

- ❑ Restore fish runs upstream of Folsom Dam
- ❑ Protection of fish from injury at the pump station
- ❑ Auburn Ravine impacts from increased flows

Terrestrial Resources

- ❑ Wildlife migration corridors and flyways
- ❑ Riparian habitat protection/enhancement
- ❑ Restore the river channel to improve the ecosystem

Water Quality

- ❑ Sedimentation/turbidity
- ❑ Water temperature
- ❑ Auburn Ravine – when the water leaves the Auburn Ravine Tunnel – where does it go?
- ❑ Groundwater quality

Recreation

- ❑ Public access – hiking/equestrian/bicycle trails, access to the river for water-based activities
- ❑ Public use of roads constructed by the project
- ❑ Project consistency with the Auburn State Recreation Area Interim Management Plan
- ❑ Cost-benefit comparison of recreation opportunities between alternatives
- ❑ Diversion tunnel safety hazard to recreation
- ❑ Restore the river channel for water-based activities
- ❑ Attract Olympic events

Visual Resources

- ❑ Pump station aesthetics

Land Use

- ❑ Growth-inducement aspects of increased diversion/water supply (traffic, loss of habitats, public service burden)
- ❑ Agriculture impacts
- ❑ Placer County General Plan – what does “build-out” look like; will the project serve build-out; and will other facilities need to be constructed?
- ❑ Public utilities and services – energy consumption by pump station

Air Quality

- ❑ Short-term construction emissions
- ❑ Long-term operational emissions

Public Health and Worker Safety

- ❑ Diversion tunnel safety
- ❑ Structures as potential attractive nuisance (safety issue)
- ❑ Fire safety

Alternatives Analysis

- ❑ Upstream location poor choice – silt settling basin requires frequent dredging or special effort to maintain
- ❑ Cost-benefit analysis between alternatives – particularly related to recreation opportunities

Other Issues

- ❑ Political support
- ❑ Funding/use of tax dollars
- ❑ Auburn Dam – future construction/waste of resources
- ❑ Future planned changes to Folsom Dam (height)
- ❑ Relationship of project to other local and regional projects (cumulative analysis)
- ❑ Public Trust Doctrine
- ❑ Unreasonable methods of diverting water prohibited by Article X, Section 2 of the California Constitution and Section 100 of the California Water Code

Impact Conclusions

An overview of the Final EIS/EIR impact conclusions for each resource topic addressed in the EIS/EIR is provided below. The results of the impact analyses comparing the impacts among the alternatives and describing the significance of impacts of the alternatives after implementation of environmental protection or mitigation measures are summarized following these sections. Environmental protection measures have been incorporated as either construction management practices or design features to minimize or eliminate most potentially significant impacts to levels considered less than significant. The No Action/No Project Alternative would result in potentially significant, unavoidable impacts to water supply, fish resources and aquatic habitat, recreation, land use/plan consistency, and noise resources. Implementation of the Proposed Project would result in potentially significant, unavoidable water supply, recreation, and air quality (construction) impacts. The Upstream Diversion Alternative would result in potentially significant unavoidable water supply, recreation, and land use/plan consistency impacts.

Under the cumulative condition, potentially significant impacts have been identified for water supply, fish resources and aquatic habitat, water quality, recreation, cultural resources, power supply, and air quality (construction) impacts. Of these conditions, the Proposed Project potentially would have a considerable contribution only to air quality, and only in the event that other construction projects with unmitigated nitrogen oxide (NO_x) emissions occur within the air basin within the same timeframe as the Proposed Project construction.

Water Supply and Hydrology

Relative to the existing condition, potentially beneficial effects on water supply and river hydrology at the site would occur under the Proposed Project. All alternatives would provide PCWA an increased amount of water for use within Service Area Zone 1. No additional American River water relative to historical monthly maximum deliveries would be supplied to Service Area Zone 5 until further evaluation of potential effects upon Auburn Ravine resources was completed. The No Action/No Project Alternative facilities, however, would be subject to flooding and capacity limitations that make it potentially unreliable and unable to meet the project purposes and objectives. The No Action/No Project Alternative would potentially worsen groundwater overdraft conditions due to the likelihood that agricultural and rural farms would increase reliance upon groundwater as raw surface water supply deliveries ultimately would be reduced as a measure of conserving water and meeting treated water demands. The Proposed Project would close the bypass tunnel and restore surface water flows to the dewatered channel; this long-term beneficial effect upon North Fork American River hydrology would not occur under the No Action/No Project or Upstream Diversion alternatives.

