

Chapter 2: PROJECT TYPES

On-the-ground projects selected for Phase 1 of IWRP will focus on the overall health of watersheds by improving water quality, terrestrial and aquatic habitat, and removing barriers to salmonid migration. The Design & Permitting component of Phase 1 covers the selection, design, and permitting of approximately 55 projects recommended in local watershed plans and/or identified by state resource agencies. In tandem with this process, 20-40 additional rural road erosion control projects will be identified for design and permitting via the Rural Roads component of Phase 1. All of these projects fall into one or more of the following categories:

Fish Passage

Fish passage projects are aimed at removing or modifying existing manmade barriers to salmonid migration. Typical projects might include replacement of an instream ford with a bridge, retrofitting an existing culvert with structures to mitigate extremes in water velocity or depth that may impede passage, modification of a flashboard dam, or replacement/removal of an impassable culvert. Natural barriers may also be considered for modification or removal under certain circumstances.

Erosion Control

Erosion control projects include out-of-stream projects such as road improvements that slow or redirect runoff, or the repair of gullies by addressing the source of runoff and, if necessary, repairing the existing gully.

Culvert replacements

Culvert replacement is a specific type of erosion control and/or fish passage project and applies to both instream and off-channel culverts. Frequently a failing or poorly designed culvert causes erosion around or below the culvert and may also impair or prohibit salmonid migration.

Riparian restoration

Riparian restoration projects are those that involve the restoration of vegetation along a waterway. Riparian vegetation helps to protect streambanks from erosion by a) reducing flow velocities at or near the streambank surface, b) buffering the streambank against the abrasive effect of transported materials, c) inducing sediment deposition, and d) providing root systems that help hold the soil together and, in some cases, armor the bank against high flows and debris. Riparian restoration also provides for maintenance of healthy habitat for salmonids (aquatic) habitat and migrating birds (terrestrial habitat benefits associated with riparian restoration). Riparian restoration projects are often done in conjunction with erosion control projects and often include the removal of invasive non-native vegetation where possible.

Wetland enhancement

Wetland enhancement projects may include restoration of degraded wetlands through re-establishment of wetland hydrology, vegetation, and other habitat components that enhance specific wetland function or values.

Urban runoff treatment

Urban runoff treatment projects address polluted runoff released from urban areas. These types of projects might include the installation of grease traps, catch basins, or other treatment options.

Agricultural runoff treatment

This category of projects includes projects such as sediment basins, filter strips, or grassy swales focused on slowing runoff from agricultural areas and providing mechanisms to filter out sediment and other pollutants from agricultural runoff prior to entering a nearby waterway.

Monitoring (gage) stations

Many of the watershed plans developed for Santa Cruz County watersheds make recommendations for watershed monitoring. There are several existing monitoring stations that are in need of repair. One of the important issues to address for these monitoring stations is to identify who will be responsible for the long-term maintenance and data collection for these stations.

Integrated Watershed Restoration Program (IWRP) for Santa Cruz County
IWRP Design & Permitting Coordination Process Guidelines Manual