

# Benefits of Native Vegetation



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# Turf to Prairie-why would I do that?

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- ❑ Improved water quality
- ❑ Soil stabilization and absorption
- ❑ Goose control
- ❑ Reduced maintenance
- ❑ Aesthetically pleasing
- ❑ Wildlife habitat
- ❑ Reduced cost
- ❑ It might count as a Post-Construction BMP



# Improved Water Quality

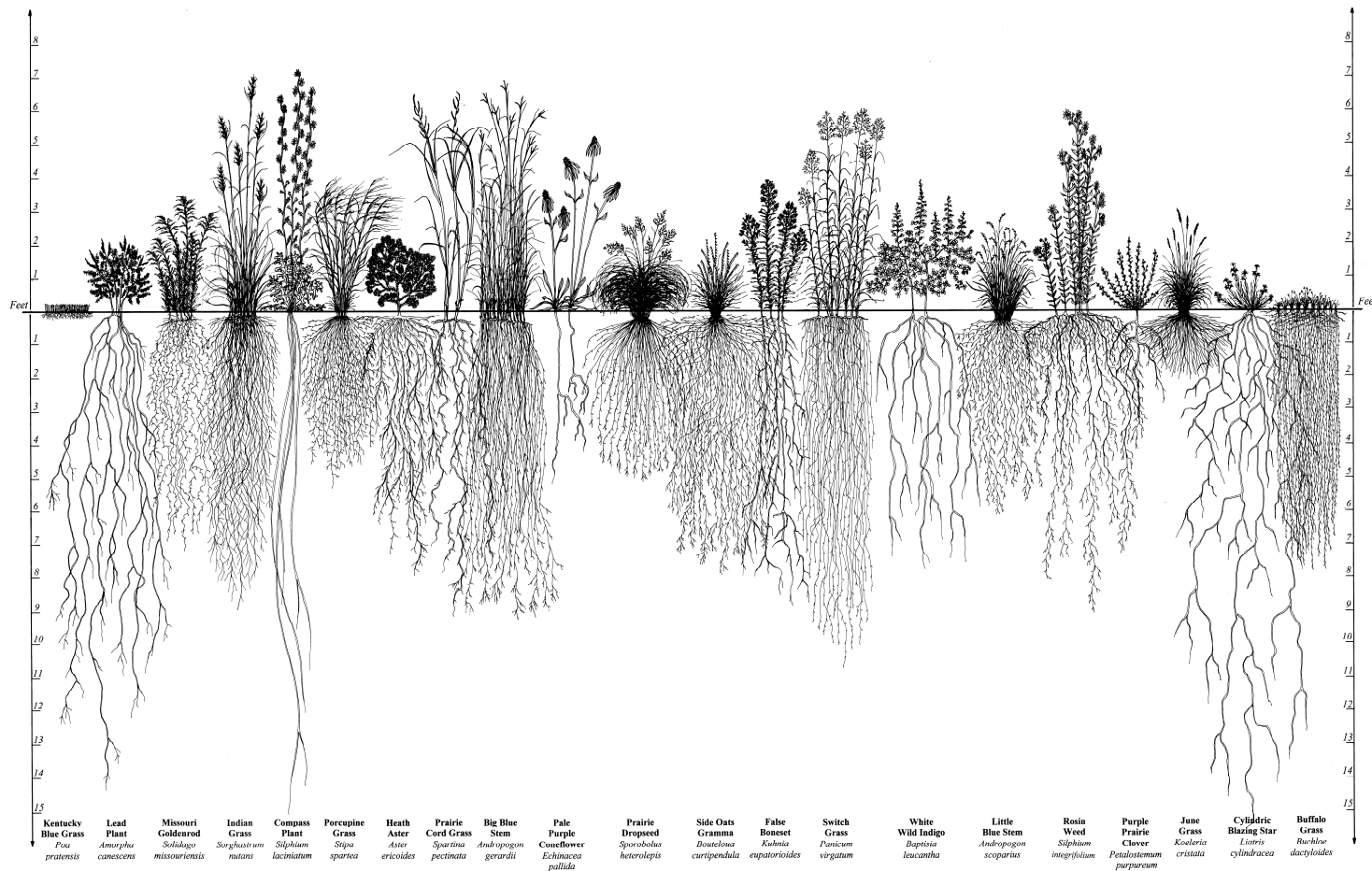
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- ❑ Native vegetation slows overland flow while filtering out pollutants and fertilizers
- ❑ Ground water infiltration is increased by the deep roots of native plants
- ❑ Native plants absorb nutrients helping to prevent algae blooms



# Stabilization and Absorption

Native Plants have deeper root systems than traditional turf which means healthier soils and better stabilization.



