

ILLINOIS URBAN MANUAL UPDATE

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Illinois Urban Manual Standards recently revised or almost completed

Porous/permeable pavements - 890	June 2013
Bioretention Facility - 800	Nov 2013
Dry Detention Basin – 809	Coming soon
Extended Detention Basin - 810	“
Wet Bottom Detention Basin - 811	“
Wetland Detention Basin - 812	“
Temporary Sediment Basin - 957	“

Standards Currently Under Final Review to be added within next few month

Rain Garden - 897	Coming soon
Soil Bioengineering – 926	“
Wetland Creation – 997	February 2014
Wetland Enhancement – 998	“
Wetland Restoration – 999	“

Porous/Permeable Pavements

- ▣ Pavement system designed to allow water to pass through the surface into the subsurface for storage and infiltration
- ▣ Reduces peak runoff rates and volumes
- ▣ Reduces pollution loads
- ▣ Requires a permeable soil or under drain system
- ▣ Maintenance considerations



Some Common Uses:

- Parking lots
- low traffic roadways
- Fire lanes
- Paths and sidewalks

Rain Gardens (Draft)

- ▣ Mainly used for residential purposes
 - Typical size of 100 to 300 square feet
- ▣ Shallow depth of less than one foot
- ▣ Targeted dewatering time of 24-48 hours
- ▣ Native or deep rooted vegetation preferred
- ▣ Setback from wells and septic fields (25'), in addition to building foundations (min. 10')

Bioretention Facility

- ❑ Larger version of a Rain Garden
- ❑ Soil permeability allows drainage within 48 hours
- ❑ Used to reduce peak flow rates and volumes for small storm events
- ❑ Removal of pollutants and nutrients thru the plants, soil and microbes
- ❑ May require soil remediation for low permeable soils, or an under drain system



Dry Detention Basin

- ▣ Designed to detain storm-water runoff and slowly release the water, reducing downstream flooding by reducing peak flow rates
- ▣ Designed to completely drain over a relatively short period of time (usually 48 hours)
- ▣ Typically designed for 25 year storm event
- ▣ NOTE - Low flow channel shall NOT be constructed
- ▣ Sediment forebays should be considered



Extended Detention Basin

- ▣ Similar to the Dry Basin, but is designed to release over a 48 to 72 hour period
- ▣ Can be converted by:
 - restricting the outlet size,
 - incorporating a multi stage outlet control structure,
 - and/or expanding the basin storage volumes
- ▣ Provides additional water quality benefits due to higher removal of suspended solids



Wet Bottom Detention Basin

- ▣ Slowly releases the water while maintaining a permanent pool throughout the year (min. of 3')
- ▣ 72 hr. drawdown of temporary pool (or local ordinance)
- ▣ Provides additional water quality benefits by allowing suspended solids to settle.
- ▣ Nutrient uptake by plants may be possible
- ▣ Forebays are required on all inlets to concentrate larger sediment, for easier removal



Wetland Detention Basin

- ▣ A constructed system designed to function as a natural wetland.
- ▣ Provides maximum pollutant removal and creates wetland habitat
- ▣ Establishment & Maintenance can be more difficult
- ▣ Requires a larger area

