

# Lakescaping



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**Portland Water District**





**Rain, Rain  
Go Away!**

**But where  
does it go...?**





## Forest:

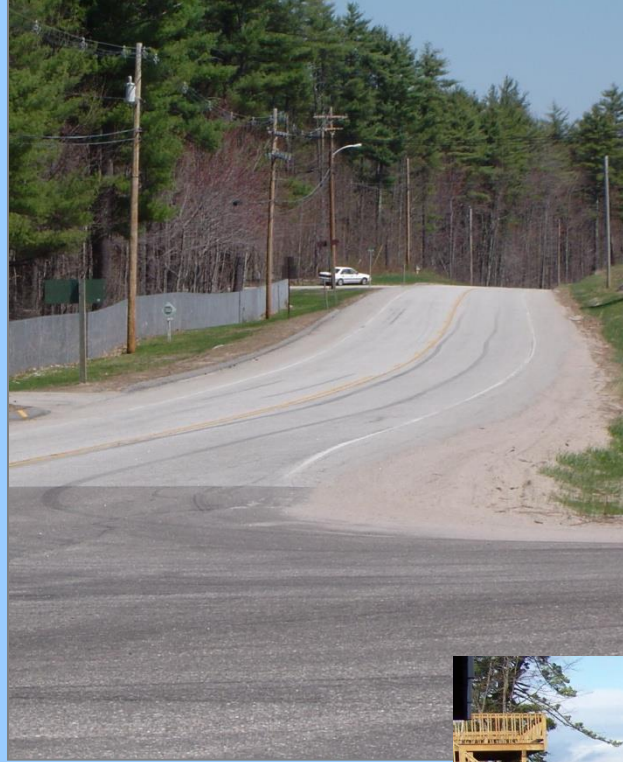
**Rain falls and  
is intercepted  
by trees and  
allowed to  
infiltrate into  
the ground.**





## Developed areas:

**Rain falls on  
our  
roadways,  
parking lots &  
roofs and  
becomes  
runoff.**





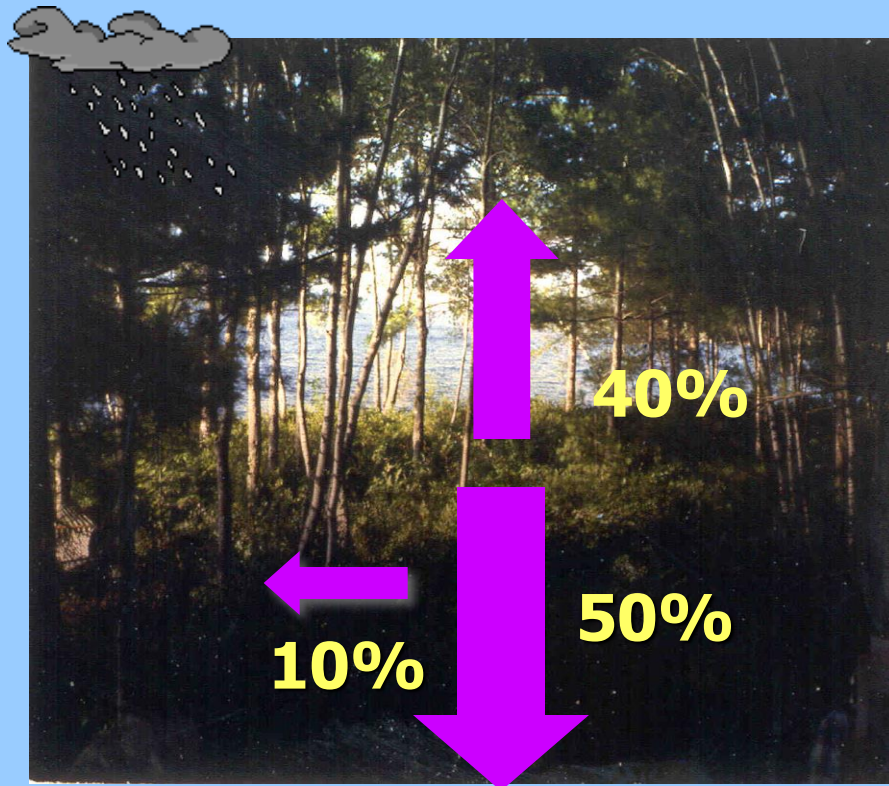
**Impervious  
(hard) surfaces  
increase runoff  
and decrease  
infiltration**





# Impervious Surfaces Change the Way Water Moves

**Natural Cover**



**Developed Land  
75-100% Impervious  
Surface**





# **Water runoff leads to erosion!**





# **Polluted Stormwater Runoff is the #1 Water Quality Problem in the U.S.**



**In most lake watersheds, about 60%-80% of  
pollution is from stormwater runoff!**



Excessive amounts of nutrients and sediment entering a water body can cause water quality deterioration and habitat loss.



