

# Cumulative and Growth-Inducing Effects

## 15.1 Introduction

The purpose of this chapter is to discuss and analyze the cumulative and growth-inducing impacts associated with the Farad diversion dam replacement project on the Truckee River system. Section 15355 of the State CEQA Guidelines defines cumulative impacts as two or more individual impacts that, when considered together, are considerable or that compound or increase other environmental impacts. These individual impacts may be changes resulting from a single project or a number of separate projects. The cumulative impact of several projects is the change in the environment that results from the incremental impact of the proposed project when added to other closely related past, present, or reasonably foreseeable, probable future projects.

An EIR must discuss the cumulative impacts of a project when the project's incremental effects are cumulatively considerable. Section 15130 of the State CEQA Guidelines state that the following elements are necessary for an adequate discussion of cumulative impacts:

- An analysis of related probable future or planned projects that affect resources or produce impacts similar to those affected or produced by the proposed project
- A summary of the expected environmental effects to be produced by those projects with specific references to additional information; and
- A reasonable analysis of the cumulative impacts of the relevant projects and reasonable feasible options for mitigating or avoiding the project's contribution to any significant cumulative impacts.

An EIR must also discuss how the proposed project, if implemented, could induce growth. A project can be considered to have a growth-inducing effect if it directly or indirectly fosters economic or population growth or removes obstacles to population growth [14 CCR 15126.2 (d)].

## 15.2 Cumulative Impacts

### 15.2.1 Affected Environment

For the purposes of this chapter, cumulative impacts on the Truckee River system were evaluated for the region from Lake Tahoe to Pyramid Lake. Specific emphasis is placed on related regional projects that would modify or change the operating conditions (i.e., instream flows and reservoir releases) on the Truckee River and construction projects near the project area.

#### 15.2.1.1 Approach

To identify related projects to be evaluated in a cumulative impact assessment, the State CEQA Guidelines (14 CCR 15130[b]) recommend creating either:

- a *list* of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, projects outside the control of the agency or
- a *summary* of projections contained in an adopted general plan, related planning document, or prior environmental document that has been adopted or certified.

This cumulative impact analysis identifies related projects using the list approach. Therefore the direct and indirect impacts of the project alternatives are considered in combination with the impacts of closely related past, present, or reasonably foreseeable and probable future projects. The criteria used for selecting related projects for this analysis are as follows:

- the project must be sufficiently related to the proposed project either by location within the Truckee River watershed boundaries from Lake Tahoe to Pyramid Lake or by production of similar types of impacts on similar or shared resources (e.g., water diversion to the Carson River watershed via the Truckee Canal),
- the project must be reasonably foreseeable,
- the specifics of the project design or operation must be known or predictable, and
- implementation of the project must produce additional impacts beyond those already considered in this EIR

#### 15.2.1.2 Sources of Information

The information used to develop the related-project list was obtained from federal, state, and local agencies with discretion and oversight for regulating

projects in the Truckee River watershed. Information was accessed through requests for printed materials and environmental documentation pertaining to the projects, personal communications with agency staff or consultants (Walker, Bouton, and Hunn pers. comms.), and Internet resources. This information, in combination with the evaluations prepared for each resource topic and contained in this EIR, was used for the cumulative impacts assessment.

### **15.2.1.3 Regional Setting and Related Projects List**

As described in earlier chapters of this document, the Truckee River basin is managed and regulated by a variety of federal and state agencies. Regulation is established primarily through formal operating agreements and strict operational requirements for controlled reservoir releases. The purposes of regulation are to maintain long-standing water rights and to ensure water supply for municipal, industrial, agricultural, and environmental uses. Increased visitation and growth in the Truckee River basin have fueled the need for new development and infrastructure that could adversely affect the Truckee River.

The projects listed in this analysis were selected for their potential to cause direct physical changes in the Truckee River from Lake Tahoe to Pyramid Lake. Because water is diverted from the river to reservoirs outside of the Truckee River's watershed boundaries, it is possible that projects occurring in neighboring watersheds could contribute to cumulative impacts. These projects were included if they met the criteria listed above. Projects included in this list have been organized into the following three general categories:

- water supply and flood control projects,
- habitat improvement and fish passage projects, and
- utility and infrastructure projects.

