

SECTION 5.0

MITIGATION MEASURES

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5.1 INTRODUCTION

The Council on Environmental Quality (CEQ) National Environmental Policy Act (NEPA) regulations require that mitigation measures be developed for all of a proposed action's effects on the environment where it is feasible to do so (40 Code of Federal Regulations [CFR] Sections 1502.14[f] and 1502.16[h]; CEQ 40 Most Asked Questions, 19a). The NEPA regulations define mitigation as:

“...avoiding the impact altogether by not taking a certain action or parts of an action; minimizing impacts by limiting the degree or magnitude of the action and its implementation; rectifying the impact by repairing, rehabilitating, or restoring the affected environment; reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; compensating for the impact by replacing or providing substitute resources or environments” (40 CFR Section 1508.20).

These principles have been applied to guide the design and siting criteria for the project alternatives. As described more fully in **Section 2.0**, alternatives integrate regulatory requirements and Best Management Practices (BMPs) into the overall project design in an effort to minimize the potentially adverse environmental effects identified in **Section 4.0**, including indirect and cumulatively adverse effects. When appropriate, mitigation measures have been recommended. Relevant regulatory requirements, BMPs, and recommended mitigation measures are summarized below.

5.2 GEOLOGY AND SOILS

The following BMPs shall be implemented in accordance with federal regulatory requirements and would minimize potential impacts related to soils and geology. These measures are recommended for Alternatives A through F.

- A. The Tribe shall comply with the National Pollutant Discharge Elimination System (NPDES) General Construction Permit from the United States Environmental Protection Agency (USEPA), for construction site runoff during the construction phase in compliance with the Clean Water Act (CWA). A Stormwater Pollution Prevention Plan (SWPPP) shall be prepared, implemented, and maintained throughout the construction phase of the development, consistent with Construction General Permit requirements. The SWPPP shall detail the BMPs to be implemented during construction and post-construction operation of the selected project

alternative to reduce impacts related to soil erosion and water quality. The BMPs shall include, but are not limited to, the following:

1. Existing vegetation shall be retained where practicable. To the extent feasible, grading activities shall be limited to the immediate area required for construction and remediation.
2. Temporary erosion control measures (such as silt fences, fiber rolls, vegetated swales, a velocity dissipation structure, staked straw bales, temporary re-vegetation, rock bag dams, erosion control blankets, and sediment traps) shall be employed for disturbed areas.
3. To the maximum extent feasible, no disturbed surfaces shall be left without erosion control measures in place.
4. Construction activities shall be scheduled to minimize land disturbance during peak runoff periods. Soil conservation practices shall be completed during the fall or late winter to reduce erosion during spring runoff.
5. Creating construction zones and grading only one area or part of a construction zone at a time shall minimize exposed areas. If practicable during the wet season, grading on a particular zone shall be delayed until protective cover is restored on the previously graded zone.
6. Disturbed areas shall be re-vegetated following construction activities.
7. Construction area entrances and exits shall be stabilized with large-diameter rock.
8. Sediment shall be retained on site by a system of sediment basins, traps, or other appropriate measures.
9. A spill prevention and countermeasure plan shall be developed which identifies proper storage, collection, and disposal measures for potential pollutants (such as fuel, fertilizers, pesticides, etc.) used on site.
10. Petroleum products shall be stored, handled, used, and disposed of properly in accordance with provisions of the CWA (33 United States Code [USC] 1251 to 1387).
11. Construction materials, including topsoil and chemicals, shall be stored, covered, and isolated to prevent runoff losses and contamination of surface and groundwater.
12. Fuel and vehicle maintenance areas shall be established away from all drainage courses and designed to control runoff.
13. Sanitary facilities shall be provided for construction workers.
14. Disposal facilities shall be provided for soil wastes, including excess asphalt during construction and demolition.
15. Other potential BMPs include use of wheel wash or rumble strips and sweeping of paved surfaces to remove any and all tracked soil.

- B. Contractors involved in the project shall be trained on the potential environmental damage resulting from soil erosion prior to construction in a pre-construction meeting. Copies of the project's SWPPP shall be distributed at that time. Construction bid packages, contracts, plans, and specifications shall contain language that requires adherence to the SWPPP.
- C. In order to prevent damage to concrete and steel from corrosive soils, construction will utilize non-corrosive materials and protective coatings for buried facilities.

5.3 WATER RESOURCES

The following measure shall be implemented, in accordance with federal regulatory requirements, for Alternative E:

- A. Prior to construction of Alternative E, the Tribe shall file a request for a "Letter of Map Revision – Fill" with Federal Emergency Management Agency (FEMA) that describes the portions of the existing 100-year floodplain on the Anderson Site that will be filled as a result of site grading activities. The application shall demonstrate that the lowest adjacent grades of all proposed on-site structures are at or above the base flood elevation, and shall also demonstrate that the land and proposed structures are reasonably safe from flooding.

