

**APPENDIX C**

---

**Alternative 4 Water Supply Pipeline Impact Analysis**

## INDIRECT EFFECTS FROM THE CONSTRUCTION OF WATER SUPPLY PIPELINE TO SERVE ALTERNATIVE 4

The Draft EIS stated that potable water to serve Alternative 4 would be provided by the Placer County Water Agency (PWCA). Water that would be used at the Alternative 4 site would be treated by the Foothill/Sunset system, which consists of the Foothill Water Treatment Plant (WTP) in Newcastle and the Sunset WTP in Rocklin. According to the Placer County Water Agency (PCWA), the unused treatment capacity within the Foothill/Sunset water system would be provided on a first come-first served basis. But the agency also noted that the buildout demands for the service area of the Foothill/Sunset system exceeded the capacity of the Foothill and Sunset water treatment plants and expansion of additional treatment capacity within Foothill/Sunset system would be necessary. The Draft EIS also noted that the treated water would be delivered through PCWA's existing transmission pipeline system to the vicinity of Industrial Avenue. There the water would be introduced into the City of Roseville's potable water system and conveyed to the intersection of Baseline and Fiddymont roads. The pipeline to serve Alternative 4 would connect to the City's distribution system at this location and extend along Baseline Road to the Alternative 4 site. Ground disturbing activities associated with pipeline installation would result in footprint impacts including impacts to biological resources and cultural resources which would be significant, but would be mitigated to less than significant with the proposed mitigation.

Based on further consultation with the PCWA staff, the U.S. Army Corps of Engineers (USACE) has determined that the current combined capacity of the Foothill/Sunset water treatment system is 66 Million Gallons per Day (mgd) with the Foothill plant providing 58 mgd of capacity and the Sunset plant providing 8 mgd of capacity. As discussed in Draft EIS Section 3.15, Utilities, the historic peak day demand on this system is 55 mgd, resulting in 11 mgd of unused capacity at the present time. According to PCWA, about half of this unused capacity is committed to future development in western Placer County, leaving about 5.5 mgd available for any new projects, including Alternative 4, on a first come-first serve basis. Based on a rate of 1,150 gallons per dwelling unit per day, this excess capacity could serve approximately 4,780 additional dwelling units. Given that Alternative 4 would provide 5,595 units, not enough unassigned capacity is available in the Foothill/Sunset system to serve Alternative 4, and the supply would need to be augmented with treated water from a new treatment source.

To meet future demand in western Placer County, the PCWA is planning to construct a new water treatment facility referred to as the Ophir Water Treatment Plant. This plant would add an additional 30 mgd to the system, and would serve the Alternative 4 site. PCWA has completed the environmental review for the construction and operation of the Ophir plant. With respect to conveying the treated water from this new plant to southwestern Placer County, a series of pipelines have been identified in conjunction with other proposed projects in the area, including the Placer Vineyards Specific Plan project

and have been evaluated for their environmental impacts in the Second Partial Draft EIR for Placer Vineyards Specific Plan prepared by Placer County (Placer County 2007).

The pipeline route identified in the Placer Vineyards Specific Plan EIR would extend from the Ophir plant through the City of Rocklin and north of the City of Roseville where it would then turn south down Watt Avenue along the western boundary of Roseville to Baseline Road. This pipeline alignment, shown on **Figure 1**, would also serve the Alternative 4 site. As noted in the Placer Vineyards Specific Plan EIR, the pipeline project would be proposed by the PCWA and constructed upon completion of appropriate environmental review by that agency.