American River water rights holders would not be subject to any supply deficiencies associated with the alternatives. CVP Settlement and Exchange Contractors would not experience any change in allocations. Although small and infrequent, potential reductions in CVP delivery allocations to Water Service Contractors would occur under all alternatives (reduced by up to five percent in up to two years out of the 70-year simulation). Under the cumulative condition, water delivery allocations for both SWP customers and CVP Water Service Contractors would be affected. Use of water by PCWA in accordance with its water rights in its place of use has a priority to the CVP's rights at Folsom Reservoir to the extent that such CVP rights are used for export. Because any reduction delivery allocations to these customers is considered significant, the impact upon SWP and CVP contractors would be considered an unavoidable adverse impact.

Fish Resources and Aquatic Habitat

Fish Passage Through Project Area

The No Action/No Project Alternative would include use of fish screening techniques approved by CDFG and included in the Streambed Alteration Agreement terms and conditions for the seasonal pump station. These provisions would be re-evaluated every five years. Implementation of these measures would protect fish from entrainment and impingement at the intake. The Action Alternatives would both include installation of a permanent CDFG-approved fish screen and provide a long-term reduction of fish impacts at the intake/diversion. Action Alternative construction would result in temporary, short-term disturbances of aquatic habitat; however, fish and water quality protection measures included in the Mitigation Plan would minimize these

effects to levels considered less than significant. The Mitigation Plan is included as Appendix D to the Final EIS/EIR and would be incorporated into Reclamation's construction contractor specifications. Potential water quality impacts upon fish habitat due to increased public use of the area would be minimized through stormwater runoff control and sanitation facilities. The Proposed Project would be the only alternative that would meet the objective of river restoration and enhanced fish/aquatic habitat at the project site. Fish passage through the project area would be improved under the Proposed Project by the river restoration; this benefit would not exist with the No Action/No Project or Upstream Diversion alternatives. However, these alternatives would not result in an adverse change from the existing condition.

Auburn Ravine

In response to the public and agency comments on the Draft EIS/EIR, PCWA identified an operational change that would involve maintaining its North Fork American River water releases to Auburn Ravine as under the existing conditions instead of releasing additional North Fork American River water into Auburn Ravine in exchange for Yuba/Bear River water. Water diverted from the North Fork American River would now be conveyed to the PCWA water supply distribution system using a process called double-pumping. After being pumped from the North Fork American River, water would flow within the Auburn Ravine Tunnel, and from the tunnel would be pumped again into PG&E's South Canal by the Auburn Ravine Tunnel Pump Station. The water would then flow within the South Canal where it would be delivered to the Foothill Water Treatment Plant (WTP). The formerly proposed American River water increase in Auburn Ravine therefore would be avoided; however, the American River water currently delivered to Auburn Ravine would remain within the limits of recent historical monthly maximum delivery rates.

The double-pumping commitment by PCWA is a more costly method of water conveyance but ensures that the potential impacts resulting from an increase in volume or a change in the seasonal distribution of flow in Auburn Ravine would be avoided. Still, American River water would be delivered to Auburn Ravine as historically conveyed, as well as via the Lincoln Wastewater Treatment and Reclamation Facility (WWTRF). Commenters suggest that these actions may still affect salmonid homing. However, a thorough review of the mechanisms that salmonids utilize when homing to natal streams indicates that it is unlikely that the Proposed Project or alternatives would produce a genetic disruption of Auburn Ravine salmonid stocks primarily due to the acute olfactory homing mechanisms in the salmonid family; the environmental homing cues and the fate of these cues within the study area; the sequential imprinting process; the probable lack of persistent, native Auburn Ravine stocks within the Central Valley Evolutionarily Significant Unit (ESU); and the mitigation programs of other water projects affecting Auburn Ravine. Similarly, the municipally delivered Proposed Project water which is distributed to the service areas of Placer County Department of Public Works SMD No. 3 and the two City of Roseville Wastewater Treatment Plants (WWTP) will undergo treatment as well, a process which is likely to drastically alter the homing cues before the effluent is discharged into Dry Creek and Pleasant Grove Creek. Therefore, the homing cues found in the American River water utilized within the PCWA service area are likely to be dramatically altered before entering Auburn Ravine, Dry Creek, and Pleasant Grove Creek suggesting that the water reaching these streams would retain low potential for attracting American River fish. These findings are described in detail in Response to Comments (Appendix C, Volume 1, Master Response 3.1.13, Auburn Ravine).

