



pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATERSHED MANAGEMENT

MS4 ANNUAL REPORT FORM FOR STORMWATER DISCHARGES FROM SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s)

Reporting Period

(Check appropriate block. Fill in the year for the reporting period you are submitting the report if not listed.)

- March 10, 2008 through March 9, 2009 (due June 9, 2009)
 March 10, 2009 through March 9, 2010 (due June 9, 2010)
 March 10, 2011 through March 9, 2012 (due June 9, 2012)

SECTION I – SMALL MS4 OPERATOR INFORMATION

1. Name of MS4 Permittee and NPDES Permit Number

Name: Brentwood Borough PAG: 136271 PAI: _____
Co-permittee : _____

2. Location

Municipality: Brentwood Borough County: Allegheny County
Watershed Name(s): Sawmill Run; Monongahela

3. Contact Person from the MS4

Name: George Zboyovksy, P.E. Title: Borough Manager Phone: 412-884-1500
Fax: 412-884-1911 Email: gzboyovsky@brentwoodboro.com

4. Permittee Mailing Address

Address: 3624 Brownsville Road
City: Brentwood State: PA Zip Code: 15227

5. MS4 Website (If applicable)

URL: www.brentwoodboro.com

6. Permittee's Consultant/Engineer Information (If applicable)

Company Name: The Gateway Engineers, Inc.
Consultant/Engineer Name: Emily J. Gaspich, P.E. Title: Borough Engineer
Phone: 412-921-4030, x 114 Fax: 412-921-9960 Email: egaspich@gatewayengineers.com
Address: 400 Holiday Drive, Suite 300
City: Pittsburgh State: PA Zip Code: 15220

SECTION II – MCM INFORMATION

7A. Have you completed all required activities for?

| | | |
|---------|---|-----------------------------|
| Year 1: | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| Year 2: | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| Year 3: | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| Year 4: | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| Year 5: | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |

7B. Complete the following section for each watershed-based or Act 167 Storm Water Management Plan.

Watershed Plan Name Monongahela

Is this an Act 167 Plan? Yes No

If yes, has DEP approved the plan? Yes No

If yes, give date: 6/15/1994

Is the ordinance required by the plan enacted: Yes No

If yes, give effective date: 9/3/1996

If the ordinance is not enacted, please provide the anticipated enactment date _____
and explain the status: _____

Watershed Plan Name Sawmill Run

Is this an Act 167 Plan? Yes No

If yes, has DEP approved the plan? Yes No

If yes, give date: _____

Is the ordinance required by the plan enacted: Yes No

If yes, give effective date: 9/3/1996

If the ordinance is not enacted, please provide the anticipated enactment date _____
and explain the status: _____

Watershed Plan Name Streets Run

Is this an Act 167 Plan? Yes No

If yes, has DEP approved the plan? Yes No

If yes, give date: _____

Is the ordinance required by the plan enacted: Yes No

If yes, give effective date: 9/3/1996

If the ordinance is not enacted, please provide the anticipated enactment date _____
and explain the status: _____

7C. Please provide current contact name and phone number information:

MCM #1

Public Education and Outreach on Storm Water Impacts

Name: George Zboyovsky, P.E., Borough Manager Phone: 412-884-1500

MCM #2

Public Involvement/Participation

Name: George Zboyovsky, P.E., Borough Manager Phone: 412-884-1500

MCM #3

Illicit Discharge Detection and Elimination (IDD&E)

Name: George Zboyovsky, P.E., Borough Manager Phone: 412-884-1500

MCM #4

Construction Site Storm Water Runoff Control

Name: George Zboyovsky, P.E., Borough Manager Phone: 412-884-1500

MCM #5

Post-Construction Storm Water Management in New Development and Redevelopment

Name: George Zboyovsky, P.E., Borough Manager Phone: 412-884-1500

MCM #6

Pollution Prevention/Good Housekeeping for Municipal Operations

Name: George Zboyovsky, P.E., Borough Manager Phone: 412-884-1500

MCM#1 - PUBLIC EDUCATION AND OUTREACH ON STORM WATER IMPACTS — MINIMUM CONTROL MEASURE

8A. MS4s USING DEP *PROTOCOL* for this MCM

BMP: Update Target Audience Information (Have you reviewed your public education plan for accuracy and content and made any relevant changes regarding your target audiences and their communication channels? If so, include/attach your revised plan.)

Measurable goal for this BMP was met.

Measurable goal for this BMP was not met.

Describe how goal was met; or if not met, give an explanation and proposed corrective actions: The Borough continues to follow its plan for appropriate public outreach and education efforts. Outreach information is targeted to residents, students and businesses. Articles and flyers are disseminated in the following manner: handouts at the Borough building and library, handouts at Council meetings, articles placed on the Borough web-site, and articles placed in the quarterly "In Brentwood Baldwin Whitehall" magazine. Outreach and education articles continued to include items on stormwater awareness and techniques to reduce stormwater pollution.

Is this BMP appropriate to meet your identified measurable goal? Yes No. If No, please provide additional information on other BMP(s) that would meet the goal.

8B. BMP: Continue public education and outreach. (What was accomplished during the past permit year regarding: Developer education/outreach? Storm water ad in local newspaper? Provide posters or other information to schools and businesses? Storm drain stenciling/markings? Maintain website links and provide website educational info? Educational information in your newsletter? Any other public education/outreach?)

Measurable goal for this BMP was met.

Measurable goal for this BMP was not met.

Describe how goal was met; or if not met, give an explanation and proposed corrective actions: The Borough distributed several articles and posters (copies attached) during the year. The articles and their descriptions are as follows:

1 – Article and Poster titled "The Basics of Building a Rain Garden" – May 9, 2011

2 – Poster titled "Keep Chlorine Out of the Storm Drain" – August 17, 2011

3 – Article titled "Love Your Swimming Pool? Show Your Watershed The Love!" – August 17, 2011

4 – Article titled "Don't Let the Pretty Fall Leaves Stink Up Our Watershed" – November 2, 2011

5 – Poster titled "Do Not Burn Leaves...Compost and Mulch Instead!" – November 2, 2011

6 – Article titled, "Stormwater Pollution? Make A POINT – Don't Do It" – February 29, 2012

7 – Poster titled, "Think Stormwater Pollution Doesn't Affect You? Think Again." – February 29, 2012

Is this BMP appropriate to meet your identified measurable goal? Yes No. If No, please provide additional information on other BMP(s) that would meet the goal.