5.4 AIR QUALITY

The BMPs described in **Section 2.3.2** will minimize potential effects to air quality resulting from construction and operation of the project alternatives; therefore, no mitigation is required.

5.5 BIOLOGICAL RESOURCES

The following mitigation measures shall be implemented in accordance with federal regulatory requirements, including the Endangered Species Act, Migratory Bird Treaty Act, Bald and Gold Eagle Protection Act, Clean Water Act, and to prevent violation of state and local policies related to biological resources imposed for the protection of the environment in accordance with 40 CFR 1508.27(b)(10).

5.5.1 SPECIAL-STATUS SPECIES

Valley Elderberry Longhorn Beetle (VELB)

The following mitigation measures, consistent with United States Fish and Wildlife Service (USFWS) Framework, shall be implemented for Alternatives A through D prior to commencement of construction activities occurring within 50 meters of Valley Elderberry Longhorn Beetle (VELB) or the elderberry shrub:

- A. The elderberry shrub located on the northwest portion of the Strawberry Fields Site along the Sacramento River shall be fenced or flagged for avoidance. Construction activities potentially impacting the shrub (e.g., trenching) shall apply a buffer of at least 6 meters (approximately 20 feet) from the drip-line. To the degree feasible, activities occurring within 50 meters (165 feet) of the elderberry shrub shall be limited to the season when VELB are not active (August to February).
- B. Should mechanical weed removal occur within the drip-line of the elderberry shrub, it shall be limited to the season when adults are not active (August to February) and shall avoid damaging the elderberry.
- C. Construction staging areas shall be located a minimum of 30 feet away from the elderberry shrub. Temporary stockpiling of excavated or imported material shall occur in approved construction staging areas. Excess excavated soil shall be used on site or disposed of at a regional landfill or other appropriate facility.
- D. A qualified biologist shall provide training for construction personnel. Training shall include the status of the VELB, its host plant and habitat, the need to avoid damaging the elderberry shrub, and the possible penalties for noncompliance.
- E. Herbicides shall not be used within the drip-line of the shrub. Insecticides shall not be used within 30 meters (98 feet) of the elderberry shrub. Chemicals shall be applied using a backpack sprayer or similar direct application method.
- F. A qualified biologist shall monitor the work area at project-appropriate intervals to assure avoidance and conservation measures are being implemented. The amount and duration of monitoring depend on project specifics and shall be discussed with USFWS.
- G. Should removal of the elderberry shrub be necessary as part of future bank stabilization measures, the shrub will be relocated following USFWS protocols (USFWS, 1999) to suitable riparian habitat approximately 1,800 feet southwest of its original location, as approved by USFWS. Additionally, two credits will be purchased from a USFWS-approved conservation bank. After relocation, monitoring and annual reporting will occur for five years. Additional mitigation may be required pursuant to consultation with USFWS.

The following mitigation measures shall be implemented for Alternatives A through E:

Red Bluff Dwarf Rush

- H. A qualified botanist will conduct a preconstruction survey for Red Bluff dwarf rush within the identifiable bloom season (March through June) directly prior to construction. If the species is not identified within the area of impact, no further mitigation is required. Should the species be

identified within the area of impact, a 25-foot “no construction” buffer will be established and maintained using fencing. If avoidance is not possible, impacts to identified populations of Red Bluff dwarf rush shall be offset by preserving remaining populations to the extent feasible and/or replanting at a 1:1 ratio. Transplants shall be planted in suitable areas ecologically similar to the original sites as determined by the qualified biologist. A 25-foot buffer shall be established around preserved populations and replanting sites. The qualified biologist shall place orange construction fencing around avoided and replanted populations prior to construction activities to ensure populations are protected. Final replanting density shall be consistent with what is impacted.

Bald Eagle

- I. If construction activities (e.g., building, grading, ground disturbance, removal of vegetation) are scheduled to occur during the nesting season for bald eagles (nesting season in the Pacific Northwest is from January 1 through August 15), a qualified biologist shall conduct a preconstruction nest survey for bald eagles within one-mile of the Strawberry Fields Site prior to the start of construction. If an active nest is located within one mile of construction activities, the Tribe will comply with the recommendations identified in the USFWS (2007) *National Bald Eagle Management Guidelines and Conservation* to avoid disturbing nesting bald eagles and their young. If the active nest is visible from the Strawberry Fields Site, recommendations include maintaining a buffer of at least 660 feet between construction activities and the nest, restricting all clearing, external construction, and landscaping activities within 660 feet of the nest until the nesting season is over and maintaining and establishing landscape buffers. If the active nest is not visible from the Strawberry Fields Site recommendations include maintaining a buffer of at least 660 feet between construction activities and the nest and maintaining and establishing landscape buffers. Implementation of the mitigation discussed in **Section 5.5.2** will further reduce potential adverse effects to bald eagles.

