Firewise Landscaping

Brett Van Paepeghem
Create Survivable Space

Start with the house itself
Immediate Zone (1)
The home and the area 0-5’

- Clean roofs & gutters
- Clean debris from attic vents & install 1/8” metal screening
- Replace or repair loose or missing shingles
Hardening the Home

Use class “A” fire rated roofing & siding
Potential Fuels for Fire

*Anything that can burn

✓ Decking
✓ Firewood
✓ Planters
✓ Doormats
✓ Patio Furniture
✓ Propane Barbeque
✓ Other Structures
Screen or box-in areas

...below decks
Fences

If it touches the home...it is considered part of the home
Intermediate Zone (2) 
5-30’ from the farthest point of the home

✓ Use low-growing, fire-resistant plants and avoid conifers
✓ Keep plants well pruned
✓ Remove dead plant material
✓ Mow or weed-eat grasses
✓ Use gravel mulch
✓ Keep well irrigated
✓ Create fuel breaks
Hardscapes

Minimize continuous fuels
Create a “Catch” for blowing, burning embers
Intermediate Zone (2) 
5-30’

- Remove ladder fuels
- Prune trees up to 6-10’
- 18’ minimum between crowns
- Mature canopy at least 10’ from home
- Remove vegetation near propane tanks
- Plant in small clusters to break up continuity of vegetation
Extended Zone (3)
30–100’ + depending on slope

✓ Dispose of heavy accumulations of ground litter/debris
✓ Remove vegetation adjacent to any outbuildings
✓ Remove dead plant and tree material
Tree Spacing

- Trees 5-30’ from the home – **at least 18’** between canopy’s
- Trees 30-60’ from the home – **at least 12’** between canopy's
- Trees 60-100’ from the home – **at least 6’** between canopy’s
Avoid plants that contain volatile oils, resins and terpenes, which ignite easily and burn hot!
Some Natives are Extremely Flammable

Artemisia tridentata  
Sagebrush

Purshia tridentata  
Bitterbrush

Juniperus occidentalis  
Western juniper

Cercocarpus ledifolius  
Curl-leaf mountain mahogany

Achillea millefolium  
Yarrow

Fallugia paradoxa  
Apache plume

Chamaebatiaria millefolium  
Fernbush

Pinus spp.  
Pine

Any large statured native grasses
Xeric but…
Not if highly flammable

✓ Fine fuels ignite easily
✓ Ornamental Grasses are fine fuels
Xeric but... Oil content

Perovskia atriplicifolia
Russian Sage
**Saponin**

✓ Is an organic chemical found in some plants
✓ Plants that contain saponin can usually be worked into a lather
✓ Soap is a fire suppressant
Philadelphus lewisii

Syringa, Mock Orange (Idaho State Flower)

Hydrangeaceae (contain saponin)
‘Cultivars’

'Buckley's Quill' Mock Orange

*Philadelphus* hybrid

(4 - 5 feet tall)
Caryophyllaceae (contain saponin)

*Dianthus gratianopolitanus*

‘Firewitch’ Dianthus
Caryophyllaceae

Gypsophila spp.

Baby’s Breath

Agavaceae

Yucca spp.

Soapweed Yucca
Rhamnaceae (contain saponin)

Ceanothus americanus

New Jersey tea
Rhamnaceae continued...

Not all species in the Genus *Ceanothus* are suggested

*Ceanothus velutinus*, Snowbrush

High in oil content
Fabaceae (contain saponin)

Baptisia sphaerocarpa ‘Screamin Yellow’

False indigo

*Other Fabaceae include native Astragalus spp.
Saponaria ocymoides

Rock soapwort
Pectin

*Fruit trees are a good choice

Crabapple

‘Lipstick’ Strawberry

Malus spp.

Atriplex canescens

Amaranthaceae (contain salt)
Caprifoliaceae (contain pectin and saponin)

Symphoricarpos albus

Snowberries
Caprifoliaceae continued...

*Sambucus caerulea*
(pectin & high moisture)
Euphorbiaceae (contain saponin & latex)

Euphorbia characias
E. epithymoides

Spurge

*Note: many Euphorbia species are invasive
High Moisture Content

‘Angelina’ Stonecrop
Sedum rupestre

Hardy Ice Plant
Delosperma cooperi
Hens & Chicks

*Sempervivum* spp.

