

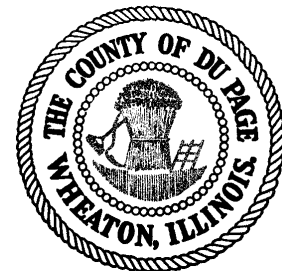
# DuPage County Water Quality BMPs and Water Control Volume

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## **BMP Approach - Existing and Proposed**

- **All Developments that require a Stormwater Management Permit must provide BMPs for the total area being developed.**
- **Generally, developed area is defined as any activity that changes the stormwater runoff characteristics or any activity in a wetland, wetland buffer, floodplain, or riparian area.**

# DuPage County

## Water Quality Best Management Practices Technical Guidance

For Inclusion into Appendix E – Technical Guidance  
for the DuPage Countywide Stormwater and Flood  
Plain Ordinance

March 2008



Prepared by:  
DuPage County Stormwater  
Management Committee

With  
DuPage County  
Economic Development and Planning  
And

 ENGINEERING RESOURCE ASSOCIATES, INC.  
Consulting Engineers, Scientists & Surveyors

# **BMP Approach – Existing vs. Proposed**

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- **Select common target pollutants**
  - **Total Suspended Solids (TSS)**
  - **Metals and Oils**
  - **Nutrients**

## **BMP Approach – Proposed Draft Ordinance**

- **Intent was a greatly simplified approach, but current proposed draft language is inadequate.**
- **Will be adding a design rainfall event to focus on frequent events, and other changes.**

# BMP Approach – Existing vs. Proposed

- **Existing BMP Guidance**

- Treat the water quality event
- 2-year 24 hour event = 3.04 inches

- **Proposed**

- Treat the first flush
- 2 inch rain event
- 80% of runoff is from storms which are 2 inches or less
- 80% of the sediment load is from storms 1.78 inches or smaller

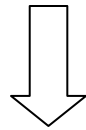


Existing BMP approach  
uses BMPs by Land-Use  
-The Selection Guide

# >1 ac. Multi-Family or Non-Residential Land Uses; Roads w/ Detention

## Pollutant Category by Treatment Importance

More Important



Less Important

TSS

Metals/Oils

Nutrients



## >1 ac. Multi-Family or Non-Residential Land Uses; Roads w/ Detention

<u>Sample Recommended BMPs</u>	<u>Value</u>	<u>Pollutant Treatment Limitation</u>
Vegetated Swale, native	2	Metals/Oil
Permeable Pavers	3	None
Dry Detention	1	Oil
Wet Bottom Detention	2	Oil
Wetland Detention (no open water)	2	None
Constructed Wetland (CWD)	3	None
Manufactured	Varies	Varies

### Importance Value (BMP Effectiveness)

1 = Low    2 = Moderate    3 = High

**BMPs should treat 100% of the developed area and average or exceed a 2.5 average importance value.**

# BMP Flexibility

- **Provide Options - treatment train**
- **Detention Basins – double credit for BMP use**

## Water Control Volume (WCV) Proposed Draft Ordinance

- WCV based on impervious area according to Table 2
- Lots greater than 12,000 square feet with more than 500 square feet of impervious area
- WCV rainfall capture depth is a sliding scale ranging from 0.5" to 1.00" depending on the project type

## Proposed Draft Ordinance Language

- Proposed Draft Ordinance attempts move away from zoning classifications by looking at impervious areas and changes to impervious areas.

**Table 2. Site Runoff Storage and Water Control Volume Requirements**

<b>Project Type</b>	<b>Site Runoff Storage</b>	<b>Water Control Volume Applicable Rainfall Depth</b>
Roadway Projects	Special	1.00 in.
Open Space Development Projects	Special	0.75 in.
Public Water and Sewer Improvement Project	Not Required	Not Required
All development where, compared to the Pre-Project Site, the TIA has increased or decreased less than 5% and the TIA of the With-Project Site is:	And new TIA is greater than 25,000 sq ft.	And new TIA is greater than 500 sq ft.
Equal to or less than 10%	Not Required	0.75 in.
Greater than 10%	Required	0.75 in.
All development where, compared to the Pre-Project Site, the TIA has decreased at least 5% and the TIA of the With-Project Site is:		
Equal to or less than 50%	Not Required	0.50 in.
Greater than 50% but less than 80%	Not Required	0.75 in.
Greater than 80%	Not Required	1.00 in.

# Water Control Volume (WCV) Proposed Draft Ordinance

- Preferred method of discharge from the WCV facility is through infiltration or evapotranspiration
- Where soils are inappropriate for infiltration, an underdrain may be used provided that the WCV does not draw down in less than 48 hours.
- The volume calculated for the WCV can be subtracted from any site runoff volume (detention) required

# Proposed Draft Ordinance

- Proposed Draft Ordinance attempts to recognize the integration of BMPs and WCV into other aspects of Stormwater Management.
- Promote design opportunities to take advantage of combining:
  - Runoff volume (detention)
  - BMPs
  - Water Control Volume

# Proposed Draft Ordinance

## – next steps

- First Public Comment period ended March 4.
- Compile comments received and develop responses with Steering Committee.
- Present comments and responses to Stormwater Committee.
- Prepare a revised draft reflecting comment response.
- Present draft to Stormwater Committee for second public comment period.
- Compile and respond to comments.
- Prepare final ordinance for Stormwater Committee and County Board approval.



# Stormwater Ordinance Update

<http://ec.dupageco.org/StormWaterUpdate/>

The screenshot shows a Mozilla Firefox browser window displaying the website <http://ec.dupageco.org/StormWaterUpdate/>. The browser's address bar and menu bar are visible at the top. The website header features the DuPage County Stormwater Ordinance logo on the left, a search bar, and a login section with fields for 'Username:' and 'Password:' and a 'Log In' button. The main content area is divided into three columns. The left column contains a 'home' link and a 'pages' list including Project, Documents, Project Overview, Provide Us Your Comments, Public Involvement, Meeting Summaries, Public Involvement Overview, and Survey. Below this is a 'categories' list with Development (1), Permit Application and Review Process (1), and Stormwater Management (1). The middle column features a post titled 'Re-ordering/Re-arranging Ordinance Articles' by StormBlog53, dated Oct 19, with 2 comments. The post text discusses the value of re-ordering and re-arranging ordinance articles, mentioning the 1992 ordinance and the current 56-page ordinance. The right column contains 'breaking news' links to Re-ordering/Re-arranging Ordinance Articles, Definitions of Development and Types, and Welcome to the DuPage Stormwater Update blog. Below this are 'archives' for October 2009 and 'links' to Dupage County and Sustainable Stormwater Blog. At the bottom of the page, there is a 'Definitions of Development and Types' section by StormBlog53, dated Oct 12, with no comments yet. The browser's status bar at the bottom shows the system tray with weather information: 'Now: Mostly Cloudy and 54°F', 'Today: 72°F', and 'Thu: 52°F'.



## Stormwater Permitting Information

[www.dupageco.org/edp](http://www.dupageco.org/edp)