Western Spadefoot Toad

- J. A qualified biologist will conduct a preconstruction survey of the potential upland grassland habitat for western spadefoot toad within 14 days prior to the start of construction. Mitigation discussed in **Section 5.5.3** will be implemented to protect potential breeding habitat. Additional silt fencing will be installed after surveys have been completed to further protect this species from construction impacts, should it be present. The fencing shall remain in place until all construction activities on the site have been completed.

California Red-legged Frog (CRLF) & Foothill Yellow-legged Frog (FYLF)

- K. A qualified biologist will conduct a preconstruction habitat assessment survey for California red-legged frog (CRLF) and foothill yellow-legged frog (FYLF) following Appendix D of USFWS (2005) *Revised Guidance of Site Assessments and Field Surveys for the California Red-legged Frog*. The survey shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance, construction activities, and/or any project activity likely to impact the CRLF or FYLF. The survey will be conducted in all potential CRLF and FYLF habitat on and within 200 feet of the Action Area. If CRLF or FYLF is detected within or immediately adjacent to the Action Area, the USFWS shall be contacted immediately to determine the best course of action.
- L. Should CRLF or FYLF be identified during surveys, additional silt fencing will be installed after surveys have been completed to further protect this species from construction impacts, should it be present. The fencing shall remain in place until construction activities cease. If identified on site, USFWS shall be contacted for additional consultation.
- M. Prior to the start of construction, the Tribe shall retain a qualified biologist to conduct an informational meeting to educate all construction staff on the CRLF and FYLF. This training will include a description of the CRLF and FYLF and habitat needs; an explanation of the status of the species and protection under the FESA; and a list of the measures being taken to reduce effects to the species during project construction and implementation. The training will include a handout containing training information. The project manager will use this handout to train any additional construction personnel that were not in attendance at the first meeting, prior to starting work on the project.

The following mitigation measure shall be implemented for Alternative E:

Western Red Bat

- N. A qualified biologist shall conduct a habitat assessment of the oak woodland habitat within the Anderson Site no more than three days prior to the start of construction occurring within 100 feet of the oak woodland. If the habitat assessment reveals suitable tree cavities large enough to accommodate roosting bats, the qualified biologist shall conduct a sunset fly-out survey on trees with identified cavities. Should bats be detected, the identified trees shall be flagged and buffered by 100 feet. Should the avoidance of identified bat-roosting trees not be feasible, replacement of suitable bat roosting habitat shall occur at a 1:1 ratio elsewhere on the Anderson Site outside of clearing limits. Replacement habitat may consist of bat boxes or similar structures. A qualified biologist shall determine bat box placement and a 100-foot avoidance buffer will be placed around each box. Trees identified to contain roosting bats that are proposed for removal shall be removed as late in the day as possible to reduce the likelihood of potential bat mortality. On the first day, remaining limbs may be removed as late in the day as

possible. This amount of disturbance should cause roosting bats to seek other roosting habitat. The rest of the tree can then be harvested on the afternoon of the second day. A qualified biologist shall be present for the removal of these trees in the event that bats are found to have been roosting.

5.5.2 NESTING MIGRATORY BIRDS

The following measures shall be implemented for Alternatives A through F to avoid and/or reduce impacts to any potentially nesting migratory, raptor, and/or special-status bird species:

- O. If construction activities (e.g., building, grading, ground disturbance, removal of vegetation) are scheduled to occur during the nesting season (February 15-September 15), a preconstruction nesting bird survey shall be conducted by a qualified wildlife biologist throughout the areas of suitable habitat within 500 feet of proposed construction activity. The surveys shall occur no more than 14 days prior to the scheduled onset of construction. If construction is delayed or halted for more than 14 days, another preconstruction survey for nesting bird species shall be conducted. If no nesting birds are detected during the preconstruction survey, no additional surveys or mitigation measures are required.
- P. If nesting bird species are observed within 500 feet of construction areas during the surveys, appropriate “no construction” buffers shall be established. The size and scale of nesting bird buffers shall be determined by a qualified biologist and shall be dependent upon the species observed and the location of the nest. Buffers shall be established around active nest locations. The nesting bird buffers shall be completely avoided during construction activities. The qualified biologist shall also determine an appropriate monitoring plan and decide whether construction monitoring is necessary during construction activities. Monitoring requirements are dependent upon the species observed, the location of the nests, and the number of nests observed. The buffers may be removed when the qualified wildlife biologist confirms that the nest(s) is no longer occupied and all birds have fledged.
- Q. If impacts (i.e., take) to migratory nesting bird species are unavoidable, consultation with USFWS shall be initiated. Through consultation, an appropriate and acceptable course of action shall be established.

Design features described in **Section 2.3.2** will reduce the potential impacts of lighting to migratory birds.