Increased weed growth along shorelines



Algal blooms





And with each rain “runoff”, organic matter, soil, fertilizer, oil and chemicals get added to our lakes and streams.







## ***The Problem: Typical site design***

***Collect  
Concentrate  
Convey  
Centralize  
Control***



***Traditional Drainage***



# How can we deal with runoff at home???



**Lake friendly landscaping and  
best management practices for erosion control**



# Roof dripline erosion (without gutters)



Dripline Trench

# Roof dripline erosion (with gutters)



Rain Barrels  
&  
Drywells





# Portland Water District

## Rain Barrel Promotion 2015



**PWD plans to offer Rain Barrels again in 2015**

**How to be notified when we sell barrels in 2015:**

Email [kness@pwd.org](mailto:kness@pwd.org) to be placed on the list to be contacted when we advertise in the winter/spring of 2015.

# Pathway erosion on a slope



Infiltration steps



# Water diversion on a path or driveway

Open top  
culvert

&

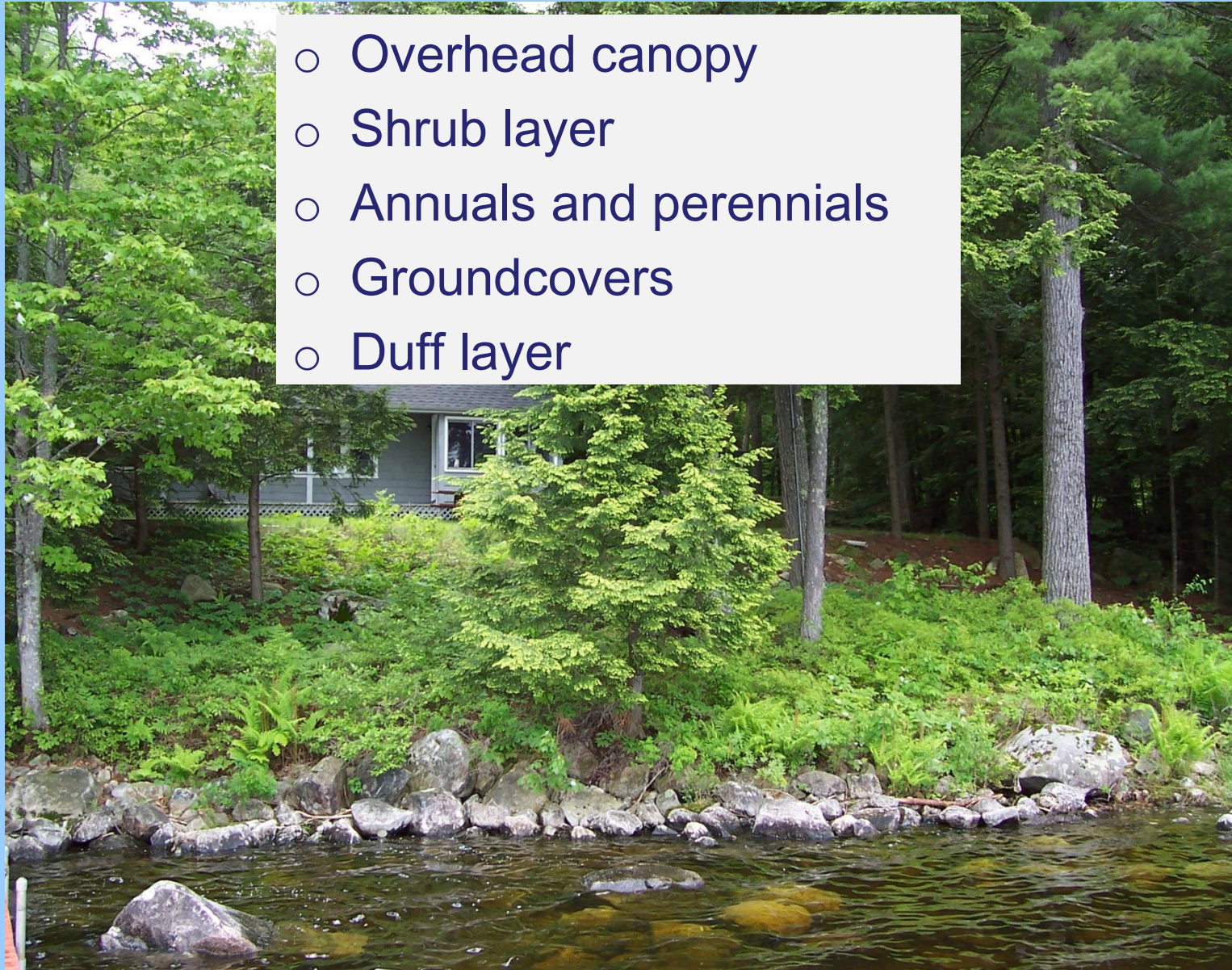
Rubber razor  
blade





# 5 components of a good buffer:

- Overhead canopy
- Shrub layer
- Annuals and perennials
- Groundcovers
- Duff layer





Good...



Better...



Best!





# Rain Gardens

- Sunken garden with native perennials
- 4-6 inches deep with flat bottom
- Normally 1/3 the size of area draining to it
- Formal or informal



# Benefits of Rain Gardens

Helps to protect  
& restore natural  
hydrology

Allows rain to soak  
into the ground

Intercept pollutants





## **Why are natives better?**

- **Better adapted to our climate**
- **Provide appropriate habitat, food, shelter**
- **Fit in with the surrounding ecosystem**
- **Maintain species diversity**





**What is the problem with alien  
ornamentals?**



**32 to 40 million acres of lawn in the US....**





# Invasive Plants to Avoid



Autumn  
olive



Oriental  
Bittersweet



Japanese  
knotweed



Japanese  
Barberry



Multiflora rosa



Purple  
loosestrife



# What should I plant?

## NATIVE PLANT LIST

~Shade, Moist to Wet Soils~

Although this is not an exhaustive list, the following native plants are carried at local nurseries. If a particular plant is not available at your nursery, ASK for it by name. The more demand there is for native plants, the more likely a nursery is to carry it. Additionally, nursery staff may be able to recommend a suitable, NON-INVASIVE substitute.



