WELCOMING SALMON TO OUR BACKYARDS:
A GUIDE TO LANDSCAPING WITH NATIVE PLANTS ALONG STREAMS AND RIVERS

Riparian buffers link the land and the water together.

Photos, from top: Cle Elum River, Mid-Columbia Fisheries Enhancement Group; Chinook salmon, fotolia.com; Columbine, J. Hess; Dry creekbed, J. Hess; Planting along Coleman Creek, Mid-Columbia Fisheries Enhancement Group; Juvenile coho salmon, W. Meyer.

The Yakima River runs from the headwaters at Snoqualmie Pass down through lush forests, working agricultural land, and arid shrub-steppe areas. Along the way, hundreds of smaller rivers and streams contribute flow to the mainstem river.

As a streamside landowner, you play a part in determining the condition of the stream that runs through your property. Conscientious stewardship of your land will help to improve water quality and enhance habitat for fish and wildlife.

THE FISH NEXT DOOR

The Yakima basin is home to Chinook and coho salmon, steelhead, cutthroat, rainbow and bull trout, and many other native fish species. If you live on the mainstem Yakima River, you are probably well aware of the presence of salmon in your backyard. Chinook salmon are mostly found in the mainstem river, and in larger tributaries such as the Cle Elum, Teanaway, and Naches Rivers. Homeowners on smaller streams, however, may be surprised to learn that they have salmon neighbors as well. Coho fry (young salmon) are found in many of the urban streams in Ellensburg and Yakima, while steelhead fry are found in many small forest streams. In addition to the species listed above, sockeye salmon are currently being reintroduced into the Lake Cle Elum system.

Salmon make wonderful neighbors. As adults returning to spawn, they bring nutrients from the ocean that help local plants and animals thrive. They attract wildlife, and are impressive to watch. Young salmon live in our local streams and rivers for up to a year before they swim out to the ocean, and they eat a lot of mosquito larvae while they're here!

GOOD BUFFERS MAKE GOOD NEIGHBORS

One of the best ways to protect and enhance salmon habitat is to build and maintain a riparian buffer. Riparian buffers, or the plants along a stream or river, link the land and the water together. Whether you live on the Yakima River mainstem or on a smaller waterway, like Ellensburg's Mercer Creek, or Richland's Amon Creek, the water is affected by what happens on your home turf.

Photos by: Mid-Columbia Fisheries Enhancement Group

LAWNS CAN HARM STREAMS

Residential neighborhoods can be major sources of pollution. Water flowing over roads, lawns, and yards picks up sediment, fertilizers, pesticides, herbicides, heavy metals, and other pollutants that harm the natural system. Maintaining a lawn right up to a stream's banks invites multiple problems.

EROSION: Cutting riverside vegetation destabilizes the shoreline and can lead to loss of land. Streambanks must stand up to scouring currents, fluctuating water levels, moving ice, flooding, and surface runoff from higher ground.

FLOODING: Land development creates impervious surfaces such as roofs, roads, sidewalks, and parking lots. Water runs off these surfaces in greater quantities, and more rapidly, than it would in a natural landscape. Rainwater can run off lawns twice as fast as from a bank planted with trees and shrubs. More water reaches the stream faster than it would naturally, causing flooding during heavy rains and snowmelt.

WATER DAMAGE: Building structures within the riparian area places them in harm's way. The power of a river in April can be a surprise when it was only a babbling brook in July, and can destroy obstacles in its path with ease.

UNSIGHTLY ALGAE BLOOMS: Fertilizers for lawns also feed algae and aquatic weeds. Algae can cover the top of the creek, reducing sunlight and, when it decays, absorbing oxygen essential to other aquatic plants and animals.

DAMAGE TO FISHERIES: Clearing trees exposes waters to more sunlight, raising water temperatures and stressing fish.

LOSS OF HABITAT: The river's edge is prime real estate for birds and other wildlife. Backyard bird feeders are no substitute for good plant cover and natural food.

LOSS OF PRIVACY: Shoreline vegetation screens homes from public view.