5.5.3 WETLANDS AND WATERS OF THE U.S.

The following measures shall be implemented for Alternatives A through D to minimize or avoid potential impacts to wetlands and Waters of the U.S.:

- R. Prior to the start of construction, wetlands and jurisdictional features shall be fenced, and excluded from activity. Fencing shall be located as far as feasible from the edge of wetlands and riparian habitats and installed prior to the dry season, after special-status species surveys have been conducted and prior to construction. The fencing shall remain in place until all construction activities on the site have been completed.
1. Construction activities within 50 feet of any United States Army Corps of Engineers (USACE) jurisdictional features identified in the formal delineation process shall be conducted during the dry season to minimize erosion.
 2. Staging areas shall be located away from the areas of wetland habitat that are fenced off. Temporary stockpiling of excavated or imported material shall occur only in approved construction staging areas. Excess excavated soil shall be used on site or disposed of at a regional landfill or other appropriate facility. Stockpiles that are to remain on the site through the wet season shall be protected to prevent erosion (e.g. with tarps, silt fences, or straw bales).
 3. Standard precautions shall be employed by the construction contractor to prevent the accidental release of fuel, oil, lubricant, or other hazardous materials associated with construction activities into jurisdictional features. A contaminant program shall be developed and implemented in the event of release of hazardous materials.
 4. If impacts to Waters of the U.S. and wetland habitat are unavoidable, a 404 permit and 401 Certification under CWA shall be obtained from the USACE and USEPA. Mitigation measures may include creation or restoration of wetland habitats either on site or at an appropriate off-site location, or the purchase of approved credits in a wetland mitigation bank approved by the USACE. Compensatory mitigation shall occur at a minimum of 1:1 ratio or as required by the USACE and USEPA.
- S. Prior to the construction of streambank stabilization measures along the Sacramento River, the Tribe shall consult with the USEPA and USACE regarding the need to obtain a CWA 404 permit and 401 Water Quality Certification. Additionally, the Tribe shall consult with FEMA regarding the need for FEMA review of potential floodplain impacts. The Tribe shall adhere to all conditions of the permits to ensure the protection of the floodplain and water quality during construction activities.

The following measure shall be implemented for Alternatives A through E to minimize or avoid potential impacts to wetlands and Waters of the U.S.:

- T. Compliance with the NPDES General Construction Permit, as required in **Mitigation Measure 5.2(A)**, will provide additional protection to wetlands, Waters of the U.S., and the fish and wildlife species that depend on them.

The following measure shall be implemented for Alternative E to minimize or avoid potential impacts to wetlands and Waters of the U.S.:

- U. Prior to the start of construction on any site, a formal Jurisdictional Delineation shall be conducted and the results of that survey shall be verified by the USACE. A 404 permit and 401 Certification under CWA shall be obtained from the USACE and USEPA. Mitigation measures may include creation or restoration of wetland habitats either on site or at an appropriate off-site location, or the purchase of approved credits in a wetland mitigation bank approved by the USACE. Compensatory mitigation shall occur at a minimum of 1:1 ratio or as required by the USACE and USEPA.

5.6 CULTURAL AND PALEONTOLOGICAL RESOURCES

The following mitigation measures shall be implemented for Alternatives A through F in accordance with federal regulatory requirements:

- A. In the event of inadvertent discovery of prehistoric or historic archaeological resources during construction-related earth-moving activities within the site, traffic mitigation locations, or Off-site Access Improvement Areas, all such finds shall be subject to Section 106 of the National Historic Preservation Act (NHPA) as amended (36 CFR 800), and the Bureau of Indian Affairs (BIA) shall be notified. Specifically, procedures for post-review discoveries without prior planning pursuant to 36 CFR 800.13 shall be followed. All work within 50 feet of the find shall be halted until a professional archaeologist meeting the Secretary of the Interior's qualifications (36 CFR 61) can assess the significance of the find.

If the find can be associated with archaeological site CA-SHA-4413 and appears to represent a new feature, activity, time period, or is anything other than emblematic of the site as it is currently understood, then the National Register eligibility of CA-SHA-4413 shall be reassessed in light of the new finds.

Any find not related to CA-SHA-4413 shall be evaluated by the archaeologist in consultation with the Tribe and BIA; if the site appears to be eligible to the National Register of Historic Places (NRHP), the archaeologist in consultation with the Tribe and BIA shall determine the appropriate course of action, including the development and implementation of a Treatment Plan or Monitoring Plan if necessary. All significant cultural materials recovered shall be subject to scientific analysis, professional curation or repatriation, and a report prepared by the professional archaeologist according to current professional standards.

- B. In the event of inadvertent discovery of paleontological resources during construction-related earth-moving activities, all such finds shall be subject to Section 101 (b)(4) of NEPA (40 CFR §§ 1500-1508), and the BIA shall be notified. All work within 50 feet of the find shall be

halted until a professional paleontologist can assess the significance of the find. If the find is determined to be significant by the paleontologist, then representatives of the BIA shall meet with the paleontologist to determine the appropriate course of action, including the development of an Evaluation Report and/or Mitigation Plan, if necessary. All significant paleontological materials recovered shall be subject to scientific analysis, professional curation, and a report prepared by the professional paleontologist according to current professional standards.

