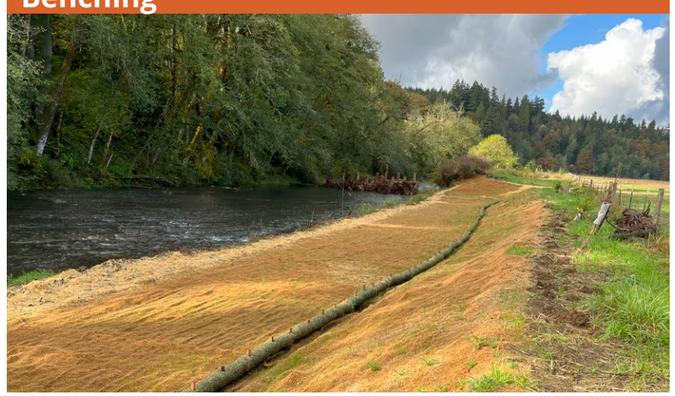
Common bioengineering solutions

Erosion control blanket with wood toe

Live staking

Benching



Office of Chehalis Basin

The Office of Chehalis Basin is overseen and funded by the Chehalis Basin Board and administered by the Department of Ecology's Office of Chehalis Basin. The Strategy is designed to reduce flood-related damage and restore aquatic habitat in the Chehalis River Basin in southwest Washington.

Contacts:

Grays Harbor Conservation District: 360-346-7829

Lewis Conservation District: 360-996-4560

Thurston Conservation District: 360-754-3588

Mason Conservation District: 360-427-9436

Washington Department of Fish and Wildlife Habitat Biologists: Find the habitat biologist for your location here: https://wdfw.wa.gov/licenses/environmental/hpa/application

Ecology's Office of Chehalis Basin: https://ecology.wa.gov/about-us/who-we-are/our-programs/office-of-chehalis-basin

https://officeofchehalisbasin.com

Erosion Management Guidebook

Erosion and sediment deposition are natural processes keeping streams and rivers in the Chehalis River basin healthy. However, vegetation removal, building activities, and excessive irrigation can worsen problems associated with streambank erosion.

Some approaches, like stabilizing the shoreline with large rocks and boulders, can be expensive and create erosion problems at other locations and properties downstream. However, soft or "bioengineered" solutions using natural materials like soil, wood, and native vegetation can be cheaper and easier to maintain. They also can help build habitat for salmon and other aquatic species.

Ecology's Office of Chehalis Basin developed the Erosion Management Guidebook outlining bioengineered solutions to manage streambank erosion in the basin.

To download the new guidebook, scan this QR code.

https://apps.ecology.wa.gov/publications/SummaryPages/2413001.html

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Native vegetation help reduce erosion, protect streambanks

- **Vegetation** slows the speed of flowing water along a streambanks while **root systems hold soil particles together,** increasing bank stability.
- **Vegetation** also helps slow down floodwaters, promoting deposition of important sediments.
- Although erosion can still occur after vegetation is established, bioengineered solutions often involve other erosion-control approaches like placing wood or engineered logjams in and along a stream.

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Frequently asked questions

Q: What are examples of bioengineered techniques to control erosion?

A: Soft, bioengineered approaches use natural materials such as wood, soil, and native vegetation to slow streambank erosion. Examples include planting native vegetation and live tree stakes along a streambank, installing erosion-control blankets, anchoring wood in and along a stream including engineered log jams, and creating benched banks (see page 4). Since work in a stream usually requires permits, please contact your local conservation district or a professional before starting.

Q: *Can rocks be used to stabilize an eroding streambank?*

A: While placing rocks or boulders along the shore can help reduce erosion, it can can also have unintended consequences. This hard approach refocuses water energy and often moves erosion problems to other locations and properties. Bioengineering can be less expensive than installing rock (depending on technique used) and provides longer lasting benefits to streams.

Streambank erosion issues?

Contact your county conservation district for more information (see back cover).

Erosion Management Guidebook
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