



Taking Care of

streams

in Washington, Oregon,
Idaho, and Alaska

A Recreationist's Guide to Riparian Areas

PNW 561 • October 2002 • A Pacific Northwest Extension publication

Oregon State University • University of Idaho • Washington State University
in cooperation with the University of Alaska

As a recreationist, you have a unique opportunity to help maintain or improve the health of streams and riparian areas. A riparian area is the land adjacent to a stream, lake, or wetland. Healthy riparian areas often have moist, fertile soils that support many types of plants. These plants provide food and shelter to numerous fish and wildlife.

The Pacific Northwest's growing population adds to the numbers of people accessing our waterways. Recreational uses include fishing, kayaking, bird watching, camping, biking, hunting, jet skiing, and more. Although designated access points are provided throughout the Northwest, many people access the water from public or private properties that lack proper access facilities. In these places, proper care of the riparian area will ensure a more pleasant experience for all users, as well as better conditions for fish and wildlife.

Healthy riparian areas:

- Reduce the chance of damaging floods
- Improve water quality
- Store and release water, moderating stream flow
- 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 roots.
- Filter sediment out of muddy runoff, keeping sediment from smothering fish habitat.
- Allow rain to soak into the soil instead of running directly into the stream. This allows water to be released slowly to the stream during the dry season.
- Filter out pollutants, such as fertilizers, pesticides, sediment, and animal wastes.
- Provide food sources, homes, shelter, and travel corridors for wildlife, fish, and other aquatic organisms.

The bottom line is:

- A more appealing natural setting
- Cleaner water
- More water in the stream during summer
- Homes and food for fish and wildlife



It's all about plants

Healthy riparian areas include a variety of types and ages of plants, including trees, shrubs, grasses, and groundcovers.

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

- Alder
- Black cottonwood
- Devils club
- Douglas-fir
- Elderberry
- Oceanspray
- Oregon ash
- Pacific ninebark
- Red-osier dogwood
- Salmonberry
- Sitka spruce
- Snowberry
- Swamp rose
- Western hemlock
- Western redcedar
- Willow

Enjoy and respect
our streams.

Snowberry



Lupine



Oceanspray





Fishermen. (Photo courtesy of USDA NRCS)

How do people change riparian areas?

When we recreate in and along riparian areas, we may damage the plants that are vital to the area. Riparian plants can be damaged and eliminated through trampling, soil compaction, and other recreational practices. Nonnative noxious weeds, which compete with native plants, can be spread via the soles of boots, tire treads, and boat propellers and trailers.

Plants, particularly trees and shrubs, catch rainfall and allow it to soak slowly into the ground instead of running quickly into streams. When riparian plants are absent or sparse, runoff from storms reaches streams too fast, causing erosion as well as downstream flooding. In areas without riparian plants to slow and filter water, pesticides, animal waste, fertilizers, and sediment can reach the stream more easily.

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

- We lose recreational areas.
- 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.

What Can You Do?

Campers

- Set your camp away from the water's edge to prevent trampling of riparian vegetation and to protect yourself from varying stream flows.
- Avoid creating numerous trails through riparian areas.
- Use biodegradable detergents for washing, and wash away from streams and lakes.
- Reduce garbage by minimizing the amount of disposable items and prepackaged foods you use. Pack out and properly dispose of all garbage.
- Bring in your own firewood. Forest woody debris are an important part of the ecosystem, building soils when they decay, holding soil during floods, and providing habitat for wildlife, fish, and insects.
- Discourage dogs and people from walking in rivers or streams to protect salmon eggs and fry that may be hiding in bottom gravels.
- Bury human and dog fecal matter at least 6 inches deep and well away from riparian areas. Better yet, use a bucket for later disposal in a campground toilet.

Hikers and bikers

- Stay out of streams as much as possible and use designated stream crossings to prevent bank and stream degradation.
- Stay on designated trails to prevent off-trail damage to natural vegetation.
- Avoid hiking in restricted salmon areas to prevent stress to spawning fish.
- Check shoe soles and tire treads for weed seeds before and after using trails.
- Be aware of and respect private property boundaries.