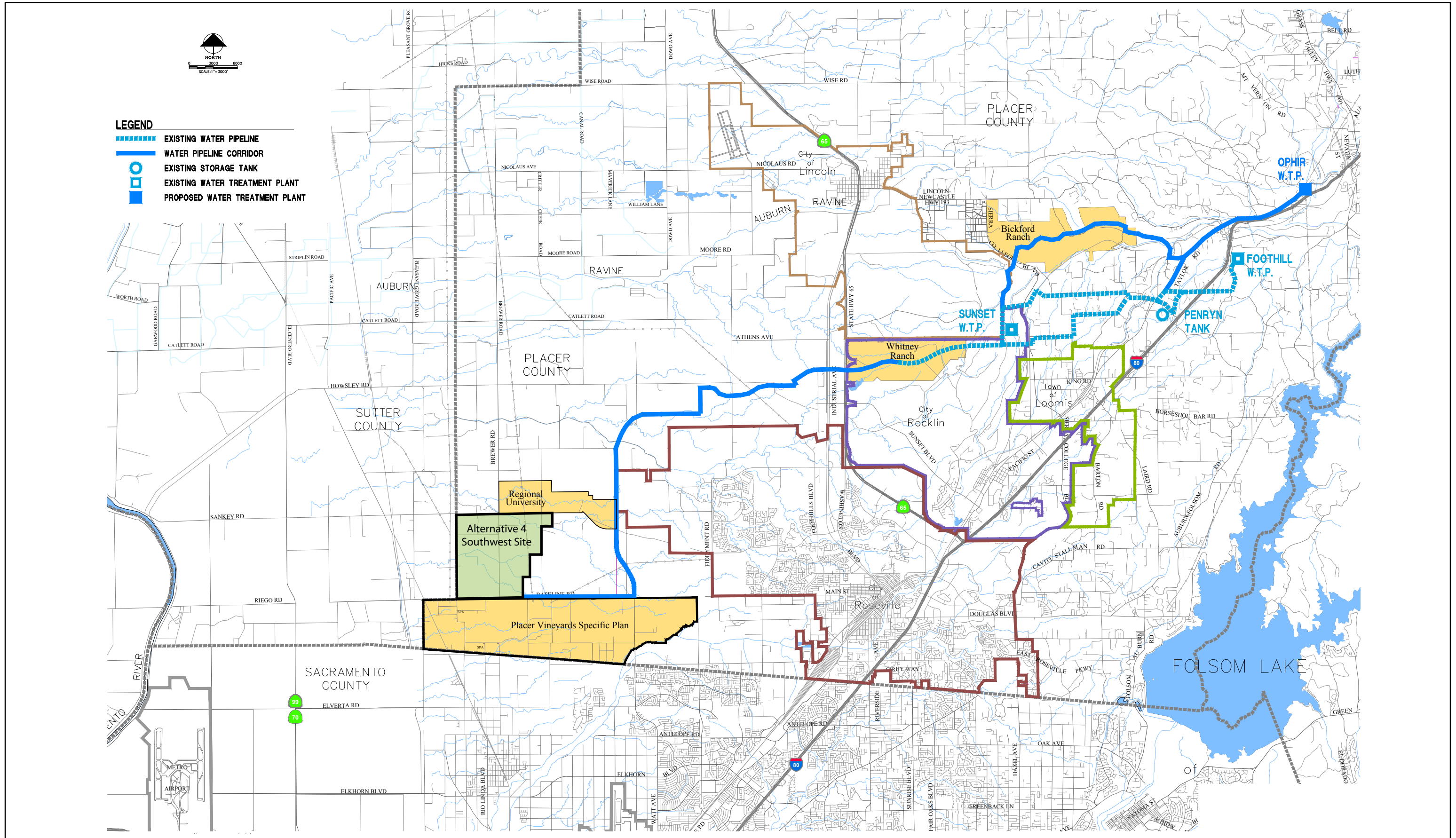
As it would not be constructed by the Sierra Vista Specific Plan Applicants, the pipeline is not a part of Alternative 4. However, because it is required in order to develop Alternative 4, the environmental effects from the construction of this water supply improvement are analyzed and reported below as potential indirect effects of Alternative 4.

