



E7. MITIGATION MEASURES



MASTER MANAGEMENT PLAN UPDATE AND ASSOCIATED PARK IMPROVEMENT PROJECTS
DRAFT ENVIRONMENTAL IMPACT REPORT

APPENDIX E7

MITIGATION MEASURES

INTRODUCTION

This Appendix provides a summary of all the mitigation measures provided in this EIR. This summary is intended to provide an easy reference for future Park projects that would result in similar impacts as the four Park Improvement Projects analyzed in detail in this EIR and therefore would likely be subject to the same (or similar) mitigation.

E4.1.1 AIR QUALITY

Mitigation Measure AQ-2: Control Short-term Construction Emissions

Consistent with BCAQMD guidelines, the following measures shall be implemented to reduce potentially significant effects on air quality resulting from construction related to the four specific Park Improvement Projects:

- ▶ Alternatives to open burning of vegetative material removed from a project site shall be used unless otherwise deemed infeasible by the AQMD. Among suitable alternatives are chipping, mulching, or conversion to biomass fuel;
- ▶ Adequate and applicable dust control measures (identified in detail below) shall be implemented during all phases of project development and construction as outlined below:
 - All active construction sites shall be watered at least twice daily. Frequency should be based on the type of operation, soil, and wind exposure.
 - Chemical soil stabilizers shall be applied to inactive construction areas (disturbed lands within construction projects that are unused for at least four consecutive days).
 - On-site vehicles speeds shall be limited to a speed of 15 mph on unpaved roads.
 - Land clearing, grading, earth moving or excavation activities shall be suspended when winds exceed 20 miles per hour.
 - Non-toxic binders (e.g., latex acrylic copolymer) shall be applied to exposed areas after cut and fill operations and the area shall be hydroseeded.
 - Vegetative ground cover shall be planted in disturbed areas as soon as possible after disturbance.
 - Inactive storage piles shall be covered.

- ▶ Paved streets adjacent to each project site shall be swept or washed at the end of each day as necessary to remove excessive accumulations of silt and/or mud which may have accumulated as a result of activities on the project site.
- ▶ A publicly visible sign shall be posted with the telephone number and person to contact regarding dust complaints. This person shall respond and take corrective action within 24 hours if a complaint is received. The telephone number of the BCAQMD shall also be visible to ensure compliance with BCAQMD Rule 201 & 207 (Nuisance and Fugitive Dust Emissions).

Timing/Implementation: During construction activities

Responsible Party: City of Chico

Applies to: Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan

Implementation of Mitigation Measure AQ-2 would reduce direct and cumulative impacts on air quality resulting from construction of the four specific Park Improvement Projects to less than significant.

E4.1.2 BIOLOGICAL RESOURCES

Mitigation Measure BIO-1b: Implement Measures to Protect Butte County Checkerbloom in the Disc Golf/Trailhead Concept Plan Area

The following measures shall be implemented to mitigate potential direct and indirect effects on populations of Butte County checkerbloom from implementation of the Disc Golf/Trailhead Area Concept Plan:

- ▶ As provided in Appendix H of the BPMMP, the Disc Golf/Trailhead Area Concept Plan shall be implemented to avoid direct and indirect impacts on locations of Butte County checkerbloom on the site to the greatest extent feasible. All disc golf structures (e.g., tees, targets, fairways) and trails shall be placed a minimum of 50 feet from locations that currently support Butte County checkerbloom wherever possible. Where this cannot be accomplished due to physical site constraints, the buffer may be reduced, but shall remain at a minimum of 25 feet.
- ▶ Before construction of any facility at the Disc Golf/Trailhead area in the vicinity of known locations of Butte County checkerbloom, exclusionary fencing shall be installed along a 25-foot buffer around the outer perimeter of the occurrence. Exclusionary fencing shall be installed under the guidance of a qualified botanist before commencement of construction to keep workers and equipment from disturbing existing Butte County

checkerbloom plants. The fencing shall be kept in place and periodically inspected and repaired, if necessary, for the duration of construction.

- ▶ The Disc Golf/Trailhead Area Concept Plan shall restrict foot traffic to clearly defined trails and disc golf features. Trails shall be constructed as narrow as possible to avoid degradation of suitable habitat for Butte County checkerbloom (and other special status plant species). Where existing disc golf structures and trails in the vicinity of existing locations of Butte County checkerbloom will be decommissioned, barriers (such as boulders) shall be placed to discourage use of these trails and structures.
- ▶ Permanent signage at the trailhead/rest area shall be installed to inform Park users of the presence and sensitivity of Butte County checkerbloom (and other sensitive resources) on the site.
- ▶ As provided in Appendix H of the BPMMP, alternate pin locations for Holes 3 and 4 of the long course shall be used from March 1 through July 1 to minimize potential disturbance of nearby checkerbloom plants during the active growth and blooming period.
- ▶ Per Plant Objective O. P-8 of the BPMMP, an adaptive management program shall be implemented that relies on periodic data collection on the distribution and progress of Butte County checkerbloom at the Disc Golf/Trailhead site. The goal of this adaptive management program shall be to document and monitor changes in the existing population of Butte County checkerbloom over time.
- ▶ If data collection indicates a decline in existing populations after implementation of the Disc Golf/Trailhead Area Concept Plan, relocation of trails or disc golf structures in the vicinity of these populations, or other management strategies that would benefit the plants based on the data collected, shall be implemented. This strategy would implement Plant Objective O. P-7 and Plant Implementation Strategies and Guidelines I. P-3 and I. P-4 of the BPMMP.

Applies to: Disc Golf/Trailhead Area Concept Plan

Timing/Implementation: Before ground-disturbing activities and during ongoing operation

Responsible Party: City of Chico

Implementation of Mitigation Measure BIO-1b would reduce potentially significant impacts on Butte County checkerbloom from implementation of the Disc Golf/Trailhead Area Concept Plan to a less than significant level.

Mitigation Measure BIO-1c: Implement Measures to Protect Known Occurrences of Butte County Checkerbloom in the Trails Plan and Horseshoe Lake Area Concept Plan Areas

To mitigate the potential direct and indirect effects on known occurrences of Butte County checkerbloom in the Trails Plan and Horseshoe Lake Area Concept Plan areas, the following measures shall be implemented:

- ▶ Before the start of any ground-disturbing activities, the City shall retain a qualified botanist to identify the locations of previously documented occurrences of Butte County checkerbloom in the Trails Plan and Horseshoe Lake Area Concept Plan Areas. The locations shall be clearly flagged or otherwise marked for avoidance during construction.
- ▶ The flagged occurrences shall be avoided to the maximum extent feasible and a buffer of at least 25 feet shall be established.
- ▶ If impacts to known occurrences of Butte County checkerbloom cannot be avoided while accomplishing the Park Improvement Project goals, every effort shall be made to minimize impacts to these occurrences.
- ▶ If it is determined that known occurrences of Butte County checkerbloom cannot be avoided, appropriate mitigation shall be developed through consultation with DFG. Any loss of Butte County checkerbloom shall be mitigated through preservation and enhancement of remaining occurrences and preservation and enhancement of suitable habitat on-site. Mitigation shall aim to ensure a no-net loss in special-status plant populations/and or habitat within the Park or region.
- ▶ Any mitigation developed through consultation with DFG shall be implemented as part of project implementation, and any monitoring and remedial action requirements specified as part of the consultation shall be implemented by the City.

Applies to: Trails Plan, Horseshoe Lake Area Concept Plan

Timing/Implementation: Before ground-disturbing activities and during ongoing operation

Responsible Party: City of Chico

Implementation of Mitigation Measure BIO-1c would reduce potentially significant impacts on known occurrences of Butte County checkerbloom from implementation of Trails Plan and Horseshoe Lake Area Concept Plan to a less than significant level.

Mitigation Measure BIO-1d: Implement Measures to Protect Bidwell's Knotweed at the Disc Golf/Trailhead Area

The following measures shall be implemented to mitigate for potential direct and indirect effect to Bidwell's knotweed at the Disc Golf/Trailhead Plan area:

- ▶ The Disc Golf/Trailhead Area Concept Plan shall be implemented to minimize direct and indirect impacts on Bidwell's knotweed habitat on the site. Because Bidwell's knotweed is an annual plant species, population sizes may fluctuate greatly from year to year. Therefore, simply avoiding plants that are present in a given year would not ensure that great numbers of individuals would not be affected in subsequent years. Therefore, a habitat approach shall be taken to minimize impacts on this species. This approach would entail minimizing impacts to wildflower fields, the native plant community that supports Bidwell's knotweed.
- ▶ Consistent with the Disc Golf/Trailhead Area Concept Plan, trails shall generally be placed outside of wildflower fields. The Disc Golf/Trailhead Area Concept Plan shall be implemented to restrict foot traffic to clearly defined trails and disc golf structures. The number of trails dissecting wildflower fields shall be minimized to the fewest number necessary to facilitate reasonable access to the disc golf course and scenic viewpoints, and trails shall be as narrow as possible and have clearly marked edges to reduce widening and discourage users from wandering off the path. Existing trails through wildflower fields that will not be retained as part of the Disc Golf/Trailhead Area Concept Plan shall be decommissioned, and barriers (such as boulders) shall be placed just outside any points where trails enter the wildflower field community to discourage use of these trails.
- ▶ Exclusionary fencing shall be installed under the guidance of a qualified botanist before commencement of construction to keep workers and equipment from disturbing wildflower field habitat intended for preservation. High priority shall be given to preserving those wildflower field communities that contained Bidwell's knotweed during surveys conducted in 2005.
- ▶ Permanent signage at the trailhead/rest area shall be installed to inform Park users of the presence and sensitivity of Bidwell's knotweed and wildflower field habitat and to deter users from disturbing the species.
- ▶ Per Plant Objective O. P-8 of the BPMMP, an adaptive management program shall be implemented that relies on periodic data collection on the distribution and progress of Butte County checkerbloom at the Disc Golf/Trailhead site. The goal of this adaptive management program shall be to document and monitor changes in the existing population of Butte County checkerbloom over time.
- ▶ If data collection indicates a decline in existing populations after implementation of the Disc Golf/Trailhead Area Concept Plan, relocation of trails or disc golf structures in the vicinity of these populations, or other management strategies that would benefit the plants based on the data collected, shall be implemented. This strategy would implement Plant Objective O. P-7 and Plant Implementation Strategies and Guidelines I. P-3 and I. P-4 of the BPMMP.

Applies to: Disc Golf/Trailhead Area Concept Plan

Timing/Implementation: During construction of Disc Golf/Trailhead Area Plans and during ongoing operation

Responsible Party: City of Chico

Implementation of Mitigation Measure BIO-1d would reduce potentially significant impacts on Bidwell's knotweed from implementation of the Disc Golf/Trailhead Area Concept Plan to a less than significant level.

Mitigation Measure BIO-1e: Implement Measures to Protect Unknown Occurrences of Butte County Checkerbloom, Bidwell's Knotweed, and Other Special-status Plant Species

The following measures shall be applied to mitigate potential direct and indirect impacts on as-yet-unknown occurrences of Butte County checkerbloom, Bidwell's knotweed, and other special-status plant species as a result of implementation of the Cedar Grove Area Concept Plan, Trails Plan, and Horseshoe Lake Area Concept Plan:

- ▶ Before the start of any ground-disturbing activities, the City shall retain a qualified botanist to conduct protocol-level special-status plant surveys in areas that have the potential to be disturbed by implementation of the Cedar Grove Concept Plan, Trails Plan, and Horseshoe Lake Concept Plan. These surveys shall be conducted during the appropriate time of year when the potentially occurring species would be present and clearly identifiable (i.e., the blooming period as identified in Table 2.3.2-2 in the BPMMP) and shall focus on those areas supporting suitable habitat for the target species. Survey protocols outlined by DFG shall be followed. CNPS List 4 species with potential to occur in the project sites shall be included in the surveys whenever feasible, so data on their distribution can be taken into consideration during project planning and design.
- ▶ For the Trails Plan, special-status plant surveys may be conducted on a segment by segment basis, as specific trail segments are proposed for development.
- ▶ If no special-status plant occurrences are found in the areas that would be affected by the site-specific projects, then the results of the surveys shall be documented in a letter report to the City and no further mitigation shall be required.
- ▶ If any special-status plant species are identified in the site-specific project areas, the location and extent of each occurrence shall be inventoried and these occurrences shall be avoided, to the maximum extent feasible, while still accomplishing the goals of the four Park Improvement Projects.
- ▶ If impacts on special-status plants cannot be avoided while accomplishing the Park Improvement Project goals, every effort shall be made to minimize impacts on special-status plants (including CNPS List 4 plants) through design planning.

- ▶ If federally or state listed plant species are identified in the site-specific project areas and it is determined that occurrences of these species would be directly or indirectly affected by the site-specific projects, then appropriate mitigation shall be developed through consultation with USFWS or DFG, depending on the listing status of the plant. Any loss of special-status plants (except CNPS List 4 plants) shall be mitigated through preservation and enhancement of remaining occurrences and preservation and enhancement of suitable habitat on-site. Mitigation shall aim to ensure a no-net loss in special-status plant populations/and or habitat within the Park or region. Impacts to CNPS list 4 plants shall be avoided to the greatest extent possible. If complete avoidance is not feasible, impacts to CNPS plants shall be minimized.
- ▶ Any mitigation developed through consultation with the regulatory agencies shall be implemented as part of project implementation, and any monitoring and remedial action requirements specified as part of the consultation shall be implemented by the City.

Applies to: Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan

Timing/Implementation: Prior to any ground-disturbing activities

Responsible Party: City of Chico

Implementation of Mitigation Measure BIO-1e would reduce potentially significant impacts on unknown occurrences of Butte County checkerbloom, Bidwell's knotweed, and other special-status plant species from implementation of Park Improvement Projects to a less than significant level.

Mitigation Measure BIO-2b: Implement Measures to Protect Elderberry Shrubs, the Host Plant for the Valley Elderberry Longhorn Beetle

The City shall ensure that the following measures are implemented to minimize potential project effects on elderberry shrubs, the host plant for valley elderberry longhorn beetles.

Areas that support elderberry shrubs shall be identified and, to the extent feasible and practicable, project elements shall be designed to avoid direct effects on these areas. Before beginning any ground-disturbing project activities, a qualified biologist shall identify areas that support elderberry shrubs and that could be affected by the given project. The City shall ensure, through coordination with the biologist, that the footprint of project features and construction zones, staging areas, and access routes are designed to avoid disturbance of potential habitat to the extent feasible and practicable.

If impacts to areas supporting elderberry shrubs cannot be avoided, focused surveys shall be conducted. Before the initiation of any ground-disturbing activities, a qualified biologist shall conduct surveys for elderberry shrubs

within 100 feet of the impact area, in accordance with USFWS guidelines. All elderberry shrubs with potential to be affected by project activities shall be mapped and the number of stems greater than 1 inch in diameter on each shrub that may require removal shall be counted. If no elderberry shrubs are found during focused surveys, no further action shall be required.

If potential effects to valley elderberry longhorn beetle cannot be avoided, measures shall be implemented to minimize and mitigate unavoidable effects. Before the initiation of any ground-disturbing project activities within 100 feet of elderberry shrubs that are suitable for use by valley elderberry longhorn beetles, USFWS shall be consulted to develop appropriate measures. Such measures may include those described in Conservation Guidelines for the Valley Elderberry Longhorn Beetle (USFWS 1999) and the VELB Programmatic Consultation (USFWS 1996). Minimization measures may include implementation of buffers around shrubs that would not be removed, transplanting shrubs to a conservation area, conducting worker awareness training, and periodic biological monitoring. Compensation may include planting of elderberry seedling or cuttings and associate native species.

Authorization for take of valley elderberry longhorn beetle under ESA shall be obtained if it is determined that implementation of a program component is likely to result in take, despite implementation of avoidance and minimization measures.

- ▶ All measures developed through informal consultation with USFWS shall be implemented, as well as any additional measures adopted through a formal permitting process, if applicable.

Applies to: Trails Plan, Horseshoe Lake Area Concept Plan, and Cedar Grove Area Concept Plan

Timing/Implementation: Before and during construction activities

Responsible Party: City of Chico

Implementation of Mitigation Measure BIO-2b would reduce potentially significant impacts on VELB from implementation of Park Improvement Projects to a less than significant level.

Mitigation Measure BIO-2c: Implement Measures to Protect and Compensate for Loss of Vernal Pool Invertebrate and Western Spadefoot Habitat

The City shall ensure that the following measures are implemented to avoid, minimize, and mitigate potential project effects on vernal pool invertebrates and western spadefoot:

- ▶ Before any ground-disturbing project activities begin, the City shall retain a qualified biologist to identify and map potential habitat in areas that could be affected by the given project. The City shall ensure, through coordination with the biologist, that the footprint of project features and construction zones, staging areas, and access routes are designed to avoid direct or indirect effects on suitable habitat for vernal pool invertebrates and western spadefoot to the extent feasible and practicable. In addition to vernal pools, suitable habitat for western spadefoot includes the surrounding grassland matrix.
- ▶ If vernal pool invertebrate and western spadefoot habitat cannot be avoided, measures shall be implemented to minimize and mitigate unavoidable effects. Before beginning any ground-disturbing project activities in such habitat, USFWS shall be consulted to identify appropriate measures to minimize and compensate for adverse effects on special-status vernal pool invertebrates; DFG shall be consulted to identify measures to minimize and compensate for adverse effects on western spadefoot. Applicable avoidance and minimization measures may include those described in USFWS's vernal pool crustacean Programmatic Consultation (USFWS 1996a). Minimization measures for vernal pool invertebrates are likely to include, but would not be limited to, fencing of habitat to be avoided, timing of ground disturbance to correspond with the dry season, conducting worker awareness training, and periodic biological monitoring. Compensation may include preservation, enhancement, and/or creation of suitable habitat in areas that currently, or could in the future, support special-status invertebrate and/or spadefoot populations.
- ▶ Authorization for take of vernal pool invertebrates under ESA shall be obtained if it is determined that implementation of a program component is likely to result in take, despite implementation of avoidance and minimization measures.
- ▶ All measures developed through informal consultation with USFWS and DFG shall be implemented, as well as any additional measures adopted through a formal permitting process, if applicable.

Implementing this mitigation measure would reduce the potential impact on special-status vernal pool invertebrates and western spadefoot to a less than significant level.

