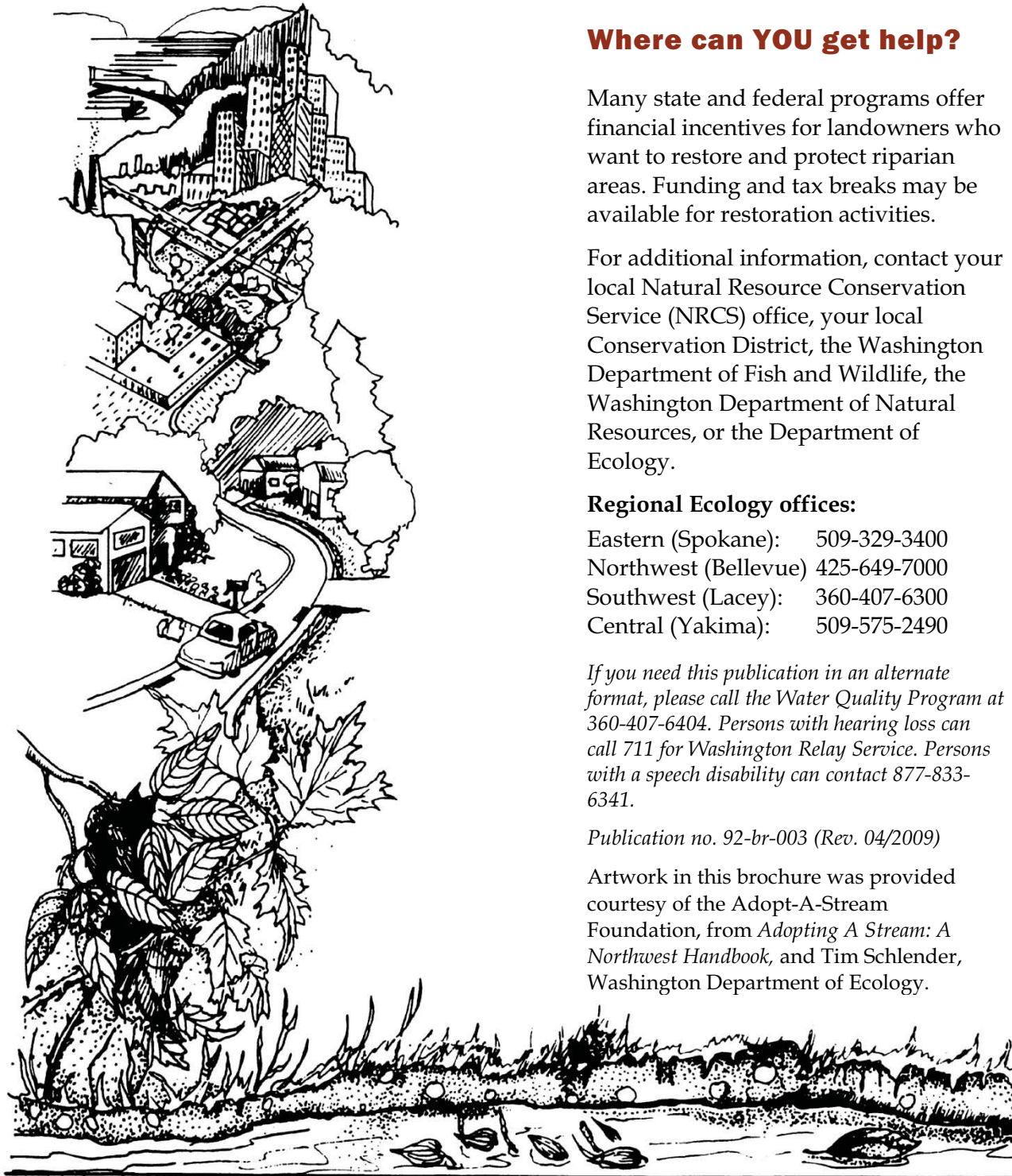


How can you help?

Whether you live in a city, on a farm, or in a forest—especially if you live near the water—it is in everyone's interest to keep our riparian areas as natural as possible. When we neglect them or let them get cleared, paved, or split up, water quality and fish habitat suffer. Increased flooding and erosion may cause severe property damage.

One way to help is to create buffers of native vegetation along streams, lakes, and wetlands. On farms, this can mean fencing to limit access by livestock and diverting water to a stock tank.

Sometimes more sophisticated restoration methods are necessary. These include bank stabilization, in-stream structure, and meander construction. Permits are required for many activities in and around streams, lakes, and wetlands. Before you start a project like this, consult an expert and the Office of Regulatory Assistance at 1-800-917-0043 or visit their website at www.ora.wa.gov



Where can YOU get help?

Many state and federal programs offer financial incentives for landowners who want to restore and protect riparian areas. Funding and tax breaks may be available for restoration activities.

For additional information, contact your local Natural Resource Conservation Service (NRCS) office, your local Conservation District, the Washington Department of Fish and Wildlife, the Washington Department of Natural Resources, or the Department of Ecology.

Regional Ecology offices:

Eastern (Spokane): 509-329-3400
Northwest (Bellevue) 425-649-7000
Southwest (Lacey): 360-407-6300
Central (Yakima): 509-575-2490

If you need this publication in an alternate format, please call the Water Quality Program at 360-407-6404. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can contact 877-833-6341.

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Artwork in this brochure was provided courtesy of the Adopt-A-Stream Foundation, from *Adopting A Stream: A Northwest Handbook*, and Tim Schlender, Washington Department of Ecology.

What are Riparian areas?



They're the transition zones between land and water environments.

Riparian areas have unique plant and soil characteristics, often much different from the land and water environments they connect

Why are riparian areas important?

