Natural Area Assessment

March 2012

Goals

- Increase biodiversity
- Reduce or eliminate invasive species
- Educate stakeholders

Natural Area Assessment

- Determine the current state of your ecosystem
  - Assess your site to determine plant species, soils, and hydrology

Natural Area Assessment – Soils

- Ensure a proper base for plant growth, adequate topsoil and/or compost

Natural Area Assessment – Hydrology

- Plant species are assigned wetness factors.
- Wetness factors are categories of saturation tolerance. The categories are Obligate Wetland (OBL), Facultative Wetland (FACW), Facultative (FAC), Facultative Upland (FACU), and Upland (UPL).
- Wetland plants are adapted to soils with varying degrees of saturation.

Natural Area Assessment – Plants

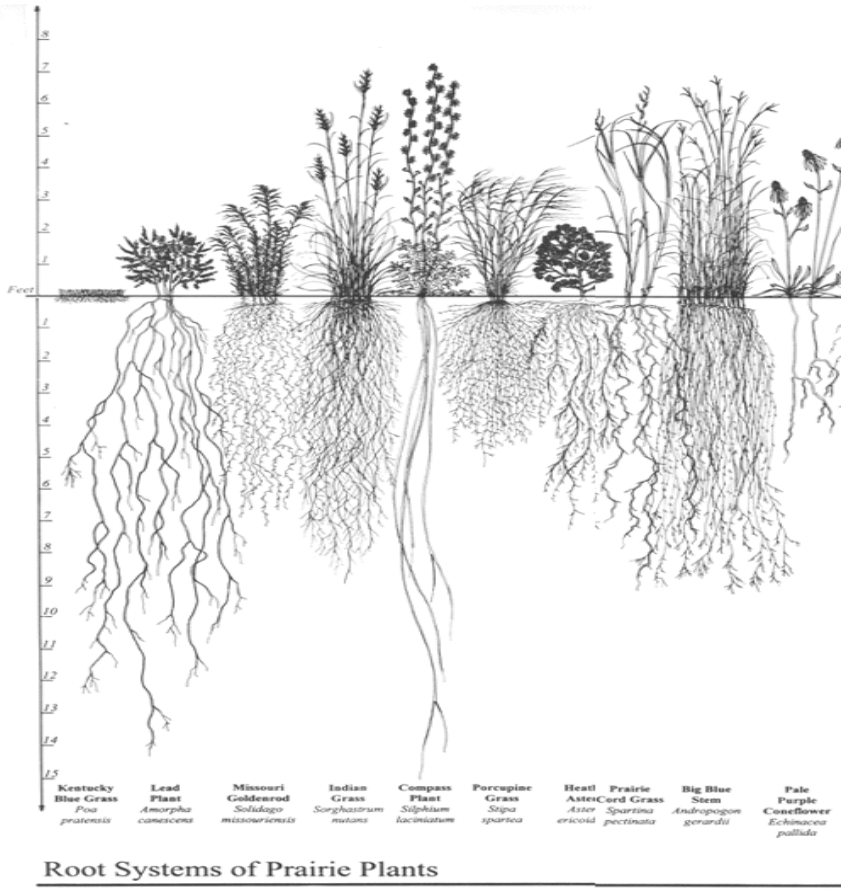
- Determine the plant species on site and whether they are native or invasives

Native Plants

- Native plants have natural limits to growth
- There is a life cycle to these ecosystems, called succession.
- Succession increases diversity and limits each species so they do not continuously dominate the landscape.
- Some examples of native plants include Grasses, Coneflowers, Susans, Irises, Bulrushes, Sedges, Rushes, Arrowheads

Native Plants

- Prairie plant root systems are very deep compared to traditional landscaping.



