

City of Troy Department of Public Utilities

Stormwater Management Program (SWMP)



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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.” - EPA*
- Two main components responsible for stormwater pollution:
 - ◆ Increased volume & rate of runoff from impervious surfaces
 - ◆ Concentration of pollutants in runoff

What is Stormwater Runoff *cont'd*

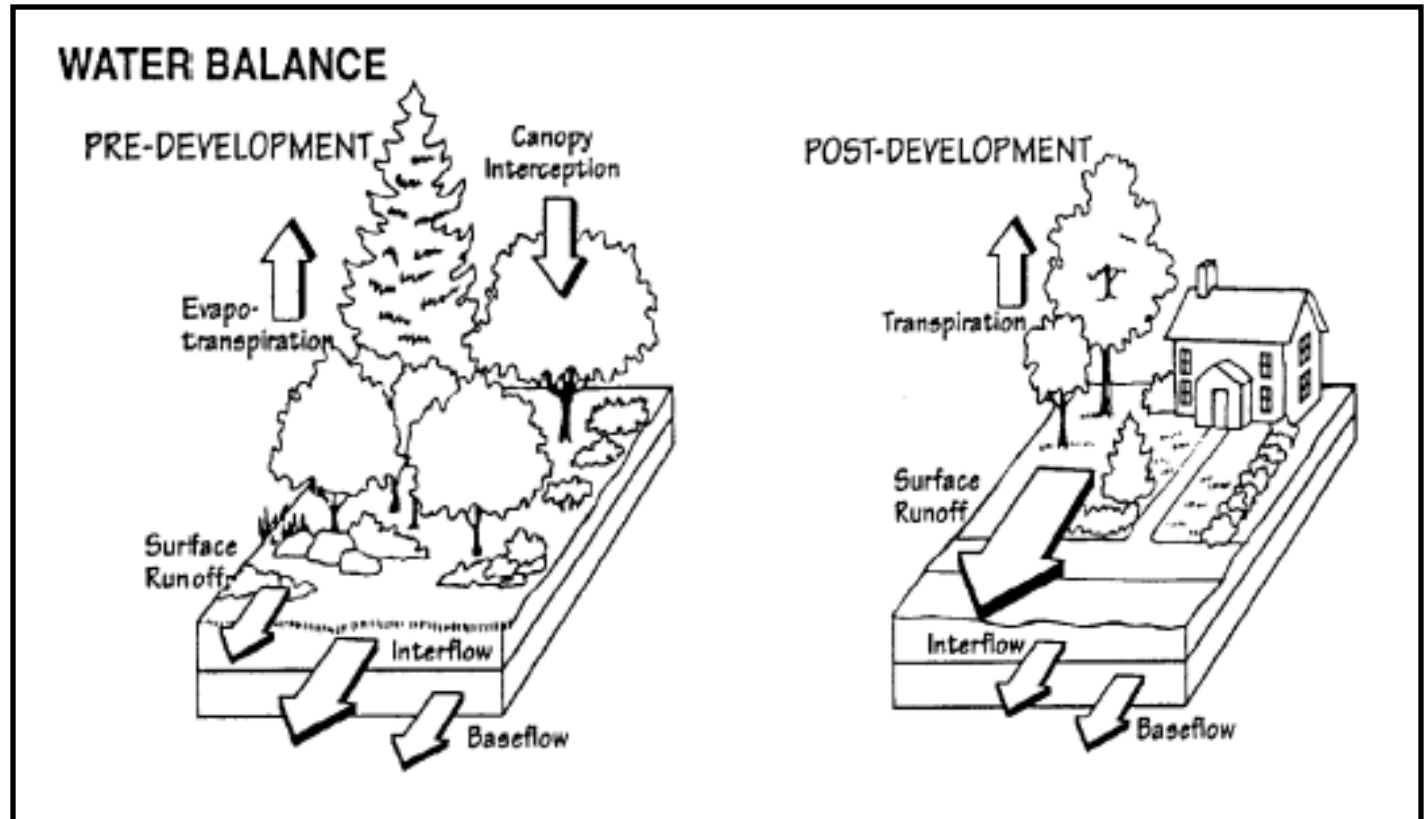
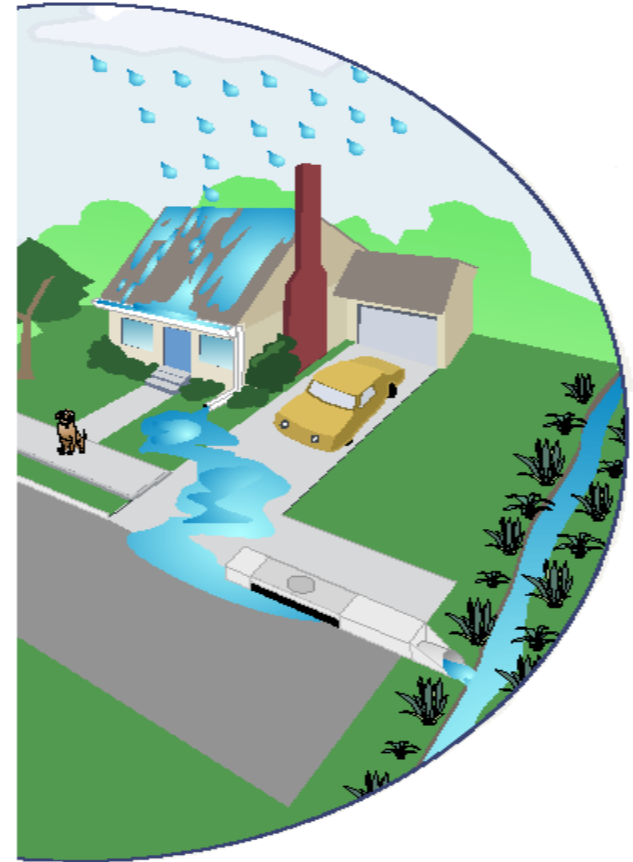


