# Chapter 6.0 CEQA CONSIDERATIONS

## 6.1 GROWTH INDUCEMENT

CEQA requires that an EIR discuss the ways in which the proposed project could foster economic or population growth. Pursuant to the State CEQA Guidelines Section 15126.2(d), this discussion should include ways in which the proposed project could directly or indirectly foster economic or population growth or construction of new housing in the surrounding area. The discussion should include projects which could remove obstacles to population growth such as major public service expansion that allow for more construction in applicable services areas and characteristics of projects that may encourage and facilitate other activities that could result in significant impacts. According to the CEQA Guidelines, it must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significant to the environment.

As discussed in **Chapter 3, Project Description**, the proposed project involves implementing three project components: the EPB, SRPS, and ISMP. The proposed EPB project component would maintain existing flood protection to low-lying homes and public infrastructure along the north edge of the Lagoon, while the frequency of mechanical management of the sandbar is reduced in compliance with regulatory requirements. The proposed SRPS project component would provide protection from erosion along the northern sand cliffs and the undermining of Scenic Road which may result from northerly river flows or large ocean swells. The proposed ISMP project component is intended to provide a short-term (i.e., until the design, environmental review, permitting, and construction of the proposed EPB and SRPS project components are completed) solution to potential flooding issues by implementing select sandbar management actions that allow additional natural function in the Lagoon while still protecting properties and infrastructure, with the understanding that the development of the proposed EPB and SRPS project components would further reduce mechanical management of the sandbar and return the Lagoon, its sandbar, and associated riverine and ocean dynamics to more natural cycles. The proposed project does not include the construction of new homes or businesses in the area. Thus, the proposed project would not directly induce population or economic growth.

Once construction is completed, the County would utilize existing County staff to perform any necessary maintenance activities required at the proposed EPB project component or proposed SRPS project component sites. The proposed project would not result in any new jobs. Thus, the proposed project would not indirectly foster population growth as a result of creation of new jobs.

The proposed project is an infrastructure project to reduce the necessity for mechanical breaching of the sandbar by allowing Lagoon levels to rise and the Lagoon to breach as naturally as possible, thereby improving fish and wildlife habitat while maintaining the current level of flood protection and protecting public infrastructure. The proposed project would not result in a reduction of flooding to the extent that additional new homes, buildings, or other habitable structures could be constructed in the floodplain. In addition, the proposed project would not extend roads or public services into an unserved area. Therefore, the proposed project would not induce the economic growth that would facilitate other activities that would have significant environmental effects.

In conclusion, the proposed project would not directly result in population or economic growth through the development of new residential or commercial uses, and would not induce substantial population growth due to new permanent employees or extension of roads or public services to unserved locations. Therefore, the proposed project would not directly or indirectly result in growth inducing impacts.

## 6.2 CUMULATIVE IMPACTS

Cumulative impacts are defined as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts" (CEQA Guidelines Section 15355). Cumulative impacts can result from individually minor, but collectively significant, actions when added to those of other closely related past, present, or reasonably foreseeable future projects. Guidance for cumulative impact analysis is provided in Section 15130 of the CEQA Guidelines:

a. An EIR shall discuss cumulative impacts of a project when the project's incremental effect is "cumulatively considerable" (i.e., the incremental effects of an individual project are considerable when viewed in connection with the effects of past, current, and probable future projects, including those outside the control of the agency, if necessary).

b. An EIR should not discuss impacts that do not result in part from the project evaluated in the EIR.

c. A project's contribution is less than cumulatively considerable, and thus not significant, if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact.

d. The discussion of impact severity and likelihood of occurrence need not be as detailed as for effects attributable to the project alone.

e. The focus of analysis should be on the cumulative impact to which the identified other projects contribute, rather than on attributes of the other projects that do not contribute to the cumulative impact.

### 6.2.1 Approach to Cumulative Impact Analysis

Two approaches to a cumulative impact analysis are discussed in CEQA Guidelines Section 15130(b). The first approach uses a list of past, present, and reasonably foreseeable future projects producing related or cumulative impacts. The second approach is a summary of projections contained in an adopted local, regional, or statewide plan, such as a general plan or related planning document, or in an adopted or certified environmental document, which describes or evaluates conditions contributing to cumulative effects.

For this EIR, other projects that may cause cumulative impacts have been identified using the list approach; however, as required by the MBUAPCD, the plan-based approach is used to assess cumulative impacts on regional air quality. In addition, the cumulative analysis for traffic relies upon traffic modeling of the AMBAG, respectively. Greenhouse gases also are assessed using summaries of projections.

Section 15355 of the CEQA Guidelines defines "cumulative impacts" as two or more individual effects which, when considered together, are considerable or which compound or increase other environmental effects. The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time. In addition to assessing the combined impacts of the project and past, present and probable future projects, the EIR determines whether the impact of the proposed project is cumulatively considerable.

Three criteria were used to determine an appropriate list of relevant past, present, and future projects to be considered in this cumulative analysis: (1) similar environmental impacts, (2) geographic scope and location, and (3) timing and duration of implementation. A relevant future probable project is defined as one that is "reasonably foreseeable," such as a proposed project that has approved funding or for which an application has been filed and deemed complete by an approving agency by the time of commencement of environmental review of the proposed project. In addition, some projects may be excluded from the cumulative list if the agency and/or applicant were not actively pursuing further entitlements at the time of preparation of this EIR.

#### 6.2.1.1 Similar Environmental Impacts

Projects that are relevant to the cumulative impact analysis include projects that could contribute incremental environmental effects on the same resources as, and would have similar impacts to, those discussed in this EIR applicable to the proposed project. Cumulative impacts that could occur when the impacts of the proposed project are considered in combination with the impacts of other relevant projects are discussed in **Chapter 4, Environmental Setting, Impacts, and Mitigation Measures**, **Sections 4.1** through **4.12** of this EIR.

#### 6.2.1.2 Geographic Scope and Location

Projects that are relevant to the cumulative analysis include those that are within the defined geographic scope for the cumulative effect. The defined geographic scope is dependent on the environmental resource affected. Generally, the geographic scope includes the area within and adjacent to the project component site. However, for certain environmental resource topics the geographic scope extends farther, such as the regional roadway network, regional air basin, or the Carmel River watershed. The geographic scope is described by resource topic in the section below.

