

# Santa Cruz County Streams



JUVENILE STEELHEAD TROUT

## STEELHEAD TROUT AND COHO SALMON

Steelhead trout are found in the San Lorenzo, Arana, Soquel, Aptos and Pajaro River watersheds, and most north coast streams including Waddell, Scott and San Vicente Creeks. Small remnant runs of coho salmon exist in Waddell, Scott, and San Vicente Creeks. In 2005, coho salmon were also found in Laguna and Bean creeks.

Steelhead trout populations have declined from historic levels for many reasons including past and current water diversions, road building, urbanization, forestry practices, channelization, hatchery practices, removal of large wood, and degradation of riparian areas. Steelhead trout and coho salmon are currently protected under the Federal and State Endangered Species Act.



SCULPIN

### The Living Stream

A stream is more than just a channel for rainwater in its passage to the ocean. It is a complex, living ecosystem that reflects what is happening on the surrounding land.

In Santa Cruz County a healthy creek will have:

- cool, clear oxygen rich water free of pollutants and excess algae
- adequate summer streamflow
- gravel and cobble substrates, without too much sand and silt, that enables aquatic insect production and fish spawning
- a balance of fast water riffles for aquatic insects, fish spawning and feeding, and pool habitats for cover and flow refuge for fish, amphibians and aquatic reptiles
- abundant woody material to provide habitat and cover for aquatic and riparian species, and to act as scour objects for pool development
- native streamside vegetation to stabilize banks and provide shade and food for wildlife

### Local Streams

Santa Cruz County streams are home to a wide variety of native fish, plants and wildlife. Our local streams support native fishes that include steelhead trout, coho salmon, Pacific lamprey, Sacramento sucker, prickly sculpin, coast-range sculpin, three-spine stickleback, and California roach.

### Threats to Local Streams

Reduced streamflows and fine sediments, especially sand, are the greatest threats to Santa Cruz County streams. Reduced streamflows from both surface diversions and groundwater extraction reduce the quantity and quality of stream habitat. Fine sediments from accelerated erosion reduce habitat for aquatic insects and fill spawning and rearing habitat for steelhead trout and coho salmon.



In 2007, the New Zealand mudsnail was discovered in the Lower San Lorenzo River. This highly invasive aquatic snail has the potential to alter our local stream food webs. If you fish or recreate near the lower San Lorenzo River, learn how to clean your boots and gear to avoid spreading this pest to other watersheds at: [www.dfg.ca.gov/invasives/mudsnail/Mudsnail\\_FAQ.html](http://www.dfg.ca.gov/invasives/mudsnail/Mudsnail_FAQ.html)



LARGE WOODY MATERIAL CONTRIBUTES TO HEALTHY STREAM HABITAT



### Large Woody Material

The term "large woody material" (LWM) is what biologists call logs, root wads and large branches within or near the stream channel. The presence of LWM is critical because it provides habitat for fish and other aquatic animals. A lack of large woody material in streams is one of the primary limiting factors for steelhead trout and coho salmon in Santa Cruz County.

Large woody material:

- promotes pool development
- influences the development of critical riffle habitat and spawning areas
- provides cover habitat for adults during migration, for juveniles during rearing and as flow refuge during winter storms.
- can provide natural protection for streambanks
- helps sort and meter the movement of sediments and wood in the stream system
- can provide pockets of good habitat even in streams with excessive fine sediments.

### COUNTY OF SANTA CRUZ FISH AND GAME ADVISORY COMMISSION

The Fish and Game Advisory Commission advises the Board of Supervisors on issues relating to fish and wildlife, and also recommends projects for funding with the County's portion of Fish and Game fine monies and judgments.

For more information, contact Kristen Kittleson, EHS (831) 454-3154 • [kristen.kittleson@co.santa-cruz.ca.us](mailto:kristen.kittleson@co.santa-cruz.ca.us)

### Santa Cruz County Stream Habitat and Juvenile Salmonid Sampling Program

The County of Santa Cruz partners with several local agencies to monitor stream habitat and juvenile salmonids sampling in four watersheds: San Lorenzo, Soquel, Aptos and Corralitos.



STEELHEAD ARE CAPTURED USING NETS



JUVENILE STEELHEAD TROUT ARE COUNTED AND MEASURED



FISHERY BIOLOGIST DON ALLEY MEASURING COVER HABITAT

Photography: Morgan Bond (steelhead juvenile and adults, coho salmon juvenile and adults, sculpin); Kevin Collins (sampling crew); Kristen Kittleson (woody material, Scott Creek, juvenile steelhead, Don Alley)



JUVENILE COHO SALMON



ADULT COHO SALMON



MALE AND FEMALE ADULT STEELHEAD



JUVENILE STEELHEAD TROUT