



STEELHEAD STRUGGLES

WORKING TO RESTORE CRITICAL HABITAT FOR AN ENDANGERED FISH IN SOUTHERN CALIFORNIA

by Rick Evans



Photo:

NOAA FISHERIES

SOUTHERN STEELHEAD

The Southern Steelhead is a species of trout listed as endangered federally. They can be found from Santa Barbara all the way south to the Mexico border. Steelhead are the ocean-going form of rainbow trout that go between freshwater and out to the ocean for several years before returning, typically, to their native spawning area to reproduce in fresh water streams.



Photo: Rick Evans

A REMARKABLE SPECIES

South Coast Regional Director for [California Trout](#), Dr. Sandi Jacobson calls them a remarkable species and says, “They are particularly innovative on how they express their life history forms. What that means is, because of the Mediterranean climate and the sand berms that build over the estuaries to form lagoons, they don't always have access to their spawning grounds into the headwaters. And so, they may stray a little bit more depending on which river system is open.”

She explains that during the rainy winter seasons the berms will often be pushed open by increased flow from the rivers. This signals the Steelhead it is time to move upstream toward the headwaters for spawning. “They can make it back up to the freshwater which may sometimes be 30 to 50 miles inland which they can [travel] typically in a couple of days,” she says.

KEEPING TRACK OF THE NUMBERS

Organizations like [Recreation Conservation District for the Santa Monica Mountains](#) (RCDSMM) monitor the Southern Steelhead populations as well as collaborate with federal, state, and local agencies to implement projects that restore or enhance habitat. RCDSMM Senior Conservation Biologist, Rosi Dagit says her organization has been monitoring southern steelhead trout populations throughout the Santa Monica bay since 2001. “We use an instream antenna, [weir trap](#) and DIDSON camera to document abundance, distribution, and reproduction,” and, “we also monitor habitat, water quality, benthic macroinvertebrates, and invasive species impacts,” she says.

California Trout works on closely monitoring Southern Steelhead as well. Dr. Jacobson says, “There's multiple ways that you can do it. And each site is better aligned with a particular way of monitoring.” She says methods include devices at fish passage structures that funnel them into a narrow area where they can be counted, DIDSON cameras, [electrofishing](#), and visual observation through snorkel surveys. “Generally, it's not very easy to do,” she adds.