Cactus

*Opuntia* spp.
Compact Growth Form
Use of ‘Cultivars’

Sand cherry
*Prunus pumila*
(6 feet tall)

‘Pawnee Buttes’
Sand cherry
(3 feet tall)

© Plant Select (Colorado Based)
‘Pawnee Buttes’
Oak Leaf Sumac

*Rhus trilobata*  
(6 - 12 feet tall)
Sumac ‘Cultivars’

‘Autumn Amber’
Sumac
*Rhus trilobata*
(2 feet tall)

‘Gro-Low’ Sumac
*Rhus aromatica*
(3-4 feet tall)
# Plant Types

<table>
<thead>
<tr>
<th>Succulents</th>
<th>More Fire Resistant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ground Covers</td>
<td></td>
</tr>
<tr>
<td>Turf</td>
<td></td>
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<tr>
<td>Vines</td>
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<td>Annuals</td>
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<td>Less Fire Resistant</td>
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- Succulents: More Fire Resistant
- Ground Covers
- Turf
- Vines
- Annuals
- Perennials
- Deciduous Trees
- Shrubs
- Grasses
- Conifers: Less Fire Resistant
Plant Attributes & Rating Fire Resistance

✓ Moisture Content

✓ Mineral Content
  (Soap, Salt, Pectin, Latex)

✓ Volatile Oil / Resin Content

✓ Height / Compactness
Ranking Attributes

- High
- Medium
- Low

Mineral Content

(Soap, Salt, Latex, Pectin)

Soap lather from *Philadelphus* leaf
### 'Buckley's Quill' Mock Orange
*Philadelphus hybrid*

<table>
<thead>
<tr>
<th>Moisture Content</th>
<th>Moisture Score</th>
<th>Mineral Content</th>
<th>Mineral Score</th>
<th>Height x Width</th>
<th>Height / Compactness Score</th>
<th>Volatile Oil/Resin Content</th>
<th>Volatile Oil Score</th>
<th>Score For Fire Resistance</th>
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</thead>
<tbody>
<tr>
<td>High</td>
<td>2.5</td>
<td>High</td>
<td>2</td>
<td>4’ x 4’</td>
<td>2</td>
<td>Low</td>
<td>2.5</td>
<td>9</td>
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</tbody>
</table>

### Saskatoon Serviceberry
*Amelanchier alnifolia*

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<tr>
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<th>Mineral Content</th>
<th>Mineral Score</th>
<th>Height x Width</th>
<th>Volatile Oil/Resin Content</th>
<th>Volatile Oil Score</th>
<th>Score For Fire Resistance</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>2.5</td>
<td>Low</td>
<td>0</td>
<td>20’ x 15’</td>
<td>-1</td>
<td>Low</td>
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</tbody>
</table>
'Buckley's Quill'

Saskatoon Serviceberry
Flammable Plant Alternatives

**PLANT THIS**

‘Autumn Amber’
*Sumac*
*Rhus trilobata*

Score 8

**NOT THAT**

Creeping Juniper
*Juniperus horizontalis*
Contains resins

Score 3
Alternatives

**PLANT THIS**

Rocky Mountain Penstemon
*Penstemon strictus*

**NOT THAT**

Russian Sage
*Perovskia atriplicifolia*

Score: 8

Score: 2
‘Walker’s Low’ Catmint

Nepeta x faassenii
Alternatives

**PLANT THIS**

Western Larch  
*Larix occidentalis*  
Score: 4

**NOT THAT**

Blue Spruce  
*Picea* spp.  
Contains Resins  
Score: 1
Firewise Landscaping
Makes A Difference

There are not enough fire engines to be at every home during every wildfire.

Firewise landscaping and building materials may be the only defense for a home.
Idaho Firewise Garden Cooperative
In summary

- Fire-resistant does not mean fireproof

- Vegetation clearance, Firewise construction and roof composition are key to ignition prevention

- This presentation is based on research and professional judgment and is intended to serve as a guide.

It is not a guarantee!