Applies to: Trails Plan Horseshoe Lake Area Concept Plan, and Disc Golf/Trailhead Area Concept Plan

Timing/Implementation: Before and during construction in and near vernal pool habitats and Western spadefoot habitats.

Responsible Party: City of Chico

Implementation of Mitigation Measure BIO-2c would reduce potentially significant impacts on vernal pool crustacean and western spadefoot habitat from implementation of Park Improvement Projects to a less than significant level.

Mitigation Measure BIO-2d(1): Protect Tree-Nesting Raptors

Before project construction, it shall be determined whether any construction or tree removal is proposed during the raptor nesting season (February 1 to August 31). If no construction or tree removal will occur during the raptor nesting season, no further mitigation shall be necessary.

If construction or tree removal is proposed during the raptor nesting season, a focused survey for special-status and common raptor nests shall be conducted by a qualified biologist during the nesting season to identify active nests within 500 feet of the project area. The survey shall be conducted no less than 14 days and no more than 30 days before the beginning of construction or tree removal.

If nesting raptors are found during the focused survey, impacts shall be avoided by establishment of appropriate buffers. No project activity shall commence within the buffer area until a qualified biologist confirms that the nest is no longer active. DFG guidelines recommend implementation of 500 foot buffers, but the size of the buffer may be adjusted if a qualified biologist determines it would not be likely to adversely affect the nest. Monitoring of the nest by a qualified biologist may be required if the activity has potential to adversely affect the nest.

Applies to: Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, and Disc Golf/Trailhead Area Concept Plan

Timing/Implementation: Before and during construction during the breeding season of tree-nesting raptors

Responsible Party: City of Chico

Mitigation Measure BIO-2d(2): Protect Peregrine Falcon

If construction at the Disc Golf/Trailhead Area Concept Plan site is to occur during the peregrine falcon breeding period (generally February 1 to June 30), an appropriate buffer around the southern cliff edge shall be determined by a qualified biologist and construction activities shall be avoided within the buffer zone unless a qualified biologist confirms there is no active nest on the cliff.

If construction commences between June 30 and February 1, no buffer will be necessary.

Applies to: Disc Golf/Trailhead Area Concept Plan

Timing/Implementation: Before and during construction during the breeding season of peregrine falcons known to nest below the South Rim

Responsible Party: City of Chico

Mitigation Measure BIO-2d(3): Protect Burrowing Owl

Grassland habitat in Middle and Upper Park provides potentially suitable habitat for burrowing owls.

The following mitigation measure shall be implemented to identify suitable habitat and protect burrowing owl from adverse effects of the Park Improvement Projects:

- ▶ Before any ground disturbance related to the Park Improvement Projects that occur within or adjacent to grassland habitat, a qualified biologist shall conduct a preconstruction survey to assess habitat suitability for burrowing owl (e.g., based on grassland structure and presence of burrows) and, in areas determined to be suitable, evaluate use by burrowing owls in accordance with current DFG survey guidelines (CDFG 1995). Surveys shall be conducted within 30 days prior to beginning construction activities and shall include the disturbance footprint and a 500-foot radius of the disturbance footprint perimeter. For construction activities occurring during the burrowing owl breeding season (February 1–August 31), surveys shall document whether burrowing owls are nesting on or directly adjacent to disturbance areas. Survey results shall be valid only for the season during which the survey is conducted. If no burrowing owls are documented during the surveys, no further mitigation shall be required.

If burrowing owls are found, the following additional measures shall be implemented:

- ▶ Project construction shall avoid all burrowing owl nest sites that could otherwise be disturbed by project construction during the breeding season (February 1–August 31) or while the nest is occupied by adults or young. Avoidance shall include establishment of a nondisturbance buffer zone of at least 250 feet around each nest site. The buffer zone shall be delineated by highly visible temporary construction fencing. Construction may occur during the breeding season if a qualified biologist monitors the nest and determines that the nest site is no longer used by burrowing owls.
- ▶ If burrowing owls are found during the nonbreeding season (September 1–January 31), project construction shall avoid the owls and the burrows they are using. Avoidance shall include the establishment of at least a 160-foot nondisturbance buffer zone around each burrow being used. The buffer shall be delineated by highly visible temporary construction fencing. If burrowing owls cannot be avoided, the City shall conduct passive relocation by installing one-way doors in suitable burrow entrances that are used or may be used by the owls and that would be collapsed or degraded by construction activities. This measure is described below. Artificial

burrows shall be created in an area of the Park determined suitable by a qualified biologist in coordination with Fish and Game staff. The burrows shall be created according to the conservation measures established for this species.

- ▶ To displace burrowing owls without destroying eggs, young, or adults, one-way doors shall be installed on owl burrows before February 1 prior to disturbance, and each burrow shall be monitored following DFG's protocol (California Department of Fish and Game 1995). This measure includes monitoring the burrow for a 48-hour period after the one-way doors are installed. The doors shall be checked every 24 hours following installation to determine whether they are still intact. If the one-way door is still correctly installed after a continuous 48-hour period (i.e., no animals have dug up the door and rendered it useless), then the one-way door shall be removed and the burrows shall be excavated using hand tools and plastic tubing to maintain an escape route for any animals still inside the burrow.

Applies to: Trails Plan and Horseshoe Lake Area Concept Plan

Timing/Implementation: Before and during construction

Responsible Party: City of Chico

Implementation of Mitigation Measures BIO-2d(1) through BIO-2d(3) would reduce potentially significant impacts on nesting raptors from implementation of Park Improvement Projects to a less than significant level.

Mitigation Measure BIO-2e: Protect Northwestern Pond Turtle: Identify Habitat, Minimize Potential Impacts, and Mitigate in Consultation with DFG as Needed

Before any ground-disturbing project activities begin, a qualified biologist shall identify potential aquatic and nesting habitat in areas that could be affected by the given Park Improvement Project. The City shall ensure, through coordination with the biologist, that the footprint of project features and construction zones, staging areas, and access routes are designed to avoid direct or indirect effects on suitable habitat for northwestern pond turtle to the extent feasible and practicable.

If effects to pond turtle habitat cannot be avoided, measures shall be implemented to minimize unavoidable effects. Before beginning any project activities in such habitat, DFG shall be consulted to identify appropriate measures to minimize adverse effects on pond turtles. Such measures are likely to include, but would not be limited to, relocating turtles to appropriate areas, installing fencing to exclude turtles from nesting in areas where ground disturbance would occur, conducting worker awareness training, and periodic biological monitoring. All measures deemed appropriate and feasible during this consultation with DFG shall be implemented.

Applies to: Trails Plan and Horseshoe Lake Area Concept Plan

Timing/Implementation: Before and during construction

Responsible Party: City of Chico

Implementation of Mitigation Measure BIO-2e would reduce potentially significant impacts on northwestern pond turtle from implementation of Park Improvement Projects to a less than significant level.

Mitigation Measure BIO-2f: Implement Measures to Protect Other Special-status Nesting Birds

The following measures shall be implemented to minimize and mitigate the potential disturbance of nesting special-status birds.

- ▶ The City shall design Park Improvement Projects to minimize disturbance and removal of nesting habitat for special-status nesting birds to the extent feasible and practicable. Nesting habitat that cannot be avoided shall be removed during the non-nesting season, to the extent feasible and practicable.
- ▶ To avoid potential impacts to active nests of special-status birds, a qualified biologist shall conduct preconstruction surveys to identify active special-status bird nests within 500 feet of construction areas. The survey shall be conducted no more than 10 days before project activities begin. If an active nest is found, an appropriate buffer to minimize impacts shall be determined by a qualified biologist. No project activities shall commence within the buffer area until a qualified biologist confirms that the nest is no longer active or the birds are not dependent upon it. The size of the buffer may vary, depending on the nest location, nest stage, and construction activity.

Applies to: Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, and the Disc Golf/Trailhead Area Concept Plan

Timing/Implementation: Before and during construction during the breeding season of yellow warbler, yellow-breasted chat, and loggerhead shrike.

Responsible Party: City of Chico

Implementation of Mitigation Measure BIO-2f would reduce potentially significant impacts on neotropical migrant landbirds from implementation of Park Improvement Projects to a less than significant level.

Mitigation Measure BIO-3b: Implement Measures to Protect Riparian Forest

The following measures shall be implemented to mitigate potential impacts on riparian forest associated with implementation of the Trails Plan and Cedar Grove Area Concept Plan:

Trails Plan

- ▶ The amount of riparian forest affected by construction of new bridges or other activities occurring in or near riparian forest during implementation of the Trails Plan shall be limited to the minimum necessary.
- ▶ Any areas that require removal of riparian vegetation shall be restored with native riparian plant species.
- ▶ The City shall consult with DFG regarding the need for a Streambed Alteration Agreement before construction of any of the proposed bridges over Big Chico Creek.
- ▶ If a Streambed Alteration Agreement is deemed necessary for Big Chico Creek crossings, the City shall obtain the agreement before the start of any construction affecting the bed or bank of Big Chico Creek and shall implement all measures that are conditions of the agreement.

Cedar Grove Area Concept Plan

- ▶ The Cedar Grove Area Concept Plan shall be implemented to avoid or minimize degradation of areas supporting riparian forest vegetation. High priority shall be given to protecting riparian communities from activities that cause compaction, erosion, vegetation removal, or other degradation according to Natural Community Implementation Strategy I. NC-1.
- ▶ Where ground-disturbing activities occur in the immediate vicinity of riparian forest, exclusionary fencing shall be installed under the guidance of a qualified botanist along the outside edge of the riparian forest canopy before commencement of construction, to prevent workers and equipment from entering this sensitive habitat.
- ▶ If removal of riparian habitat is required for implementation of the concept plan, the amount shall be limited to the minimum necessary to achieve concept plan objectives.
- ▶ Any areas that require removal of riparian vegetation shall be restored with native riparian plant species.

Applies to: Trails Plan and Cedar Grove Area Concept Plan

Timing/Implementation: Before and during construction of a new bridge crossing over Big Chico Creek associated with implementation of the Trails Plan; before and during the construction of any components of the Cedar Grove Area Concept Plan located immediately adjacent to riparian forest.

Responsible Party: City of Chico

Implementation of Mitigation Measure BIO-3b would reduce potentially significant impacts on riparian forest from implementation of Park Improvement Projects to a less than significant level.

Mitigation Measure BIO-3c: Implement Measures to Protect Oak Woodland

The following measures shall be implemented to mitigate potential impacts on oak woodlands resulting from implementation of the Trails Plan, Horseshoe Lake Area Concept Plan, and Disc Golf/Trailhead Area Concept Plan:

- ▶ Where possible, trails, improvements, and facilities shall be constructed outside of oak woodlands. The number of trails dissecting oak woodlands shall be minimized to the fewest number necessary to accomplish the goals of the site-specific Park Improvement Projects. The width of trails through oak woodlands shall be minimized and trails shall have clearly marked edges that discourage trail widening and deter users from straying off the designated trail.
- ▶ Trails through oak woodlands that are decommissioned as part of a site-specific Park Improvement Project shall be reclaimed using barriers (such as boulders) to discourage continued use of these trails.
- ▶ Grading, trenching, equipment storage, and other soil-disturbing or compacting activities shall not occur within the driplines of oak trees. New structures and impervious-surface materials shall not be placed in the driplines of oaks, except where deemed necessary to reduce the footprint size of tees as part of the proposed Disc Golf/Trailhead Concept Plan and to reduce soil compaction.
- ▶ To ensure that the driplines of oaks are not disturbed during construction, protective fencing shall be installed, under the guidance of a qualified botanist, certified arborist, or Registered Professional Forester, at least 1 foot beyond the outer edge of the driplines of all oaks that grow within the construction zones of the site-specific Park Improvement Projects, and no project activities shall be allowed within these exclusion zones, unless specifically required as part of project construction.
- ▶ The oak woodland management guidelines contained in Section 3 of the NRMP (Appendix C of the BPMMP) shall be implemented. These guidelines include recommendations for sustaining oak woodlands, initiating a burning program, and maintaining the oak landscape.

In addition to the measures outlined above, the following additional measures shall be implemented in connection with development and ongoing maintenance of the proposed Disc Golf/Trailhead Concept Plan to protect oaks and to mitigate for any unavoidable loss resulting from mortality over time. These measures are based on site

observations, oak woodland management guidelines provided by DFG, and measure recommended in the tree assessment (Appendix E4):

- ▶ Any modification to the proposed design and layout of the site shall be subject to the same impact avoidance and minimization criteria as the initial design;
- ▶ Information describing the value of native oak trees and the importance of the preservation and protection of oak woodland for wildlife habitat and the aesthetic values of Bidwell Park shall be provided at the informational kiosk at the Disc Golf/Trailhead area site. The information shall discuss the importance of avoiding direct impacts resulting from bark and limb damage as well as indirect effects such as soil compaction/root damage and shall encourage site users to act responsibly and prevent adverse effects.
- ▶ In cases where disc golf pins are located within groves of oak trees or oak trees are within fairways, measures to protect the tree trunks such as the installation of shielding pole structures shall be implemented. Installation shall be implemented without damage to the root zone, and in a manner that preserves the visual character of the site.
- ▶ In cases where tees or trails are located within driplines of oaks or in the immediate vicinity of driplines, a 6 inch layer of woodchip mulch shall be applied to a 20' radius around the tees and on the trails to minimize soil compaction; this layer shall be maintained on a ongoing basis, as needed, to ensure continued protection of the root zones.
- ▶ Periodic monitoring of the oaks at the site shall be conducted to determine if any unavoidable impacts are occurring as a result of site use, in spite of the impact minimization measures.
- ▶ Any unavoidable impacts to oaks resulting from construction, or tree mortality resulting from ongoing use of the site shall be mitigated by replanting oak woodland habitat at the Disc Golf/Trailhead site in areas located outside of the footprint of facilities and trails.
 - Oak planting should be from seeds (acorns) or seedlings that are obtained from the local genetic stock and should be of the same species as those targeted for replacement. Replacement ratios shall be at least 5:1 for trees lost/replaced that are greater than 5 inches diameter at breast height.
 - Oak plantings shall be protected from browsing, planted on the north and east side of existing trees, and irrigated during the first few years as outlined in the oak assessment (Appendix E4) to enhance their chance of survival.

- Replacement plantings shall be monitored for their success for a period of five years. If planting does not succeed, remedial actions such as replanting shall be implemented.
- If requested, community/user group stewardship of the plantings shall be allowed to contribute to restoration/revegetation efforts under guidance and supervision by City staff.

Applies to: Trails Plan, Horseshoe Lake Area Concept Plan, Disc Golf/Trailhead Area Concept Plan

Timing/Implementation: Before and during construction activities within or in the immediate vicinity of oak woodland habitat; ongoing for site management of the Disc Golf/Trailhead Area Concept Plan site.

Responsible Party: City of Chico

Implementation of Mitigation Measure BIO-3c would reduce potentially significant impacts on oak woodland from implementation of Park Improvement Projects to a less than significant level.

Mitigation Measure BIO-3d: Implement Measures to Protect Wildflower Fields

The following measures shall be implemented to minimize potential disturbances to wildflower field communities resulting from implementation of the Trails Plan, Horseshoe Lake Area Concept Plan, and Disc Golf/Trailhead Area Concept Plan:

- ▶ Mitigation Measure BIO-1d shall be implemented to minimize adverse effects on wildflower fields resulting from implementation of the Disc Golf/Trailhead Area Concept Plan.
- ▶ Before the start of construction activities associated with implementation of specific trail sections identified in the Trails Plan and the Horseshoe Lake Area Concept Plan, the City shall retain a qualified botanist to map the location and extent of wildflower fields in specific areas proposed for construction.
- ▶ Whenever possible, trail segments, site improvements, facilities and other design features shall be located to minimize impacts to wildflower fields.
- ▶ Exclusionary fencing shall be installed under the guidance of a qualified botanist before commencement of construction to keep workers and equipment from disturbing wildflower field habitat intended to be preserved on the project sites (some areas may be lost, consistent with site design).
- ▶ The number of trails dissecting wildflower fields shall be minimized to the fewest number necessary to accomplish the goals of the site-specific Park Improvement Projects.

- ▶ Trails through wildflower fields shall be as narrow as possible and shall have clearly marked edges that discourage trail widening and deter users from straying off the designated trail.
- ▶ Existing trails through wildflower fields that will not be retained as part of the site-specific Park Improvement Projects shall be reclaimed using barriers (such as boulders) to discourage use of these trails. If these reclaimed trails fail to revegetate on their own over time, re-seeding may be considered.
- ▶ Permanent signage shall be installed at kiosks located at the Horseshoe Lake and the Disc Golf/Trailhead Area Concept Plan sites to inform Park users of the presence and sensitivity of the wildflower field community and discourage visitors from off-trail use and trampling of vegetation.

Applies to: Trails Plan, Horseshoe Lake Area Concept Plan, Disc Golf/Trailhead Area Concept Plan

Timing/Implementation: Before and during construction of components of the Trails Plan, Horseshoe Lake Area Concept Plan, and Disc Golf/Trailhead Area Concept Plan that occur within the immediate vicinity of wildflower fields

Responsible Party: City of Chico

Implementation of Mitigation Measure BIO-3d would reduce potentially significant impacts on wildflower fields from implementation of Park Improvement Projects to a less than significant level.

Mitigation Measure BIO-4: Implement Measures to Protect Jurisdictional Wetlands

The following measures shall be implemented to mitigate impacts on waters of the United States:

- ▶ Before the implementation of specific components of the Trails Plan, Horseshoe Lake Area Concept Plan, and Disc Golf/Trailhead Area Concept Plan that occur in the immediate vicinity of wetlands or other waters of the United States, a delineation of waters of the United States, including wetlands, that would be affected by the proposed projects shall be made by qualified biologists through the formal Section 404 wetland delineation process. The delineation shall be submitted to and verified by USACE.
- ▶ If, based on the verified delineation, it is determined that fill of waters of the United States would result from implementation of any of the site-specific Park Improvement Projects, authorization for such fill shall be secured from USACE through the Section 404 permitting process.
- ▶ The acreage of waters of the United States, including wetlands, that would be adversely affected by project construction shall be replaced or restored/enhanced on a “no net loss” basis in accordance with USACE regulations and City General Plan Policy OS. G-9. Habitat restoration, enhancement, and/or replacement shall

be at a location and by methods agreeable to USACE, as determined during the Section 404 permitting process.