#### 6.2.1.3 Timing and Duration of Implementation

Projects that are relevant to the cumulative analysis include projects that could contribute impacts that coincide with proposed project impacts during construction (short-term) or operation (long-term). Construction of the proposed project would last approximately five months (if not constructed concurrently) (please refer to **Chapter 3, Project Description, Section 3.4.2, Construction Duration and Phasing**). The timing of construction is unknown at this time. For the purposes of this analysis, it is assumed that construction could occur within the range of April 2017 and November 2020. For temporal impacts such as air pollutant emissions, and increased noise levels and traffic during construction, cumulative effects could overlap with those of the proposed project, and would affect the same environmental resources.

### 6.2.2 List of Relevant Projects

**Table 6-1. Projects Considered for Cumulative Impacts Analysis** provides a list of the past, present, and probable future projects within and near the proposed project area, including a brief description of the projects and their anticipated construction schedules. **Figure 6-1** shows the location of the cumulative projects; the numbering of the projects in the table correlates to the numbered location of the projects on the figure.

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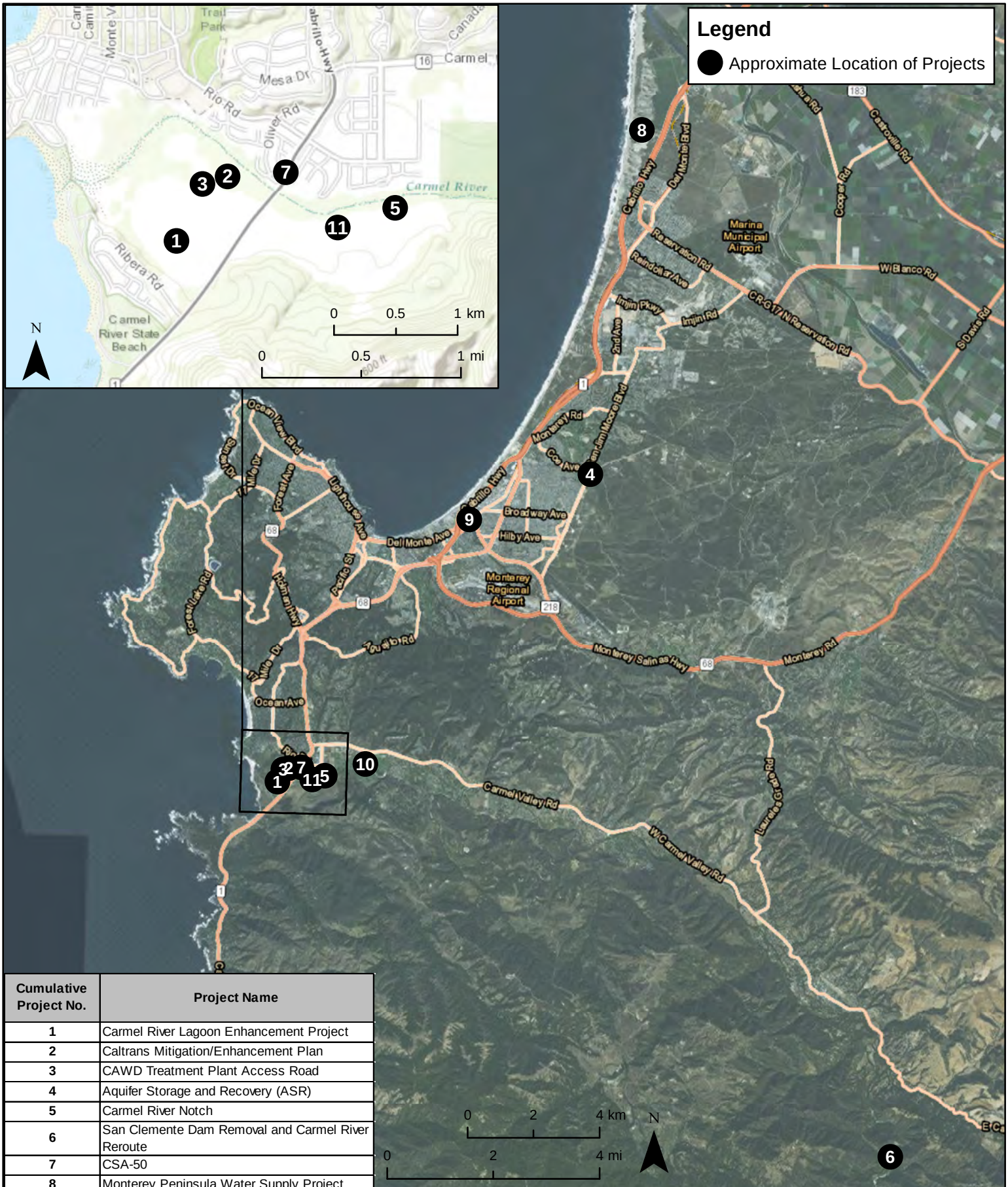


| Cumulative Project No. | Project Name |
|---|---|
| 1 | Carmel River Lagoon Enhancement Project |
| 2 | Caltrans Mitigation/Enhancement Plan |
| 3 | CAWD Treatment Plant Access Road |
| 4 | Aquifer Storage and Recovery (ASR) |
| 5 | Carmel River Notch |
| 6 | San Clemente Dam Removal and Carmel River Reroute |
| 7 | CSA-50 |
| 8 | Monterey Peninsula Water Supply Project |
| 9* | Monterey Peninsula Groundwater Replenishment Project |
| 10 | Rancho Cañada Village |
| 11 | Carmel River Floodplain Restoration and Environmental Enhancement Project (CRFREE) |

*The Monterey Groundwater Replenishment Project extends from just north of the City of Marina to the city of Pacific Grove

# Location of Projects Considered for Cumulative Analysis

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Planning and Environmental Consulting

Date: 06-30-2015
Scale: 1 in = 57.9 mi
Figure: 6-1

Path: C:\GIS\GIS_Projects\2013-22 Carmel Lagoon\Final Products\EIR Maps\Figure 6-1 Projects Considered in Cumulative.mxd

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The cumulative impact analysis is presented below by each resource topic included in **Chapter 4, Environmental Setting, Impacts, and Mitigation Measures**. Resources topics determined to have no impact as a result of the proposed project as described in **Section 6.5, Effects Not Found to be Significant**, below, are not included in the cumulative impact analysis. A summary of the projects considered for the cumulative impact analysis is provided in **Table 6-1**.

