

# CENTRAL TEXAS FIRE ECOLOGY

## 2018 Grow Green Series

Michelle Bertelsen—Lady Bird Johnson Wildflower Center





Bird Johnson

Wildflower Center

100 LA CROSSE AVENUE

THE UNIVERSITY OF TEXAS AT AUSTIN





# Burn Season

Summer

Winter

Fall

### Treatments

- Small plot research area
- Burn
- Control
- Mow





<https://youtu.be/Xg1zhtE69rw>

Figure 2.4 Major habitat types of the United States and Canada.



- LEGEND**
- 1.1 Tropical Moist Broadleaf Forests MHT
  - 1.2 Tropical Dry Broadleaf Forests MHT
  - 2.1 Temperate Broadleaf and Mixed Forests MHT
  - 2.2 Temperate Coniferous Forests MHT
  - 3.1 Temperate Grasslands/Savanna/Shrub MHT
  - 3.2 Flooded Grasslands MHT
  - 4.1 Mediterranean Scrub and Savanna MHT
  - 4.2 Xeric Shrublands/Deserts MHT
  - 6.1 Boreal Forest/Taiga MHT
  - 6.2 Tundra MHT



LEGEND













**Figure 2.4 Major habitat types of the United States and Canada.**



**LEGEND**

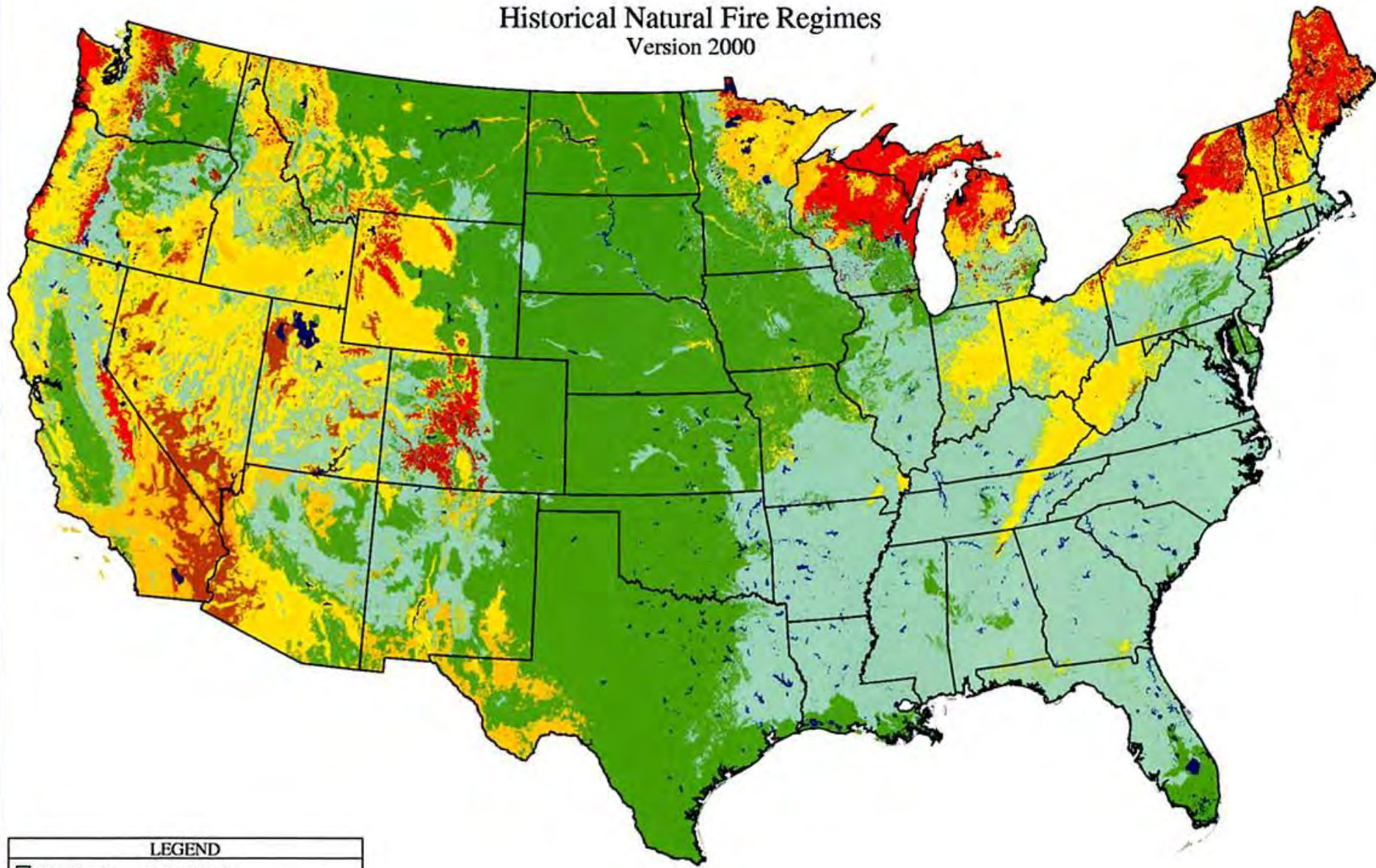
- 1.1 Tropical Moist Broadleaf Forests MHT
- 1.2 Tropical Dry Broadleaf Forests MHT
- 2.1 Temperate Broadleaf and Mixed Forests MHT
- 2.2 Temperate Coniferous Forests MHT
- 3.1 Temperate Grasslands/Savanna/Shrub MHT
- 3.2 Flooded Grasslands MHT
- 4.1 Mediterranean Scrub and Savanna MHT
- 4.2 Xeric Shrublands/Deserts MHT
- 6.1 Boreal Forest/Taiga MHT
- 6.2 Tundra MHT