- ▶ Concurrently with the CWA Section 404 permit, the City shall obtain CWA Section 401 Clean Water Certification from the Central Valley RWQCB before project implementation.
- ▶ The City shall also coordinate with the Central Valley RWQCB regarding any wetland features that are not subject to USACE jurisdiction under Section 404 of the CWA, but may be subject to State regulation under the Porter Cologne Act. All conditions required by the RWQCB as part of the Section 401 Water Quality Certification process or Porter Cologne permitting process shall be implemented.

Applies to: Trails Plan, Horseshoe Lake Area Concept Plan, and Disc Golf/Trailhead Area Concept Plan

Timing/Implementation: Before and concurrent with any component of the Trails Plan, Horseshoe Lake Area Concept Plan, and Disc Golf/Trailhead Area Concept Plan that involve ground-disturbing activities in or near jurisdictional wetlands and/or waters of the state

Responsible Party: City of Chico

Implementation of Mitigation Measure BIO-4 would reduce potentially significant impacts on wetlands subject to USACE jurisdiction and wetland subject to the State's Porter Cologne Act resulting from implementation of Park Improvement Projects to less than significant.

E4.1.3 CULTURAL RESOURCES

Mitigation Measure CUL-1: Protect Historic and Unique Archaeological Resources from Impacts

The City shall implement the following mitigation to reduce potential direct impacts on historic and unique archaeological resources:

- ▶ Consistent with the policies of the BPMMP, a qualified archaeologist shall conduct a cultural resources assessment of the proposed project site during project planning and design. For the Trails Plan, this can be accomplished on a segment by segment basis.
- ▶ If cultural resources are documented in the planning area, they shall be evaluated for their significance.
- ▶ If it has been determined by a qualified archaeologist that a cultural resource is significant, the project shall be designed or redesigned to avoid these cultural resources to the greatest extent feasible.

- ▶ If avoidance of significant sites is not feasible, mitigation in the form of data recovery shall be applied to archaeological sites.
- ▶ For portions of the Humboldt Wagon Road that cannot be avoided during implementation of the Disc Golf/Trailhead, impacts would result in destruction of a portion of the route and intrusion of newer elements that would alter the immediate surroundings. As outlined in the management plan (see Jensen, et al. 1996; Table 2). This segment of the road appears significant based upon the associated archaeological deposit (NRHP Criterion D/CRHR Criterion 4), which will not be impacted by construction, and the association of the wagon road with John Bidwell. As currently designed, neither Alternative A nor Alternative B will result in destruction or alteration of the surroundings of the archeological deposit, and would impact only a percentage of the route associated with the original person responsible for its construction, John Bidwell. The surrounding environment of this segment of the route has been previously impacted by construction of a more recent dirt road that parallels the contemporary route of Highway 32, such that the immediate surroundings have been altered from that present during the historic period. Therefore, because neither alternative would impact the archaeological deposit or substantially impair the significance of the resource as it relates to its association with a person of historic importance (NRHP Criterion B/CRHR Criterion 2), both alternatives would result in less-than-substantial adverse changes in the significance of this resource.
- ▶ Mitigation of any adverse changes resulting from direct impacts caused by implementation of the Disc Golf/Trailhead Area Concept Plan shall take the form of interpretive signage presenting an historic overview and the historic importance of the route.

Applies to: Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan and future Park Improvement Projects

Timing/Implementation: During final design of projects and during construction activities

Responsible Party: City of Chico

Implementation of Mitigation Measure CUL-1 would reduce potentially significant impacts on historic and unique archaeological resources from implementation of the four Park Improvement Projects to a less than significant level.

Mitigation Measure CUL-2b: Protect Human Remains from Vandalism and Inadvertent Destruction.

In accordance with the California Health and Safety Code, if human remains are uncovered during ground-disturbing activities related to implementation of the Park Improvement Projects, all such activities in the vicinity of the find shall be halted immediately and the City or the City’s designated representative shall be notified.

The City shall immediately notify the county coroner and a qualified professional archaeologist. The coroner shall examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or state lands (Health and Safety Code Section 7050.5[b]). If the coroner determines that the remains are those of a Native American, he or she shall contact the Native American Heritage Commission (NAHC) by phone within 24 hours of making that determination (Health and Safety Code Section 7050[c]). The responsibilities of the City for acting upon notification of a discovery of Native American human remains are identified in detail in the California Public Resources Code Section 5097.9. The City or its appointed representative (Park Director) and the professional archaeologist shall consult with a Most Likely Descendant (MLD) determined by the NAHC regarding the removal or preservation and avoidance of the remains and determine whether additional burials could be present in the vicinity.

Applies to: BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, and Disc Golf/Trailhead Area Concept Plan

Timing/Implementation: During construction activities

Responsible Party: City of Chico

E4.1.4 HYDROLOGY AND WATER QUALITY

Mitigation Measure HYDRO-1b: Comply with Water Quality Standards and Waste Discharge Requirements

When required, the City shall obtain a General Permit for Discharges of Storm Water associated with Construction Activity (Construction General Permit), which pertains to water pollution resulting from project construction. In compliance with permit requirements, the City shall file a Notice of Intent (NOI) with the State Water Resources Control Board (SWRCB) and prepare a Storm Water Pollution Prevention Plan (SWPPP) before commencement of construction activities. The SWPPP will incorporate BMPs to prevent, or reduce to the greatest extent feasible, adverse effects on water quality from erosion and sedimentation. In addition, all new trails shall be designed, constructed, and maintained per the City's Trails Manual.

Applies to: Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, and Disc Golf/Trailhead Area Concept Plan

Timing/Implementation: Before commencement of construction activities

Responsible Party: City of Chico

Implementation of Mitigation Measure HYDRO-1b would reduce potentially significant water quality impacts from implementation of Park Improvement Projects to a less than significant level.

Mitigation Measure Noise-1: Construction Related Noise

The following measures shall be implemented to mitigate for construction noise control associated with the Park Improvement Projects:

- ▶ Construction equipment shall be properly maintained and equipped with noise control, such as mufflers, in accordance with manufacturers' specifications
- ▶ Construction activities shall be limited to the hours of 7:00 a.m.–9:00 p.m., Monday through Saturday, and to 10:00 a.m.–6:00 p.m. on Sundays and holidays.
- ▶ Construction equipment shall be arranged to minimize travel adjacent to occupied residences and turned off during prolonged periods of non-use.

Applies to: Cedar Grove Concept Plan, Disc Golf Area Concept Plan, future Park Improvement projects near sensitive receptors

Timing/Implementation: During construction of Park Improvement Projects

Responsible Party: City of Chico

Off-site Construction Traffic

As described in the methods section above, a worst case scenario was assumed for construction traffic. Construction of the proposed project would require approximately 10 on-site employees at any given time. Assuming two total trips per day per employee and five roundtrips per day associated with the transport of equipment and materials, project construction would result in a maximum of approximately 30 one-way daily trips. Typically, traffic volumes have to double before the associated increase in noise levels is noticeable [3 dBA (CNEL/L_{dn})] along roadways. Therefore, the addition of these daily trips on the local roadway system to existing volumes would be minor. Consequently, construction of the project would not result in a noticeable change in the traffic noise contours of area roadways. In addition, such increases in traffic would be temporary and occur during the less noise-sensitive daytime hours. Thus, short-term off-site construction traffic source noise would not result in the exposure of persons to or generation of noise levels in excess of applicable standards or create a substantial temporary increase in ambient noise levels in the project vicinity.

As a result, this impact is considered less than significant. No mitigation is required.

Applies to: Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan

E4.1.5 NOISE

Mitigation Measure Noise-1: Construction Related Noise

The following measures shall be implemented to mitigate for construction noise control associated with the Park Improvement Projects:

- ▶ Construction equipment shall be properly maintained and equipped with noise control, such as mufflers, in accordance with manufacturers' specifications
- ▶ Construction activities shall be limited to the hours of 7:00 a.m.–9:00 p.m., Monday through Saturday, and to 10:00 a.m.–6:00 p.m. on Sundays and holidays.
- ▶ Construction equipment shall be arranged to minimize travel adjacent to occupied residences and turned off during prolonged periods of non-use.

Applies to: Cedar Grove Concept Plan, Disc Golf Area Concept Plan, future Park Improvement projects near sensitive receptors

Timing/Implementation: During construction of Park Improvement Projects

Responsible Party: City of Chico

Off-site Construction Traffic

As described in the methods section above, a worst case scenario was assumed for construction traffic. Construction of the proposed project would require approximately 10 on-site employees at any given time. Assuming two total trips per day per employee and five roundtrips per day associated with the transport of equipment and materials, project construction would result in a maximum of approximately 30 one-way daily trips. Typically, traffic volumes have to double before the associated increase in noise levels is noticeable [3 dBA (CNEL/L_{dn})] along roadways. Therefore, the addition of these daily trips on the local roadway system to existing volumes would be minor. Consequently, construction of the project would not result in a noticeable change in the traffic noise contours of area roadways. In addition, such increases in traffic would be temporary and occur during the less noise-sensitive daytime hours. Thus, short-term off-site construction traffic source noise would not result in the exposure of persons to or generation of noise levels in excess of applicable standards or create a substantial temporary increase in ambient noise levels in the project vicinity.

As a result, this impact is considered less than significant. No mitigation is required.

Applies to: Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan

E4.1.6 TRANSPORTATION AND TRAFFIC

Mitigation Measure Traffic-4: Coordinate with Caltrans

To address the potential increase in traffic hazards resulting from implementation of the Disc Golf/Trailhead Area Concept Plan, the City shall coordinate with Caltrans to obtain an encroachment permit for construction of the site access and parking lot for the Disc Golf/Trailhead area. As part of the consultation with Caltrans, the City shall address the potential need for additional signage and/or a left turning lane to address traffic safety along SR 32. The City shall implement any measures deemed necessary by Caltrans as a condition of the encroachment permit or as a result of the consultation on safety.

Applies to: Disc Golf/Trailhead Area Concept Plan

Timing/Implementation: Prior to construction of the Disc Golf/Trailhead Area Concept Plan

Responsible Party: City of Chico

Implementation of Mitigation Measure Traffic-1 would reduce potentially significant impacts on traffic safety resulting from implementation of the Disc Golf/Trailhead Area Concept Plan to a less than significant level.

E4.2 REFERENCES

E4.2.1 BIOLOGICAL RESOURCES

California Department of Fish and Game. 1995. Staff report on burrowing owl mitigation. Sacramento, CA.

U.S. Fish and Wildlife Service. 1996a. Programmatic Formal Endangered Species Act Consultation on Issuance of 404 Permits for Projects with Relatively Small Effects on Listed Vernal Pool Crustaceans Within the Jurisdiction of the Sacramento Field Office, California

U.S. Fish and Wildlife Service. 1996b. Programmatic Formal Consultation Permitting Projects with Relatively Small Effects on the Valley Elderberry Longhorn Beetle Within the Jurisdiction of the Sacramento Field Office, California (Corps File #199600065)

U.S. Fish and Wildlife Service. 1999. Conservation Guidelines for the Valley Elderberry Longhorn Beetle.

Table E7-1 Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
E4.3.1 AESTHETIC			
AES-1: ALTERATION OF A SCENIC VISTA			
<p>AES-1a: Alteration of Scenic Vistas with Implementation of the BPMMP</p> <p>The BPMMP includes goals, objectives, and implementation strategies and guidelines designed to identify and protect the scenic and aesthetic resources within the Park. Goal AR clearly states the BPMMP’s purpose to identify and protect the scenic resources in Bidwell Park; Visual Resources Objective O. VR-1 seeks to protect scenic characteristics and aesthetic resources; Visual Resource Objective O. VR-2 seeks to keep structures and other developed features to a minimum and have them blend in with the natural environment; Visual Resources Objective O. VR-3 encourages the use of native plants for landscaping, and Visual Resources Objective O.</p> <p>VR-4 calls for the limitation of irrigated turf to the more intensely developed area of the Park. In addition, Viewshed Objective O. VS-1 seeks to protect the viewshed from Park vantage points, and Night Sky Objective O. NS-1 seeks to protect the night sky. Visual Resources Implementation Strategies and Guidelines I. VR-1 through I. VR-5, Viewshed Implementation Strategies and Guidelines I. VS-1 and I. VS-2, and Night Sky Implementation Strategy I. NS-1 all seek to achieve these stated goals and objectives and to protect the visual resources and scenic characteristics of, and night sky above, Bidwell Park.</p> <p>Goal SLU-1 calls for the establishment of a Bidwell Park Sphere of Influence (BPSI) in order to preserve and enhance the experiential value of Bidwell Park and protect the Park from adverse effects within the BPSI. Objective O. SLU-1 specifies rules for implementation of the BPSI policy and implementation strategy I.</p>	B	No mitigation is required.	

B = Beneficial NI = No Impact LTS = Less than Significant S = Significant PS = Potentially Significant SU = Significant and Unavoidable

<p align="center">Table E7-1 Summary of Project Impacts and Mitigation Measures</p>			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>SLU-1 states how the BPPC would implement the policy by providing input during review of discretionary development projects within the BPSI. The City Council has adopted the BPSI policy and all City projects that fall within the BPSI sphere will now be forwarded to the Bidwell Park and Playground Commission for its input.</p> <p>The BPMMP contains additional objectives and implementation strategies and guidelines aimed at surrounding land uses that are also intended to preserve and enhance the Park’s scenic characteristics. Specifically, Surrounding Land Use Objective O. SLU-6 calls for the prevention of the park viewshed from being obstructed by surrounding development. Surrounding Land Use Implementation Strategies I. SLU-6 through I. SLU-9 target the protection of the Park’s viewshed through communication with adjacent landowners, provision of setbacks, development of architectural guidelines, and landscape plans. Implementation of these strategies would minimize potential adverse effects to the Park and on habitat conditions. The BPMMP also contains objectives and implementation strategies and guidelines for facilities development and maintenance that specifically aim at protecting scenic and aesthetic resources. Facilities implementation strategy I. F-2 calls for the use of materials that have the least adverse effect and greatest benefit to the environment, including aesthetics. This would be achieved through facilities siting and use of native vegetation and materials that blend in with the natural environment.</p> <p>Implementation of the BPMMP would ensure the preservation of the Park’s scenic vistas and City designated scenic roads and would result in an overall beneficial impact on scenic vistas. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP</p>			
<p>AES-1b: Alteration of Scenic Vistas with Implementation of Park Improvement Projects</p> <p>Each of the Park Improvement Projects has been designed to preserve,</p>	B	No mitigation is required.	

B = Beneficial NI = No Impact LTS = Less than Significant S = Significant PS = Potentially Significant SU = Significant and Unavoidable

**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>protect, and enhance scenic views as part of the overall recreation experience for Park visitors. These Plans were developed while taking the scenic quality and natural diversity of these sites into account. Any proposed new elements have been carefully sited and designed to preserve the integrity of the sites and avoid adverse effects on visual resources. Furthermore, no new significant structures or alterations to the natural landscape are being proposed.</p> <p>Implementation of the Trails Plan, Horseshoe Lake Area Concept Plan, and Disc Golf/Trailhead Area Concept Plan is expected to enhance the scenic quality of the project sites. These Plans call for a reduction in the number of informal trails (social trails), restoration/rehabilitation of degraded areas, and reduction of unmitigated use of the sites. Visual enhancement is also planned through the use of natural materials to demarcate trails, provide interpretation, and provide facilities, such as picnic areas and scenic overlooks. The Cedar Grove Area Concept Plan includes the establishment of a new trail around the festival meadow and connector trails to facilitate pedestrian circulation during special events. These proposed improvements would also prevent the visual character of the area from being degraded, because they would discourage and counteract off-trail travel. The enhancement and clear demarcation of parking areas would lead to less off-road parking, which tends to damage the scenic quality of a site by damaging natural resources. In addition, all of the concept plans call for the use of native plants in site rehabilitation and the planting of native trees to enhance the natural character of the project site. The Horseshoe Lake Area Specific Plan also calls for the establishment of a natural vegetation edge along Horseshoe Lake.</p> <p>Implementation of the Park Improvement Projects would result in a beneficial impact on scenic vistas in the Park. No mitigation is required.</p> <p>Applies to: Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, and the Disc Golf/Trailhead Area Concept Plan</p>			

B = Beneficial NI = No Impact LTS = Less than Significant S = Significant PS = Potentially Significant SU = Significant and Unavoidable

Table E7-1 Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>AES-2: DAMAGE TO SCENIC RESOURCES WITHIN A STATE SCENIC HIGHWAY</p> <p>The project site is not visible from any state- or County-designated scenic highways or roadways. General Plan Policy CD-G-10 identifies Vallombrosa, Manzanita & Woodland Avenues as local scenic roads. Implementation of the BPMMP and the four Park Improvement projects does not call for construction or placement of structures near any of these roadways, and no impacts would occur.</p> <p>Implementation of the BPMMP and the four Park Improvement Projects would have no impact on scenic resources within a state scenic highway or local scenic roads. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p>	NI	No mitigation is required.	
<p>AES-3: EFFECTS ON LANDS PRESERVED UNDER A SCENIC EASEMENT OR CONTRACT</p> <p>The Park is owned by the City of Chico and does not include any lands that are required to be preserved under a scenic easement or contract.</p> <p>Implementation of the BPMMP and the four Park Improvement Projects would have no impact on lands preserved under a scenic easement or contract. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p>	NI	No mitigation is required.	
<p>AES-4: DEGRADATION OF VISUAL CHARACTER</p>			
<p>AES-4a: Degradation of the Park’s Visual Character with Implementation of the BPMMP</p> <p>Bidwell Park is one of the largest municipal parks in the United States,</p>	B	No mitigation is required.	