#### **Water Supply and Flood Control Projects**

##### **15.2.1.3.1.1 Truckee River Operating Agreement**

The TROA is intended to provide a more flexible a basin-wide approach to operating reservoirs and managing water releases in the Truckee River watershed. Public Law 101-618 directs the Secretary of the Interior to negotiate an operating agreement with the States of Nevada and California after consultation with other parties designated by the Secretary or the States. The TROA cannot take effect until it is signed by the Secretary, the States, SPPC, and the Pyramid Lake Paiute Tribe. Other parties who have taken part in the negotiations may also sign the agreement. A draft EIR/EIS for the TROA was released in 1998; however, negotiations among the parties to the agreement are still in progress and another draft EIS/EIR will be prepared.

If TROA is signed and becomes effective, it will alter the streamflow regime so that it is different from the baseline conditions used to evaluate impacts in this

analysis. Generally, TROA operations would likely decrease instream flows during wet periods by 100–200 cfs and increase flows during dry periods.

#### **15.2.1.3.1.2 Recoupment Flows**

In 1995, the United States filed a class action lawsuit on behalf of the PLPT against the TCID board of directors for repayment of at least 1,057,000 af of water allegedly illegally diverted from the Truckee River to the Newlands Project. This alleged diversion occurred between 1973 and 1987 (15 years) in violation of the 1973 Operating Criteria and Procedures for the river (Nevada Division of Water Planning 1997). The lawsuit is still pending before the United States District Court. Recoupment of the lost flows would result in less water being diverted to the Truckee Canal and additional water flowing past Derby Dam to Pyramid Lake. The court will decide the amount, timing, and method of recoupment.

#### **15.2.1.3.1.3 Water Quality Settlement Agreement**

The Water Quality Settlement Agreement provides for the purchase of water rights on the lower Truckee River and for the Newlands Project in an attempt to resolve major water quality and aquatic resource problems. The parties involved in the agreement are the Cities of Reno and Sparks, the Washoe County Water Conservation District, the PLPT, the U.S. Department of the Interior, the U.S. Department of Justice, EPA, and the Nevada Division of Environmental Protection. The local governments of Reno, Sparks, and Washoe County have agreed to provide \$12 million for the purchase of downstream water rights. The U.S. Department of Interior in turn has agreed to match this amount with federal funds. The water purchased would be used to dilute treated effluent discharges, which in turn would improve water quality and provide more water for Pyramid Lake (Western Water Policy Review Advisory Commission 1997). All water associated with this program will be stored in federally managed reservoirs and released according to agreed schedules and management procedures implemented as part of the TROA.

#### **15.2.1.3.1.4 Truckee Meadows Flood Control Project**

USACE is currently proposing a project to provide increased flood control protection on the Truckee River. The primary study area for this project includes the Truckee River in Washoe County, Nevada, at and below Reno, Sparks, and the Truckee Meadows. A tentative flood control plan consists of storage facilities on the Truckee River at Verdi, interceptor facilities on Steamboat Creek, and channel improvements in the Truckee Meadows area. Specific flood control measures would include the construction of floodwalls and levees to confine the flow of the river as well as the construction of a detention basin near University Farms, southeast of Reno, Nevada (U.S. Army Corps of Engineers 2000). The project's status is currently in the feasibility and "citizen review" stage of the USACE project development process.

## Habitat Improvement and Fish Passage Projects

### 15.2.1.3.2.1 Derby Dam Fish Passage Facility

The Truckee-Carson Diversion Dam (Derby Dam) is located on the lower Truckee River approximately 11 miles above Wadsworth in Washoe County, Nevada. The dam is a key component of the Newlands Project, diverting water into the Truckee Canal for irrigation and storage. The Lahontan Basin Area office of USBR has proposed the construction of a fish passage facility to provide access for resident and migratory fish species (including the endangered cui-ui and threatened Lahontan cutthroat trout) to spawning and rearing habitat upstream of the dam. The project would also provide passage by the dam during current operating conditions (U.S. Bureau of Reclamation 2000). USBR proposes to use the same low-flow fish passage design that the project applicant proposes to use at Farad. A draft environmental assessment has been prepared that identifies affected resources and evaluates several project alternatives.

