Fox River Ecosystem Partnership
Noon Network

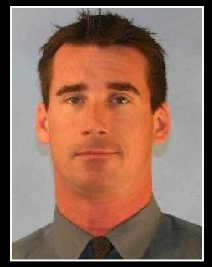
BMP Design, Implementation, & Inspection

Geneva Middle School

Presenters

Tom Slowinski - Director of Wetland/Ecology Group

George Milner - Senior Project Manager/Ecologist



Keith Jones - Project Manager/Senior Ecologist

Presentation Overview

What is a Stormwater BMP
BMP Design
BMP Implementation
BMP Inspection/ Management

What is a Stormwater BMP?

"A stormwater best management practice (BMP) is a technique, measure, or structural control that is used for a given set of conditions to manage the quantity and improve the quality of stormwater runoff in the most cost-effective manner."

- EPA Preliminary Data Summary of Urban Storm Water Best Management Practices

"Measures designed and implemented to prevent stormwater quality degradation and to enhance overall stormwater quality."

- DuPage County Appendix E: Technical Guide for Water Quality Best Management Practices

BMP Benefits

Improves Water Quality

Enhances the Environment

Often Improves the Permitting Profile

Creates Marketing Theme

Secondary Benefits
- Reduced Maintenance
- Improved Aesthetics
- Reduced Costs

BMP Benefits

Infiltration & Groundwater Recharge

Reduced Pollution & Sediment Loading

Wildlife Habitat

Shoreline Stabilization

Increase Aesthetics

Cost Savings

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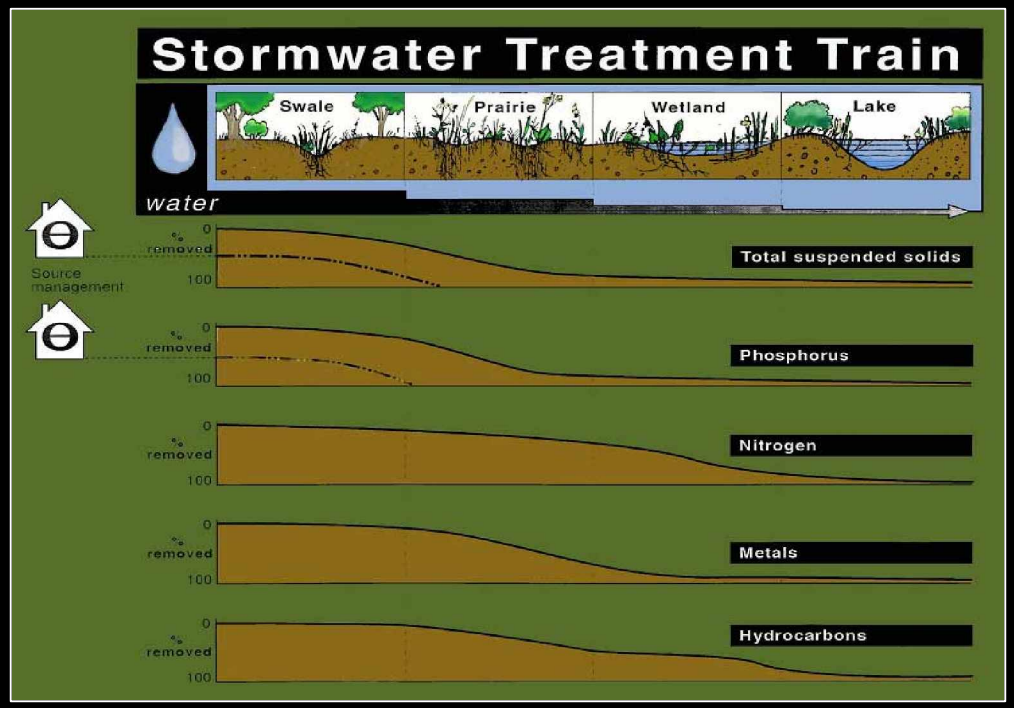