#### **Indirect Effects on Aesthetics**

Council on Environmental Quality (CEQ) guidance requires an evaluation of a proposed action's effect on the human environment. USACE has determined that the pipeline project would result in significant effects related to aesthetics if it would have a substantial adverse effect on a scenic resource or substantially degrade the visual character of the site and its surroundings.

The construction and operation of off-site water pipeline infrastructure by the PCWA would result in **significant** effects to aesthetics. The corridors where the pipeline would be constructed are primarily along existing roadways and utility corridors. The infrastructure would mostly be underground and not visible, except at utility line access points. Once constructed, the corridor would be revegetated as necessary. The temporary disturbance of pipeline corridor in addition to aboveground permanent water pipeline structures would degrade the visual character in the area. The effects from permanent above ground pipeline infrastructure would be significant.

Although mitigation measures are available to reduce these effects to less than significant, USACE does not have the authority to impose mitigation measures on a project that would be built by the PCWA, and there is no guarantee that the mitigation measures would be implemented by the PCWA. Therefore, the USACE finds that the effects would remain **significant**.



SOURCE: County of Placer, 2007/ Impact Sciences, 2013

FIGURE 1

Water Supply Pipeline

### Indirect Effects on Agricultural Resources

The USACE has determined that the pipeline project would result in significant effects related to agricultural resources if it would result in the conversion of Important Farmland or land in active intensive agricultural production to non-agricultural uses; or place incompatible uses adjacent to existing agricultural uses. Important Farmland is defined as land that is designated as prime farmland, unique farmland, and land of statewide or local importance under the Farmland Mapping and Monitoring Program (FMMP).

The construction of off-site water pipeline infrastructure by the PCWA would result in **less than significant** effects on agricultural resources. The corridors where the water infrastructure would be constructed are primarily along existing roadways and utility corridors and would not affect Important Farmland. However, in some locations construction in the utility line corridor would result in temporary loss of use of agricultural land. Because the loss of use would be temporary and agricultural operations would be resumed once pipeline construction is completed, the effect would be **less than significant**. Operation of the pipelines would not result in disruption of agricultural land. Therefore, operational impacts would be **less than significant**. Mitigation is not required.

---

### Indirect Effects on Air Quality

The Air District has adopted thresholds for determining significant impacts on air quality. In accordance with guidance from the Council on Environmental Quality (40 CFR 1506.2), the USACE considers local standards when determining significance of the impacts of a proposed action. Therefore, the USACE has used the thresholds developed by the local Air District to evaluate the impacts of the pipeline construction on air quality. The Air District thresholds presented below in **Table 1, Placer County CEQA Significance Thresholds**, are for both construction and operation.

**Table 1**  
**Placer County Air District Significance Thresholds**

Pollutant	Threshold (lbs per day)
ROG	82
NOx	82
PM10	82
CO	550

ROG = reactive organic gases; NOx = oxides of nitrogen;  
PM10 = respirable particulate matter; CO = carbon monoxide.  
Source: Placer County APCD, (2010).

The construction activities associated with the off-site water pipeline infrastructure by the PCWA would result in **significant** effects to air quality. There would be no operational air quality emissions.

Construction of the pipeline would generate exhaust emissions, primarily NOx, from equipment. In addition, there would be fugitive dust emissions due to excavation, grading, and exposed earth. The duration and extent of the construction is unknown. Therefore, average daily construction emissions cannot be estimated. Nonetheless, given the nonattainment status of the Air Basin with respect to ozone and particulate matter, the USACE conservatively assumes that the emissions would result in a **significant** impact. While standard construction-phase mitigation measures would reduce the emissions, the emissions have not been estimated, so it cannot be concluded that the emissions would be reduced to below thresholds. Therefore, the impact would not be fully mitigated and a **residual impact** would result. Furthermore, the USACE does not have the authority to impose mitigation measures on a project that would be built by the PCWA and finds that the effect would remain **significant**.