B = Beneficial NI = No Impact LTS = Less than Significant S = Significant PS = Potentially Significant SU = Significant and Unavoidable

**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>encompassing 3,670 acres of public parkland. The Park includes substantial scenic resources and provides access to scenic views both within and outside of the Park. The BPMMP includes goals, objectives, and implementation strategies and guidelines to preserve and protect existing scenic resources, and in some cases, provide new access to scenic viewpoints:</p> <ul style="list-style-type: none"> ▶ Visual Resources Objectives O. VR-1, O. VR-2, and O. VR-3 and Visual Resources Implementation Strategies and Guidelines I. VR-1 through VR-5 aim to protect the Park’s visual resources and scenic characteristics by seeking to keep structures to a minimum and using natural looking materials and native vegetation to help developed features blend into the natural environment of the Park; ▶ Viewshed Objective O. VS-1 and Viewshed Implementation Strategies and Guidelines I. VS-1 and I. VS-2 seek to protect the Park’s viewshed by implementing the BPPC’s “Sphere of Influence” policy and encouraging cooperation with other planning entities affecting the immediate surroundings of the Park; ▶ Utilities Objectives O. OU-2 and O. OU-3 and Utilities Implementation Strategies I. OU-1 and I. OU-2 address placement of new utilities and use of natural-looking containers for trash and recycling to preserve and enhance the visual character of the Park. <p>The newly updated Design Standards (Appendix L), and Design Standard Objective O. DS-2, and Design Standard Implementation Strategies I. DS-1 through I. DS-5 address the consistency of new and updated facilities, signage, and other Park elements with the natural character of the Park.</p> <p>Recreational Activity Implementation Strategies and Guidelines I. RA-5 and I. RA-6 call for monitoring and adaptive management of recreational activities within the Park to avoid the degradation of physical, biological, cultural, aesthetic, and other resources.</p>			

B = Beneficial NI = No Impact LTS = Less than Significant S = Significant PS = Potentially Significant SU = Significant and Unavoidable

Table E7-1 Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>Implementation of the BPMMP would not substantially degrade the existing visual character or quality of the Park, and would have a beneficial impact by protecting existing visual resources. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP</p>			
<p>AES-4b: Degradation of the Park’s Visual Character with Implementation of Park Improvement Projects</p> <p>Each of the four Park Improvement Projects has been designed to preserve the existing visual character of the Park, while providing management of and necessary improvements to recreational facilities. Implementation of the four site-specific Park Improvement Projects would not substantially degrade the existing visual character or quality of the respective project sites, and would have a beneficial impact by protecting existing visual resources.</p> <p>The Trails Plan was developed to provide for optimal circulation in the Park while eliminating and rehabilitating redundant and informal trails, which would lead to an improvement of the Park’s visual character. The Trails Plan also identifies problem areas that are suffering from severe erosion or excessive use and calls for the remediation of these sites by:</p> <ul style="list-style-type: none"> ▶ Maintaining existing trails; ▶ Discouraging off-trail use; ▶ Maintaining, upgrading, or re-routing trails in known problem areas; ▶ Addressing unofficial/informal trails for either closure and restoration or establishment as an official trail; and ▶ Constructing proposed trails to standards outlined in the City’ Trails Manual. 	LTS	No mitigation is required.	

**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>With implementation of the Trails Plan, all trails within the Park would eventually be brought up to the standards identified in the City’s Trails Manual, which would lead to a reduction of erosion and, therefore, enhance the Park’s visual characteristics.</p> <p>The Horseshoe Lake Area Concept Plan and Cedar Grove Area Concept Plan also provide for better circulation and a reduction in the number of informal trails in the area. They also include planting/revegetation plans to enhance the aesthetics of the sites. These concept plans provide additional, well-delineated parking and call for the clear demarcation of parking spots and hardening of parking surfaces. This would reduce the number of vehicles that park off-road and would, therefore, preserve the natural resources and, in turn, the visual character of the sites. Hardening of parking lot surfaces would also reduce the amount of dust generated by vehicles and would, therefore, enhance the visual character of the Park during times of high visitor use.</p> <p>Environmental criteria that were included in the design process of the proposed Disc Golf/Trailhead Area Concept Plan included areas that were identified for avoidance and protection. These areas, which included occurrences of Butte County checkerbloom, vernal pools, and ephemeral drainages, also constitute visual resources, which would be largely avoided under the conceptual project plan. The design criteria also identified resources for impact minimization, including blue oaks and other native oak species, Bidwell’s knotweed populations, native wildflower fields, and the old Humboldt wagon road. All of these resources contribute to the attractive visual character of the project site, and under the conceptual project plan, impacts on these resources would be minimized to the greatest extent possible as a result of the proposed course design. The design places structures and trails away from sensitive resources and minimizes the site footprint by providing clearly marked trails. It also provides facilities at a centralized location and demarcates parking, seeking to concentrate certain uses near the parking lot area.</p>			

B = Beneficial NI = No Impact LTS = Less than Significant S = Significant PS = Potentially Significant SU = Significant and Unavoidable

Table E7-1 Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>The Disc Golf/Trailhead area is currently being utilized for disc golf with minimal infrastructure. This use has resulted in a degradation of the visual character of the site. Implementation of the Disc Golf/Trailhead Area Concept plan would enhance this situation by minimizing the disc golf area footprint and providing additional infrastructure designed to avoid sensitive resources. Existing facilities would be upgraded and new facilities constructed in accordance with the Park's updated Design Standards, thus preserving and enhancing the visual character of the Park.</p> <p>All four of the conceptual project plans also call for the planting of native vegetation, either to screen existing and proposed facilities, to provide shade for parking and picnic areas, or to rehabilitate degraded areas. Additional native vegetation would also be planted around parking areas to soften the appearance of delineated parking lots, along the edges of Horseshoe Lake, and in other areas.</p> <p>Potential for the degradation of the existing visual character or scenic quality of the Park resulting from implementation of the four Park Improvement Projects would be less than significant. No mitigation is required.</p> <p><i>Applies to:</i> Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p>			
<p>AES-5: NEW LIGHT AND GLARE EFFECTS</p> <p>Activities within the Park are primarily recreational. These activities are supported by facilities and buildings that are generally not substantial sources of light or glare or that do not obscure views of the night sky, the BPMMP includes specific Night Sky Objective O. NS-1 and Night Sky Implementation Strategy I. NS-1 promoting the preservation of the night sky. In addition, Lighting Objective O. L-1, and Lighting Implementation Strategies I.</p> <p>L-1 and I. L-2 aim at preventing adverse effects of artificial light on wildlife and public vistas.</p>	LTS	No mitigation is required.	

**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>Of the four Park Improvement Projects, only the Cedar Grove Area Concept Plan calls for improvements to lighting to provide better circulation and safety in the area during special events. This lighting would replace temporary lighting currently installed by Park staff for special events, so the additional magnitude of light sources would not be substantial. Such lighting would also be subject to the City's adopted lighting standards that prohibit spill-over lighting and the shielding of light sources. The Trails Plan, Horseshoe Lake Area Concept Plan, and Disc Golf/Trailhead Area Concept Plan do not include new sources of nighttime lighting.</p> <p>Because the BPMMP and the four Park Improvement Projects do not propose substantial new sources of light or glare that would adversely affect day or nighttime views; impacts would be less than significant. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p>			
E4.3.2 AIR QUALITY			
AQ-1: APPLICABLE AIR QUALITY PLANS			
<p>AQ-1a: Conflict with or Obstruction of Implementation of the Applicable Air Quality Plan of the BPMMP</p> <p>The BPMMP is a policy document aimed at providing guidance for the management of Bidwell Park in the long term and implementation of the BPMMP itself does not include any significant construction related projects or any project aspects that would result in changes to current air quality other than as set forth in the four specific Park Improvement Projects, which are discussed below. Controlled burns are still proposed as a management tool. Such burns are subject to permits from the BCAQMD and would not result in new impacts. Implementation of the BPMMP will not result in obstruction of the implementation of local</p>	LTS	No mitigation is required.	

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Table E7-1 Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>and regional air quality attainment plans and there would be no impact. No mitigation is required. Any future projects proposed will be subject to air quality guidelines established by the City General Plan and BCAQMD for dust suppression and minimization of vehicle emissions. Adherence to these guidelines will ensure that such projects do not result in any significant air quality impacts.</p> <p>Implementation of the BPMMP would not conflict with or obstruct implementation of any local or regional air quality planning efforts. This impact is considered less than significant. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP</p>			
<p>AQ-1b: Conflict with or Obstruction of Implementation of the Applicable Air Quality Plan of the Park Improvement Projects</p> <p>As stated above, Butte County is currently designated a nonattainment area with respect to the state and national ozone (1-hour) standards and the state PM₁₀ standard. As discussed in Section E4.3.12, “Transportation and Traffic,” the long-term operation of the proposed Park Improvement Projects would not require any additional employees, nor would the number of emergency response vehicle trips increase as a result of the projects. The four Park Improvement Projects aim to better accommodate existing uses and their implementation is not expected to result in a significant number of new trips. Consequently, implementation of the four specific Park Improvement Projects would not result in an increase in vehicle miles traveled and, thus, would not conflict with or obstruct implementation of BCAQMD’s air quality planning efforts. Furthermore, construction of the four specific Park Improvement Projects is not anticipated to result in the operation of any major stationary emission sources.</p> <p>Implementation of the four specific Park Improvement Projects would not conflict with or obstruct implementation of any local or regional air quality planning efforts. This impact is considered less than significant.</p>	LTS	No mitigation is required.	

**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<i>Applies to:</i> Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan			
AQ-2: VIOLATION OF STANDARDS			
<p>AQ-2a: Violation of Air Quality Standard or Substantial Contribution to an Existing or Projected Air Quality Violation of the BPMMP</p> <p>Short-Term Construction Emissions</p> <p>BPMMP</p> <p>As stated above, the BPMMP is a policy document aimed at providing guidance for the management of Bidwell Park in the long term, and implementation of the BPMMP itself does not include any construction related projects or any project aspects that would result in changes to current air quality other than the four specific Park Improvement Projects that are analyzed below.</p> <p>Implementation of the BPMMP will not result in any construction activities, therefore there would be no impact resulting from short term construction emissions. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP</p>	NI	No mitigation is required.	
<p>AQ-2b: Violation of Air Quality Standard or Substantial Contribution to an Existing or Projected Air Quality Violation of the Park Improvement Projects</p> <p>Construction emissions are described as “short term” or temporary in duration and have the potential to represent a significant impact with respect to air quality, especially fugitive dust emissions (PM₁₀). Fugitive dust emissions are primarily associated with site preparation and vary as a function of such parameters as soil silt content, soil moisture, wind speed, acreage of disturbance area, and miles traveled by construction vehicles on-site and off-site. Emissions of ozone precursors ROG and NO_x are primarily associated with gas and diesel</p>	PS	<p>AQ-2: Control Short-term Construction Emissions</p> <p>Consistent with BCAQMD guidelines, the following measures shall be implemented to reduce potentially significant effects on air quality resulting from construction related to the four specific Park Improvement Projects:</p> <ul style="list-style-type: none"> ▶ Alternatives to open burning of vegetative material removed from a project site shall be used unless otherwise deemed infeasible by the AQMD. Among suitable alternatives are chipping, mulching, or conversion to biomass fuel; 	LTS

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**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>equipment exhaust and the application of architectural coatings. With respect to the four specific Park Improvement Projects, construction of trails, parking lots, picnic areas, scenic overlooks, and disc golf tees and structures would result in the temporary generation of ROG, NO_x, and PM₁₀ emissions from site preparation (e.g., excavation, grading, and clearing), material transport (especially on unpaved surfaces), trail construction, trenching, laying of concrete foundations, paving, equipment installation, finishing, cleanup, and other miscellaneous activities.</p> <p>Short-term construction-generated emissions of ROG, NO_x, and PM₁₀ were modeled for construction of the project using the Road Construction Emissions Model Version 5.2 (SMAQMD 2006) as recommended for linear-type construction projects (e.g., bridges and trails), and other emission factors and recommended methodologies from BCAQMD's Indirect Source Review Guidelines (BCAQMD 1997). The modeled daily construction emissions are summarized in Table E4.3.2-3 and described in more detail below and in Appendix E2.</p> <p>Projects would be constructed as funding becomes available over a 20 year planning horizon. It is not anticipated that any of the four projects would be constructed simultaneously. Worst-case assumptions were made for modeling purposes. In order to be conservative, it was assumed that all projects would be constructed back-to-back during a one year period (as stated above, projects would likely occur over an extended timeframe as funding becomes available). It was assumed that construction would take place during 2008, as emission factors for a construction fleet acquired at that time would be higher than in future years, due to more restrictive emission standards becoming applicable over time. Detailed on-site construction equipment is not known at this time, but could include trucks, a trail builder, graders, scrapers, paving equipment, dozers, loaders, excavators, and other miscellaneous construction equipment.</p>		<ul style="list-style-type: none"> ▶ Adequate and applicable dust control measures (identified in detail below) shall be implemented during all phases of project development and construction as outlined below: <ul style="list-style-type: none"> • All active construction sites shall be watered at least twice daily. Frequency should be based on the type of operation, SOIL, and wind exposure. • Chemical soil stabilizers shall be applied to inactive construction areas (disturbed lands within construction projects that are unused for at least four consecutive days). • On-site vehicles speeds shall be limited to a speed of 15 mph on unpaved roads. • Land clearing, grading, earth moving or excavation activities shall be suspended when winds exceed 20 miles per hour. • Non-toxic binders (e.g., latex acrylic copolymer) shall be applied to exposed areas after cut and fill operations and the area shall be hydroseeded. • Vegetative ground cover shall be planted in disturbed areas as soon as possible after disturbance. • Inactive storage piles shall be covered. ▶ Paved streets adjacent to each project site shall be swept or washed at the end of each day as necessary to remove excessive accumulations of silt and/or mud which may have accumulated as a result of activities on the project site. ▶ A publicly visible sign shall be posted with the telephone number and person to contact regarding dust complaints. This person shall respond and take corrective action within 	

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**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>Based on the modeling conducted, construction of the four Park Improvement Projects would result in worst-case maximum unmitigated daily emissions of approximately 10 lb/day of ROG, 55 lb/day of NO_x, and 13 lb/day of PM₁₀. Daily unmitigated emissions of NO_x would exceed BCAQMD's level B significance threshold of 25 lb/day. No project-generated construction-related emissions would exceed BCAQMD's level C threshold of 137 lb/day of ROG, NO_x, or PM₁₀. Because BCAQMD's standard mitigation measures are not incorporated into the project description, construction-generated emissions could violate an air quality standard or contribute substantially to an existing or projected air quality violation. Thus, this impact is considered potentially significant and is subject to mitigation.</p>		<p>24 hours if a complaint is received. The telephone number of the BCAQMD shall also be visible to ensure compliance with BCAQMD Rule 201 & 207 (Nuisance and Fugitive Dust Emissions).</p> <p>Timing/Implementation: During construction activities</p> <p>Responsible Party: City of Chico</p> <p>Applies to: Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p> <p>Implementation of Mitigation Measure AQ-2 would reduce direct and cumulative impacts on air quality resulting from construction of the four specific Park Improvement Projects to less than significant.</p>	
AQ-3: LONG-TERM OPERATIONAL EMISSIONS			
<p>AQ-3a: Long Term Operation Emissions of the BPMMP</p> <p>The BPMMP is a policy document aimed at providing guidance for the management of Bidwell Park in the long term, and implementation of the BPMMP itself does not include any elements that would be expected to result in new long-term operations emissions other than the four specific Park Implementation Projects discussed below. The BPMMP provides guidance for the overall management of the Park. Any future projects other than the four Park Improvement Projects discussed in detail in this document will undergo environmental review and, if applicable, will be subject to similar mitigation measures as described within this section.</p> <p>Implementation of the BPMMP will not result in the generation of long-term operational emissions; therefore there would be no impact. No mitigation would be required.</p>	NI	No mitigation would be required.	

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Table E7-1 Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<i>Applies to:</i> BPMMP			
<p>AQ-3b: Long Term Operation Emissions of the Park Improvement Projects</p> <p>The operation of the four specific Park Improvement Projects is not expected to result in a net increase of long-term regional ROG, NO_x, or PM₁₀, or local carbon monoxide emissions from area or mobile sources. Once the concept plans have been constructed, the long-term operation of the upgraded facilities and trails would not require any additional park employees, and, thus, would not result in any associated employee commute trip emissions of criteria air pollutant (e.g., PM₁₀) or ozone precursor emissions (e.g., ROG and NO_x). While upgrades of the sites associated with the four Park Improvement Project will formalize the status of the sites as destinations in the Park and therefore may attract some additional visitors to the respective sites, it is anticipated that the increase in potential users of the Park Improvements Projects would only result in negligible additional trip generation from recreational users, as the projects are mostly aimed at accommodating existing uses. Area source emissions associated with landscaping and maintenance activities of the upgraded facilities and trails would take place at generally the same level as without the four specific Park Improvement Projects. Furthermore, implementation of the four Park Improvement Projects would not result in the operation of new major stationary emission sources.</p> <p>Implementation of the four specific Park Improvement Projects would not result in long-term operational emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation. This impact is less than significant. No mitigation is required.</p> <p><i>Applies to:</i> Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p>	LTS	No mitigation is required.	

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**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
AQ-4: CUMULATIVE AIR QUALITY CONSIDERATIONS			
<p>AQ-4a: 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors) of the BPMMP</p> <p>The BPMMP is a policy document aimed at providing guidance for the management of Bidwell Park in the long term, and implementation of the BPMMP itself does not include any elements that would result in a considerable net increase in pollutant for which the project region is nonattainment.</p> <p>Implementation of the BPMMP will not result in a considerable net increase in pollutant for which the project region is non attainment and therefore there would be no impact. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP</p>	NI	No mitigation is required.	
<p>AQ-4b: 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors) of the Park Improvement Projects</p> <p>As discussed under Impact AQ-2b and AQ-3b above, implementation of the four Park Improvement Projects would not result in long-term operational ROG, NO_x, PM₁₀, or CO emissions that would result in or contribute substantially to an air quality violation. However, because mitigation measures outlined above for short term construction related impacts are not currently incorporated into the project description for the four specific Park Improvement Projects, temporary construction emissions could violate or contribute substantially to an existing or projected air quality violation, especially considering the region's nonattainment status for ozone and PM₁₀.</p>	LTS	No mitigation is required.	