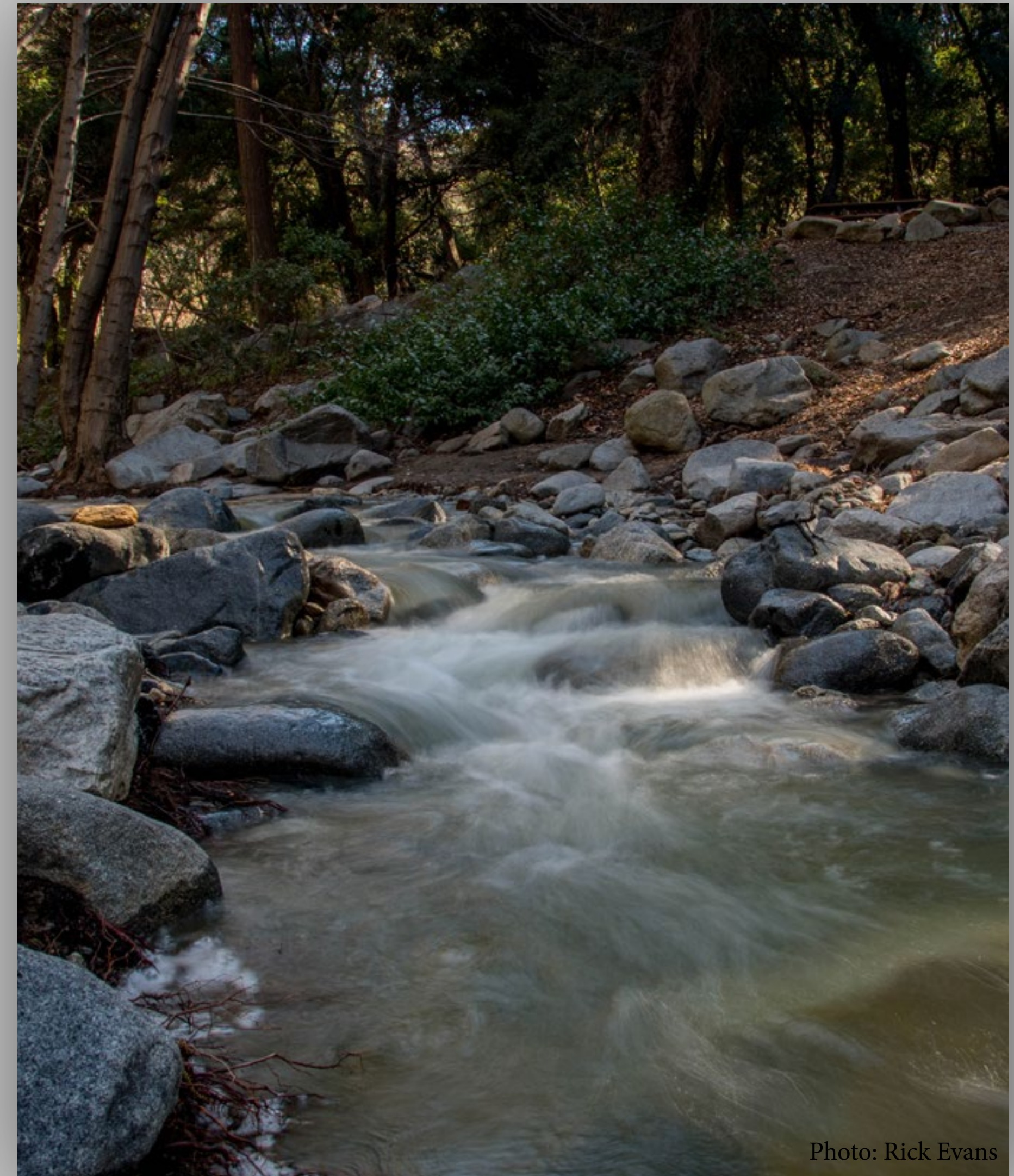


Photo: Rick Evans



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THREATS TO SURVIVAL

"...THAT IMPAIRS [THEIR] LIFE CYCLE ALMOST IMMEDIATELY..."

One of the biggest problems for the Southern Steelhead is blocked access to their freshwater breeding sites. Dr. Jacobson says, "Major threats are fish passage barriers in the forms of dams, diversions, and bridges [which] impair their access to their spawning grounds. When [the Steelhead are] going between the ocean and fresh water, if there's a block, that impairs [their] life cycle almost immediately, and the population takes a dive."



MALIBU CREEK AND THE RINDGE DAM

One of these barriers is the Rindge Dam in Malibu. The dam, which sits about three miles from the coast, blocks the passage of Steelhead from the Pacific Ocean into Malibu Creek for spawning and reproduction. A [report](#) issued by California Trout points to the Rindge Dam, along with four others, cited as being especially problematic for the migration of Steelhead. Dr. Jacobson says, “Malibu Creek is one of the few areas that has a really long stretch of critical habitat that’s designated by

the National Marine Fisheries Service for steelhead. So, it's in a really important watershed for their recovery, but it's blocked very low down in the watershed. So, they don't have access to all that spawning and rearing area upstream.” She says removal of the dam is a complex [project](#) which is in planning stages at this point and is being put together by multiple agencies including the [Army Corps of Engineers](#) and [California Department of Parks and Recreation](#).

INDICATOR SPECIES

Steelhead are considered by biologists to be a critical indicator species. This means the health and quality of the water in streams and creeks can be determined by how well the fish like Steelhead are thriving. Dr. Jacobson says they can help determine passability, stating, “dams or bridges [can] cause altered hydrology and altered sediment transport,” which can affect coastal erosion and access for recreation. She also says, “as an indicator species they are very sensitive to dissolved oxygen levels.” This helps researchers better understand water quality.



Photo: Rick Evans

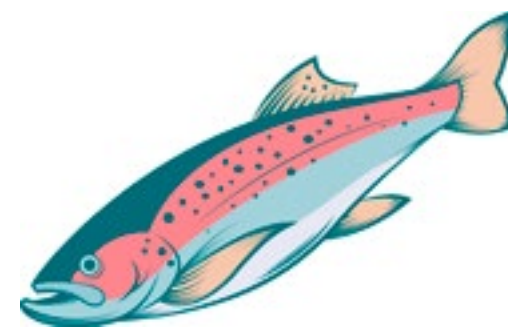
WHAT CAN WE LEARN FROM THEM?

AS INDICATOR SPECIES, WHAT ARE THEY TELLING RESEARCHERS AND BIOLOGISTS?



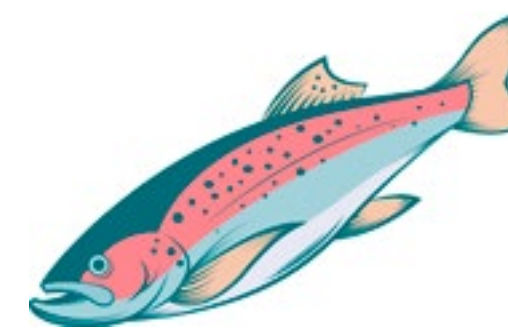
1. WATER QUALITY

Steelhead need clean water free of toxins with sufficient oxygen levels.



2. HABITAT QUALITY

The streams should be free from unnecessary obstruction and excessive sediment.



3. SUSTAINABILITY

The habitat needs to be free of non-native species to ensure productive life cycles.



"WE WORK WITH PARTNERS
TO HELP MOVE STEELHEAD
RECOVERY FORWARD ON
MULTIPLE FRONTS."

SANDI JACOBSON, PH.D.
South Coast Regional Director, California Trout

COMMUNITY IMPACT

"IT'S ACTUALLY ABOUT THE COMMUNITY."

Protecting and restoring habitat for fish like Southern Steelhead is beneficial for the environment. But it is also important for the people who live alongside the habitat. Dr. Jacobson says the restoration efforts are for the fish but, "it's actually about the community." She points to a current project along the Santa Margarita River just north of San Diego which will have significant benefits for the Steelhead as well as the community.

She says the project of redesigning an old box culvert over the river, "preserves a wildlife corridor, enhances fish passage, improves flood management, and improves traffic and safety considerations for the community." She adds, "I think that, in my mind, is like a textbook case of how you integrate endangered species management into a community plan."



TAKE ACTION

TO LEARN MORE ABOUT THE SOUTHERN STEELHEAD AND HOW TO GET INVOLVED, VISIT THE WEBSITES FOR ORGANIZATIONS WORKING HARD TO PROTECT THESE ENDANGERED FISH.

[CALIFORNIA TROUT](#)

[RECREATION CONSERVATION DISTRICT OF THE SANTA MONICA MOUNTAINS](#)