Root Systems of Prairie Plants

# BMPs as a solution: Erosion

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□ Turf Grass Shoreline



□ Native Shoreline



# BMPs as a solution: Erosion

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Deeper roots reduce erosion in swales and detention ponds



# BMPs as a solution: Poor Drainage

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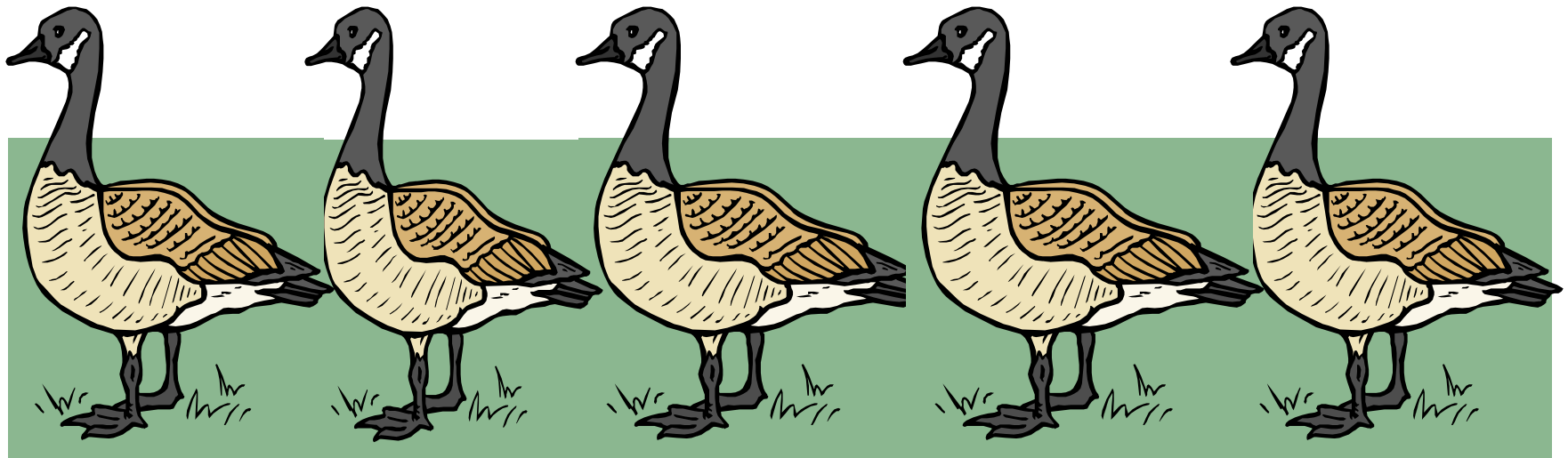
Solve a small drainage problem by planting species that don't mind getting wet.



# BMPs as a solution: Geese

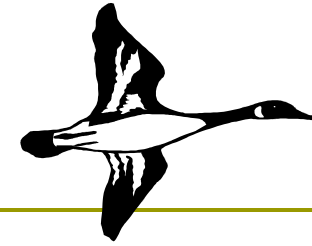
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- ❑ Canada Geese are less likely to gather in an area with native vegetation- can't see predators
- ❑ Mowed turf grass mimics their native landscape- predators are visible



# Goose control

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- ❑ Planting native vegetation along the shoreline of stormwater basin makes it difficult for geese to enter and leave water
- ❑ Plantings should be at least 30 inches tall to be most effective
- ❑ You may also consider native planting strips in park areas to further reduce the amount of feeding areas

# Reduced Maintenance

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- ❑ Native vegetation requires less long term maintenance once established
- ❑ Native plants are adapted to northern Illinois climate- mature plants are drought resistant
- ❑ Watering may be required during establishment period
- ❑ No regular mowing- saves money, time, energy, and reduces emissions
- ❑ No fertilizing necessary

The most important thing to understand when using native vegetation as a BMP is.....