Diversion-Related Fisheries Effects in Regional Water Bodies

Changes to river flows and reservoir elevations in the regional study area would not be expected to result in adverse fish resources or aquatic habitat impacts due to the alternatives. Cumulative conditions, however, would result in potentially significant impacts to the following conditions affecting fish resources:

- Availability of littoral habitat for warmwater fish at Folsom Reservoir and an increase of nest-dewatering events;
- Availability of rearing habitat for juvenile fall-run chinook salmon and steelhead and increased water temperatures of the lower American River;
- Availability of useable habitat for splittail in the lower American River;
- Availability of littoral habitat for warmwater fish at Shasta Reservoir;
- Increased water temperatures of the upper Sacramento River, including additional exceedances of NMFS Biological Opinion temperature thresholds for winter-run chinook salmon and decrease in the long-term average early-lifestage survival for fall-run and winter-run chinook salmon;
- Increased water temperatures of the lower Sacramento River such that additional exceedances of temperature thresholds would occur;
- Decreased Delta outflow and shifts in X2 (2 parts per thousand (ppt) isohaline in the Delta);
- Changes in elevation and storage at Oroville Reservoir such that warmwater fish resources may be adversely affected; and
- Changes in flow of the lower Feather River such that fish resources may be adversely affected.

The assessment of the Action Alternatives' incremental contribution to these cumulative effects indicate that the Proposed Project and Upstream Diversion Alternative would not result in significant effects upon these resources or conditions.

Terrestrial Resources

The No Action/No Project Alternative would not result in disturbance of riparian or other vegetation and associated habitats at the project site beyond that which already occurs as part of the seasonal pump station installation under the existing condition. Because the site is already highly disturbed from past Auburn Dam construction activity, the Proposed Project and Upstream Diversion Alternative would result in vegetation/habitat loss, including riparian and wetland areas. Temporary habitat disturbance would result from construction of the proposed facilities and permanent habitat loss would occur due to placement of water supply and public river access features, including placement of excavated materials removed from the river channel within the study area (Figures S-7 and S-11). Overall, under the Proposed Project, approximately 3.35 acres

of vegetation and up to 37 acres of “disturbed” area (i.e., grasses, scattered shrubs, and trees) would be either temporarily or permanently affected, as shown below:

Urban	0
Potential Wetlands	0.01
Riparian Vegetation	1.06
Early Successional Oak Woodlands	2.08
Late Successional Oak Woodlands	0.20
Disturbed	37

Under the Proposed Project, restoration of the river channel would result in the replacement and enhancement of riparian/wetland areas at the site. Additional mitigation of potential wetlands, potentially involving restoration, enhancement or creation of wetland area, would be implemented according to consultations with resource agencies for the permanent loss of acreage that would occur if the Upstream Diversion Alternative were selected. Cumulative facilities-related impacts would be less than significant.

Bank and slope erosion would be common for annual flows much less than the 100-year flood event, and passive restoration according to site potential would occur naturally once the disturbed areas within the project area stabilize in response to natural processes associated with channel formation and seasonal fluctuations in river levels. However, until the extent of floodplain inundation and other channel characteristics have been established, it would not be practical to implement a revegetation program because the benefits of these efforts may be lost during high water events. Reclamation, through implementation of the environmental commitments included in the Mitigation Plan (Appendix D to the Final EIS/EIR), would monitor the area for natural vegetation growth and habitat establishment to determine whether adaptive resource management actions would be appropriate or needed in the project study area. Please see Master Response 3.1.5, Project Area River Restoration and the Mitigation Plan (Appendix D to the Final EIS/EIR).

Special-Status Wildlife Species

Pre-construction site surveys would be conducted to determine the presence of habitat and, if necessary, relocate individuals of California horned lizard, spotted bat, greater western mastiff-bat, yellow-legged frogs, western toads, and chorus frogs. A survey for red-legged frogs was ongoing in early June 2002 pursuant to the USFWS 1997 protocol and as a follow-up to the March 2002 red-legged frog habitat assessment performed at the project site. Findings of the survey will be provided to USFWS as part of the ESA Section 7 consultation for the Proposed Project. No red-legged frogs were sighted in the project area during the first phase of the observation period. However, should red-legged frogs be found to use the project area ponds, appropriate terms and conditions to mitigate for potential project impacts would be incorporated into the USFWS Biological Opinion for the project and included in the construction contractor specifications. Reclamation may not issue its Record of Decision for the project until the USFWS ESA consultation is complete. Additionally, construction worker briefings would be held to provide

educational materials regarding what to do should these species be observed during construction. These measures are included in the Mitigation Plan (Appendix D to the Final EIS/EIR) and would minimize habitat and special-status species impacts to less than significant.

Diversion-Related Effects to Terrestrial Resources Within Regional Water Bodies

Diversion-related changes to CVP operations affecting river flows and reservoir elevations would not be anticipated to result in adverse effects to riparian vegetation, open-water habitat, or associated wildlife habitat for the lower American River, upper or lower Sacramento River, the Delta, or Folsom, Shasta, or Trinity reservoirs under any alternative or under the cumulative condition. Future increased demands on the SWP would result in potentially significant impacts at Oroville Reservoir and along the lower Feather River. These effects are not directly or indirectly related to the Proposed Project.

