

Keys to the ILR40

The Six Minimum Control Measures

Shauna Urlacher

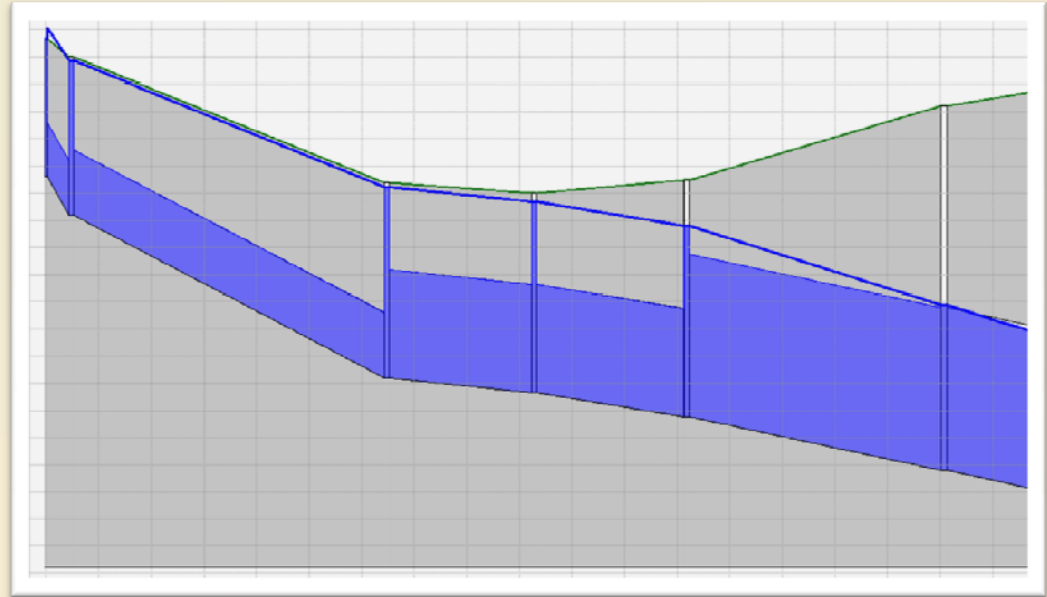
May 25, 2010

Clark Dietz
ENGINEERS

Municipal Separate Storm Sewer System (MS4)

Municipal Separate Storm Sewer System:

A conveyance system (including “open” drainageways) owned by a State, City, Town, or other public entity that discharges stormwater to waters of the United States.



Six Minimum Control Measures

1. Public Education and Outreach on Stormwater Impacts
2. Public Involvement and Participation
3. Illicit Discharge Detection and Elimination
4. Construction Site Stormwater Management
5. Post-construction Stormwater Management in New Development and Redevelopment
6. Pollution Prevention/Good Housekeeping for Municipal Operations

#1 - Public Education and Outreach on Stormwater Best Management Practices

OBJECTIVE : Inform Citizens about the Impacts of Polluted Stormwater Runoff Discharges on Water Quality of Streams.

OPTIONS:

- Distribute paper materials
 - Newsletter/Newspaper Article
 - Brochures, Flyers, etc.
 - Door Hangers
- Billboards
- Partner with Local Businesses
- Public Service Announcements
- Community Website



#1 - Public Education and Outreach on Stormwater Best Management Practices

RESOURCES:

- www.epa.gov/owow/nps/toolbox/printcatalog.htm
- www.epa.gov/owow/watershed/
- www.knowwhereitgoes.org



#2 - Public Participation/Involvement

OBJECTIVE : Provide Opportunities for Citizens to Participate in the Program

OPTIONS:

- Citizen Watch Groups
- Volunteer Programs
 - Community Clean-up,
 - Adopt a Street,
 - Storm Drain Stenciling,
 - Stream Monitoring



#2 - Public Participation/Involvement

OPTIONS:

- Public Hearing or Town Hall Meeting
- Create a Stormwater Management Panel
- Incentive Programs
 - Downspout Disconnection,
 - Rain Gardens,
 - Rain Barrels



Image Source: City of Portland, OR

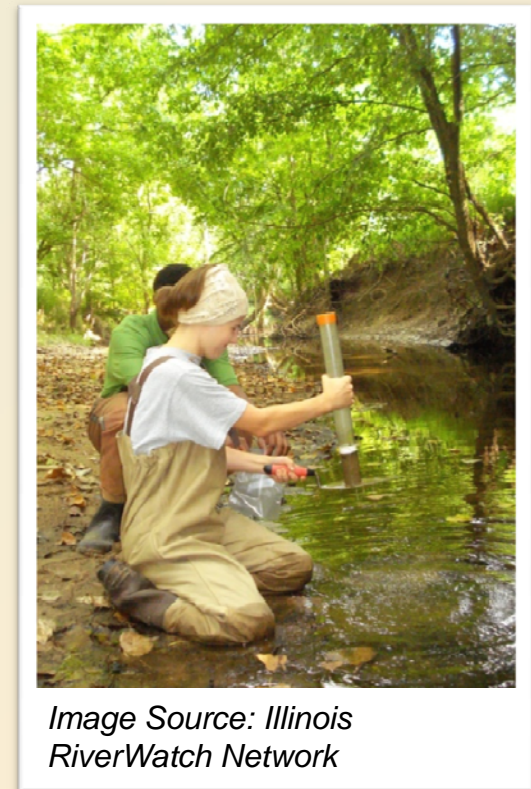


#3 - Illicit Discharge Detection and Elimination

OBJECTIVE : Detect & Eliminate Illicit Discharges to the Storm Sewer System.