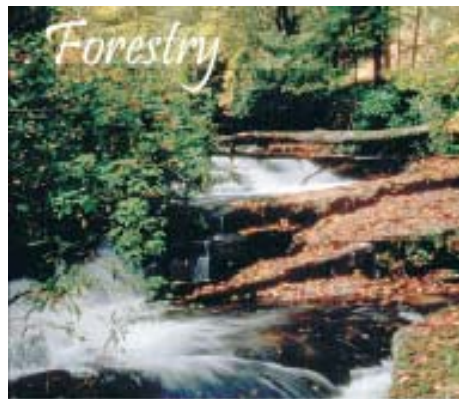
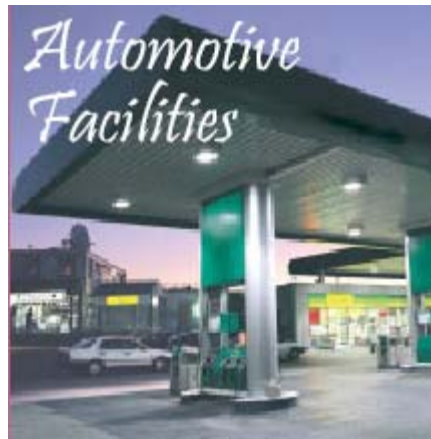
Figure from NYS DEC Stormwater Management Design Manual

Pollutants Associated with Stormwater Discharges

- Floatables: street litter
- Settleables: soil/dirt
- Suspended Solids: smaller soil particles
- Phosphorus: fertilizers
- Nitrogen: fertilizers
- Coliform: pet waste
- Metals
- Bio-degradable



Other Sources of Stormwater Runoffs



Effects of Stormwater Runoff

- Habitat modification and loss
- Increased localized potential of flooding
- Decreased aquatic biological diversity
- Increased sedimentation and erosion
- Increased bacteria levels in recreational waters

Advantages of Stormwater Management

- Protection of wetlands and aquatic ecosystems
- Improved quality of receiving waterbodies
- Conservation of water resources
- Protection of public health
- Flood control