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Table E7-1 Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>Construction-generated ozone precursor (ROG and NO_x) emissions and PM₁₀ emissions resulting from implementation of the four specific Park Improvement Projects could result in a cumulatively considerable net increase of a criteria pollutant for which the project region is nonattainment under any applicable federal or state ambient air quality standards. This impact is considered potentially significant and requires mitigation.</p> <p>Implementation of Mitigation Measure AQ-2 described above would reduce cumulative impacts from short-term construction-generated emissions to less than significant.</p> <p><i>Applies to:</i> Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p>			
AQ-5: SENSITIVE RECEPTORS			
<p>AQ-5a: Exposure of Sensitive Receptors to Substantial Pollutant Concentrations of the BPMMP</p> <p>The BPMMP is a policy document aimed at providing guidance for the management of Bidwell Park in the long term. Implementation of the policies contained within the BPMMP will not result in the exposure of sensitive receptors to substantial pollutant concentration. Any future projects other than the four Park Improvement Projects discussed in detail in this document will undergo environmental review and, if applicable, will be subject to similar mitigation measures as described in this section.</p> <p>Implementation of the BPMMP policies would result in no impact. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP</p>	NI	No mitigation is required.	
<p>AQ-5b: Exposure of Sensitive Receptors to Substantial Pollutant Concentrations of the Park Improvement Projects</p> <p>Sensitive receptors in the vicinity of the proposed project include</p>	LTS	No mitigation is required.	

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**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>residences adjacent to the Cedar Grove Area residences adjacent to the southwest portion of the Trails Plan Area, and one residential home adjacent to the eastern portion of the Disc Golf/Trailhead Area. As discussed in AQ-2b and AQ-3b above, project implementation would not result in long-term operational ROG, NO_x, PM₁₀, or local CO emissions that would result in or contribute substantially to an air quality violation. However, because BCAQMD recommended mitigation measures are not currently incorporated into the project description, temporary construction emissions could violate or contribute substantially to an existing or projected air quality violation. Thus, construction-generated ozone and PM₁₀ emissions could expose receptors to substantial pollutant concentrations. As a result, this impact is considered potentially significant and would require mitigation. Implementation of the Mitigation Measure AQ-2b, as described above, would reduce short-term construction-generated emissions to a less than significant level.</p> <p>Toxic Air Contaminant Emissions</p> <p><i>Short-Term Construction Sources</i></p> <p>Construction of each of the four Park Improvement Projects would result in short-term diesel exhaust emissions from on-site heavy duty equipment. Particulate exhaust emissions from diesel-fueled engines (diesel PM) were identified as a TAC by the ARB in 1998. Construction of individual projects would result in the generation of diesel PM emissions from the use of off-road diesel equipment required for site grading and excavation, and other construction activities. The dose to which receptors are exposed (a function of concentration and duration of exposure) is the primary factor used to determine health risk (i.e., potential exposure to TAC emission levels that exceed applicable standards). Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for the maximally exposed individual. Thus, the risks estimated for a maximally exposed individual are higher if a fixed exposure occurs over</p>			

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Table E7-1 Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>a longer period of time. According to the Office of Environmental Health Hazard Assessment (OEHHA), health risk assessments, which determine the exposure of sensitive receptors to TAC emissions, should be based on a 70-year exposure period; however, such assessments should be limited to the period/duration of activities associated with the project. Thus, because the use of mobilized equipment would be temporary (less than 2% of the exposure period) in combination with the dispersive properties of diesel PM (Zhu and Hinds 2002), and the fact that the project sites are small and would only require the use of a few pieces of equipment and no atypical construction activities (e.g., large amount of soil import/export with heavy-duty trucks) would occur, short-term construction activities would not expose sensitive receptors to substantial pollutant concentrations.</p> <p><i>Long-Term Operational Sources</i></p> <p>With respect to mobile-source TAC emissions, the operation of the Park Improvement Projects, once built, would not result in a net increase of long-term emissions from mobile sources. The long-term operation of the Park Improvement Projects would not require any additional employees, and, thus, would not result in any associated employee commute or significant increased Park user trip emissions of TACs. Furthermore, project implementation would not result in the operation of any new major stationary emission sources of TACs. The Park Improvement Projects aim to better accommodate existing uses and their implementation is not expected to result in a significant number of new trips.</p>			
AQ-6: OBJECTIONABLE ODORS			
<p>AQ-6a: Creation of Objectionable Odors Affecting a Substantial Number of People of the BPMMP</p> <p>The occurrence and severity of odor impacts depend on numerous factors, including the nature, frequency, and intensity of the source; wind speed and direction; and the presence of sensitive receptors.</p>	NI	No mitigation is required.	

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**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>Although offensive odors rarely cause any physical harm, they still can be very unpleasant, leading to considerable distress and often generating citizen complaints to local governments and regulatory agencies.</p> <p>The BPMMP is a policy document aimed at providing guidance for the management of Bidwell Park in the long term, and implementation of the BPMMP itself does not include any elements that would result the emission of odors.</p> <p>Implementation of the BPMMP will not result in the emission of odors therefore there would be no impact. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP</p>			
<p>AQ-6b: Creation of Objectionable Odors Affecting a Substantial Number of People of the Park Improvement Projects</p> <p>Implementation of the four Park Improvement Projects would not result in any major sources of odor and the project types are not one of the common types of facilities that are known to produce odors (e.g., landfill, coffee roaster, wastewater treatment facility). In addition, the diesel exhaust being generated by construction equipment used during implementation of the four specific Park Improvement Projects would be intermittent and temporary, and would dissipate rapidly from the source with an increase in distance. Finally, as mentioned previously, only a few pieces of construction equipment would be in operation at any one time.</p> <p>Implementation of the four Park Improvement Projects would not create objectionable odors affecting a substantial number of people and there would be no impact. No mitigation is required.</p> <p><i>Applies to:</i> Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p>	NI	No mitigation is required.	

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Table E7-1 Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
E4.3.3 BIOLOGICAL RESOURCES			
BIO-1: ADVERSE EFFECTS ON SPECIAL-STATUS PLANT SPECIES			
Effects of the BPMMP			
<p>BIO-1a: Adverse Effects of the BPMMP on Special-Status Plants</p> <p>Implementation of the BPMMP would result in the avoidance or minimization of disturbance or losses of special-status plants. The BPMMP includes goals and guidelines aimed at the protection of natural resources, including special-status plant species. Compliance with the goals, objectives, and implementation strategies and guidelines in the BPMMP would ensure that implementation of the BPMMP would not result in substantial adverse effects on any plant species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by DFG or USFWS. Implementation of the BPMMP would ensure the Natural Communities Objectives (O. NC-1 through O. NC-8) are met, such as preserving natural habitats and improving conditions for native plant communities. Strategies for meeting these objectives would be to protect sensitive habitats (e.g., vernal pools, wet meadows) by implementing the vegetation management guidelines from Section 3 of the NRMP and by implementing temporary or seasonal restrictions to specific Park areas, when necessary. Implementation of the BPMMP would also ensure that visitor use, development of new facilities and facility expansions, maintenance, restoration, and other ground-disturbing activities would be conducted in accordance with the Plants Objectives (O. P-2 through O. P-5 and O. P-7) and Implementation Strategies and Guidelines (I. P-1, I. P-3, I. P-4, I. P-7, I. P-8, I. P-10, and I. P-11). These objectives aim to preserve, maintain, and protect sensitive plants and natural wetlands by informing the public and prohibiting and/or restricting incompatible recreation activities. These objectives also aim to collect data on the condition of the vegetation communities. Implementation strategies</p>	LTS	No mitigation is required.	

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**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>include:</p> <ul style="list-style-type: none"> ▶ Native plant planting programs with success criteria, ▶ Implementing the vegetation management guidelines from Section 3 of the NRMP, ▶ Modifying existing recreation facilities and restricting and/or controlling recreation activities, ▶ Cataloging natural wetlands in the Park when funding or volunteer efforts are available, and ▶ Removing old roads in sensitive areas and avoiding the creation of new roads in sensitive areas. <p>These objectives and implementation strategies provide a framework for avoiding and minimizing sensitive resources during implementation of the BPMMP. Specific projects implemented in the future as part of BPMMP implementation may require additional environmental review in the form of special-status plant surveys and impact avoidance and minimization measures to ensure that special-status plants species are not adversely affected when projects are implemented.</p> <p>With the implementation of the BPMMP's protective objectives and implementation goals and strategies for special-status plants, direct and indirect impacts on special-status plant species resulting from BPMMP implementation would be less than significant. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP</p>			
Effects of the Four Park Improvement Projects			
<p>BIO-1b: Adverse Effects of the Disc Golf/Trailhead Area Concept Plan on Butte County Checkerbloom</p> <p>The knowledge of the current distribution of Butte County checkerbloom within the Disc Golf/Trailhead Area Concept Plan area</p>	PS	<p>BIO-1b: Implement Measures to Protect Butte County Checkerbloom in the Disc Golf/Trailhead Concept Plan Area</p> <p>The following measures shall be implemented to mitigate</p>	LTS

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**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>has been used in the design of the concept plan layouts, and the layouts have been developed to avoid known Butte County checkerbloom to the greatest extent feasible; therefore, the potential disturbance of known Butte County checkerbloom occurrences at that site would be avoided or minimized with implementation of the various course layouts found in the concept plan. However, a certain amount of direct or indirect impacts on Butte County checkerbloom could occur as a result of inadvertent trampling or picking of plants, or habitat degradation over time.</p> <p>Three potential layouts have been identified for the Disc Golf/Trailhead area. Concept Plan A, the plan with the largest footprint, has the greatest potential to result in indirect impacts on Butte County checkerbloom, because it would result in the construction of two courses at the SR 32 site, an 18-hole beginner course (the short course) and a 21-hole advanced course (the long course). Concept Plan A also has the greatest potential to result in direct impacts on Butte County checkerbloom, because it would establish four holes (Hole 12 of the short course and Holes 3, 4, and 17 of the long course) in the immediate vicinity of known locations of this plant species. Concept Plan B would also result in construction of two courses, a short course and a long course, but the short course would be reduced to 12 Holes and eliminate Hole 12 on Concept Plan A, which is located immediately adjacent to known Butte County checkerbloom. Concept Plan C has the lowest potential to affect Butte County checkerbloom, because it would eliminate the short course and would result in construction of only the 21-hole long course, using the same design concept as Concept Plans A and B for the long course. All three layouts also include multiuse trails in the immediate vicinity of known locations of Butte County checkerbloom. These trails would be used by a variety of Park users including hikers, mountain bikers, disc golfers, and people visiting the site for scenic viewing or nature study. The potential layouts route these trails to avoid direct impacts to Butte County checkerbloom. However, in some cases, individual of Butte County checkerbloom may occur on</p>		<p>potential direct and indirect effects on populations of Butte County checkerbloom from implementation of the Disc Golf/Trailhead Area Concept Plan:</p> <ul style="list-style-type: none"> ▶ As provided in Appendix H of the BPMMP, the Disc Golf/Trailhead Area Concept Plan shall be implemented to avoid direct and indirect impacts on locations of Butte County checkerbloom on the site to the greatest extent feasible. All disc golf structures (e.g., tees, targets, fairways) and trails shall be placed a minimum of 50 feet from locations that currently support Butte County checkerbloom wherever possible. Where this cannot be accomplished due to physical site constraints, the buffer may be reduced, but shall remain at a minimum of 25 feet. ▶ Before construction of any facility at the Disc Golf/Trailhead area in the vicinity of known locations of Butte County checkerbloom, exclusionary fencing shall be installed along a 25-foot buffer around the outer perimeter of the occurrence. Exclusionary fencing shall be installed under the guidance of a qualified botanist before commencement of construction to keep workers and equipment from disturbing existing Butte County checkerbloom plants. The fencing shall be kept in place and periodically inspected and repaired, if necessary, for the duration of construction. ▶ The Disc Golf/Trailhead Area Concept Plan shall restrict foot traffic to clearly defined trails and disc golf features. Trails shall be constructed as narrow as possible to avoid degradation of suitable habitat for Butte County checkerbloom (and other special status plant species). Where existing disc golf structures and trails in the vicinity of existing locations of Butte County checkerbloom will be decommissioned, barriers (such as boulders) shall be 	

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**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>both sides of a proposed trail.</p> <p>All three course layouts could result in a minor degree of direct and/or indirect impacts on Butte County checkerbloom, because they all would establish holes in the immediate vicinity of known locations of this species and all include proposed trails in the immediate vicinity of known locations of this species.</p> <p>It is important to note that implementation of the Disc Golf/Trailhead Area Concept Plan would reduce direct and indirect impacts on Butte County checkerbloom compared to the current, unmitigated use of the area as a disc golf course, because tees, holes, and trails would be well-defined and located in the less environmentally sensitive locations. The proposed layouts would direct disc golf use to the most appropriate locations, rather than allowing for continued, undirected walk-over of the general area. Course improvements have been designed to restrict foot traffic to clearly defined trails and establish clearly defined tees, targets, and fairways. Resource protection areas would also be defined and set aside from disc golf use. This design approach would reduce the overall footprint of each hole and eliminate errant and volunteer trails, fairways, tees, and targets. Also, Holes 3 and 4 of the long course would have alternate pin locations, depending on the season, to lessen the potential for disturbance to Butte County checkerbloom during the active growth season (March to July). Therefore, compared to existing conditions, any of the three layouts identified in the Disc Golf/Trailhead Area Concept Plan would result in less adverse impact on Butte County checkerbloom. Nonetheless, recognizing the sensitivity of the Butte County checkerbloom and the remaining potential for loss or disturbance of the species from implementation of the concept plan, a potentially significant adverse effect could occur.</p> <p>Loss or degradation of populations of Butte County checkerbloom resulting from implementation of the Disc Golf/Trailhead Area Concept Plan would be a potentially significant impact requiring mitigation.</p>		<p>placed to discourage use of these trails and structures.</p> <ul style="list-style-type: none"> ▶ Permanent signage at the trailhead/rest area shall be installed to inform Park users of the presence and sensitivity of Butte County checkerbloom (and other sensitive resources) on the site. ▶ As provided in Appendix H of the BPMMP, alternate pin locations for Holes 3 and 4 of the long course shall be used from March 1 through July 1 to minimize potential disturbance of nearby checkerbloom plants during the active growth and blooming period. ▶ Per Plant Objective O. P-8 of the BPMMP, an adaptive management program shall be implemented that relies on periodic data collection on the distribution and progress of Butte County checkerbloom at the Disc Golf/ Trailhead site. The goal of this adaptive management program shall be to document and monitor changes in the existing population of Butte County checkerbloom over time. ▶ If data collection indicates a decline in existing populations after implementation of the Disc Golf/Trailhead Area Concept Plan, relocation of trails or disc golf structures in the vicinity of these populations, or other management strategies that would benefit the plants based on the data collected, shall be implemented. This strategy would implement Plant Objective O. P-7 and Plant Implementation Strategies and Guidelines I. P-3 and I. P-4 of the BPMMP. <p>Applies to: Disc Golf/Trailhead Area Concept Plan</p> <p>Timing/Implementation: Before ground-disturbing activities and during ongoing operation</p> <p>Responsible Party: City of Chico</p>	

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Table E7-1 Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<i>Applies to:</i> Disc Golf/Trailhead Area Concept Plan		Implementation of Mitigation Measure BIO-1b would reduce potentially significant impacts on Butte County checkerbloom from implementation of the Disc Golf/Trailhead Area Concept Plan to a less than significant level.	
<p>BIO-1c: Adverse Effects of the Trails Plan and Horseshoe Lake Area Concept Plan on Butte County Checkerbloom</p> <p>Documented occurrences of Butte County checkerbloom are also located within the Trails Plan area and within the vicinity of the Horseshoe Lake Area Concept Plan. (Please refer to Impact BIO-1e below for a discussion of as-yet-unknown occurrences of Butte County checkerbloom and other special-status plant occurrences.)</p> <p>Focused special-status plant surveys have not been conducted for the Horseshoe Lake Area Concept Plan or the current Trails Plan area, so additional populations of Butte County checkerbloom could exist in potential disturbance areas of these site-specific Park Improvement Projects. Some of the proposed trail segments, such as the proposed new trail to Monkey Face Overlook, traverse areas where Butte County checkerbloom previously has been documented.</p> <p>Direct impacts, such as removal or damage of populations of Butte County checkerbloom, have the potential to result from implementation of the Trails Plan and the Horseshoe Lake Area Concept Plan. Indirect impacts on Butte County checkerbloom may result from degradation of suitable checkerbloom habitat caused by user activity. Potential impacts could also result from future facility improvements and maintenance or restoration activities.</p> <p>Loss or degradation of populations of Butte County checkerbloom resulting from implementation of the Trails Plan and/or Horseshoe Lake Area Concept Plan would be a potentially significant impact requiring mitigation.</p> <p><i>Applies to:</i> Trails Plan, Horseshoe Lake Area Concept Plan</p>	PS	<p>BIO-1c: Implement Measures to Protect Known Occurrences of Butte County Checkerbloom in the Trails Plan and Horseshoe Lake Area Concept Plan Areas</p> <p>To mitigate the potential direct and indirect effects on known occurrences of Butte County checkerbloom in the Trails Plan and Horseshoe Lake Area Concept Plan areas, the following measures shall be implemented:</p> <ul style="list-style-type: none"> ▶ Before the start of any ground-disturbing activities, the City shall retain a qualified botanist to identify the locations of previously documented occurrences of Butte County checkerbloom in the Trails Plan and Horseshoe Lake Area Concept Plan Areas. The locations shall be clearly flagged or otherwise marked for avoidance during construction. ▶ The flagged occurrences shall be avoided to the maximum extent feasible and a buffer of at least 25 feet shall be established. ▶ If impacts to known occurrences of Butte County checkerbloom cannot be avoided while accomplishing the Park Improvement Project goals, every effort shall be made to minimize impacts to these occurrences. ▶ If it is determined that known occurrences of Butte County checkerbloom cannot be avoided, appropriate mitigation shall be developed through consultation with DFG. Any loss of Butte County checkerbloom shall be mitigated through preservation and enhancement of remaining occurrences and preservation and enhancement of suitable 	LTS

