded a grant from the Pennsylvania Department of Conservation and Natural Resources to hire a consulting firm to complete a thorough review of Bellwood Borough's and Antis Township's existing recreation infrastructure and programs currently offered. The consultants will work with a recently formed recreation committee over the next year to study both communities and submit recommendations for improving current recreational assets as well as other possible recreational opportunities.

- **Fire Hydrant Installation –** Recognizing the importance of fire safety the Board of Supervisors has also budgeted for FY 2015 to install seven (7) new hydrants along Grazierville road as proposed by the Altoona Water Authority.

- **2015 Paving Project –** The Antis Township Board of Supervisors has publicly requested bids for this year's paving program. This year's ambitious paving program includes the paving and in some areas milling of the following roadways:

  - The intersection of N. 1st Street and W. Logan Street
  - N. 12th Street
  - N. 15th Street
  - N. 16th Street
  - Campbell Road
  - Hunter Road
  - E. 9th Street
  - E. 6th Street
  - E. 7th Street
  - E. 8th Street
  - S. Tuckahoe Street
  - Maple Street-As long as utility improvements are made in time
  - Campbells Lane
  - E. Antis Street
  - Becker Road Underpass-Milling and Paving

- Hegarty Road
- McFarland Road
- Rossman Road
- Sassafras Street
- Forrest Street
- Walnut Street
- Bellmeade Drive
- Swartz Road
- Paving of the Antis Township compost yard

We would like to apologize in advance for any inconvenience this year's paving program will have on you and your family and we will do our best to inform you of the start and completion dates of this public project.

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  Commercial use is now permitted however commercial entities must first secure an annual pass from the Intermunicipal Relations Committee (IRC). Once purchased a decal will be provided and must be displayed on vehicles that enter the compost facility. Those who fail to comply with this policy will be prosecuted. The IRC can be contacted at (942-7472).

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2. Many people may not realize that swimming pools also require a building permit. It may come as a surprise to some that even temporary inflatable pools often require a permit. If your pool contains 24" or more water, a permit and inspections are required. When retailers sell these "inexpensive" pools they fail to let customers know that there are significant additional expenses involved such as the cost of installing a 4' permanent fence with a locking gate all the way around the pool. For more information on these and other requirements for a swimming pool permit you may wish to call the Township office and speak with the Ordinance Enforcement Officer before taking advantage of one of these "bargains".

If you have questions on these or other building related concerns, please call the Township office before beginning the project. Getting answers to your questions in advance will save you money and help avoid costly delays.

- **Public Nuisance Laws and Dangerous Structures** – The Antis Township Board of Supervisors have asked me to remind residents that the Township does have laws prohibiting the collection of unsightly material. They have also asked me to provide the following definitions to ensure our community is safe and attractive:

  Public Nuisance: Is an act or process that interferes with a community's enjoyment of a land, area or region. It may include anything that disturbs the health and safety of a community, and can also include things that are not particularly unsafe or unhealthy, but annoy the general public and keep people from being comfortable in a community.

  Deleterious Object: Anything injurious, or with reasonable potential to become injurious to the health, safety or welfare of any persons.

  Solid Waste: Garbage, refuse, rubbish hazardous waste, dead animals, sludge, liquid or semi-liquid waste, and other spent, useless or worthless or discarded materials.

  Weeds: Vegetation that has become a fire hazard, vegetation that is noxious, a nuisance or dangerous. Grasses, stubble, brush, clippings and cuttings that endanger the health and safety by creating a fire hazard; insect, rodent or other vermin harborage, or other nuisance.

  Outdoor Storage: The keeping of any personal property, equipment, materials, products, junk, trash or materials that is not entirely contained within a structure.

  Junk: Any scrap, waste, reclaimable material or debris whether or not stored or used in conjunction with dismantling, processing, salvage, storage, disposal or other use or disposition. Junk includes, but is not limited to tires, furniture tools, paper, rags, plastics, cordage scrap iron or other metal, glass, building materials, machinery and appliances or parts thereof, brush, wood and lumber, solid waste and vehicles and parts thereof.

  "Red Tag" Ordinance: An "on site" inspection is made by the Code Officer and the Township Manager. If in agreement, the Code Officer will send a "letter of inquiry" to the property owner, by certified mail, stating the deficiencies that have been observed and that he/she have a thirty (30) day

"grace period" to respond to the letter "in writing". If the Code Officer does not receive a reply to his letter, the officer will present his findings in a report to the Board of Supervisors at the next scheduled meeting stating in what respect the structure is dangerous and if it is capable of being repaired or should be demolished. If the Board is in agreement with the officers findings, then written notice by certified mail is issued to the owner to appear before the Board on a date specified in the notice to show cause why the structure should not be repaired, vacated or demolished. The Board will issue an order based on said findings and advise the owner that the provisions as stated in the notice are justified and should proceed accordingly. In addition the structure or building shall be placarded with a "RED TAG" notice as set forth in the ordinance.

THINGS TO CONSIDER

- **Recycling** - Citizens are reminded that the Township has a curbside recycling collection program. Solid waste haulers are required to collect Act 101 recyclables. Aluminum cans, bi-metal cans, glass bottles and jars (clear, brown, and green), plastic bottles and jugs, newspapers, magazines, catalogs and other printed paper are all collected at the curbside by haulers.

  Township residents are encouraged to separate recyclables from solid waste and prepare them for collection. All trash haulers providing service within the Township are required to collect recyclables. If your hauler is not keeping recyclables separate from other solid waste you should contact the Inter-municipal Relations Committee (IRC) Council of Governments (942-7472) and notify them of the problem. Curbside bins and informational pamphlets regarding recycling are also available at the Township Office.

  Reminder: State law (The Covered Device Recycling Act of 2010) now prohibits the disposal of televisions, computers, computer monitors and most computer peripherals. All these electronic devices must be recycled. The IRC offers free recycling of these products at their recycling and composting facility in the village of the Buckhorn on Blacksnake Road.

- **Litter Bugs BEWARE** – The Township, in conjunction with the Intermunicpal Relations Committee and the Pennsylvania Fish and Boat Commission, has been successful in the identification and prosecution of those who dump their trash along roadways and river banks. This thoughtless behavior reflects badly on all of us. Join the effort to keep our community a clean and pleasant place to live. Residents can contact the Intermunicipal Relations Committee (IRC) Council of Governments (942-7472) and notify them of illegal dumping activity.

Additional information regarding Antis Township is available on the Township website (www.antistownship.org)

Lucas L. Martsolf, Manager

ANTIS TOWNSHIP NEWSLETTER

FROM THE MANAGER'S DESK

www.antistownship.org

BOARD OF SUPERVISORS
Meets the 1st Thursday at 7:00pm

- Chairman Robert Smith
- Vice Chairman Kenneth Hostler
- Supervisor Charles Caracciolo
- Supervisor Leo Matuszewski
- Supervisor David Worthing

CAPITAL IMPROVEMENT COMMITTEE
Meets the 3rd Thursday at 6:00pm

- Supervisor Robert Smith
- Supervisor Kenneth Hostler
- Supervisor Leo Matuszewski

PLANNING COMMISSION
Meets the 3rd Thursday at 7:00pm

- Chairman Norman Saylor
- Vice Chairman Robert Smith
- Secretary Sherree Johannes
- Commissioner Charles Taylor
- Commissioner Thomas DelMastro

All meetings are held at the Antis Township Municipal Building located at 909 North Second Street Bellwood, PA 16617

BOARD OF SUPERVISORS

We know many of you are turning your thoughts to winter so we have provided a few informational topics to assist you and your families with some of our initiatives, winter services and regulations.

2015 Operating and Capital Budgets

An annual priority for the Board of Supervisors is to adopt the operating and capital budgets for the Township of Antis. Our goal in preparing the 2015 budget was to maintain current service levels including infrastructure repair so to promote the health, safety and welfare of Township residents. The weak economy has affected revenue growth; however, implementation of responsible fiscal policies has positioned the Township in a relatively strong financial condition. Copies of the 2015 Proposed and Adopted Budgets are available at the Township Building and on the Township's website for your review.

CAPITAL IMPROVEMENT PROJECTS/PROGRAM UPDATES

- **Antis Township Tree Cutback Program** - The Antis Township Board of Supervisors, at the recommendation of staff, approved this year's tree cutback program. This year vegetation was cut back along River Road and Riggles Gap Road. The benefits of the program are to remove overgrown tree limbs that hang over township highways which can pose risk to motorist, utilities, and private property. The risk of overgrowth is increased during severe storms and the winter season when heavy snow laden branches can fall due to the weight of precipitation and high winds.

- **Annual Fire Hydrant Installation Program** – In September the Antis Township Board of Supervisors approved for payment for the installation of four fire hydrants two along East Eight Street, one on East 9th street and one on East 6th Street. Recognizing the importance of fire safety the Board of Supervisors has also budgeted $15,486 for FY 2015 to install hydrants along Grazierville road as proposed by the Altoona Water Authority.

- **Antis-Fostoria Compost Facility –** Improvements to the Compost facility are nearly complete. The remaining improvements consist of paving the roadway entrance and the facility's loading areas. The Antis Township Board of Supervisors have budgeted $20,000 for the paving and will be completed during next year's paving program. The cost of the paving may be covered by a state grant which was submitted by

Township staff in August.

- **2015 Capital Improvement Budget -** The Antis Township Capital Improvements Committee has proposed to the Board of Supervisors a Capital Budget for FY 2015 that consists of approximately $973,986 worth of improvements. The final recommendation to the Antis Township Board of Supervisors consist of the following:

  - $6,500 has been proposed for tree trimming along Township Right-of-Ways.
  - $12,000 has been proposed to evaluate local bridges to determine the need for repairs or replacement.
  - $20,000 has been proposed for paving at the Antis Township Compost facility.
  - $25,000 has been proposed to perform a Township wide comprehensive park plan. The Township has filed for a grant through the Department of Conservation and Natural Resources to assist in paying for the plan.
  - $245,000 has been proposed to replace two Township vehicles which are utilized for snow removal during the winter months.
  - $400,000 has been proposed for the paving of Township roads. This amount typically permits us to pave approximately nine (9) lane miles.
  - $250,000 has been proposed to manage riverbank erosion along River Road.
  - $15,486 has been proposed to install six new hydrants along Grazierville Road. However, installation of new hydrants is contingent upon the Altoona Water Authority 2015 fiscal year budget.

  The Antis Township Capital improvement committee has asked me to remind the public they are encouraged to participate in these discussions. The Capital Improvement Committee meets the third Thursday of each month at 6:00pm at the Antis Township Municipal Building.

PLANNING COMMISSION

- Recommended approval of the Tipton Baptist Church Recreation Facility Land Development.
- Recommended approval of the Robert Himes Storage Building.
- Recommended approval of the Rossi Holding Farm Building.
- Recommended approval of the Gonder Minor Subdivision.

TOWNSHIP SERVICES

- **Winter Road Maintenance -** It is Antis Township's goal to provide a transportation system that is passable and reasonably safe as much of the time as possible within the limitations imposed by the natural environment and the availability of equipment, material, and personnel resources. The Antis Township Board of Supervisors took action this year to increase personnel numbers in our Public Works Department by adding two seasonal employees to help combat winter storms. However, please recognize that there will be occasions when the pavement and bridge surfaces will be slippery and/or snow and ice covered. During these periods customers (drivers) must recognize the conditions and operate their vehicles in an appropriately safe manner.

  The Township will conduct snow and ice control activities that afford customers a reasonably safe and passable (not necessarily bare) road surface as much of the time as possible. To accomplish that, snow and ice accumulations will be removed as soon as possible, consistent with stated priorities

and resources. To the extent possible, the bond of snow and ice to the pavement will be prevented by the timely application of ice control chemicals. Abrasives may be used as necessary to provide temporary friction improvement.

Certain conditions such as blizzards, whiteouts, other locally severe snow or ice events, thin ice formation in the absence of or during very light and spotty precipitation, and other conditions unknown to or beyond the control of the Township's maintenance forces may temporarily preclude achieving this goal.

How Residents and Property Owners Can Help Assure the Safety and Efficiency of ANTIS'S Snow and Ice Control Operations:

- Do not park on township streets, especially during a snow or ice event
- Keep basketball devices at least 10 feet from the edge of pavement
- Do not park cars in driveways within 10 feet of edge of pavement
- Do not allow children to build and occupy snow forts and similar creations within 10 feet of the edge of pavement
- Do not relocate snow from driveways and sidewalks into the paved street. This is in violation of Pennsylvania law and will cause a hazardous condition on the street (PA C.S., Chapter 55)
- Fences should not be within 10 feet of the edge of pavement
- Remove all non-permanent seasonal items from within 10 feet of edge of pavement
- Pile most of the snow from the driveway throat on the traffic downstream side. This will minimize visibility problems
- Vehicles must be removed from public streets within one hour after the commencement of each snowfall
- It is unlawful for anyone to shovel, plow or in any way deflect snow onto public roads.
- Snowmobiles, ATV's and all other unlicensed vehicles are strictly prohibited on public streets at all times.

In addition, please remember the following:

- Roads are cleaned in priority order, beginning first with major arteries and trouble spots, then moving to secondary roadways, and finally cleaning residential streets. Every effort is made to keep all Township roads cleared, but in cases of heavy or quickly falling snow it will take time for crews to get to every road.
- Township snow removal crews do not clear private driveways or driveway entrances of accumulated snow.
- A truck with a raised plow does not always mean the driver has completed your area. They may be:
    - Returning for fuel or vehicle service
    - Returning to the maintenance yard for additional treatment material

- Responding to a call to assist Emergency Services

- You can help reduce the possibility of a damaged/broken mailbox or mailbox post. Plow operators are urged to take precautions to avoid hitting mailbox posts. Experience has shown that reduced visibility during a storm makes it difficult for a driver to see a post in time to avoid striking it or pushing it over with plowed snow.

Any installation within the right of way - including a mailbox/post - is placed there at the owner's risk. Owners are encouraged to install mailboxes at the maximum usable distance from the edge of the pavement. Posts should also be checked for deterioration to reduce the possibility that the weight of the plowed snow may simply break or push the post over. The Township shall not repair or replace mailboxes or posts damaged by the force or placement of plowed snow.

- Maintenance of all state roads located within the geographical boundary of the Township is the responsibility of PENNDOT. Calls regarding winter maintenance issues should be directed to the PENNDOT District 9-0 office in Hollidaysburg.

Contacting the Township during a Snow or Ice Event

- Avoid calling municipal offices during a storm except in an emergency. Personnel are extremely busy dealing with storm conditions. *Please keep telephone lines clear for emergencies*
- Emergency calls during snow removal season should be placed with the municipal offices, (814) 742-7361, Monday thru Friday 8:00 am to 4:30 pm. *Weekends and evenings, please call 911.*

THINGS TO CONSIDER

- **Recycling** - Citizens are reminded that the Township has a curbside recycling collection program. Solid waste haulers are required to collect Act 101 recyclables. Aluminum cans, bi-metal cans, glass bottles and jars (clear, brown, and green), plastic bottles and jugs, newspapers, magazines, catalogs and other printed paper are all collected at the curbside by haulers.