**Table 6-1. Projects Considered for Cumulative Impact Analysis**

| Cumulative Project No. | Project Name | Project Description | Areas of Overlap (Potentially Affected Project Components) | Estimated Construction Schedule |
|---|---|---|---|---|
| **1** | Carmel River Lagoon Enhancement Project | Restoration of the south arm of the Carmel Lagoon | Similar environmental impacts, geographic scope, and location (all Proposed Project Components) | Completed |
| **2** | Caltrans Mitigation/ Enhancement Plan | 20-acre riparian habitat enhancement along the south bank of the Carmel River | Similar environmental impacts and geographic scope (all Proposed Project Components) | Completed |
| **3** | CAWD Treatment Plant Access Road | Relocated road designed to function as an overflow weir during 10-year or greater floods, allowing flood waters from the Carmel River to pass through culverts under the road or over "at grade" sections to the floodplain surrounding the south arm of the Carmel Lagoon | Similar environmental impacts, geographic scope, and location (all Proposed Project Components) | Completed |

| Cumulative Project No. | Project Name | Project Description | Areas of Overlap (Potentially Affected Project Components) | Estimated Construction Schedule |
|---|---|---|---|---|
| **4** | Aquifer Storage and Recovery (ASR) | Diverting excess winter flows from the Carmel River through Cal-Am facilities and injecting water into the Seaside Groundwater Basin to reduce the amount of unauthorized pumping from the Carmel River during summer and fall | Similar environmental impacts and geographic scope (all Proposed Project Components) | Completed |
| **5** | Carmel River Notch | Removal of a small section of the south levee to alleviate flooding on the north bank of the Carmel River | Similar environmental impacts, geographic scope, and location (all Proposed Project Components) | Completed |
| **6** | San Clemente Dam Removal and Carmel River Reroute | Removal of the San Clemente Dam and re-route of a segment of the Carmel River to alleviate seismic safety concerns, restore habitat, and improve anadromous fish access to the watershed | Similar environmental impacts, geographic scope, and location (all Proposed Project Components) | 2014-2016 |
| **7** | CSA-50 | Flood control improvements to reduce the risk of flood in CSA-50 | Similar environmental impacts, geographic scope, and location (all Proposed Project Components) | Beyond 2017 |

| Cumulative Project No. | Project Name | Project Description | Areas of Overlap (Potentially Affected Project Components) | Estimated Construction Schedule |
|---|---|---|---|---|
| **8** | Monterey Peninsula Water Supply Project | Construction of a desalination facility intended to provide additional supply to help reduce Cal-Am's pumping from the Carmel River | Similar environmental impacts, geographic scope, and location (all Proposed Project Components) | 2017-2019 |
| **9** | Monterey Peninsula Groundwater Replenishment Project | Reclaimed water would be used to recharge the Seaside Groundwater Basin to help reduce Cal-Am's pumping from the Carmel River | Geographic scope and location (all Proposed Project Components) | 2016-2017 |
| **10** | Rancho Cañada Village | Replacement of a portion of an existing golf course with residential units and a restored riparian open-space corridor | Similar environmental impacts and geographic scope (all Proposed Project Components) | Beyond 2017 |
| **11** | Carmel River Floodplain Restoration and Environmental Enhancement Project (CRFREE) | Improve flood control and to restore native riparian and floodplain habitat and hydrologic function to a portion of the lower floodplain along the Carmel River | Similar environmental impacts, geographic scope, and location (all Proposed Project Components) | 2017 |

## 6.2.3 Cumulative Impact Analysis

### 6.2.3.1 Aesthetics

The geographic scope for cumulative impact analysis on aesthetic resources consists of all proposed project component sites and the immediate vicinity around each of these sites that is visible from the same public vantage points as proposed project sites. Based on the list of cumulative projects provided on **Table 6-1. Projects Considered for Cumulative Analysis**, the following projects are within the same viewshed of the proposed project component sites: Carmel River Lagoon Enhancement Project, Carmel River Notch, and CRFREE. **Table 2-1,** in **Section 2.0, Summary of the Environmental Impact Report**, provides a summary of potential impacts from the proposed project to the aesthetic environment and significance determinations at each proposed project component site by impact area for construction and operations.

The proposed project construction impacts (**AES-1**) on scenic vistas and visual quality of sites and permanent light and glare during operations (**AES-3**) were found to be less-than-significant. The proposed project would not be within the same viewshed as any other known projects whose construction schedule might overlap with the proposed project. If an overlap would occur (due to changes in construction schedules for cumulative projects); the timing for the construction of specific components would be such that no construction on any one site would occur for a substantial period of time. Thus, there would be no significant construction-related cumulative impacts of the proposed project combined with all other projects. None of the cumulative projects within the same viewshed as the proposed project include, or would include, substantial new permanent lighting. The proposed EPB project component would include minimal new exterior lighting; however, the lighting would be low intensity and, where possible, directed downward and away from surrounding residential areas. Therefore, there would be no significant operation-related lighting and glare cumulative impacts of the proposed project combined with these projects.

The operation of the proposed EPB and SRPS project components would place development within a scenic vista and sensitive viewshed. The operation of the proposed EPB project component would result in a significant and unavoidable impact to the visual character of the site and would partially obstruct scenic vistas and sensitive viewsheds. The proposed EPB project component would be partially screened by Lagoon vegetation; however, the visual character would remain degraded and the scenic views partially obstructed. Implementation of **Mitigation Measure AES-2** would reduce the visual impacts of the proposed EPB project component, but would not reduce the impact to a less-than-significant level. Therefore, operational aesthetic impacts associated with the proposed EPB project component would remain significant and unavoidable even with implementation of the identified mitigation measure. The operation of the proposed SRPS project component would result in a moderate impact to the visual character of the site. The rip-rap would be covered by sand during most of the year and would be visible as a temporary visual degradation of the site and surrounding area. Therefore, this is a less-than-significant impact. The other projects within the same viewshed would not result in significant operational impacts to scenic vistas or the visual quality of the surrounding area, and would not result in any aesthetic improvements to the area in which the significant impacts of the proposed project would be reduced to a less-than-significant level. Therefore, the operation of the proposed EPB project component would result in significant and unavoidable impacts to scenic vistas and the visual quality and character of the surrounding area, but would not contribute to any significant cumulative aesthetic impacts due to lack of impacts from any other cumulative projects. Further, the operation of the proposed SRPS project component would result in less-than-significant impacts to

scenic vistas and the visual quality and character of the surrounding area, and would not contribute to any significant cumulative aesthetic impacts due to lack of impacts from any other cumulative projects.

