

# Meadows 101 – Establishing and Maintaining Native Grass/Wildflower Meadows

DCNR Webinar  
December 18, 2013



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# Pennsylvania - Penn's Woods



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# Natural Meadows in PA:

- Fire
- Wind
- Insects
- Flooding
- Agriculture
- Geology



# Meadows Only Stay Meadows When You Interrupt the Process of Succession



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# Benefits of Meadows

## Reduced costs and inputs

- Labor
- Wear and tear
- Carbon foot print

Wildlife

Pollinators

Aesthetics

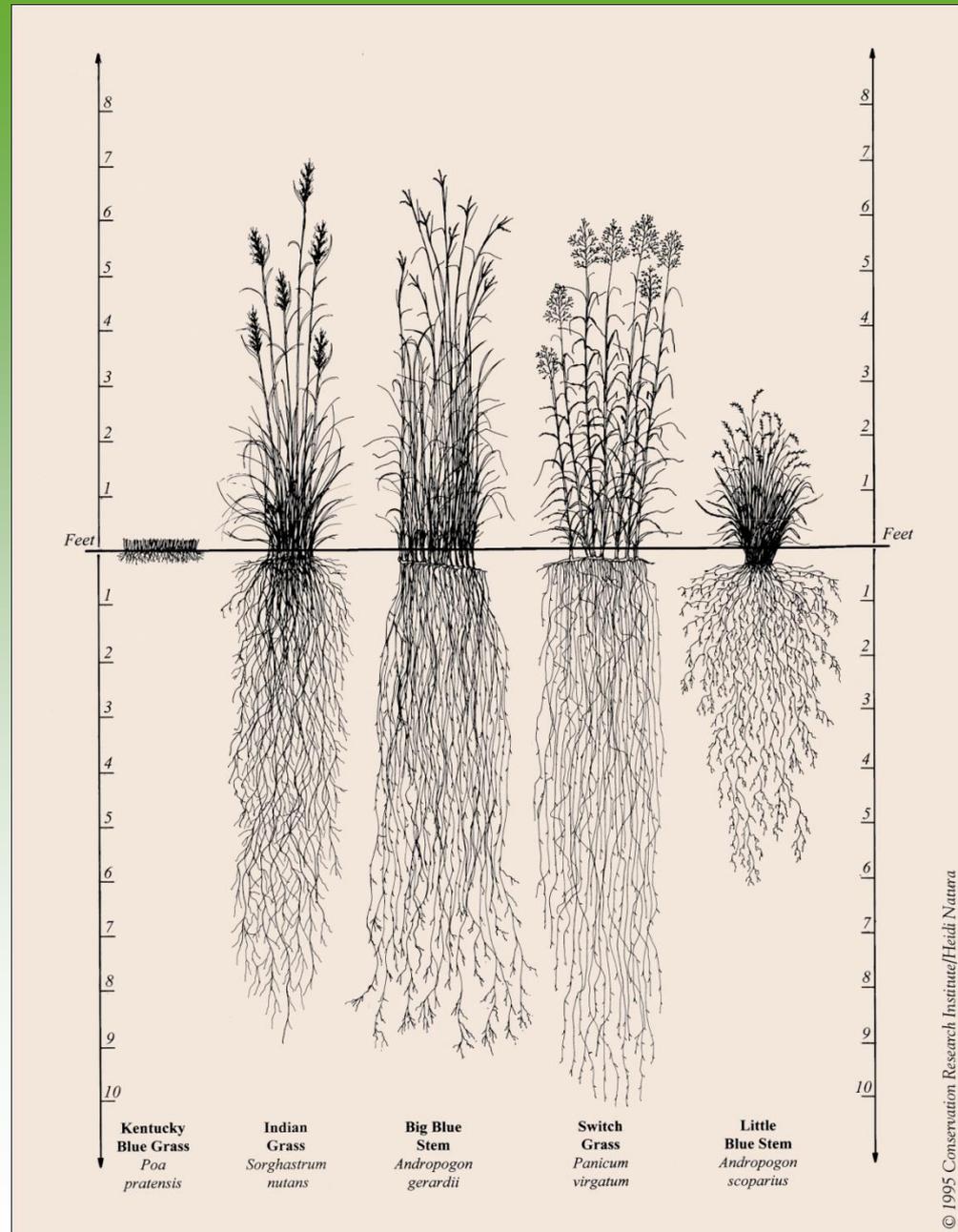
Stormwater



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# Meadows and Stormwater

- Interception capacity
- Slow surface runoff rates
- Increased filtering capacity
- Uptake of pollutants
- Absorption and infiltration of stormwater
- Dispersal of raindrop energy





# Vocabulary

Native Verses Non –Native

Invasive Verses Non-Invasive

Cool Verses Warm Season  
Grasses

# Examples of Native Grasses



Little Blue Stem



Big Bluestem



Indian Grass



Virginia Wild Rye

# Meadow Management: What are your Goals

## Balancing Act Between:

- Wildflowers/Wildlife
- Invasive Species
- Aesthetics
- Agriculture
- Stormwater mgmt.





# Meadows Through the Seasons

## Spring

- Cool season grasses
- Wildlife nesting habitat
- Food and Cover

## Summer

- Warm season grasses and wildflowers
- Insects/pollinators
- Invasive plants
- Food and cover



# Meadow Through the Seasons

## Fall

- Wildflowers, cool season grasses
- Food and cover



## Winter

- Dormant vegetation
- Food and cover



# Mowing Frequency and Timing

Species composition varies with mowing schedule

Mow no more than two times per year\*

\*Exceptions for spot treatment mowing



# General Rules

Blackout dates

- April to June

Mow around:

- Saint Patty's Day  
and/or
- Fourth of July

Fall Mowing = Robin habitat



# Why not mow April 1 to June 30?



# Saint Patty's Day Mowing

## Positives

- Winter food and cover
- Greatest species diversity
- Higher vegetation acts as snow fence

## Negatives

- Difficult weather or ground conditions
- Less effect on controlling woody and invasive species



# Independence Day Mowing

## Positives

- Encourages Native Warm Season Grasses
- Greater impact on invasive plants
- Generally dry conditions for mowing