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- **Christmas Trees** - The Township does not pick up Christmas trees, but you can drop one off at the compost site Monday through Friday from 10:00 a.m. to 5:00 p.m. Make sure you have removed all of the decorations from the tree before you drop it off.

  On behalf of the Supervisors and the entire Township staff we wish you all a safe and happy holiday season.

  Lucas L. Martsolf, Antis Township Manager

Antis Township Yard Waste Collections

Written by Katrina Pope. Posted in Yard Wastes

2015

Anits Township offers curbside collection of leaves for residents beginning October 19th through November 19th. Residents will be able to bag their leaves and yard trimmings for collection. Residents can always take these materials to the either the Buckhorn Recycling & Compost Facility or the Duncansville Recycling & Compost Facility. Materials should be placed at the curbside for collection by 7:00 a.m.

Monday Zone: Crews will collect in the Bellemeade & Pinecroft Areas.

Wednesday Zone: Crews will collect in Tipton Area.

Friday Zone: Crews will collect in the Bellwood & Riggles Gap Area

Christmas Tree Recycling

Live undecorated trees can be dropped off on weekdays from 8 am - 2 pm at the Fostoria Compost Facility

Recycle

Recycling App Coming Soon!

The IRC is developing and will soon introduce a smart phone app for our recycling and composting programs. The app will kickoff on America Recycles Day, November 15, 2014. In the meantime, residents and businesses can visit our website (*IRCenvironment.org*) for more information on recycling, composting, reuse and waste reduction. If you can't find the answers on our website, contact our office by phone (814-942-7472) or email (*kpope@ircenvironment.org*).

What Gets Recycled?

Mixed Paper, Magazines & Catalogs

- Place in a covered bin or place in paper bags.
- No plastic bags (except for shredded paper)

Newspapers, Inserts & Phone Books

- Tie with string or place in a paper (but <u>not</u> plastic) bag.
- Keep dry.
- Other similar paper, too.

Cardboard & Paperboard Boxes

- Boxes should be <u>flattened!</u>
- Boxes should be kept dry and set out with paper collection.

Plastic Bottles

- All plastic bottles & jars
- Please rinse.
- Stomp bottle to save space...
- Screw on lid. It's recyclable!

Aerosol, Steel & Aluminum Cans

- <u>Non</u>-aerosol cans may be smashed to save space.
- No need to remove labels.
- Please wash out food & drink.

Glass Bottles & Jars

- Green, brown, clear bottles & jars.
- Please rinse out food & drink.
- Remove lids.

Helpful Hints

- **No** tissues, napkins, paper towels
- **No** hardback books
- **No** plastic bags or Tyvec envelopes
- Except shredded paper must be bagged (so it doesn't blow away)

- **No** plastic bags for whole paper
- Recycle plastic bags at the market
- **No** soaking wet paper

- **No** waxed boxes (like milk cartons)
- **No** styrofoam packaging
- **No** pizza or food-covered boxes
- Boxes should be flattened.

- **No** tubs or trays
- **No** yogurt or margarine tubs
- **No** buckets

- **No** bulky scrap metal
- **No** food residue in cans
- **No** liquid paint left in paint cans
- Household Hazardous Waste can be disposed at annual HHW event.

- **No** light bulbs
- **No** window glass
- **No** ceramic containers or cookware
- **No** drinking glasses

BLAIR COUNTY CONSERVATION DISTRICT

2014 ANNUAL REPORT

SPECIAL POINTS OF INTEREST:

- **Local Food Initiative promoting farmers' markets**
- **Green Alternatives for Stormwater**
- **Hands-On Educational Activities**

INSIDE THIS ISSUE:

2014 ANNUAL REPORT

Bedford Street Property

Plans are progressing for the Conservation District Property located at the intersection of Rt. 36 and Bedford Street in the Borough of Hollidaysburg. 2014 brought about the first "visions on paper" of our proposed project.!

The District has retained Keller Engineers, Inc. to complete the master plan for the site. We also retained their services to work with the Borough related to zoning and overall site development.

Baechle & Associates has been retained as the architect for the proposed office complex. A design team has been assembled to include a consultant that will assist the district in attaining LEED certification for the proposed 6,000 sq ft office.

A 0.5 acre wetland mitigation project by the Sheetz Corporation began in 2014, which will include a boardwalk through the site for educational purposes.

The next steps will be soliciting for grants to build the Outdoor Environmental Education Facility, preparation of required permits and thoughts for fund raising opportunities.

Always a question….is the utilization of the 1920 era bank barn. Structurally sound, the barn will remain and be enhanced to be used for storage, hosting of events and to serve as a reminder of Blair County's long history as an agricultural community.

Stay tuned in 2015 to follow the progress of the District Property!

Proposed LEED Certified Office Building

Supporting Blair County Agriculture

Stabilized Animal Walkway & Fencing

Agriculture is the Number 1 industry in Blair County and the Blair District has a strong program to support agriculture.

The district was created by a petition from local citizens—mainly farmers—in 1966. Since then, we have implemented programs and projects to provide technical and financial assistance to farm landowners.

Funding through the Chesapeake Bay Program was attained in 2014 for the design and construction of a Rotational Grazing, Roof Runoff, Tile Drainage and a Waterway system on Blair County farms. Funds were also distributed for Nutrient Management Planning.

The district also serves as the reviewing entity for submitted Nutrient Management Plans, either volunteer or required by regulations and as the local contact for agriculture related complaints.

A major focus for the ag staff starting in 2012 and continuing through 2017 is to conduct "Farm Visits" to inform local landowners of their regulatory requirements associated with Erosion Control and Manure Management. 100 visits are required annually of the Blair District staff. If you would like to schedule a visit to your farm….please contact Rich Huether, Ag Conservation Specialist at 696-0877 ext. 5.

Local Foods Initiative

Juniata Winter Market

The Blair County Conservation District supports agriculture in all shapes and sizes.

A target in 2014 was the advancement of knowledge for our area direct-market farmers growing local food. Two "Farmer to Farmer:" workshops were held with topics including pricing of specialty crops, effective marketing, growing in high tunnels, growing/harvesting/selling brambles and other small fruit, and manure management. The workshops provide information and mentoring opportunities for local growers.

Working with the Partnership for Health, the district helped to implement a "market buck" program funded by a United Way Grant. The idea of market bucks is for participants to receive and redeem "bucks" to buy fruit, vegetables, eggs, and dairy products from local Farmers' market. The Juniata Market was targeted in 2014.

The District continues to meet with many community stakeholders to help support Blair County's local food initiative. Together, we are working to improve the entrepreneurial outcome for farmers and bring more healthy foods to the community.

Check out one of the many Blair County Markets this year!

Farmland Preservation

"To date, 46 farms totaling just under 6,700 acres have been preserved….."

There is no shortage of interest in the Conservation Easement Purchase Program in Blair County.

To date, 46 farms totaling just under 6,700 acres have been preserved for agricultural use in perpetuity!

Blair County Commissioners allocated $80,000 for preservation efforts in 2014, which was matched with State Funds. The total allocation of $331,217 allowed us to consider the purchase of the development rights on 2 farms in Sinking Valley in 2014.

The average easement value (the difference between the development value and the farmland value as determined by an appraisal) for Blair County stands at approximately $1,000 per acre.

Annually, applications received by October 15th are ranked to be considered for funding in the following year. Application forms are available on the District website or call 696-0877 ext. 5.

Dirt & Gravel Road Program

Woodbury Township Project

Historically, the Conservation District received an annual allocation of approximately $20,000 for distribution to state or municipal entities for the repair and stabilization of Dirt & Gravel Roads within their jurisdiction.

The district worked in 2014 to lay the groundwork for a 5-fold increase in funding expected for 2015, made possible through Act 89 of 2013. Both a significant increase in funding for dirt and gravel roads along with a "Low Volume Road" component means that Blair County will receive $180,817 for 2015!

The funding program continues to address sediment pollution from undermanaged roads and drainage facilities on Dirt & Gravel Roads, and now allows for projects on paved Low Volume Roads (less than 500 vehicles per day).

To attain funding, the project sponsor must become and maintain certification in the "Environmentally Sensitive Maintenance of Dirt & Gravel Roads" training. Currently, only seven Blair County municipalities and the PA Game Commission maintain certified personnel for the program.

Applications are solicited annually and ranked for funding approval. For more information or to find a training session near you, contact Jim Eckenrode at the district office at 696-0877 ext 5.

Erosion Control and NPDES Permitting

"….Sites of one acre or more require an NPDES permit…."

The Blair County Conservation District is delegated duties related to public information, plan review, permit issuance, complaint handling and inspections associated with earth disturbance activities in Blair County. Workload and the flow of plan submittals seems to be on a rise—which is an indicator of the stronger economy.

All earthmoving activities are required to have a written Erosion Control Plan. Many local municipalities have within their ordinances the requirement of plan review and approval. Sites involving a disturbance of 1 (one) acre or more are required to attain an NPDES permit prior to commencement of the project. NPDES permits are authorized and/or processed thru the District.

In 2014, 20 General and 6 Individual Permits (located in High Quality Watersheds) were processed. In addition, 74 Erosion and Sediment (E&S) Control Plans were reviewed and approved based on the State's Chapter 92 and 102 Regulations.

35 complaints were logged and 38 inspections were conducted at earth moving sites.

Chris Myers took over as the Resource Conservation Technician in April of 2014. Chris has a background in Forestry and hit the ground running for the district. Funds are budgeted to hire another E&S staff member in 2015.

Funds for Stormwater Projects

The Blair County Conservation District , working with the local MS4 Workgroup, received just over $420,000 from the National Fish and Wildlife Federation to implement green infrastructure projects for the control of stormwater. The MS4 Workgroup is a collaboration of 13 municipalities located in the urbanized area of the County.

Six projects are proposed across the county to serve as demonstrations for the construction and management of practices like Rain Gardens and other alternative stormwater designs.

Along with the implementation phase, a stormwater website will be developed to provide public and municipal education.

There is also a water quality monitoring phase of the grant whereby the district and others will set up long term monitoring stations to establish a baseline of the existing water quality and to demonstrate improvements within the watersheds with the implementation of green alternatives. For more information contact Beth Futrick or Jim Eckenrode at the district office.

Environmental Education

Taking the Environment to the Classroom!

The Blair County Conservation District offers a wealth of educational opportunities through its Environmental Education Specialist, Jody Wallace aka the "Creature Teacher" and the Conservation District Staff. In fact, this year the district's Environmental Education Programs served 10,000 people.

Youth programs include a variety of hands on activities, experiments, songs, games, and often live animals. Because of the hands-on nature of the instruction, most are designed for one classroom at a time but some can be adapted to large group audiences. Most programs last about an hour, this can also be adjusted to meet the needs and interests of the group. Each lesson's objective addresses one or more of the Pennsylvania Standards for Environmental Education and/or Science and Technology.

It's not just kid stuff either! We do a variety of adult programs including Manure Management Workshops, Water Quality Training, Cover Crop Workshops and Pollution Control training for Municipalities. A highlight the last several years has been participation in the Sheetz Earth Day event at their distribution center near Claysburg.

Jody Wallace earned the 2014 Outstanding Environmental Educator Award from the PA Assoc. of Environmental Educators!

Outstanding Conservationist Award

"The District Board has been honoring Outstanding Conservation Efforts since 1968…"

The District presented two Outstanding Conservationist Awards to retiring partners for their outstanding service to the Conservation District at the annual banquet in October.

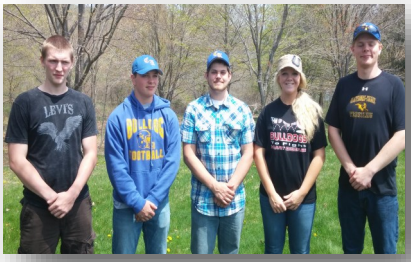
State Representative Jerry A. Stern was honored for his steadfast support of the district and district programs over his 22 year tenure in the House of Representatives serving the 80th district. Jerry was always reactive to our requests for assistance and proactive in solving environmental issues within his legislative district. He was also instrumental in creating the Resource Enhancement and Protection Act (REAP) where landowners can receive state tax credits for conservation practices.

Bill Clouser retiring from the State Conservation Commission was acknowledged for his support of the Blair and surrounding districts related to the Nutrient Management Program. Bill was an excellent resource for our staff and a strong advocate for the farming community.

Honorable Jerry A. Stern with Blaine Smith, Vice-Chair and Donna Fisher, District Manager

Bill Clouser with Blaine Smith, Vice-Chair and Donna Fisher, District Manager

Blair County Envirothon



"Team Tree Bark" from Claysburg-Kimmel HS

The 29th annual Envirothon Competition was held on May 8th at Canoe Creek State Park. Our local event is co-sponsored by the Altoona Kiwanis Club. The contest is open to all Blair County Schools, grades 9 to 12. Six schools were represented in 2014.

Students complete written exams as a team at 5 different testing stations. Station topics are Aquatics, Forestry, Soils, Wildlife and a current environmental issue. The 2014 current issue was Sustainable Agriculture.

Testing stations were staffed by regional resource professionals from the PA Department of Conservation and Natural Resources, Bureau of Forestry; the USDA, Natural Resource Conservation Service; PA Game Commission; PA Fish and Boat Commission and the Conservation District.

First Place was won by "Team Tree Bark" from Claysburg-Kimmel High School. They went on to represent Blair County at the State Event.

Second Place was taken by Williamsburg High School's "Kickin Bass" and Third Place by the Bellwood High School "Blue" Team.

FFA Sponsored Contests

Annually the District, along with the FFA Chapters in the Bellwood-Antis, Central, Tyrone and Williamsburg School Districts, sponsor two contests specific to the Future Farmers of America Chapters.

Each spring a Public Speaking Contest is hosted at the county level in preparation for statewide participation. The winner of the Blair County "Conservation" Speech was Brandon Decker from the Tyrone Area FFA.

The fall brings the annual Land Judging Competition. Gary Stern hosted the 2014 event where the students are required to "judge" test pits dug to expose the soil horizons and characteristics.

Over 100 students converged on 4 test pits dug on the Stern Farm, located outside of Martinsburg .

First Place, for the second year in a row, with a perfect score of 300 points was taken by Nathan Smith, Central-Cove FFA -

Second Place by Ben Smith, Central -Cove FFA and -

Third Place by Aaron Clouse, Central-Cove FFA.

"…..students are required to judge test pits dug to expose the soil horizons and characteristics"

School Riparian Buffer Plantings

Still a popular school activity, the district continues to partner with local municipalities, agencies and school districts to develop and implement a lesson plan related to floodplains, water quality and riparian buffers.

Classroom presentations introduce the concepts of watersheds, stormwater, floodplains and buffers.