THE BEAUTY OF BUFFERS

Native plants protect your property by slowing runoff and allowing it to soak into the ground, recharging wells and reducing flooding. Roots help hold the soil in place and control erosion. Trees cast their shade over the water to keep it cool for fish and frogs, and provide perching places for birds.

Buffer plants can provide seasonal blooms and autumn color to beautify your yard while attracting butterflies and birds. Vegetation along your streambank provides a "living filter" to protect streams and groundwater, while providing your home landscape with privacy and the pleasure of watchable wildlife.

The flood and erosion "insurance" provided by a riparian buffer is all the more important now that weather patterns are taking a turn. In the future, the Yakima basin is expected to see more of its precipitation delivered as rain. Sturdy plantings on your streambank are the best protection you can provide for your own property and your neighbors. It can take several years for a newly-planted riparian buffer to be fully effective, so if you can, start planting today.

BUILDING A BACKYARD RIPARIAN BUFFER

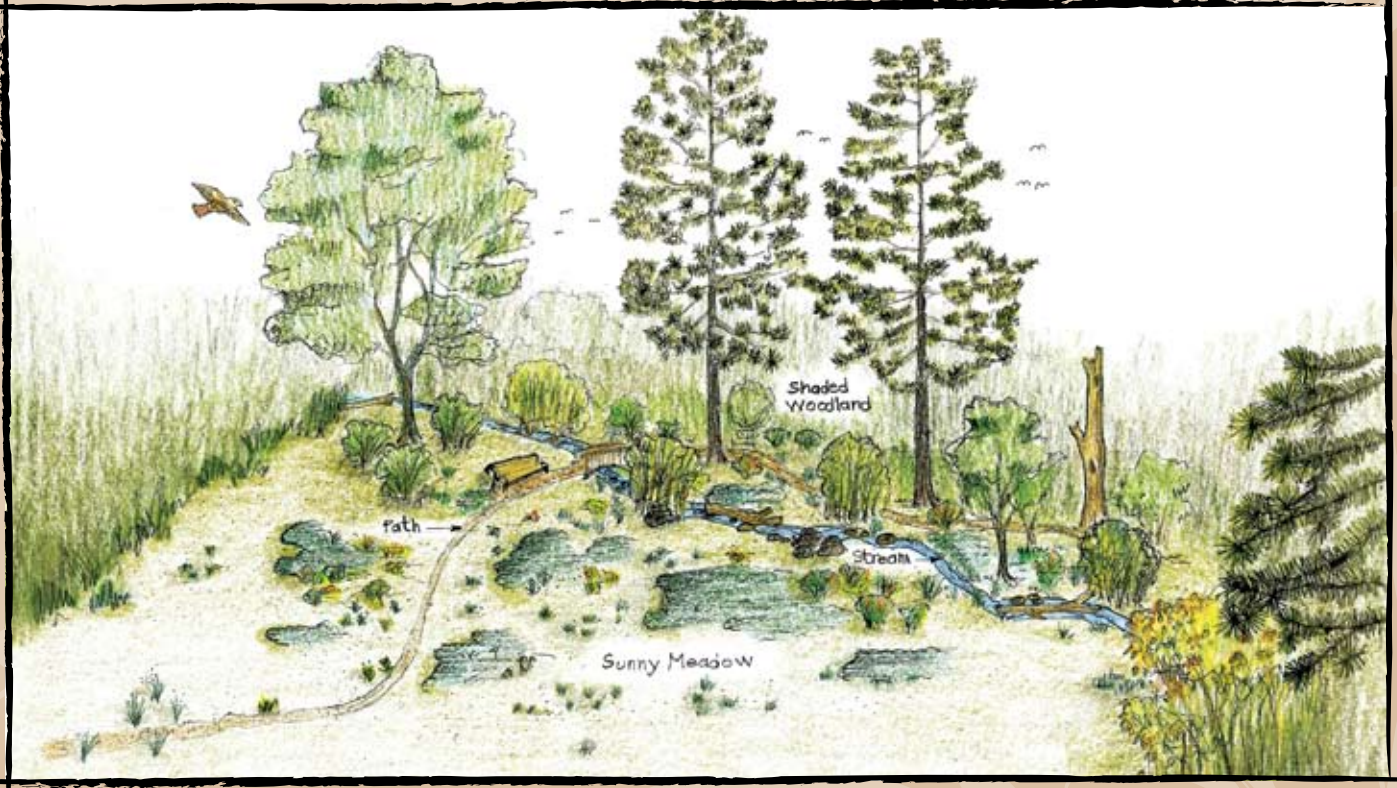
As you begin to think about establishing a riparian buffer on your property, start by considering how you use your land. Do you play sports in your yard? Do you have small children or pets? Where are the best spots to sit and watch the river?