### **Indirect Effects on Biological Resources**

The Council on Environmental Quality (CEQ) regulations requires an evaluation of a proposed action's ecological effects such as the effects on natural resources and on the components, structures and functioning of affected ecosystems (40 CFR 1508.8), as well as effects in Endangered or Threatened species or their habitat (40 CFR 1508.27). The National Environmental Policy Act (NEPA) does not specify significance thresholds to evaluate the effects of a proposed action on biological resources. For purposes of evaluating the effects in this EIS, the USACE has determined that the pipeline project would result in significant effects on biological resources if it would have a substantial adverse effect, either directly or

through habitat modification, on any species identified as a candidate, sensitive, Threatened, Endangered, or special-status species, in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or the U.S. Fish and Wildlife Service (USFWS), or on riparian habitat, or on waters of the United States, or interfere with the movement of any native, resident, or migratory wildlife species.

The construction and operation of off-site water pipeline infrastructure by the PCWA which would be used by Alternative 4 was evaluated in the Second Partial Draft EIR for Placer Vineyards Specific Plan (PVSP) (Placer County 2007) prepared by Placer County. The analysis in the EIR concluded that construction activities associated with the water pipeline infrastructure would have the potential to impact wetlands (including vernal pools) and other jurisdictional aquatic features, riparian habitat, nesting habitat for raptors and other migratory birds, and elderberry shrubs providing habitat for the Valley elderberry longhorn beetle. The off-site water pipeline could cross several streams and listed fish species could occur in those streams. The effect on biological resources was determined to be potentially **significant**. The EIR noted that mitigation measures included in the Placer Vineyards Specific Plan EIR to address off-site infrastructure impacts could reduce the impacts of the water pipeline infrastructure, but that all impacts may not be reduced to a less than significant level.

At this time, the pipeline project has not been put forth by PCWA. However, because the pipeline project will most likely involve filling of the waters of the US, PCWA will require a permit from the USACE. As part of the permit process, the USACE will require that all project impacts on jurisdictional waters and other biological resources be mitigated to a less than significant level. The USACE finds that because of the USACE's no net loss policy, with compliance with permit conditions, impacts to waters of the U.S. would be reduced to a less than significant level. The USACE finds that other impacts including impacts to raptors, migratory birds, the Valley elderberry longhorn beetle, and listed fish species, would also be reduced to less than significant as the project would be required to comply with the federal and state Endangered species acts and implement the conditions of the biological opinion.

---

### **Indirect Effects on Climate Change**

NEPA does not specify significance thresholds that may be used to evaluate the effects of a proposed action on global climate. As the appropriate approach to evaluating a project's impact on global climate under NEPA is still under development, consistent with CEQ guidance, the USACE examined State of California and local guidance and protocols related to the effects of greenhouse gas (GHG) emissions to

select a threshold of significance to use to evaluate the effect. No thresholds are available at the state or local level to evaluate the impacts on climate from the construction of the water pipeline.

The construction and operation of off-site water pipeline infrastructure by the PCWA would result in **less than significant** effects to climate change. The duration and extent of construction is unknown. However because construction emissions of GHG would be short term and very small compared to the operational GHG emissions of any development project or the construction emissions of Alternative 4, and mitigation measures that are routinely implemented to reduce criteria pollutant emissions from construction equipment would also reduce GHG emissions, the impact from construction-phase GHG emissions associated with pipeline infrastructure would be less than significant. There would be no operational GHG emissions related to maintenance of the off-site water pipeline.

---

### Indirect Effects on Cultural Resources

Under the National Historic Preservation Act (NHPA), the federal Lead Agency is required to take into account the effects of its undertakings on historic properties. If historic properties are present within the project Area of Potential Effects, the Lead Agency must determine whether its actions would adversely affect the significance of the historic property.

Under federal regulations, a project has an effect on an historic property when the undertaking could alter the characteristics of the property that may qualify the property for inclusion in the National Register of Historic Places (NRHP). An undertaking may be considered to have an adverse effect on an historic property when it may diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Adverse effects on historic properties include, but are not limited to, physical destruction, alteration, or removal of all or part of the property or change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance.