LEGEND

# Historical Natural Fire Regimes

Version 2000

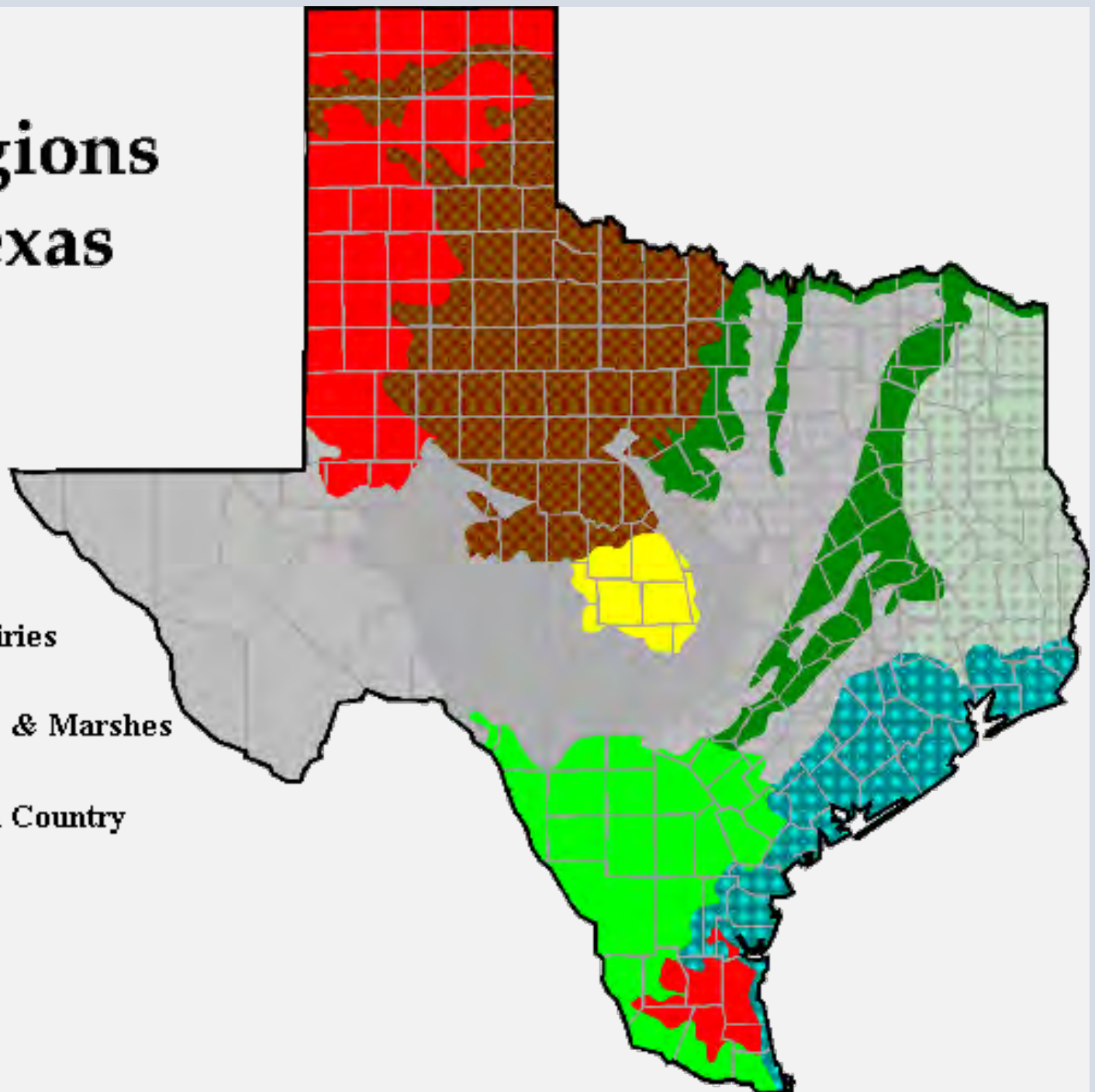


## LEGEND

- I: 0–35 yr. frequency, Low Severity
- II: 0–35 yr. frequency, Stand Replacement Severity
- III: 35–100+ yr. frequency, Mixed Severity
- IV: 35–100+ yr. frequency, Stand Replacement Severity
- V: 200+ yr. frequency, Stand Replacement Severity
- Barren
- Water

# Ecoregions of Texas

-  Piney Woods
-  Oak Woods & Prairies
-  Blackland Prairie
-  Gulf Coast Prairies & Marshes
-  Coastal Sand Plain
-  South Texas Brush Country
-  Edwards Plateau
-  Rolling Plains
-  High Plains
-  Trans Pecos
-  Llano Uplift