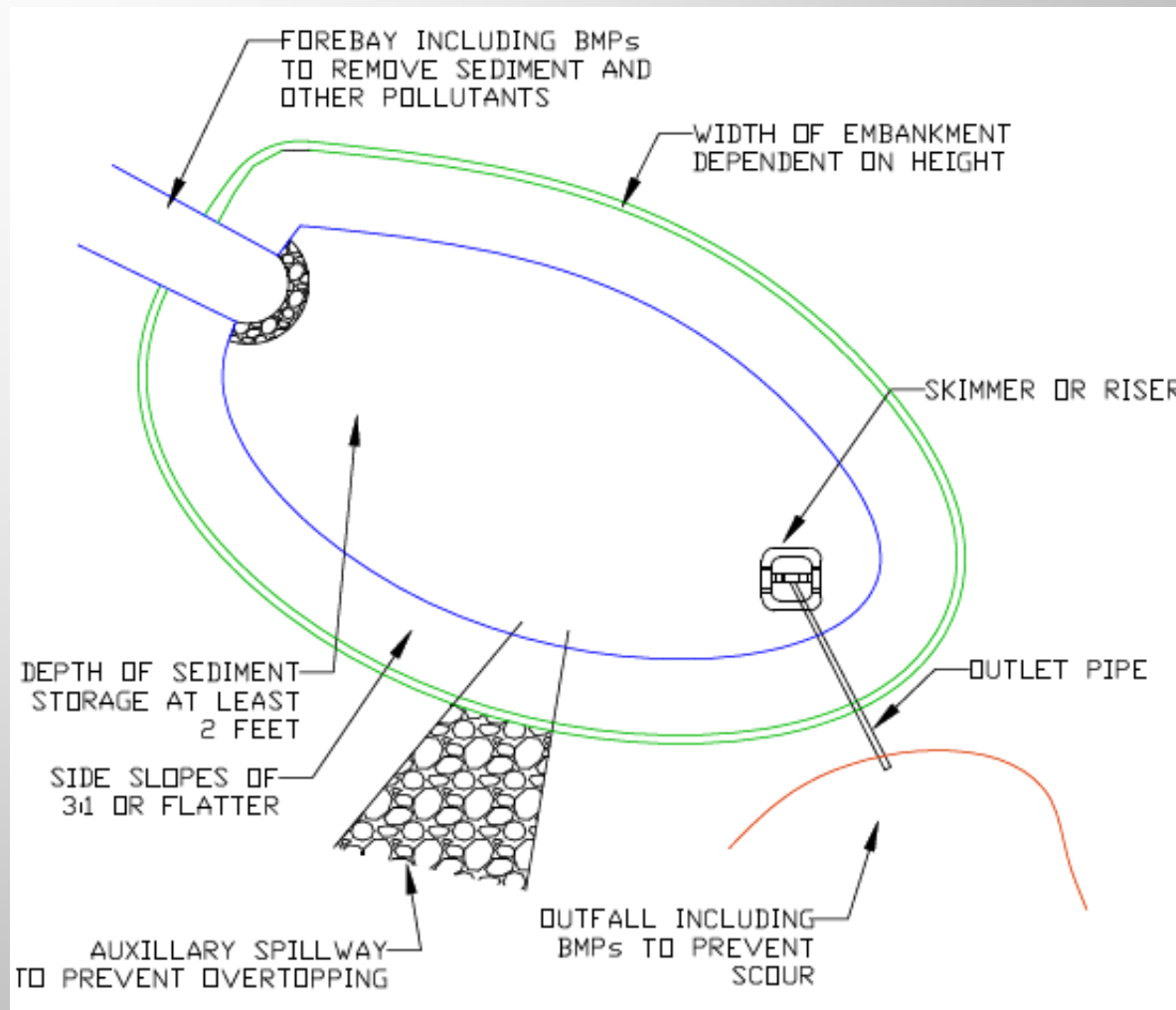


Temporary Sediment Basin

- ▣ A basin constructed with an outlet formed by either an embankment or excavation, or a combination of the two.
- ▣ Drainage area constraints - between 5 and 30 acres
- ▣ Storage volume of 34 cubic yards per acre
- ▣ Draw down of 40 hours or 24 hours, depending on basin type