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**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>habitat on-site. Mitigation shall aim to ensure a no-net loss in special-status plant populations/and or habitat within the Park or region.</p> <ul style="list-style-type: none"> ▶ Any mitigation developed through consultation with DFG shall be implemented as part of project implementation, and any monitoring and remedial action requirements specified as part of the consultation shall be implemented by the City. <p>Applies to: Trails Plan, Horseshoe Lake Area Concept Plan</p> <p>Timing/Implementation: Before ground-disturbing activities and during ongoing operation</p> <p>Responsible Party: City of Chico</p> <p>Implementation of Mitigation Measure BIO-1c would reduce potentially significant impacts on known occurrences of Butte County checkerbloom from implementation of Trails Plan and Horseshoe Lake Area Concept Plan to a less than significant level.</p>	
<p>BIO-1d: Adverse Effects of Disc Golf/Trailhead Area Concept Plan on Bidwell’s Knotweed</p> <p>The Disc Golf/Trailhead Area Plan was designed to minimize impacts to Bidwell’s knotweed to the greatest extent possible. However, direct impacts such as removal or damage of Bidwell’s knotweed may still occur as a result of implementation of the Disc Golf/Trailhead Area Concept Plan, as the plant is widely distributed throughout the Disc Golf/Trailhead area project site. In addition, indirect impacts on Bidwell’s knotweed may result from the degradation of habitat in which this species occurs. Potential impacts such as soils compaction or trampling in the immediate vicinity of known locations of this species could also result from future facility improvements, maintenance or restoration activities, and visitor use. It is anticipated that wildflower</p>	PS	<p>BIO-1d: Implement Measures to Protect Bidwell’s Knotweed at the Disc Golf/Trailhead Area</p> <p>The following measures shall be implemented to mitigate for potential direct and indirect effect to Bidwell’s knotweed at the Disc Golf/Trailhead Plan area:</p> <ul style="list-style-type: none"> ▶ The Disc Golf/Trailhead Area Concept Plan shall be implemented to minimize direct and indirect impacts on Bidwell’s knotweed habitat on the site. Because Bidwell’s knotweed is an annual plant species, population sizes may fluctuate greatly from year to year. Therefore, simply avoiding plants that are present in a given year would not ensure that great numbers of individuals would not be affected in subsequent years. Therefore, a habitat approach 	LTS

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Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>field communities, and eventually Bidwell’s knotweed, will establish on suitable soils in the decommissioned parts of the existing disc golf course footprint once recreational activities are eliminated from these areas.</p> <p>The designation as a CNPS List 4 species (plants of limited distribution—a watch list) does not afford Bidwell’s knotweed any legal protection under the federal or California Endangered Species Act or CEQA, but the plant is recognized by local resource specialists and agency personnel as a unique and valuable resource worthy of protection and stewardship. Plant Implementation Strategies and Guidelines I. P-3, I. P-4, and I. P-7 of the BPMMP aim to minimize potential effects on special-status plants, including Bidwell’s knotweed. These implementation strategies state that where possible, existing facilities shall be modified to minimize potential effects on special-status plants, and that intensive recreation shall be restricted and nonintensive recreation shall be controlled where necessary to minimize potential effects on special-status plants, and that building of new roads and trails through natural wetlands and shallow soils should be avoided, where feasible, especially where special-status plant populations may occur. Even with these implementation strategies, some loss or degradation to Bidwell’s knotweed at the Disc Golf/Trailhead area may occur. Loss or degradation of Bidwell’s knotweed populations resulting from implementation of the Disc Golf/Trailhead Area Concept Plan would be a potentially significant impact requiring mitigation.</p> <p><i>Applies to:</i> Disc Golf/Trailhead Area Concept Plan</p>		<p>shall be taken to minimize impacts on this species. This approach would entail minimizing impacts to wildflower fields, the native plant community that supports Bidwell’s knotweed.</p> <ul style="list-style-type: none"> ▶ Consistent with the Disc Golf/Trailhead Area Concept Plan, trails shall generally be placed outside of wildflower fields. The Disc Golf/Trailhead Area Concept Plan shall be implemented to restrict foot traffic to clearly defined trails and disc golf structures. The number of trails dissecting wildflower fields shall be minimized to the fewest number necessary to facilitate reasonable access to the disc golf course and scenic viewpoints, and trails shall be as narrow as possible and have clearly marked edges to reduce widening and discourage users from wandering off the path. Existing trails through wildflower fields that will not be retained as part of the Disc Golf/Trailhead Area Concept Plan shall be decommissioned, and barriers (such as boulders) shall be placed just outside any points where trails enter the wildflower field community to discourage use of these trails. ▶ Exclusionary fencing shall be installed under the guidance of a qualified botanist before commencement of construction to keep workers and equipment from disturbing wildflower field habitat intended for preservation. High priority shall be given to preserving those wildflower field communities that contained Bidwell’s knotweed during surveys conducted in 2005. ▶ Permanent signage at the trailhead/rest area shall be installed to inform Park users of the presence and sensitivity of Bidwell’s knotweed and wildflower field habitat and to deter users from disturbing the species. 	

**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<ul style="list-style-type: none"> ▶ Per Plant Objective O. P-8 of the BPMMP, an adaptive management program shall be implemented that relies on periodic data collection on the distribution and progress of Butte County checkerbloom at the Disc Golf/ Trailhead site. The goal of this adaptive management program shall be to document and monitor changes in the existing population of Butte County checkerbloom over time. ▶ If data collection indicates a decline in existing populations after implementation of the Disc Golf/Trailhead Area Concept Plan, relocation of trails or disc golf structures in the vicinity of these populations, or other management strategies that would benefit the plants based on the data collected, shall be implemented. This strategy would implement Plant Objective O. P-7 and Plant Implementation Strategies and Guidelines I. P-3 and I. P-4 of the BPMMP. <p><i>Applies to:</i> Disc Golf/Trailhead Area Concept Plan</p> <p><i>Timing/Implementation:</i> During construction of Disc Golf/Trailhead Area Plans and during ongoing operation</p> <p><i>Responsible Party:</i> City of Chico</p> <p>Implementation of Mitigation Measure BIO-1d would reduce potentially significant impacts on Bidwell’s knotweed from implementation of the Disc Golf/Trailhead Area Concept Plan to a less than significant level.</p>	
<p>BIO-1e: Adverse Effects of Park Improvement Projects on Unknown Occurrences of Butte County Checkerbloom, Bidwell’s Knotweed, and Other Special-status Plant Species</p> <p>As mentioned above, Bidwell’s knotweed is known to occur within the Horseshoe Lake Area and could be present in several of the areas proposed for trail improvement in the Trails Plan and could potentially</p>	PS	<p>BIO-1e: Implement Measures to Protect Unknown Occurrences of Butte County Checkerbloom, Bidwell’s Knotweed, and Other Special-status Plant Species</p> <p>The following measures shall be applied to mitigate potential direct and indirect impacts on as-yet-unknown occurrences of Butte County checkerbloom, Bidwell’s knotweed, and other</p>	LTS

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Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>be impacted by construction activities in these areas. Potentially suitable habitat for fox sedge, a CNPS List 2 species, is present in the riparian community immediately north of the Cedar Grove Area Concept Plan site. If present, this species could be affected by the proposed construction and expansion of the parking area in this vicinity. Potentially suitable habitat for many of the 39 special-status plant species described in Table 2.3.2-2 in the BPMMP is present in the Trails Plan and Horseshoe Lake Area Concept plan areas. In addition to Butte County checkerbloom and Bidwell’s knotweed, small spikerush (CNPS List 4) has been documented at Horseshoe Lake, and shield-bracted monkeyflower (CNPS List 4) has been documented northwest of Horseshoe Lake in an area that could be affected by development of a new trail to Monkey Face Overlook. The Horseshoe Lake Area Concept Plan and Trails Plan could, therefore, result in direct and indirect impacts on these species. Humboldt lily (CNPS List 4) has been documented in the vicinity of Parking Lots S and T. Expansion of these lots and new trails to these lots is under consideration as part of the Trails Plan. Expansion of the parking lots and construction of trails in this area could result in direct impacts on Humboldt lily. Because focused special-status plant surveys have not been conducted in these site-specific project areas, it is possible that additional special-status plants are present in these areas and could be lost as a result of construction activity and Park use.</p> <p>Direct impacts, such as removal or damage of special-status plants, may occur as a result of implementation of the Trails Plan, the Horseshoe Lake Area Concept Plan and the Cedar Grove Plan. Indirect impacts on special-status plants may result from these Park Improvement Projects because of degradation of their habitat. Potential indirect impacts such as soil compaction or inadvertent trampling or picking of specimens could also result from future facility improvements, maintenance or restoration activities, and visitor use.</p> <p>The designation as a CNPS List 4 species (plants of limited distribution—a watch list) does not afford some of the plants discussed</p>		<p>special-status plant species as a result of implementation of the Cedar Grove Area Concept Plan, Trails Plan, and Horseshoe Lake Area Concept Plan:</p> <ul style="list-style-type: none"> ▶ Before the start of any ground-disturbing activities, the City shall retain a qualified botanist to conduct protocol-level special-status plant surveys in areas that have the potential to be disturbed by implementation of the Cedar Grove Concept Plan, Trails Plan, and Horseshoe Lake Concept Plan. These surveys shall be conducted during the appropriate time of year when the potentially occurring species would be present and clearly identifiable (i.e., the blooming period as identified in Table 2.3.2-2 in the BPMMP) and shall focus on those areas supporting suitable habitat for the target species. Survey protocols outlined by DFG shall be followed. CNPS List 4 species with potential to occur in the project sites shall be included in the surveys whenever feasible, so data on their distribution can be taken into consideration during project planning and design. ▶ For the Trails Plan, special-status plant surveys may be conducted on a segment by segment basis, as specific trail segments are proposed for development. ▶ If no special-status plant occurrences are found in the areas that would be affected by the site-specific projects, then the results of the surveys shall be documented in a letter report to the City and no further mitigation shall be required. ▶ If any special-status plant species are identified in the site-specific project areas, the location and extent of each occurrence shall be inventoried and these occurrences shall be avoided, to the maximum extent feasible, while still accomplishing the goals of the four Park Improvement 	

**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>above any legal protection under the federal or California Endangered Species Acts, but these plants are recognized by local resource specialists and agency personnel as unique and valuable resources worthy of protection and stewardship and potential impacts to these species will be considered during project planning and implementation.</p> <p>Loss or degradation of other special-status plant populations protected by law as a result of development of the Trails Plan, Horseshoe Lake Area Concept Plan, and/or Cedar Grove Area Concept Plan is a potentially significant impact requiring mitigation.</p> <p>Applies to: Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan</p>		<p>Projects.</p> <ul style="list-style-type: none"> ▶ If impacts on special-status plants cannot be avoided while accomplishing the Park Improvement Project goals, every effort shall be made to minimize impacts on special-status plants (including CNPS List 4 plants) through design planning. ▶ If federally or state listed plant species are identified in the site-specific project areas and it is determined that occurrences of these species would be directly or indirectly affected by the site-specific projects, then appropriate mitigation shall be developed through consultation with USFWS or DFG, depending on the listing status of the plant. Any loss of special-status plants (except CNPS List 4 plants) shall be mitigated through preservation and enhancement of remaining occurrences and preservation and enhancement of suitable habitat on-site. Mitigation shall aim to ensure a no-net loss in special-status plant populations/and or habitat within the Park or region. Impacts to CNPS list 4 plants shall be avoided to the greatest extent possible. If complete avoidance it not feasible, impacts to CNPS plants shall be minimized. ▶ Any mitigation developed through consultation with the regulatory agencies shall be implemented as part of project implementation, and any monitoring and remedial action requirements specified as part of the consultation shall be implemented by the City. <p>Applies to: Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan</p> <p>Timing/Implementation: Prior to any ground-disturbing activities</p>	

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Table E7-1 Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p><i>Responsible Party:</i> City of Chico</p> <p>Implementation of Mitigation Measure BIO-1e would reduce potentially significant impacts on unknown occurrences of Butte County checkerbloom, Bidwell’s knotweed, and other special-status plant species from implementation of Park Improvement Projects to a less than significant level.</p>	
BIO-2: ADVERSE EFFECTS ON SPECIAL-STATUS WILDLIFE SPECIES			
Effects of the BPMMP			
<p>BIO-2a: Adverse Effects of the BPMMP on Special-Status Wildlife</p> <p>The BPMMP includes goals and guidelines aimed at the protection of natural resources, including special-status terrestrial wildlife and fish species, in the Park. The BPMMP includes objectives (O. TW-1 through O. TW-5) that aim at protecting special-status terrestrial wildlife by providing opportunities for nesting, foraging, hunting and other essential wildlife activities, maintain habitat connectivity, minimize disturbance, and manage or abate non-native, invasive animal species. The BPMMP also includes terrestrial wildlife implementation strategies and guidelines (I. TW-1 through I. TW-6) for Park management that would result in the avoidance or minimization of disturbance or losses of special-status terrestrial wildlife species and their habitat, such as preserving the wildlife corridor along Big Chico Creek, partnering with groups and organizations (e.g., students and faculty at CSUC) to collect wildlife population data, and restricting outdoor lighting in or near natural areas. The Natural Communities Objectives (O. NC-1 through O. NC-8) also include objectives for preserving natural habitats and improving conditions for native plant communities which provide important habitat for common and special-status wildlife species. Implementation Strategies for meeting these objectives would be to protect sensitive habitats (e.g., vernal pools, wet meadows) by implementing the vegetation management guidelines from</p>	LTS	No mitigation is required.	

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Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>Section 3 of the NRMP and by implementing temporary or seasonal restrictions to specific Park areas, when necessary. The BPMMP contains several objectives and implementation strategies and guidelines aimed at protecting and enhancing aquatic habitat and associated resources, including special-status fish within the Park. The Aquatic Resources Objectives (O. AR-1 through O. AR-6) include objectives for protecting and enhancing fisheries and fishery habitat. Aquatic Resources Implementation Strategies I. AR-1 through I. AR-9 include strategies such as working to eliminate migration barriers, assessing and protecting water quality, facilitating riparian restoration projects, restoring spawning gravel, providing bathroom and trash receptacles to reduce potential bacteriological contamination and outreach and education. Compliance with BPMMP objectives and implementation strategies and guidelines would ensure that the overall BPMMP would not result in substantial adverse effects on any fish species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by DFG or USFWS.</p> <p>Compliance with BPMMP objectives and implementation strategies and guidelines would ensure that the overall BPMMP would not result in substantial adverse effects on any terrestrial wildlife or fish species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by DFG or USFWS. With the implementation of the BPMMP’s protective objectives and implementation goals and strategies for special-status terrestrial wildlife and fish species, direct and indirect impacts on special-status terrestrial wildlife and fish species resulting from BPMMP implementation other than as analyzed below in regard to the four Park Improvement Projects, would be less than significant. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP</p>			

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Table E7-1 Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Effects of Park Improvement Projects			
<p>BIO-2b: Adverse Effects of Park Improvement Projects on Valley Elderberry Longhorn Beetle (VELB)</p> <p>Valley elderberry longhorn beetle (VELB) exit holes on elderberry shrub have been documented at several locations within the Park, including locations in Middle Park along Big Chico Creek in the vicinity of Horseshoe Lake (CNDDDB 2005). However, no Parkwide inventory of elderberry shrubs that provide suitable habitat for VELB has been conducted, so elderberry shrubs may be found elsewhere in the Park. VELB inhabit elderberry shrubs with branches that are one inch in diameter or more and rely on these shrubs for their survival. Direct impacts, such as removal or damage of shrubs occupied by VELB, may occur as a result of implementation of the Trails Plan, Horseshoe Lake Area Concept Plan, and Cedar Grove Area Concept Plan. Implementation of these projects could also result in indirect impacts on VELB, including future mortality or site abandonment as a result of habitat degradation. During construction, elderberry shrubs could be subjected to dust deposition. If VELB are present, the dust settling on leaves could cause disorientation and ill health effects, potentially resulting in a failure to reproduce. Dust could also cause a significant decrease in the level of photosynthesis in the elderberry shrub and result in a decline in the health of the shrub, further affecting VELB.</p> <p>Direct or indirect effects on VELB resulting from implementation of the Trails Plan, Horseshoe Lake Area Concept Plan and Cedar Grove Area Concept Plan would be a potentially significant effect requiring mitigation.</p> <p><i>Applies to:</i> Trails Plan, Horseshoe Lake Area Concept Plan, and Cedar Grove Area Concept Plan</p>	PS	<p>BIO-2b: Implement Measures to Protect Elderberry Shrubs, the host plant for the Valley Elderberry Longhorn Beetle</p> <p>The City shall ensure that the following measures are implemented to minimize potential project effects on elderberry shrubs, the host plant for valley elderberry longhorn beetles.</p> <p>Areas that support elderberry shrubs shall be identified and, to the extent feasible and practicable, project elements shall be designed to avoid direct effects on these areas. Before beginning any ground-disturbing project activities, a qualified biologist shall identify areas that support elderberry shrubs and that could be affected by the given project. The City shall ensure, through coordination with the biologist, that the footprint of project features and construction zones, staging areas, and access routes are designed to avoid disturbance of potential habitat to the extent feasible and practicable.</p> <p>If impacts to areas supporting elderberry shrubs cannot be avoided, focused surveys shall be conducted. Before the initiation of any ground-disturbing activities, a qualified biologist shall conduct surveys for elderberry shrubs within 100 feet of the impact area, in accordance with USFWS guidelines. All elderberry shrubs with potential to be affected by project activities shall be mapped and the number of stems greater than 1 inch in diameter on each shrub that may require removal shall be counted. If no elderberry shrubs are found during focused surveys, no further action shall be required.</p> <p>If potential effects to valley elderberry longhorn beetle cannot be avoided, measures shall be implemented to minimize and mitigate unavoidable effects. Before the initiation of any</p>	LTS

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Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>ground-disturbing project activities within 100 feet of elderberry shrubs that are suitable for use by valley elderberry longhorn beetles, USFWS shall be consulted to develop appropriate measures. Such measures may include those described in Conservation Guidelines for the Valley Elderberry Longhorn Beetle (USFWS 1999) and the VELB Programmatic Consultation (USFWS 1996). Minimization measures may include implementation of buffers around shrubs that would not be removed, transplanting shrubs to a conservation area, conducting worker awareness training, and periodic biological monitoring. Compensation may include planting of elderberry seedling or cuttings and associate native species.</p> <p>Authorization for take of valley elderberry longhorn beetle under ESA shall be obtained if it is determined that implementation of a program component is likely to result in take, despite implementation of avoidance and minimization measures.</p> <ul style="list-style-type: none"> ▶ All measures developed through informal consultation with USFWS shall be implemented, as well as any additional measures adopted through a formal permitting process, if applicable. <p><i>Applies to:</i> Trails Plan, Horseshoe Lake Area Concept Plan, and Cedar Grove Area Concept Plan</p> <p><i>Timing/Implementation:</i> Before and during construction activities</p> <p><i>Responsible Party:</i> City of Chico</p> <p>Implementation of Mitigation Measure BIO-2b would reduce potentially significant impacts on VELB from implementation of Park Improvement Projects to a less than significant level.</p>	