### SMALL SHRUBS (<6')



**Summersweet** (*Clethra alnifolia*) Also called Hummingbird Pepperbush. Grows 3 to 8 feet high with a 4 to 6 foot spr. foliage and very fragrant, white or pink flowers in summer wet soil. Zones 4-9.

**Canadian Yew** (*Taxus canadensis*) Grows from 1 to 6 feet high with spreading to 6 feet. Grows best in moist, loamy, alkaline, well-drained soil. Prefers partial to full shade. A popular food for moose and deer. Zones 2-6.



**Mapleleaf Viburnum** (*Viburnum acerifolium*) Grows equal spread. Grows best in well-drained, mildly acidic soil but can tolerate drier soils. Prefers shade to other viburnums, a cluster of small white flowers give fruits that are enjoyed by birds and other wildlife. Not susceptible to attack from the *Viburnum Leaf Beetle*. nursery to see if the Beetle is a problem in your area.

### TALL SHRUBS (>6')

**Allegheny Serviceberry** (*Amelanchier laevis*) Grows to approximately 20 feet. Grows in shade and partial shade. A hardy serviceberry species that will tolerate moisture and light than some other varieties. White flowers and purple/black edible berries are typical. Zones 4-8.



**Witherod** (*Viburnum cassinoides*) Also called W. with a lesser spread. A slender, upright shrub with feathery, white to pinkish fruit turning blue-black in the fall. Red. Moist to wet soil but tolerates drier conditions. swamps and moist thickets. Good for birds. Watch for the *Viburnum Leaf Beetle*. Check with the nursery to see if the Beetle is a problem in your area. Zones 3-8.

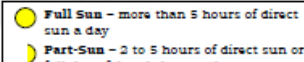
Native Plant List - Shade, Moist to Wet Soil, page 1 of 8

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## NATIVE PLANT LIST

~Sun, Moist to Wet Soil~

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### SMALL SHRUB

**Bog Rosemary** (*Andromeda polifolia*) Grows from 6 to 8 feet high with a 3 to 4 foot spread. Leaves are narrow, evergreen and color. Some resemblance to the culinary herb. Typ. and marshes. Flowers are small, pink, and bell-shaped. acid soil in cooler climates. Zones 2-6.



