LAWN CONVERSION TO NATIVE ALTERNATIVES

Mary Logalbo, Urban Conservationist
Overview

• Why?
• Site Planning
• Design Considerations
• Site Prep
• Native Groundcovers
• Native Turf Alternatives
• Meadowscaping
• Maintenance
Why Convert Your Lawn?

- Wildlife & Biodiversity
- Water & Air Quality
- Water Conservation
- Natural Heritage
- Lower Maintenance Options

Adrena on Lasthenia goldfields.
Photo Credit: Mace Vaughn, Xerces Society
Why go native?

“Humanity, for its own sake, must attend to the forgotten pollinators and their countless dependent plant species.”
-- E. O. Wilson, insect ecologist and author
Stormwater Management & Carbon Sequestration

Habitat Connectivity

Photo Credit: Marissa Aurora Dorais
Portland Parks & Recreation
Willamette River Stewardship Coordinator | City Nature
Site Planning

• Project Goals
  • Aesthetics
  • Lower Maintenance
  • Wildlife Habitat
  • Stormwater Treatment

• Project Type
  • Low Lying Groundcover
  • Native Grass Alternative
  • Meadowscape

Wilson Meadow, Danthonia californica (Oatgrass) & Ranunculus occidentalis (W. Buttercup)
Site Planning

• Resources & Constraints
  • Labor
  • Tools
  • Materials
  • Budget

• Inventory & Analyze Site
  • Soil Type & Moisture
  • Slope
  • Shade
  • Weeds
  • Pressures
  • Human Needs
Project Design

• Choose appropriate & available plants

• Small palate for small place

• Strategically locate “anchor plants”

• Late and early bloomers

• Clump species

• Careful of bullies!

• Consider clear dividers of plant groupings including an access path for maintenance, water feature & firebreak
Fire resistance consideration

- Use plants with high moisture content (deciduous) nearest the home.
- Fire-resistant plants (from OSU, firefree.org):
  - Shrubs include: Oregon grape, serviceberry, salal, mock orange, rhododendron and nootka rose.
  - Perennial choices include yarrow, iris and geranium.
  - Groundcovers include stonecrop, strawberry and kinnikinnick.

http://www.portlandoregon.gov/fire
Clumps & Anchors

Photo: mulysa.org
Heavy Use Areas

• Photo: mulysa.org
Parking strips
Entertainment space - clumps & setbacks

Photo: mulysa.org
Opportunities are everywhere!

Photo credits: Bob Hansen, Corvallis
Site Preparation

- Minimum: spring – fall prep
- Organic:
  - Sod cutter + hand weeding + top dressing of “native” soil
  - Sheet mulching + hand weeding + top dressing of “native” soil
  - Solarizing + hand weeding + top dressing of “native” soil
  - Scalping + hand weeding alone not enough
  - Flaming and/or Organic Herbicides won’t kill grass roots
- Spring spray + early fall spray + hand weeding
Site Preparation

- What type of soil are you starting with?
  - Soil Restoration:

*Figure 3 Lawn or landscape garden, the same generalized cross section of loosened and amended soils apply.*
# Native Groundcovers

<table>
<thead>
<tr>
<th>GROUNDCOVER</th>
<th>GROWING CONDITIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>beach strawberry</td>
<td>sun, part shade; dry to moderate moisture</td>
</tr>
<tr>
<td>(Fragaria chiloensis)</td>
<td></td>
</tr>
<tr>
<td>bunchberry, Canadian dogwood</td>
<td>partial to full shade; humus-rich soil</td>
</tr>
<tr>
<td>(Cornus canadensis)</td>
<td></td>
</tr>
<tr>
<td>coltsfoot</td>
<td>moist shade</td>
</tr>
<tr>
<td>(Petasites palmatu)</td>
<td></td>
</tr>
<tr>
<td>false lily-of-the-valley</td>
<td>full to partial shade; moist soil</td>
</tr>
<tr>
<td>(Maianthemum dilatatum)</td>
<td></td>
</tr>
<tr>
<td>fringe cup</td>
<td>partial shade; moist soil</td>
</tr>
<tr>
<td>(Tellima grandiflora)</td>
<td></td>
</tr>
<tr>
<td>inside-out flower</td>
<td>sun to shade</td>
</tr>
<tr>
<td>(Vancouveria hexandra)</td>
<td></td>
</tr>
<tr>
<td>kinnikinnick</td>
<td>sun, some shade; well drained soil</td>
</tr>
<tr>
<td>(Arctostaphylos uva-ursi)</td>
<td></td>
</tr>
<tr>
<td>low Oregon grape</td>
<td>prefers shade; can tolerate sun</td>
</tr>
<tr>
<td>(Mahonia nervosa)</td>
<td></td>
</tr>
<tr>
<td>Fern species (Sword hardiest)</td>
<td>partial shade to full shade dry - moist</td>
</tr>
<tr>
<td>(Polystichum munitum)</td>
<td></td>
</tr>
<tr>
<td>slough sedge</td>
<td>moist shade</td>
</tr>
<tr>
<td>(Carex obnupta)</td>
<td></td>
</tr>
<tr>
<td>twinflower</td>
<td>partial to full shade</td>
</tr>
<tr>
<td>(Linnaea borealis)</td>
<td></td>
</tr>
<tr>
<td>vanilla leaf</td>
<td>partial sun; dry to moist soil</td>
</tr>
<tr>
<td>(Achlys triphylla)</td>
<td></td>
</tr>
<tr>
<td>wood sorrel</td>
<td>wet or dry shade</td>
</tr>
<tr>
<td>(Oxalis oregana)</td>
<td></td>
</tr>
</tbody>
</table>

Graphic adapted from King County's "Ivy Alternatives“ & Beach Strawberry photo from King County.