**SAVANNA**

NO fire or grazing

Fire and /or grazing

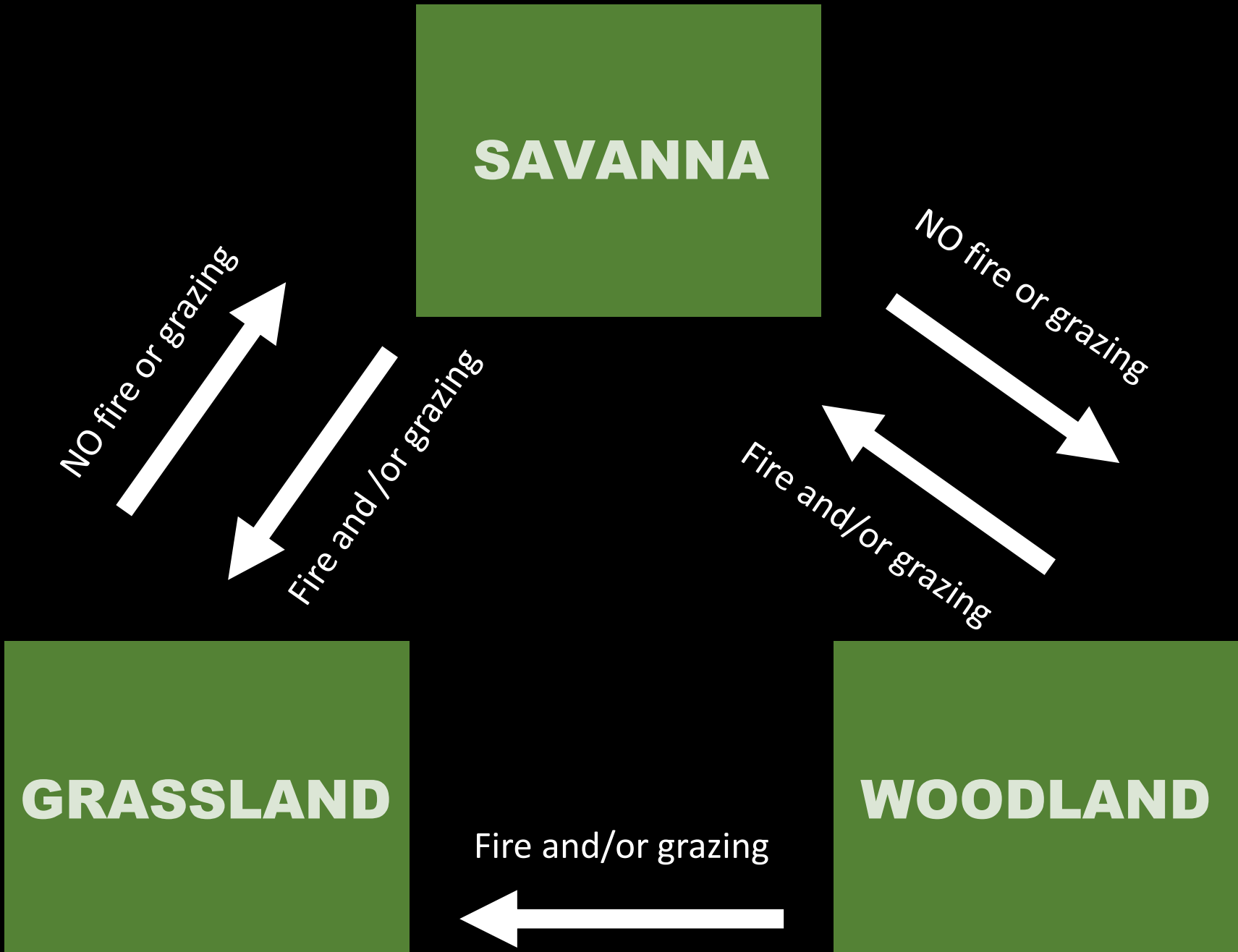
NO fire or grazing

Fire and/or grazing

**GRASSLAND**

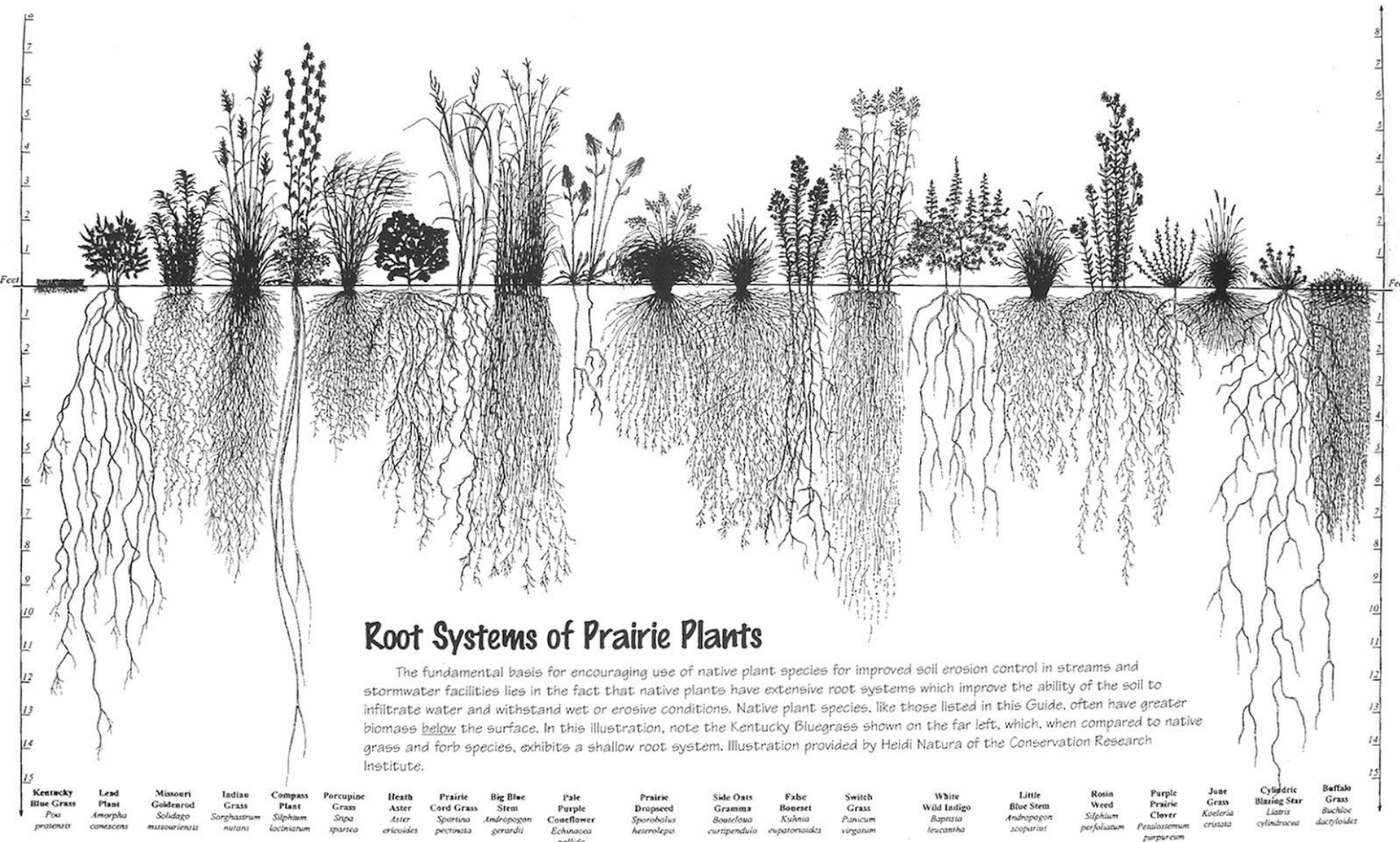
Fire and/or grazing

**WOODLAND**









## Root Systems of Prairie Plants

The fundamental basis for encouraging use of native plant species for improved soil erosion control in streams and stormwater facilities lies in the fact that native plants have extensive root systems which improve the ability of the soil to infiltrate water and withstand wet or erosive conditions. Native plant species, like those listed in this Guide, often have greater biomass below the surface. In this illustration, note the Kentucky Bluegrass shown on the far left, which, when compared to native grass and forb species, exhibits a shallow root system. Illustration provided by Heidi Natura of the Conservation Research Institute.