**Buttonbush** (*Cephalanthus occidentalis*) Grows from 6 to 8 feet high with a 3 to 4 foot spread. Darkish-green, glossy, heads (pom-poms) in summer, winter. Sun to part-sun. Wet soil tolerant. Found along lakes and rivers.

**Summersweet** (*Clethra alnifolia*) Also called Hummingbird Pepperbush. Grows 3 to 8 feet high with a 4 to 6 foot spread. foliage and very fragrant, white or pink flowers in summer wet soil. Zones 4-9.



**Common Juniper** (*Juniperus communis*) Grows from 6 to 8 feet high with a 3 to 4 foot spread. Form can be var. brown during the winter. Tolerant full sun. Zones 2-6.

**Sheep Laurel/Lambkill** (*Kalmia angustifolia*) Grows from 6 to 8 feet high with a 3 to 4 foot spread. Grows best in moist, organic, cool, variety of soil types. Prefers full sun to partial shade. Bright pink flowers bloom in early summer. As the name suggests it is poisonous to livestock. Zones 1-6.



**Labrador Tea** (*Ledum groenlandicum*) Grows from 6 to 8 feet high with a 3 to 4 foot spread. Typically found in wet, white flowers bloom in the spring. G. Prefers a wet, acid soil. Leaves are evergreen. Zones 2-5.

**Sweetgale** (*Myrica gale*) Grows from 2 to 4 feet high. Typically found near lakes, streams and wetlands and aromatic. Produces fruits that are similar to those of a moist to wet soil with full sun. Attractive to wildlife. Zones 3-7.

Native Plant List - Sun, Moist to Wet Soil, page 1 of 6

## NATIVE PLANT LIST

~Part Sun, Dry Soils~



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### SMALL SHRUBS (<6')



**Bush Honeysuckle** (*Lonicera maackii*) Also called American Fly Honeysuckle. (Do not confuse with European Fly Honeysuckle which is invasive.) Grows 2 to 5 feet high. A straggling shrub with handsome red berries. Sun to shade. Sandy, dry soil. Drought tolerant. Found in cool, rocky woods. Zones 3-7.

**Sheep Laurel/Lambkill** (*Kalmia angustifolia*) Grows from 1 to 3 feet high with a greater spread. Grows best in moist, organic, cool, acidic soils but can tolerate a variety of soil types. Prefers full sun to partial shade. Bright pink flowers bloom in early summer. As the name suggests it is poisonous to livestock. Zones 1-6.



**Fragrant Sumac** (*Rhus aromatica*) Available in standard and 'Gro-Low' varieties. Dwarf grows 2 to 3 feet with a 6 to 8 foot spread. A low shrub with compound leaves and small, fragrant, yellow flowers in spring, followed by red fruit. Excellent orange to red fall color. Leaves are aromatic when crushed. Sun to part shade. Dry, sandy to rocky soil. Good as bank covers and in mass plantings. Dwarf variety used as a ground cover. Found in dry, rocky, open woods. Zones 3-9.

**Snowberry** (*Symphoricarpos alba*) Grows 3 to 6 feet high with similar spread. Spreads by suckering so will form thickets, if allowed. Good for erosion control. Blue-green foliage, pink spring flowers and ornamental, white berries in fall. Rapid growth. Sun to part-sun. Moist to dry soil. Adaptable to a variety of soil conditions. Good for birds. Zones 3-7.



**Highbush Blueberry** (*Vaccinium corymbosum*) Grows from 6 to 8 feet in height with a spread of 8 to 12 feet. Typically found near bogs and marshes. Prefers moist, well-drained, acidic soil. Sun to partial shade. White bell-shaped flowers bloom in the spring and are followed by edible dark blue berries. Leaves turn red in the fall. Berries are attractive to birds and other wildlife. Zones 5-7.



Lots of options! Find native plants lists at [www.pwd.org](http://www.pwd.org) or at the Ecology Center!



# Lakescaping Examples



Before





After





After





Before





After





Before





After





Before





After









Portland  
Water District  
WATER RESOURCES





**Besides, would you rather spend  
your weekend mowing this...**



**...or enjoying this?**



**Questions?**

