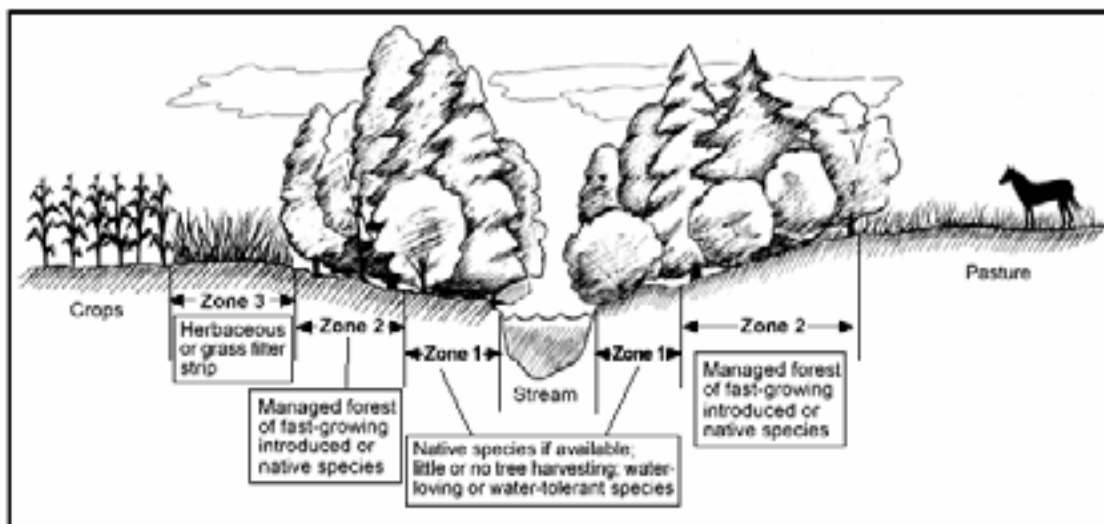


## Establishing a Riparian Forest Buffer

### Definition

A riparian forest buffer is an area of trees and shrubs located adjacent to streams, lakes, ponds and wetlands.



A riparian forest buffer includes zone 1, the area closest to the waterbody or course, and zone 2, the area adjacent to and up gradient of zone 1. Trees and shrubs in zone 1 provide important wildlife habitat, litter fall for aquatic organisms, and shading to lower water temperature. This zone helps stabilize streambanks and shorelines. Trees and shrubs in zone 2 (along with zone 1) intercept sediment, nutrients, pesticides, and other pollutants in surface and subsurface water flows. Zone 2 can be managed to provide timber, wood fiber, and horticultural products. A third zone, zone 3, is established if periodic and excessive water flows, erosion, and sediment from upslope fields or tracts are anticipated. Zone 3 is generally of herbaceous plants or grass and a diversion or terrace, if needed. This zone provides a "first defense" to assure proper functioning of zones 1 and 2.

### Purpose

Riparian forest buffers of sufficient width (USDA-NRCS recommends 35-180 feet);

- ❖ Intercept sediment, nutrients, pesticides and other materials in surface runoff
- ❖ Reduce nutrients and other pollutants in shallow subsurface water flow
- ❖ Provide woody vegetation for food wildlife forage and cover
- ❖ Helps lower water temperatures by shading the water
- ❖ Slows out-of-bank flood flows
- ❖ Vegetation closest to the stream or waterbody provides litter fall and large woody debris important to aquatic organisms
- ❖ Woody roots increases streambank resistance to erosion caused by high water flows
- ❖ Some species established or managed in a riparian forest buffer can be managed to provide timber, wood fiber and horticultural products

### Where Used

Buffers are located by permanent or intermittent streams, lakes, ponds, wetlands and seeps. Many of these areas have year-round or seasonal beneficial moisture, which allows woody species to establish quickly. New plantings can be successful on land that was formerly cropped or on pastureland as long as grazing livestock are fenced out.

### Assistance Programs Available

#### ❖ Continuous Conservation Reserve Program (CCRP)

Through continuous sign up CCRP, you can receive annual rental payments and cost-share assistance to establish long-term, resource conserving covers such as riparian buffers on eligible crop and pastureland. CCRP encourages landowners to convert highly erodible land, such as streambanks, to vegetative cover namely trees and shrubs for a riparian buffer.

Annual rental payments are based on soil types. CCRP also provides cost-share assistance for up to 50 percent of the participant's expenses in establishing approved conservation practices.

### ❖ **Conservation Reserve Enhancement Program (CREP)**

In Oregon, CREP was designed to improve the water quality of streams providing habitat fish listed under the Federal Endangered Species Act. Many of the streams and rivers in Yamhill County are eligible for CREP, so be sure to ask about your particular situation.

CREP contracts are 10-15 years in length. Like CCRP, annual rental payments are based on soil types, but CREP provides cost-share assistance for up to 75 percent of the participant's costs in establishing approved conservation practices. Fifty percent of funding comes from FSA and 25 percent comes from the Oregon Watershed Enhancement Board. Currently, there are also incentive payments that can be added to the 75 percent base rate. Legislation is in the works to eliminate the fish requirement of this program and make all streams eligible for this program. Completion is expected late 2004.

*Note: If you are interested in participating in a cost share program do not begin installation until you have contacted either Yamhill SWCD or Yamhill FSA.*

### **Basic Steps for Buffer Installation**

- ❖ **Site Preparation**- remove any noxious weeds that are present. Sub-soiling may be required in areas that are highly compacted. Install fence if livestock are present.
- ❖ **Planting**- plant trees and shrubs which are appropriate for the site. Consider both moisture and sunlight requirements of species. Generally, hardwoods do better in wetter sites than conifers. Try to replicate what was there historically. Tree seedlings should be well established before shrubs are installed so as to avoid additional moisture competition. Install protective tubes around trees at time of planting if beaver damage or deer/elk browse will be an issue. Rodent barriers may also be required to prevent girdling of young seedlings.
- ❖ **Maintenance**- control of weeds and grass are essential for seedling survival. Grass is an aggressive competitor for moisture and offers excellent habitat for mice, voles and rabbits. A thick layer of bark may prevent weed/grass encroachment. Otherwise hoeing or herbicide application will be required to maintain a 3-ft. radius "clear" area around seedlings. During dry summers, seedlings may need to be watered. Protective tubes (to prevent animal damage) must be monitored and adjusted to tree growth.