Root Systems of Prairie Plants

Image by Conservation Research Institute and Heidi Natura

Natural Area Management Goals - Stormwater Management

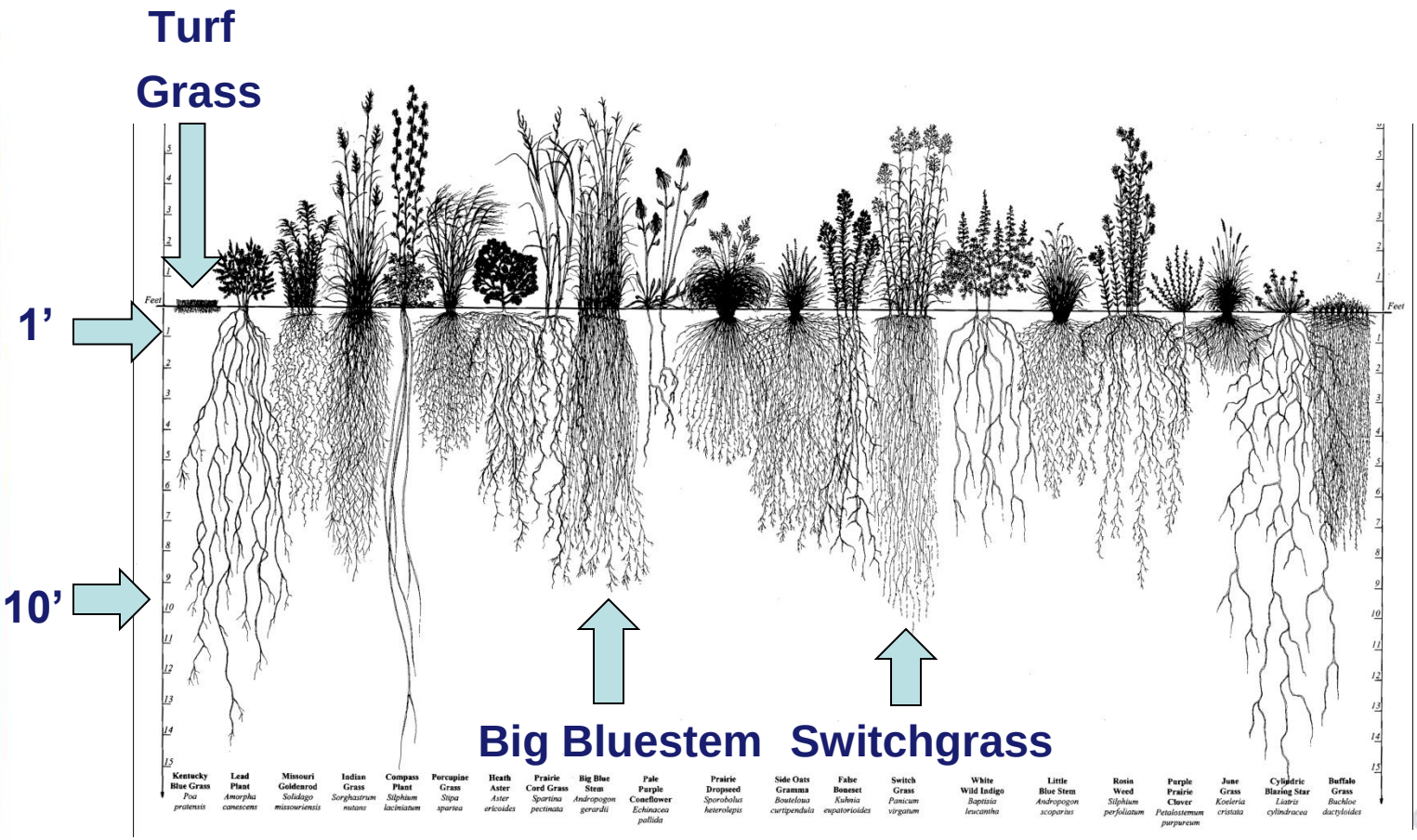


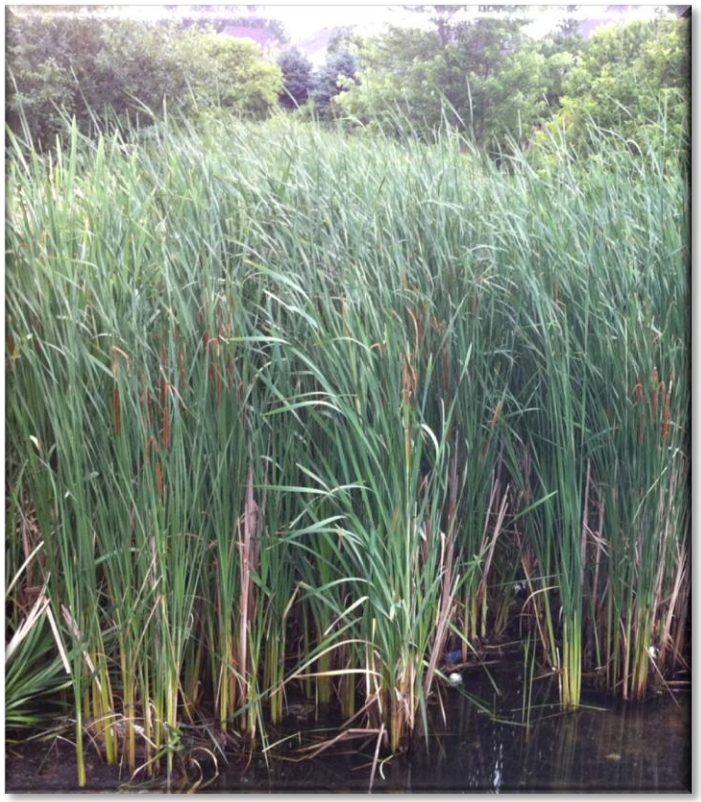
Image by Conservation Research Institute and Heidi Natura

Invasive Plants

- Typically, invasive species are from Europe or Asia, brought over for landscaping, agricultural, or were mixed up with other items.
- Invasive species are out of their native habitat and so generally do not have any predators or natural limits on growth.
- Some examples of invasive plans include Buckthorn, Reed Canary Grass, Honeysuckle, Garlic Mustard, Common Reed, Cut-leaved Teasel, Canada Thistle, Eurasian Milfoil and Purple Loosestrife.