Creating a buffer does not mean giving up on the recreational and aesthetic uses of your yard. Backyard buffers should be designed to maintain views and invite people to play in your yard. You can frame your view of the river or stream with careful plant selection and pruning when necessary.

If foot access to the stream is important, lay out a curved path and plant around it. Grade the path if necessary to keep it from becoming a tiny stream channel during rainstorms. Slopes over 15% require constructing steps or stairs. Try to keep children and pets on this path to discourage them from trampling the rest of the riverbank.

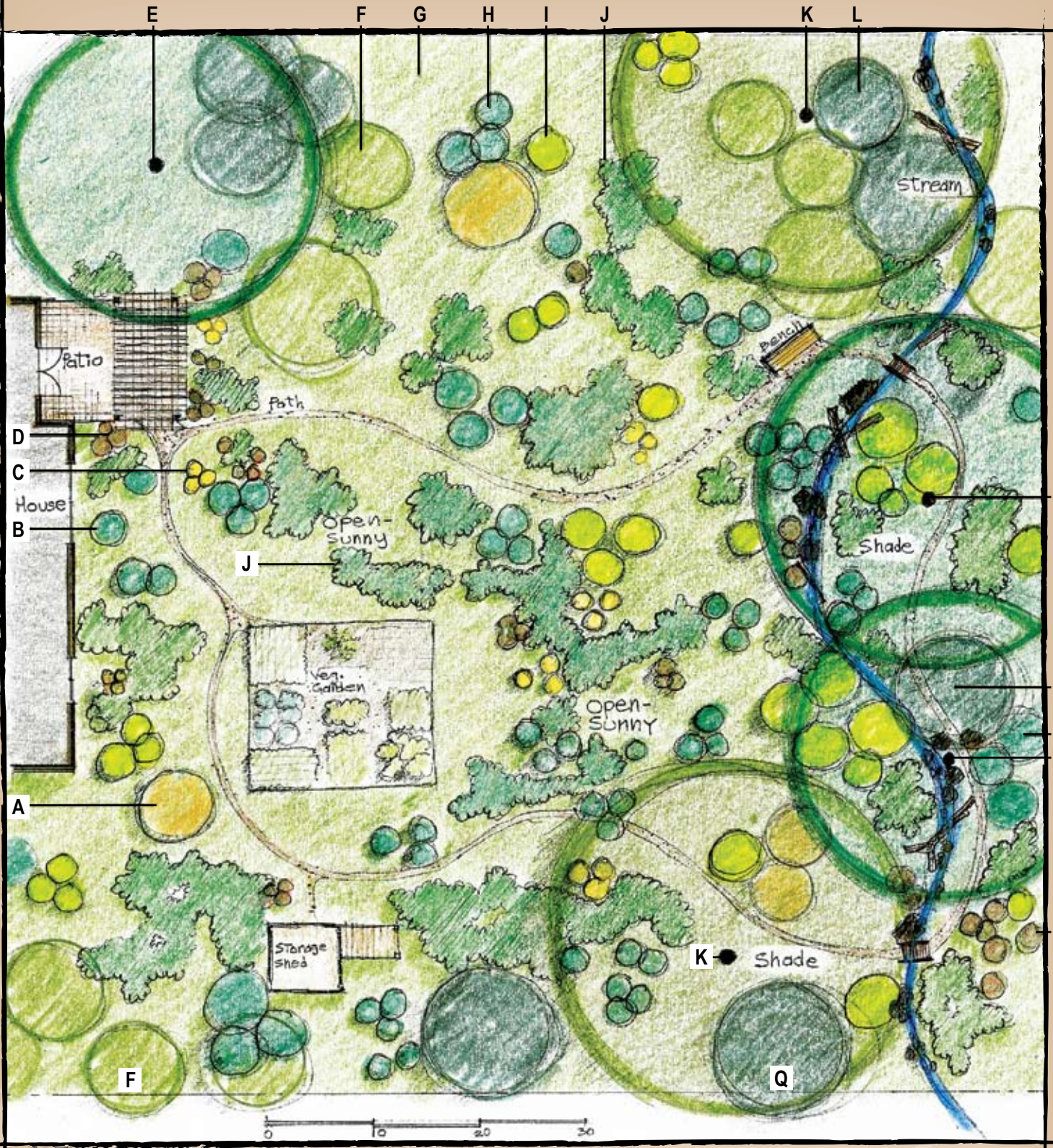
Plants that are native to your area will create the most valuable buffers.