**Cumulative Impact Conclusion**

The combined cumulative projects with the proposed project would result in a less-than-significant cumulative impact to scenic vistas and visual quality of sites during construction and permanent light and glare during operations. Once constructed, the operation of the proposed EPB project component would result in significant unavoidable cumulative impacts on scenic vistas and the visual quality of the surrounding area. There are no mitigation measures available to reduce this cumulative impact, and, therefore, it remains significant and avoidable. Once constructed, the operation of the proposed SRPS project component would result in less-than-significant cumulative impacts on scenic vistas and the visual quality of the surrounding area.

### 6.2.3.2 Air Quality

For localized air quality effects (such as exposure of nearby sensitive receptors to emissions from construction activities, such as diesel vehicle and equipment exhaust), the geographic scope is the vicinity of the proposed project component sites.

The geographic scope for cumulative analysis of regional criteria pollutant air quality impacts is the air basin in which the facilities would be constructed and operated, and any downwind air basins that may be affected by emissions from the proposed project. In this case, due to the locations of the proposed project component sites and the predominantly west-northwest winds in the project region, the proposed project would not affect other air basins; therefore, only projects and plans applicable to the jurisdiction of the MBUAPCD (i.e., the North Central Coast Air Basin) would apply. Projects throughout this region could have adverse effects on the regional air quality and the same sensitive receptors within the region.

**LOCALIZED, COMBINED EXPOSURES TO AIR POLLUTANTS**

*Cumulative Projects Contributing to Localized Impacts*

Localized air pollutant emissions from cumulative projects may potentially impact sensitive receptors if intense construction activities (i.e., those activities with high air pollutant emissions) from two or more construction projects would occur in close proximity to each other (i.e., within 1 mile). Two projects listed in **Table 6-1, Projects Considered for Cumulative Analysis** of the Draft EIR would be in close proximity to each other and to the proposed project (i.e., CSA-50 and CRFREE Projects), and some may be expected to be under construction during the same worst-case and overlapping construction periods. The exact sequence of other projects' construction are outside the control of the County; but as currently envisioned, the construction periods may potentially overlap.

*Proposed Project Localized Air Pollutants Impacts*

**Table 2-1** in **Section 2.0, Summary of the Environmental Impact Report** provides a summary of potential impacts related to air quality and significance determinations at each proposed project component site. As detailed in **Section 4.2**, **Air Quality** the following five impacts are relevant to the cumulative localized air pollutant analysis and the proposed project would have a less-than-significant impact related to all of them:

- AQ-1: Conflict with or Obstruct Implementation of Applicable Air Quality Plans

- AQ-2: Violate any Air Quality Standard or Contribute Substantially to an Existing or Projected Air Quality Violation
- AQ-3: Result in a Cumulatively Considerable Net Increase of Any Criteria Pollutant for which the Project region is Non-Attainment under an Applicable Federal or State Ambient Air Quality Standard
- AQ-4: Expose Sensitive Receptors to Substantial Pollutant Concentration
- AQ-5: Create Objectionable Odors Affecting a Substantial Number of People

The proposed project would have less-than-significant impacts due to emissions impacts on nearby sensitive receptors. The only other cumulative projects with construction schedules with the potential to overlap with the proposed project are the CSA-50 and CRFREE Projects. Most of the construction using heavy equipment that would generate construction emissions would be completed at the Highway 1 overpass and east of Highway 1. Accordingly, the two projects would not result in significant cumulative impacts due to localized concentrations of pollutants or odors. Therefore, there would be no significant cumulative impacts due to localized air pollutant exposures or odors.

**Cumulative Regional, Criteria Air Pollutant Emissions**

For regional criteria air pollutants, the cumulative analysis is based on review of consistency with the Air District's AQMP, as well as prediction of emissions. Consistency determinations with the AQMP are used by the District to address a project's contribution to regional air quality (i.e., ozone levels).

The MBUAPCD prepares air quality plans which address attainment of the State ozone AAQS and maintenance of federal AAQS. These plans accommodate growth by projecting growth in emissions based on different indicators. For example, population forecasts adopted by AMBAG are used to forecast population-related emissions. Through the planning process, emission growth is offset by basin-wide controls on stationary, area, and transportation sources of air pollution. In developing emission-based thresholds, MBUAPCD also considered the levels for which a project's individual contribution would be cumulatively considerable to the region. Since the proposed project would be consistent with the AQMP and proposed project emissions are not predicted to exceed the Air District's significance thresholds, the proposed project's incremental increase in emissions would not result in a cumulatively considerable contribution to existing or future regional air quality violations. The proposed project would not make a considerable contribution to any significant cumulative regional air quality impacts.

The region is in non-attainment for the state ambient air quality standard for $PM_{10}$. Construction of one or more of these projects at one time could result in potentially significant $PM_{10}$ emissions if compared to the significance threshold. Therefore, this analysis assumes that construction of multiple projects would result in a potentially significant cumulative impact. The significance thresholds used in the project-level analysis above measures whether the project would make a cumulatively considerable contribution to a cumulatively significant impact. The analysis above regarding whether the proposed project would exceed the MBUAPCD emissions thresholds provides a measure of whether the project would considerably contribute to significant air quality cumulative impacts, including exceedances/violations of air quality standards, exposure of sensitive receptors to substantial pollutants, or conflicts with air quality management plans. If the threshold is not exceeded, then one should conclude that the project would not contribute to any violation, regardless of what additional $PM_{10}$ emissions these cumulative projects contribute.

The proposed project would not exceed the $PM_{10}$ significance thresholds for construction emissions, the project's contribution to this potentially significant cumulative impact would not be cumulatively considerable (i.e., less than the MBUAPCD's threshold).

**Cumulative Impact Conclusion**

The proposed project would not make a considerable contribution to significant cumulative regional emissions of $PM_{10}$; therefore, the impact is less-than-significant.

### 6.2.3.3 Biological Resources

The geographic scope for cumulative impact analysis on biological resources consists of the overall region (such as central coastal California) and more specifically, the Carmel River watershed, in which the project components are being constructed. Based on the list of cumulative projects provided on **Table 6-1, Projects Considered for Cumulative Analysis**, projects throughout the region could have adverse effects on the same sensitive species and habitats that occur within and adjacent to the proposed project component sites.