MCM#1 (continued)

9. MS4s USING OWN PROTOCOL FOR THIS MCM

If you are implementing your own protocol, approved by the Department, describe the current status of this Minimum Control Measure. In the boxes below list all BMPs and measurable goals you identified on your NOI or application approved by DEP. If the goals were met, describe how they were met. If they were not met, describe the current status of each and when/how they will be met.

Goal #1

List/Describe BMPs and measurable goal (Approved by DEP):

Describe how measurable goal was met:

If not met, describe reason(s), current status, plans and schedule for meeting the goal:

Goal #2

List/Describe BMPs and measurable goal (Approved by DEP):

Describe how measurable goal was met:

If not met, describe reason(s), current status, plans and schedule for meeting the goal:

Goal #3

List/Describe BMPs and measurable goal (Approved by DEP):

Describe how measurable goal was met:

If not met, describe reason(s), current status, plans and schedule for meeting the goal:

MCM#2 - PUBLIC INVOLVEMENT/PARTICIPATION — MINIMUM CONTROL MEASURE

10A. **MS4s USING DEP *PROTOCOL* for this MCM**

BMP: Update your Public Involvement and Participation Plan (PIPP). (Have you reviewed your PIPP for accuracy and content and made any relevant changes? If so, include/attach your revised PIPP.)

Measurable goal for this BMP was met. Measurable goal for this BMP was not met.

Describe how goal was met; or if not met, give an explanation and proposed corrective actions: The Borough continued to implement its Public Involvement and Participation Plan to its target audience of residents, students, and businesses. Public involvement efforts are supplemented by activities of the Streets Run Watershed Association. The Borough is also a member of Economic Development South, a non-profit community development corporation. EDS is in the process of developing an environmental committee, consisting of volunteers, where lot reclamation and general greening projects are being planned.

Is this BMP appropriate to meet your identified measurable goal? Yes No. If No, please provide additional information on other BMP(s) that would meet the goal.

10B. **BMP: Notify and solicit public input/involvement regarding implementation of your Storm Water Management Program.** (How and when did you solicit public input/involvement? What were the results/accomplishments during the past permit year?)

Measurable goal for this BMP was met. Measurable goal for this BMP was not met.

Describe how goal was met; or if not met, give an explanation and proposed corrective actions: Residents had the opportunity to participate in a rain barrel workshop held on May 24th, 2011, sponsored by the Streets Run Watershed Association, of which Brentwood is a member, the Pennsylvania Resources Council and Whitehall Public Library. The Borough held on a Redd Up Cleaning event on April 16, 2011, working with Citizens Against Litter, to clean up trash and debris at various locations in the Borough. Residents also had the opportunity to donate unwanted technology to Goodwill and deposit hard to dispose of items in dumpsters at Brentwood Park. The Borough again partnered with Citizens Against Litter along with student volunteers from the University of Pittsburgh on October 22, 2011 for a fall Redd Up event. Borough residents had the opportunity to participate in four local household hazardous waste collection events throughout 2011 including one held on October 1st at the South Park Wave Pool Parking Lot.

Is this BMP appropriate to meet your identified measurable goal? Yes No. If No, please provide additional information on other BMP(s) that would meet the goal.

MCM#2 (continued)

11. MS4s USING OWN PROTOCOL FOR THIS MCM

If you are implementing your own protocol, approved by the Department, describe the current status of this Minimum Control Measure. In the boxes below list all BMPs and measurable goals you identified on your NOI or application approved by DEP. If the goals were met, describe how they were met. If they were not met, describe the current status of each and when/how they will be met.

Goal #1

List/Describe BMPs and measurable goal (Approved by DEP):

Describe how measurable goal was met:

If not met, describe reason(s), current status, plans and schedule for meeting the goal:

Goal #2

List/Describe BMPs and measurable goal (Approved by DEP):

Describe how measurable goal was met:

If not met, describe reason(s), current status, plans and schedule for meeting the goal:

Goal #3

List/Describe BMPs and measurable goal (Approved by DEP):

Describe how measurable goal was met:

If not met, describe reason(s), current status, plans and schedule for meeting the goal:

MCM#3 - ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDD&E) — MINIMUM CONTROL MEASURE

12A. MS4s USING DEP *PROTOCOL* for this MCM

BMP: Map all outfalls and receiving water-bodies. (Is your map up-to-date and accurate? Have you mapped additional features that can assist your outfall screening program, such as inlets, piping and outfall drainage areas? If updated, please submit)

Measurable goal for this BMP was met. Measurable goal for this BMP was not met.

Describe how goal was met; or if not met, give an explanation and proposed corrective actions: All of the MS-4 outfalls were mapped in year one and updated in 2007, with a paper copy of the mapping submitted to DEP in March 2004 and an updated map submitted with the June 2008 report. The structures mapped include inlets, manholes, endwalls, headwalls, outfalls and storm pipes. In 2010, the mapping was enhanced with connectivity and mapping grade structure locations. Brentwood continues to rely on this GIS mapping to manage and inspect its stormwater facilities.

Is this BMP appropriate to meet your identified measurable goal? Yes No. If No, please provide additional information on other BMP(s) that would meet the goal.

12B. BMP Implement and enforce ordinance to satisfy this Minimum Control Measure. (How was ordinance implemented and enforced during the past permit year in order to meet the goals of this MCM?)

Measurable goal for this BMP was met. Measurable goal for this BMP was not met.

Describe how goal was met; or if not met, give an explanation and proposed corrective actions: The Borough submitted a draft ordinance amending Brentwood's existing Stormwater Management Ordinance to DEP for review in March, 2004. Comments were not received from DEP. Since that time DEP has developed multiple draft model Stormwater Management Ordinances, with the latest version dated March 3, 2009. On behalf of the Borough, Gateway submitted comments to DEP on May 1, 2009 regarding the ordinance. It is our understanding that DEP is revising this ordinance.

Is this BMP appropriate to meet your identified measurable goal? Yes No. If No, please provide additional information on other BMP(s) that would meet the goal.

12C. BMP: Distribute IDD&E specific educational material. (What educational material was distributed to public employees, businesses and the general public concerning the hazards associated with illegal discharges and improper disposal of waste? Who received it? When?)