The culmination is a day long tree planting event. Students, teachers and parents planted over 500 trees at two locations in 2014. Work on Kentucky Avenue (a floodzone "buyout" property in the City of Altoona); and we started a new site on the Biddle Farm just outside of Williamsburg. There students also learned about and toured Best Management Practices used in Agriculture.

A "time capsule" is prepared for each site—packed by the students and planted beneath a tree at the closing of each event.

Interested in participating ….contact Jody Wallace at 696-0877 ext. 5. New planting sites and schools are being sought!

Trees planted along Clover Creek at the Biddle Farm

1407 Blair Street
Hollidaysburg, PA 16648

Phone: 814-696-0877 ext. 5
Fax: 814-696-9981
E-mail: bcd@blairconservationdistrict.org
www.blairconservationdistrict.org

Conservation District Board

Harold Bailey, Chairman
Blaine Smith, Vice-Chairman
Jim Biddle, Secretary/Treasurer
John Morrow
Alan Gearhart
Gary Long
Commissioner Terry Tomassetti

Conservation District Staff

Donna Fisher, District Manager
Margaret Angle, District Clerk
Rich Huether, Ag Conservation Specialist
Jim Eckenrode, Watershed Specialist
Chris Myers, Resource Conservation Technician
Diane Thomas, Resource Conservation Technician
Beth Futrick, Ombudsman
also in contract with the district
Jody Wallace, a.k.a. "the Creature Teacher"
as the Environmental Education Specialist

Conservation District Funding

The Blair County Conservation District receives funding from several sources to include: Local, State and Federal funds.

Annual allocations are received from the Blair County Commissioners through the General Fund and the PA Departments of Agriculture and Environmental Protection.

Most recently, conservation districts across the Commonwealth have been written into the Act 13 Legislation related to the Marcellus Shale Development in Pennsylvania. Impact fees are collected from the industry and a portion of those funds are distributed to the Conservation Districts through both the Public Utilities Commission (PUC) and the State Conservation Commission (SCC).

PUC funds in 2014 were received as a block grant in the amount of $56,818 per conservation district across the Commonwealth. The PUC funds in Blair County have been allocated for the development of the District Property on Bedford Street.

The SCC funds are distributed in base amounts plus a calculated portion based on Unconventional Well Counts per county. Blair County received a base amount of $76,063 plus an additional $6,436 for our 6 wells. These funds are utilized to cost share salaries and administrative expenses .

It is important to note that the SCC base amount is not necessarily "new funds" but rather funds that were available previously through line item allocations in the commonwealth budget and are included in the state program funds.

2014 General Fund Budget

Expenses:	
Salaries/Benefits	$313,473
Rent/Insurances/Audit	$ 30,350
Operating Expenses	$ 60,300
Payment to County	$ 33,000
Project Grants	$ 70,000
Total Expenses	**$507,123**
Revenues:	
Beginning Balance	$ 66,225
County Commissioners	$125,250
E&S/NPDES Fees	$ 25,000
State Program Funds	$217,333
Grants	$ 70,000
Misc. Revenue Sources	$ 3,315
Total Revenues	**$507,123**

90-0018.335 **Billboard Advertisement Photo Documentation**

Antis Township in Conjunction with the Blair County Conservation District and Blair County MS4 Work Group, Blair County, Pennsylvania

1. Billboard Advertisement located on Plank Rd, Altoona. Photo Taken: March 5, 2014

2. Billboard Advertisement located on Plank Rd, Altoona. Photo Taken: Feb 16, 2015

MCM #2 APPENDIX

1. **MCM #2 Project Plan**
2. **MCM #2 Attachments**

MCM#2: Public Involvement / Participation

Antis Township

2014-2015

BMP 1

Open meetings held at the Antis Township Supervisors and Planning Commission continue to encourage public input in the decision-making process (es) of land development activities related to stormwater management. MS4 Program updates were presented on February 5, 2015 at the Township Supervisors Meeting. Other opportunities are outlined as part of the partnership with the BCCD as described in the MOU referred to in MCM #1.

Periodic reports will be available to the public via the website, municipal office or by US Postal Service upon request.

The Township continues open and routine communication with watershed groups and environmental advisory committees and organizations operating in proximity to the Permittees regulated MS4s /receiving waters. Antis Townships contact list developed in MCM #1 BMP #2 will included contact information for appropriate groups.

BMP 2

Pennsylvania Municipalities Planning Code requires adequate opportunity for public review, feedback and input for any ordinance proposed for adoption by Antis Township. Public comments are always considered prior to adoption of any ordinance.

BMP 3

Antis Township meetings allow for public comment on any subject, including stormwater related issues. As stated in MCM #2, public review is always encouraged at Supervisors and planning commission meetings. The Blair County MS4 Work Group holds county-wide meetings to discuss the SWMP for all Permittees. All target audience groups listed as part of MCM#1 are invited and encouraged to attend these meetings which will also be advertised on the community websites and local newspapers. Other interested volunteer groups such as Boy Scouts, local schools (class projects) and church groups will be encouraged to participate.

Antis Township – February 5, 2015 Supervisors Meeting
MS4 presentation notes

Six Minimum Control Measures (MCMs):

1. Public Education and Outreach on Stormwater Impacts
   - Important moving forward – we have made it a long way with very little investment as a result of grant money. Do not want to squander time for educating public before grant money runs out and "real" money is being spent.
   - Likely will come a day when stormwater fees are assessed and public needs to be aware of what they are paying for (e.g. infrastructure projects, projects for pollution, etc.)
   - Educate audiences such as developers and contractors in addition to local residents and business/industry.
   - Blair CCD & the Blair County MS4 Work Group will be valuable assets for education; also included with MOU with Blair CCD.
2. Public Involvement/Participation
3. Illicit Discharge Detection and Elimination
   - Outfall mapping and monitoring – outfalls are mapped and monitoring can be done during routine O&M or by SMA as was done in the last permit cycle.
   - Stormwater MS4 mapping – Township must map entire separate storm sewer system, including all pipes, inlets, ditches, etc. EPA has come down hard on DEP to require the system mapping, which was not initially required during the first permit cycle.
   - Document inspections and violations
4. Construction Site Stormwater Runoff Control (Erosion & Sedimentation - E&S)
   - Blair CCD handles E&S reviews per MOU
   - Township must maintain records of reviews, inspections, violations, etc. The Blair CCD copies the Township on all correspondence they send out for reviews, inspections, etc.
5. Post-Construction Stormwater Management in New and Re-Development Activities
   - Handled through Township's SALDO & SWM Ordinances
   - Blair CCD assists with regulating SWM
   - Annual inspections of existing SWM facilities (public or private)
   - Document all inspections, violations, etc., including all review and inspection correspondence from Blair CCD.
6. Pollution Prevention/Good Housekeeping
   - O&M plan and schedule for existing stormwater facilities/infrastructure
   - O&M plan and schedule for operations areas run by the Township. Regular inspections of Township facilities (e.g. compost yard, garage area, fueling stations, maintenance areas, etc.).
   - Maintain log of inspections and document all repairs, changes, etc. (e.g. repair of leaking fuel tank)

The MCMs are broken down into more specific Best Management Practices / Goals. A well defined, written plan will be written with a breakdown of the Township's obligations (e.g.

educational info posted at Twp. building, pamphlets sent out with building permits, etc.). Checklists will also be provided to guide the Township through each goal and make sure the proper documentation is filled out and included with each annual report.

TMDL Plan:

Plan prepared by Center for Watershed Protection to address sediment TMDL and Chesapeake Bay TMDL's (Sediment, Nitrogen, & Phosphorous)

TMDL Plan outlines waste load allocations & reductions necessary to meet TMDL. Specific potential projects are listed in the Plan. Examples are various streambank restoration projects and riparian buffer construction projects. The Township's river road streambank stabilization project will reduce sediment load. The projects constructed by The Little Juniata River Association have also helped reduce loads.

Grants:

Grant from Nation Fish and Wildlife Foundation (NFWF) will fund construction of 6 projects within Blair County. One is being considered in Antis Township. The grant requires a local match of funds. The municipality where each project will be located will be performing the construction to achieve the local match. All materials and design will be paid for by the grant. The grant will also fund the purchase of stream monitoring and testing equipment hardware and software to aid the Blair CCD and County Workgroup in establishing baseline conditions within the stream and evaluate the efficiency of BMP's that will eventually be installed as part of the TMDL Plan. This approach is not done elsewhere but it will provide "real" data as opposed to utilizing theoretical models that may be significantly flawed.

The Alliance for the Chesapeake Bay also has a grant from NFWF that will be used to assist the Blair County MS4's. The grant will provide assistance with education and training for municipal employees, designers/engineers, contractors, developers, general public, and any other groups targeted by the public education and outreach programs for the MS4's. The Alliance and several affiliate groups will assist the County in addressing challenges with the MS4 permit requirements as a watershed instead of by municipal boundaries. This will require a great deal of cooperation by the member municipalities. The grant will also fund a watershed based website and the Alliance will provide assistance with modifying the Township's SWM Ordinance beyond the changes required by DEP. Funding challenges will also be addressed as part of the grant.

Moving Forward:

The grants will bridge the gap while getting our feet under us. We are fortunate to be given additional time to educate the public on what they will eventually be investing their tax dollars on. This will cost real money at some point. The grant money will only take us so far and the state and federal requirements will expand over time. Assessing a stormwater "tax" or "fee"

is inevitable some day. Stormwater is not traditionally considered a utility, which presents a real challenge: assessing a fee for the ability to discharge stormwater runoff, unlike a utility fee for water or sewer which is easily defined and quantified.

Tasks that need addressed in the short term are:

- Creating a written stormwater plan to address the 6 MCM's. This was presented in outline form as part of the Township permit renewal application. A more detailed, usable plan has been started. It will assist the Township in performing the tasks necessary to meet the MS4 permit requirements while easily managing the necessary work with a variety of personnel. The goal is to incorporate, with minimum burden, as much as possible into routine operation and maintenance activities.
- Mapping the entire MS4 system, including storm sewer, inlets, ditches, outfalls, etc.
- Revising the SWM Ordinance.

Next training/conference by Alliance for Chesapeake Bay to be held on March 18, 2015. Time and venue to be determined. Financing will be the topic and target audience will be municipal officials, managers, and engineers.

ANTIS TOWNSHIP
NPDES MUNICIPAL SEPARATE STORM SEWER SYSTEM PROGRAM SUMMARY
February 5, 2015

Introduction and Background

A **Municipal Separate Storm Sewer System (MS4)** is a publicly-owned conveyance or system of conveyances (i.e., ditches, curbs, catch basins, underground pipes, etc.) that is designed or used for collecting or conveying stormwater and that discharges to surface waters of the State.

Phase I, issued in 1990, required *medium* and *large* cities or certain counties with populations of 100,000 or more to obtain a **National Pollutant Discharge Elimination System (NPDES)** permit coverage for their stormwater discharges.

Phase II, issued in 1999, required regulated small MS4s in urbanized areas, as well as small MS4s outside the urbanized areas that are designated by the permitting authority, to obtain NPDES permit coverage for their stormwater discharges.

Impaired storm water runoff is often transported to municipal separate storm sewer systems (MS4s) and ultimately discharged into local rivers and streams without treatment. In order to minimize the amount of pollutants discharged into streams the **Environmental Protection Agency (EPA)** under its Storm Water Phase II Rule requires that NPDES permits for MS4s require implementation of a stormwater management program that contains six **Minimum Control Measures (MCMs)**, which include:

1. Public Education and Outreach on Stormwater Impacts
2. Public Involvement/Participation
3. Illicit Discharge Detection and Elimination
4. Construction Site Stormwater Runoff Control (Erosion & Sedimentation - E&S)
5. Post-Construction Stormwater Management in New and Re-Development Activities
6. Pollution Prevention/Good Housekeeping

Total Maximum Daily Loads

Early on stormwater management addressed water quality by controlling stormwater runoff in terms of volume and rate of runoff through **Best Management Practices ("BMP's")** for developments increasing impervious cover by more than 5000 Square feet. However under the NPDES permit for MS4's, stricter water quality standards were added due to Federal regulations that were passed to clean up the Chesapeake Bay as well as adhering to new requirements of the Federal Clean Water Act. Water quality standards establishing **Total Maximum Daily Loads ("TMDL"'s)** were added.

TMDL is defined as the sum of the individual waste load allocations and load allocations; a margin of safety is included with the two types of allocations so that any additional loading, regardless of source, would not produce a violation of water quality standards.

The watershed approach requires selection or definition of watershed size and begins with a comprehensive assessment of water quality in the watershed. After water quality impairments are identified, a planning process occurs to develop strategies that can successfully address and correct water quality issues in the watershed. Pennsylvania is using this process together with Federal Clean Water Act requirements to establish TMDLs to restore impaired streams so that they meet water quality standards.

TMDLs can be considered to be a watershed budget for pollutants, representing the total amount of pollutants that can be assimilated by a stream without causing water quality standards to be exceeded. The pollutant allocations resulting from the TMDL process represent the amount of pollutants that can be discharged into a waterway from each source. The TMDL does not specify how dischargers must attain particular load reduction. A TDML Plan, however, does specify how dischargers or permittees plan to reduce their TDML

A TDML Plan was to be part of the Township's last permit application, however there were suspected flaws in the **Department of Environmental Protection ("DEP")** TDML and mapping. The **Notice of Intent ("NOI")** for the Township's MS4 NPDES permit was submitted September 13, 2012. The Township has yet to receive a new permit or even acknowledgement of their permit application (this is the same for most MS4 permittees in the south central region, not just Antis Township).

Blair County MS4 Workgroup

Around the time of the NOI for the last permit application, all the municipalities with MS4's in the Altoona Urbanized Area, who had similar concerns, coordinated what is now known as the **Blair County MS4 Workgroup ("Workgroup").** The first Workgroup meeting was held on March 20, 2012. The purpose of the group was to share thoughts, ideas, information, etc. on EPA and DEP's permitting and to also combine our resources for minimum control measures 1 and 2.

Members of the Workgroup include The City of Altoona, Allegheny Township, Antis Township, Bellwood Borough, Blair Township, Duncansville Borough, Frankstown Township, Freedom Township, Hollidaysburg Borough, Logan Township, Newry Borough, Juniata township, Blair County Conservation District, Blair County Planning Commission, and Engineers representing the above townships, boroughs and city, including Stiffler,

McGraw & Associates, Keller Engineers, Levine Engineering, and Morris Knowles & Associates. There has also been limited involvement by The Pennsylvania State University and PennDOT, who are also MS4 permittees within Blair County.

Recent Activity Toward Compliance and Looking Forward

Over the last year or so, discussions with DEP, through the Workgroup, have shed light on deficiencies in the original application, even though no formal written correspondence has been drafted by DEP. The most significant deficiency discussed is the TMDL Plan required to address the Little Juniata River Sedimentation TMDL in the north half of the urbanized area and the Beaverdam Branch TMDL for metals associated with acid mine drainage in the south half of the urbanized area. Antis Township is completely contained within the Little Juniata River Watershed, and, therefore the Beaverdam Branch TMDL is not applicable.