Native plants:
- are time proven—they have been around for thousands of years and are adapted to the climate.
- conserve water, which saves a precious resource, reduces costs, and helps to maintain the groundwater table.
- provide fish and wildlife habitat—food, shelter, shade and hiding cover.
- are disease and pest resistant.
- do not need chemicals for their growth or care.
- require little maintenance after establishment.
- provide buffers to streams.
- are beautiful and provide year-round interest.



Landscape architecture by: J. Hess

A BACKYARD BUFFER FOR THE ELLENSBURG AREA



Landscape architecture by: J. Hess

NATIVE PLANTS DRAWN IN THIS EXAMPLE:

A Mockorange
B Oregon Grape, Creeping
C Columbine
D Lewis' Blue Flax
E Ponderosa Pine
F Golden Currant
G Idaho Fescue, Wild Strawberry, Columbine
H Oregon Grape, Creeping
I Snowberry
J Kinnikinnick, Blanket Flower
K Garry Oak
L Douglas Spirea
M Ponderosa Pine
N Douglas Maple
O Wood's Rose
P Prairie Smoke
Q Serviceberry

A buffer of native plants can be a beautiful addition to any landscape. The planting plan shown here allows for easy access to the stream, good views, and minimal maintenance after the first few years. The trees, shrubs, grasses and groundcovers used in this plan could all be exchanged for plants from the chart below, according to personal preference and plant availabilty.

PLANTING GUIDELINES

- Group plants by similar moisture and sun/shade requirements.
- Plant in layers by different heights: overstory trees, understory trees, shrubs, perennials/grasses.
- Plan on the mature size for plant location.
- Water plants for 2-3 summers until plants are well-established, then stop watering.
- Minimize lawn or use water conserving grass species.
- Choose native plants that provide wildlife habitat.

CHOOSING YOUR NATIVE PLANTS:

COMMON NAME	SCIENTIFIC NAME	SOIL D=dry M=moist	LIGHT S=sun Sh=shade S/Sh=sun/shade	HEIGHT	NOTES E=evergreen D=deciduous
TREES					
Trees are critical to the effective function of a riparian buffer. They provide shade, nutrient input, and bank protection.					
Black Cottonwood	Populus trichocarpa	D/M	S	150’	D, drought tolerant, fast growth, cottony seed
Chokecherry	Prunus virginiana	D/M	S	12’	D, drought tolerant, bird fruit
Douglas Maple	Acer glabrum	D/M	S	15’	D, red-orange fall color, seeds for birds
Garry Oak	Quercus garryana	D	S	90’	D, slow growth, acorns, drought tolerant
Pacific Willow	Salix lasiandra	M	S	10-25’	D, sandbars or floodplains, yellow twigs
Ponderosa Pine	Pinus ponderosa	D	S	180’	E, reddish bark on mature trees, wildlife cover
Quaking Aspen	Populus tremuloides	M	S	35’	D, sends out suckers, gold fall color, white trunk
SHRUBS					
Shrubs help to hold on to streambanks, filter water, and provide wildlife habitat.					
Big Sage	Artemisia tridentata	D	S	6-8’	E, very drought tolerant, highly scented
Bitterbrush	Purshia tridentata	D	S	3-6’	E, drought tolerant, small yellow flower
Douglas Spirea	Spirea douglasii	D	S/Sh	7’	D, pink-rose flowers
Elderberry, Blue	Sambucus cerulea	D/M	S	12’	D, blue berries, white flowers
Golden Currant	Ribes aureum	D/M	S	6-8’	D, yellow flowers, gold fall color
Hazelnut	Corylus cornuta	D	S	12’	D, catkins, nuts in tubular husk
Mockorange	Philadelphus lewisii	D/M	S	8’	D, fragrant white flowers
Oceanspray	Holidiscus discolor	D	S	10’	D, cream colored cascading flowers

Oregon Sunshine by: J. Hess

Lewis’ Blue Flax by: J. Hess

Serviceberry by: J. Hess

CHOOSING YOUR NATIVE PLANTS (CONTINUED):

COMMON NAME	SCIENTIFIC NAME	SOIL D=dry M=moist	LIGHT S=sun Sh=shade S/Sh=sun/shade	HEIGHT	NOTES E=evergreen D=deciduous
SHRUBS (CONT.)					
Oregon Grape, Creeping	Mahonia repens	D	S/Sh	3’	E, yellow flowers, blue berries
Oregon Grape, Tall	Mahonia aquifolium	D/M	S/Sh	8’	E, yellow flowers, blue berries
Red-flowering Currant	Ribes sanguineum	D/M	S	7’	D, small pink-red flowers in spring
Red-osier Dogwood	Cornus sericea	M	S/Sh	8-12’	D, red stems, seasonally wet soil, streambanks
Serviceberry	Amelanchier alnifolia	D	S	12’	D, white flowers, blue-black berries
Shrubby Cinquefoil	Potentilla fruticosa	D	S	4’	D, prolific yellow flowers in early summer
Smooth Sumac	Rhus glabra	D	S	8-12’	D, brilliant red fall color
Snowberry	Symphoricarpos albus	D	S/Sh	3-4’	D, white berries for quail, spreading by roots
Twinberry	Lonicera involucrata	D/m	S	8’	D, red twin berries, cream flowers,
Woods Rose (&Nootka)	Rosa woodsii (nutkana)	D/M	S	4-6’	D, drought tolerant, pink flower, spreading

GRASSES

Native grasses require no irrigation after establishment. Their deep roots stabilize riparian soils and streambanks.

Idaho Fescue	Festuca idahoensis	D	S	2’	D, fine leaves, dense bunchgrass clump
Pinegrass	Calamagrostis rubescens	D/M	S/Sh	18-30”	D, soft foliage with reddish stems

PERENNIALS/SUCCULENTS/GROUND COVERS/VINES

These plants help to filter snowmelt and rainwater as it runs toward the stream. They provide forage for wildlife, and are attractive, fragrant components of a native plant landscape.

