



DEPARTMENT OF
ECOLOGY
State of Washington

Funding Guidelines

State Fiscal Year 2016

Water Quality Financial Assistance

Centennial Clean Water Program

Clean Water Act Section 319 Program

Stormwater Financial Assistance Program

*Washington State Water Pollution Control
Revolving Fund Program*

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Appendix G: Riparian Restoration and Planting

The following are requirements when implementing a riparian restoration or riparian planting project.

Environmental Protection Agency and National Marine Fisheries Service buffer requirements

Ecology has increased the minimum requirements for riparian buffers to protect and restore salmon fisheries and achieve water quality standards. These requirements apply to funding for projects that address nonpoint pollution problems, including Section 319 grants, Centennial Clean Water Fund grants or loans, and the Water Pollution Control State Revolving Fund loans.

In response to tribal concerns, the U.S. Environmental Protection Agency (EPA) and the National Oceanographic and Atmospheric Administration (NOAA) notified the Department of Ecology that it must take additional actions to protect salmon and salmon habitat. The EPA is requiring Washington State to include conditions on federal pass-through grants to be consistent with National Marine Fisheries Service (NMFS) buffer guidance to help protect and recover Washington's salmon runs.

Ecology is attaching the special conditions to grant funds to increase levels of riparian protection to both protect and restore salmon fisheries and help achieve water quality standards.

Conditions of the funding agreement

All restoration activities must also be consistent with the Stream Habitat Restoration Guidelines, available at <http://wdfw.wa.gov/publications/01374/wdfw01374.pdf> and the requirements below.

EPA and NMFS riparian buffers

The minimum buffer size for surface waters (on each side) will be consistent with Table G-1 and additional guidance provided below. Table G-1 was developed from information provided by NMFS. Buffer widths must be measured starting from the ordinary high water mark.

Table G-1: Minimum Buffer Requirements for Surface Waters

Category	Functions	Minimum Buffer Width West of Cascades	Minimum Buffer Width East of Cascades
A. Constructed Ditches, Intermittent Streams and Ephemeral Streams that are not identified as being accessed and were historically not accessed by anadromous or Endangered Species Act (ESA) listed fish species	Water quality, shade, source control and delivery reduction.	35' minimum	35' minimum
B. Perennial waters that are not identified as being accessed and were historically not accessed by anadromous or ESA listed fish species	Water quality, shade, source control and delivery reduction.	50' minimum	50' minimum
C. Perennial, intermittent and ephemeral waters that are identified as being accessed or were historically accessed by anadromous or ESA listed fish species	Water quality, large wood debris (LWD) for cover, complexity and shade and microclimate cooling, source control and delivery reduction.	100' minimum	75' minimum
D. Intertidal and estuarine streams and channels that are identified as being accessed or were historically accessed by anadromous or ESA listed fish species	Water quality, habitat complexity	35'-75' minimum, or more as necessary to meet water quality standards	N/A

Additional guidance

- To determine which buffer category applies to a water body, EPA and Ecology developed a mapping tool available at <http://waecy.maps.arcgis.com/explorer/?open=d5478a4aaf704d81bac63ffc934e1549&extent=-13922905.3138354,5784350.44593158,-13140190.1441951,6268043.96092021>.
 - If surface water is present on a property but not shown on the map, a 35 foot minimum buffer width will apply.
 - If a water body is identified as “Category B” in the above table, the grant recipient must contact the regional Washington Department of Fish and Wildlife (WDFW) or tribal fish biologist to confirm that the water body is not currently or historically used by anadromous or listed fish. If the fish biologist informs the recipient of fish presence, then the buffer width must meet “Category C” requirements.
 - If a water body is impeded by a man-made structure (e.g. culvert, dam, etc.) which prevents anadromous or ESA listed fish access, then the buffer width must meet “Category C” requirements.