The Workgroup, through the **Blair County Conservation District ("BCCD"),** applied for and utilized a $40,000 grant from the Chesapeake Bay Foundation to have the **Center for Watershed Protection ("CWP")** help us organize and prioritize our next steps in the new permit process, mainly a TMDL reduction Plan. CWP worked with DEP in resolving many of the issues, discrepancies, and conflicts within the state's TMDL. A TMDL Plan was generated and was recently forwarded to DEP for review. The TMDL Plan addresses the deficiencies in the state's TMDL by breaking down the waste load allocations for each municipality and provides outlines the necessary steps toward achieving the waste load reductions required by the TMDL. The TMDL Plan also addresses the waste load allocations to address the Chesapeake Bay TMDL's for nutrient and sediment loads. The Chesapeake Bay TMDL Plan will be required after the first year of the Township's new MS4 permit.

The Workgroup has began to utilize, again through the Blair County Conservation District, a 3-year $400,000 **National Fish and Wildlife Foundation ("NFWF")** grant to begin implementing recommendations made by the TMDL Plan authored by CWP. Additionally, though the Township's new permit has not yet been renewed, the grant will fund several implementation projects in the county to begin addressing the waste load reductions. Among other things, the grant will also provide funding for the BCCD to purchase stream monitoring hardware and software to increase their Monitoring and Testing capabilities. (NOTE: this grant was awarded largely due to the Inter-municipal co-operative effort of the MS4 Workgroup.)

Efforts to monitor our streams, and get real data, has grown into a county-wide testing and monitoring program. This testing will provide a baseline for recording correct TMDL's based on real data from the streams as opposed to theoretical modeling. DEP/EPA base their TMDL and BMP performance on modeling. This will allow us to measure the true

effectiveness of each BMP constructed so time and money is not wasted on facilities that do not perform to the levels predicted by these models.

The Inter-municipal co-operation and Testing/Monitoring initiatives have been recognized in several stormwater conferences and by various Non-profit organizations which should help us to acquire other potential grants.

Other items that need address during the next permit cycle include:

- Create a detailed written stormwater management program to assist the Township in implementing their MS4 permit and efficiently managing all aspects of the permit and eventual TMDL reduction plans. This plan will address each of the 6 MCM's and will break down each MCM by specific BMP's and the actions necessary to fulfill them. The plan will include itemized goals, checklists and forms necessary for the Township to efficiently carry out their permit obligations with a variety of municipal personnel and adequately document all necessary components of their MS4 permit. This will be important when generating the annual reports required to be submitted to DEP and for occasional audits which may be performed by DEP and/or EPA.
- Mapping the entire separate storm sewer system with the Township's MS4 urbanized boundary.
- Revise the Township's Stormwater Management Ordinance in accordance with the MS4 Permit.

References

Various information and language contained in this document was provided by Scott Campanaro of the City of Altoona's Public Works Department through the Blair County MS4 Workgroup

BLAIR COUNTY MS4 GROUP
TIMELINE AND SUMMARY OF STORMWATER REGULATIONS AND THE MS4 PROGRAM

1937 – Pennsylvania's Clean Stream's Law is enacted. Sanitary and stormwater treatment are in their infancy.

1972 – EPA's Clean Water Act is enacted, a national level approach to cleaning up the navigable waterways of the United States (i.e. making the water: swimable, fishable, drinkable). This mandate is either handled by the EPA or a State Delegated Agency. In Pennsylvania, this is DEP.

1990 – Phase I of the Municipal Separate Storm Sewer System (MS4) program is launched. Phase I requires medium and large cities or certain counties with populations of 100,000 or more to obtain a National Pollutant Discharge Elimination System (NPDES) permit for their stormwater discharges.

1999 – Phase II of the MS4 program is launched. Phase II requires regulated small MS4s in urbanized areas, as well as small MS4s outside the urbanized areas that are designated by the permitting authority, to obtain NPDES permit coverage for their stormwater discharges.

March 10, 2003 – Permits for MS4 Phase 2 are issued in Pennsylvania. NPDES Permit first cycle began.

March 10, 2003 – March 9, 2004 (Year 1) – During permit cycle year 1, education and outreach and public participation programs were established based on the a protocol outlined by DEP and the outfalls for each MS4 were to be mapped. The Blair County Conservation District (BCCD) also carried out tasks that fulfilled the permit requirements for each MS4 relating to education and outreach. The BCCD also mapped most of the outfalls within the MS4 areas. Stormwater Management, Erosion and Sedimentation Control, and Operation and Maintenance sections of the Subdivision and Land Development Ordinances were updated to incorporate low impact development criteria, stricter earth disturbance regulations and more detailed operation and maintenance requirements. Operation and Maintenance procedures for municipal operations and stormwater control facilities were also established during the first permit year. Annual reports are submitted within three months of the end of each permit year (On or before June 9 of each year).

March 10, 2004 – March 9, 2008 (Years 2 – 5) – Plans established during permit year 1 were carried out and improved upon. All outfalls were screened for illicit discharges at least twice during dry weather conditions and action was taken to remove the illicit discharges found during the process.

September 8, 2007 – Permits are administratively extended for 12 months (March 10, 2008 – March 9, 2009).

August 23, 2008 – Permits are administratively extended for 12 months (March 10, 2009 – March 9, 2010).

August 15, 2009 – Permits are administratively extended for 12 months (March 10, 2010 – March 9, 2011).

April 2010 – The EPA performed file reviews for most of (possibly all) MS4's in the DEP Southcentral Region. EPA Orders were sent out to 79 MS4's as a result of the reviews, including many in Blair County. The deficiencies outlined in the orders were to be fulfilled by October 2010.

August 13, 2010 - Permits are administratively extended for 9 months (March 10, 2011 – December 9, 2011).

December 11, 2010 - Permits are administratively extended for 6 months (December 10, 2011 – June 9, 2012).

September 17, 2011 – Permits are administratively extended for 6 months (June 10, 2012 – March 15, 2013).

March 20, 2012 – First meeting for the Blair County MS4 Work Group was held in an effort to share municipal resources throughout the County. Each MS4 municipality made individual efforts toward submitting applications to renew their NPDES Permit while utilizing shared resources, insight, and advice established during meetings held by the Blair County MS4 Work Group during the months to follow.

July 16, 2012 – A joint public education meeting was held at the Logan Township building by the Blair County MS4 Work Group and solicited public attendance within all Blair County MS4 municipalities.

July/August 2012 – A Memorandum of Understanding (MOU) was executed between each MS4 municipality and the Blair County Conservation District. The MOU outlines the responsibilities the Blair County Conservation District will take on in fulfilling permit requirements for the next permit cycle. Language was included in the MOU's specific to Best Management Practices established in each MS4 municipality's Stormwater Management Program.

September 14, 2012 – The deadline for MS4 NPDES Permit renewal submission. Each MS4 municipality submitted NPDES Permit renewal applications, which included a Stormwater Management Program (modeled from a DEP document formerly known as the stormwater protocol); proposed revisions to the Subdivision and Land Development Ordinance specific to stormwater management operation and maintenance requirements; updated MS4 system maps (e.g. outfalls, storm sewer system, ditches, roadways, etc.);

Total Maximum Daily Load (TMDL) Strategy Plans; updated Operation and Maintenance Procedures for municipal operations and stormwater control facilities; among other items.

March 27, 2013 – Joint municipal training sessions were held at the Logan Township building for highway and maintenance crews from all Blair County municipalities.

March/April 2013 – The Blair County MS4 Work Group and the Blair County Conservation District began efforts to secure grant funding to assist in creating and implementing the TMDL Plans as well as executing or enhancing other BMP's outlined in the municipal Stormwater Management Programs. The sources of potential grant money include the Chesapeake Bay Foundation (CBF) and the National Fish and Wildlife Foundation (NFWF).

May 14, 2013 – A letter of intent was authored by the Blair County Planning Commission on behalf of the Blair County MS4 Group to apply for a CBF grant providing funding for consultant services to assist the Blair County MS4 municipalities in completing the NPDES Permit renewal and in writing and implementing the required TMDL Plans.

May 23, 2013 – The grant through the CBF was approved pending an executed agreement by all parties to begin work with the Center for Watershed Protection, the consultant hired by CBF. A scope of work was established and includes developing a TMDL plan for the TMDL streams within the MS4 urbanized areas and the Chesapeake Bay TMDL Plan and assisting the Blair County MS4 municipalities with the outstanding permit items required for NPDES Permit renewal.

May/June 2013 – Multiple phone conversations with DEP revealed significant deficiencies in the NPDES Permit renewal applications, the most significant items involving the TMDL Strategy Plans.

June 24, 2013 – An agreement was executed between CBF and the Blair County Planning Commission (on behalf of the Blair County MS4 Work Group) and work officially began with the Center for Watershed Protection.

August 12, 2013 – A meeting was held at DEP's Southcentral Regional Office in Harrisburg between DEP Southcentral, DEP Central Office, EPA, the Blair County MS4 Work Group, the Center for Watershed Protection, and the Pennsylvania State University. This meeting discussed the deficiencies in the NPDES Permit renewal applications and the steps necessary to address these deficiencies. Issues with the TMDL documents prepared by DEP and approved by EPA for the Little Juniata River and the Beaverdam Branch were also briefly discussed. Research into solutions to the TMDL issues to follow.

September 2013 – Major issues with the Little Juniata River TMDL were identified and added a substantial amount of work load to the Center for Watershed Protection's scope of work. Major issues were also discovered in the Beaverdam Branch TMDL. A testing/monitoring program is being performed by the Blair County Conservation District and City of Altoona, with additional assistance from the Altoona Water Authority to obtain

real data on the Beaverdam Branch to refute the data published in the TMDL. This program is in addition to stream monitoring that is continuously performed by the Blair County Conservation District throughout the County.

October 2013 – NFWF officially awarded a $421,424 grant, with $437,180 match, to the Blair County Conservation District acting on behalf of the Blair County MS4 Work Group. This grant will focus on implementing several projects identified by the TMDL Plans to be approved with the NPDES Permit renewals as well as provide additional resources to assist the Blair County MS4 municipalities in executing and properly documenting many of the items identified in their Stormwater Management Programs. The grant will also provide funding for equipment for testing and monitoring the TMDL streams.

December 2-3, 2013 – Individuals from the Center for Watershed Protection and representatives from the Blair County MS4 Work Group toured the Blair County MS4 municipalities to identify sites for potential structural BMP's (e.g. stream restoration, stormwater detention facility retrofits, riparian buffer plantings, etc.) and create an inventory organized by priority based on a number of contributing factors.

December 4, 2013 – A Blair County MS4 Work Group Meeting was held at the Logan Township Building with Bryan Seipp of the Center for Watershed Protection to discuss the previous days' progress. Representatives from DEP were also in attendance to discuss the major issues with the TMDL's for the Little Juniata River and Beaverdam Branch and to discuss the current progress and next steps toward addressing the NPDES Permit renewal deficiencies.

June 2, 2014 – A draft TMDL Report/Plan was supplied to the Blair County MS4 Work Group by the Center for Watershed Protection for discussion, review, and comment.

June 3, 2014 – A Blair County MS4 Work Group Meeting was held with Bryan Seipp to discuss the draft TMDL Report.

June 2014 – October 2014 – Efforts were made to finalize the TMDL Report with the Center for Watershed Protection, including several Blair County MS4 Work Group Meetings and a conference call held on July 10 with DEP to discuss the next steps in the permit renewal process.

October 17, 2014 – The TMDL Report prepared by the Center for Watershed Protection was submitted to DEP for review and acceptance.

January 20, 2015 – The first of a series of conferences/trainings was held by the Alliance for the Chesapeake Bay at the ABCD Corp. These trainings are being funded by National Fish and Wildlife Foundation (NFWF) grant money obtained by the Alliance for the Chesapeake Bay and future trainings will be held and will cover a variety of topics for a variety of audiences designed to meet the needs of the Blair County MS4's.

January 23, 2015 – A Blair County MS4 Work Group Meeting was held to discuss the current status of MS4 permits, on-going efforts to identify and implement projects to be funded by the NFWF grant being administered by the Blair County Conservation District, and scheduling municipal training.

Note: Throughout much of the timeline leading up to and following submission of the NPDES Permit renewal applications, regular meetings were being held by the Blair County MS4 Work Group, or individuals within the Group, and substantial effort was being made to obtain or generate the necessary documents and plans to be submitted to DEP and to assist the Center for Watershed Protection in their efforts to revise DEP's TMDL's and develop TMDL Strategy Plans for both the Little Juniata River and the Beaverdam Branch watersheds.

Additionally, the grant funding currently secured and listed above are being utilized to maintain compliance with the existing MS4 NPDES permits. The continued efforts by the Blair County MS4 Work Group in securing and utilizing these funding sources have allowed each municipality to make significant strides towards permit renewal and development of the TMDL plans with minimal out-of-pocket costs. Award of these grants is largely attributed to this inter-municipal co-operation. In fact, the inter-municipal co-operation and testing/monitoring initiatives have been recognized in several stormwater conferences and by various non-profit organizations which should provide opportunities for the Work Group to secure additional grant funding in the future.

2014 Great American Cleanup of PA
Keep Pennsylvania Beautiful Summary Results

Table 4. 2014 Great American Cleanup of PA Summary Statistics/County *

County Name	Total Events Reported	Total # of Volunteers	Total # of Volunteers Under 18	Total # of Communities Involved	Total Bags of Trash Collected	Total Pounds of Trash Collected
Adams	36	483	16	38	646	12,920
Allegheny	144	10,422	903	170	16,721	334,420
Armstrong	47	764	27	48	4,025	80,500
Beaver	65	573	42	64	1,449	28,980
Bedford	24	264	28	19	2,200	44,000
Berks	50	834	50	51	1,835	36,700
Blair	83	1,622	14	82	7,929	158,580
Bradford	18	296	2	18	219	4,380
Bucks	222	5,787	462	248	10,796	215,920
Butler	67	689	107	67	570	11,400
Cambria	91	2,764	495	100	3,082	61,640
Cameron	11	56	0	11	1,045	20,900
Carbon	87	913	29	87	3,700	74,000
Centre	64	1,097	120	1,659	7,767	155,340
Chester	144	5,101	494	133	8,389	167,780
Clarion	23	421	49	28	494	9,880
Clearfield	35	745	63	37	503	10,060
Clinton	19	347	16	19	554	11,080
Columbia	35	329	3	37	707	14,140
Crawford	48	603	0	48	668	13,360
Cumberland	90	2,260	115	88	1,079	21,580
Dauphin	74	1,861	292	82	9,532	190,640
Delaware	45	1,242	53	53	2,440	48,800
Elk	36	605	32	37	2,180	43,600
Erie	164	8,839	2,165	119	2,061	41,220
Fayette	57	800	14	59	2,625	52,500
Forest	44	326	0	44	515	10,300
Franklin	29	364	0	29	461	9,220
Fulton	8	94	0	8	104	2,080
Greene	42	519	70	45	3,122	62,440
Huntingdon	40	736	20	42	1,444	28,880
Indiana	88	953	109	97	2,277	45,540

* Results collected through June 20, 2014. Includes data provided by PennDOT.