Alumroot-Round Leaf	Heuchera cylindrica	D	S/Sh	2’	D, small white flowers on long stalks
Blanket Flower	Gallardia aristata	D	S	1-2’	D, yellow flowers, butterflies
Clematis Vine	Clematis ligusticifolia	M/D	S	vine	D, white flowers, interesting seed heads
Columbine	Aquilegia formosa	M/D	S/Sh	1-3’	D, red and yellow flowers, hummingbirds
Desert Eve. Primrose	Oenothera caespitosa	D	S	8”	D, white flowers, butterflies
Desert Yellow Daisy	Erigeron linearis	D	S	8”	D, covered in yellow flowers early summer
Dwarf Waterleaf	Hydrophyllum capitatum	M	Sh	6”	D, ball of purple-blue flowers
Honeysuckle Vine	Lonicera ciliosa	D/M	S/Sh	15’	D, vine, yellow fragrant flowers, hummingbirds
Kinnikinnick	Arctostaphylos uva-ursi	D	S/Sh	6”	E, ground cover, red berries, avoid foot traffic
Lewis’ Blue Flax	Linum lewisii lewisii	D	S	30”	D, profuse blue flowers on grass-like stems
Long-leaved Phlox	Phlox longifolia	D	S	12-18”	D, pink flower, rock gardens, dry sites
Lupine, Silky	Lupinus sericeus	D	S	1-2’	D, drought tolerant, purple flowers
Orange Globemallow	Sphaeralcea munroana	D	S	2’	D, peach-orange flower, dry soil
Oregon Sunshine	Eriophyllum lanatum	D	S	12”	D, profuse yellow flowers, do not overwater
Prairie Smoke	Geum trifolium	D	S/Sh	18”	D, pink bell shaped flowers, fern-like leaves
Shrubby Penstemon	Penstemon fruiticosus	D	S	12”	E, blue-lavender flowers, good drainage
Wild Strawberry	Fragaria virginiana	D	S/Sh	5”	E, white flowers, small sweet fruit, spreading
Wyeth Buckwheat	Eriogonum heracleoides	D	S	20”	D, cream flowers, ground cover, dry areas
Yarrow	Achilles millefolium	D	S	2’	D, white clustered flowers, spreading by seeds

