Lower Austin Creek Migration Improvement Program (*LACMIP*)

The LACMIP is based on a unique partnership between gravel mining interests, government agencies, local residents, and non-governmental organizations (including NOAA, DFG, CCC, TU and Bohan & Canelis). Their innovative approach to restoration is designed to improve both migration and rearing habitat conditions for endangered coho salmon, as well as threatened Chinook salmon and steelhead. 2007 marked the fifth year of this successful project. However, existing funding will expire after 2008, and more work needs to done if project goals are to be fully realized. Future plans include placement of new instream structures, modification of existing structures to increase their function, and the creation of additional alcoves via gravel extraction (to be conducted by Bohan & Canelis.). Funding is being sought to sustain and expand this unique, adaptive-management driven effort.

Past land use in the Austin Creek watershed has degraded the quality of salmonid habitat. Logging, mining and rural residential development over the past century, combined with erosive soils, high precipitation, and fire have combined to create excessive erosion and subsequent aggradation in Austin Creek. This aggraded condition (characterized by gravel filling the stream channel) has, and continues to, impair the ability of coho salmon to enter Austin Creek to spawn. It has also resulted in habitat simplification throughout the watershed, reducing the ability of salmonids to successfully rear in lower Austin Creek (Katz, 2006). The stakes have risen due to the efforts of DFG's Coho Broodstock Program, an aggressive Coho salmon recovery effort that includes the annual stocking of two tributaries of Austin Creek (Ward and Gray Creeks) with Coho salmon.

The LACMIP aims to facilitate salmonid recovery in conjunction with the Coho Broodstock Program by re-establishing the habitat conditions necessary for the successful recolonization of coho salmon in the watershed. This will be achieved by actively developing improved hydrologic connectivity between Austin Creek and the Russian River, creating alcoves, pools, and instream structures. This in combination with other restoration projects underway throughout the watershed will set the stage for effective salmonid conservation and recovery.

Annual monitoring activities associated with the LACMIP, which are used to evaluate project success, include:

- Early winter deployment of a remote underwater video camera used to document the instream migration of adult fish, particularly focused on capturing evidence of adult coho moving into Austin Creek to spawn.
- Spring installation of a rotating screw trap to census and inventory (catch and release) out-migrating smolts.
- Complete annual digital terrain mapping of the channel to track the geomorphic effects of LACMIP activities.
- Continuous temperature monitoring of over-summer pool habitat throughout the project reach.

NOAA is encouraging the SRCD to work with private landowners upstream of Bohan & Canelis lands to implement similar restoration projects to address the same habitat impacts occurring upstream.

The project partners (NOAA, landowners) have requested that the SRCD take a primary role in funding, administration, management and oversight for both the monitoring and restoration aspects of the LACMIP beginning in 2008. The SRCD is seeking funding for both monitoring and restoration activities associated with the LACMIP.

Katz, Jacob, Gary Reedy, David Hines. 2006. Downstream Migrant Trapping and Steelhead Smolt Abundance Estimate for Lower Austin Creek.

Dickerson, Rob. 2007. Trout Unlimited/NOAA National Marine Fisheries Community-Based Restoration Partnership Draft Proposal