Stormwater Phase II Rule

- Published by U.S. EPA in December 1999, Adopted by New York State Department of Environmental Conservation (NYS DEC) effective January 8, 2003
- *“Requires operators of small MS4s in urbanized areas to develop and implement a storm water management program which addresses six minimum control measures.”*
-EPA
- MS4 = Municipal Separate Storm Sewer Systems

Objectives of SWMP

- Full implementation of SWMP by Jan. 2008
- Educate public on stormwater pollution
- Detect & eliminate illicit discharges
- Control construction site runoff
- Coordinate pollution prevention measures in to City operations via Six Minimum Control Measures

Control Measure 1: Public Education and Outreach on Stormwater Impacts

- Identify & educate public on local impacts of stormwater discharges
- Informational brochures on:
 - ◆ Lawn & garden care
 - ◆ Pet waste management
 - ◆ Pollution management for businesses
 - ◆ Trash/hazardous material disposal management
 - ◆ Water conservation
- City-wide survey to identify educational interests

Control Measure 2: Public Involvement & Participation

- Identify local point of contact:
Dept. of Public Utilities
25 Water Plant Road
Phone: (518) 237-0319
Email: chris.wheland@troyny.gov
- Informational brochures available at City Hall/DPU and City webpage
- Community Hotline to report illicit discharge: Rensselaer County Health Department
(518) 270-2660

Control Measure 2: Public Involvement & Participation *cont'd*

- Public meeting for comment on SWMP Annual Report – every May

Control Measure 3: Illicit Discharge Detection & Elimination

- Identify sources of illicit discharges in local area
- Develop sewer system mapping/outfall mapping using GPS – joint effort with Rensselaer County and other municipalities
- Augment/update regulations prohibiting illicit discharges
- Inform public & businesses of hazards due to illicit discharges

Control Measure 3: Illicit Discharge Detection & Elimination *cont'd*

- Implement regulation/ordinance prohibiting illicit discharges
- Implement program to detect and eliminate illicit discharges
- Illicit discharges include (not limited to):
 - ◆ Recreational sewage from boats
 - ◆ Failing septic systems
 - ◆ Pet waste
 - ◆ Oils
 - ◆ Other Industrial Fluids/Hazardous Materials

Control Measure 4: Construction Site Stormwater Runoff Control

- Opportunity for public comment on construction plans
- Review/augment current regulations on erosion and sedimentation control
- Review/augment current regulations on construction site waste management
- Review/augment procedure for construction site review
- Review/augment current regulations on site inspections/enforcement

Control Measure 4: Construction Site Stormwater Runoff Control *cont'd*

- Educate/training of construction operators
- Implement regulations on erosion and sedimentation control
- Implement regulation on site inspections/site review/enforcement

Control Measure 5: Post-Construction Stormwater Management

- Identify management practices to aide in reducing pollutant discharge
- Establish regulation/strategy to control post construction runoff
- Establish regulation/strategy for site inspection & maintenance
- Implement regulation on post construction runoff/site inspection/maintenance

Control Measure 6: Pollution Prevention/Good Housekeeping

- Use DEC NYS Management Practices Catalog for Nonpoint Source Pollution Prevention as guide
- Continue municipal operations to prevent pollutant discharge:
 - ◆ Street cleaning
 - ◆ Catch basin cleaning
 - ◆ Spill response/prevention
 - ◆ City-wide recycling program

Control Measure 6: Pollution Prevention/Good Housekeeping

cont'd

- Review/augment pollution prevention plan addressing discharge of pollutants from municipal operations
- Provide training for employees on pollution prevention
- Implement pollution prevention program/plan

Resources

- City of Troy – DPU: <http://www.troyny.gov>
- U.S. EPA: <http://www.epa.gov>
- NYS DEC: <http://www.dec.state.ny.us>
- Rensselaer Co. Public Health Dept.:
<http://www.rensco.com>
- Stormwater Manager's Resource Center:
<http://www.stormwatercenter.net/>

Acknowledgements

- U.S. EPA Office of Wastewater Management
- New York State Department of Environmental Conservation, Division of Water
- Rensselaer County Health Department
- Rensselaer County Economic Development and Planning