Kinnikinnick by: J. Hess

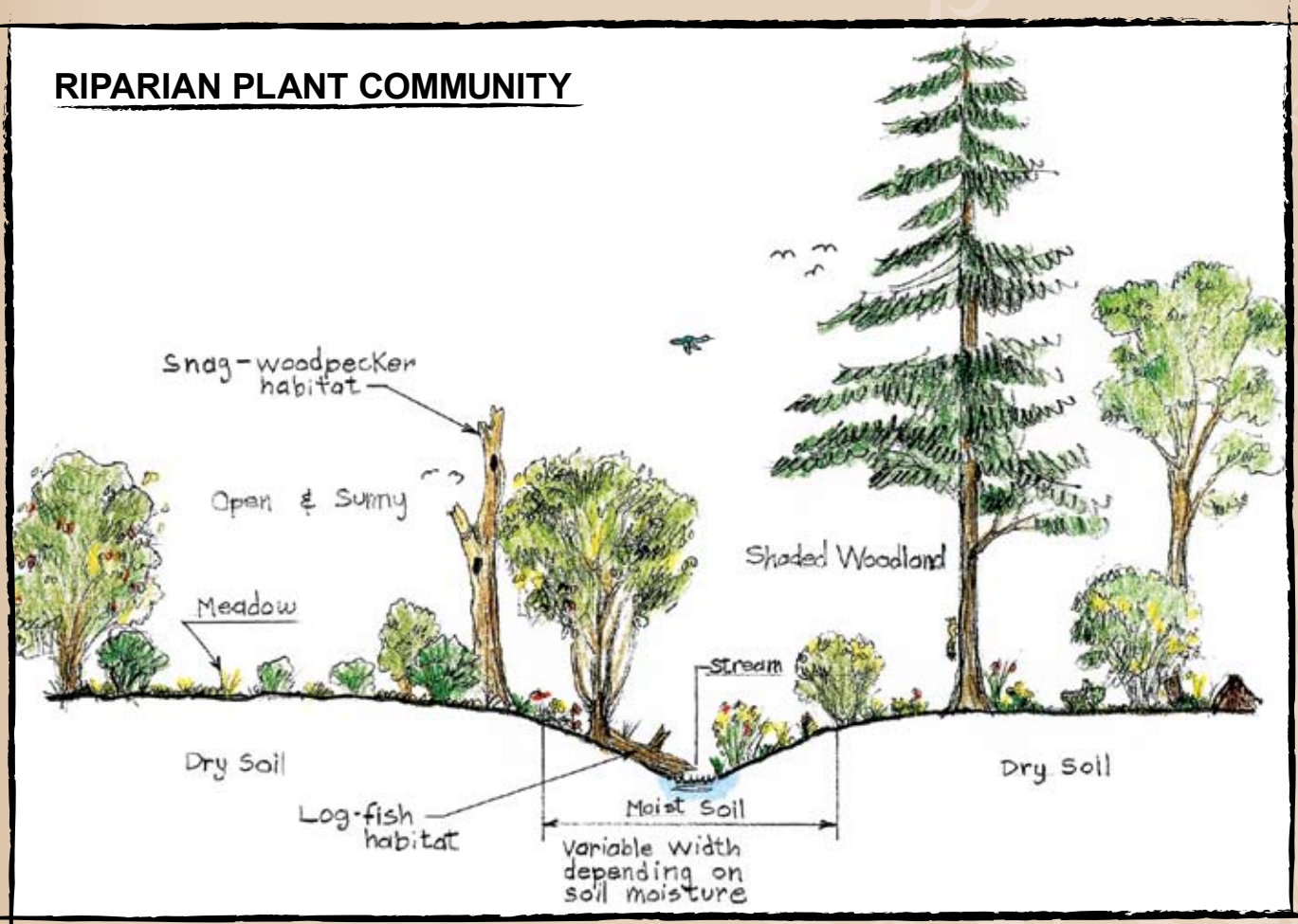
Honeysuckle Vine by: J. Hess

Red-osior Dogwood by: J. Hess

CARING FOR YOUR BUFFER

The best care is the least care when it comes to a stream buffer. Resist the urge to tidy up. A natural forest floor, with its "litter" of fallen leaves and twigs, helps the buffer break down pollutants and soak up water. Mulch with pine needles or bark chips on high visibility areas if you wish; fresh wood chips should be composted for six months before use.

Fish appreciate in-stream wood because it provides hiding places and creates resting pools. Only remove woody debris that could form dams and cause inundation. If a large tree threatens to fall from a steep bank, you can cut the tree 10 feet above the ground surface, and leave the root system in place. The "snag" that remains on the stream bank will provide a great home for wildlife.



Landscape architecture by: J. Hess

OTHER RESOURCES

Links to other resources can be found at www.midcolumbiarfeg.com. Funding to assist landowners with the installation of backyard buffers in the Yakima Basin may be available. Please contact Mid-Columbia Fisheries Enhancement Group at yakima@midcolumbiarfeg.com, or by phone at (509)281-1311, for information.

ACKNOWLEDGEMENTS

Much of the text of this brochure was adapted with permission from "Backyard Buffers", published by the Connecticut River Joint Commission in 1998. (www.crjc.org) The brochure and planting plans were funded by a grant from the Community Salmon Fund (www.nfwf.org). Jurgen Hess, LA, created the planting plan; Jurgen Hess and Karen Bicchieri, MS, jointly compiled the native plant list. This brochure is a joint project of the Mid-Columbia Fisheries Enhancement Group, the Kittitas County, North Yakima, and Benton Conservation Districts, and the Cascade Land Conservancy. It was designed by Tami Sawyer of TLS Design Studio.

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Photo by: Mid-Columbia Fisheries Enhancement Group

Riparian buffers are the strips of grass, shrubs, and trees along the banks of rivers and streams. A backyard riparian buffer enhances fish and wildlife habitat, and is a beautiful addition to any landscape.

Buffers:
- act as filters to trap pollutants that would otherwise wash into our streams.
- keep stream banks and streambeds stabilized, resulting in less flood damage.
- provide shade, keeping water cooler for salmon and trout.
- provide good homes and safe travel corridors for wildlife.

Many landowners are reluctant to install riparian buffers. Some are concerned that the buffer will block their view of the river, while others are worried that a riparian buffer will be difficult to maintain. This brochure includes a planting plan and native plant list that allow for easy access to the stream, good views, and minimal maintenance after the first few years.