



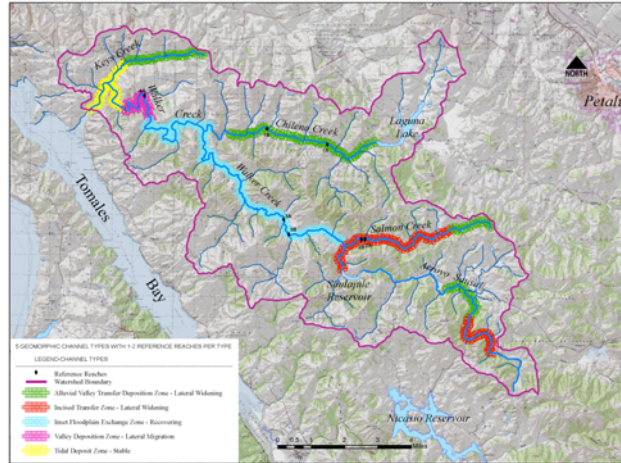
PRUNUSKE CHATHAM, INC.

## WALKER CREEK GEOMORPHOLOGY REPORT, 2005

Client: Marin RCD

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This project was part of the Walker Creek Watershed Restoration Program. The 76-square mile watershed drains into Tomales Bay, one of California's richest and most diverse coastal habitats. According to the California Regional Water Quality Control Board, San Francisco Bay Region (RWQCB), beneficial uses in the watershed are threatened by sedimentation and nutrients. PCI conducted a fluvial geomorphic assessment of the Walker Creek watershed in order to provide a scientific basis for selection, design, implementation, and monitoring of future fisheries habitat enhancement and sediment reduction projects.



The geomorphic assessment was a continuation of ongoing processes documenting the environmental status of the watershed. It provided an understanding of the hillslope and fluvial geomorphic processes currently occurring in the watershed and placed these processes in a geologic, historic, and land use perspective. Sediment mobilization, storage, and transport trends through the system were analyzed and described. Channel reaches were morphologically characterized and classified.



Most important, a strategy was developed to guide resource managers in prioritizing watershed and channel enhancement projects that will work with natural processes to restore fisheries habitat and effectively reduce detrimental sediment loads. These actions include: promotion of channel width increases, as well as riparian vegetation establishment and maturation, development of methods to provide dense grassland-filter buffer zones along channel banks, installation of riparian fencing, reduction of sediment delivery, promotion of sediment deposition, installation of grade control structures to trap sediment, and headcut repairs to halt extension. The report has provided a basis upon which the Marin RCD has requested and received grant funding to implement its recommendations.