## Negatives

- Less winter cover
- Delays early wildflowers





# Mowing Help from Farmers

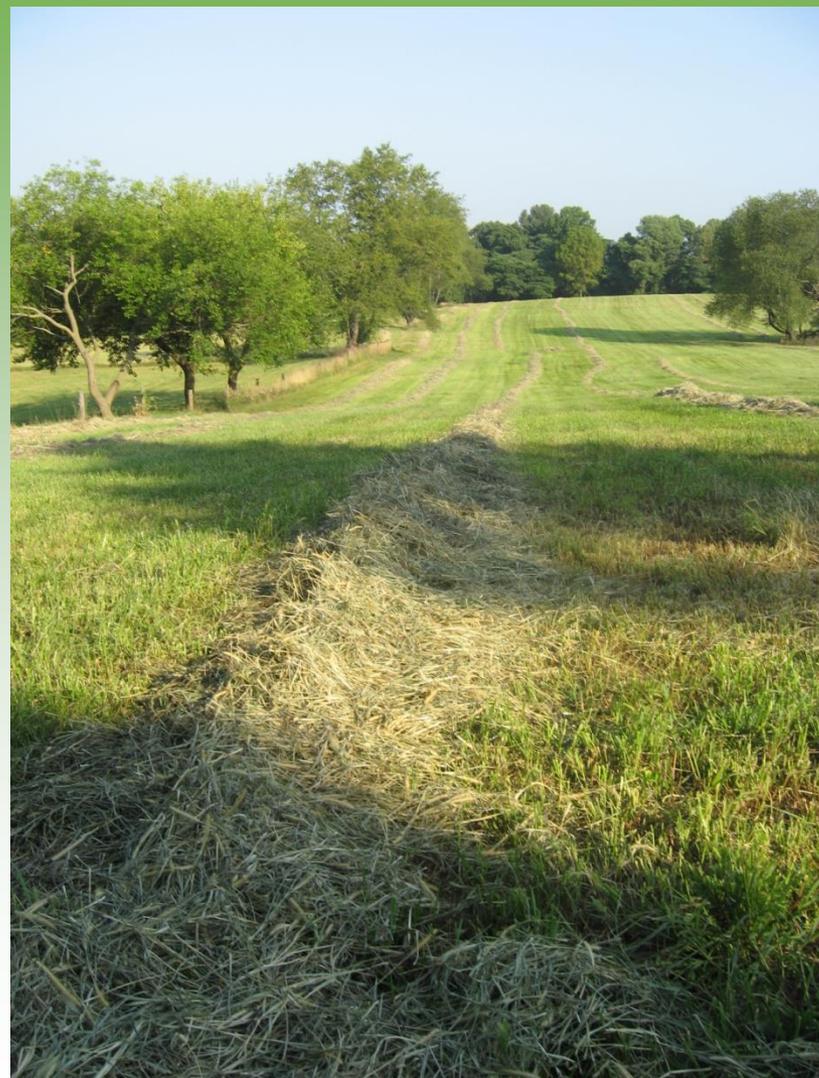
Reduces mowing costs

Use as:

- Forage (WSG)
- Mulch hay
- Mushroom hay

Harvest 1x/year after 7/1

Harvest imitates effects of  
burning



# Problem Species

## Spot mow/cut- spot herbicide



Mugwort



Multi-flora Rose

Canada Thistle







## Deer Tolerant Species

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# Three Scenarios

- Turf to Grassland  
*Let it Grow or  
Let it Grow and Plant*
- Return or Restore
- Conversion Meadow  
*Kill and Plant*



# Turf to Grassland

- Mow 1x/year to max diversity
- Mow 2x/year - grasses
- Late winter vs summer mowing
- Monitor/address invasive
- Species diversity over time
- Grassland birds



# Augment with Native Species



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# Return or Restore

Heavy brush/invasive plants

Year 1 - Mow monthly - May, June July, herbicide woody invasives in Aug/September.

Year 2 and 3 – Mow late winter and July, herbicide as needed

Year 4 and 5 – Mow July, spot treat invasives.



Caution – dry woody stumps/spikes equipment and visitors

# Conversion Meadow

## Starting Over and Planting Native Species





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# New Meadow Post-Planting Management

## Year 1

Monitor/address invasive plants  
Mow 2-4 X ( $\geq 6''$ ) as needed

## Year 2

Monitor/address invasive plants  
Mow 2-3 X ( $\geq 12''$ ) as needed

## Year 3 and beyond

Monitor/address invasive plants  
Mow 1 X ( $\geq 6''$ ) March or July)  
Consider species augmentation  
Adaptive management



# Considerations for Establishing Native Meadows

Cost \$1000-\$4000/acre and up depending on species mix

Increased herbicide use

Initial species mix/augmentation

Specialized equipment

Slow to establish

Managing expectations

Monitor and adaptive management

Worth the effort

# Cues to Care

Sharp, curved edges make it look naturalized, inviting and well managed



Make winding trails



# Meadow Augmentation

By Seed



By plugs

# Who Says You Have To Mow The Whole Field?



# Lessons Learned

- Preparation
- Aesthetics
- Maintenance
- Set backs/Ordinances
- Staff buy in/Training
- Being proactive w public
- Signage
- Cover Crop/mix of species
- % of aggressive species
- Managing expectations





Addressing Neighbors Concerns

# Dealing with Mother Nature



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Establishment  
and  
Managing Expectations



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# Unintended Positive Consequences





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