- C. If human remains are discovered during ground-disturbing activities on tribal lands, the Tribe, BIA, and County Coroner shall be contacted immediately. No further disturbance shall occur until the County Coroner has determined that the remains are not connected to criminal activity. If the remains are determined to be of Native American origin, the provisions of the Native American Graves Protection and Repatriation Act (NAGPRA) shall apply. Construction shall not resume in the vicinity until final disposition of the remains has been determined.

Prior to undertaking construction of off-site infrastructure, a qualified archaeologist shall conduct a survey for any areas to be disturbed during construction. If significant resources or significant archaeological sites are present, they shall be avoided, as feasible. If avoidance of such resources is not feasible, recordation of the sites shall be required, along with treatment as is recommended by the archaeologist after consultation with the State Historic Preservation Officer (SHPO) and, if the find is prehistoric, the Native American Heritage Commission (NAHC). If unknown resources are encountered during construction, recommendations, including the management recommendations listed in **Mitigation Measures 5.6(A)** and **5.6(B)**, shall be implemented to ensure that the resources are avoided, protected, and/or recorded.

The following mitigation measure shall be implemented for Alternatives A through D in accordance with federal regulatory requirements:

- D. Prior to construction of the northern access improvements along Bechelli Lane, the BIA shall consult with SHPO to develop an appropriate mitigation plan to address the potential for adverse effects to CA-SHA-266, an NRHP-eligible site that would be impacted by construction. Section 106 of the NHPA requires that these effects be resolved in a Memorandum of Agreement, Programmatic Agreement, or by incorporation of a description of its binding commitment to measures to avoid, minimize, or mitigate adverse effects to historic properties in the Record of Decision. It is anticipated that such measures would include development and implementation of archaeological and burial treatment plans.

The archaeological and burial treatment plans shall include details regarding the method and timing of the investigation of the North Access Improvement Area Area of Potential Effects (APE), data collection and analysis methodology, burial recordation and analysis methodology, decision points, artifact and burial storage, and repatriation schedules. It is strongly recommended that the North Access Improvement Area APE be graded to subsoil or to

anticipated construction impacts (whichever comes first) prior to Proposed Project construction wherever possible. This would help avoid unnecessary and potentially expensive construction delays by uncovering any features of CA-SHA-266 or other resources in advance, allowing time appropriately implement measures in accordance with the stipulations of the treatment plans.

All construction within the North Access Improvement Area APE below sterile subsoil shall be monitored by a team comprised of qualified professional archaeologists and Native American monitors.

5.7 SOCIOECONOMIC CONDITIONS

The following mitigation measure shall be implemented for Alternatives A, B, C, and E in accordance with the Tribal-State Compact:

- A. The Tribe shall implement problem gambling policies similar to those in effect at the existing Win-River Casino, which include self-help brochures available on site, and self-banning procedures to help those who may be affected by problem gaming.

5.8 TRANSPORTATION

Where transportation infrastructure is shown as having an unacceptable level of service (LOS) with the addition of traffic from the project alternatives (and caused at least in part from project traffic), the Tribe shall pay for a fair share of costs for the recommended mitigation (including right-of-way and any other environmental mitigation). In such cases, the Tribe shall be responsible for the incremental impact that the added project trips generate, calculated as a percentage of the costs involved for construction of the mitigation measure (referred to as the fair share). The fair share is calculated using the methodology presented in the *Caltrans Guide for the Preparation of Traffic Impact Studies* (2002; **Appendix F**). The Tribe shall make fair share contributions available prior to initiation of project construction. Funds shall be placed in an escrow account for use by the governmental entity with jurisdiction over the road to be improved so that the entity may design (funding shall be for design standards consistent with those required for similar facilities in the region, unless a deviation is approved by the entity with jurisdiction), obtain approvals/permits for, and construct the recommended road improvement.

5.8.1 CONSTRUCTION

The following mitigation measures shall be implemented in accordance with the applicable jurisdictional agency's regulatory requirements under Alternatives A through F:

- A. A traffic management plan shall be prepared in accordance with standards set forth in the California Manual on Uniform Traffic Control Devices (MUTCD) for Streets and Highways (FHWA, 2009). The traffic management plan shall be submitted to each affected local jurisdiction and/or agency. Also, prior to construction, the contractor shall coordinate with emergency service providers to avoid obstructing emergency response service. Police, fire, ambulance, and other emergency response providers shall be notified in advance of the details of the construction schedule, location of construction activities, duration of the construction period, and any access restrictions that could impact emergency response services. Traffic management plans shall include details regarding emergency service coordination. Copies of the traffic management plans shall be provided to all affected emergency service providers.

5.8.2 OPERATION

To prevent violation of federal, state, and local policies related to traffic operations imposed for the protection of the environment (40 CFR 1508.27[b][10]), the following mitigation measures shall be implemented as identified in the Traffic Impact Study (TIS) for the project alternatives (**Appendix F**).