Pets and pack animals

- Keep all animals out of streams.
- Tether riding animals away from streams, wetlands, and lakes to prevent fecal matter from entering the water and to protect riparian plants from damage.
- Minimize the number of stock you use by packing less.

Fishers and floaters

- Use officially established access points.
- Avoid driving to the water's edge, as this damages plants and habitat.
- Be careful not to damage habitat or litter.
- If you catch a hook in a tree, remove it and properly dispose of any tangled line.
- Do not release leftover live bait into streams.

Motorized craft users

- Maintain your boat in proper working condition.
- Do repairs and painting in dry dock, using tarps to contain spilled pollutants.
- Be sure your equipment is not leaking fuel or oils.
- Add fuel in a parking lot to minimize the chance of spills. Clean up any spills that do occur.
- Fill fuel tanks only 90 percent full; gas expands when warm.
- Check propellers and jets for exotic plant or animal species before launching boats and immediately after removing them from the water.
- Empty bilge and bait buckets away from the waterway to prevent introduction of nonnative species.
- Empty sewage only in approved dumping stations to prevent pollution of waterways.
- Identify and avoid nesting and spawning habitats before using watercraft in nearshore areas.
- Watch your wake to prevent shoreline erosion.

All campground and waterway users

- Pack out all cans, bottles, and garbage to protect humans and wildlife. Trash endangers wildlife and jeopardizes water quality and safety.
- Dispose of coolers or bait containers properly to prevent breakdown and distribution of Styrofoam beads.
- Keep pet wastes away from streams, riparian areas, and paved areas.



Horseback riding.



Bicyclists.



Off-road fun.



A summer float.



Whitewater kayakers.

Taking Care of Streams in Washington, Oregon, Idaho, and Alaska

A Recreationist's Guide to Riparian Areas

For more information

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>

Principles of Leave No Trace (Leave No Trace, Inc.). <http://www.LNT.org/>

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

Seattle, WA
206-553-1200
800-424-4372 (toll free in AK, ID, OR, WA)
<http://www.epa.gov/r10earth/>

Cooperative Extension Service

Alaska—907-786-6300
<http://www.uaf.edu/coop-ext/>
Idaho—208-885-6639
<http://www.uidaho.edu/ag/extension/>
Oregon—541-737-4021
<http://oregonstate.edu/extension/>
Washington—509-335-2885
<http://wawater.wsu.edu>

State Fish and Wildlife offices

Alaska—907-465-4100
<http://www.state.ak.us/adfg/adfghome.htm>
Idaho—208-334-3700
<http://www2.state.id.us/fishgame/fishgame.html>

Oregon—503-872-5268
<http://www.dfw.state.or.us/>

Washington—360-902-2200
<http://www.wa.gov/wdfw/>

U.S. Forest Service

<http://www.fs.fed.us>

Bureau of Land Management

<http://www.blm.gov/nhp/>

Funded in part by USEPA Region 10 and the USDA Cooperative State Research, Education, and Extension System. Regional Water Quality Coordination Team: Marilyn Freeman, EPA liaison; Robert L. Mahler, University of Idaho; J. Ronald Miner, Oregon State University; Robert Simmons, Washington State University; Fred Sorensen, University of Alaska; and Sylvia Kantor, Washington State University (editor). Cover photo (bottom) courtesy of USDA NRCS. Canoe photo courtesy of John H. McShane.

© 2002 Oregon State University. This publication may be photocopied or reprinted in its entirety for noncommercial purposes. Published and distributed in furtherance of the Acts of Congress of May 8 and June 30, 1914, by the Pacific Northwest Extension publishing cooperative (Oregon State University Extension Service, Washington State University Cooperative Extension, and the University of Idaho Cooperative Extension System) in cooperation with the University of Alaska. The four participating Extension Services offer educational programs, activities, and materials—*without regard to race, color, religion, sex, sexual orientation, national origin, age, marital status, disability, and disabled veteran or Vietnam-era veteran status*—as required by Title VI of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, and Section 504 of the Rehabilitation Act of 1973. The Oregon State University Extension Service, Washington State University Cooperative Extension, University of Idaho Cooperative Extension System, and Alaska Cooperative Extension are Equal Opportunity Employers.

Published October 2002.



Recycled
Paper