### 15.2.1.3.2.2 Numana Dam Fish Passage

USACE is investigating the potential for improving fish passage facilities at Numana Dam downstream of Derby Dam at river mile 8.3. USACE has investigated a range of alternatives, including a fish passage channel and removal of the dam. The preliminary alternative involves the removal of the dam (U.S. Army Corps of Engineers 1998). The project will be further developed after decisions are made regarding the provision of irrigation water to lands served by diversions from the dam.

### 15.2.1.3.2.3 Tahoe/Truckee/Pyramid Restoration and Recovery Implementation Plan

USFWS has assembled a multiagency team pursuant to ESA to study the needs of the Truckee River and its associated life. The team's primary responsibility is the development of a Restoration and Recovery Implementation Plan for the Truckee River basin. This plan will address and prioritize strategies to improve the Truckee River ecosystem to facilitate the restoration and recovery of Lahontan cutthroat trout and cui-ui populations in the basin. The plan will also address facilities on the river that may obstruct the passage of Lahontan cutthroat trout and cui-ui populations. Restoration efforts for cui-ui will focus primarily in the Pyramid Lake/lower Truckee River region, whereas those for Lahontan cutthroat trout will range from Pyramid Lake to various localized areas in the watershed (U.S. Fish and Wildlife Service 1999). The likely result of the implementation of these effects will be increased spawning and recovery of the cui-ui. The Farad diversion dam project (proposed project) is designed to conform to this recovery plan.

### 15.2.1.3.2.4 Instream Flow Regimes ("Cottonwood Flows")

There has been an increased effort by USFWS and DFG to establish minimum instream flow requirements for native fish populations, macroinvertebrates, cottonwood regeneration, recreational uses, and overall river health. In past years, an attempt has been made by USFWS and DFG to accommodate the spread and germination of cottonwood trees along the lower Truckee River by timing the release of water from upstream reservoirs to correspond with optimal

germination periods from May to early July (Gourley 1996). This attempt has been accomplished largely through an informal agreement between the Federal Watermaster, USBR, irrigation districts, and USFWS. It is anticipated that an instream flow regime for cottonwood regeneration would be implemented during appropriate water years with or without the implementation of TROA (U.S. Bureau of Reclamation 1998). Operation of the proposed project will not be inconsistent with these goals.

## **Utility and Infrastructure Projects**

### **15.2.1.3.3.1 I-80 Pavement Rehabilitation and Bridge Replacements East of Truckee in Nevada County**

Caltrans proposes to rehabilitate a 10.9-mile segment of I-80 from the Union Mills Bridge Overhead to Truckee River Bridge No. 17-63. The scope of this rehabilitation project includes overlaying existing roadways, shoulders, medians, ramps, and gore areas as well as the bridge decks and approach slabs of the Boca Bridge Overhead and the Union Mills Bridge overhead. In addition, 6 bridges in the area will be removed and replaced with wider structures. Caltrans has prepared an initial study and subsequent negative declaration pursuant to the CEQA finding that the proposed project will not have a significant impact on the environment.

The I-80 Floriston bridge rehabilitation consists of removing and replacing the deck of the bridge, removing the structural piers in the river and replacing them with pilings, and regrading the river channel sideslopes under the bridge. The rafting take-out on river left will be removed. An unimproved maintenance road will be provided under the bridge on river right. Construction is anticipated to take two seasons, and was initiated during the summer of 2001 and will continue in 2002. Construction staging will largely take place at the Caltrans maintenance building and yard east of I-80.

### **15.2.1.3.3.2 Tahoe-Truckee Sanitation Agency Water Reclamation Plant Expansion Project**

The Tahoe-Truckee Sanitation Agency is proposing to expand the capacity of its existing water reclamation plant to meet the needs of present and future population growth in its service area. The proposed expansion will be designed to accommodate future wastewater flows based on the peak summer population of about 143,000 people who are expected to reside in the service area by 2015 (Tahoe-Truckee Sanitation Agency 1999). The proposed plant expansion includes updates to existing facilities and the addition of a new effluent disposal field within the agency's property near the Truckee River. Recently, staff from the Lahontan RWQCB met with representatives of the Tahoe-Truckee Sanitation Agency to discuss the potential water quality impacts of the proposed plant expansion, which will be addressed in the cumulative impacts analysis of the TROA environmental documentation (California Department of Water Resources 2000).