Water Quality

The No Action/No Project Alternative and Action Alternatives would not be expected to result in significant water quality impacts at the project site. Avoidance of significant construction-related increases in sedimentation and turbidity would be accomplished through the implementation of environmental protection measures including standard Best Management Practices (BMPs) to control erosion of rock and soils from disturbed areas and to minimize, to the extent feasible, in-river use of construction equipment. Regulatory agency review and permitting processes would be completed under all alternatives and would require the implementation of additional site-specific terms and conditions to be determined through coordination with the U.S. Army Corps of Engineers (Corps), Regional Water Quality Control Board (RWQCB), and CDFG. The terms and conditions of the regulatory permits would include provisions to handle post-construction erosion and sedimentation that would result from restoration of the river channel.

Potential increases in constituent concentrations associated with decreased dilution capacities of the lower American River; upper and lower Sacramento River; Folsom, Shasta, or Trinity reservoirs; or the Delta would not be anticipated to result in state or federal drinking water quality criteria or standards to be exceeded, relative to the existing condition, under any of the alternatives. However, under the cumulative condition, reductions in river flows and reservoir elevations and shifts in X2 at the Delta would potentially lead to such violations. The assessment of the Action Alternatives' incremental contribution to these impacts indicates the Proposed Project or Upstream Diversion Alternative would have less than considerable effects.

Recreation

Project Trail Use During Construction Period

Under the Proposed Project and Upstream Diversion Alternative, some closure/restricted public access within the project construction areas would be necessary to protect the public and facilitate pump station construction, bypass tunnel closure, and river channel restoration. Restricted access in the project area is appropriate and required to protect the health and safety of the general public from the various hazards (i.e., heavy construction equipment operations, blasting, extensive

earthwork and unsafe materials, including explosives) associated with construction of the Action Alternatives as well as to protect the construction area and equipment.

The total area closed to public access would vary by construction phase and activity. Several trails pass around or through the project study area including Pioneer Express, Cardiac Hill, Cardiac Hill Bypass, Auburn-to-Cool, Riverview, Western States, Robie Point Fire Break, Pointed Rocks Fire Break and Olmstead Loop trails (**Figure S-14**). Construction of the Proposed Project would not affect public use of the Pioneer Express, Western States, Robie Point Fire Break, Pointed Rocks Fire Break or Olmstead Loop trails. Access impacts to these trails due to project construction would be less than significant.

Special events or activities utilizing these trails would not be expected to be adversely affected by construction of the Proposed Project. CDPD would work with special event coordinators including the Western States Endurance Run, Tevis Cup Western States Trail Ride and the American River 50-Mile Endurance Run, and Reclamation's construction contractor to avoid trail access impacts for these events. Coordination with event sponsors would enable CDPD and Reclamation to ensure safe, adequate passage along event routes for the set-up, operation and break-down/clean-up associated with each event. The impact of the Action Alternatives upon these annual trail events would be considered less than significant.

Auburn-to-Cool Trail

Under the Proposed Project, the closure of the Auburn Dam bypass tunnel and restoration of the North Fork American River to its historic channel would result in the bifurcation of the Auburn-to-Cool Trail, which currently crosses the dewatered portion of the river. Although the Auburn-to-Cool Trail serves mountain bikers, equestrians, runners, and hikers, the route is not a designated recreational trail. Rather, the Auburn-to-Cool Trail makes use of Auburn Dam Project construction roads on the south side of the canyon from the Olmstead Loop near Cool, crosses the dewatered section of river channel, and then follows construction roads up the north side of the canyon. Though the official route follows the primary construction road down to the Auburn Dam site from Maidu Drive to the bottom of the canyon, trail users follow several alternate routes up the north side of the canyon, including a steep dirt track that follows the approximate alignment of PCWA's temporary pipes.

The closure of the Auburn Dam bypass tunnel is a proposal made by, and which would be undertaken by, Reclamation in response to (1) assertions by the State of California that, in the absence of a Congressional commitment to proceed with the long-stalled Auburn Dam, Reclamation lacks authority to continue to divert water from the dewatered stretch of the North Fork American River through the bypass tunnel, and (2) the State of California's insistence that the river be restored to its historic (pre-Auburn Dam) channel. PCWA has tentatively agreed, subject to CEQA compliance, that the best location for a permanent pump station may be in a spot that is currently dewatered; but PCWA is by no means the primary actor in closing the tunnel and restoring the river. Nor does it control Reclamation's decision to do so. In fact, as Reclamation has acknowledged, the federal government has a contractual obligation, under the so-called "Land Purchase Agreement," to provide an interim pumping facility or alternative water supply until the Auburn Dam was completed. PCWA's interest is to obtain a permanent pump station that will