



The City of Springfield
Environmental Services Division
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A Homeowner's Guide to STREAMSIDE GARDENING



Streamside Gardening

A healthy streamside garden is full of birds, frogs, butterflies, and other wildlife. It provides important habitat for fish and aquatic life. This guide will help you enhance the habitat that already exists on your property, and improve water quality.

Springfield lies in between the McKenzie and Willamette Rivers. Some major local tributaries of these rivers are South Cedar Creek, the Q-Street Floodway, the Springfield Mill Race, and Gray Creek. Numerous smaller channels also meander through our town, making their way through backyards and urban areas and eventually flowing into the McKenzie or Willamette River.

Living near a river or stream is a privilege. Beautiful scenery and wildlife are right in your yard! Those who have waterways on their property are lucky, but this also comes with greater responsibility. Your choices can have a big impact on water quality. Reducing or eliminating pesticide use, picking up after pets, and fixing leaky vehicles are just a few of the ways that you can help to reduce the amount of pollution that is washed into your streams. Planting native vegetation in your riparian area helps to filter out pollutants, prevents erosion, and provides habitat.

How to Begin

This guidebook will take you step-by-step through the process of enhancing your riparian area. Remember you can start with a small area and add to it as your time allows.



Red osier dogwood and sword fern grow along streams in Oregon and make beautiful streamside landscaping plants.

Step 1: Observe and Identify Your Riparian Area

Start by observing your yard and the stream bank and flows. What plants and animals do you see? What kinds of animals do you want to attract? Are there areas of bare soil that could erode away? Note which areas are wet, dry, sunny or shady. Then make a simple plan for your streamside garden.

Your riparian area begins at the stream's edge and extends up to 75 feet from the stream bank, depending on your site. Examine the area and identify any sensitive habitat or features you would like to preserve. Also consider where property lines and underground utilities are located. If you plan on digging, by law, you must call 1-800-332-2344 for underground locates; it's free!



Step 2: Design Planting Area and Select Plants

Measure the area to be planted. Measure the length and width, then multiply them together to get the total area.

$$\text{Length (ft)} \times \text{Width (ft)} = \text{Planting Area (ft}^2\text{)}$$

Next, calculate the number of plants needed to prevent erosion, filter pollutants, and shade the water. Shading the stream is especially important because it cools the water. Fish require cold water for migration, spawning, and raising young. Healthy plantings along riparian areas encourage water to soak into the ground during heavy winter rains, preventing flooding and allowing water to be slowly released into the stream.

Planting Area (ft²) x 0.01 = Number of trees

Planting Area (ft²) x 0.05 = Number of shrubs

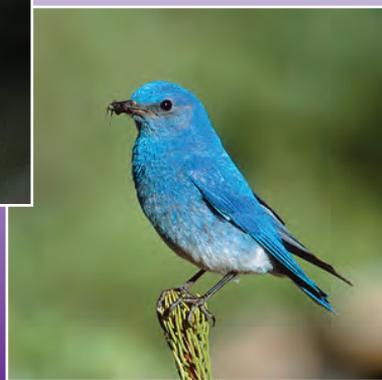
You can start with a small part of the riparian area and add to it in phases, or plant the entire site at one time.

Now you are ready to choose the plants you want for your site. Planting trees, shrubs, and herbaceous (perennials and annuals that are smaller and non-woody) plants will provide a variety of habitat for wildlife. Be sure to plant an assortment of species, as this can help prevent pests and disease and provides habitat diversity.

Plant only native riparian plants in the riparian area along the stream. Since they are already adapted to our climate, they require only a small amount of maintenance. They also provide the best habitat for native butterflies, birds, and other wildlife. Please see the plant list at the end of this guide for ideas.

Keep in mind the amount of light and the soil conditions that are present at your site. The top of bank will be drier than areas near the stream, so plan accordingly. You may find it useful to sketch out a design for your riparian buffer – including trees, shrubs, and ground covers.

Streamside gardens attract beautiful wildlife!



Step 3: Preparing Your Site for Planting

The first step is to remove invasive species and non-native species that you would like to replace with plants native to Springfield. See *A Homeowner's Guide to Common Invasive Species* for tips on how to identify invasive plants. Cut and pull invasive and non-native plants - it is best if the entire root system of the plant can be removed. Weed cloth can also be effective for some species. Invasive plants are hardy and tend to take over quickly. It is important to plant natives as soon as possible after invasives are removed to prevent them from re-establishing. Regular cutting, mowing, and pulling before plants go to seed can be an effective way to control invasive plants. Dispose of seeds and roots where they cannot re-establish.

You can purchase native plants at local nurseries and garden centers.

*Blackberries can invade a streamside garden, so be sure to maintain the area regularly. See *A Homeowner's Guide to Common Invasive Species* for more information on invasive plants.*



Step 4: Planting and Maintenance

Now for the fun part – planting the site! Use your planting plan, and adapt it if necessary. Don't forget to note the amount of light and soil conditions each of your plants prefers.