From Web Page: South Village, Vermont Prepared by Retrovest Companies

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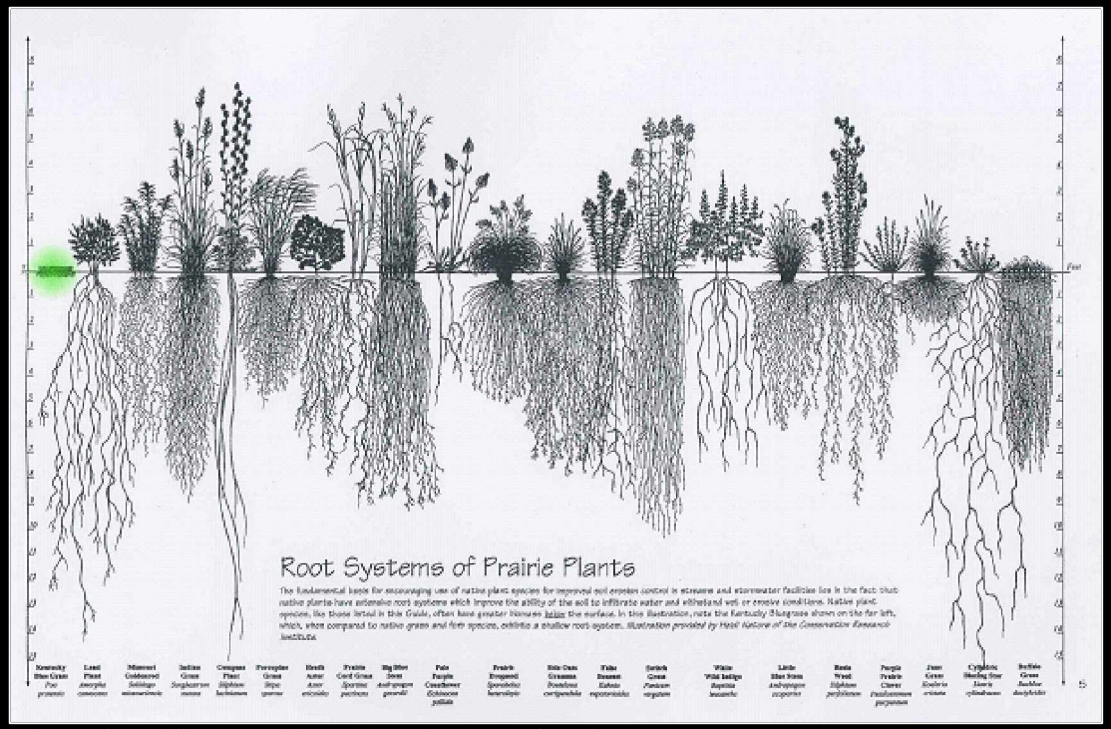

Diagram by Heidi Natura of the Conservation Research Institute

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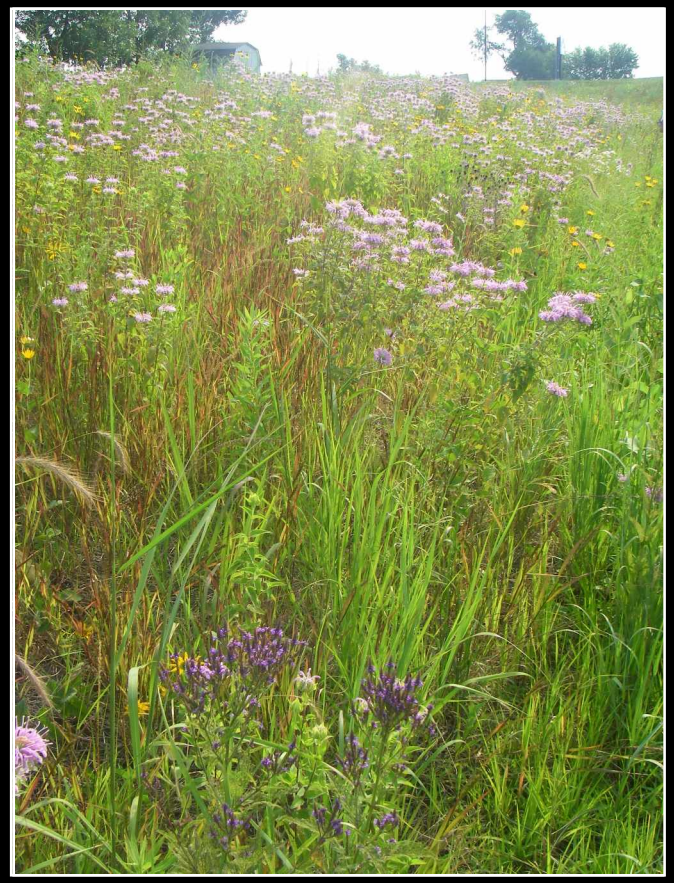