KEY ELEMENTS:

- Storm Sewer Map (Required)
- Regulatory Control
- Detection/Elimination Plan
- Visual Dry Weather Screening
- Illicit Discharge Tracing Procedures
- Illicit Sources Removal Procedures
- Program Evaluation and Assessment



#4 - Construction Site Stormwater Management

OBJECTIVE : Reduce Erosion & Sedimentation from Construction Sites One Acre or More

KEY ELEMENTS:

- **Regulatory Control Program**
 - Ordinances\Design Standards
- **Site Plan Review Procedures**
 - Encourage Low Impact Development
 - Erosion and Sediment Control BMPs



Photo from UW Extension

#4 - Construction Site Stormwater Management

KEY ELEMENTS:

- Require Controls for Construction Activity Wastes
 - Garbage,
 - Concrete Washout,
 - Sanitary Wastes
- Site Inspection/
Enforcement Procedures
 - Employee Training/
Certification (CPESC)



#5 - Post-Construction Stormwater Management in New Development and Redevelopment

OBJECTIVE : Address Discharges of Post-Construction Stormwater Runoff from New Development & Re-development Areas

KEY ELEMENTS:

- Encourage Stormwater Infiltration, Reuse and Evapotranspiration
- Preserve Natural Features and Existing Waterways



#5 - Post-Construction Stormwater Management in New Development and Redevelopment

KEY ELEMENTS:

- Reduce Volume, Velocity and Pollutants
 - Minimize Impervious Surfaces
 - Green Infrastructure
 - Open Areas
 - Permeable Pavers
- Require Post-construction Management Plans



#6 - Pollution Prevention/Good Housekeeping for Municipal Operations

OBJECTIVE : Preventing or Reducing Pollutant Runoff from Municipal Operations

KEY ELEMENTS:

- Begin an Inspection and Maintenance Program
- Review All Municipal Operations for Impact on Stormwater
 - Salt Storage & Application,
 - Vehicle Maintenance,
 - Pesticide/Herbicide Use,



#6 - Pollution Prevention/Good Housekeeping for Municipal Operations

KEY ELEMENTS:

- Properly Dispose of Wastes from Cleaning Storm Sewers and Street Sweepings
- Employee Training

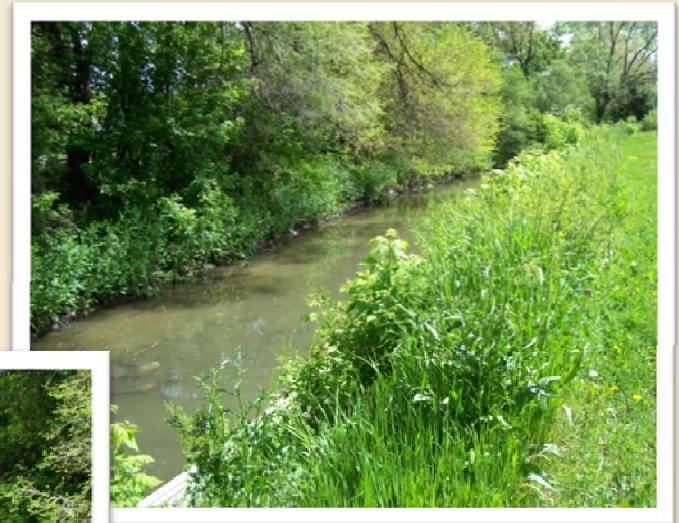
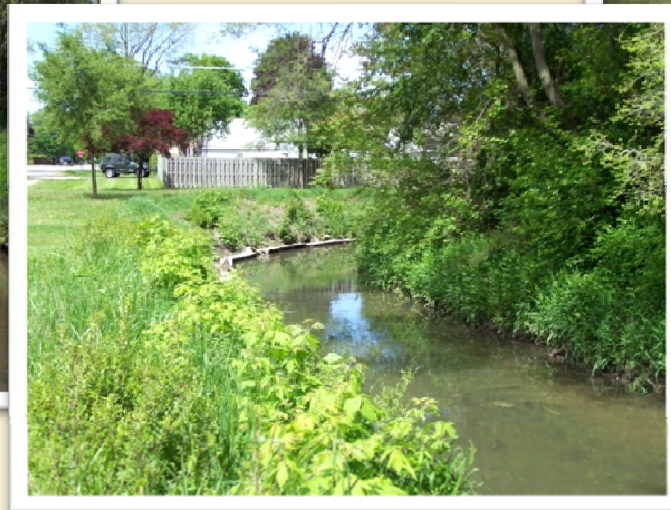
Public Works Yards are Typically Some of the Most Severe Stormwater Hotspot Facilities in a Community.



Photo from Center for Watershed Protection, Manual 9

Benefits of MS4 Programs

- Improved Water Quality
- Enhanced Opportunities for Recreation
- Reduced Flood Damage
- Enhanced Aesthetic Value



References

- **Illinois Urban Manual**
 - www.il.nrcs.usda.gov/technical/engineer/urban/standards/urstd_alpha.html
- **USEPA**
 - www.epa.gov/owow/nps/toolbox/printcatalog.htm
 - www.epa.gov/owow/watershed/
 - www.knowwhereitgoes.org
- **Center for Watershed Protection**
 - www.cwp.org/formmaker/Download-Form_RedirectFormPage.html
- **Illinois RiverWatch Network**
 - www.ngrrec.org/index.php/riverwatch
- **The Conservation Foundation**
 - www.theconservationfoundation.org/

Contact Information

Shauna R. Urlacher, P.E., CFM

Clark Dietz, Inc. - Engineers

118 South Clinton Street, Suite 600

Chicago, IL 60661

312.382.1294 - office

shauna.urlacher@clark-dietz.com