INTERNATIONAL COAST CLEANUP 2014 – NO EVENTS IN 2014
ROAD ADOPTIONS IN BLAIR COUNTY - 1 ROAD ADOPTION IN BLAIR 5 PEOPLE AND 13 BAGS OF TRASH

MCM #3 APPENDIX

1. **MCM #3 Project Plan**
2. **MCM #3 Attachments**

MCM#3: Illicit Discharge Detection and Elimination (IDD&E)

Antis Township
2014-2015

Antis Township verifies all outfalls and confirms that all outfalls have been located and mapped. Priority areas for dry weather field screening will include areas with older infrastructure, concentrations of higher-risk activities, or areas with histories of water pollution. Antis Township utilizes the EPA publication *Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments (CWP, October 2004),* for guidance. The Township is currently in the planning process with the Blair County MS4 Work Group to map the entire municipality's storm sewer collection system within the urbanized area, possibly through a county-wide MS4 mapping project. In the meantime, The Township will continue to update and maintain current mapping and include newly constructed facilities and previously missed facilities as necessary during each year of the permit coverage.

Antis Township plans to conduct dry weather screening of the priority areas identified in BMP #1 by visually inspecting the outfalls and sampling as necessary when flow is present. Outfalls will be inspected for color, turbidity, sheen, floating/submerged solids, adverse effects to environment, and odors. If the source of the discharge area cannot be easily identified and/or discharges show any indication of pollutants, then samples of the discharge will be collected for field/lab analysis of chemical and biological parameters such as pH, conductivity, E.Coli, fecal coliform, metals, suspended solids, dissolved solids, oils, ammonia, surfactants, chloride, fluoride, etc.

Outfall inspections shall be recorded on the Outfall Reconnaissance Inventory/Sample Collection field sheets excerpted from the *Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments (CWP, October 2004)*. Written documentation, regardless of the presence of dry weather flow, shall be maintained to justify a determination that an outfall is or isn't illicit. Actions will be taken to identify and eliminate any illicit flows. Any actions taken to identify and eliminate an illicit discharge shall also be documented. The Township did not have any illicit discharges reported during the reporting year.

The Subdivision & Land Development Ordinance, which fulfills the requirements for this MCM, has been implemented and is enforced during routine Township procedures. The Township requires all major Subdivision and Land Development plans be submitted for review by the Township Engineer with final approval given by the Township Supervisors. The Subdivision & Land Development Ordinance will be modified in accordance with the checklist provided by DEP.

The Township relies on the various activities included in the MOU with the BCCD to provide outreach about the detection and illumination of illicit discharges. The Township also plans to re-vamp procedure and written program to include updated mailing and various venues of material distribution to specific target audiences in the upcoming year.

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed:		Outfall ID:	
Today's date:		Time (Military):	
Investigators:		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: Last 48 hours:		
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	

Land Use in Drainage Area (Check all that apply):

- ☐ Industrial
- ☐ Ultra-Urban Residential
- ☐ Suburban Residential
- ☐ Commercial
- ☐ Open Space
- ☐ Institutional
- Other: _____
- Known Industries: _____

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☐ **Closed Pipe**	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☐ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☐ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: _____	In Water: ☐ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☐ No *If No, Skip to Section 5*				
Flow Description (If present)	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
☐Flow #2	Flow depth		In	Tape measure
	Flow width	____' ____"	Ft, In	Tape measure
	Measured length	____' ____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
Ammonia			mg/L	Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

Section 6: Overall Outfall Characterization

☐ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1. Sample for the lab?	☐ Yes	☐ No	
2. If yes, collected from:	☐ Flow	☐ Pool	
3. Intermittent flow trap set?	☐ Yes	☐ No	If Yes, type: ☐ OBM ☐ Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

MCM #4 APPENDIX

1. **MCM #4 Project Plan**
2. **MCM #4 Attachments**
    a. **Blair County Conservation District Memorandum of Understanding**

MCM#4: Construction Site Stormwater Runoff Control

Antis Township

2014-2015

Antis Township has chosen to rely on DEP's statewide program for issuing NPDES Permits for Stormwater Discharges Associated with Construction Activities to satisfy all requirements and BMP's under MCM #4. A Memorandum of Understanding (MOU) has been signed by Antis Township and the Blair County Conservation District. The MOU spells out the responsibilities of the Conservation District under MCM #4 which includes definitions of the roles and responsibilities involved with the program. The Conservation District preforms regular inspections of all active construction sites locations within the MS4 and forwards copies of inspections and violation notices to the Township. Antis Township also addresses construction site runoff in their Subdivision and Land Development Ordinance.

MEMORANDUM OF UNDERSTANDING
Between the

Blair County Conservation District
(hereinafter sometimes referred to as "District")
And

Antis Township
(hereinafter sometimes referred to as "Municipality")

STATEMENT OF PURPOSE

This Memorandum made and executed this Second day of August, 2012, has been prepared jointly and agreed upon by each party, the same parties intending to be legally bound hereby, for the following purposes to the extent applicable:

To serve as a joint commitment by the signatory parties to control accelerated erosion and to minimize sediment pollution to the waters of the Commonwealth which may result from the conduct of earthmoving activities in **Antis Township.**

To serve as a basis for stating the role of each party in administering the provisions of Antis Township's Subdivision and Land Development Ordinance (#2-2011), Erosion and Sediment Control Ordinance # 3-2011, and Stormwater Management Ordinance (#4-2011) as amended from time to time.

I. In carrying out the intent of this memorandum, the Blair County Conservation District (District) shall:

A. Receive all Stormwater Management and Erosion and Sediment control plans (E&S Plan) as required under Ordinances (#3-2011, #4-2011) and complete an initial review of the Stormwater Management and E&S Plans within 45 calendar days of its receipt. Any subsequent reviews of Stormwater Management and E&S Plan submissions (revisions) will be completed within 30 calendar days of receipt.

B. Within ten (10) working days of completion of review, notify in writing, the consultant, the applicant, and the municipality of all Stormwater Management and E&S Plan approvals, deficiencies, and all determinations that an Stormwater Management or E&S Plan cannot be approved because of inadequate information and/or a failure of the applicant to develop a Stormwater Management and E&S Plan in compliance with the provisions of the ordinance and in compliance with Chapter 102.

C. Upon request, provide all applicants with a Department of Environmental Protection (DEP) Erosion and Sediment Pollution Control Program Manual and related forms, worksheets, checklists, etc. necessary to successfully prepare an E&S Plan, NPDES Permit and Post-Construction Stormwater Plan.

D. In accordance with a routine inspection schedule contained in the ordinance, and/or upon the request of the municipality, and /or upon the receipt of request from a third

party, inspect ongoing earth disturbance projects and complete a standard DEP site inspection report. In conjunction with this responsibility, the District shall:

1. Advise the municipality of all third party complaints within 10 calendar days of their receipt.

2. Provide a copy of all inspection reports to the affected responsible party (ies) and municipality within 10 calendar days of the inspection.

E. Serve as the repository for all E&S Plans, NPDES Permits, complaints, inspection reports, correspondence, etc that involve earth disturbance activities. All such information shall be contained in a filing system which shall be available for inspection by the municipal officials for a time frame that is consistent with the DEP Records Retention Policy.

F. Commit the necessary staff time, and provide all information necessary to assist the municipality in conducting enforcement proceedings as specified in Ordinance # 3-2011.

G. As part of and as stated in a Delegation Agreement with the DEP, the District shall administer and implement the Commonwealth's Erosion, Sediment, and Stormwater Control Program and through the Delegation with DEP and this MOU shall assist **Antis Township** in maintaining compliance with: Minimum Control Measures (MCM) #4; #5 (BMP #1, #2 and #3) of Antis Township's NPDES Municipal Separate Stormsewer System (MS4) permit;

H. Assist, as staffing allows, **Antis Township** in maintaining compliance with Minimum Control Measures (MCM) #1; #2 and #6 of the municipalities MS4 Permit.

I. Annually, prepare and send to the municipality a summary of District activities related to MS4 MCM's.

J. Conduct inspections in response to complaints regarding agricultural earth disturbance activities, including agricultural plowing and tilling or animal heavy use areas. Copies of the inspection report will be supplied to the municipality within ten (10) days of completion.

K. Upon receiving a request from the municipal officials, and after appropriate municipal representatives have received the required training, the District will provide technical assistance and financial support, to the limit of its allocation approved by the State Conservation Commission, for projects qualifying for the Dirt and Gravel Roads Program. The District will provide the municipality with this service by-way-of an agreement with the municipality.

L. As part of a Delegation Agreement with the State Conservation Commission, the District will review all nutrient management plans submitted under Act 38 (PA Nutrient Management Act), approve those plans that meet Act 38 standards and monitor implementation of these plans. In addition, the District will provide information on federal nutrient management initiatives or confined animal feeding operation (CAFO) regulations. The District will upon request evaluate and determine if an individual operation is subject to Act 38.

M. Upon written request by a landowner or operator, the District will facilitate conservation planning technical assistance to farm owners and or operators. Within the limits of our allocations, the District will provide cost share assistance to eligible landowners or operators.

N. As part of a Delegation Agreement with the DEP and at the request of the County Commissioners, the District's Watershed Specialist will assist municipal officials and citizen groups to form watershed associations for the purpose of addressing local water resource issues on a watershed basis. The Watershed Specialist will also be available to assist municipal planners that wish to incorporate a watershed focus into zoning and land planning.

O. The District will, in a timely manner, provide municipalities with current information relating to changes in fee schedules, regulations, program requirements, or permits for those program areas that are discussed in this Memorandum of Understanding.

II. In carrying out the intent of this Memorandum, Antis Township shall:

A. Notify the District within 5 days of receipt of an application for any permit or approval that could involve earth disturbance activities consisting of 1 acre or more, pursuant to Chapter 102.42.

B. Pursuant to Chapter 102.43, **Antis Township** shall not issue building or other permit or approval to those proposing or conducting earth disturbance activities requiring a Department permit until the Department or District has issued the E&S or individual NPDES Permit or approved coverage under a general NPDES Permit for Stormwater Discharges Associated with Construction Activities under Chapter 102.5.

C. Shall provide instructions to have the E&S Plans submitted to the District and forward all questions pertaining to the preparation of E&S Plans and Applications and tracking forms to the District.

D. Forward all third party complaints about ongoing earth disturbance projects to the District for their inspection.

E. Upon notification by the District, withhold any building, grading, or other permits that apply as specified in the ordinance or Chapter 102.43, when and where it has been determined that an applicant has failed to secure E&S Plan approval from the District.

F. Contact the District seeking services of the Ombudsman to assist with ordinance review and/or potential conflict resolution resulting from the interface of production agriculture and urban constituents.

G. Disseminate natural resource conservation information and written materials to the general public

H. Seek assistance from the District when natural resource protection concerns arise in your municipality.

I. Encourage and support appropriate local watershed activities and will invite the District's Watershed Specialist to participate with watershed-related projects and planning activities.

J. Inform permit applicants of new or updated permit requirements or program information as the District provides such information.

K. Consult with the District before referring to or assigning responsibilities to the District in any of their ordinances.

L. Chapter 102.4 requires all farming operations that disturb over 5,000 sq ft to have a conservation plan/Ag E&S plan. This also includes no-till as an earth disturbing practice. Along with the conservation plans, the Commonwealth also requires farmers to have a manure management plan, Chapter 91, developed for every farm that produces or spreads manure on their ground, no limit on size or scope of operation. Once farm size reaches certain thresholds based on livestock, further requirement for nutrient management may be required(such as Act 38 or CAFO). These plans must be available upon request for review from the landowner/operator. The District highly recommends that Antis Township require development of these plans before building permits for agricultural operations are approved.

M. Rely upon the Commonwealth's Erosion, Sediment, and Stormwater Control program through this MOU to comply with MCM #4 of Antis Township's NPDES MS4 program.

III. This Memorandum of Understanding shall become effective immediately. It shall be reviewed annually, as the need arises by either or both parties, and may be amended by mutual consent of both parties. This MOU may be terminated at any time, by either party, following a 60 day written notice to the other party.

FOR ANTIS TOWNSHIP

Raymond E. Amato — Chairman of the Board

8.2.2012
(DATE)

FOR THE BLAIR COUNTY CONSERVATION DISTRICT

Harold W Bailey
(CHAIRMAN)

8/20/12
(DATE)

MCM #5 APPENDIX

1. **MCM #5 Project Plan**
2. **MCM #5 Attachments**

MCM#5: Post-Construction Stormwater Management (PCSM) in New and Re-Development

Antis Township
2014-2015

Antis Township has chosen to rely on DEP's statewide program for issuing NPDES Permits for Stormwater Discharges Associated with Construction Activities to satisfy all the requirements under BMPs #1 through #3 of this MCM #5; therefore, all requirements are met for BMPs #1 through #3 of this MCM #5 and for all requirements under MCM #4.

All major Subdivision and Land Development plans are reviewed by the Township Engineer to confirm compliance with the ordinance. All Subdivision and Land Development plans must adhere to the regulations specified in the ordinance, such as stormwater runoff magnitude and volume limits, and are subject to final approval by the Township Supervisors. When an NPDES permit for stormwater discharges associated with construction activities is required, the Blair County Conservation District and/or DEP may also review the Post Construction Stormwater Management Plan.

Land Development projects that require post construction SWM BMP's are required to establish a maintenance program. The facilities that are conveyed to the Township are inspected prior to taking over. Once conveyed, all facilities are inspected and maintained according to the Township's operation and maintenance program. SWM BMP's to remain privately owned are given a final inspection by the Township or Township Engineer prior to financial security release.