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Wildlife Habitat

Shoreline Stabilization

Increase Aesthetics

Cost Savings

Traditional Detention Basin
= $46 / LF

Naturalized Detention Basin
= $24 / LF

Site Design Using Stormwater BMPs

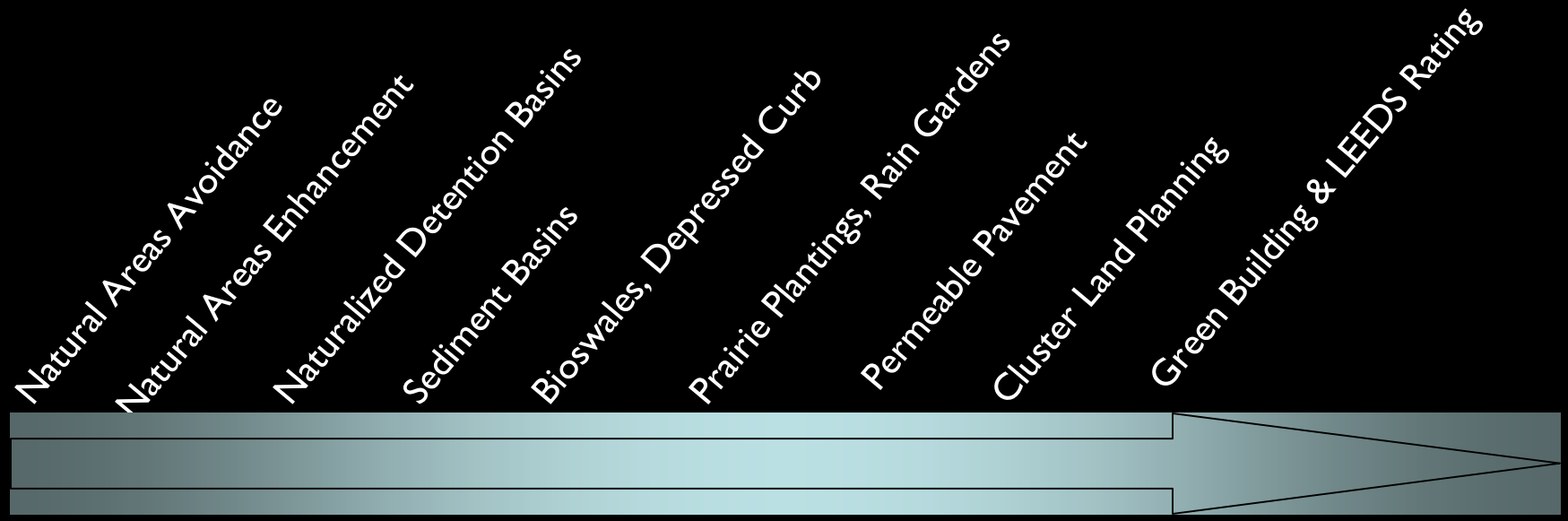
Understanding the Site / Site Considerations

- Surrounding Character: Urban, Suburban, Rural
- Desired Aesthetics

Set Goals

- What level of BMP are you trying to achieve?
  - Meet Requirements
  - Make a Statement