Measurable goal for this BMP was met. Measurable goal for this BMP was not met.

Describe how goal was met; or if not met, give an explanation and proposed corrective actions: Public discussions on stormwater issues occur at Council meetings in conjunction with the distribution of relevant articles to officials. Articles are placed in the Borough building for pickup for any interested resident. Articles are placed in the quarterly "In Brentwood Baldwin Whitehall" magazine and information on stormwater awareness is posted on the Borough web-site as part of its Go Green campaign. Specifically the articles titled "Keep Chlorine Out of the Storm Drain" and "Stormwater Pollution? Make a POINT - Don't Do It" address illicit discharge prevention.

Is this BMP appropriate to meet your identified measurable goal? Yes No. If No, please provide additional information on other BMP(s) that would meet the goal.

MCM#3 (continued)

12D. **BMP: Establish priority areas, conduct screening/sampling and take appropriate actions as needed.**
(Describe how the priority area was established and which outfalls were selected for screening during the past permit year. Summarize the results of your outfall screening/sampling. Include properly completed illicit discharge field screening form for any problem outfall. Include the illicit discharge quarterly summary report form. Describe the corrective actions taken to eliminate any illicit discharges or connections.)

Number of outfalls in system: 28

Number of outfalls screened during the past permit year: _____

Number of screenings conducted during the past permit year: _____

Number of outfalls/screenings with dry weather flow during the past permit year: _____

Number of dry weather flows sampled during the past permit year: _____

Number of outfalls determined to have an illicit discharge or connection during past permit year: _____

Measurable goal for this BMP was met. Measurable goal for this BMP was not met.

Describe how goal was met; or if not met, give an explanation and proposed corrective actions: The Borough's twenty-eight outfalls were screened in the prior reporting periods of March 2003-2008.

Is this BMP appropriate to meet your identified measurable goal? Yes No. If No, please provide additional information on other BMP(s) that would meet the goal.

MCM#3 (continued)

13. MS4s USING OWN PROTOCOL FOR THIS MCM

If you are implementing your own protocol, approved by the Department, describe the current status of this Minimum Control Measure. In the boxes below list all BMPs and measurable goals you identified on your NOI or application approved by DEP. If the goals were met, describe how they were met. If they were not met, describe the current status of each and when/how they will be met.

Goal #1

List/Describe BMPs and measurable goal (Approved by DEP):

Describe how measurable goal was met:

If not met, describe reason(s), current status, plans and schedule for meeting the goal:

Goal #2

List/Describe BMPs and measurable goal (Approved by DEP):

Describe how measurable goal was met:

If not met, describe reason(s), current status, plans and schedule for meeting the goal:

Goal #3

List/Describe BMPs and measurable goal (Approved by DEP):

Describe how measurable goal was met:

If not met, describe reason(s), current status, plans and schedule for meeting the goal:

MCM#4 - CONSTRUCTION SITE STORM WATER RUNOFF CONTROL — MINIMUM CONTROL MEASURE

14A. MS4s USING DEP PROTOCOL for this MCM

BMP: Implement and enforce ordinance to satisfy this Minimum Control Measure. (How was ordinance implemented and enforced during the past permit year in order to meet the goals of this MCM?).

Measurable goal for this BMP was met. Measurable goal for this BMP was not met.

Describe how goal was met; or if not met, give an explanation and proposed corrective actions: The Borough submitted a draft ordinance amending Brentwood's existing Stormwater Management Ordinance to DEP for review in March, 2004. Comments were not received from DEP. Since that time DEP has developed multiple draft model Stormwater Management Ordinances, with the latest version dated March 3, 2009. On behalf of the Borough, Gateway submitted comments to DEP on May 1, 2009 regarding the ordinance. It is our understanding that DEP is revising this ordinance.

Is this BMP appropriate to meet your identified measurable goal? Yes No. If No, please provide additional information on other BMP(s) that would meet the goal.

14B. BMP: Implement procedures for the review and enforcement of Erosion and Sediment (E&S) Control Plans. (Who reviewed E&S Control Plans during the past permit year? Did the MS4 permittee conduct any E&S site inspections? Briefly describe any enforcement activities undertaken by the MS4 permittee.)

Measurable goal for this BMP was met. Measurable goal for this BMP was not met.

Describe how goal was met; or if not met, give an explanation and proposed corrective actions: The Allegheny County Conservation District is the primary reviewer and enforcer of E&S controls in Brentwood. The Borough Engineer also reviews the E&S plans and Borough inspectors look out for any earth disturbances and related E&S controls throughout the Borough to enforce E&S requirements. In 2011, however, there were no new developments that required E&S plans.

Is this BMP appropriate to meet your identified measurable goal? Yes No. If No, please provide additional information on other BMP(s) that would meet the goal.

14C. BMP: Provide education and outreach for developers and builders. (What educational/outreach materials were distributed to developers/builders during the past permit year?)

Measurable goal for this BMP was met. Measurable goal for this BMP was not met.

Describe how goal was met; or if not met, give an explanation and proposed corrective actions: The Borough distributes the PADEP's "Don't Let Stormwater Run Off With Your Time and Money" pamphlet with building permits. Although there are almost no sites being developed, operators were welcomed to attend monthly Council meetings where Stormwater Phase II issues are discussed and information is provided.

Is this BMP appropriate to meet your identified measurable goal? Yes No. If No, please provide additional information on other BMP(s) that would meet the goal.

MCM#4 (continued)

14D. **BMP: Require construction site operators to control waste at the construction site.** (What was done in the past permit year to require construction site operators to control wastes such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary wastes?)

Measurable goal for this BMP was met. Measurable goal for this BMP was not met.

Describe how goal was met; or if not met, give an explanation and proposed corrective actions: For all construction projects, the Borough requires that contractors and sub-contractors haul all trash, discarded building materials and other items to a DEP approved site outside the Borough.

Is this BMP appropriate to meet your identified measurable goal? Yes No. If No, please provide additional information on other BMP(s) that would meet the goal.

14E. **BMP: Implement procedures for the receipt and consideration of information submitted by the public.** (Summarize any information or complaints received from the public during the past permit year concerning construction site storm water runoff. Briefly describe how you responded to any such information/complaints?)

Measurable goal for this BMP was met. Measurable goal for this BMP was not met.