The construction and operation of off-site water pipeline infrastructure by the PCWA would have a **less than significant** impact on Native American archaeological resources and **unknown effects** on historic sites.

The record search indicates that there is one Native American site identified on the basis of an archaeological isolate discovered along the pipeline reaches. The discovery of a single artifact does not indicate that the site is highly sensitive. However, it is possible that Native American archaeological features or deposits may be buried along the water pipeline route particularly near waterways. If a



NRHP-eligible buried archaeological deposit or feature, or human remains—either in an archaeological context or in isolation—were discovered during construction, disturbance or destruction of the deposit or the remains would constitute a **significant** effect to an historic property. Therefore, **Mitigation Measure CR-1** would apply to any archaeological sites that are encountered during construction and would reduce this effect to **less than significant**.

With respect to features of the built environment that could potentially be historic, the significance of each feature located along or near the proposed pipeline route would need to be individually assessed. Certain sites, specifically linear sites such as canals, railroads, roads, and fences, do not display integrity along the entire length. Therefore, each individual feature would need to be evaluated to determine eligibility of the specific segment for the NRHP. The effect to historic sites along or near the proposed water pipeline route cannot be determined at this time. In the event that a Section 404 permit is sought by PCWA for the pipeline project, a detailed evaluation of all features would be completed in order to comply with Section 106. If some features are determined to be historic resources, appropriate mitigation measures would be developed and implemented.

The USACE notes that at this time, the PCWA has not submitted an application to the USACE for a Section 404 permit for the pipeline infrastructure project, and therefore at the present time, USACE does not have a mechanism to any mitigation measures on the infrastructure project.

---

### **Indirect Effects on Environmental Justice, Population, and Housing**

NEPA does not specify significance thresholds that may be used to evaluate the effects of a proposed action related to environmental justice. However, CEQ guidance requires an evaluation of a proposed action's effect on the human environment, and the USACE must comply with Executive Order 12898. The USACE has determined that the pipeline project would result in significant effects related to environmental justice if it would disproportionately adversely affect an environmental justice (EJ) community through its effects on environmental conditions such as quality of air, water, and other environmental media; degradation of aesthetics, loss of open space, and nuisance concerns such as odor, noise, and dust, public welfare in terms of social conditions such as reduced access to certain amenities like hospitals, safe drinking water, public transportation, etc. or public welfare in terms of economic conditions such as changes in employment, income, and the cost of housing, etc.

The construction and operation of off-site water pipeline infrastructure by the PCWA would result in **less than significant** effect on environmental justice, population, and housing.

The construction of the infrastructure may induce population growth in the area. However, the water pipeline would be built to provide for anticipated population growth that would remain within Sacramento Area Council of Governments (SACOG) growth projections. The proposed pipeline would not displace any population or housing. The construction activities would also not disproportionately affect minority or low-income populations. Therefore, the effect on environmental justice, population, and housing from the water pipeline infrastructure would be **less than significant**. Mitigation is not necessary.

---

### **Indirect Effects Associated with Geology, Soils, and Minerals**

The USACE has determined that the pipeline project would result in significant effects related to geology and soils if it would preclude the development of or access to mineral deposits, expose structures to strong seismic ground shaking, seismically induced ground failure, including liquefaction, landslides, other slope failure, or result in substantial soil erosion or the loss of topsoil.

The construction and operation of off-site water pipeline infrastructure by the PCWA would result in **significant** effects associated with geology, soils, and minerals. The area around the pipeline route is not known for mineral deposits. In addition, the route would be constructed along existing roadways and utility easements, which under existing conditions would limit access to potential mineral deposits. Therefore, construction and operation would not prevent access to potential mineral deposits.