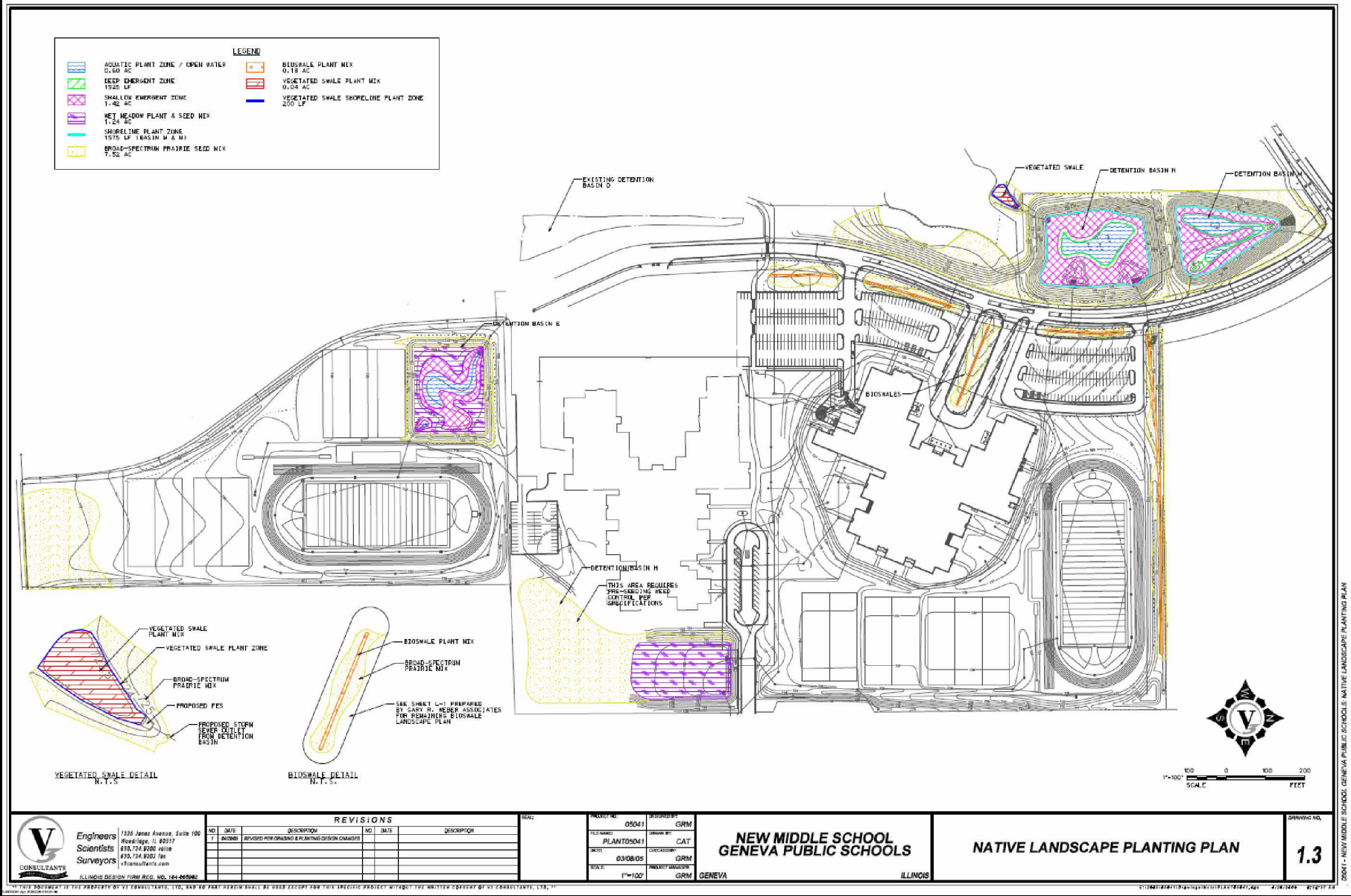
Site Design Using Stormwater BMPs
The Conservation Site Design Continuum



Recycled Material Use

KEY: Decide where along the continuum and then commit to it

Site Design Using Stormwater BMPs



Site Design Using Stormwater BMPs

Before:

70 Acre Site
1 Wet-bottom Basin
1 Dry-bottom Basin
Single Building
Track & Football Fields

Now:

Additional Building
3 Additional Wet-bottom Basins
4 Bioswales
2 Vegetated Swales

Site Design Using Stormwater BMPs

Constraints:

- Project Deadline
- Ecological Sensitivity

Goals:

- Keep Project Moving
- Minimize Short & Long-term Water Quality Impacts Offsite
- Expand on Existing Naturalized BMP Profile

BMP Techniques

Temporary
&
Permanent

Temporary
BMP Techniques

Inlet & Pipe Protection

Flocculent Bags

Ditch Checks/Wattles

Silt Fences

Sedimentation Basins

Erosion Control :