Describe how goal was met; or if not met, give an explanation and proposed corrective actions: The Borough did not receive any complaints or concerns during the past permit year. However, if any complaints were brought to the Borough's attention, they would be immediately investigated by the Borough Manager. Pending investigation, if the complaint was warranted regarding an illicit discharge, the Borough would follow up with an action plan to correct the situation.

Is this BMP appropriate to meet your identified measurable goal? Yes No. If No, please provide additional information on other BMP(s) that would meet the goal.

MCM#4 (continued)

15. MS4s USING OWN PROTOCOL FOR THIS MCM

If you are implementing your own protocol, approved by the Department, describe the current status of this Minimum Control Measure. In the boxes below list all BMPs and measurable goals you identified on your NOI or application approved by DEP. If the goals were met, describe how they were met. If they were not met, describe the current status of each and when/how they will be met.

Goal #1

List/Describe BMPs and measurable goal (Approved by DEP):

Describe how measurable goal was met:

If not met, describe reason(s), current status, plans and schedule for meeting the goal:

Goal #2

List/Describe BMPs and measurable goal (Approved by DEP):

Describe how measurable goal was met:

If not met, describe reason(s), current status, plans and schedule for meeting the goal:

Goal #3

List/Describe BMPs and measurable goal (Approved by DEP):

Describe how measurable goal was met:

If not met, describe reason(s), current status, plans and schedule for meeting the goal:

MCM#5 - POST-CONSTRUCTION STORM WATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT — MINIMUM CONTROL MEASURE

16A. MS4s USING DEP *PROTOCOL* for this MCM

BMP: Implement and enforce ordinance to satisfy this Minimum Control Measure. (How was ordinance implemented and enforced during the past permit year in order to meet the goals of this MCM?)

Measurable goal for this BMP was met. Measurable goal for this BMP was not met.

Describe how goal was met; or if not met, give an explanation and proposed corrective actions: The Borough submitted a draft ordinance amending Brentwood's existing Stormwater Management Ordinance to DEP for review in March, 2004. Comments were not received from DEP. Since that time DEP has developed multiple draft model Stormwater Management Ordinances, with the latest version dated March 3, 2009. On behalf of the Borough, Gateway submitted comments to DEP on May 1, 2009 regarding the ordinance. It is our understanding that DEP is revising this ordinance.

Is this BMP appropriate to meet your identified measurable goal? Yes No. If No, please provide additional information on other BMP(s) that would meet the goal.

16B. BMP: Ensure that all Post-Construction Storm Water Management (PCSWM) BMPs in new or re-development areas are built as designed, and operated and maintained properly. (Summarize how the MS4 permittee accomplished this during the past permit year. Include a list of all applicable PCSWM BMPs.)

Measurable goal for this BMP was met. Measurable goal for this BMP was not met.

Describe how goal was met; or if not met, give an explanation and proposed corrective actions: Brentwood Borough requires that a maintenance plan be submitted as part of all development plans. There were no new development plans in 2011.

Is this BMP appropriate to meet your identified measurable goal? Yes No. If No, please provide additional information on other BMP(s) that would meet the goal.

MCM#5 (continued)

17. MS4s USING OWN PROTOCOL FOR THIS MCM

If you are implementing your own protocol, approved by the Department, describe the current status of this Minimum Control Measure. In the boxes below list all BMPs and measurable goals you identified on your NOI or application approved by DEP. If the goals were met, describe how they were met. If they were not met, describe the current status of each and when/how they will be met.

Goal #1

List/Describe BMPs and measurable goal (Approved by DEP):

Describe how measurable goal was met:

If not met, describe reason(s), current status, plans and schedule for meeting the goal:

Goal #2

List/Describe BMPs and measurable goal (Approved by DEP):

Describe how measurable goal was met:

If not met, describe reason(s), current status, plans and schedule for meeting the goal:

Goal #3

List/Describe BMPs and measurable goal (Approved by DEP):

Describe how measurable goal was met:

If not met, describe reason(s), current status, plans and schedule for meeting the goal:

**MCM#6 - POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS —
MINIMUM CONTROL MEASURE**

18A. MS4s USING DEP *PROTOCOL* for this MCM

BMP: Implement an operation, maintenance, inspection and repair program for all municipally owned storm water facilities. (Describe how your program was implemented during the past permit year. Include your written Operation & Maintenance (O&M) plan, if not previously submitted.)

Measurable goal for this BMP was met.

Measurable goal for this BMP was not met.

Describe how goal was met; or if not met, give an explanation and proposed corrective actions: The Borough inspects its stormwater structures on an annual basis. Maintenance is conducted on an as-needed basis. Catch basins in storm drains contain sediment traps that allow sediment to be retained in the trap reducing sediment outfall into the receiving watercourse. Catch basin cleaning is performed on an as-needed basis. Some catch basins require cleaning more frequently, while others do not require frequent cleaning.

Is this BMP appropriate to meet your identified measurable goal? Yes No. If No, please provide additional information on other BMP(s) that would meet the goal.

18B. BMP: Implement a pollution prevention/operation and maintenance program for all municipal vehicle/equipment operation, maintenance, fueling, and washing activities. (Describe how your program was implemented during the past permit year. Include your written pollution prevention/O&M plan, if not previously submitted.)

Measurable goal for this BMP was met.

Measurable goal for this BMP was not met.

Describe how goal was met; or if not met, give an explanation and proposed corrective actions: The Borough continues to implement procedures from its good housekeeping program. Salt trucks are equipped with an adjustable spreader. The Borough uses a street sweeper twice a month. The Borough does not have vehicle fueling facilities nor does it repair or maintain vehicles. Commercial facilities are used to fuel, maintain and repair all vehicles. The garage facilities are used for washing activities.

Is this BMP appropriate to meet your identified measurable goal? Yes No. If No, please provide additional information on other BMP(s) that would meet the goal.

18C. **BMP: Conduct BMP 18A and 18B training for appropriate municipal employees.** (Who was trained? When was the training conducted? What was the subject matter?)

Measurable goal for this BMP was met.

Measurable goal for this BMP was not met.

Describe how goal was met; or if not met, give an explanation and proposed corrective actions: The Borough Engineer has reviewed basic procedures with the public works supervisor and crews regarding impacts of stormwater runoff.

Is this BMP appropriate to meet your identified measurable goal? Yes No. If No, please provide additional information on other BMP(s) that would meet the goal.