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**Native vegetation does not grow overnight!!**



# Establishment

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- ❑ Native seeding takes about 3 yrs to establish
- ❑ Planting plugs or container plantings will significantly decrease the establishment time



Native  
basin in  
first  
growing  
season

To improve the overall appearance of a natural area during the establishment period:

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- ❑ Plant plugs instead of seed
- ❑ Consider adding annual flowers to the seed mix



Second  
growing  
season  
with  
annual  
flowers

# Management Activities

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- High mowing (6-12") spring/fall
  - target weedy/ invasive plants
- Herbicide application by a licensed professional
  - Type of herbicide and time of year dependent on target species
- Prescribed burn every 2-4 yrs. in spring/fall by a professional
  - performed after third year of growth- after establishment period



# Aesthetics

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- ❑ A healthy stand of native vegetation is attractive all year long
- ❑ Increases biodiversity by attracting birds, butterflies, and other wildlife



# A managed naturalized detention basin

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# Native vegetation planted in a more formal arrangement

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The Morton Arboretum

# Cost Comparison- Turf vs. Native

## Figure A. First Year Installation Cost Per Acre

(Natural Landscaping for Public Officials: A Sourcebook. Chicago: Northeastern Illinois Planning Commission, 2004)

Treatment	Low-End Estimate	High-End Estimate
Turf Grass	\$7,800	\$14,825
Native Landscaping	\$3,400	\$5,975

## Figure B. 10 Year Average Maintenance Cost Per Acre

(Natural Landscaping for Public Officials: A Sourcebook. Chicago: Northeastern Illinois Planning Commission, 2004)

Treatment	Low-End Estimate	High-End Estimate
Turf Grass	\$5,550	\$6,471
Native Landscaping	\$1,600	\$1,788

## Native prairie costs at least 63% less than traditional turf grass!

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- ❑ Turf grass expenses can include seed, mulch, fertilizers, and maintenance cost over five years (including mowing, fertilizer application, an irrigation system, municipal water, aerating or dethatching every other year).
- ❑ Native prairie plant expenses include seeding, planting plugs, mulching, and maintenance costs (including mowing in the first two years, spot herbicide treatment over five years, and prescribed burning in years two, three, and five).



# Post Construction BMPs

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- ❑ The EPA now requires Post Construction BMPs to be installed for new development
- ❑ Your planned BMP project may also qualify as credit towards future construction projects at your facility

# Adding a Post-Construction BMP

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- ❑ Design and construct the BMP using the latest regulatory guidance in Appendix E of the DuPage County Stormwater and Flood Plain Ordinance (BMP Manual)
- ❑ Keep your specifications, plans, calculations and all associated documentation
- ❑ Maintain the BMP to keep it in top functioning order
- ❑ Before you construct your BMP, contact your municipality's permitting department or DuPage County EDP to see if it can be counted toward future projects

# More Information about Post Construction BMPs

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Can be found at:

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

Click on Best Management Practices



# Enhance a natural area

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- ❑ Wetlands and riparian areas function better when they are healthy



US Fish and Wildlife

# Enhance a natural area

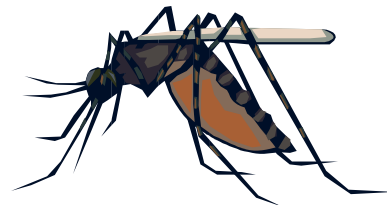
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- ❑ Check with your local permitting authority about receiving authorization to work in a Special Management Area
- ❑ Consult with an environmental scientist to develop a management plan
- ❑ Remove invasive species and plant natives
- ❑ Don't stop there. Protect your investment with regular maintenance.

# Myth 1: Attracts Mosquitoes

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- ❑ Native vegetation provides habitat for mosquito predators including dragonflies, birds, frogs, etc.
- ❑ Native vegetation reduces mosquito breeding areas by absorbing stagnant water.



## Myth 2: Aggravates Allergies

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- ❑ Ragweed is the main culprit of pollen allergies BUT is not commonly found in mature native landscapes.
- ❑ Most native plants have not been shown to aggravate allergies.



# Myth 3: Looks weedy

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Do you agree?

# Myth 4: Fire Hazard

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- ❑ Only a problem if dead plant material is allowed to accumulate.
- ❑ Prescribed burning and annual mowing eliminate this risk.



# Funding

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- Funding may be available from local, state, and federal agencies
- Contact Veronica Valladolid, DuPage County Civil Engineer at (630) 407-6719 or [veronica.valladolid@dupageco.org](mailto:veronica.valladolid@dupageco.org)



Questions?