Buildout Year (2025)

Strawberry Fields Site (Alternatives A, B, C, and D)

Site Access Option 1 – North Access Only

The following mitigation measures shall be implemented under Alternatives A through D:

- B. **South Bonnyview Road / Bechelli Lane.** Construct a second westbound (WB) left turn lane and corresponding receiving lane. Restripe the southbound (SB) approach to include two left turn lanes and a through/right turn lane. Restripe the northbound (NB) approach to include a left turn lane, a through/right turn lane, and a right turn pocket. Add a NB right turn permitted overlap signal phase. Fair share calculations are 56 percent for Alternative A, 43 percent for Alternative B, 53 percent for Alternative C, and 31 percent for Alternative D.
- C. **South Bonnyview Road / Interstate 5 (I-5) SB Ramps.** Construct a SB right turn channelized lane with yield control. Fair share calculations are 44 percent for Alternative A, 30 percent for Alternative B, 40 percent for Alternative C, and 22 percent for Alternative D.
- D. **South Bonnyview Road / I-5 NB Ramps.** Construct a NB left turn lane. Fair share calculations are 30 percent for Alternative A, 19 percent for Alternative B, 27 percent for Alternative C, and 14 percent for Alternative D.
- E. **Churn Creek Road / Victor Avenue.** Install a traffic signal. Fair share calculations are 5 percent for Alternative A, 4 percent for Alternative B, 7.5 percent for Alternative C, and 1 percent for Alternative D.

The following mitigation measure shall be implemented under Alternative A:

- F. **South Bonnyview Road / Churn Creek Road.** Construct a SB right turn lane. Fair share calculations are 4 percent.

The following mitigation measure shall be implemented under Alternatives B, C, and D:

- G. **South Bonnyview Road / Churn Creek Road.** Add a SB right turn permitted overlap signal phase. Fair share calculations are 2 percent for Alternative B, 3 percent for Alternative C, and 1 percent for Alternative D.

Site Access Option 2 – North and South Access

The following mitigation measure shall be implemented under Alternative A:

- H. **South Bonnyview Road / Bechelli Lane.** Construct a second WB left turn lane and corresponding receiving lane. Restripe the SB approach to include two left turn lanes and a through/right turn lane. Restripe the NB approach to include a left turn lane, a through/right turn lane, and a right turn pocket. Add a NB right turn permitted overlap signal phase. Fair share calculations are 47 percent.

The following mitigation measure shall be implemented under Alternatives B and C:

- I. **South Bonnyview Road / Bechelli Lane.** Restripe the SB approach to include two left turn lanes and a through/right turn lane. Restripe the NB approach to include a left turn lane and a through/right turn lane. Add a NB right turn permitted overlap signal phase. Fair share calculations are 33 percent for Alternative B and 43 percent for Alternative C.

The following mitigation measure shall be implemented under Alternative D:

- J. **South Bonnyview Road / Bechelli Lane.** Restripe the SB approach to include two left turn lanes and a through/right turn lane. Restripe the NB approach to include a left turn lane and a through/right turn lane. Fair share calculations are 24 percent.

The following mitigation measures shall be implemented under Alternatives A through D:

- K. **South Bonnyview Road / I-5 SB Ramps.** Construct a SB right turn channelized lane with yield control. Fair share calculations are 30 percent for Alternative A, 18 percent for Alternative B, 27 percent for Alternative C, and 13 percent for Alternative D.

- L. **South Bonnyview Road / I-5 NB Ramps.** Construct a NB left turn lane. Fair share calculations are 17 percent for Alternative A, 7 percent for Alternative B, 14 percent for Alternative C, and 8 percent for Alternative D.
- M. **South Bonnyview Road / Churn Creek Road.** Add a SB right turn permitted overlap signal phase. Fair share calculations are 4 percent for Alternative A, 2 percent for Alternative B, 3 percent for Alternative C, and 1 percent for Alternative D.
- N. **Churn Creek Road / Victor Avenue.** Install a traffic signal. Fair share calculations are 5 percent for Alternative A, 4 percent for Alternative B, 8 percent for Alternative C, and 1 percent for Alternative D.

Anderson Site (Alternative E)

The following mitigation measures shall be implemented under Alternative E:

- O. **North Street / Oak Street.** Install a traffic signal or roundabout. Fair share calculations are 90 percent.
- P. **North Street / I-5 SB Off-Ramp.** Install a traffic signal or roundabout. Fair share calculations are 81 percent.
- Q. **North Street / McMurray Drive and I-5 NB Off-Ramp.** Install a traffic signal or roundabout. Fair share calculations are 39 percent.
- R. **I-5 SB Off-Ramp / North Street Diverge Segment.** Either increase the length of the deceleration lane to 360 feet or add a third lane to I-5 in the SB direction. Fair share calculations are 24 percent.