MCM#6 (continued)

19. **MS4s USING OWN PROTOCOL FOR THIS MCM**

If you are implementing your own protocol approved by the Department, describe the current status of this Minimum Control Measure. In the boxes below list all BMPs and measurable goals you identified on your NOI or application approved by DEP. If the goals were met, describe how they were met. If they were not met, describe the current status of each and when/how they will be met.

Goal #1

List/Describe BMPs and measurable goal (Approved by DEP):

Describe how measurable goal was met:

If not met, describe reason(s), current status, plans and schedule for meeting the goal:

Goal #2

List/Describe BMPs and measurable goal (Approved by DEP):

Describe how measurable goal was met:

If not met, describe reason(s), current status, plans and schedule for meeting the goal:

Goal #3

List/Describe BMPs and measurable goal (Approved by DEP):

Describe how measurable goal was met:

If not met, describe reason(s), current status, plans and schedule for meeting the goal:

SECTION III – CERTIFICATION

CERTIFICATION STATEMENT

I certify under penalty of law that 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 knowing violations.

George Zboyovksy, P.E., Borough Manager

Name and official title

Signature

Date

Sworn and subscribed to before me, this ____ day of _____, 20____

Notary Public

My commission expires _____

(Notary Public Seal and Stamp)

The Basics of Building a Rain Garden

Why Build A Rain Garden?

If you have a green thumb and are making plans for your yearly spring gardening ritual, you can make some subtle changes to help reduce water pollution. Consider building a rain garden in the spring of 2011 instead of your usual planting routine. Rain gardens are landscaped areas planted with wild flowers and other native vegetation that are designed to soak up water runoff from your roof, driveway and lawn. Holding back this runoff helps prevent pollutants such as fertilizers from washing off your yard into storm sewers, and eventually into our streams and Three Rivers. By reducing the amount of water that enters the storm drains, rain gardens can reduce the potential for local flooding after days of heavy rain.

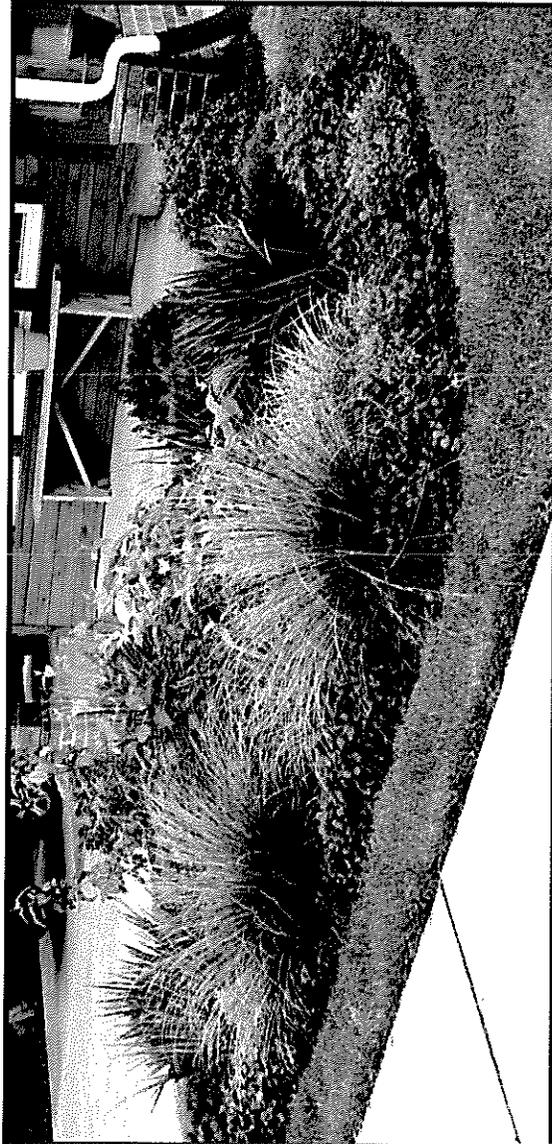
Okay, How Do I Build A Rain Garden Then?

1. First, you will need to **select the best location** on your property for the garden. Observe your yard when it rains heavily, noting where water flows from and where it goes. The ideal spot for a rain garden is a location between the source of runoff (roofs and driveways) and the runoff point (drains, streams, low spots). Be sure to consider the following guidelines when selecting the location:
 - The garden should not be within ten feet of the foundation of the home.
 - Make sure to avoid underground utility lines.
 - The ideal location for the garden will be in partial to full sun.
2. **Soils and Drainage:** Check that your soil is suitable for the location you have selected. Rain gardens work best when constructed in well-drained or sandy soils, but they can also be installed on sites with less permeable soils such as clays. Dig a hole about 1 foot deep at the potential site to examine the soil to check for three signs of an impermeable soil:
 - The site ponds water or remains saturated for several days after a storm event.
 - The soil shows signs of being a wetland soil within one foot of the surface. A wetland soil is often gray with ribbons or areas of brown area.
 - Water poured into the dug hole is still there after two days, provided it has not rained. If you see any of these signs, you will need to select another location. Otherwise, your site is ideal for the rain garden.
3. **Sizing Your Garden:** Rain gardens can be large or small, with the size dependent on the site drainage area. To estimate the drainage area, first figure out the roof area draining to the site. The volume of water draining to the garden from the roof will be equal to the square footage of the house multiplied by the percentage of roof feeding the downspouts to the garden. Add to this number the surface area of your paved driveway. The combined roof and driveway drainage area make up the total impermeable drainage area for the garden.
4. **Garden Construction:** Prior to digging your rain garden, it may be helpful to do the following:
 - Outline the area using string or spray paint.
 - The garden should be dug four to six inches deep with a slight depression in the center. Use the dug out soil to create a berm along one side of the rain garden. This will allow water to be retained during a storm.
 - If the garden is located on a slight slope, the berm should be placed on the downhill sloping side of the garden.
 - Cover the berm with mulch or grass to prevent erosion.
 - For very well drained soils, adding compost to the top layer will allow plants to establish themselves better and also allow the retention of more water.
 - For compacted soils, add gravel or mulch to improve infiltration.
5. **Now Plant Away!** Note that plants in a rain garden will have to tolerate fluctuating levels of soil wetness. To help plants survive the wet times, it will be beneficial to plant them 'high' on the edge of the garden or on elevated mounds within the garden to raise the roots above the ponded water level. The area should be mulched within 2-3 inches of hardwood mulch. Lighter mulches can float, so avoid pine bark and pine straw mulches. Mulch is important in pollution removal, maintaining soil moisture, and erosion prevention.