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Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>BIO-2c: Adverse Effects of Park Improvement Projects on Vernal Pool Crustacean and Western Spadefoot Habitat</p> <p>Vernal pool fairy shrimp, vernal pool tadpole shrimp, Conservancy fairy shrimp, and western spadefoot have not been documented in the Park, but potential habitat for these species is provided by vernal pools present around Horseshoe Lake. Several shallow vernal pools also occur on the south rim, including a few on the Disc Golf/ Trailhead Area site. Vernal pools in the Park may be considered potentially suitable habitat for special-status vernal pool crustaceans and western spadefoot. Direct impacts, such as removal or degradation of vernal pools, may occur as a result of implementation of the Trails Plan, Horseshoe Lake Area Concept Plan, and Disc Golf/Trailhead Area Plan. Potential impacts could also result from future facility improvements, maintenance or restoration activities, and visitor use, such as soils compaction, intrusion of pets, and vegetation trampling within the pools. Indirect impacts could result from degradation in water quality or alteration of the watershed supporting the pools.</p> <p>Potential loss or disturbance of vernal pool habitat potentially occupied by vernal pool fairy shrimp, vernal pool tadpole shrimp, Conservancy fairy shrimp, and western spadefoot would be a potentially significant impact requiring mitigation.</p> <p>Applies to: Trails Plan, Horseshoe Lake Area Concept Plan, and Disc Golf/Trailhead Area Concept Plan</p>	<p>PS</p>	<p>BIO-2c: Implement Measures to Protect and Compensate for Loss of Vernal Pool Invertebrate and Western Spadefoot Habitat</p> <p>The City shall ensure that the following measures are implemented to avoid, minimize, and mitigate potential project effects on vernal pool invertebrates and western spadefoot:</p> <ul style="list-style-type: none"> ▶ Before any ground-disturbing project activities begin, the City shall retain a qualified biologist to identify and map potential habitat in areas that could be affected by the given project. The City shall ensure, through coordination with the biologist, that the footprint of project features and construction zones, staging areas, and access routes are designed to avoid direct or indirect effects on suitable habitat for vernal pool invertebrates and western spadefoot to the extent feasible and practicable. In addition to vernal pools, suitable habitat for western spadefoot includes the surrounding grassland matrix. ▶ If vernal pool invertebrate and western spadefoot habitat cannot be avoided, measures shall be implemented to minimize and mitigate unavoidable effects. Before beginning any ground-disturbing project activities in such habitat, USFWS shall be consulted to identify appropriate measures to minimize and compensate for adverse effects on special-status vernal pool invertebrates; DFG shall be consulted to identify measures to minimize and compensate for adverse effects on western spadefoot. Applicable avoidance and minimization measures may include those described in USFWS’s vernal pool crustacean Programmatic Consultation (USFWS 1996a). Minimization measures for vernal pool invertebrates are likely to include, but would not be limited to, fencing of 	<p>LTS</p>

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**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>habitat to be avoided, timing of ground disturbance to correspond with the dry season, conducting worker awareness training, and periodic biological monitoring. Compensation may include preservation, enhancement, and/or creation of suitable habitat in areas that currently, or could in the future, support special-status invertebrate and/or spadefoot populations.</p> <ul style="list-style-type: none"> ▶ Authorization for take of vernal pool invertebrates under ESA shall be obtained if it is determined that implementation of a program component is likely to result in take, despite implementation of avoidance and minimization measures. ▶ All measures developed through informal consultation with USFWS and DFG shall be implemented, as well as any additional measures adopted through a formal permitting process, if applicable. <p>Implementing this mitigation measure would reduce the potential impact on special-status vernal pool invertebrates and western spadefoot to a less than significant level.</p> <p>Applies to: Trails Plan Horseshoe Lake Area Concept Plan, and Disc Golf/Trailhead Area Concept Plan</p> <p>Timing/Implementation: Before and during construction in and near vernal pool habitats and Western spadefoot habitats.</p> <p>Responsible Party: City of Chico</p> <p>Implementation of Mitigation Measure BIO-2c would reduce potentially significant impacts on vernal pool crustacean and western spadefoot habitat from implementation of Park Improvement Projects to a less than significant level.</p>	

**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>BIO-2d: Adverse Effects of Park Improvement Projects on Nesting Raptors, other Migratory Birds, and Burrowing Owls</p> <p>The extent and mix of grassland, woodland, riparian, and cliff habitats found in Bidwell Park provide important winter, breeding, and migration habitat for a high proportion of the raptor species known to occur over the larger region. An active peregrine falcon nest site occurs on the cliff below the southern ridgetop, adjacent to the Disc Golf/Trailhead Area Concept Plan area in Upper Bidwell Park. Large trees in the woodland and riparian habitats in the vicinity of the Cedar Grove, Trails Plan, Horseshoe Lake, and Disc Golf/Trailhead areas provide potential nest sites for special-status raptor species, including Cooper’s hawk and white-tailed kite. Some grasslands throughout the Park could provide nesting habitat and winter burrow sites for burrowing owls. In addition, other cliffs and rock outcrops found in the vicinity of the Trails Plan, Horseshoe Lake, and Disc Golf/Trailhead areas provide potential nest sites for other raptors. Raptors and their nests are protected under Section 3503.5 of the California Fish and Game Code. Implementation of the site-specific Park Improvement Projects would not substantially reduce nesting, foraging, or migration opportunities for raptors in the Park because suitable habitat would not be removed in substantial quantities. However, raptor nests or burrows could be affected by the removal of trees and/or nearby construction related to the four Park Improvement Projects, which could result in potentially significant disturbance of nesting raptors during the breeding season (approximately February 1 to August 31, depending on the species).</p> <p>Potential loss of raptor nests or disturbance of nesting special-status raptors as a result of implementation of the Park Improvement Projects would be a potentially significant impact requiring mitigation. Loss of active nests of common raptor species (e.g., red-tailed hawk [<i>Buteo jamaicensis</i>]) would be inconsistent with the MBTA and a violation of Fish and Game Code, but would not constitute a significant impact</p>	<p>PS</p>	<p>BIO-2d(1): Protect Tree-Nesting Raptors</p> <p>Before project construction, it shall be determined whether any construction or tree removal is proposed during the raptor nesting season (February 1 to August 31). If no construction or tree removal will occur during the raptor nesting season, no further mitigation shall be necessary.</p> <p>If construction or tree removal is proposed during the raptor nesting season, a focused survey for special-status and common raptor nests shall be conducted by a qualified biologist during the nesting season to identify active nests within 500 feet of the project area. The survey shall be conducted no less than 14 days and no more than 30 days before the beginning of construction or tree removal.</p> <p>If nesting raptors are found during the focused survey, impacts shall be avoided by establishment of appropriate buffers. No project activity shall commence within the buffer area until a qualified biologist confirms that the nest is no longer active. DFG guidelines recommend implementation of 500 foot buffers, but the size of the buffer may be adjusted if a qualified biologist determines it would not be likely to adversely affect the nest. Monitoring of the nest by a qualified biologist may be required if the activity has potential to adversely affect the nest.</p> <p>Applies to: Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, and Disc Golf/Trailhead Area Concept Plan</p> <p>Timing/Implementation: Before and during construction during the breeding season of tree-nesting raptors</p> <p>Responsible Party: City of Chico</p>	<p>LTS</p>

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**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>under CEQA, because CEQA addresses impact special-status species only.</p> <p>Applies to: Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, and Disc Golf/Trailhead Area Concept Plan</p>		<p>BIO-2d(2): Protect Peregrine Falcon</p> <p>If construction at the Disc Golf/Trailhead Area Concept Plan site is to occur during the peregrine falcon breeding period (generally February 1 to June 30), an appropriate buffer around the southern cliff edge shall be determined by a qualified biologist and construction activities shall be avoided within the buffer zone unless a qualified biologist confirms there is no active nest on the cliff.</p> <p>If construction commences between June 30 and February 1, no buffer will be necessary.</p> <p>Applies to: Disc Golf/Trailhead Area Concept Plan</p> <p>Timing/Implementation: Before and during construction during the breeding season of peregrine falcons known to nest below the South Rim</p> <p>Responsible Party: City of Chico</p>	LTS
		<p>BIO-2d(3): Protect Burrowing Owl</p> <p>Grassland habitat in Middle and Upper Park provides potentially suitable habitat for burrowing owls. The following mitigation measure shall be implemented to identify suitable habitat and protect burrowing owl from adverse effects of the Park Improvement Projects:</p> <ul style="list-style-type: none"> ▶ Before any ground disturbance related to the Park Improvement Projects that occur within or adjacent to grassland habitat, a qualified biologist shall conduct a preconstruction survey to assess habitat suitability for burrowing owl (e.g., based on grassland structure and presence of burrows) and, in areas determined to be suitable, evaluate use by burrowing owls in accordance with current DFG survey guidelines (CDFG 1995). Surveys shall be conducted within 30 days prior to 	LTS

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**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>beginning construction activities and shall include the disturbance footprint and a 500 foot radius of the disturbance footprint perimeter. For construction activities occurring during the burrowing owl breeding season (February 1–August 31), surveys shall document whether burrowing owls are nesting on or directly adjacent to disturbance areas. Survey results shall be valid only for the season during which the survey is conducted. If no burrowing owls are documented during the surveys, no further mitigation shall be required.</p> <p>If burrowing owls are found, the following additional measures shall be implemented:</p> <ul style="list-style-type: none"> ▶ Project construction shall avoid all burrowing owl nest sites that could otherwise be disturbed by project construction during the breeding season (February 1–August 31) or while the nest is occupied by adults or young. Avoidance shall include establishment of a nondisturbance buffer zone of at least 250 feet around each nest site. The buffer zone shall be delineated by highly visible temporary construction fencing. Construction may occur during the breeding season if a qualified biologist monitors the nest and determines that the nest site is no longer used by burrowing owls. ▶ If burrowing owls are found during the nonbreeding season (September 1–January 31), project construction shall avoid the owls and the burrows they are using. Avoidance shall include the establishment of at least a 160 foot nondisturbance buffer zone around each burrow being used. The buffer shall be delineated by highly visible temporary construction fencing. If burrowing owls cannot be avoided, the City shall conduct passive relocation by installing one-way doors in suitable burrow entrances that 	

**Table E7-1
 Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>are used or may be used by the owls and that would be collapsed or degraded by construction activities. This measure is described below. Artificial burrows shall be created in an area of the Park determined suitable by a qualified biologist in coordination with Fish and Game staff. The burrows shall be created according to the conservation measures established for this species.</p> <ul style="list-style-type: none"> ▶ To displace burrowing owls without destroying eggs, young, or adults, one-way doors shall be installed on owl burrows before February 1 prior to disturbance, and each burrow shall be monitored following DFG’s protocol (California Department of Fish and Game 1995). This measure includes monitoring the burrow for a 48-hour period after the one-way doors are installed. The doors shall be checked every 24 hours following installation to determine whether they are still intact. If the one-way door is still correctly installed after a continuous 48-hour period (i.e., no animals have dug up the door and rendered it useless), then the one-way door shall be removed and the burrows shall be excavated using hand tools and plastic tubing to maintain an escape route for any animals still inside the burrow. <p><i>Applies to:</i> Trails Plan and Horseshoe Lake Area Concept Plan</p> <p><i>Timing/Implementation:</i> Before and during construction</p> <p><i>Responsible Party:</i> City of Chico</p> <p>Implementation of Mitigation Measures BIO-2d(1) through BIO-2d(3) would reduce potentially significant impacts on nesting raptors from implementation of Park Improvement Projects to a less than significant level.</p>	

Table E7-1 Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>BIO-2e: Adverse Effects of Park Improvement Projects on Northwestern Pond Turtle</p> <p>Pond turtle habitat could be affected by implementation of the Trails Plan and the Horseshoe Lake Area Concept Plan in a variety of ways. Temporary and permanent loss of suitable habitat could result from improvement activities along ponds, creeks, and streams. Construction activities associated with these program components could also result in direct disturbance and loss of individual pond turtles. Potential impacts to northwestern pond turtle, a species of special concern to DFG, would be a potentially significant impact requiring mitigation.</p> <p><i>Applies to:</i> Trails Plan and Horseshoe Lake Area Concept Plan</p>	PS	<p>BIO-2e: Protect Northwestern Pond Turtle: Identify Habitat, Minimize Potential Impacts, and Mitigate in Consultation with DFG as Needed</p> <p>Before any ground-disturbing project activities begin, a qualified biologist shall identify potential aquatic and nesting habitat in areas that could be affected by the given Park Improvement Project. The City shall ensure, through coordination with the biologist, that the footprint of project features and construction zones, staging areas, and access routes are designed to avoid direct or indirect effects on suitable habitat for northwestern pond turtle to the extent feasible and practicable.</p> <p>If effects to pond turtle habitat cannot be avoided, measures shall be implemented to minimize unavoidable effects. Before beginning any project activities in such habitat, DFG shall be consulted to identify appropriate measures to minimize adverse effects on pond turtles. Such measures are likely to include, but would not be limited to, relocating turtles to appropriate areas, installing fencing to exclude turtles from nesting in areas where ground disturbance would occur, conducting worker awareness training, and periodic biological monitoring. All measures deemed appropriate and feasible during this consultation with DFG shall be implemented.</p> <p><i>Applies to:</i> Trails Plan and Horseshoe Lake Area Concept Plan</p> <p><i>Timing/Implementation:</i> Before and during construction</p> <p><i>Responsible Party:</i> City of Chico</p> <p>Implementation of Mitigation Measure BIO-2e would reduce potentially significant impacts on northwestern pond turtle from implementation of Park Improvement Projects to a less</p>	LTS

Table E7-1 Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		than significant level.	
<p>BIO-2f: Adverse Effects of Park Improvement Projects on Other Special-Status Wildlife</p> <p>Special-status bird species that are known to use the riparian woodland and scrub habitat within Bidwell Park are yellow warbler and yellow-breasted chat, both DFG species of special concern. Some areas of riparian habitat along Big Chico Creek appear to provide biophysical habitat elements that are suitable for the state-listed yellow-billed cuckoo, however, this species has not been documented there despite frequent visits by an active birdwatching community. Loggerhead shrike, a DFG species of special concern, occurs in the Park and likely breeds there. In 2006, black rails were observed in Upper Bidwell Park, near Bear Hole. Yellow warbler, yellow-breasted chat, and loggerhead shrike could be affected during construction of the four Park Improvement Projects directly through loss of habitat and increased localized habitat fragmentation. Substantial habitat loss and fragmentation would result in the reduction of population sizes and diminished use of the project area by some local wildlife populations, including these special-status species. However, implementation of the four Park Improvement Projects would not substantially reduce nesting, foraging, or migration opportunities for these species in the Park because suitable habitat would not be removed in substantial quantities. Therefore, the amount of suitable habitat removed is not expected to affect the distribution, reproductive success, or population viability of these species. Black rails in Upper Park occur in association with marsh habitat. Because this habitat type will be avoided during implementation of the Trails Plan (the only Park Improvement Project that may involve activities near black rail habitat), implementation of the Park Improvement Projects is not expected to result in adverse effects on black rails.</p> <p>Removal and/or disturbance of active nests of yellow warbler, yellow-breasted chat, and loggerhead shrike, as well as common nesting birds</p>	PS	<p>BIO-2f: Implement Measures to Protect Other Special-status Nesting Birds</p> <p>The following measures shall be implemented to minimize and mitigate the potential disturbance of nesting special-status birds.</p> <ul style="list-style-type: none"> ▶ The City shall design Park Improvement Projects to minimize disturbance and removal of nesting habitat for special-status nesting birds to the extent feasible and practicable. Nesting habitat that cannot be avoided shall be removed during the non-nesting season, to the extent feasible and practicable. ▶ To avoid potential impacts to active nests of special-status birds, a qualified biologist shall conduct preconstruction surveys to identify active special-status bird nests within 500 feet of construction areas. The survey shall be conducted no more than 10 days before project activities begin. If an active nest is found, an appropriate buffer to minimize impacts shall be determined by a qualified biologist. No project activities shall commence within the buffer area until a qualified biologist confirms that the nest is no longer active or the birds are not dependent upon it. The size of the buffer may vary, depending on the nest location, nest stage, and construction activity. <p><i>Applies to:</i> Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, and the Disc Golf/Trailhead Area Concept Plan</p> <p><i>Timing/Implementation:</i> Before and during construction during the breeding season of yellow warbler, yellow-breasted chat, and loggerhead shrike.</p>	LTS

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Table E7-1 Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>that are protected under the MBTA and the Fish and Game Code, could also result from implementation of Park Improvement Projects. Disturbance of nesting pairs could result in nest abandonment and loss of active nests. Loss of active nests of these special-status birds could result in a substantial adverse effect to local populations of the affected species. Loss of active nests of common species would be inconsistent with the MBTA and a violation of Fish and Game Code but would not constitute a significant impact under CEQA, as CEQA addresses impacts to special-status species only. Impacts to special-status nesting birds would be potentially significant and subject to mitigation.</p>		<p>Responsible Party: City of Chico</p> <p>Implementation of Mitigation Measure BIO-2f would reduce potentially significant impacts on neotropical migrant landbirds from implementation of Park Improvement Projects to a less than significant level</p>	
<p>BIO-2g: Adverse Effects of Park Improvement Projects on Special-status Fish Species</p> <p>The Trails Plan calls for the construction of a new bridge/creek crossing in Upper Bidwell Park. The bridge crossings would be designed to span Big Chico Creek and would be installed using the City’s Best Management Practices as outlined in the City of Chico Best Practices Technical Manual (City of Chico 1998). The City’s Best Management Practices follow mandatory conditions set forth in the required U.S. Army Corp of Engineers and Department of Fish and Game permit review and approval process. These include measures such as using appropriate erosion and siltation controls during the construction period, stabilizing exposed soil and other fills at the earliest possible date, minimizing discharge of dredged or fill material in water of the United States, avoiding the removal of woody riparian vegetation, and restoring the stream channel within the high water mark following the construction period. More importantly, any bridge crossing that would affect the bed and bank of Big Chico Creek would require a Streambed Alteration Agreement from DFG, which would require consultation with DFG, the state agency vested with the responsibility for protecting special-status fish species. The consultation with DFG would result in the identification of measures, if any, to mitigate impacts on special-status fish species.</p>	LTS	No mitigation is required.	