STRUCTURAL STORMWATER MANAGEMENT BMP'S CONSTRUCTED IN ANTIS TOWNSHIP SINCE MARCH 2003

Structural BMP	Type of SWM	Drainage Area (acres)	Storage Volume (cubic feet)	Receiving Water Body	Inspection Frequency	Person or Organization Responsible for Maintenance	Located in MS4 Urban Boundary? (Y/N)		Mapped? (Y/N)
							2000 Census	2010 Census	
Meyers Elementary School Stormwater Facility	Bioretention Basins	1.05	4,582	Little Juniata River	Annual by Twp.	Property Owner	Y	Y	Y
Raystown Transit Service Detention Facilities	Dry Detention Basin	2.08	5,706	Little Juniata River	Annual by Twp.	Property Owner	N	N	Y
Reilly Garage Pipe Storage Facility	Underground Detention	0.24	388	Little Juniata River	Annual by Twp.	Property Owner	N	N	Y
Bellwood Plaza (Kopp Drug) Stormwater Facility	Underground Detention / Infiltration	1.92	4,077	Little Juniata River	Annual by Twp.	Property Owner	Y	Y	Y
Winterstein Plaza Stormwater Facility	Underground Detention / Infiltration	1.31	5,179	Sandy Run	Annual by Twp.	Property Owner	Y	Y	Y
Todd Himes Garage Infiltration Trench	Infiltration Trenches	0.43	4,006	Sugar Run	Annual by Twp.	Property Owner	N	N	Y
John Yau Office & Retail Plaza Stormwater Facility	Underground Detention / Infiltration	1.09	6,547	Sandy Run	Annual by Twp.	Property Owner	Y	Y	Y
John Deere & Builders Surplus Detention Facility	Dry Detention Basin	2.02	7,105	Little Juniata River	Annual by Twp.	Property Owner	Y	N	Y
Comfort Inn Stormwater Facility	Bioretention Basins	8.75	207,991	Sandy Run	Annual by Twp.	Property Owner	N	Y	Y
New Life Assembly of God Stormwater Facility	Underground Detention	0.71	1,196	Sandy Run	Annual by Twp.	Property Owner	N	N	Y
Enterprise Campus Stormwater Facility (Gardner Denver)	Bioretention Basins	5.82	33,049	Little Juniata River	Annual by Twp.	Property Owner	N	N	N
Jeff Long Rest./Office/Retail (LaScalias/Seltzers)	Underground Detention	2.21	9,060	Sandy Run		Property Owner	Y	Y	N
Jeff Long Graystone	Dry Detention Basin	0.66	2,518	Sandy Run		Property Owner	Y	Y	N
	Underground Detention	1.10	8,554						
Days Inn Pinecroft	Bioretention Basin	1.49	10,665	Sandy Run		Property Owner	Y	N	N
Dennis & Susie Himes L.D.									

MCM #6 APPENDIX

1. **MCM #6 Project Plan**
2. **MCM #6 Attachments**

MCM#6: Pollution Prevention/Good Housekeeping for Municipal Operations

Antis Township

2014-2015

Antis Township is currently in the process of re-writing the Pollution Prevention and Good Housekeeping for Municipal Operations Plan included with previous submissions. The Plan will be based on the template published and purchased from the Lancaster Inter-Municipal Committee (LIMC). The LIMC template includes thorough written plans outlined by the requirements set forth in the MCM#6. The Township also plans to have the facility and operations inspected by the Township Engineer to include a self-audit and recommendations in order to tailor it's O&M program to the Township's needs.

Open channels, small culverts, storm sewer inlets, detention facilities, roadside drainage swales, and infiltration facilities are inspected by Township staff on a regular basis. Maintenance and repairs are conducted as needed. A fall and spring leaf and limb collection program is also conducted. The Township establishes specific dates in which they pick up leaves and limbs from Township residents throughout the fall and spring. Refer to attachment for the O & M plan currently in place.

Vehicle and equipment maintenance is performed by the Township. Any waste generated is disposed of in approved containers and picked up by a certified collector. Refer to attachment for the pollution prevention/O & M plan currently in place. Antis Township is currently in the process of overhauling and updating the current O& M Plan. The Township has initiated a self-audit and inspection of the Township's facility by the Township's Engineer to evaluate compliance and provide recommendations based to MS4 regulations and BMPs. The updated O&M Plan will address proper maintenance of municipal operations and facilities and include implementation planning to address MS4 regulations.

Information and training with respect to storm water management regulations and updates to the O & M and pollution prevention plans are given to all appropriate employees, as necessary. Joint municipal training is planned annually with the Blair County MS4 Work Group and Blair County Conservation District. Antis Township will continue to train any new employees upon hiring. Training activities are documented in the appropriate manner to include dates, names, topics covered and training presenters.

EXHIBIT 16

POLLUTION PREVENTION OPERATION AND MAINTENANCE PROGRAM FOR ANTIS TOWNSHIP

The Small Municipal Separate Storm Sewer Systems (MS4) permit requires the development, implementation and maintenance of an operation and maintenance (O&M) program for all municipal operations and facilities that could contribute to pollutant discharge. The goal of this program is to reduce or prevent pollutant runoff from municipal operations.

Structural Control Maintenance Program:

Antis Township inspects and assesses the structural storm water controls for sediment buildup, structural integrity, and the presence of illicit discharges. Maintenance activities are conducted along drainage inlets, ditches, and pipes and channels. Types of maintenance activities include removing floatables (i.e. grass clippings and trash), sediment, and other pollutants from storm drains and repairing structural damage and erosion of existing channels. Antis Township will replace and repair inlets/catch basins as necessary. The public is also encouraged to report areas in need of maintenance. A record log will be maintained on site of all inspections and maintenance completed, or scheduled to be completed on the stormwater facilities and Best Management Practices (BMP's).

Leaf and Limb Collection Program:

Antis Township currently collects leaves and tree limbs throughout the Township each year. Residents are urged to place the leaves and limbs at a designated location near the street right-of-way line where they will be collected according to a schedule established by the Township and published for public participation.

The leaf collection program is implemented during the fall season from late October through mid November. The Township requests residents to place leaves roadside so that a leaf vacuum can reach the leaves or bag leaves in brown paper bags. The leaves are then disposed of at the Township's compost yard.

The Township collects tree limbs in the spring season with the intention to collect limbs fallen throughout the winter season. The Township urges residents who accumulate limbs outside the limb collection season to take the trimmings/limbs to the Township compost site. Limbs are chipped by the Township and recycled for use as mulch.

Composting:

Antis Township operates a Yard Waste Composting Facility which is open all year to residents of the Township. Township residents are encouraged to use the compost facility for yard waste including tree trimmings (<4" in diameter), leaves, grass clippings, and Christmas trees. Mulch and compost from the site is available to the Township residents at no charge (unless the Township is requested to load the mulch, in which, a charge of $15 per scoop is applied).

Municipal Vehicle Operation:

1. Municipal vehicles shall be operated in a manner that reduces the potential for pollution to the municipal storm sewer system and to the environment. This should include obeying all road and traffic rules and being alert at all times.
2. In the event of a vehicle pollution incident involving vehicle fluids or cargo, all attempts will be made to prevent the spilled material(s) from entering the storm sewer system of any nearby waterways. This may include diking, damming, absorbing, or removing the material from the affected area. All recovered material will be properly disposed of in accordance with all applicable state and federal waste disposal regulations. Appropriate spill containment and recovery equipment will be maintained at the public works facility. For any spill beyond the Township's ability to properly address, local contractors would be contacted for assistance. A list of appropriate contractors will be maintained and readily available. Other entities to be contacted may include PA DEP, PA Fish & Boat Commission, water users, etc.)

Municipal Vehicle Maintenance:

The Township performs minimal maintenance and repairs to vehicles (i.e. fluid changes).

1. Vehicle maintenance will be performed indoors to reduce the potential for leaks of spills into the storm water collection system.
2. Non-hazardous cleaners and solvents will be used when possible.
3. Products of maintenance activities (i.e., greasy rags, used oil filters, air filters, batteries, degreasers, used oil, used coolant, etc.) will be placed in appropriately labeled containers for disposal or recycling.
4. Areas containing spillage or contaminants will not be washed or hosed off so that runoff will not enter the storm system. Dry cleanup methods and/or absorbent materials will be utilized when appropriate.
5. Appropriate materials for the cleanup and disposal of oils, chemicals, and other hazardous materials will be maintained on site. (e.g., absorbent pads, drip pans, fluid recycling bins, waste containers, etc.)
6. Indoor floor drains will not be connected to any part of the storm sewer system to prevent discharge from entering the environment.
7. Drip pans or containers will be utilized for leaking vehicles when necessary.
8. Outdoor vehicles will be inspected periodically for evidence of leakage and repaired immediately.
9. Vehicle storage and maintenance areas will be inspected routinely to determine the effectiveness of the O&M program. Inspection records will be maintained and any deficiencies will be promptly addressed.

Municipal Vehicle/Equipment Washing:

1. Municipal vehicles are to be washed inside the Township garage/shed/bay areas or at commercial establishments, where water can be recycled or directed to treatment.
2. A designated cleaning area within the Township garage/shed/bay will be utilized so that debris/sediment can be contained in the trench drain system sediment trap.
3. The sediment trap will be cleaned out after each vehicle/piece of equipment is washed.
4. Phosphate-free biodegradable detergents will be used when possible.

Municipal Vehicle/Equipment Fueling:

The Township fuels gasoline vehicles at a commercial fueling station. The Township maintains a diesel pump/tank which is set on a gravel pad designed to absorb small fueling spills. The diesel tank is located away from any waterways and is visually inspected regularly by employees.

1. All fueling operations will be constantly monitored in order to prevent or quickly react to spillage.
2. "Topping off" vehicle tanks is discouraged.
3. All spillage from fueling activities will be cleaned up immediately. Appropriate clean-up materials such as oil dry or absorbent pads will be maintained at the fueling area which will be used to prevent spillage from entering into any storm drainage systems.
4. Cleaning fueling areas with running water will be avoided. Absorbent materials/mops will be used for routine cleaning.

ANTIS TOWNSHIP POLICY FOR THE INSTALLATION OF STORMWATER PIPE	
Date of Adoption July 6, 2006	**Date of Latest Revision**

1.0 PURPOSE

The Antis Township Board of Supervisors is aware that storm water runoff is a growing problem and that different situations may dictate how storm water runoff must be conveyed in different areas of the Township. The Township recognizes that proper installation and maintenance of storm water piping is a large part of managing storm water run off effectively. The following policy addresses how stormwater pipe will be installed within the Township right of way.

1.1 DRIVEWAY PIPE

The following section identifies the procedure for the installation of driveway pipe(s) within the Township right of way.

A. Upon receipt of a Township *Road Occupancy Permit Application*, the Township Road Foreman will visit the site and determine if a one-pipe or two-pipe installation is required and that the driveway complies with all other Township ordinances and regulations.

B. Costs associated with the driveway pipe installation shall be the property owner's responsibility. The following options are available:

1. The property owner may request that the Township install the driveway pipe.

   a. The applicant shall pre-pay in accordance with the fee schedule established in Section 1.4 of this policy.

   b. Pipe installation must be scheduled at least two weeks in advance to allow adequate time for the Road Foreman to schedule the work crew.

2. The property owner may arrange to have the pipe privately installed.

   a. The pipe shall be installed in accordance with the terms of the Township *Road Occupancy Permit*.

   b. The Township will not sell any piping or other material. Acquiring materials to complete the job will be the responsibility of the property owner and their contractor.

c. The Township Road Foreman will inspect the project before, during and after installation.

1.2 STORMWATER PIPING (OTHER THAN DRIVEWAY PIPE)

The following section identifies the Township policy for the installation of stormwater piping in applications other than driveways.

A. It is the policy of the Township to maintain open ditches verses piping to carry storm water from one area to another. Ditching preserves the roadways by allowing water to drain from under the road surface, which helps prevent road deterioration due to winter freezing and thawing.

B. It is the policy of the Township that placement of any piping along Township roads (other than driveway pipes) must be pre-approved by an official vote of the Board of Supervisors.

1. The Township Road Foreman will determine the amount and size of the pipe that is needed as well as the location and size of clean-out boxes and any other specifics related to the project.

2. The property owner will incorporate the information provided by the Road Foreman into a site plan, which will be provided to the Board of Supervisors for consideration.

3. Only after receipt of written approval from the Board of Supervisors may the property owner make arrangements to have a private contractor install the pipe.

4. The Township will inspect all storm water pipe projects before, during and after installation.

5. It shall be the sole responsibility of the property owner to keep open and clear (at all times) all stormwater piping, storm water collection boxes, etc that has been installed as part of this project.

1.3 MISCELLANEOUS

A. It shall be the sole responsibility of the property owner to maintain their driveway pipe regardless of who completed the installation

B. In all cases, it shall be the responsibility of the property owner to replace any blacktop, concrete or other overlay, which was removed during the installation of the driveway pipe.

C. In order to protect the health and welfare of other residents, the Township retains the right to remove all stormwater piping from the Township right of way if the property owner fails to keep it clear and open.

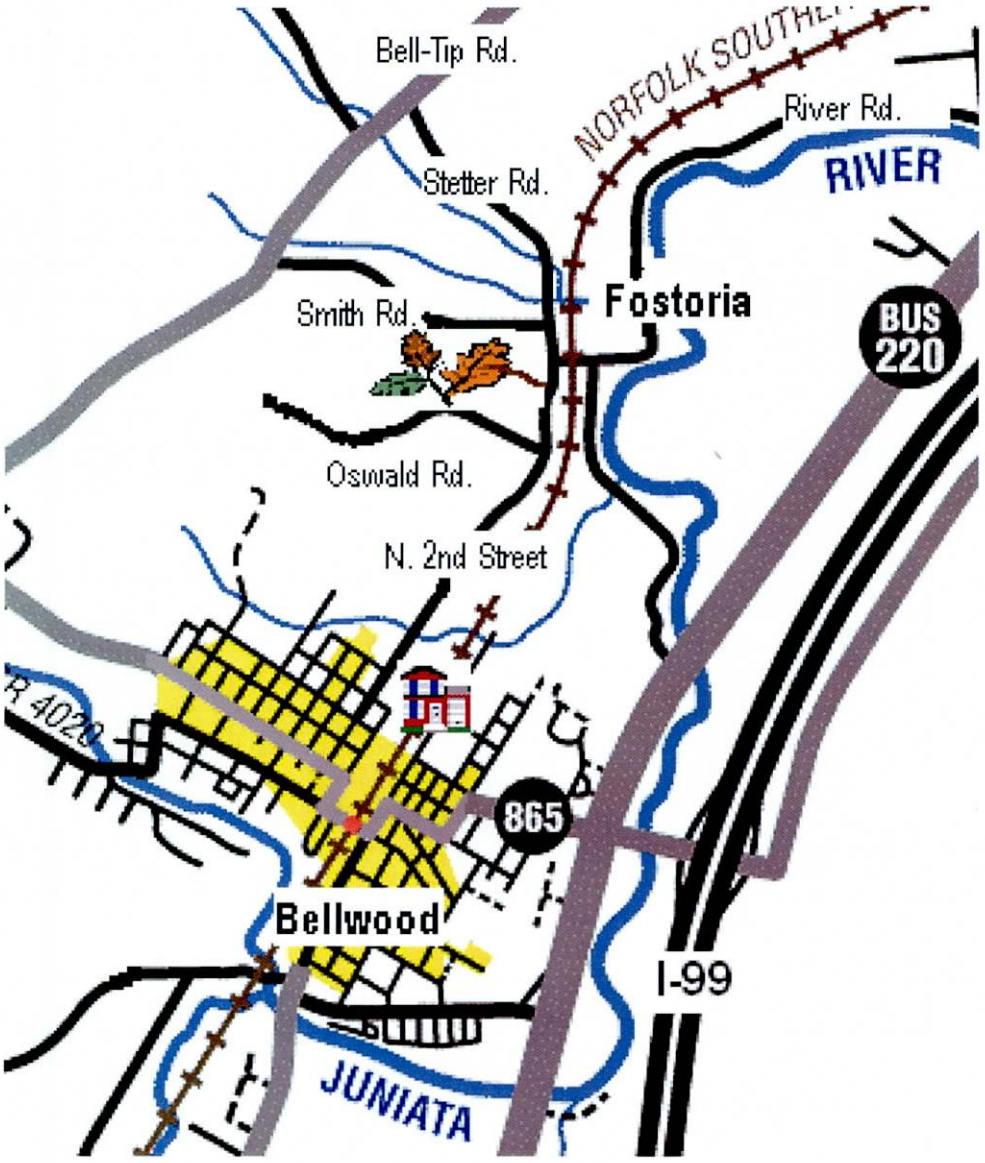
D. In addition to this policy, all driveway pipes installed as part of an approved Plan under the Township Subdivision & Land Development Ordinance shall be installed in accordance with the terms and conditions of that approval.