Place mulch around each of your plantings to suppress weeds and hold in moisture. If you have deer in your area, consider placing a guard around young trees and shrubs to protect them from grazing!

Congratulations, you have created a streamside garden on your property that provides habitat for native species and improves water quality! Now all you have to do is maintain it. Plants will need to be watered during dry weather until they are established (the first one or two summers), especially those at the top of bank. Weed the area regularly to keep invasive species under control. The use of chemical pesticides and fertilizers is highly discouraged – use mulch and compost instead. Remove trash that floats into your section of the stream.



Downed logs in streams can provide basking habitat for the western pond turtle, which is a threatened species of the Willamette Valley. Downed logs and branches also provide places for amphibians and reptiles to reproduce, find shelter, hibernate, and feed.



Native trees and shrubs do not need pruning. Allow branches to hang over the water – this will help cool the water, which makes your stream ideal habitat for fish. Downed logs and branches are great cover for fish. Snags also provide important habitat for birds. Allow leaves to accumulate on the ground. Inspect your plantings, and replace plants that do not survive, or add to what you've already got. Willows, red dogwood, and alders stabilize stream banks and can be started from cuttings.



Snags are great habitat for birds. Dead branches and cavities provide important places for wildlife to raise young.

ENJOY YOUR BEAUTIFUL STREAMSIDE GARDEN!

Don't forget to check out the other guides in the "Homeowner's" series:

- Rainwater Harvesting
- Naturescaping
- Rain Gardens
- Common Invasive Plants
- Pervious Surfaces



Native Plants for Riparian Areas

This list will help you get started. This is not a complete list of plants, and some plants may be more difficult to find than others. Call or visit local nurseries to see what is available.

Plant Name	Light	Soil	E/D*	Notes
<i>Trees</i>				
Big Leaf Maple	Full/partial sun	Moist	D	Large tree to 90 ft, good for shade, great for birds
Red Alder	Full sun	Moist	D	Fast growing to 80 ft
Black Cottonwood	Full sun/partial shade	Moist	D	Large tree to 100 ft
Pacific Crabapple	Full/partial sun	Moist	D	Shrub to tree. Do not confuse with domestic fruit trees
Wester Red Cedar	Sun/shade	Moist	E	Slow growing, large tree
<i>Shrubs</i>				
Snowberry	Sun/shade	Moist/dry	D	Pink flowers, provides cover, attracts humming-birds & butterflies
Vine Maple	Sun/shade	Moist	D	Spreads, showy fall foliage
Pacific Willow	Sun/shade	Wet/moist	D	Excellent for bank stabilization
Red Osier Dogwood	Full/partial sun	Wet/moist	D	Thicket-forming, important food source
Tall Oregon Grape	Sun/partial shade	Moist	E	Showy yellow flowers & purple berries
Osoberry	Sun/shade	Moist	D	Spreads, up to 16 ft tall
Mock Orange	Full/partial sun	Moist/dry	D	Show, aromatic flowers
Douglas Spirea	Full/partial sun	Wet/moist	D	Spreads, flowers attract butterflies, provides dense habitat for bird nesting
Pacific Ninebark	Full/partial sun	Wet/moist	D	Spreads, flowers attract butterflies, seeds provide food for birds

* E stands for evergreen and D stands for deciduous

Plant Name	Light	Soil	E/D*	Notes
<i>Shrubs cont.</i>				
Red-flowering Currant	Full sun	Moist/dry	D	Spread, flowers attract hummingbirds & butterflies
Western Serviceberry	Full sun	Moist/dry	D	Small tree/large shrub to 10 ft, berries attract songbirds
<i>Herbaceous/ground cover</i>				
Sword Fern	Sun/shade	Moist/dry	E	Good ground cover
Maidenhair Fern	Partial/full shade	Moist	D	Good ground cover
Oregon Wood Sorrel	Partial/full shade	Moist	D	Spreads, excellent ground cover
Cow Parsnip	Sun/partial shade	Moist	D	Great for butterflies
Piggyback Plant	Partial/full shade	Moist	D	Beautiful leaves, butterflies
Bleeding Heart	Full/partial sun	Moist	D	Spreads, up to 1.5 ft tall
False Lily-of-the-valley	Partial Sun/shade	Moist	D	Up to 15 in. tall, lightly fragrant, attracts birds
Wild Ginger	Shade	Moist	E	Spreads, ground cover with showy flowers
Fringecup	Partial sun/shade	Moist/dry	D	Beautiful small flowers
Stream Violet	Partial shade	Moist	D	Beautiful yellow flowers, host to butterfly larvae

* E stands for evergreen and D stands for deciduous



Plant natives and welcome birds & butterflies to your yard!