The Three Rivers Rain Garden Alliance provides recommendations on its web-site for plants to choose, for your reference at www.raingardenalliance.org.



Basics of Building a Residential Rain Garden



Garden Construction

- Dig 4-6 inches
- Create a berm
- Cover berm with grass or mulch to prevent erosion
- Add compost to top layer of soil

- ## Sizing Your Garden
- Volume of water draining to the garden from the roof will be equal to the square footage of the house multiplied by the percentage of roof feeding the downspouts to the garden
 - Add to this number the surface area of your paved driveway

Soils and Drainage

- Check that soil is suitable for drainage

Plant Away

- Plant high on edge of garden to raise roots above ponded water level
- Mulch area with 2-3 inches of hardwood mulch

Select Best Location

- Stay within 10 feet from foundation of home
- Avoid underground utility lines
- Plant in partial to full sun exposure



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For more information visit The North Carolina Cooperative Extension at www.ces.ncsu.edu

Rachelle Ogun

From: Cynthia L. Alexander
Sent: Monday, May 23, 2011 9:08 AM
To: 'gzboyovsky@brentwoodboro.com'
Cc: Emily Gaspich
Subject: Updated Building a Rain Garden
Attachments: Building a Rain Garden - Revised 2011-5-17.pdf

Good Morning George;

We have updated the rain garden article submitted to you previously, to include a requirement that rain gardens be constructed in accordance with the Allegheny County Health Department's Plumbing Code. Please discard the other article that we sent to you and replace it with the attached.

Cynthia L. Alexander

Administrative Assistant

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The Basics of Building a Rain Garden

Why Build A Rain Garden?

If you have a green thumb and are making plans for your yearly spring gardening ritual, you can make some subtle changes to help reduce water pollution. Consider building a rain garden in the spring of 2011 instead of your usual planting routine. Rain gardens are landscaped areas planted with wild flowers and other native vegetation that are designed to soak up water runoff from your roof, driveway and lawn. Holding back this runoff helps prevent pollutants such as fertilizers from washing off your yard into storm sewers, and eventually into our streams and Three Rivers. By reducing the amount of water that enters the storm drains, rain gardens can reduce the potential for local flooding after days of heavy rain.

Okay, How Do I Build A Rain Garden Then?

1. First, you will need to **select the best location** on your property for the garden. Observe your yard when it rains heavily, noting where water flows from and where it goes. The ideal spot for a rain garden is a location between the source of runoff (roofs and driveways) and the runoff point (drains, streams, low spots). Be sure to consider the following guidelines when selecting the location:
 - The garden should not be within ten feet of the foundation of the home.
 - Make sure to avoid underground utility lines.
 - The ideal location for the garden will be in partial to full sun.
2. **Soils and Drainage:** Check that your soil is suitable for the location you have selected. Rain gardens work best when constructed in well-drained or sandy soils, but they can also be installed on sites with less permeable soils such as clays. Dig a hole about 1 foot deep at the potential site to examine the soil to check for three signs of an impermeable soil:
 - The site ponds water or remains saturated for several days after a storm event.
 - The soil shows signs of being a wetland soil within one foot of the surface. A wetland soil is often gray with ribbons or areas of brown area.
 - Water poured into the dug hole is still there after two days, provided it has not rained. If you see any of these signs, you will need to select another location. Otherwise, your site is ideal for the rain garden.
3. **Sizing Your Garden:** Rain gardens can be large or small, with the size dependent on the site drainage area. To estimate the drainage area, first figure out the roof area draining to the site. The volume of water draining to the garden from the roof will be equal to the square footage of the house multiplied by the percentage of roof feeding the downspouts to the garden. Add to this number the surface area of your paved driveway. The combined roof and driveway drainage area make up the total impermeable drainage area for the garden.
4. **Garden Construction:** Prior to digging your rain garden, it may be helpful to do the following:
 - Outline the area using string or spray paint.
 - The garden should be dug four to six inches deep with a slight depression in the center. Use the dug out soil to create a berm along one side of the rain garden. This will allow water to be retained during a storm.
 - If the garden is located on a slight slope, the berm should be placed on the downhill sloping side of the garden.
 - Cover the berm with mulch or grass to prevent erosion.
 - For very well drained soils, adding compost to the top layer will allow plants to establish themselves better and also allow the retention of more water.
 - For compacted soils, add gravel or mulch to improve infiltration.
 - Rain gardens are required to be constructed in accordance with the Allegheny County Health Department's Plumbing Code Chapter 11 Storm Drainage (<http://www.achd.net/plumbing/pubs/pdf/plumbingcode15.pdf>)
5. **Now Plant Away!** Note that plants in a rain garden will have to tolerate fluctuating levels of soil wetness. To help plants survive the wet times, it will be beneficial to plant them 'high' on the edge of the garden or on elevated mounds within the garden to raise the roots above the ponded water level. The area should be mulched within 2-3 inches of hardwood mulch. Lighter mulches can float, so avoid pine bark and pine straw mulches. Mulch is important in pollution removal, maintaining soil moisture, and erosion prevention.

The Three Rivers Rain Garden Alliance provides recommendations on its web-site for plants to choose, for your reference at www.raingardenalliance.org.



Rachelle Ogun

From: Rachelle Ogun
Sent: Wednesday, August 17, 2011 8:14 AM
To: George Zboyovsky (gzboyovsky@brentwoodboro.comcastbiz.net)
Cc: Emily Gaspich; Katherine Gilmartin
Subject: Quarterly Stormwater Phase II Public Education and Outreach Articles
Attachments: MS4 - Chlorine2.pdf; Swimming Pool Care Article.pdf

Good morning George –

Attached please find an article and poster on swimming pool care and chlorine alternatives for public education and outreach for stormwater phase ii. Please post the articles online on the Borough web-site. Hard copies of these items will be sent under separate cover.

Rachelle

Rachelle S. Ogun

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Keep Chlorine Out of the Storm Drain!

Chlorine from swimming pools is a common pollutant that, when emptied into our storm drains, can have a harmful effect on fish and aquatic life.

