

**Comments on Devil's Gate Reservoir Sediment Removal and Management Project
Sediment Removal and Habitat Enhancement Concepts** **Mickey Long**

November 9, 2011

Watershed is much more than water and sediment. Therefore a Watershed Management program must include all functioning parts of the watershed ecosystem, including, but not limited to vegetation, wildlife and phenology (timing of ecosystem functions, such as flowering, bird nesting seasons, etc.) into sustainable planning for the watershed.

Therefore a County Watershed Management Division must broaden its thinking, planning and actions to encompass this Holistic approach to this Watershed Management mission.

County Public Works has applied Physical and Engineering management into its work in the past, with obvious success in terms of flood control, sediment capture and ground water recharge. It is critical that the County planning process incorporates all aspects of Biological resource management into the plans to make the mission complete. This would be Ecological Engineering, or "Eco-engineering".

At Hahamongna the following concepts should be recognized and included in any sediment removal and overall maintenance plan.

1. One stated goal in the Devil's Gate Reservoir Sediment Removal and Management Project is "Supporting sustainability by establishing a reservoir configuration more suitable for routine maintenance activities including sediment management."
2. The Devil's Gate Dam interrupted natural processes and those processes of water flow and sediment movement downstream along with vegetation dynamics (establishment and re-establishment of riparian vegetation) need to be restored by reincorporating these functions into the management plan. Holistic, ecosystem planning must be incorporated into the project process in order to have real sustainability.
3. Incorporate natural areas and native vegetation and functioning ecosystems into all flood and sediment planning. Integrate wildlife habitat into the Hahamongna Basin plan. The southern and central portion, behind the dam, floods most often and forms a lake, and is utilized as a buffer pool for sediment dropout to protect the dam valve. Treat that feature and surrounding area as a wildlife lake-reservoir, not just a flood reservoir. Design sediment removal to create such a lake with irregular, meandering shorelines, peninsulas and stands of willows along the shore. Maintain a wide buffer perimeter of riparian woodland around the central pool, not disturbed by periodic debris removal. Conceptual drawing attached as Page 3.
4. Strongly consider a meandering stream course created by sediment removal in more linear fashion above the reservoir/lake. Not all the sediment needs removal in the upper basin and can be left as terraces to the sides of a more natural stream channel or braided stream to recover naturally or be restored to riparian and alluvial scrub vegetation.
5. All sediment removal or construction work in and near riparian stands and other vegetation must, by law (California State Code 3503 and Federal Migratory Bird Treaty Act), avoid the bird nesting season. California Department of Fish and Game provides guidelines.

6. The losses of native riparian stands during sediment removal mitigated and restoration should be at ratio of at least 2 to 1. Agency consultation and input needed (U.S. Fish and Wildlife, Department of Fish and Game).
7. There are stands of emergent native wetland vegetation, cattails and bulrush, surrounding seasonal pools in the southwestern end of the basin near the dam. Impacts could occur to waters of the U.S., including wetlands, as a result of sediment removal in this area.
8. There remain stands of rare Alluvial Sage Scrub in the northern portion of the basin, and the recent sediment deposition does not destroy this community. Indeed, the plant community and the ecosystem it supports rests upon layers of alluvium deposited over millennia. This dynamic community depends on sediment movement and flooding to rejuvenate the vegetation. Terraces and banks supporting current and naturally re-establishing Alluvial Sage Scrub should be allowed to remain intact.
9. As briefly shown in the County slide presentation, the entire Hahamongna basin has high value on a daily basis as a passive recreation area, supporting hiking, horseback riding, nature study, birding, plant study, photography. This all should be an integrated component of the watershed management plan. Maintain or create new access points to the riparian woodlands and lake for the passive, low impact uses such as hiking, birding, and nature study.

Wildlife Lake-Reservoir design concept



Michael Long
6128 No. Reno Ave.
Temple City, CA 91780
mlongbird@gmail.com