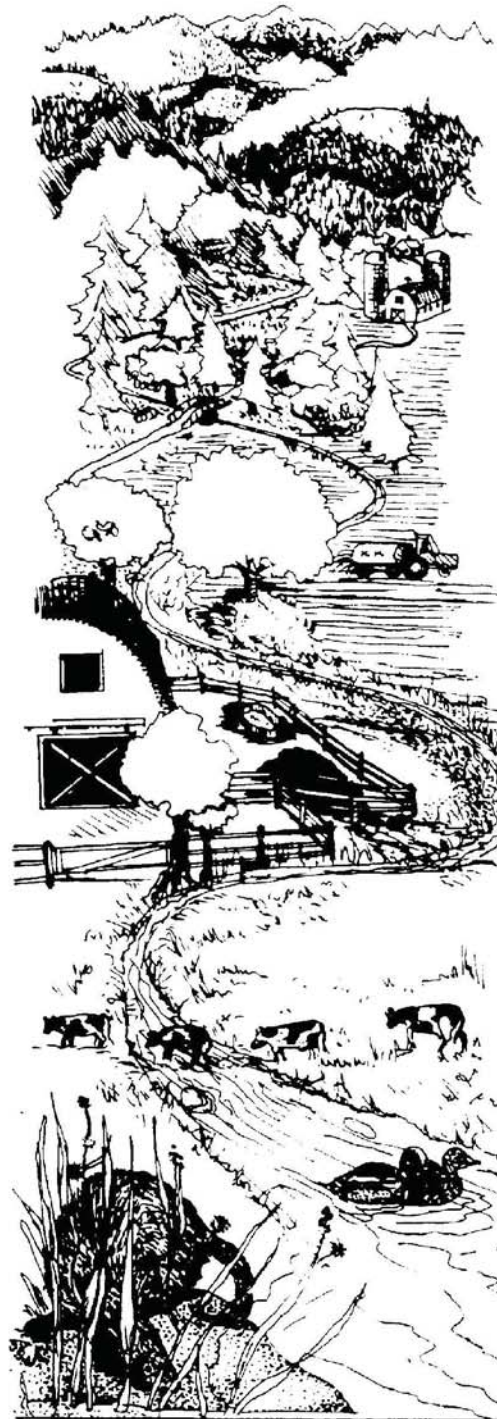
Undisturbed riparian zones teem with wildlife and dense vegetation – grasses, shrubs, and larger trees like willows, cottonwoods, and conifers. They protect the adjacent water body and perform many vital functions.

They stabilize shorelines – Shrubs and trees hold the soil along streams and lakes, preventing banks from collapsing and eroding during periods of high water.

They reduce downstream flooding – Trees and shrubs absorb runoff, letting water soak into the soil, recharging groundwater reserves and replenishing the streamflow or lake level later in the year.

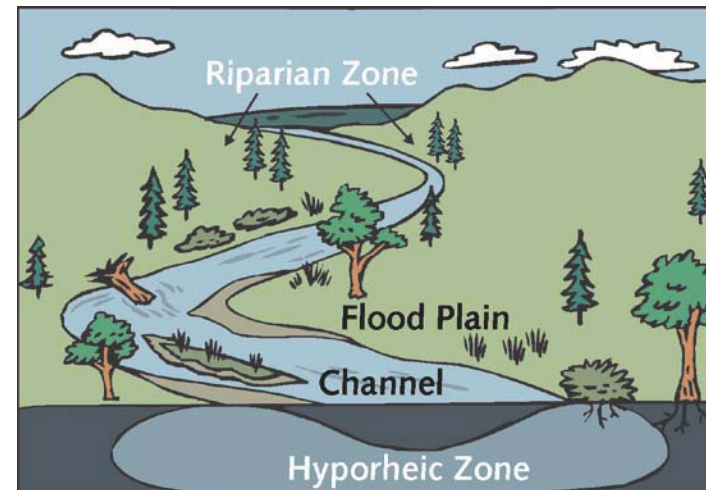
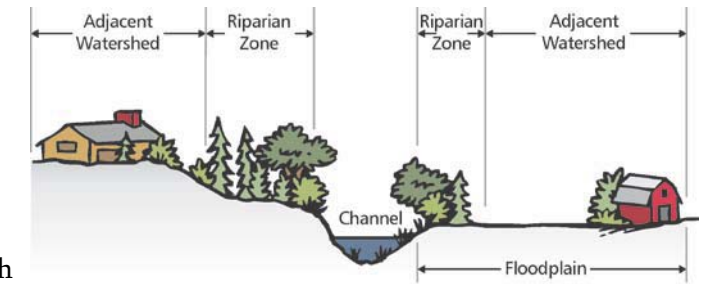
They improve water quality – Plants filter out sediment, excess nutrients, pesticides, pathogens, and other pollutants before they enter the water. Vegetation shades and cools streams and small lakes during warm weather.

They enhance wildlife habitat – Trees and shrubs provide habitat and food for fish and aquatic creatures and travel corridors for many species of wildlife.



What makes a healthy stream?

- ❖ Deep-rooted native plants along the banks, including large bushes and trees, with no exposed soil in the riparian area.
- ❖ A stream channel that meanders from side to side, with overflow channels and a healthy floodplain.
- ❖ Channels with a balance of flow, sediment, and large limbs and root wads that have fallen in the water from the riparian zone.
- ❖ Large trees near the stream can help stabilize banks and provide food for water creatures. Wood that drops into the stream creates shade, hiding places, and nurseries for fish and other aquatic life.



Many water bodies leak both sideways and down, into underground sand and gravel deposits called the *hyporheic zone*. Here water flows more slowly. Biological and chemical activity takes place in hyporheic zones. These zones host diverse invertebrate communities and provide another important connection in the transition between land and water environments.