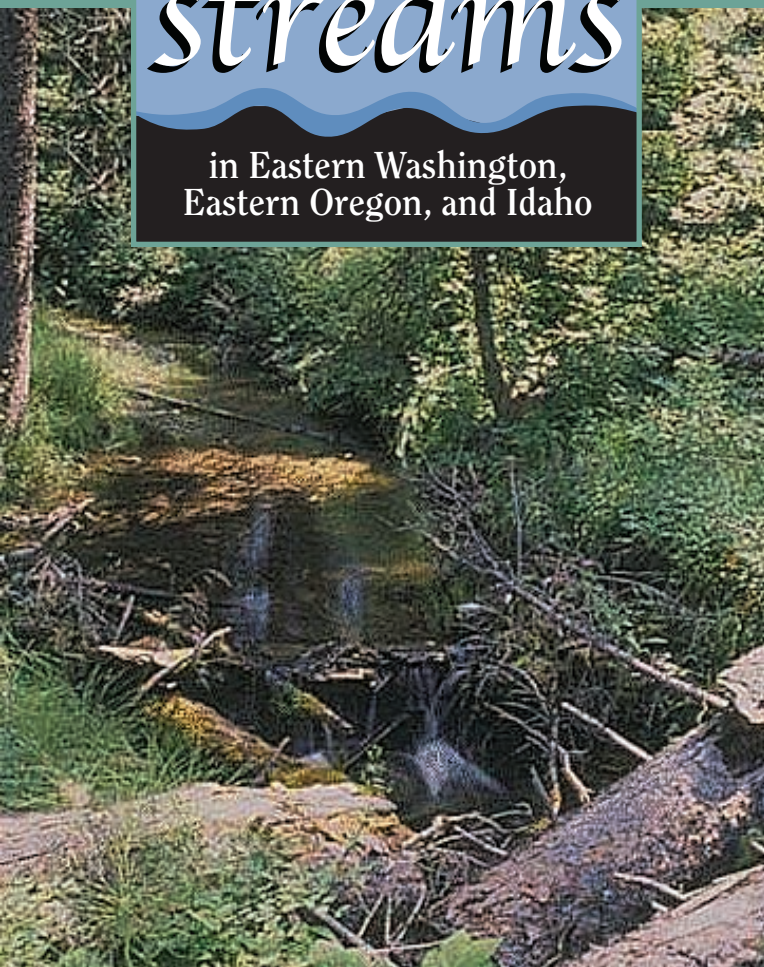




Taking Care of

streams

in Eastern Washington,
Eastern Oregon, and Idaho



A Homeowner's Guide to Riparian Areas

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Oregon State University • University of Idaho • Washington State University

As a homeowner in the Pacific Northwest, you have a unique opportunity to help maintain or improve the health of streams and riparian areas.

A riparian area is the area of land adjacent to a stream, lake, or wetland. Most healthy, natural riparian areas have moist, fertile soils that support many types of moisture-loving plants. These plants provide food and shelter to numerous fish and wildlife.

Healthy riparian areas:

- Reduce the chance of flooding
- Improve water quality
- Provide habitat for fish and wildlife

Why do riparian areas matter?

Plants in healthy riparian areas:

- Provide wood to streams, creating fish habitat and slowing the stream current after storms.
- Shade streams in summer. Cool water is healthier for many native fish species.
- Help prevent erosion by holding soil in place with their roots.
- Filter sediment out of muddy runoff, keeping it from smothering fish habitat.
- Allow rain to soak into the soil instead of running immediately into the stream. This reduces flooding and allows water to be released slowly to the stream during the dry season.
- Filter out pollutants, such as fertilizers, pesticides, and animal wastes.
- Provide important food sources, homes, shelter, and travel corridors for wildlife, fish, and other aquatic organisms.

The bottom line is:

- Less flooding during and immediately after storms
- More water in the stream during summer
- Cleaner water
- Homes and food for wildlife, including many species of fish, insects, amphibians, reptiles, birds, and mammals



It's all about plants

Healthy riparian areas include a variety of types and ages of plants, including trees, shrubs, grasses, and other groundcovers. Plants adapted to local rainfall, climate, insects, and soil conditions tend to be easier to care for because they need less water and pesticides.