Invasive Natives

- These plants:
  - Dominate created habitats and fringe areas
  - Very aggressive
  - Limited restrictions to growth and propagation
- Cattails, Poison Ivy, and Box Elder Trees are native plants that are considered invasive in regards to natural area management.



Natural Area Assessment – Plants

- Determine the plant species on site and whether or not they are wetland or upland species
- Wetlands are the most common habitats protected from development, and therefore are the most common naturalized area which requires management.

Natural Area Assessment – Plants

- Wetland plants are adapted to soils with varying degrees of saturation.
- The soil saturation limits or inhibits oxygen intake by roots, so the wetland plants adapt by utilizing the above ground leaves for oxygen.
- Adaptations include waxy cuticles, adventitious roots, buttressing (hypertrophy) and modified growth schedules.

Natural Area Assessment – Plants

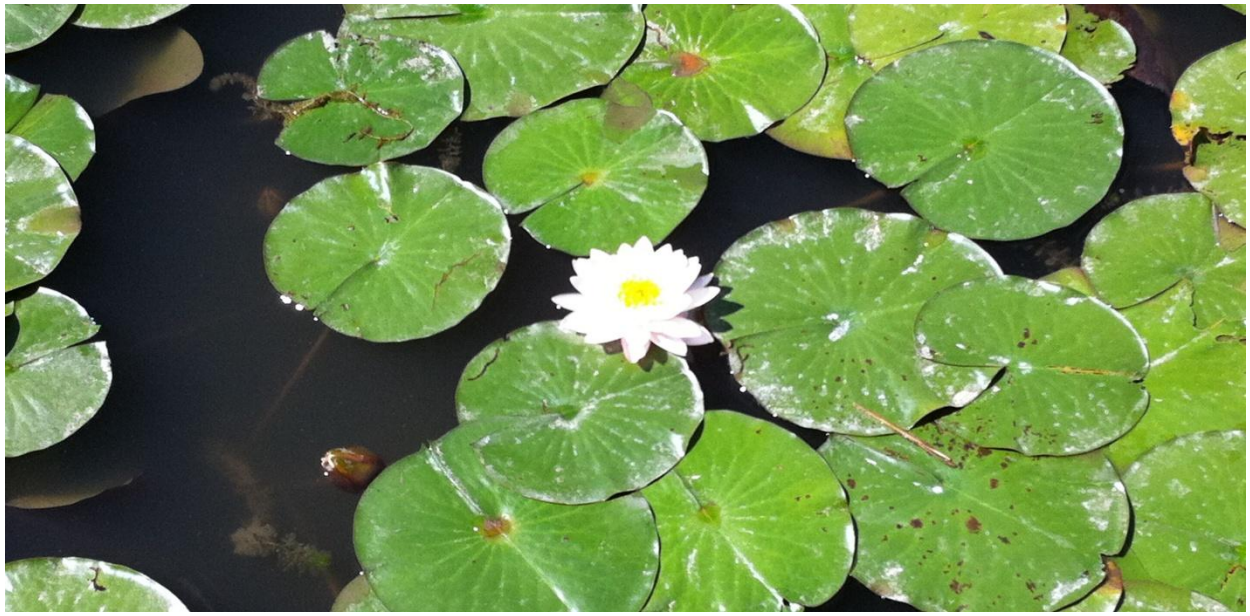
- Plant species are assigned coefficients of conservatism.
- Coefficients of conservatism or C-values refer to the native value of the plant, specifically the likelihood it would exist only in undisturbed, not degraded, remnant areas.

Natural Area Assessment – Plants

- Prairie Dropseed has a C-value of 10 and a FACU wetness factor, because it does not grow in the wild degraded, disturbed fringe areas and has a possibility of saturation tolerance (1%-33% probability of growing in a wetland).
- Common Cattail has a C-value of 1 and an OBL wetness factor, because it will grow in any disturbed or fringe area but requires water (greater than 99% probability of growing in a wetland).

Natural Area Assessment

- Determine the current state of your ecosystem
  - Soils
  - Hydrology
  - Plants



Questions and Contact Information

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