Cumulative Year (2040)

Strawberry Fields Site (Alternatives A, B, C, and D)

Site Access Option 1 – North Access Only

The following mitigation measures shall be implemented under Alternatives A through D:

- S. **South Bonnyview Road / Bechelli Lane.** Install a traffic signal with a third eastbound (EB) through lane and a right turn pocket, an additional WB left turn lane, and an additional SB left turn lane. This is consistent with the Alternative 1B concept proposed by Omni-Means. Fair share calculations are 56 percent for Alternative A, 43 percent for Alternative B, 53 percent for Alternative C, and 31 percent for Alternative D.
- T. **South Bonnyview Road / I-5 SB Ramps.** Install a diverging diamond interchange at the I-5 NB and SB ramps. This is consistent with the Alternative 4B concept proposed by Omni-

Means. Fair share calculations are 44 percent for Alternative A, 30 percent for Alternative B, 40 percent for Alternative C, and 22 percent for Alternative D.

- U. **South Bonnyview Road / I-5 NB Ramps.** Implement **Mitigation Measure 5.8(T)**. Fair share calculations are 30 percent for Alternative A, 19 percent for Alternative B, 27 percent for Alternative C, and 14 percent for Alternative D.
- V. **South Bonnyview Road / Churn Creek Road.** Install a roundabout. This is consistent with the Alternative 4B concept proposed by Omni-Means. Fair share calculations are 4 percent for Alternative A, 2 percent for Alternative B, 3 percent for Alternative C, and 1 percent for Alternative D.
- W. **Churn Creek Road / Alrose Lane.** Implement **Mitigation Measure 5.8(T)** and **Mitigation Measure 5.8(V)**. Fair share calculations are 8 percent for Alternative A, 5 percent for Alternative B, 8 percent for Alternative C, and 3 percent for Alternative D.
- X. **Churn Creek Road / Victor Avenue.** Install a traffic signal. Fair share calculations are 5 percent for Alternative A, 4 percent for Alternative B, 7.5 percent for Alternative C, and 1 percent for Alternative D.
- Y. **Churn Creek Road / Rancho Road.** Add a SB left turn pocket. Fair share calculations are 6 percent for Alternative A, 5 percent for Alternative B, 5 percent for Alternative C, and 1 percent for Alternative D.

Site Access Option 2 – North and South Access

The following mitigation measures shall be implemented under Alternatives A through D:

- Z. **South Bonnyview Road / Bechelli Lane.** Add a SB left turn lane. Add a WB left turn lane. Add an EB right turn pocket. Fair share calculations are 47 percent for Alternative A, 33 percent for Alternative B, 43 percent for Alternative C, and 24 percent for Alternative D.
- AA. **South Bonnyview Road / I-5 SB Ramps.** Install a diverging diamond interchange at the I-5 NB and SB ramps. This is consistent with the Alternative 4B concept proposed by Omni-Means. Fair share calculations are 30 percent for Alternative A, 18 percent for Alternative B, 27 percent for Alternative C, and 13 percent for Alternative D.
- BB. **South Bonnyview Road / I-5 NB Ramps.** Implement **Mitigation Measure 5.8(AA)**. Fair share calculations are 17 percent for Alternative A, 7 percent for Alternative B, 14 percent for Alternative C, and 8 percent for Alternative D.
- CC. **South Bonnyview Road / Churn Creek Road.** Install a roundabout. This is consistent with the Alternative 4B concept proposed by Omni-Means. Fair share calculations are 4 percent for

Alternative A, 2 percent for Alternative B, 3 percent for Alternative C, and 1 percent for Alternative D.

DD. **Churn Creek Road / Alrose Lane.** Implement **Mitigation Measure 5.8(AA)** and **Mitigation Measure 5.8(CC)**. Fair share calculations are 8 percent for Alternative A, 5 percent for Alternative B, 8 percent for Alternative C, and 3 percent for Alternative D.

EE. **Churn Creek Road / Victor Avenue.** Install a traffic signal. Fair share calculations are 5 percent for Alternative A, 4 percent for Alternative B, 8 percent for Alternative C, and 1 percent for Alternative D.

FF. **Churn Creek Road / Rancho Road.** Add a SB left turn pocket. Fair share calculations are 3 percent for Alternative A, 5 percent for Alternative B, 5 percent for Alternative C, and 1 percent for Alternative D.

Anderson Site (Alternative E)

The following mitigation measures shall be implemented under Alternative E:

GG. **North Street / Oak Street.** Install a traffic signal. Fair share calculations are 90 percent.

HH. **North Street / I-5 SB Off-Ramp.** Install a traffic signal or roundabout. Fair share calculations are 81 percent.

II. **North Street / McMurray Drive and I-5 NB On-Ramp.** Install a traffic signal or roundabout. Fair share calculations are 39 percent.

JJ. **Balls Ferry Road / Oak Street.** Install all-way stop control. Fair share calculations are 43 percent.

5.9 LAND USE

Mitigation in **Section 5.8** and BMPs in **Section 2.3.2** will reduce incompatibilities with neighboring land uses due to air quality, noise, traffic, and aesthetic impacts to less-than-significant levels.