1.4 FEE SCHEDULE

Type of Installation	15"	18"	24"
One pipe installation	$540.76	$608.18	$712.48
Two pipe installation	$809.68	$944.51	$1,153.12

* Prices subject to change due to fluctuation in material and/or labor cost.

Map to the Antis Township Compost Facility



Directions: From the Municipal Building, travel northeast on North Second street approximately 9/10 of a mile. The compost facility is on the left side back a short dirt road (visible from the road). If you get to the crossing in Fostoria you have gone too far.

Pollution Prevention and Good Housekeeping for Municipal Operations and Maintenance

Operations and Maintenance Program Development Tracking Form

Municipality: _____

Contact Name: _____

Date: 20___

Storm Water Facility Operation and Maintenance Program Development: Existing Program Information (for Permit Year 1)			
Storm Water Facility Type (check if applicable)		Existing Programs	
		Description of Corrective Maintenance Activities	Description of Preventative Maintenance Activities
	Open Channels		
	Culverts		
	Detention Facilities		
	Drainage Swales		
	Infiltration Facilities		
	Other		

Storm Water Facility Operation and Maintenance Program Development: Proposed Program Modifications (for Permit Year 2)			
Storm Water Facility Type (check if applicable)		Proposed Program Modifications	
		Description of Corrective Maintenance Activities	Description of Preventative Maintenance Activities
	Open Channels		
	Culverts		
	Detention Facilities		
	Drainage Swales		
	Infiltration Facilities		
	Other		

Vehicle Maintenance, Fueling and Washing Program Development: Existing Program Information (for Permit Year 1)	
Type of Activity	**Description of Existing Programs and Procedures** (Include information on location, materials, disposal practices)
Vehicle Maintenance	
Vehicle Fueling	
Vehicle Washing	

Vehicle Maintenance, Fueling and Washing Program Development: Proposed Program Changes (for Permit Year 2)	
Type of Activity	**Description of Proposed Changes to Existing Programs and Procedures** (Include information on location, materials, disposal practices)
Vehicle Maintenance	
Vehicle Fueling	
Vehicle Washing	

Highway and Maintenance Crew Training
Mandatory for Blair County MS4 Communities

As part of our MS4 responsibilities, we are required to hold mandatory training for our highway and maintenance crews. The 13 member Blair County MS4 Workgroup, has worked together to hold this joint training. This training will become a part of each municipality's annual report. Because of this, it is important that each municipality is represented with their highway and maintenance crews.

Date: **Wednesday, February 25, 2015**

Time: Morning Session **10:30am – 11:45am**

OR

Afternoon Session **12:15pm - 1:30pm**

Lunch will be provided for both sessions from 11:45am-12:15pm.

Lunch is being provided courtesy of the Blair County Conservation District, Keller Engineers, and Stiffler McGraw.

Location: Logan Township Municipal Building
First Floor Meeting Room
100 Chief Logan Circle
Altoona, PA

Topics to be Covered:

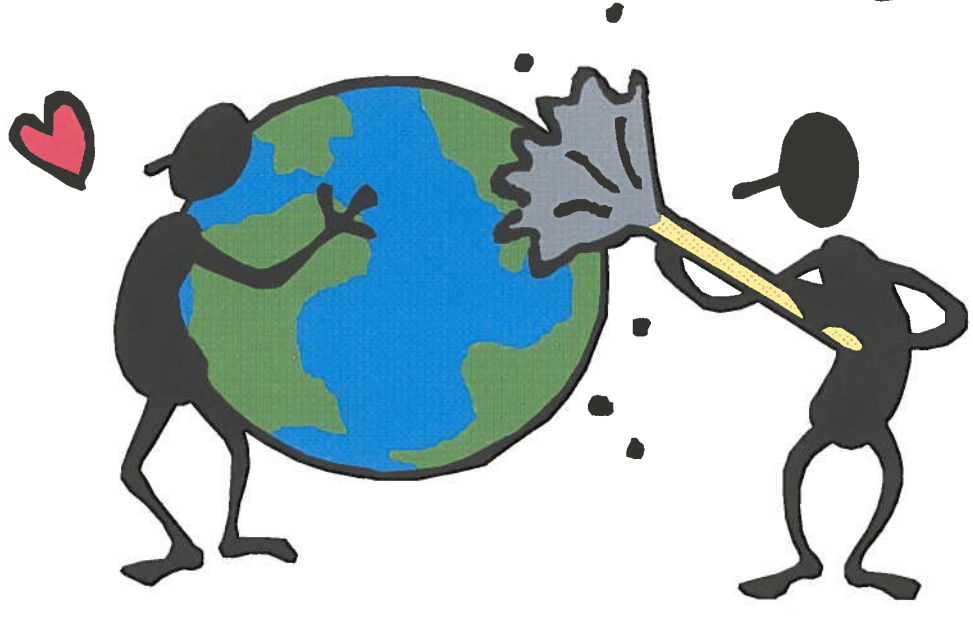
Illicit Discharge Detection and Elimination
Erosion and Sediment Control

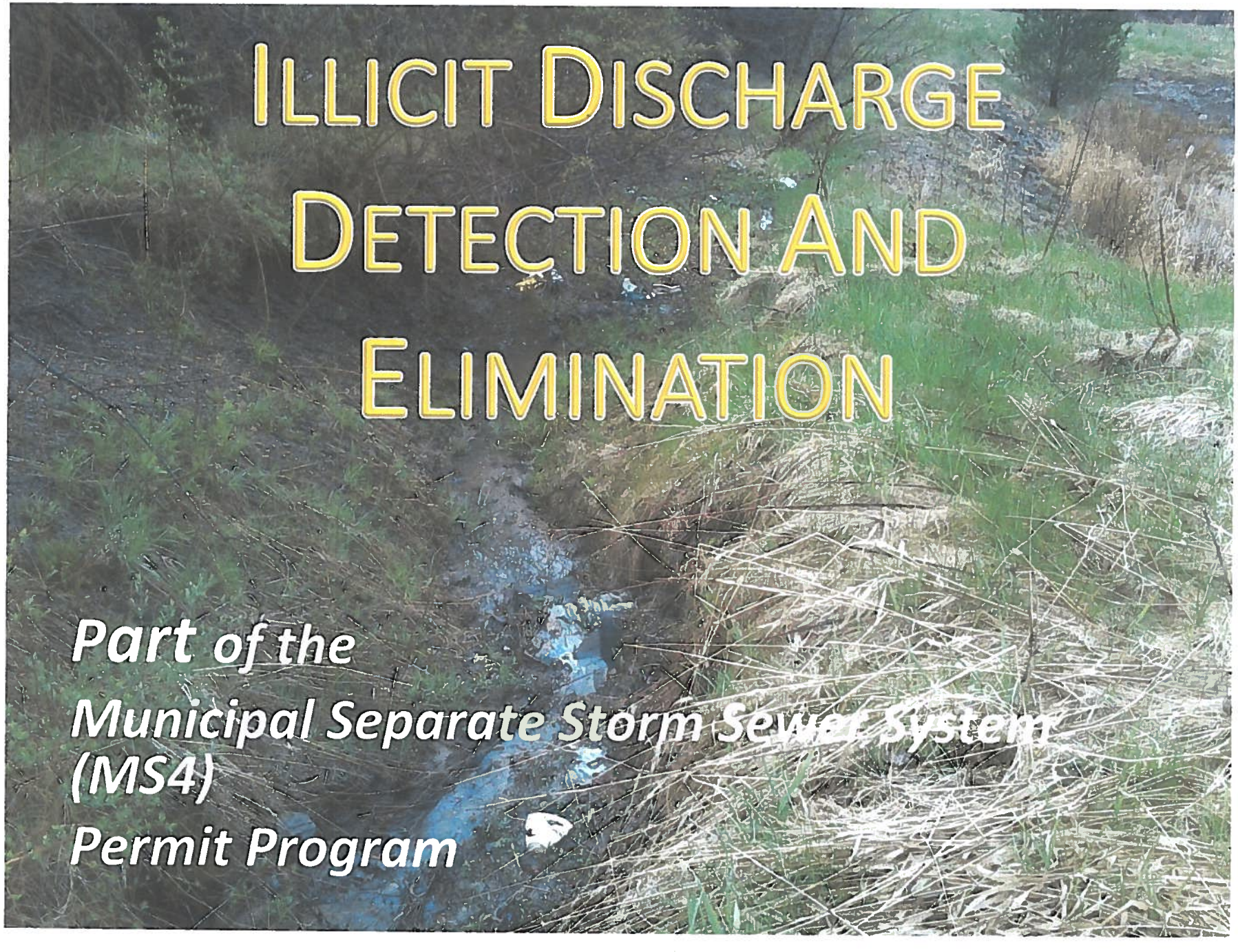
Cost: FREE

Registration: Please contact Cassandra Schmick, Logan Township at 814-944-5349 or by e-mail at cschmick@atlanticbbn.net. I will need to know the number of employees that will be attending each session. If you have a larger crew, please try to split them between the morning and afternoon sessions. Please respond by Friday, February 13th.

Doing Your Job...
for the Environment

Erosion Control Considerations for Public Works Employees




ILLICIT DISCHARGE
DETECTION AND
ELIMINATION
Part of the
Municipal Separate Storm Sewer System
(MS4)
Permit Program

PUBLIC WORKS MS4 TRAINING -February 25, 2015
LOGAN TOWNSHIP MUNICIPAL BUILDING
ATTENDANCE SHEET

Bellwood Borough		
	James Parson, Jr.	x
	Thomas Whiteford	x
	Derrick Caswell	x
	David Miller	x
Antis Township		
	Lucas Martsolf	x
	Steve Shiffler	x
	Donald Carnell	x
	Art Walters	x
	James Widdman	x
	Joseph Despoy	x
	John Mellott	x
	Lori DelBiondo	x
Logan Township		
	Arden Shinn	x
	LaMarr Dively	x
	Jeffrey Wills	x
	Dave Swanger	x
	John Adams	x
	Wayne McElheny	x
	Eric Barr	x
	Jeff Stevens	x
	Chet Kowalski	x
	John Albright	x
	Fred Schwarze	x
	Tim Brown	x
	Cassandra Schmick	x
City of Altoona		
	Bob Gardner	x
	Dan Ott	x
	Bob Weigand	x
	Denney Nearhoof	x
	Mike Frye	x
	Dominic Roberts	x
	Shawn Ickes	x
	Duane Kuny	x
	Shawn Beatty	x
	Jim Berry	x
	Tim Becker	x
	Chet Mosey	
	Gabe Chesney	
	Scott Cooper	x
	Jeff Aungst	x
	Kenney Servello	x
	Brenden Vansickel	x
	Lou Perino	x

PUBLIC WORKS MS4 TRAINING -February 25, 2015
LOGAN TOWNSHIP MUNICIPAL BUILDING
ATTENDANCE SHEET

	Brian Merritts	x
	Chris Wilson	x
	Don Schraff	x
	Chris Keagy	x
	Eric Koller	x
	Greg Bartley	x
	John Eckenrode	x
	Aneesa Winrick	x
	Brian Shaner	x
	Larry Nileski	x
	Tony Emerick	x
	Fred Seville	x
	Adrian Piper	x
	Bruce Hughey	x
	Doug Moudy	x
	Dennis Smith	x
	Alan Hykes	x
	Rick Lightner	x
	Dave Diedrich	x
	Mark Criste	x
	Jane Gill	x
	Rob Crossman	x
	Steve Ocker	x
	Scott Campanaro	x
Allegheny Township		
	Shelly Lightner	x
	Dave Spinazzola	x
	Fred Baker	
	Adam Black	x
	Tim Campolong	x
Blair Township		
	Lance A. Dick	x
	Denver R. Dick	x
	Louis J. Legory	x
	John Reed	x
Frankstown Township		
	Paul Singer	x
	Dennis Walls	x
	Anthony Stevens	x
	Lewis Reese	x
	Kevin Cramer	x
	Dave Chesney	x
	Robert Miller	x
	Carl Shaffer	x
	Andy Shade	x
	Zac Rhykerd	x
	William Gentry	x

PUBLIC WORKS MS4 TRAINING -February 25, 2015
LOGAN TOWNSHIP MUNICIPAL BUILDING
ATTENDANCE SHEET

	James Grove	x
Hollidaysburg Borough		
	Rick Pope	x
	Jim Hoover	x
	Steve Bice	x
	Don Smithmyer	x
	Amy Hazlett	x
	Richard Stringer	x
	Kelly Leydig	x
	John Cassidy	x
	Jim Bickers	x
	Ron Lingenfelter	x
Duncansville Borough		
	Glenn W. Hartman	
	James R. Batzel	
Juniata Township		
	David Kane	x
	David Rimbeck	x
Freedom Township		
	Ed Bender	
	Doug Grace	
Blair County		
	Todd Vaughn	x
	Rocky Greenland	x
	Paul Conner	x
	Timothy Hazenstab	x
	Paul Shaffer	
	Donald Hazenstab	x
	Steve Pielmeier	x
	Thomas Loechner	x
	John Stich	x
	James Garlick	x
	Robert Nearhoof	
	Doug Trotter	x
	Scott Lingenfelter	x
	Steve Mentzer	x
	John Hartman	x
	Joe Ickes	x

ILLICIT DISCHARGE
DETECTION AND
ILLUMINATION

Part of the
Municipal Separate Storm Sewer System
(MS4)
Permit Program

Background

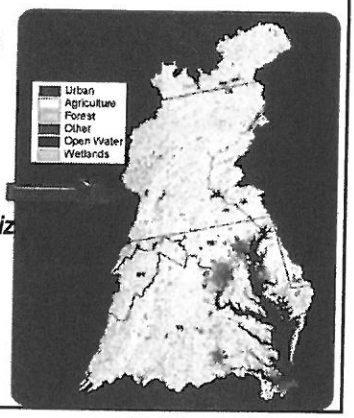
1. Pennsylvania Clean Stream's Law – 1937
2. EPA's Clean Water Act 1972
3. Municipal Separate Storm Sewer System (MS4) Permit Program
   a. Phase I - 1990
   b. Phase II - 1999
   c. First Permit Cycle - 2003
   d. Activities Required by Permit Holders