The proposed project has the potential to impact some of the same biological resources as other past, present, and probable future projects. However, the proposed project's construction-related impacts would not be cumulatively considerable with implementation of the mitigation measures identified. Proposed project construction impacts to special-status species and habitat, and construction impacts to riparian, federally protected wetlands as defined by Section 404 of the CWA, or other sensitive natural community were found to be less-than-significant with mitigation. With mitigation, construction impacts from the proposed project can be reduced to less-than-significant.

Similarly, the proposed project's operational impacts would be less-than-significant, even beneficial in some instances, and would not be cumulatively considerable. The function of the proposed EPB project component is intended to improve and increase habitat for special-status wildlife species known or with the potential to occur in the Lagoon. The proposed EPB project component is expected to result in the following impacts:

1. Higher frequency of natural sandbar breaches.
2. A reduction in frequency of annual mechanical breaching.
3. Increased depth and duration of inundation within the Lagoon.

A more naturally functioning lagoon ecosystem will result in a higher water surface elevation for longer periods of time within the Lagoon. This may also increase the amount of emergent marsh, riparian, and other sensitive vegetation types influenced by hydrology that provide habitat for many common and special-status species. Special-status species that may occur within areas affected by an increase in water surface elevation include Monterey-dusky-footed woodrat, tricolored blackbird, California horned lark, white-tailed kite, sharp-shinned hawk, nesting raptors and migratory bird species, California legless lizard, western pond turtle, CRLF, S-CCC steelhead, and SBB. This is a beneficial impact.

The function of the SRPS is intended to improve and increase habitat for special-status wildlife species known or with the potential to occur in the Lagoon. The function of the SRPS is expected to result in the following:

1. More northerly breaches of the barrier beach during the rainy season than the existing condition will result in relatively long channel alignments and drawdown over a longer period,

resulting in a higher water surface elevation that will increase the amount of aquatic habitat and may reduce the potential for lagoon species to be drawn out into the ocean.

2. A more naturally functioning lagoon ecosystem resulting in a higher ratio of fresh water to salt water.
3. A more naturally functioning lagoon ecosystem

This is a beneficial impact.

The proposed project operational impacts to the movement of native wildlife were found to be beneficial. The proposed project impacts from operations to riparian, federally protected wetlands, and other sensitive natural communities were found to be less-than-significant with mitigation. Therefore, the proposed project not result in a significant cumulative impacts to biological resources.

**Cumulative Impact Conclusion**

The proposed project would not make a considerable contribution to significant cumulative impacts to biological resources, and this is a less-than-significant cumulative impact.

### 6.2.3.4 Cultural Resources

The geographic scope for cumulative impact analysis on cultural and paleontological resources includes all sites upon which past, present or future activities could affect the same cultural resources as the proposed project. Cumulative projects are provided in **Table 6-1, Projects Considered for Cumulative Impact Analysis**.

As described in **Section 4.4**, **Cultural Resources**, known and potential cultural resources may be affected by the proposed project components. As described in **Impacts CR-1, CR-2, CR-3,** and **CR-4**, construction of the proposed EPB and SRPS project components may result in significant impacts to historic resources (extant buildings and structures), historical and/or archaeological resources, human remains, and tribal resources. These impacts would be reduced to a less-than-significant level with implementation of the mitigation measures identified.

All of the cumulative development identified in **Table 6-1** could result in potential impacts to cultural resources; however, impacts to cultural resources are site-specific and are evaluated and mitigated on a project-by-project basis. None of the cumulative projects would be located in sufficiently close proximity to result in combined impacts to the known historic and archaeological resources that could be affected by the proposed project.

Two of the cumulative projects (i.e., CSA-50 and CRFREE Projects) and would be located in the project vicinity and have the potential to significantly impact cultural and historic resources. The proposed project's construction schedule may overlap with the construction of these projects. Therefore, these projects may result in cumulative impacts to historic resources from construction-related activities. Implementation of the mitigation measures identified would reduce this impact to a less-than-significant level.

**Cumulative Impact Conclusion**

Construction of the proposed project would result in less-than-significant impacts to cultural resources with implementation of the mitigation identified. No cumulative impacts to cultural resources have been identified related to ongoing operation of cumulative projects. Therefore, the proposed project would not contribute to cumulative impacts related to cultural resources.

### 6.2.3.5 Geology, Soils, and Seismicity

The geographic scope for cumulative impact analysis on geology, soils, and seismicity consists of each proposed project component site and the immediate vicinity around each of these sites. Geologic and seismic impacts are generally site-specific, because they result from the local geology and soil conditions at a given site and do not have additive effects with activities/projects beyond the immediate vicinity. Based on the list of cumulative projects provided on **Table 6-1, Projects Considered for Cumulative Impact Analysis**, there are no other proposed or planned developments within the immediate vicinity of the proposed project components.

The proposed project would not be within the same location as any other known projects. Because of the localized nature of the anticipated individual project impacts, the projects listed in **Table 6-1** would not combine with those of the proposed project to cause or contribute to potential cumulative geologic, soil, or seismic impacts. Construction of all projects would be subject to applicable codes and requirements of the CBC with California additions (CCR Title 24), and applicable County construction and grading ordinances.

**Cumulative Impact Conclusion**

With compliance with applicable regulations overseeing construction of the proposed project, the exposure to seismic or soils hazards would not result in a significant cumulative impact. Because of the localized nature of the anticipated impacts or other cumulative projects listed in **Table 6-1**, the cumulative projects, including the proposed project, would not result in cumulative geologic, soil, or seismicity impacts.

### 6.2.3.6 Greenhouse Gas Emissions

Because GHG emissions affect global climate change, the evaluation of GHG emissions is inherently a cumulative impact analysis. The geographic scope for cumulative impact analysis of GHG emissions includes the North Central Coast Air Basin, as well as the State of California.

GHG emissions contribute to the environmental effect of global climate change. The impacts of cumulative projects worldwide have been acknowledged to result in significant cumulative impacts (rising sea levels, species extinction, increased hydrologic and climate changes resulting in greater numbers and more severe storms and droughts, increased and more severed human illnesses, etc.). The proposed project would not result in a cumulatively considerable contribution to GHG emissions and global climate change because the proposed project greenhouse gas emissions would be below the significance threshold as discussed in **Section 4-6, Greenhouse Gases** and **Impact GHG-1** and **Impact GHG-2** analyses.