5.10 PUBLIC SERVICES

To prevent violation of federal, state, and local policies related to public services imposed for the protection of the environment (40 CFR 1508.27[b][10]), the following mitigation measures shall be implemented.

5.10.1 OFF-SITE WATER AND WASTEWATER SERVICES

The following mitigation measures shall be implemented for Alternatives A through D:

- A. For off-site water and/or wastewater provision options, the Tribe shall enter into a service agreement with the City of Redding prior to project operation. The service agreement shall include provisions for monthly services charges consistent with rates paid by other commercial users within the city.
- B. Should the project be operational prior to the completion of improvements to the West Side Interceptor, the Tribe shall construct an equalization storage tank with a capacity of at least 362,000 gallons for storage of wastewater generated during 10-year, 24-hour storm events when the City's conveyance system is over capacity until the peak event has resided and flows are below the capacity of the pipeline conveyance system.

The following mitigation measure shall be implemented for Alternative E:

- C. For the off-site water and/or wastewater provision option, the Tribe shall enter into a service agreement with the City of Anderson prior to project operation. The service agreement shall include provisions for monthly services charges consistent with rates paid by other commercial users within the city.

The following mitigation measure shall be implemented for Alternative F:

- D. The existing 2012 Master Service Agreement between the City of Redding and the Tribe shall be renegotiated to account for the increase in water and wastewater demand as a result of Alternative F. The Tribe would continue to pay for water and wastewater services on per-use basis.

5.10.2 SOLID WASTE

The BMPs described in **Section 2.3.2** will minimize potential effects to solid waste resulting from construction and operation of the project alternatives; therefore, no mitigation is required.

5.10.3 LAW ENFORCEMENT

To prevent violation of federal, state, and local policies related to law enforcement services imposed for the protection of the environment (40 CFR 1508.27[b][10]), the following mitigation measure shall be implemented for Alternatives A through D:

- E. Prior to operation the Tribe shall enter into agreements to Shasta County Sheriff's Office (SCSO) for quantifiable direct and indirect costs incurred in conjunction with providing law enforcement services.

To prevent violation of federal, state, and local policies related to law enforcement services imposed for the protection of the environment (40 CFR 1508.27[b][10]), the following mitigation measure shall be implemented for Alternative E:

- F. Prior to operation the Tribe shall enter into agreements to reimburse the Anderson Police Department (APD) for quantifiable direct and indirect costs incurred in conjunction with providing law enforcement services.

5.10.4 FIRE PROTECTION AND EMERGENCY SERVICES

To prevent violation of federal, state, and local policies related to fire protection and emergency services imposed for the protection of the environment (40 CFR 1508.27[b][10]), the following mitigation measure shall be implemented for Alternatives A through D and F:

- G. Prior to operation the Tribe shall enter into a service agreement to reimburse the Shasta County Fire Department (SCFD) for additional demands caused by the operation of the facilities on trust property. The agreement shall address any required conditions and standards for emergency access and fire protection systems.

To prevent violation of federal, state, and local policies related to fire protection and emergency services imposed for the protection of the environment (40 CFR 1508.27[b][10]), the following mitigation measure shall be implemented for Alternative E:

- H. Prior to operation the Tribe shall enter into a service agreement to reimburse the Anderson Fire Department (AFD) for additional demands caused by the operation of the facilities on trust property. The agreement shall address any required conditions and standards for emergency access and fire protection systems.

5.10.5 ELECTRICITY AND NATURAL GAS

The BMPs described in **Section 2.3.2** will minimize potential effects to electricity and natural gas resulting from construction and operation of the project alternatives; therefore, no mitigation is required.

5.11 NOISE

To prevent violation of federal, state, and local policies related to noise imposed for the protection of the environment (40 CFR 1508.27[b][10]), the following measure shall be implemented for Alternatives A, B, and C:

- A. Sound levels shall be monitored at initial performances or “practice sessions” at the outdoor amphitheater to determine the sound levels at the nearest receptors based upon a reference sound level at 100 feet from the stage. To quantify this relationship, sound levels shall be monitored simultaneously at a point 100 feet from the stage and at one or more points near the northern boundary of the Strawberry Fields Site close to the nearest residential receptors. Once this relationship is established for the specifics of the venue, sound levels at the point 100 feet from the stage shall be monitored during events and, if necessary, the volume shall be reduced to ensure that the ambient sound level in the vicinity of residential receptors remains below 67 A-weighted decibels (dBA) equivalent sound level (Leq). Performers shall be required by contract to turn down the volume at the request of the Tribe if event conditions indicate this is necessary.

5.12 HAZARDOUS MATERIALS

The BMPs described in **Section 2.3.2** will minimize potential effects to hazardous materials resulting from construction and operation of the project alternatives; therefore, no mitigation is required.

5.13 AESTHETICS

The design features described in **Section 2.3.2** will minimize potential effects to aesthetics resulting from construction and operation of the project alternatives; therefore, no mitigation is required.