#### **15.2.1.3.3.3 State Route 267 Truckee Bypass**

Caltrans is constructing a bypass to SR 267 that will reroute traffic around downtown Truckee and connect with I-80. The bypass project involves construction of a new bridge over the Truckee River downstream from the downtown Truckee area (California Department of Transportation 1992). Construction of the project began in 1999.

## **15.2.2 Cumulative Impact Assessment**

As explained above, under “Approach,” cumulative impacts of the proposed project have been evaluated using the list approach. The direct and indirect impacts of the project alternatives are considered in combination with the impacts of the closely related past, present, or reasonably foreseeable and probable future projects identified above. For the Farad diversion dam replacement project, cumulative impacts are analyzed qualitatively.

The water supply and flood control projects listed above are designed to improve the reliability and certainty of Truckee River flows for a broad range of interests, including agricultural, municipal, industrial, recreational, and environmental interests. The cumulative net effect resulting from these projects is anticipated to be positive. However, these projects may result in some negative impacts, including localized changes in water temperature, recreation impacts, or changes in water supply availability or reliability as described below in the cumulative impact analysis for the project alternatives.

Habitat improvement and fish passage projects, as well as utility and infrastructure projects, are generally designed to improve fish passage, restore ecosystem components, or improve existing transportation and utility networks throughout the region. Although these projects could result in temporary impacts, such as increased sedimentation caused by construction, they are expected to be beneficial over the long term.

### **15.2.2.1 Criteria for Determining Impact Significance**

Cumulative impacts were considered significant if the project, when considered with closely related past, present, or reasonably foreseeable and probable future projects, would contribute to cumulative adverse impacts on any of the resource areas identified in chapters 3–13. Refer to the respective chapters for more detailed information on the significance criteria used for evaluating impacts on the given resource area.

## 15.2.2.2 Impacts and Mitigation Measures of Alternative A: Proposed Project

### Hydrology

#### Impact 15-1: Change in Flows in the Truckee River under Cumulative Conditions

Flows in the Truckee River are subject to the regulatory and legal agreements currently in place, as well as those that will be established as part of the TROA. Implementation of the TROA would result in modifications to the timing and quantity of flows in the Truckee River. In general, greater streamflows in dry hydrologic conditions and lower streamflows in wet hydrologic conditions would occur under the TROA. This change would occur primarily as a result of increased storage of water in upstream reservoirs during wet conditions for release during dry hydrologic conditions. Under some hydrologic conditions, water-right holders would forego diversions for storage credit in upstream reservoirs. This “credit water” could then be released later to improve flows for natural resources while maintaining deliveries for municipal and industrial water-right holders.

Changes to river flows resulting from implementation of water supply and flood control plans, including the TROA and related agreements, in combination with the Farad diversion dam replacement project, are not considered cumulatively adverse. Therefore, this impact is considered *less than significant*. No mitigation is required.

### Water Quality

#### Impact 15-2: Increase in Water Temperature in the Truckee River under Cumulative Conditions

Water supply and flood control projects on the Truckee River are being designed to maintain or enhance flows for natural resources along the river. As indicated in chapter 4, “Water Quality,” 92% of the variability in mean water temperature is caused by variation in mean daily air temperature and modeled water temperature in the bypassed reach only increased by 0.1°C. Additional modeling may need to be conducted for TROA, but a cumulative increase in water temperature is not expected because weather plays such a key role in determining water temperature and because operational changes would account for seasonal temperature and flow variation, thus maintaining water temperatures at or near existing conditions. Individual river segments such as the project operation area or areas immediately downstream of top-discharging reservoirs (i.e., Lake Tahoe and Donner Lake) could experience an increase in temperature, depending on the season and instream flows, but these changes are not anticipated to cumulatively decrease water quality. Therefore, this impact is considered *less than significant*. No additional mitigation is required.