Temporary Sediment Basin



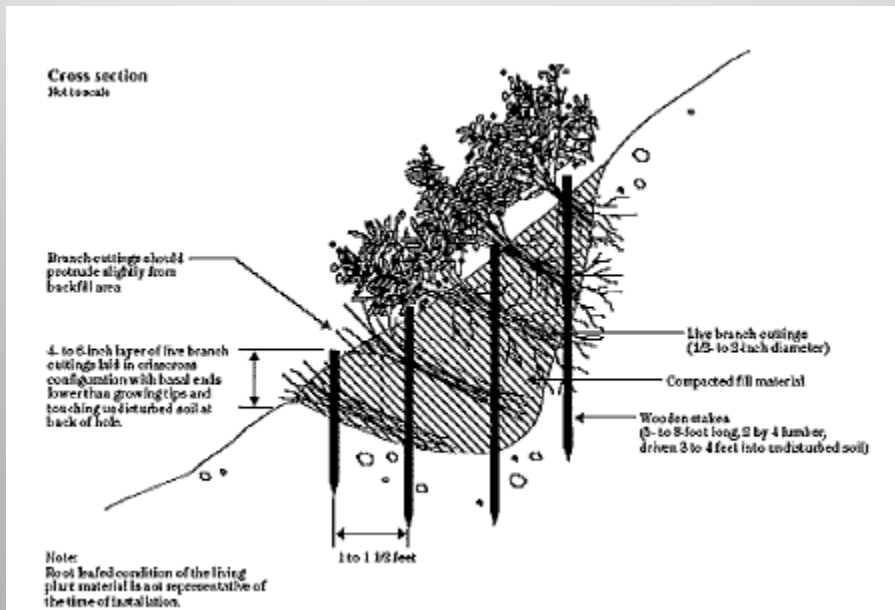
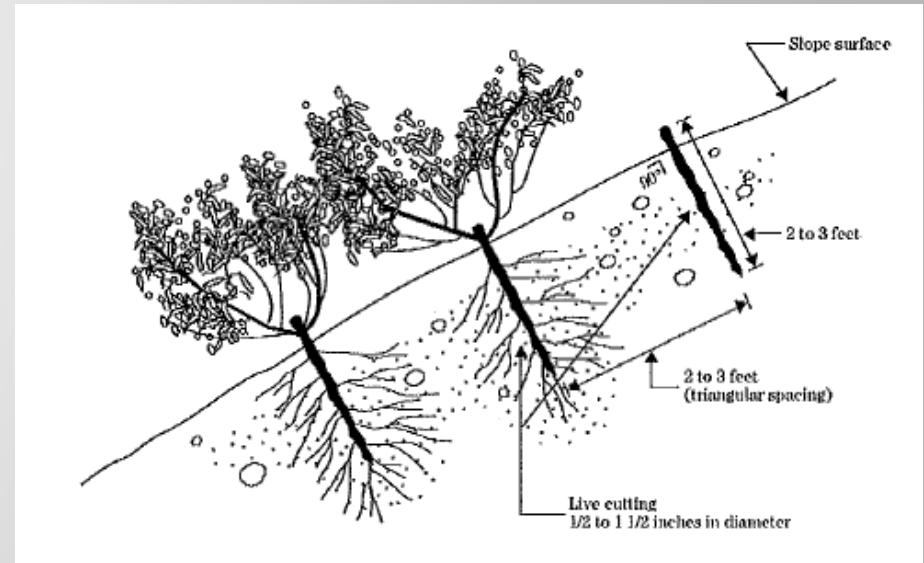
Soil Bioengineering (draft)

- ▣ Treatment used to reinforce the soil and reduce erosion of slopes using live plant materials alone, or in conjunction with simple structures.

- ▣ This practice can apply to the following conditions:
 - Natural streambanks
 - Channel sideslopes
 - Cut and fill slope stabilization
 - Any earthen slope where erosion can or has occurred

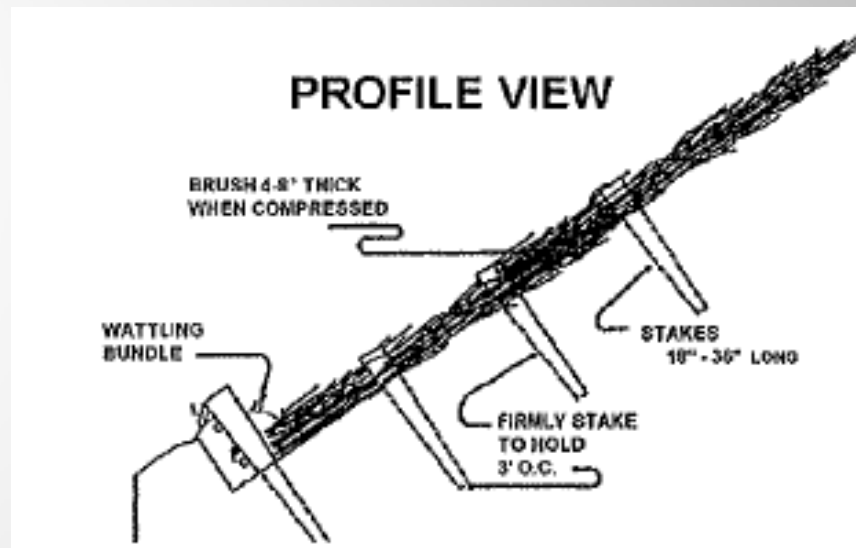
Soil Bioengineering Techniques:

Live Stakes

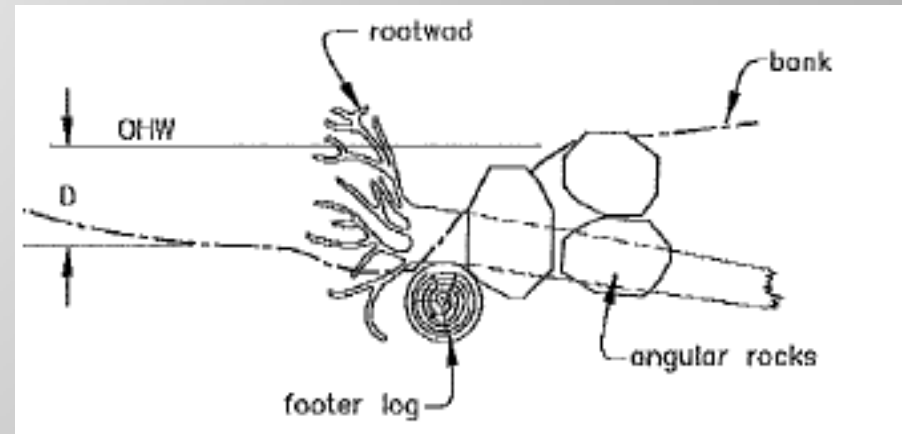
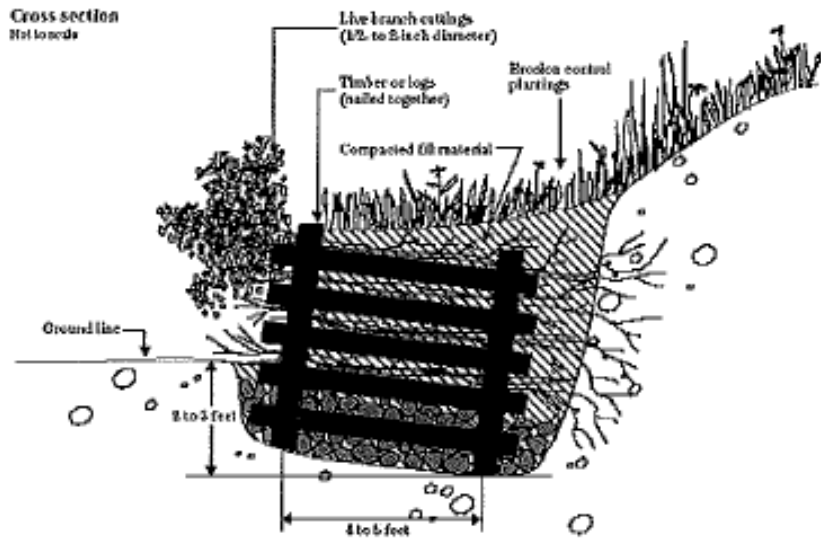


Branchpacking

Brush layer



Live Cribwall



Root Wad

Wetland Standards

- 997 – Wetland Creation
- 998 – Wetland Enhancement
- 999 – Wetland Restoration



Source: Hey and Associates, Inc.

NOTE – NOT the standard to be used to treat point or non-point sources of water pollution

The Bioretention Facility Standard, or one of the Detention Basin Standards discussed earlier, serve that purpose

ILLINOIS URBAN MANUAL WEBSITE

<http://www.aiswcd.org/ium/>

There is a link on the website to register to receive updates as they become available

Inspection Field Manual

- ▣ Field Manual includes:
 - Planning principles for Soil Erosion & Sediment Control
 - Regulations and Requirements, including site inspections
 - The Practice Selection Guide
 - The “Top 16” commonly used practices broken down based on erosion control or sediment control



Field Manual for Inspection of
Erosion and Sediment Control
Best Management Practices

Field Manual

Erosion Control Practices

830	Erosion Control Blanket
875	Mulching for Seeding and Soil Stabilization
893	Polyacrylamide (PAM) for Temporary Soil Stabilization
910	Rock Outlet Protection
930	Stabilized Construction Entrance
965	Temporary Seeding
831	Erosion Control Blanket - Turf Reinforcement Mat

Field Manual

Sediment Control Practices

808	Culvert Inlet Protection
813	Dewatering
814	Ditch Check (Manufactured)
861	Inlet Protection - Paved Areas
894	Polyacrylamide (PAM) for Turbidity Reduction & Sediment Control
905	Rock Check Dam
920	Silt Fence
950	Sump Pit

Field Manual

Other Information

954	Temporary Concrete Washout Facility
	Stockpile stabilization/Management
984	Tree Protection & Tree and Forest Ecosystem Preservation
895	Portable Sediment Tank

Electronic version available on the website



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