

# EROSION CONTROL

## *Helpful tips and tricks*

### WHAT IS STREAMBANK SOIL BIOENGINEERING?



An actively eroding bank on the Chehalis River near Oakville

You may have river bank erosion on your property or have seen places along our local waterways that are actively eroding. "When compared to streams with little or no vegetation on their banks, streams with well-established perennial vegetation on their banks typically have higher economic value, better water quality, and better fish and wildlife habitats." The integration of natural vegetation to stabilize streambanks has many advantages over hard armor linings. "Streambank soil bioengineering is defined as the use of living and nonliving plant materials in combination with natural and synthetic support materials for slope stabilization, erosion reduction, and vegetative establishment." - [Streambank Soil Bioengineering, National Engineering Handbook](#)

### WHERE DO I EVEN BEGIN TO START?

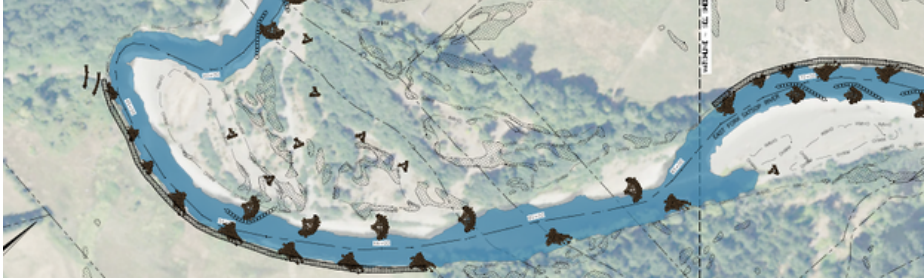
Naturally rivers meander, and change course, as they have for thousands of years. It is not uncommon that if you live near a river or a creek, that you will see erosion of your streambanks at some point. As we build houses and businesses in floodplains, we also increase the likelihood of flooding and erosion. If you have an actively eroding bank on your property, addressing the problem may seem daunting.

#### **What to consider when observing streamside erosion:**

1. If you live on a river or creek that is experiencing widespread erosion, contact your local conservation district or the Chehalis Basin Lead Entity to see if you and your neighbors are eligible for a project that can reduce erosion using habitat friendly techniques such as engineered log jams and riparian plantings. These projects can take multiple years to design and implement, however they have been effective throughout western Washington at reducing erosion and improving habitat conditions over the long-term.
2. Do you have room to terrace the bank? If you have room to do this it can definitely help you and the river. This gives the river access to it's floodplain while also installing a structure that can protect the bank from erosion. The [Streambank Soil Bioengineering, National Engineering Handbook](#) is a great resource.
3. Is the riparian zone intact on the rivers edge? If it is not, it is a good idea to plant that area with fast growing, water adapted plants like willow, black cottonwood, Sitka spruce, and Western Red Cedar.
4. Have you talked to your neighbors? Are they experiencing similar problems? Community support around flooding and erosion issues can help a project move forward.

## WHAT ARE MY NEXT STEPS?

1. If there is something upstream directing flow toward your riverbank, one line of action is to talk with the upstream property owner. Contact the [Chehalis Basin Lead Entity](#) to learn if you can develop a project to re-direct the river flow towards the old river channel and add large wood to protect your riverbank.



A design for an engineered log jam complex on the Satsop River aimed at reducing erosion, increasing river connectivity with side channels, and improving aquatic habitat. Plans by Natural Systems Design.

2. If you have room to terrace the bank, this can be the best option especially if combined with placement of large wood. This provides a soft armor that decreases erosion while also creating wildlife habitat. Willow wattles are one example, and made from live willow cuttings. The willow cuttings are woven in place to create a living protective fence. The roots of the willow grow into the ground, hold soil in place and keep the living fence stable. Here is a great resource:

<https://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?content=17818.wba>



Example of a terraced bank with willow wattles,  
Source: <https://www.salixrw.com/>



This stream has a healthy riparian zone, you can tell by bright green vegetation outlining the stream

3. Planting the riparian zone is one of the best things you can do to prevent erosion in the future. Streambanks with healthy native vegetation, including coniferous and deciduous trees have decreased erosion due to the deep tree roots that hold soil in place. Native trees that survive best in the riparian zone are willow, red alder, Sitka spruce, and Western red cedar. You can also plant bushes like salmonberry, snowberry, twin berry, and red-osier dogwood. Here is a great resource:

<https://s3.wp.wsu.edu/uploads/sites/2079/2015/06/streamside-planting-guide-for-western-washington.pdf>

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