**Cumulative Impact Conclusions**

As described under **Impact GHG-1 (Construction Greenhouse Gas Emissions),** the proposed project construction would not make a considerable contribution to significant cumulative impacts due to greenhouse gas emissions and the related global climate change impacts and this is a less-than-significant cumulative impact.

As described under **Impact GHG-1 (Operational Greenhouse Gas Emissions),** the proposed project (including operational plus amortized construction greenhouse gas emissions) would not make a considerable contribution to significant cumulative impacts of greenhouse gas emissions and the related global climate change impacts and this is a less than significant cumulative impact.

### 6.2.3.7 Hazards and Hazardous Materials

The geographic scope for the hazards and hazardous materials cumulative impact analysis consists of the proposed project component sites, and the immediate vicinity surrounding each of these sites, including roadways. Based on the list of cumulative projects provided on **Table 6-1, Projects Considered for Cumulative Impact Analysis**, no cumulative projects would be located sufficiently close to the proposed project construction sites such that a combined impact from hazards and hazardous materials would occur except for the CRFREE project, as discussed below.

Operation of the proposed project would not result in hazardous emissions, and thus, would not contribute to cumulative impacts pertaining to hazardous emissions within 0.25 miles of a school. Similarly, the proposed project would not result in new structural development that would result in airport hazards or safety issues. Thus, the proposed project would not contribute to potential cumulative impacts related to airport hazards. Finally, the proposed project operations would not increase wildland fire risks or impair implementation of an emergency access plan. Thus, cumulative impacts related to this topic are not further addressed as the proposed project would not contribute to a cumulative impact related to hazardous emissions, airport hazards, wildland fire hazards, or emergency access.

The CRFREE project includes construction of a causeway and restoration activities upstream of the proposed project along the Carmel River. The CRFREE project may be constructed starting in 2017 and ending in 2018, which may coincide with construction at the proposed project sites. Should an overlap of construction schedules occur, there could be overlapping cumulative impacts related to transport or use of hazardous materials during construction or operations on Highway 1. These projects would not result in a significant cumulative impact relating to transport, storage and use of hazardous materials because both projects would be governed by the same statutory and regulatory requirements for use, transport, and disposal of hazardous materials that reduce the risk of hazardous conditions to less-than-significant. Therefore, no significant cumulative construction or operational impacts would occur in this area.

**Cumulative Impact Conclusion**

Construction of the CRFREE project and proposed project may have overlapping or close construction schedules, but the two projects would not result in significant cumulative impacts related to hazards or hazardous materials. These projects would be subject to compliance with applicable federal and state laws, and the combined projects would not result in significant cumulative impacts.

### 6.2.3.8 Hydrology/Water Quality

The geographic scope for cumulative impact analysis on hydrology and water quality includes the Carmel River watershed, Carmel Bay, and groundwater basin.

**COMBINED GROUNDWATER CONSTRUCTION AND OPERATION IMPACTS**

The discussion of cumulative groundwater impacts addresses all relevant past, present and probable future projects identified on **Table 6-1, Projects Considered for Cumulative Impact Analysis.** While the proposed project would use a small amount of water during construction (likely recycled water provided by the CAWD facility) and would introduce small amounts of impervious surfaces, there would be no noticeable change to groundwater levels or quality due to these construction-related changes. Construction of the proposed project would not change groundwater quality, recharge, levels, and

storage in the groundwater basin on which proposed project components would be located. The operation of the EPB and SRPS project components would not result in a depletion of groundwater supplies or interfere with groundwater recharge. Therefore, the proposed project would not contribute considerably to cumulative impacts on groundwater resources during construction or operation.

**COMBINED SURFACE WATER CONSTRUCTION IMPACTS**

**Table 2-1** in **Section 2.0, Summary of the Environmental Impact Report** provides a summary of impacts of the proposed project components for construction-related impacts of hydrology and water quality, including surface water quality impacts due to discharges (HYD-1), and surface water quality impacts due to earthmoving, drainage alterations, and use of hazardous chemicals (HYD-3). These impacts were found to be less-than-significant with compliance with the requirements of state and local agencies and professional engineering standards during construction.

Because of the localized nature of the anticipated individual project impacts, the projects listed in **Table 6-1** would not combine with those of the proposed project to cause or contribute to potential cumulative surface water hydrology and water quality impacts. Construction of all projects would be subject to applicable County construction and grading ordinances, local permit requirements, and state waste discharge requirements (NPDES permits). Thus, there would be no significant construction-related cumulative impacts of the proposed project combined with all other projects related to surface water hydrology and water quality beyond the impacts of individual components of each project.

**COMBINED SURFACE WATER OPERATION IMPACTS**

The following proposed project operational impacts to hydrology and surface water quality were found to be less-than-significant with mitigation, including the following:

- Operational Risks due to Flooding due to Levee/Dam Failure, or Coastal Inundation (HYD-8)
- Operational Seiche, Tsunami, or Mudflow Risk (HYD-9)

The following proposed project operational impacts to hydrology and surface water quality were found to be less-than-significant with implementation of the identified mitigation measures:

- Operational Impacts to Water Quality due to Drainage Pattern Alterations and Discharges (HYD-4)
- Operational Risks due to Location within a 100-Year Flood Hazard Area (HYD-7)

Based on the proposed project objectives, implementation of the proposed project would beneficially impact the Carmel River system, including conditions due to erosion, bank stability, and water quality. Regarding hydrologic and water quality impacts due to discharges and risks associated with the 100-year floodplain, the proposed project has the potential to result in impacts to water quality from discharges from the pumps associated with the EPB project component and the validity of the base flood elevations cited in the currently-effective FEMA Flood Insurance Map Panel for the project area. Implementation of **Mitigation Measures HYD-4** and **HYD-7** would reduce the impacts to a less-than-significant level.

Both the proposed project and the cumulative projects identified in **Table 6-1** would have similar and less-than-significant impacts to operational surface water quality impacts due to the requirements for projects to comply with local and state regulatory programs to control discharges and runoff to prevent water quality changes by retaining discharges and runoff on site with appropriate BMPs and low impact development standards included in the relevant permits. The impacts of each project from risks of exposure of people or structures to flooding due to levee failure, coastal inundation and seiche, tsunami or mudflow risks would not be additive.