### **Impact 15-3: Degradation of Surface Water Quality in the Construction Area under Cumulative Conditions**

The simultaneous construction periods of the proposed project and Caltrans' I-80 Floriston bridge replacement project could result in degradation of surface water quality (i.e., oil and grease, sediment and turbidity) that exceeds Basin Plan standards. Caltrans' in-channel construction activities have resulted in a degradation of water quality during winter storm events in 2001; however, new BMPs and stricter monitoring are anticipated to resolve these issues. Future preparation for winter flows by both Caltrans and the project applicant, and permitting and monitoring by the Lahontan RWQCB, are anticipated to minimize the potential for an adverse effect. This impact is considered *less than significant*.

## **Geology, Seismicity, and Soils**

### **Impact 15-4: Increase in Erosion and Sedimentation in the Truckee River under Cumulative Conditions**

Construction associated with utility and infrastructure projects on the Truckee River could result in temporary, localized increases in sediment runoff and accidental discharge of pollutants. However, because individual construction projects are required to obtain NPDES permits, comply with USACE permit conditions, and implement hazardous spill prevention and recovery programs, state water quality standards will be met and a cumulatively considerable decrease in water quality related to erosion and sedimentation is not anticipated.

Water supply and flood control projects include proposed releases of water that are designed to simulate natural erosion and sedimentation to promote the growth of cottonwood trees and improve the riparian ecosystem. These releases could result in periodic erosion and sedimentation events. Operation of the proposed Farad diversion dam replacement project is designed to maximize sweeping flows that would transport sediment downstream. The combined water operations of the proposed project and other proposed Truckee River flows are not expected to have a cumulative adverse impact on erosion and sedimentation in the watershed. Therefore, this impact is considered *less than significant*. No mitigation is required.

## **Vegetation and Wetland Resources**

### **Impact 15-5: Change in Riparian Vegetation as a Result of Changes in Instream Flows under Cumulative Conditions**

As explained in chapter 7, "Vegetation and Wetland Resources," the Truckee River in the project area and in a large portion of the watershed consists of an incised channel with a shallow soil-and-bedrock layer. Because of the close proximity of groundwater to bedrock, the groundwater level is not expected to change significantly as a result of project diversions. Small decreases in groundwater level could result in selective mortality of juvenile riparian plants

with poorly established root systems. However, with implementation of instream flow regimes and water supply agreements related to the TROA, flows are expected to be higher during dry hydrologic conditions. In general, water supply and flood control projects on the Truckee River are being designed to maintain or enhance flows for riparian vegetation along the river.

In addition, construction activities associated with the proposed project would not create a substantial loss of vegetation. Construction activities associated with utility and infrastructure projects could result in the loss of vegetation, but those losses are not expected to be substantial. Vegetation removed during construction of the Farad diversion dam replacement project would be mitigated through the implementation of restoration measures.

Therefore, when the impacts of the proposed project are added to those of related projects, the cumulative effect on riparian vegetation is considered *less than significant*. No mitigation is required.

## Aquatic Resources

### **Impact 15-6: Mortality, or Disruptions of Movements of Fish under Cumulative Conditions**

Ongoing and proposed watershed planning efforts in the Truckee River basin potentially affecting aquatic resources include the Derby Dam Fish Passage Facility, Truckee Restoration and Recovery Implementation Plan, Truckee Meadows Flood Control Project, Truckee River Operating Agreement, and Water Quality Settlement Agreement. Cumulatively, these actions are expected to have beneficial effects on Lahontan cutthroat trout, cui-ui, and other aquatic resources in the Truckee River basin. The Farad diversion dam replacement project is being designed to conform to these actions and avoid conflicts with established resource management and conservation goals for the basin. Therefore, the proposed project is not expected to cause significant cumulative impacts on aquatic resources.

The proposed TROA includes provisions for improving instream flows and water quality for biological resources in the Truckee River system. The proposed agreement would include maintaining existing “fish water” and providing additional “fish credit water” for the conservation of Pyramid Lake fishes (U.S. Bureau of Reclamation 1998). This water would be managed to meet the recovery goals of the cui-ui recovery plan, the Lahontan cutthroat trout recovery plan, and any future revisions of these plans. The TROA would provide opportunities for using fish credit water, additional fish water, and other sources of water to enhance minimum instream flows in the Truckee River basin, including the Farad reach. Consequently, the TROA is expected to benefit salmonid populations in the Truckee River by increasing the amount of habitat for juvenile rainbow trout and adult rainbow and brown trout relative to existing conditions (U.S. Bureau of Reclamation 1998). Therefore, this impact is considered *less than significant*.