Most native plants are well adapted to their region. In the drier regions of the inland Pacific Northwest, a few of the common native riparian plants are:

- Black cottonwood
- Bunchgrass
- Coyote and sandbar willows
- Golden currant
- Tufted hairgrass
- Lupine
- Ponderosa pine
- Quaking aspen
- Red-osier dogwood
- Snowberry
- Woods' rose

Streamside plants help stabilize streambanks, moderate stream temperatures, and provide habitat for fish and other wildlife.

Snowberry flowers



Snowberry fruit





Nutrients and pollutants associated with stormwater runoff can increase the amount of algae in streams. (Photo courtesy of the Center for Watershed Protection)

How do people change riparian areas?

Removing or damaging plants through construction and landscaping, especially in the riparian area, can harm streams. Plants, particularly trees and shrubs, catch rainfall and allow it to soak slowly into the ground instead of running quickly into streams. When water runoff from storms reaches streams too quickly, more erosion and flooding occur downstream. More rain-water, pesticides, fertilizers, and soil reach the stream in areas without riparian plants to slow and filter water.

When streams and riparian areas are not healthy, people feel the consequences.

- Recreational areas are lost or degraded.
- Fish and wildlife decline, reducing opportunities for hunting, fishing, and wildlife viewing.
- Increased flooding may cause erosion and property damage.
- The region may lose economic opportunities because people avoid unattractive and unhealthy areas.

**Be aware of ways
you can reduce the amount
of water flowing downhill
from your property.**

What Can You Do?

Take care of plants and the streamside

- Promote dense vegetation to reduce runoff and trap contaminants.
- Learn about native plants and use them where appropriate.
- Restore eroded streambanks with help from a professional.
- Leave wood and other natural materials in streams.
- Don't straighten channels or place rubble or rip-rap on streambanks.
- Use a small switchback trail to reduce erosion in steep areas.

Grow and maintain a stream-friendly garden and lawn

- Plant native plants—they can be easier to care for because they often are more tolerant of insects and low summer rainfall.
- Minimize the use of pesticides and synthetic fertilizers. Consider using natural, slow-release fertilizers.
- Locate compost piles on flat surfaces away from streams or drainage areas, and keep them covered during the wet winter months. Do not dispose of grass clippings near streams.
- Apply compost to gardens only during the growing season.

**Teach your children
what is healthy and unhealthy
for streams and riparian areas.
Make caring for the stream
a family project.**

Be careful when you build

- Leave as many native plants as possible near streams and everywhere!
- Plan new construction away from existing streams and wetlands instead of modifying them.
- Minimize paved areas. Keep the roof area, walkways, and driveways as small as possible, and direct runoff to landscaping or another filtering system where possible.
- Use gravel or bark instead of pavement for paths and driveways.
- Always observe local ordinances and get proper permits.
- Leave as wide a vegetation buffer as possible next to the stream.

There's more you can do around the house

- Don't pour soapy water, automobile oil, paint, household chemicals, or pesticides down storm drains. Drains often are connected directly to streams.
- Direct gutters away from streams, pavement, and septic drain fields, and into areas where water can seep slowly into the soil.
- Inspect your septic system annually, and pump the tank as necessary.
- Keep pet waste away from streams, riparian areas, and paved areas. Put pet waste in a bag and place it in the trash.
- Use less toxic or nontoxic household cleaners.





Install a bark path instead of pavement.



Quaking aspen



Don't dump waste. Drains often connect to streams or groundwater.



Red-osier dogwood



Lupine

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For more information

EPA literature review on low-impact development techniques

<http://www.epa.gov/owow/nps/lidlit.html>

Landscaping with Native Plants in the Inland Northwest

(T. Fitzgerald, revised 2001, Washington State University Cooperative Extension, MISC 0267)

<http://pubs.wsu.edu>

Life on the Edge: Improving Riparian Function

(D. Godwin, 2000, Oregon State University Extension Service, EM 8738)

<http://eesc.oregonstate.edu/agcomwebfile/edmat/EM8738.pdf>

Stream Corridor Restoration—Principles, Processes, and Practices

(The Federal Interagency Stream Restoration Working Group, 1998, revised August 2000)

http://www.usda.gov/stream_restoration

EPA Region 10

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<http://www.epa.gov/r10earth/>

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Oregon State University Extension Service

Contact your local office or call:

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<http://oregonstate.edu/extension/>

Idaho

University of Idaho Cooperative Extension

Contact your local office or call:

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<http://www.uidaho.edu/wq/wqhome.html>

Washington

WSU Cooperative Extension

Contact your local office or call:

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<http://wawater.wsu.edu>

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