

Raw Water Conservation Best Management Practices (BMP's)

Like many water conveyance systems in the Sierra Nevada foothills, the NID and PCWA raw water delivery systems provide many benefits, some of which were intended and some of which were not. Beyond its original purpose of providing water for irrigation, today some of the water conveyed through these systems provides non-agricultural amenities for foothill-area residents, such as backyard creeks and ponds, which contribute to the maintenance of the shallow aquifers and wells and which also provide fire safe reserves. Today many open, unlined canals are also bordered by trails that are used frequently and enthusiastically by the public.

Another unintended benefit of the system has been protection and enhancement of aquatic habitats and fisheries. Seeps and leaks from canals have given rise to pockets of local habitat, areas that the California Department of Fish and Game believes may even harbor special status species, such as the California Black Rail and the Foothill Yellow-Legged frog. Local creeks whose flows have been augmented to deliver raw water to customers now sustain significant riparian vegetation. Canals have long been maintained for management reasons at flow levels above actual demand, resulting in spills that enhance flows in major foothill drainages, including Dry Creek/Coon Creek, Dry Creek/Secret Ravine, and Auburn Ravine. While these flows can fluctuate dramatically and are thus neither reliable nor optimal, they help to sustain a diversified anadromous fishery across a variety of foothill stream habitats.

It must be acknowledged that water conveyance system efficiency improvement measures have the potential to reverse the important biological benefits that have been byproducts of those systems since their construction. Canal lining and piping will make tremendous sense in some situations, but in other cases may destroy habitats and species of local, regional, and even statewide importance. Similarly, the installation of telemetry systems in canals, intended to allow water system managers to more closely match flows with actual demands, may negatively impact existing riparian habitat and fish populations that currently depend on operational spills and other “surplus” supplies.

Implementation of Raw Water Conservation BMP's will no doubt result in significant water savings that enable both NID and PCWA to provide additional benefits within limited overall supplies. But the long-term success of such programs also depends on a complete understanding of baseline conditions, a comprehensive assessment of site-specific and cumulative impacts, and development of alternative mechanisms to protect the resource values at issue.

Comprehensive community-based planning can help to guide raw water conveyance system improvements at both NID and PCWA, ensuring significant reduction in system losses while taking important cultural, biological, and agricultural values into account. Adoption of the following framework would help to ensure that all of these values are properly addressed:

1) Canal Lining or Piping: The agencies should engage in a comprehensive, system-wide evaluation of site-specific and cumulative impacts of prospective canal lining or piping projects. Where adverse impacts are significant, appropriate mitigations must be provided.

2) Operational Efficiencies: Changes in system operations which may impact stream flows should not be made until a planning process is completed to determine the appropriate allocation of raw water to best serve cultural, agricultural, and biological needs. An inventory should also be made of the current benefits of the raw water system, as well as the potential to provide additional benefits or to ensure them in other ways.

3) Public/Stakeholder Input: Outreach to and involvement of public and stakeholder groups as well as other public agencies and interests should be an integral part of the above planning efforts.

4) Utilization of Conserved Water: Water conserved through the implementation of raw water system conservation BMP's should be allocated with priority to mitigate adverse impacts (e.g., provision of adequate and reliable supplies of water for loss-dependent environments), and otherwise to improve in-stream conditions throughout the Bear River problem-shed. Allowance should also be made for the proportionate allocation of conserved water to public restoration purposes based on provision of matching funds.

5) Placer Legacy: The Placer Legacy program provides an opportunity for PCWA in particular to assist in conserving Placer County's most important biological resources, including the avoidance or mitigation of adverse impacts due to implementation of the Raw Water Conservation BMP. The Agency should formalize its participation in the Placer Legacy HCP/NCCP by becoming a signatory to the planning agreement