## Wildlife

### **Impact 15-7: Disturbance or Loss of Wildlife Habitat under Cumulative Conditions**

The proposed project's operation-related impacts on wildlife would not make a substantial cumulative contribution to the impacts of related projects. No long-term loss of habitat functions or values is anticipated as a result of operation of the proposed project. In addition, water supply and flood control projects on the Truckee River are being designed to maintain or enhance flows to promote riparian habitat and increase habitat values along the river. Therefore, when the impacts of the proposed project are added to those of related projects, an adverse cumulative effect is not anticipated.

Construction activities associated with the proposed project, in addition to those of utility and infrastructure projects, have the potential to temporarily disturb local wildlife species. If the proposed project and the Caltrans bridge replacement project are constructed simultaneously, activity and noise associated with construction could cause adverse impacts on nesting raptors or other wildlife species. However, project-specific impacts on wildlife disturbance would be fully mitigated by preconstruction surveys of the construction area and through consultation with DFG to establish appropriate buffers around occupied nesting sites. These mitigation measures would minimize the cumulative impact on wildlife.

This impact is considered *less than significant*. No mitigation is required.

## Recreation

### **Impact 15-8: Change in Recreational Boating Opportunities under Cumulative Conditions**

Implementation of the proposed project would reduce the amount of flow available for recreation in the operation area. A detailed description of recreational boating thresholds is presented in chapter 9, "Recreation." With implementation of the TROA, flows are expected to be higher during dry hydrologic conditions and slightly lower during wet hydrologic conditions. A net difference in cumulative conditions for recreational boating based on implementation of the TROA or other water supply and flood control projects is unlikely. Peak flows during wet hydrologic conditions typically exceed boating conditions, and a reduction in flow during this period as a result of TROA would not affect boaters. Increases in flow during normal and dry periods could benefit boaters depending on the increase and duration of flow. In general, water supply and flood control projects on the Truckee River are being designed to consider maintenance or enhancement of recreation flows in the river.

Construction activities associated with implementation of the Caltrans bridge replacement project, in addition to construction of the proposed project, would change recreational boating conditions on the Truckee River near Floriston. It is

expected that, in addition to the construction of diversion facilities associated with the proposed project, Caltrans will be performing some instream work. However, because construction of the proposed project would be short-term and would occur during off-peak recreation periods, and because a temporary portage path around the construction activity would be provided, the proposed project would not contribute to a cumulative decrease in recreational boating opportunities. This impact is considered *less than significant*. No additional mitigation is required.

### **Impact 15-9: Change in Angling Success under Cumulative Conditions**

Ongoing and proposed watershed planning efforts in the Truckee River basin are designed to enhance conditions for aquatic resources and therefore are anticipated to improve angling success in the Truckee River. Fishing conditions will continue to have seasonal variation depending on water levels, habitat availability, and reproductive success, but in general are anticipated to improve as a result of regional projects. Changes in river flows are not anticipated to result in substantial changes in fishing opportunities or angling success. Therefore, this impact is considered *less than significant*.

## **Cultural Resources**

The Farad hydroelectric system could be considered a significant historic resource. However, portions of the system have been modified to meet the modern demands of hydroelectric power generation. The original diversion structure for the Farad system was rebuilt and relocated as a result of the construction of I-80 over Donner Pass in 1959. In addition, no prehistoric archaeological sites or artifacts have been identified in areas where construction or operation would occur. Alterations in flow resulting from project operations, when added to the impacts of other related water supply and flood control projects, would not disturb any known cultural resources. Therefore, construction and operation of the Farad Diversion would have *no cumulative impact* on cultural resources when considered with other related projects.

## **Noise**

### **Impact 15-10: Temporary Increase in Noise Levels from Construction under Cumulative Conditions**

The planned replacement of the I-80 Floriston bridge adjacent to the project construction area would result in a temporary increase in noise that will be audible to the residents of Floriston. A cumulative noise condition would be created if bridge replacement and construction of the proposed project were to occur at the same time. However, because both projects are short-term, and because noise mitigation is provided as part of the proposed project, an adverse cumulative noise effect is not anticipated. Construction activities associated with other related projects are located outside the audible range of the proposed

project and are not cumulatively considerable. Therefore, this impact is considered *less than significant*. No additional mitigation is required.