Below are some alternative systems to using chlorine for sanitizing pools:

- Ozone Pool Systems: Pool systems utilize either an ultraviolet light source or corona discharge tube to convert ambient oxygen in the air (O₂) to ozone (O₃), which is then injected into the jet system of the pool. Ozone systems require more filter cleanings and still must be treated with chlorine as a backup, but only 20% as much chlorine is needed compared to a traditional pool.
- Ultraviolet Light (UV) Pool Systems: A UV system utilizes an ultraviolet light source to kill pathogens as water circulates through the sanitizer unit (not to be confused with the UV lights used to produce ozone). These systems can cut chlorine usage by 70%.
- Natural Aquatic Plant Pools: These pools recreate the ecology of a pond in a controlled setting, where plants, beneficial bacteria in the water, and sometimes even fish provide all the necessary filtration and cleaning. A properly designed system will offer crystal clear water completely free of chemicals.

If you wish to move away from a traditional chlorine only system, do your research as no one system is the best for every one. Maintaining a healthy and safe pool must be your first priority.

Source information for this article provided by metaefficient.com



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Natural Aquatic Plant Pool

Love Your Swimming Pool? Show Your Watershed The Love!

Swimming Pools and Stormwater

During hot summer days, it is very refreshing to take a dip in your local swimming pool or maybe your own pool in your backyard! Did you know the chemicals used to treat pools to make it clean and safe for swimming can have the exact opposite effect in the quality of water in our lakes, streams and rivers? Chlorine drained from swimming pools is a common pollutant that can have a harmful effect on fish and aquatic life.

Best Management Practices (BMP's) to Prevent Swimming Pool Stormwater Pollution

General Maintenance

1. Clean your pool or hot tub on a regular basis. Maintaining proper chlorine levels, water filtration and circulation will reduce circumstances in which you need to drain your pool or hot tub.
2. Avoid using copper based algaecides. Control algae with chlorine or other alternatives to copper-based chemicals.
3. Dispose of unwanted pool chemicals properly, since many are considered household wastes when discarded. Check out the web-site of the Pennsylvania Resources Council for a schedule of local household chemical collection events. The direct link to the current schedule is: <http://www.zerowastepgh.org/ZW-hcw-events.html>
4. Store pool chemicals in a cool dry place away from sunlight, drains, children and pets.



Filter Maintenance

1. Do not rinse or clean filters into the street, paved driveways, or a street drain. Do not drain backwash into streets or street drains.
2. Rinse cartridge filters into a container and allow the waste to settle out. Dispose of residue by bagging and placing it in the trash after it dries out.

Draining Pools and Hot Tubs:

Discharging swimming pool water to Pennsylvania's waters without a permit violates the Clean Streams Law. Property owners and pool companies that violate this law may be prosecuted and penalized for damages. If your municipality grants permission, pool wastewater should be discharged to the local sanitary sewer system. If sanitary sewers cannot be accessed, the wastewater should be hauled off-site for disposal at an approved treatment facility. If wastewater cannot be hauled away and you must drain your pool, follow the tips listed below:

1. Prior to draining, shut off the chlorination system or do not add any chlorine for a minimum of one to three days to allow chlorine to dissipate.
2. Drain water onto a landscaped area of your property away from your storm drains.
3. When draining be considerate of your neighbor by keeping all water on your property. Use sand bags or berms, if necessary, to keep water from leaving your property.
4. Do not drain if there has been recent application of herbicides, pesticides or fertilizers on your lawn.
5. Take note of the Allegheny County Health Department's regulations if you are an owner or operator of a public pool or hot tub facility. The regulations can be found here: <http://www.achd.net/newweb/regs.html>

Rachelle Ogun

From: Rachelle Ogun
Sent: Wednesday, November 02, 2011 1:04 PM
To: George Zboyovsky (gzboyovsky@brentwoodboro.comcastbiz.net)
Cc: Emily Gaspich
Subject: Stormwater Phase II - Quarterly Public Outreach - Article and Poster
Attachments: MS4 - Burning Leaves - Oct 2011.pdf; Falling Leaves.pdf

Good afternoon George –

Attached please find an article and poster on leaf disposal for public education and outreach for stormwater phase ii. Please post the articles online on the Borough web-site. Hard copies of these items will be sent under separate cover.

Rachelle

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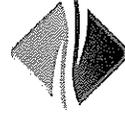
Do not Burn Leaves...



...Compost and Mulch Instead!

It is illegal to burn leaves under the federal Clean Air Act and the Pennsylvania Air Pollution Control Act. It is very damaging to air quality and studies show a connection between high levels of particulate pollution, released from smoke, with chronic coughs and respiratory illness.

Composting is easy! All you need is a 4X4X4 foot area out of direct sunlight and three parts leaves to three parts greens, such as grass clippings. Materials should feel moist, and warm to touch (except in winter months). The pile should be turned every few weeks so the outside layers are exchanged in the center of the pile. It is ready to be used when it looks dark and crumbly and none of the starting ingredients are visible.



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For more details on how to compost refer to: <http://www.dep.state.pa.us/dep/deputate/airwaste/wm/recycle/facts/compost.htm>

Don't Let the Pretty Fall Leaves Stink Up Our Watershed!

The Leaf Problem

The beautiful vivid colors of autumn's leaves are one of Western's Pennsylvania's most prized assets. On our properties, however, leaves can become a nuisance. In the fall, particularly in October and November, we all struggle to figure out the best way to dispose of leaves on our property. The temptation is to just sweep up the leaves onto the street. The problem, however, with this out of sight out of mind mentality is that leaves dumped into the street, will eventually fall into our storm sewers. The leaf debris, carrying fertilizers and pesticides, combined with other yard waste, eventually gets carried into lakes and rivers, and this waste is untreated and unfiltered. Once in the water this debris releases phosphorus, which promotes the growth of algae blooms that degrade water quality, harming lake and river ecosystems and aquatic life. Leaf debris can also clog culverts, storm drains and pipes, increasing the risk of flooding during heavy rains. There are many alternatives to taking care of the leaves on our property in a responsible and safe way to protect our watercourses!

Off Site Disposal Options for Leaves

- A private refuse hauler may haul away your leaves for a fee.
- Many municipalities hold scheduled leaf pick up days. Check your municipality's web-site or contact them by telephone to see if this program is in effect in your community.
- There are several composting facilities in Southwestern Pennsylvania that will accept leaf waste and yard debris. Check out the EPA directory at the link below: <http://www.epa.gov/reg3wcmd/composting/>

Please, Do Not Burn Leaves!