The pipeline route is located in an area of low seismic activity, limiting risk from seismic groundshaking, or liquefaction. The pipeline would be constructed on primarily flat terrain, reducing the possibility of slope failure. There may be expansive soils along the pipeline route. The County requires compliance with the California Building Code which would reduce risk associated with seismic hazards and expansive soils. As analyzed in the PVSP Second Partially Recirculated Revised Draft EIR dated March 2007, there are no areas of suspected or potential ground instability. However, erosion is expected to occur in disturbed soil areas. Soil stockpiles are also susceptible to erosion and soil loss. These impacts would be significant.

Mitigation measures are available to reduce the effects related to erosion to a less than significant level. However, the USACE does not have the authority to impose mitigation measures on a project that would be built by the PCWA and finds that the effects would remain **significant**.

### Indirect Effects Associated with Hazards and Hazardous Materials

NEPA does not specify significance thresholds that may be used to evaluate the effects of a proposed action on hazards and hazardous materials. However, CEQ regulations require an evaluation of the degree to which the proposed action could affect public health or safety. The USACE has determined that the pipeline project would result in significant effects related to hazards and hazardous materials if it would result in exposure of construction workers or the public to contaminated soil or groundwater or expose people to a public safety hazard.

The construction and operation of off-site water pipeline infrastructure by the PCWA would result in **significant** effects associated with hazards and hazardous materials. The pipeline would convey potable water to the project site and other nearby areas which even if damaged, would not represent a hazard to residents near the pipeline route. As analyzed in the PVSP Second Partially Recirculated Revised Draft EIR dated March 2007, construction of the water pipeline may subject construction workers to hazardous materials such as petroleum products, underground storage tanks (USTs), contaminated soils, refuse, abandoned wells, septic systems, and structures containing asbestos. Although construction activities would be subject to federal and state hazardous materials regulations and worker safety regulations regarding handling of and exposure to hazardous materials, and the infrastructure project would be required to comply with National Pollutant Discharge Elimination System (NPDES) requirements, including submission of a Storm Water Pollution Prevention Plan (SWPP), nonetheless significant impacts could occur. Although mitigation measures are available to reduce the effects associated with hazards and hazardous materials from off-site infrastructure to a less than significant level, the USACE does not have the authority to impose mitigation measures on a project that would be built by the PCWA and finds that the effects would remain **significant**.

---

### Indirect Effects related to Hydrology and Water Quality

CEQ guidance requires an evaluation of a proposed action's effect on the human environment. The USACE has determined that the pipeline project would result in significant effects related to hydrology and water quality if it would

- substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site;
- place structures within a 100-year floodplain or place structures that would impede or redirect flood flows; or

- during and post construction, create substantial additional sources of polluted runoff that could affect water quality.

The construction and operation of off-site water pipeline infrastructure by the PCWA would result in **significant** effects to hydrology and water quality. As analyzed in the PVSP Second Partially Recirculated Revised Draft EIR dated March 2007, the pipeline route would be constructed along existing roadways and utility easements. The pipeline would primarily be underground. Construction would generally replace the existing surface material with similar or in-kind surface materials. Therefore, construction of the pipeline would not result in a substantial increase in impervious surfaces or runoff. As discussed in the EIR, the proposed pipeline route would cross waterways and 100-year floodplains. However, the pipeline would be buried and enclosed and would not cause any impacts to the waterways or floodplains.

As discussed in the EIR, grading operations would result in loss of vegetation and expose soils to erosion. Construction equipment and vehicles could release contaminants. Storm water could transport eroded soil and contaminants into nearby waterways contributing to higher sediment loads. The increased sediment loads and turbidity in local waterways would be considered a significant short-term water quality impact. Mitigation measures are identified in the Placer Vineyards EIR to reduce the effects associated with erosion to a less than significant level. These mitigation measures require a General Construction Activity Stormwater Permit under the NPDES from the State Water Resources Control Board (SWRCB). As the project would be required by federal and state law to comply with NPDES requirements, the impact related to soil erosion and polluted runoff during construction would be reduced to a less than significant level.

---

### **Indirect Effects related to Land Use and Planning**

The USACE has determined that the pipeline project would result in significant effects related to land use and planning if it would result in the development of incompatible land uses, physically divide an established community, or conflict with applicable plans, policies, or regulations.