Purpose of the MS4 Permit

- ✔ Improve the water quality of the surface waters
- ✔ Reduce the nutrient and sediment load on the Chesapeake Bay

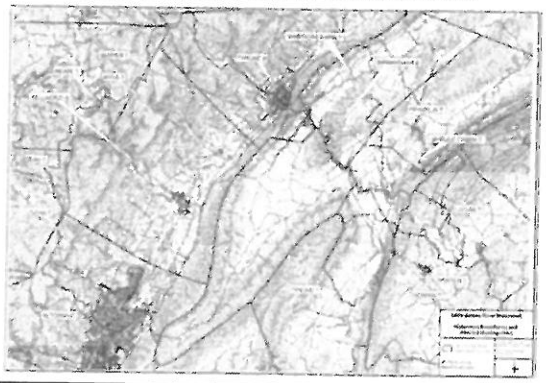
Chesapeake Bay Watershed

Altoona Urbaniz

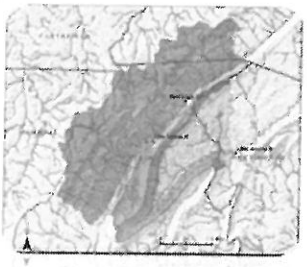


Altoona Urbanized Area

Little Juniata River Watershed

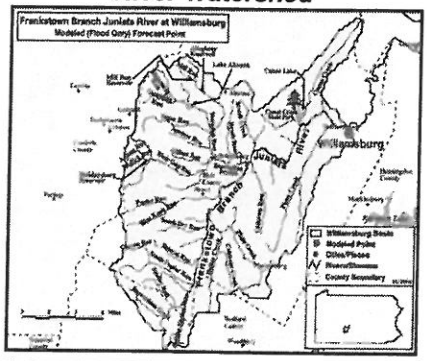


Tributaries of the Little Juniata River



- Kettle Creek
- Homer Gap Run
- Sandy Run
- Riggles Gap Run
- Sugar Run
- Bells Gap Run
- Tipton Run
- Spring Run

Frankstown Branch of the Juniata River Watershed



Tributaries of the Frankstown Branch of the Juniata River

- Poplar Run
- Oldtown Run
- Beaverdam Branch of the Juniata River
  - *Burgoon Run*
  - *Glenwhite Run*
  - *Kittanning Run*
  - *Scotch Gap Run*
  - *Mill Run*
  - *Sugar Run*
  - *Spencer Run*
  - *Blair Gap Run*
- Brush Creek
- Robinson Run
- Canoe Creek
- Township Run

Definitions Of Key Terms

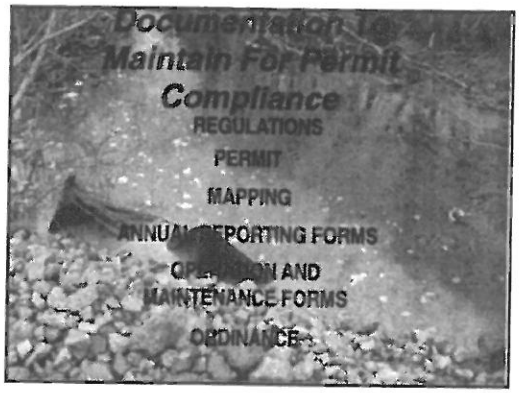
STORMWATER
If it falls from the sky as precipitation, then it is stormwater.

MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4)
A conveyance or system of conveyances (manmade) owned or operated by your local government designed for conveying stormwater not connected to any sewage treatment plant.

WATERS OF THE COMMONWEALTH
Any and all rivers, streams, creeks, rivulets, impoundments, ditches, water surface and underground water, or parts thereof, whether natural or artificial, within or on the boundaries of this Commonwealth.

OUTFALL
A "Point Source" where the MS4 discharges stormwater to the Waters of the Commonwealth.

BEST MANAGEMENT PRACTICES (BMP)
Activities and structural controls implemented to prevent or reduce pollution to the Waters of the Commonwealth.

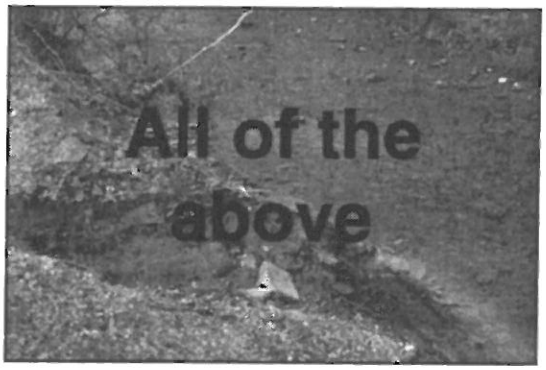


Implementation of the MS4 Permit and YOU

- Everyone in this room will be expected to explain the process of operation and maintenance of your BMP's.
- Obtain a copy of your written operation and maintenance plan from your supervisor, review and understand this plan.
- Supervisors, if don't have an operation and maintenance plan, get one soon!!

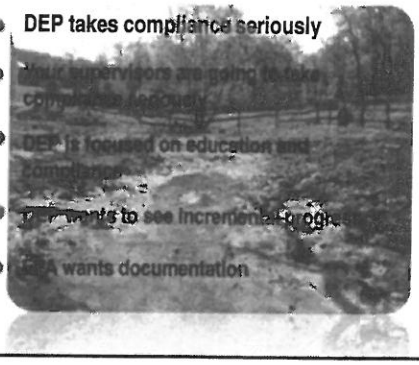
Who Is Responsible For Making Sure That Your Operation And Maintenance Plan Is Being Implemented Properly?

- You?
- Your supervisor?
- Your supervisor's supervisor?
- The Pennsylvania Department of Environmental Protection (DEP)?
- The United States Environmental Protection Agency?

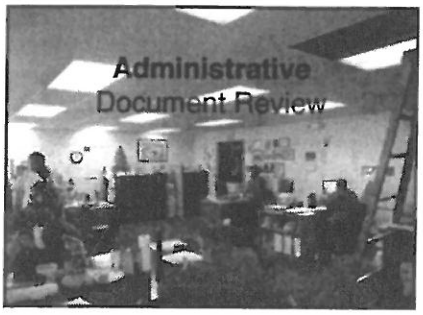


Compliance with Permit Requirements

- DEP takes compliance seriously
- Your supervisors are going to take compliance seriously
- DEP is focused on education and compliance
- DEP wants to see incremental progress
- DEP wants documentation



Types of Inspections by DEP/ EPA



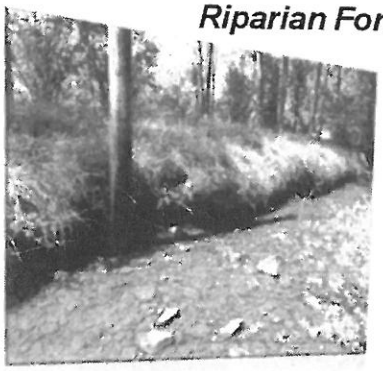
What are your BMP's?

- Outfalls
- Ponds
- Bioretention areas
- Riparian forest buffers
- Garage housekeeping
- Vehicle fueling
- Vehicle washing and maintenance
- Erosion and sediment controls during construction

Outfall

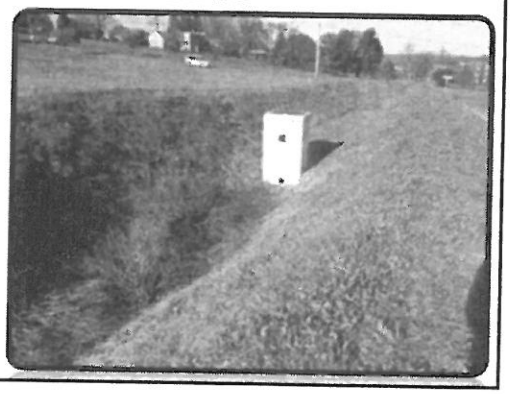
BMP - Silt Fence

Riparian Forest Buffer



Retention Ponds

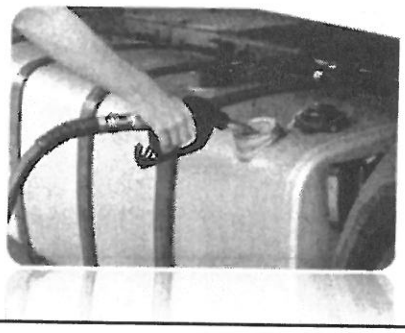
Detention Ponds



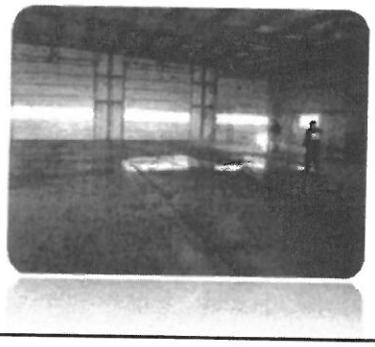
Bioretention / Raingardens

Vehicle Washing

Vehicle Fueling



Garage Housekeeping



Education

- Continued education regarding the MS4 permit and its regulations is a mandatory requirement
- You will be required to attend
- You will be required to participate
- Future training programs will be offered

Public Involvement

Continued input from the public will be required for permit compliance.

You as an agent of your municipality have a duty to provide to the public general information regarding the permit requirements:

- ✔ Storm water is a resource and should be protected
- ✔ Pollution of storm water is a result of carelessness
- ✔ Additional information regarding this resource is available at the municipal building

What is an Illicit Discharge?

"Any discharge to a municipal separate storm sewer system that is not composed entirely of stormwater"

- Illicit discharges occur due to illegal or legacy connections

- Illicit discharge connections may be intentional or unknown

Examples of Illicit Discharges

1. On-lot septic system malfunction
2. Vehicle wash water (except private vehicles)
3. Recreational vehicle holding tank waste

On-lot Septic System Malfunction

Vehicle Wash Water

Recreati... ...lding

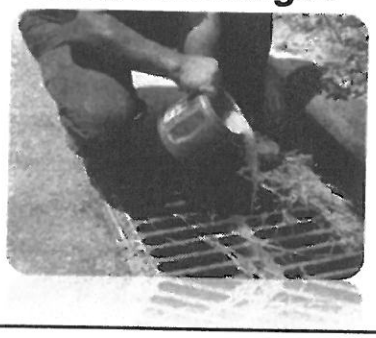
Why Do Illicit Discharges Matter?

- Contaminate surface waters with pollutants
- Toxins
- Oil and grease
- Solvents
- Nutrients
- Viruses
- Bacteria
- Metals

The Effect of Illicit Discharges

- Degrade surface water quality
- Threaten aquatic wildlife
- Threaten human health

So What ISN'T an Illicit Discharge?



- ✔ Waterline flushing that has been dechlorinated
- ✔ Irrigation water
- ✔ Diverted stream flow from the Waters of the Commonwealth
- ✔ Groundwater

- ✔ Foundation drains
- ✔ Air conditioning condensate
- ✔ Individual residential car washing
- ✔ Dechlorinated swimming pool discharge
- ✔ Street sweeping wash water

Where Do Illicit Discharges Come From?

1. Mechanical Equipment Maintenance
2. Housekeeping
3. Vehicle Maintenance
4. Construction Activities
5. Property Maintenance
6. Food Preparation
7. Recreational Activities

Develop a Plan

Develop and maintain a written program that includes:

- Procedures to identify priority areas
- Identify priority areas
- Procedures to screening outfalls
- **Dry Weather Screening Outfalls** – No rainfall for the previous three (3) days - locates the presence of Illicit discharges
- **Sampling for physical, chemical and biological parameters** – Color, odor, foam, temperature, pH and ammonia
- **Identify sources** – based on the field testing; if a discharge is determined to be Illicit, then complete a Field Report and document with a photograph and report the same to your supervisors

Develop Procedures

- Who is responsible for system investigation from the point of Illicit discharge identification to the source?
- Who is responsible for the disconnection of the Illicit discharge source?
- Who is responsible to determine if the disconnection is acceptable?
- Who is responsible for follow-up testing to make sure that the Illicit discharge has been disconnected?

- What additional testing is required to determine the source of the Illicit discharge?
- What additional field work will be needed to examine the MS4 upstream from the detection point?
- Where will the laboratory services required be obtained?
- Where will the additional field work services be obtained?
- When will each element of the process be scheduled and completed?

- How will the costs be covered?

Access to Private Property

- ✔ An essential part of this program
- ✔ Your Supervisors will need to determine if existing ordinances are adequate
- ✔ Ordinance revisions

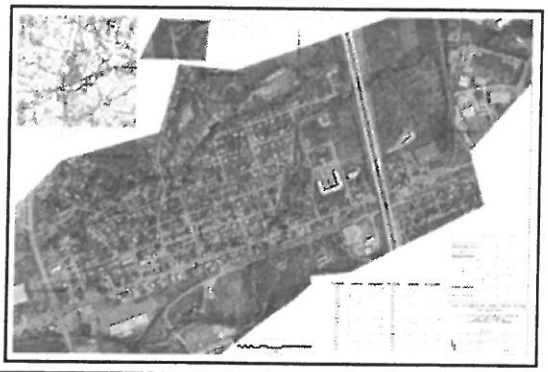
Documentation, Evaluation and Assessment

- ✔ Your Supervisors will be responsible for the development of reporting forms to document, assess, evaluate and illuminate all illicit discharges
- ✔ Your Supervisor will be required to keep and maintain records that will be in compliance with the permit

Outfall Screening

- Each Municipality is required to inspect each outfall identified on the permit mapping

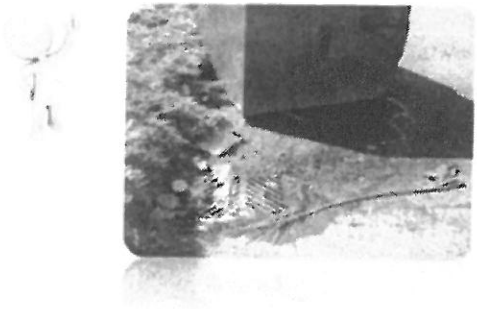
Permit Mapping



Where to Find Illicit Discharges?

- Commercial areas
- Industrial areas
- Municipal facilities
- School facilities
- Federal, Commonwealth and County facilities

Commercial Illicit Discharge



Industrial Illicit Discharge

Once an Illicit Discharge is Located...

- Educate the property owner
- Educate the site manager
- Educate the building manager
- Physically disconnect the Illicit Discha
- Inspect the work for compliance
- Document the completion of the work
- Post construction outfall sampling

For Additional Information...

Click Here http://www.epa.gov/npdes/pubs/fact2-5.pdf

Click Here http://www.portal.state.pa.us/portal/server.pt/community/municipal_stormwater/21380

Click Here http://www.blairconservationdistrict.org/stormwater_management.htm

Questions?

For More Assistance, Contact . . .