Leaf burning has often been viewed as a fall tradition, but it is also illegal under the federal Clean Air Act and the Pennsylvania Air Pollution Control Act. Though there are some exemptions to this law, if you live in a densely populated or urban community, there is a good chance your municipality has an ordinance prohibiting leaf burning. Along with leaf burning being illegal, it is very damaging to our air quality and studies show a connection between high levels of particulate pollution, released from smoke, with chronic coughs and respiratory illnesses. It is particularly troubling for those who suffer from asthma, so please do not burn leaves!

Leaf Mulching and Composting: Fall Leaves Can Be A Great Tool for Your Garden

Benefits of Leaves in the Garden

- The leaves of one shade tree equate to as much as \$50 worth of plant food and humus.
- Leaves hold 300% their weight in water making them a great way to keep soil moist in the heat of summer.
- Leaves decompose slowly and release their nutrients over time, improving the structure of the soil.
- Leaves are an inexpensive and very beneficial mulch that you can use around trees, shrubs, or in flower and vegetable gardens.
- Leaves protect against temperature fluctuations and cold weather in the winter. When the leaves eventually decompose, nutrients will be added to the soil and the soil structure will be improved.

The Basics of Composting: Turning Leaves into Mulch

Keys to Successful Composting

1. **Organic Materials:** A good mix will consist of three parts leaves and one part greens such as fresh grass clippings and garden prunings.
2. **Moisture:** Composting materials should feel moist but not overly soggy.
3. **Temperature:** Compost should feel warm to the touch except in the cold winter months.
4. **Air:** To prevent unpleasant odors that can occur when materials decompose without oxygen, compost should be turned regularly to ensure that air is reaching the center of the pile.

Materials Needed for Composting

1. Yard Waste, Space, and Enthusiasm!
2. Compost piles do not need to be enclosed, although many people use a bin or similar enclosure.
3. Compost bins can be purchased or you can easily construct one with basic materials such as chicken wire, snow fencing, lumber or used pallets.

Getting Started on Your Compost

A 4X4X4 foot area out of direct sunlight is ideal for your compost pile. Choose an easily accessible spot on a grass or soil base. Organic materials should be mixed, adding water as needed so that materials feel like a moist wrung out sponge. The compost pile should be turned after a few weeks so that the outside layers are exchanged with the center of the pile. Turn compost piles about once per month, except in cold weather. Water can be added during turning if necessary. Be sure to not compost diseased leaves.

Using Compost

Compost is ready to be used when it looks dark and crumbly and none of the starting ingredients are visible. One way to test if compost is finished, is to seal a small sample in a plastic bag for 24 to 48 hours. If no strong odors are released when you open the bag, the compost is ready to be used as mulch.



Rachelle Ogun

From: Rachelle Ogun
Sent: Wednesday, February 29, 2012 2:24 PM
To: George Zboyovsky (gzboyovsky@brentwoodboro.comcastbiz.net)
Cc: Emily Gaspich; Ryan Berner
Subject: Stormwater Phase II Public Outreach
Attachments: Stormwater Pollution - Simply Pointless.pdf; Stormwater Pollution.pdf

Good afternoon –

Attached please find an article and poster for public education and outreach for stormwater phase ii. Please post the articles online on the Borough website. Hard copies of these items will be sent under separate cover.

Rachelle

Rachelle S. Ogun
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Stormwater Pollution? Make A POINT - Don't Do It.

What Are Sources of Pollution?

Pollution of our waterways comes from two types—point and nonpoint sources. Point sources of pollution can be traced to a specific location. Typically this type of pollution can be tied to a defined source such as an industrial or sewage treatment plant. Non-point source pollution, by contrast, come from a wide range of sources. If it rained or snowed today in your community, runoff from this precipitation picked up several kinds of natural and human made pollutants, eventually depositing them into our three rivers. Non-point source pollution can include:

- excess fertilizers
- herbicides and insecticides from treating your lawn to make it healthier
- oil, grease and toxic chemicals from your vehicle and energy production
- viruses, bacteria and nutrients from pet waste
- road salts from treatments used to get rid of snow
- sediment from improperly managed construction sites, crop and forest lands, and eroding stream banks
- and acid drainage from abandoned mines



Think Stormwater Pollution Doesn't Affect You? Think Again.

-Sediment can cloud water, inhibiting growth of aquatic plants or destroying entire habitats.

-Excess nutrients can cause algae blooms. When algae die, they sink to the bottom and decompose, removing oxygen from the water. Fish can't survive in water with low oxygen levels.

-Bacteria and other pathogens that infiltrate into swimming areas, create public health hazards, forcing beach closures.

-Debris such as plastic bags, cigarette butts, and bottles often gets washed into water bodies, threatening aquatic life.

-Common household chemical waste such as paints, pesticides and motor oil can poison aquatic life.

-Polluted storm water also negatively impacts drinking water sources, impacting human health and increasing the costs to treat it.

Make A Point—Don't Do It!

-Keep debris out of street gutters and storm drains.

-Apply lawn and garden chemicals sparingly and carefully follow the directions.

-Dispose of used household chemicals properly—not in storm sewers or drains. Check the DEP web site for information on household hazardous waste collection programs:

<http://www.portal.state.pa.us/portal/server.pt?open=514&objID=589595&mode=2>

-Immediately clean up spills.

-Wash your car on the grass to prevent runoff, or better, take it to the car wash.

-Use low-phosphate or phosphate free detergents.

-Spread mulch on the bare ground to help prevent erosion and runoff.

-Clean up after your pets.

-Gutters and down spouts should drain onto vegetated or gravel-filled seepage areas.

-Participate in clean-up activities in your community.



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Think Stormwater Pollution Doesn't Affect You? Think Again.



Polluted stormwater runoff can negatively impact people, plants, animals and fish in a number of ways:

- Pollution contaminates our drinking water sources, affecting health and increasing costs to treat it.
- Debris such as plastic bags, pet waste, cigarette butts, and bottles often get washed into water bodies.
- Common household chemical waste such as paints, pesticides and motor oil can poison aquatic life.
- Bacteria and other pathogens can infiltrate into swimming areas.
- Sediment can cloud water, stemming growth of aquatic plants.
- Excess nutrients can cause algae blooms, threatening the fish population.



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