New BMP Requirements in N.E. Illinois
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Kane County
Land Use Strategy Perspective
Kane County 2030 Plan

- Prime Agricultural Area
- Critical Growth Area
- Urban Corridor Area

Westward Development
KANE CO. STORMWATER ORDINANCE KEY POINTS

- Reducing stormwater damages
- Commitment to water quality and infiltration
- Preserve or compensate depressional storage
- Development design alternatives
- Post development release rate is $\leq 0.1$ cfs/acre for a 100-year event for areas disturbed
- Retain 0.75” rainfall $\times$ “directly connected impervious area” (plan for evapotranspiration or infiltration) Volume based on 'directly connected impervious surface’ in the development
- Set gravity outlet above retention volume
Mixed uses within development (i.e. offices, retail, restaurants, etc.)

Conservation Commercial / Industrial Template

Bioswale

Green Roof

Naturalized Detention

Commercial Building

Porous Pavement

Conventional Commercial / Industrial Template

Naturalized Rainwater Garden

Naturalized Rainwater Garden
TYPICAL STORMWATER DETENTION POND
WITH CONTROLLED WETLAND RETENTION
HADDLESTON-MCBRIDE TYPICAL SECTION NO. C-128-98

STORM SEWER DISCHARGE
TO STORM WATER FACILITY

STORM DETENTION
VOLUME AREA

DETENTION POND DISCHARGE
CONTROL PIPE OUTLET

DETENTION HIGH WATER LEVEL

STORM RETENTION
VOLUME AREA

LOWFLOW RETENTION
SURCHARGE SYSTEM

INLINE RETENTION WATER
LEVEL AND DISCHARGE CONTROL
STRUCTURE

LOW FLOW DISCHARGE
TO OFF-SITE OUTLET SYSTEM

NORMAL WATER LEVEL

RETENTION HIGH WATER LEVEL

RETENTION HIGH WATER LEVEL
Pass the existing conditions peak runoff rate from the 100-year, critical duration rainfall above the design 100-year high water level

Protect agricultural land uses (drain tile investigations and improvements)

Soil erosion and sediment control measures

Wetland protection (non-Corps Jurisdiction)

Wetland buffers

Floodplain regulations

Mandatory special service areas (SSA) or Homeowners association and a mandatory backup SSA
BMP Demonstration Project

Kane County Events Center
Environmentally Friendly Parking Lot Improvements

Ecoloc Permeable Paving System

Vegetative Bio-Swale Benefit = Water Quality
Stormwater runoff is filtered through layers of the paving systems before flowing through the naturally filtering bio-swales to White's Creek and eventually the Fox River.

Gravel Grass Paving System

Gravel Grass & Ecoloc Permeable Paving Systems Benefit = Reduced Flooding
Stormwater infiltrates (sinks in) and is stored in the system's base layer, decreasing the amount and rate of runoff from the site & decreasing flooding downstream.

This is the first installation of Gravel Grass Pavements in the Chicagoland Area.
2009 Minor Ordinance Amendments

- BMP-in-lieu of site runoff storage
- Outline permeable pavement and rain gardens
Thoughts on the Future

- Ordinance Interpretation left to Municipalities (County will assist municipality, not developer or engineer)
- Stormwater Authority does not include zoning
- Water Quality opportunities are gone when the water leaves the basin
- Development community just wants to build, and follows tried and true methods
- Ordinance is “strict enough,” tradeoffs for improved water quality, including **Density**
- I personally oppose on site mandated water quality sampling
- Open to Ideas/Suggestions
THANK YOU