Burning for Butterflies, Birds, and Blooms

Prescribed Fire in the Willamette Valley

(Johannessen, 1971; ODFW, 2006; Christy, 2011)
Firewood
Heat, light, cooking, boiling, cleaning, celebration, ceremony

Patch Burning
Hunting, berry patches, root harvest, pest control, weaving materials, trail maintenance, seasonal, situational

Broadcast Burning
wildlife habitat; curing seeds; hunting; transportation; weaving materials; acorn harvest, late summer, early fall for grasslands. (Boyd 1986; Gilsen 1989).
1 million acres of wet and upland prairie

>600,000 acres of oak savanna

Ecotones: vegetation changes = ↑ Elevation

Ecotones = bathtub rings around the Willamette Basin
Presumed Historic Mean Fire Return Intervals
Willamette Valley

- Wet and Upland Prairie and Savanna 6-15 Year MFRI
- Oak Woodland 21-40 Year MFRI
- Riparian and Conifer Forest 71-1000 Year MFRI
Increased tree density and changes in canopy structure

Altered overstory and understory species composition
Upland Prairie and Savanna
Altered overstory = altered understory

Increased tree density
burn·er
ˈbərnər/

noun
a thing that burns something or is burned, in particular.

a part of a stove, lamp, etc., that emits and shapes a flame.

noun: burner; plural noun: burners

an apparatus in which a fuel is used or an aromatic substance is heated.
an active participant in the annual Burning Man festival and/or the surrounding community
pyrotechnician with legal authority and good intentions
Assessment of Vegetation (Fuel Conditions)

Does it need to burn?
If so, how will it burn?
Can it be burned?
Pre-Burn Mechanical Treatments

Hand-felling
Girdling
Harvester Processor
Helicopter Logging
### Native Plant Response to Prescribed Burns

<table>
<thead>
<tr>
<th>Prairie Plant Species</th>
<th>Total #</th>
<th>1st Two Years</th>
<th>No significant response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burn</td>
<td>57</td>
<td>23 (+) 13 (-)</td>
<td>21</td>
</tr>
<tr>
<td>Mow</td>
<td>57</td>
<td>13 (+) 18 (-)</td>
<td>26</td>
</tr>
</tbody>
</table>

#### Diagram:
- **Open Wet Prairie**
- **Altered Fire-Regime in Wet Prairie**
- **Invaded Wet Prairie**
- **Top-killed Invaded Wet Prairie**
- **Ash Savannah**

**Treatment Types**:
- **T1**: Fire Suppression
- **T2**: Mech Veg. Removal
- **T3**: Prescribed Fire
“...the choice is not between two landscapes, one with and one without a human influence; it is between two ways of belonging to an ecosystem.”

- William Cronon, 1983