A cutting edge program to manage 4,700 miles of Northern California public roads with salmon in mind has been endorsed by the federal government.

The National Marine Fisheries Service has approved the road manual being used by Humboldt, Del Norte, Trinity, Siskiyou and Mendocino counties, which contains measures to protect salmon and enhance habitat for the fish that define the region. The program is now being used as a model around the country.

"This is another tool that we have to show the state and federal agencies that we are well on the road to maintaining and improving habitat," said Mark Lancaster, director of the Five Counties Salmonid Restoration Program.

Among the most well-known efforts of the program have been removing culverts that block salmon and steelhead from reaching tributaries. Experts believe that perhaps 15 to 20 percent of all steelhead habitat in the region is behind impassible barriers like these. Where culverts have been replaced with fish-friendly culverts or bridges, salmon and steelhead have responded quickly and moved up the newly available streams to spawn.

The program also contains measures to ensure that routine maintenance doesn't send sediment into streams, by modifying ditches and placing spoils where they can't leach into streams. It also calls for habitat improvement, including putting large logs in streams and planting trees along streams.

Fisheries service recovery coordinator for southern Oregon and Northern California Greg Bryant said the program was born out of concerns about the Endangered Species Act and water quality regulations. While it got off to a rough start, he said, it eventually became perceived as an accomplishment. Caltrans also joined on, meaning all but private roads in the region are covered under the program.

"It became a source of pride," Bryant said. "They were doing something that's helpful and they understood why."

Several years into the program, hundreds of miles of once-closed off streams are opened up and tons of sediment has been kept out of creeks and rivers. The counties involved also expect to have more regulatory certainty, and possibly a more streamlined process for road project approvals.

Projects are prioritized to keep the counties from competing for the same limited restoration funds, and while an impressive number of project have been completed, there are plenty more to go.

"We look at this as a really long-term process," Lancaster said.

John Driscoll can be reached at 441-0504 or jdriscoll@times-standard.com.