The construction and operation of off-site water pipeline infrastructure by the PCWA would result in **less than significant** effect on land use and planning.

The water pipeline would not conflict with neighboring agricultural, rural and urban land uses as construction of the improvements would be temporary and would mostly occur within existing rights of way. Use of agricultural land may be temporarily disturbed during construction. The majority of the

proposed infrastructure would be underground and would not disturb any adjacent land uses during or divide existing communities.

Placer County General Plan Policy 4.A.2 requires that the County ensure through the development review process that adequate public facilities and services are available to serve new development. The pipeline would be constructed to supply water to projects in the area, including Alternative 4, as required by the General Plan. There would be no conflict with General Plan policies. Therefore, the effect on land use and planning from the water pipeline infrastructure project would be **less than significant**. Mitigation is not necessary.

---

### Indirect Effects on Noise

CEQ guidance requires an evaluation of a proposed action's effect on the human environment. The USACE has determined that the pipeline project would result in significant effects related to noise if its construction would expose persons to noise levels in excess of standards established in the City of Roseville Municipal Code Noise Ordinance or the noise standards established in the Placer County Noise Ordinance and the Noise Element of the Placer County General Plan or expose persons to excessive ground-borne vibration or ground-borne noise levels.

The construction of off-site water pipeline infrastructure by the PCWA would result in **less than significant** effects related to noise. The water infrastructure would be primarily underground pipelines that would not disturb nearby noise sensitive land uses. Therefore, operational impacts would not be significant. Construction of the proposed water pipeline would not involve pile driving or other unusual construction practices which would result in higher noise levels. Increased truck traffic along area roadways would generate noise during construction. As analyzed in the PVSP Second Partially Recirculated Revised Draft EIR dated March 2007, construction activities would be temporary and generally occur during normal daytime working hours. However, should construction be undertaken during nighttime hours, construction noise could result in annoyance or sleep disruption for nearby residents, or if equipment is not properly muffled or maintained, the noise levels could affect nearby residents. This would be a significant effect. However, the infrastructure project would comply with the Placer County Noise Element standards and the Placer County Noise Ordinance which would reduce the effect to **less than significant**.

### **Indirect Effects on Public Services**

The USACE has determined that the pipeline project would result in significant effects related to public services if it would interfere with emergency response for police or fire protection services.

Construction activities, such as additional truck traffic, could affect emergency response times for police and fire protection. However, construction would be temporary and the project would be subject to standard County and state traffic control and access procedures. The effect on public services from the water pipeline infrastructure project would be **less than significant**.

---

### **Indirect Effects on Transportation and Traffic**

The USACE has determined that the pipeline project would result in significant effects related to transportation and traffic if the traffic added by it resulted in the exceedance of significance thresholds established by the City of Roseville and Placer County for facilities within their jurisdiction.

The construction and operation of off-site water pipeline infrastructure by the PCWA would result in **less than significant** effects to transportation and traffic. As analyzed in the PVSP Second Partially Recirculated Revised Draft EIR dated March 2007, construction activities would increase truck traffic on roads in the area. However, construction would be temporary and the project would be subject to standard County and state traffic control and access procedures. Once installed underground, the pipelines would not affect traffic. Therefore, the effects on transportation and traffic from the water pipeline project would be **less than significant**.

---

### **Indirect Effects on Utilities**

The USACE has determined that the pipeline project would have a significant effect on the human environment if it would interfere with the provision of utility services to the project area.

The construction and operation of off-site water pipeline infrastructure by the PCWA would result in **less than significant** effects to utilities. Construction activities associated with off-site water pipeline such as additional truck traffic could interfere with solid waste collection. However, construction would be temporary and the project would be subject to standard County and state traffic control and access procedures. No other effects would result from the construction and operation of the pipeline. The effect on utilities from the water pipeline project would be **less than significant**.