



# Restore Your River

Grades: 6-8

Suggested category/unit: Ecology

PGE cares a lot about the rivers where we generate power. Our biologists help salmon, steelhead and lamprey get around our dams using fish ladders and other tools. But assisting fish with their migration to and from the ocean is only part of the process. **These fish also need a great place to live.**

That’s why we partner with other organizations to restore river habitat. These projects may involve planting trees, removing harmful plants, placing logs or boulders in the water, educating others and more. We could use your help! Follow the steps below to design your own river restoration project.

## Part 1: Healthy or harmful?

Salmon like their rivers to be **clean, clear, cool** and **complex**. We call these the “Four Cs” of a healthy salmon stream.



**Clean** = Little or no pollution/litter



**Clear** = You can see right through the water, it isn’t turbid (cloudy)



**Cool** = Cold temperature, shady



**Complex** = There are boulders, logs, and the river meanders (curves back and forth)

Some human activities can alter the ecosystem, making conditions unhealthy or even unlivable for salmon. **Read each description below. If it describes something helpful for fish, circle the letter. If it describes something harmful for fish, draw an X over the letter.**

- |   |  |  |
|---|--|--|
| A. Large trees along the river provide shade                                | E. People fishing along the banks are not following Oregon’s rules and regulations                         | H. People are admiring the river’s wildlife from a safe distance |
| B. Invasive grasses have taken over, pushing out other native plant species | F. Animals from a nearby farm are drinking from the stream, kicking up dirt and leaving their waste behind | I. The stream meanders (curves back and forth) in a natural way  |
| C. People are leaving trash along the banks                                 | G. There are many different kinds of insects   | J. The water is shallow and feels warm to the touch              |
| D. Logs and boulders create areas for small fish to hide from predators     |  |  |

Answers: Healthy - A, D, G, H, I  
Harmful - B, C, E, F, J

**Part 2: Make a plan**

You recently took a walk along your nearby stream and made some observations. Unfortunately, you noticed all of the “harmful” descriptions from Part 1. You care about your stream and want to help restore it.

**Come up with 3-4 actions to help improve the stream.** These may be actions you could easily perform in real life (picking up litter, for example) or they may be large-scale projects that would require significant time, money and equipment. An example is provided for you.

| Problem   | Cause(s) of problem   | Action  | Outcome(s)   |
|---|---|---|--|
| <i>Farm animals leave dirt and waste in the water</i> | <i>Farms built too close to the river. No fencing to keep animals away.</i> | <i>Build a fence along the river to keep farm animals away from the water. Get help from volunteers and local landowners.</i> | <ul style="list-style-type: none"> <li><i>Less dirt and mud entering the water from erosion</i></li> <li><i>Less animal waste</i></li> <li><i>Cleaner and clearer water</i></li> </ul> |
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**Reflect on your restoration plan**

Which of these actions, if any, could you complete by yourself?

Which of these actions would require the help of volunteers?

Which of these actions would have the biggest impact on the stream? Why?

Name one thing you can do in real life, starting today, to benefit salmon and their habitats.

### ***Part 3: A river restored***

What will your stream look like once the restoration project is complete? Draw it in the space below, using crayons, markers or colored pencils. Use as much detail as possible.

**You can use the following questions to help guide your drawing:**

- Are there logs and rocks in the water?
- Does your stream flow in a straight line, or does it meander?
- Are there trees and plants along the banks? What species do you see?
- Are humans, pets or farm animals visiting the stream? If so, how are they behaving?
- What kinds of wildlife can be found? Are there both predators and prey? Is there enough food supply?
- Can you see salmon using the stream?