## Transportation

### **Impact 15-11: Temporary Construction-Related Increase in Traffic Volumes on Roadways**

Multiple construction or development projects could cumulatively increase the number of construction-related vehicle trips in the vicinity of the project area, which would affect local and regional traffic and circulation. Because I-80 is at LOS B these effects will not interfere with overall traffic volumes. However, localized traffic effects including slowing in Floriston, due to this project and Caltrans' I-80 Floriston bridge replacement could cumulatively affect traffic. However, the project applicant will use other construction access routes (i.e., Old Highway 40), and Caltrans regulates construction access and controls on I-80. Therefore, this impact is considered *less than significant*. No additional mitigation is required.

## Aesthetics

### **Impact 15-12: Changes in Views along the Truckee River under Cumulative Conditions**

Substantial roadwork that is in progress on I-80 throughout eastern Nevada County contributes to an increased presence of construction-related equipment along the I-80 corridor as it follows the Truckee River. This roadwork includes construction activities associated with the replacement of bridges over the Truckee River (California Department of Transportation 2000), completion of work on the Truckee Bypass (California Department of Transportation 1992), and general scheduled road rehabilitation work. The visual evidence of construction activities and equipment is not a new or uncommon component of views of this area. Foreground views in the I-80 corridor in eastern Nevada County are only moderately intact and lack unity, and area viewers are relatively accustomed to construction equipment and activities. Therefore, temporary visual impacts of the proposed project would not make a substantial cumulative contribution when added to the impacts related to utility and infrastructure projects. This impact is considered *less than significant*. No additional mitigation is required.

## **15.2.2.3 Impacts and Mitigation Measures of Alternative B: In-Kind Replacement**

The cumulative impacts for Alternative B are identical to those discussed above for Alternative A.

### **15.2.2.4 Impacts and Mitigation Measures of Alternative C: No Project**

Under Alternative C, the project applicant would not build a dam or any other structure in the Truckee River. Therefore, no cumulative impacts would result from implementation of this alternative.

## **15.3 Growth-Inducing Impacts**

### **15.3.1 Affected Environment**

Growth-inducing impacts were evaluated based on the project applicant's service area, which consists of northeastern California and most of the state of Nevada.

#### **15.3.1.1 Approach**

A project may be growth inducing if it:

- fosters economic, population, or housing growth;
- removes obstacles to growth;
- taxes existing community service facilities; or
- encourages or facilitates other activities that cause significant environmental impacts.

Evaluation of potential growth-inducing impacts of the Farad diversion dam replacement project was based on a qualitative analysis of the indirect effects that could result from the use of power within the project applicant's service area.

### **15.3.2 Growth-Inducing Impact Assessment**

Operation of facilities proposed under Alternative A or B would produce the maximum design capacity of 2.6 megawatts of electricity per hour. Using a conservative assumption that the Farad Power Plant would generate 2.6 average megawatts (aMW)<sup>1</sup> of power per hour (24 hours per day) for an entire year, the total energy available for consumption would equal 22,776 megawatt hours, where 1 megawatt hour equals 1 megawatt of power produced in 1 hour. SPPC is able to generate power in all year types (wet, normal, and dry), although maximum power generation occurs in wet years. Using the representative wet,

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<sup>1</sup> Average Megawatts (aMW)—The energy produced by the continuous operation of 1 megawatt of capacity over a period of 1 year. One average megawatt is equivalent to 8.76 million kilowatt hours.

normal, and dry years of 1983, 1973, and 1977, respectively, full power generation (485 cfs) occurs 92%, 58%, and 0% of the time, and some power generation (185 cfs) occurs 100%, 100%, and 71% of the time, respectively.

The project applicant's combined electric sales in 1999 totaled 10,211,842 megawatt hours (Sierra Pacific Power Company 2000b). When compared to the project applicant's total electricity sales, the Farad Power Plant would contribute less than 1% of the total power available for sale in the SPPC service area. This small addition of power would not contribute to growth in the service area but would augment the supplies necessary to meet the area's existing power demands. Therefore, no growth-inducing impacts are expected to occur from implementation of project alternatives.