- WDFW Fish Biologist Contact Information:
http://wdfw.wa.gov/conservation/fisheries/fish_district_bios.pdf
- WA State Tribes and Tribal Reservations Map (with links):
www.ecy.wa.gov/services/gis/maps/state/tribal_res.pdf
- The buffer table above establishes minimum requirements for funding eligibility purposes. Projects that include buffers that are larger than the minimums are preferred, especially when stated in a TMDL or other watershed improvement plan. To maintain fully functional riparian ecosystems and provide sufficient habitat to meet the needs of fish and wildlife, it is recommended that the recipient use Washington Department of Fish and Wildlife buffer widths table whenever those recommendations are larger.
- As stated in the *Stream Habitat Restoration Guidelines*, if the 100-year floodplain exceeds these widths, the riparian buffer width should extend to the outer edge of the 100-year floodplain.
- Recipients are required to plant the buffer established by the fencing setback with native trees and shrubs to provide a higher level of water quality improvement. Grass filters strips are not sufficient to satisfy this requirement.
- When buffers are established in forested areas, the buffer width must also be consistent with Forest Practices Rules.
- Buffers established as part of a Water Quality Program grant may not violate county Critical Area Ordinances, county Shoreline Rules, or other state and local regulations.
- Ecology may allow a conditional exemption from the minimum buffer width requirements where the presence of a structure impedes the ability to meet the conditions. The recipient must submit an adequate justification as to why these cannot be met and an alternate written plan to Ecology's Project Manager for review and written approval.

Riparian plantings

- The recipient must develop site-specific plans for all riparian buffers prior to implementation which include plant locations and species. The plan must be based on an assessment of native plant associations and community types.
- The recipient must only plant species that are riparian in nature and indigenous to the primary watershed where the buffer is being established.
- The recipient must use, to the greatest extent possible, genetically appropriate plant materials collected from the primary or secondary watershed where the buffer is to be established.
- The recipient must utilize, to the greatest extent possible, plant species that are early successional within the primary watershed. Early successional species are those whose characteristics are such that they are first to colonize after a disturbance.

Streambank protection

- Streambank protection projects must not stand alone, but be part of a larger riparian buffer project. The project must include the buffer and planting requirements listed above.
- Rock should not be used to armor a bank against the erosive forces of a stream or river unless a bridge, road, or other manmade structure cannot be protected by any other means. In any

situation where rock is to be used, the recipient must submit the design to Ecology's Project Manager for an evaluation.

- Streambank protection designs must be consistent with the Aquatic Habitat Guidelines: Integrated Streambank Protection Guidelines document which can be found at <http://wdfw.wa.gov/publications/00046/>.

Relevant definitions

Anadromous fish

Fish that live their adult lives in the ocean but move into freshwater streams to reproduce or spawn (e.g., salmon); see: www.nmfs.noaa.gov/pr/glossary.htm#anadromous.

Constructed ditch

A regularly maintained man-made trench or furrow dug in the ground for the primary purpose of conveying or draining surface water, storm water or irrigation water, that may or may not, contain water at all times of the year.

Ephemeral stream

A stream or portion of a stream which flows briefly in direct response to precipitation in the immediate vicinity, and whose channel is at all times above the groundwater reservoir.

ESA listed fish species

The [Endangered Species Act of 1973 \(ESA\)](#) was signed on December 28, 1973, and provides for the conservation of [species that are endangered or threatened](#) throughout all or a significant portion of their range, and the conservation of the ecosystems on which they depend. The ESA replaced the Endangered Species Conservation Act of 1969; it has been amended several times. A "[species](#)" is considered: 1) endangered if it is in danger of extinction throughout all or a significant portion of its range, and 2) threatened if it is likely to become an endangered species within the foreseeable future. There are [approximately 2,100 total species](#) listed under the ESA. Of these species, approximately 1,480 are found in part or entirely in the U.S. and its waters; the remainder are foreign species. NOAA's National Marine Fisheries Service (NMFS) and the [U.S. Fish and Wildlife Service \(USFWS\)](#) share responsibility for implementing the ESA. Generally, USFWS manages land and freshwater species, while NMFS manages marine and "[anadromous](#)" species. NMFS has jurisdiction over [94 listed species](#). <http://www.nmfs.noaa.gov/pr/laws/esa/>

Exclusion fencing

A constructed barrier to livestock, wildlife or people for 1) dividing pasture for rotational grazing; 2) fencing livestock out of a riparian area; and 3) facilitating the application of conservation practices that treat the soil, water, air, plant, animal, and human resource concerns.

Floodplain

Any lowland that borders a stream and is inundated periodically by the stream's waters.