Photo: [http://tryonfarm.org/](http://tryonfarm.org/)

© Greg Rabourn
Native Groundcovers

- © Greg Rabourn
- Dicentra formosa

© Greg Rabourn
Tolmiea menziesii
Native Turf Alternatives

- *Danthonia californica* (California oatgrass)
  - Plant grass on mesic/xeric soils in full sun; self sowing after establishment

Photo: waterwisegardendesigns.com
Turf alternatives...

- **Carex tumulicola** (foothill sedge)
  - Plant this deciduous (and rhizomatous) sedge on mesic soils in full sun
Turf alternatives

- Deschampsia cespitosa (D. caespitosa, tufted hairgrass)
  A narrow leaved bunch grass mesic/xeric soils in sun – part shade. Self sowing after establishment
Portland Urban Meadowscaiping Pilot
Meadowscaping Establishment Strategies

- Start w/ plugs (perennial forbs & bunchgrasses) – strategically seed in annuals
- Clump like species (3-5)
- ~2 foot spacing
- Scratch in seed in fall
- Fencing?
- Start w/1:5 ratio of grasses:forbs
# Cover 3 Bloom Times for Pollinators

<table>
<thead>
<tr>
<th>Flower Species - common name (scientific name)</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
</tr>
</thead>
<tbody>
<tr>
<td>western buttercup (Ranunculus occidentalis)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>yellow</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>shooting star (Dodecatheon hendersonii)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>pink</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>western trillium (Trillium ovatum)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>white to purple</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>meadow checkerbloom (Sidalcea campestris)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>light pink</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>woodland strawberry (Fragaria vesca ssp. Brachteata)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>white to pink</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Oregon iris (Iris tenax)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>purple</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>camas (Camassia leichtlinii or quasham)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>blue</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>western columbine (Aquilegia formosa)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>red</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>fringecup (Tellima grandiflora)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>greenish-white to reddish</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>varileaf phacelia (Phacelia heterophylla)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>white</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>lance selfheal (Prunella vulgaris)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>purple</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>slender cinquefoil (Potentilla gracilis)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>yellow</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>harvest brodiaea (Brodiaea elegans)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>purple</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>salebrosa goldenrod (Solidago canadensis var. salebrosa)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>yellow</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bunchgrass Species - common name (scientific name)</th>
<th>Height at maturity (ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>blue wildrye (Elymus glaucus)</td>
<td>3</td>
</tr>
<tr>
<td>California brome (Bromus carinatus)</td>
<td>3</td>
</tr>
<tr>
<td>tufted hairgrass (Deschampsia caespitosa)</td>
<td>3</td>
</tr>
<tr>
<td>Roemer’s fescue (Festuca roemeri)</td>
<td>2</td>
</tr>
<tr>
<td>California fescue (Festuca californica)</td>
<td>3</td>
</tr>
</tbody>
</table>
Succession & Maintenance

- Disturbance (annual mow) needed
- “Bullies” will take over, but they have a place – plan to “weed”
- Many annuals will self sow
- Bare spots will invite weeds
- Avoid disturbance during primary nesting seasons…April 15th - September
A Dynamic Landscape

Danthonia californica
Ranunculus occidentalis & Camassia
Favorite “Bullies”

Lupinus spp

Photos: heritageseedlings.com

Eriophyllum lanatum
Other Lovely “Bullies”

Achillea millefolium

Solidago canadensis var. salebrosa
Choose the right heights for sites…

Photo: Kammy Kern-Korot, Sidalcea campestris

Photo: EMSWCD, Aster subspicatus
Outstanding Annuals

Photo: Erica Stokes, Plectritis congesta

Photo: Mary Bushman, Gilia capitata
Native and non-natives co-mingled

Photo credit: Eric Mader, Xerces Society
Challenges & Resources

• Public perception
• Tall grass ordinance
• Maintenance/weeds
• Plant costs/availability
• Grass ID

Pollinator Habitat

This area has been
planted with a range
of flowering native
plants to provide
good quality habitat
for native bees and
other pollinators.

For information about creating habitat
for pollinators, please visit:
www.xerces.org
www.wmswcd.org
Online Informational Resources

• The Oregon Flora Project [www.oregonflora.org](http://www.oregonflora.org)
• King County Native Plant Guide [https://green2.kingcounty.gov/gonative/index.aspx](https://green2.kingcounty.gov/gonative/index.aspx)
Native Planting Resources

- Native Plant Nurseries [www.plantnative.org/nd_or.htm](http://www.plantnative.org/nd_or.htm)
Native Plant Identification

- Plants of the Pacific Northwest Coast: Washington, Oregon, British Columbia & Alaska (Pojar & Mackinnon)
- Flora of the Pacific Northwest (Hitchcock & Cronquist)
- Handbook of Northwestern Plants (Gilkey & Dennis)
- Northwest Trees: Identifying and Understanding the Region’s Native Trees (Arno & Hammerly)
Thank You!

Mary Logalbo, Urban Conservationist
mary@wmswcd.org
503.238.4775 x103
www.wmswcd.org