- Blanket
- Temporary Cover Crop

Temporary
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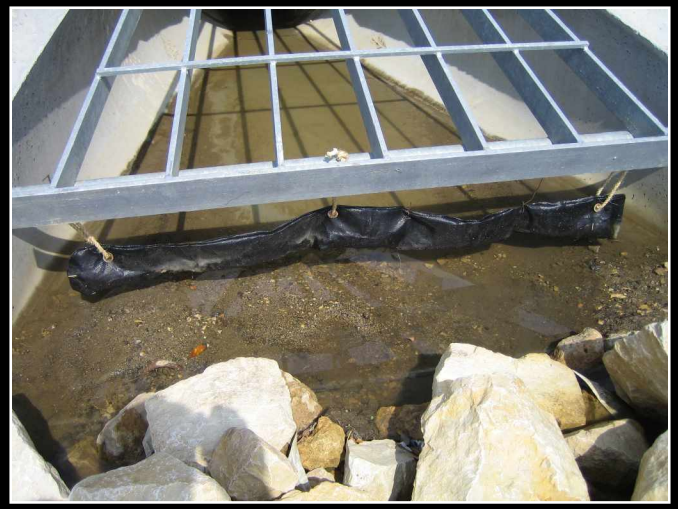

Temporary
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Sedimentation Basins

Erosion Control :

- **Blanket**
- **Temporary Cover Crop**

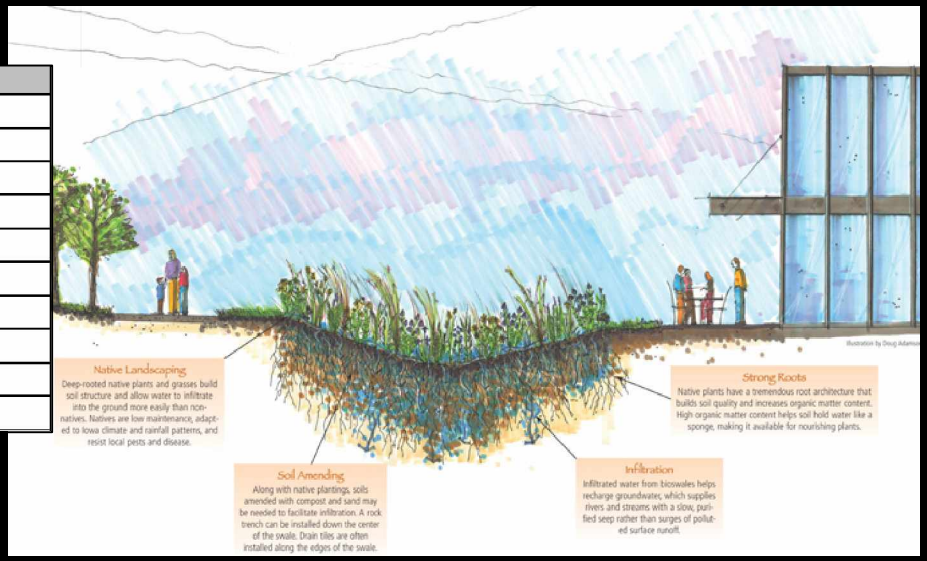
Permanent
BMP Techniques

Bioswales

Naturalized Stormwater Detention (Sediment) Basins

Natural Ditches (Vegetated Swales)

Species Name	Common Name
Andropogon scoparius	little bluestem
Coreopsis tripteris	tall coreopsis
Liatris spicata	dense blazing star
Panicum virgatum	switch grass
Pycnanthemum virginianum	mountain mint
Rudbeckia subtomentosa	black eyed Susan
Silphium integrifolium	rosin weed
Sorghastrum nutans	Indian grass
Sporobolus heterolepis	prairie dropseed
Vernonia fasciculata	smooth ironweed



Permanent
BMP Techniques

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Geneva Middle School's
Current Native Plant Community

FLORISTIC QUALITY DATA

87 NATIVE SPECIES
115 Total Species

4.3 NATIVE MEAN C

40.4 NATIVE FQI

BMP Inspection/ Management

Monitoring
Weed Control
Mowing/Burning
Reporting

QUESTIONS?