- |  |   |  |  |  |  |  |  |   |  |  |  |  |  |   |  |  |  |   |  |  |
|--|---|--|--|--|--|--|--|---|--|--|--|--|--|---|--|--|--|---|--|--|
| Kentucky<br>Blue Grass<br><i>Poa<br/>pratensis</i> | Lead<br>Plant<br><i>Amarpha<br/>canescens</i> | Missouri<br>Goldenrod<br><i>Solidago<br/>missouriensis</i> | Indian<br>Grass<br><i>Sorghastrum<br/>nutans</i> | Compass<br>Plant<br><i>Silphium<br/>laciniatum</i> | Porcupine<br>Grass<br><i>Stipa<br/>spartea</i> | Heath<br>Aster<br><i>Aster<br/>ericoides</i> | Prairie<br>Cord Grass<br><i>Spartina<br/>pectinata</i> | Big Blue<br>Stem<br><i>Andropogon<br/>gerardi</i> | Pale<br>Purple<br>Coneflower<br><i>Echinacea<br/>pollida</i> | Prairie<br>Dropseed<br><i>Sporobolus<br/>heterolepis</i> | Side Oats<br>Gramma<br><i>Bouteloua<br/>curtipendula</i> | Fabe<br>Bonaset<br><i>Kuhnia<br/>eupatorioides</i> | Switch<br>Grass<br><i>Panicum<br/>virgatum</i> | White<br>Wild Indigo<br><i>Baptisia<br/>leucantha</i> | Little<br>Blue Stem<br><i>Andropogon<br/>scoparius</i> | Rosin<br>Weed<br><i>Silphium<br/>perfoliatum</i> | Purple<br>Prairie<br>Clover<br><i>Petalostemum<br/>purpureum</i> | June<br>Grass<br><i>Koeleria<br/>cristata</i> | Cylindric<br>Blazing Star<br><i>Liatris<br/>cylindrica</i> | Buffalo<br>Grass<br><i>Buchloe<br/>dactyloides</i> |
|--|---|--|--|--|--|--|--|---|--|--|--|--|--|---|--|--|--|---|--|--|



<http://www.sbs.utexas.edu/fowler/research/community.html>

02/19/15



03/11/15



03/16/15



03/25/15



03/30/15





04/06/15



04/15/15



04/20/15



05/01/15



05/18/15









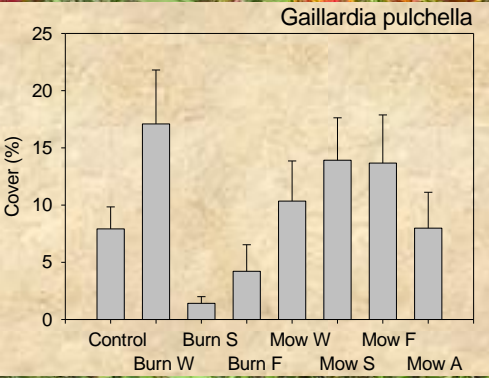








# Winter Fire



# Summer Fire