However, operational drainage pattern alterations associated with the proposed EPB project component would result in increased water surface elevations that would cause flooding on- or off-site, specifically at the CAWD and Mission Ranch properties. No feasible mitigation was identified and, therefore, this impact is significant and unavoidable. The other projects within the Lagoon would not result in significant operational flooding impacts on- or off-site due to drainage pattern alterations. Therefore, the operation of the proposed EPB project component would result in significant and unavoidable impacts to flooding on- or off-site, but would not contribute to any significant cumulative flooding impacts due to lack of impacts from any other cumulative projects.

**Cumulative Impact Conclusion**

There would not be significant cumulative construction flooding impacts to which the proposed project would contribute. However, construction and operation of the proposed EPB project component would result in significant and unavoidable flooding impacts, which would also be cumulatively significant and unavoidable. There would be no significant cumulative construction or operational impacts to hydrology and water quality to which the proposed project would contribute. Construction of the cumulative projects and proposed project may have overlapping or close construction schedules; however, compliance with the permitting requirements of local and state agencies related to stormwater water quality and drainage would ensure combined impacts would not be significant.

### 6.2.3.9 Land Use

The geographic scope for cumulative impact analysis related to land use consists of the immediate area of each of the proposed project component sites. Potential project conflicts or inconsistencies with applicable adopted plans, policies, and regulations would be specific to an individual project component, and would not combine to result in a cumulative impact related to plan consistency.

Furthermore, in cases where a potential conflict or inconsistency is identified, the proposed project would be consistent with implementation of mitigation measures recommended in this EIR, thus resulting in no contribution to cumulative land use impacts.

The discussion of cumulative impacts addresses the overall combined impacts of the proposed project and all relevant past, present and probable future projects identified on **Table 6-1, Projects Considered for Cumulative Analysis**.

**Table 2-1** in **Section 2.0, Summary of the Environmental Impact Report** provides a summary of potential impacts related to land use and significance determinations at each proposed project component site. Potential inconsistencies with applicable land use plans, policies, and regulations during the construction and operation of the proposed EPB and SRPS project components and implementation of the proposed ISMP project components may occur; however, mitigation measures have been identified in this EIR to reduce these impacts to a less-than-significant level and, if implemented, would ensure that the proposed project would be consistent with the relevant policies.

It is unlikely that the cumulative projects identified in **Table 6-1** would result in the same potential inconsistencies as the proposed project, and if identified, would be required to mitigate or obtain a plan amendment. The cumulative projects would not have similar impacts as the proposed project.

**Cumulative Impact Conclusion**

The proposed project would not result in significant cumulative land use impacts. Potential inconsistencies with applicable land use plans, policies, and regulations during the construction

and operation of the proposed project; however, mitigation measures have been identified in this EIR to reduce these impacts to a less-than-significant level and, if implemented, would ensure that the proposed project would be consistent with the relevant policies. The proposed project would not contribute to a significant cumulative impact related to land use.

### 6.2.3.10 Noise

The geographic scope for cumulative impact analysis of noise and vibration effects consists of the proposed project component sites and the immediate vicinity around each of these sites, in which noise could combine with noise from the proposed project to adversely affect the same sensitive receptors. Based on the list of cumulative projects provided on **Table 6-1**, no other projects have the potential to result in construction or operation noise impacts that could combine with noise impacts resulting from the proposed project.

Construction of the CRFREE project may occur at the same time; however, the projects are not in the immediate vicinity of each other, and, therefore, would not result in a combination of noise and vibration impacts that would affect sensitive receptors. None of the other cumulative development projects identified above would result in substantial permanent operational noise impacts as most projects are restoration, residential, and/or infrastructure projects that would not result in substantial noise-producing equipment or uses.

However, noise and vibration impacts related to construction and operation of the proposed EPB project component would be significant and unavoidable. Therefore, the construction and operation of the proposed EPB project component would result in significant unavoidable impacts related to noise and vibration, but would not contribute to any significant cumulative noise impacts due to lack of impacts from any other cumulative projects.

**Cumulative Impact Conclusion**

There would not be significant cumulative construction noise and vibration impacts to which the proposed project would contribute. However, construction and operation of the proposed EPB project component would result in significant unavoidable noise and vibration impacts, which would also be cumulatively significant and unavoidable.

### 6.2.3.11 Public Services, Recreation, and Utilities

The geographic scope for cumulative impact analysis of public services consists of the service areas of the public service providers evaluated (fire protection, police protection, schools, and parks/recreation). For landfill capacity, the geographic scope includes the service area of the Monterey Regional Waste Management District. For compliance with solid waste statutes and regulations, the geographic scope encompasses Monterey County. Based on the list of cumulative projects provided on **Table 6-1, Projects Considered for Cumulative Analysis**, cumulative projects in the service areas in which the proposed project sites are located are summarized below in the discussion of potential cumulative impacts.

**Table 2-1** in **Section 2.0, Summary of the Environmental Impact Report** summarizes project impacts public services, utilities, and recreation. The proposed project construction impacts on demand for public services and landfill capacity were found to be less-than-significant. Public services demand during operation was also determined to be less-than-significant. The construction of the proposed project would potentially conflict with state and local statutes, policies, and regulations relate to solid waste. Implementation of **Mitigation Measure PS-3** would reduce this impact to a less-than-significant

level. The proposed project would not result in new population growth that would require schools or parks and recreational services. Thus, public service impacts are only related to police and fire protection services and solid waste regulation compliance.

The following cumulative projects identified in **Table 6-1** would have similar public service impacts: San Clemente Dam Removal and Carmel River Reroute, CSA-50, Monterey Peninsula Water Supply Project, Monterey Peninsula Groundwater Replenishment Project, Rancho Cañada Village, and CRFREE Project. These projects would also require minimal fire and police protection services during construction and operation, which would not result in the need to construct new facilities that may have environmental impacts. In addition, these projects would be required to comply with solid waste regulations and each project may require similar mitigation requirements to reduce this potential impact to a less-than-significant level.

The operation of these projects combined with the proposed project would not result in a considerable increase in demand for public services or result in a considerable contribution to cumulative impacts.

**Cumulative Impact Conclusion**

The proposed project would not contribute to any cumulative impacts related to schools, parks, and recreational facilities. The proposed project's contribution to other public services and utilities (fire and police protection, solid waste) would not be cumulatively considerable.