Intermittent stream

A stream where portions flow continuously only at certain times of the year, for example when it receives water from a spring, ground-water source or from a surface source, such as melting snow (i.e. seasonal). At low flow there may be dry segments alternating with flowing segments. These streams are also defined as no measurable flow during thirty (30) consecutive days in a normal water year.

Ordinary high water mark (O)HWM

The point on the sides of streams or lakes which is historically or normally at water's edge, as identified by a visible change in vegetation and/or soil. It is also generally, the lowest point at which perennial vegetation grows on the streambank. The ordinary high water mark can usually be identified by physical scarring along the bank or shore, or by other distinctive signs.

Perennial stream

A stream or portion of a stream that flows year-round, is considered a permanent stream, and for which base flow is maintained by ground-water discharge to the streambed due to the ground-water elevation adjacent to the stream typically being higher than the elevation of the streambed.

Riparian buffers

Riparian buffers are generally recognized as a "separation zone" between a water body and a land use activity for the purposes of protecting ecological processes and water quality. The riparian buffer usually extends from the stream's ordinary high water line to the outer edge of the floodplain. Riparian buffers provide essential functions for river and stream ecosystems, including cover and shade, a source of fine or coarse woody material, nutrients, and organic and inorganic debris that maintain stream ecosystem function. As used here, riparian buffers are defined as separation zones that are relatively undisturbed by humans and contain native vegetation consistent with the potential of the site.

Figure G-1 provides a diagram depicting a typical stream showing the active floodplain, the ordinary high water mark (OHWM), the riparian zone, and the top of the bank.

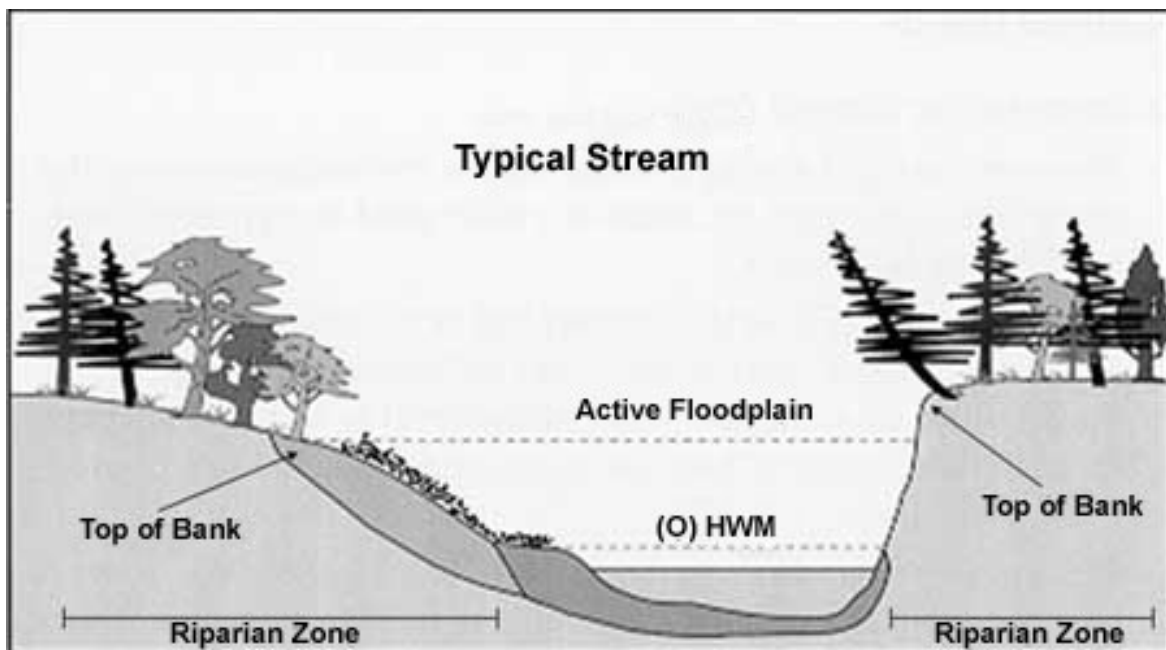


Figure G-1: Diagram of a Typical Stream.

Figure is a reproduction of a figure obtained from Fisheries and Oceans Canada at <http://www.pac.dfo-mpo.gc.ca/habitat/Glossary-glossaire-eng.htm>.