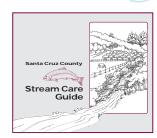
**Learn more about general** stream care and stream wood in the Santa Cruz County Stream **Care Guide** 



www.scceh.com/eh/fgc/stream\_care\_guide.pdf

## This brochure was created by

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County of Santa Cruz Environmental Health Services Water Resources Program 831.454.2022

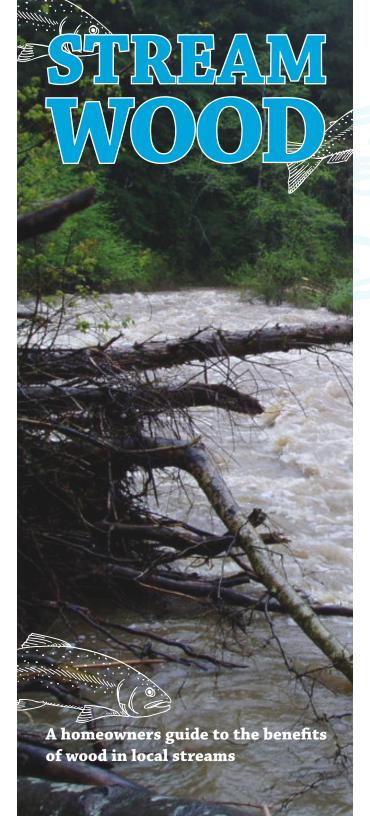
This brochure was produced with funding from the County of Santa Cruz Fish and Game Advisory Commission.

> Support Santa Cruz Steelhead

Conserve **Central California Coastal Coho** 







Large stream wood—fallen trees, logs, root wads and large branches—provides essential habitat for local populations of steelhead and coho salmon and helps maintain natural stream flow.

### **Leave large wood in streams**

Many people believe that large wood should be cut up or removed from the stream because it causes problems such as flooding or bank erosion. But, in most cases, wood protects the stream bank from strong currents and prevents deepening stream channels that also lead to bank erosion. Having multiple large wood masses along a stream can actually reduce flooding by catching wood and debris that would otherwise wash downstream all at once and create logiams.

# **Help our local Steelhead & Coho**

In Santa Cruz County, steelhead populations are threatened, but can be improved with good stream care. Coho salmon are critically endangered and may become locally extinct without serious efforts to improve stream habitat.

You can help preserve our local steelhead and coho salmon by learning more about the importance and role of stream wood.

## **Concerned** about stream wood on your property?

Contact the County of Santa Cruz Public Works Department at 831.477.3999 for assistance with the assessment or modification of large wood.





During winter storms, stream wood protects young fish and improves their survival. Adults can rest during migration in the slower water created by stream wood.

#### **Stream wood creates habitats**

Stream wood is an important part of habitats for steelhead, coho salmon and other wildlife.

Stream wood provides young fish with places to hide from winter storms. During winter storms, large wood helps form pool habitats—where many young fish live—and riffle habitats—where adult fish lay their eggs. Large wood can provides storage for fine sediments and small woody material that enriches the stream food web.

Local monitoring shows that many young steelhead do not survive the winter season. Increasing the amount of stream wood in local

waterways can help young fish survive the winter so they can migrate out to the ocean to mature as adults.

Many young fish live in pools created by large wood which provides protection from predators. Coho salmon are found mostly in pool habitats with lots of large wood.

Wildlife such as the red-legged frog and western pond turtle prefer habitats with large wood also. Stream wood also provides food and habitat for small creatures such as aquatic insects.

Young steelhead and coho salmon live in pool habitats where stream wood provides protection from predators.



#### Can I remove stream wood?

Stream wood should be left in the stream. Brush, weeds, grass clippings, or other small material should not be thrown into a stream or dumped on stream banks where it can be washed away. This small material can create debris jams or block a culvert which can cause flooding, erosion or block fish passage.

To cut up or remove large stream wood requires permission from the California Department of Fish and Wildlife (CDFW).

Large wood may need to be modified or removed if it causes flooding or erosion that threatens life or property. **In an emergency,** you have the right to protect life and property, but you must notify the California Department of Fish and Wildlife (CDFW) after removal. The County of Santa Cruz Public Works Department provides no-cost general assistance and emergency assessment for stream wood modification. The can be reached at during normal business hours at **(831) 477-3999.** Assistance is also available after hours for emergencies only.

In an emergency, trim smaller branches that catch other material first. Otherwise, modify wood so that trunks or root wads remain intact. Keep log lengths at least  $1\,\frac{1}{2}$  times the stream width.

### What if fish passage is blocked?

Most fish can swim through, under, or around log clusters or debris jams, especially during high flows. If you are concerned that a large stream wood blockage is preventing fish from migrating, contact the County of Santa Cruz Environmental Health Department at **(831) 454-3154** or the California Department of Fish and Wildlife (CDFW) for assistance. Both steelhead and coho salmon and their habitat are protected under the federal Endangered Species Act, state and local laws.

## What else can I do to:

- > protect our streams
- > reduce flooding and erosion
- > help steelhead and coho

#### **Conserve Water!**

Fish and wildlife need adequate stream flows to survive and thrive. Whether you live in town or in the country, practice water conservation for household and outdoor use. Protect stream flows if you divert from a stream. Educate yourself about local water issues.

### **Protect Riparian Habitats!**

Streamside property owners play an important role in protecting stream habitat. Maintaining and restoring native vegetation that grows along our streams protects drinking water quality and supports our local fish and wildlife populations.

### **Keep streams clean!**

Prevent sediment, wastewater, chemicals or garbage from entering a stream.

## **Reduce Stormwater Runoff!**

Capture rain in barrels or cisterns, direct runoff away from roads or driveways and into areas that allow water to soak into the ground, and make sure road culverts and other water diversions are properly sized and placed.