### 6.2.3.12 Traffic and Circulation

The geographic scope for the analysis of cumulative impacts on transportation and circulation consists of the roadways affected by the proposed project. A list of cumulative projects is provided on **Table 6-1, Projects Considered for Cumulative Impact Analysis**. Cumulative projects that would result in permanent traffic increases include development projects (i.e., Rancho Canada Village) in Carmel Valley. Relevant projects with potential traffic impacts that could combine with traffic impacts resulting from the proposed project are summarized below.

**Table 2-1** in **Section 2.0, Summary of the Environmental Impact Report** provides a summary of potential impacts related to traffic and transportation and significance determinations at each proposed project component site. The proposed project would result in less-than-significant impacts to traffic during construction and operation. The proposed project may result in significant impacts related to traffic delays, safety hazards, access limitations, roadway deterioration, and construction parking. Implementation of **Mitigation Measures TRA-2, TRA-3**, and **TRA-4** would reduce these impacts to a less-than-significant level.

None of the identified cumulative projects that are in close proximity to the proposed project are known to have overlapping construction schedules that would result in cumulative construction-related impacts, except for potentially the CRFREE project. Construction trips on Highway 1 from both projects would be spread out throughout the day and would not result in a significant temporary cumulative impact related to construction traffic, traffic delays, safety hazards, access limitations, and roadway deterioration. Most of the construction-related impacts would be in the immediate project vicinity of the two projects. Thus, there would be no significant cumulative traffic impacts resulting from the construction of the two projects.

Development projects (i.e., Rancho Cañada Village) would primarily utilized Highway 1 and Carmel Valley Road. Operation of the cumulative projects identified in **Table 6-1** and located in the project vicinity would not result in a significant increase in traffic trips since these are primarily infrastructure projects that require minimal maintenance activity (i.e., CSA-50 and CRFREE projects). The operation of

the proposed project would not result in a significant increase in traffic trips. Thus, there would be no significant cumulative traffic impacts resulting from the operation of these projects.

For these reasons, the proposed project's contribution to significant cumulative traffic impacts would not be cumulatively considerable.

**Cumulative Impact Conclusion**

Construction of the CRFREE project and proposed project may have overlapping or close construction schedules. Construction of both projects would not result in significant cumulative construction or operational traffic impacts. There are no other identified cumulative construction-related traffic impacts to which the proposed project would contribute.

Cumulative development could result in significant cumulative traffic impacts along segments of Highway 1 and Carmel Valley Road. However, operation of the proposed project would result in minimal new trips, resulting in minor peak hour trip increase on Highway 1. Therefore, the proposed project's contribution to significant cumulative traffic impacts due to cumulative development projects would not be cumulatively considerable.

## 6.3 SIGNIFICANT UNAVOIDABLE IMPACTS

The proposed project would result in significant impacts in the following categories, as described in this EIR: aesthetics, air quality, biological resources, cultural resources, hydrology, noise, and traffic. All project impacts can be reduced to a less-than-significant level with implementation of mitigation identified in this EIR with the exception of the following:

- Project and cumulative impacts to scenic vistas and viewsheds and visual character of the area associated with the operation of the proposed EPB project component;
- Project and cumulative impacts to flooding on- or off-site associated with the operation of the proposed EPB project component; and
- Project and cumulative impacts to noise associated with the construction and operation of the proposed EPB project component.

## 6.4 IRREVERSIBLE ENVIRONMENTAL CHANGES

CEQA Guidelines Section 15126(c) requires that an EIR include a discussion of significant, irreversible environmental changes that would result from the implementation of a project. Irreversible environmental changes are identified as those involving a large commitment of nonrenewable resources or irreversible damage resulting from environmental accidents. Public Resources Code Sec. 21100.1 provides further guidance identifying when the evaluation of potential irreversible environmental changes must be included in an EIR. An EIR must evaluate the significant irreversible impacts associated with the following types of projects:

- The adoption, amendment, or enactment of a plan, policy, or ordinance of a public agency.
- The adoption by local agency formation commission of a resolution making a determination.
- A project which will be subject to the requirement for preparing an environmental impact statement pursuant to the requirements of the National Environmental Policy Act of 1969.

The proposed project involves implementing three project components: 1) EPB; 2) SRPS; and 3) ISMP. The proposed EPB project component would maintain or improve existing flood protection to low-lying homes and public infrastructure along the north edge of the Lagoon, while the frequency of mechanical management of the sandbar is reduced in compliance with regulatory requirements. The proposed SRPS project component would provide protection from erosion along the northern sand cliffs and the undermining of Scenic Road which may result from northerly river flows or large ocean swells. The proposed ISMP project component is intended to provide a short-term (i.e., until the design, environmental review, permitting, and construction of the project is completed) solution to potential flooding issues by implementing select sandbar management actions that allow additional natural function in the Lagoon while still protecting properties and infrastructure. The environmental changes from the proposed project would occur as a result of project construction rather than operations. The only minor irreversible changes associated with the project include 1) the use of nonrenewable resources during construction, including building materials (such as concrete and glass) and petroleum products, and 2) the use of electricity for new facilities during the operational phase of the proposed EPB project component.

## 6.5 EFFECTS FOUND NOT TO BE SIGNIFICANT

CEQA Guidelines Sec. 15128 states that an EIR shall contain a statement to briefly indicate the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail. These are as follows:

**Agricultural Resources:** The proposed project and alternatives would not have an effect on agricultural resources because the project area does not contain significant agricultural resources. There are no designated prime or important farmlands, or parcels with Williamson Act contracts at the proposed project site.

**Population and Housing:** The proposed project would not directly result in population or economic growth through the development of new residential or commercial uses, and would not induce substantial population growth due to new permanent employees or extension of roads or public services to unserved locations. Therefore, the proposed project would not directly or indirectly result in growth inducing impacts. The proposed project would not displace a substantial number of existing housing or cause the displacement of a substantial number of persons.

**Mineral Resources:** Sand, gravel, and petroleum are the primary mineral resources extracted in Monterey County. Construction-grade aggregate (sand, gravel, and crushed stone) is the most abundant and commonly used mineral resource. The proposed project site contains sand; however, the proposed project site does support any mining activities and due to the sensitivity of the area, future mineral extraction in this area is unlikely. Therefore, the proposed project would not result in the loss of availability of a known mineral resource.