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**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>Implementation of the Cedar Grove Area Concept Plan and Disc Golf/Trailhead Area Concept Plan do not involve work in or near Big Chico Creek; therefore, these projects would have no effect on habitat for special-status fish species, and no impact would occur. Horseshoe Lake is not considered habitat for special-status fish species.</p> <p>Implementation of the four Park Improvement Projects would result in less than significant impacts on special-status fish species. No mitigation is required.</p> <p><i>Applies to:</i> Trails Plan</p>			
BIO-3: ADVERSE EFFECTS ON RIPARIAN HABITATS OR OTHER SENSITIVE NATURAL COMMUNITIES			
Effects of the BPMMP			
<p>BIO-3a: Adverse Effects of the BPMMP on Riparian Habitats or Other Sensitive Natural Communities</p> <p>Implementation of the BPMMP would result in the avoidance or minimization of disturbance or losses of sensitive natural communities or riparian habitats. The BPMMP includes goals and guidelines to ensure protection of natural resources, including native plant communities, in the Park. Natural Community Objectives O. NC-1 through O. NC-8 seek to preserve and enhance natural habitats in the Park by seeking to limit new development, encourage age diversity and regeneration of native plant communities, apply adaptive management strategies, and further develop and implement the NRMP for Bidwell Park. Plant Objectives O. P-1 through O. P-6 seek to protect native plants in the Park through protection of their habitat, education and outreach, the use of proper horticultural techniques, management and restriction of recreational activities in areas known to support special-status plants, monitoring, and consultation with the sovereign nation of the Mechoopda regarding propagation and gathering of native plants for cultural traditional. Aquatic Resources Objectives O. AR-2 through O.</p>	LTS	No mitigation is required.	

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Table E7-1 Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>AR-4 seek to protect riparian and shaded riverine aquatic habitat, and Invasive Plant Objective O. IP-1 seeks to control or eliminate invasive plants that degrade natural communities. Natural Community Implementation Goals and Strategies I. NC-1 through I. NC-3 specifically call for the protection of sensitive habitats, implementation of the NRMP, and consideration of temporary or seasonal restrictions of Park use when resources are affected. Plant Implementation Strategies I. P-1, I. P-3, and I. P-5 through I. P-11 all provide guidance on the protection and management of sensitive natural communities. Compliance with these objectives and implementation strategies and guidelines would ensure that the BPMMP would not result in substantial adverse effects on riparian habitats or other sensitive natural communities.</p> <p>With the implementation of the BPMMP’s protective objectives and implementation goals and strategies, effects on riparian habitats and other sensitive plant communities resulting from implementation of the BPMMP would be less than significant, and no mitigation is required.</p> <p><i>Applies to:</i> BPMMP</p>			
Effects of Park Improvement Projects			
<p>BIO-3b: Adverse Effects of Park Improvement Projects on Riparian Forest</p> <p>As described in the discussion of riparian forest in E4.3.3.1 above, Bidwell Park contains approximately 296 acres of Great Valley mixed riparian forest, 56 acres of Great Valley valley oak riparian forest, and 21 acres of white alder riparian forest. Riparian plant communities do not exist in the areas of the Horseshoe Lake Area Concept Plan and Disc Golf/Trailhead Area Concept Plan, and in areas identified for new trails in the Trails Plan. Therefore, implementation of the Horseshoe Lake Area Concept Plan and Disc Golf/Trailhead Area Concept Plan are not expected to result in adverse effects on riparian forest. The Trails Plan does, however, include the construction of a bridge in Upper</p>	PS	<p>BIO-3b: Implement Measures to Protect Riparian Forest</p> <p>The following measures shall be implemented to mitigate potential impacts on riparian forest associated with implementation of the Trails Plan and Cedar Grove Area Concept Plan:</p> <p>Trails Plan</p> <ul style="list-style-type: none"> ▶ The amount of riparian forest affected by construction of new bridges or other activities occurring in or near riparian forest during implementation of the Trails Plan shall be limited to the minimum necessary. 	LTS

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Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>Park. Depending on the exact location chosen for the bridge/creek crossing, a limited amount of riparian vegetation present at that crossing site may be affected.</p> <p>The Cedar Grove Area Concept Plan would be implemented in an area adjacent to the Great Valley mixed riparian forest community on the banks of Big Chico Creek. This Concept Plan includes expansion and improvement of an existing parking lot and creation of an additional parking area in an existing clearing. Most of the Cedar Grove area is characterized by nonnative landscape vegetation, including a tree plantation known as the World of Trees. However, implementation of the Cedar Grove Area Concept Plan could result in removal of some Great Valley mixed riparian forest habitat along the northern boundary of Cedar Grove. In addition, indirect impacts such as soil compaction and vegetation trampling could result from visitor use.</p> <p>Loss or degradation of riparian forests potentially resulting from implementation of the Trails Plan and the Cedar Grove Area Concept Plan would be a potentially significant impact requiring mitigation.</p> <p>Applies to: Trails Plan, Cedar Grove Area Concept Plan</p>		<ul style="list-style-type: none"> ▶ Any areas that require removal of riparian vegetation shall be restored with native riparian plant species. ▶ The City shall consult with DFG regarding the need for a Streambed Alteration Agreement before construction of any of the proposed bridges over Big Chico Creek. ▶ If a Streambed Alteration Agreement is deemed necessary for Big Chico Creek crossings, the City shall obtain the agreement before the start of any construction affecting the bed or bank of Big Chico Creek and shall implement all measures that are conditions of the agreement. <p>Cedar Grove Area Concept Plan</p> <ul style="list-style-type: none"> ▶ The Cedar Grove Area Concept Plan shall be implemented to avoid or minimize degradation of areas supporting riparian forest vegetation. High priority shall be given to protecting riparian communities from activities that cause compaction, erosion, vegetation removal, or other degradation according to Natural Community Implementation Strategy I. NC-1. ▶ Where ground-disturbing activities occur in the immediate vicinity of riparian forest, exclusionary fencing shall be installed under the guidance of a qualified botanist along the outside edge of the riparian forest canopy before commencement of construction, to prevent workers and equipment from entering this sensitive habitat. ▶ If removal of riparian habitat is required for implementation of the concept plan, the amount shall be limited to the minimum necessary to achieve concept plan objectives. ▶ Any areas that require removal of riparian vegetation shall be restored with native riparian plant species. 	

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Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>Applies to: Trails Plan and Cedar Grove Area Concept Plan</p> <p>Timing/Implementation: Before and during construction of a new bridge crossing over Big Chico Creek associated with implementation of the Trails Plan; before and during the construction of any components of the Cedar Grove Area Concept Plan located immediately adjacent to riparian forest.</p> <p>Responsible Party: City of Chico</p> <p>Implementation of Mitigation Measure BIO-3b would reduce potentially significant impacts on riparian forest from implementation of Park Improvement Projects to a less than significant level.</p>	
<p>BIO-3c: Adverse Effects of Park Improvement Projects on Oak Woodland</p> <p>Bidwell Park contains approximately 1,171 acres of blue oak woodland and savanna, 7 acres of canyon live oak forest, 368 acres of foothill pine–oak woodland, 109 acres of interior live oak woodland, and 403 acres of mixed oak woodland. Oak woodland communities occur throughout Middle and Upper Park, and valley oak riparian forest is the predominant community type in Lower Park. Blue oak woodland/savanna is found on the north side of the Horseshoe Lake area.</p> <p>Oak woodland communities occupy more than half of the Disc Golf/Trailhead Area Concept Plan site. Some of the individual oak trees at this site have suffered from unmitigated use of the site as a disc golf course. An oak assessment was conducted by a certified arborist during development of the Disc Golf/Trailhead Area Concept Plan (Tree Associates 2005) to aid in understanding the health of on-site trees and to identify measures to help reduce future stressors. This assessment is included in Appendix E4. The study concluded that based on visual observations use of the site for disc golf is impacting the health of trees as a result of foliage and branch tip loss and soil compaction.</p>	PS	<p>BIO-3c: Implement Measures to Protect Oak Woodland</p> <p>The following measures shall be implemented to mitigate potential impacts on oak woodlands resulting from implementation of the Trails Plan, Horseshoe Lake Area Concept Plan, and Disc Golf/Trailhead Area Concept Plan:</p> <ul style="list-style-type: none"> ▶ Where possible, trails, improvements, and facilities shall be constructed outside of oak woodlands. The number of trails dissecting oak woodlands shall be minimized to the fewest number necessary to accomplish the goals of the site-specific Park Improvement Projects. The width of trails through oak woodlands shall be minimized and trails shall have clearly marked edges that discourage trail widening and deter users from straying off the designated trail. ▶ Trails through oak woodlands that are decommissioned as part of a site-specific Park Improvement Project shall be reclaimed using barriers (such as boulders) to discourage continued use of these trails. 	LTS

**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>Blue oak woodland is typically considered a sensitive habitat by DFG and local agencies, although it is not currently tracked in the CNDDDB. There is a great deal of concern about oak and other hardwood communities in California (Harris and Kocher 2002) due to the rapid rate of urban development in the foothills where these communities are predominantly found. It is estimated that more than a million acres of California’s oak woodlands were lost between 1950 and 1988 (Bolsinger 1988) and loss of oak woodlands has continued at an alarming rate since that time. Recent studies suggest that oak and other hardwood habitats are indeed at risk in Placer County and throughout California (California Oak Foundation 2003, Saving and Greenwood 2002, Giusti and Merenlender 2002, Light and Pedroni 2002).</p> <p>Implementation of the Trails Plan, Horseshoe Lake Area Concept Plan, and Disc Golf/Trailhead Area Concept Plan has the potential to affect oak woodland communities. Some of the trails proposed in the Trails Plan would be constructed in oak woodland communities. Direct impacts could result from conversion of oak woodland habitat to other uses such as trails and parking areas. At the Disc Golf/Trailhead area, direct impacts to oak may also occur as a result of discs repeatedly striking the bark of oak trees which can eventually lead to cambium damage, resulting in reduced or slowed growth. Direct impacts to oak at this site may also occur from breakage of small branches as a result of disc strikes and retrieval activities by disc golfers. Breakage of branches or limbs exposes the tree’s apical meristems, preventing or adversely affecting growth which can lead to tree deformity. Breakage also enhances the likelihood of infection or insect infestation, which can lead to premature death of the oak. Indirect impacts to oak trees at the respective Park Improvement Project sites could result from visitor use which may result in soil compaction and trampling of oak seedlings.</p> <p>Direct loss or fragmentation of oak woodland or indirect effects on oak woodland such as habitat degradation and tree damage could occur as a result of implementation of the Trails Plan, Horseshoe Lake Area Concept Plan, and Disc Golf/Trailhead Area Concept Plan. This would</p>		<ul style="list-style-type: none"> ▶ Grading, trenching, equipment storage, and other soil-disturbing or compacting activities shall not occur within the driplines of oak trees. New structures and impervious-surface materials shall not be placed in the driplines of oaks, except where deemed necessary to reduce the footprint size of tees as part of the proposed Disc Golf/Trailhead Concept Plan and to reduce soil compaction. ▶ To ensure that the driplines of oaks are not disturbed during construction, protective fencing shall be installed, under the guidance of a qualified botanist, certified arborist, or Registered Professional Forester, at least 1 foot beyond the outer edge of the driplines of all oaks that grow within the construction zones of the site-specific Park Improvement Projects, and no project activities shall be allowed within these exclusion zones, unless specifically required as part of project construction. ▶ The oak woodland management guidelines contained in Section 3 of the NRMP (Appendix C of the BPMMP) shall be implemented. These guidelines include recommendations for sustaining oak woodlands, initiating a burning program, and maintaining the oak landscape. <p>In addition to the measures outlined above, the following additional measures shall be implemented in connection with development and ongoing maintenance of the proposed Disc Golf/Trailhead Concept Plan to protect oaks and to mitigate for any unavoidable loss resulting from mortality over time. These measures are based on site observations, oak woodland management guidelines provided by DFG, and measure recommended in the tree assessment (Appendix E4):</p> <ul style="list-style-type: none"> ▶ Any modification to the proposed design and layout of the site shall be subject to the same impact avoidance and 	

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**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>be a potentially significant impact requiring mitigation.</p> <p>Applies to: Trails Plan, Horseshoe Lake Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p>		<p>minimization criteria as the initial design;</p> <ul style="list-style-type: none"> ▶ Information describing the value of native oak trees and the importance of the preservation and protection of oak woodland for wildlife habitat and the aesthetic values of Bidwell Park shall be provided at the informational kiosk at the Disc Golf/Trailhead area site. The information shall discuss the importance of avoiding direct impacts resulting from bark and limb damage as well as indirect effects such as soil compaction/root damage and shall encourage site users to act responsibly and prevent adverse effects. ▶ In cases where disc golf pins are located within groves of oak trees or oak trees are within fairways, measures to protect the tree trunks such as the installation of shielding pole structures shall be implemented. Installation shall be implemented without damage to the root zone, and in a manner that preserves the visual character of the site. ▶ In cases where tees or trails are located within driplines of oaks or in the immediate vicinity of driplines, a 6 inch layer of woodchip mulch shall be applied to a 20' radius around the tees and on the trails to minimize soil compaction; this layer shall be maintained on a ongoing basis, as needed, to ensure continued protection of the root zones. ▶ Periodic monitoring of the oaks at the site shall be conducted to determine if any unavoidable impacts are occurring as a result of site use, in spite of the impact minimization measures. ▶ Any unavoidable impacts to oaks resulting from construction, or tree mortality resulting from ongoing use of the site shall be mitigated by replanting oak woodland habitat at the Disc Golf/Trailhead site in areas located 	

**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>outside of the footprint of facilities and trails.</p> <ul style="list-style-type: none"> • Oak planting should be from seeds (acorns) or seedlings that are obtained from the local genetic stock and should be of the same species as those targeted for replacement. Replacement ratios shall be at least 5:1 for trees lost/replaced that are greater than 5 inches diameter at breast height. • Oak plantings shall be protected from browsing, planted on the north and east side of existing trees, and irrigated during the first few years as outlined in the oak assessment (Appendix E4) to enhance their chance of survival. • Replacement plantings shall be monitored for their success for a period of five years. If planting does not succeed, remedial actions such as replanting shall be implemented. • If requested, community/user group stewardship of the plantings shall be allowed to contribute to restoration/revegetation efforts under guidance and supervision by City staff. <p>Applies to: Trails Plan, Horseshoe Lake Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p> <p>Timing/Implementation: Before and during construction activities within or in the immediate vicinity of oak woodland habitat; ongoing for site management of the Disc Golf/Trailhead Area Concept Plan site.</p> <p>Responsible Party: City of Chico</p> <p>Implementation of Mitigation Measure BIO-3c would reduce potentially significant impacts on oak woodland from</p>	

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Table E7-1 Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		implementation of Park Improvement Projects to a less than significant level.	
<p>BIO-3d: Adverse Effects of Park Improvement Projects on Wildflower Fields</p> <p>Wildflower fields within Bidwell Park are found in soils of the Tuscan Formation and other thin volcanic soils throughout Middle and Upper Parks, including areas traversed by proposed new trails, and particularly around Horseshoe Lake and along the south rim, including the Disc Golf/Trailhead Area Concept Plan. No wildflower fields are located at Cedar Grove. With the exception of the Disc Golf/Trailhead Area Concept Plan site, occurrences of the wildflower field community in the Park have not been precisely mapped and the total acreage of this community is unknown. Wildflower fields are widely distributed throughout the Disc Golf/Trailhead Area Concept Plan project site. Wildflower fields are considered a sensitive natural community under CEQA and are tracked in DFG’s Natural Diversity Database.</p> <p>Direct impacts, such as removal or degradation of wildflower fields, may occur as a result of implementation of the Trails Plan and Horseshoe Lake Area Concept Plan. The Disc Golf/Trailhead Area Concept Plan was designed with the objective to minimize adverse effects on sensitive resources, including wildflower fields. Potential indirect impacts such as soils compaction or trampling, resulting in habitat degradation, could occur as a result of visitor use at the Park Improvement Project sites.</p> <p>Loss or degradation of wildflower fields resulting from development and/or operation of the Trails Plan, Horseshoe Lake Area Concept Plan, and Disc Golf/Trailhead Area Concept Plan would be a potentially significant impact requiring mitigation.</p> <p>Applies to: Trails Plan, Horseshoe Lake Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p>	PS	<p>BIO-3d: Implement Measures to Protect Wildflower Fields</p> <p>The following measures shall be implemented to minimize potential disturbances to wildflower field communities resulting from implementation of the Trails Plan, Horseshoe Lake Area Concept Plan, and Disc Golf/Trailhead Area Concept Plan:</p> <ul style="list-style-type: none"> ▶ Mitigation Measure BIO-1d shall be implemented to minimize adverse effects on wildflower fields resulting from implementation of the Disc Golf/Trailhead Area Concept Plan. ▶ Before the start of construction activities associated with implementation of specific trail sections identified in the Trails Plan and the Horseshoe Lake Area Concept Plan, the City shall retain a qualified botanist to map the location and extent of wildflower fields in specific areas proposed for construction. ▶ Whenever possible, trail segments, site improvements, facilities and other design features shall be located to minimize impacts to wildflower fields. ▶ Exclusionary fencing shall be installed under the guidance of a qualified botanist before commencement of construction to keep workers and equipment from disturbing wildflower field habitat intended to be preserved on the project sites (some areas may be lost, consistent with site design). ▶ The number of trails dissecting wildflower fields shall be minimized to the fewest number necessary to accomplish 	LTS

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**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>the goals of the site-specific Park Improvement Projects.</p> <ul style="list-style-type: none"> ▶ Trails through wildflower fields shall be as narrow as possible and shall have clearly marked edges that discourage trail widening and deter users from straying off the designated trail. ▶ Existing trails through wildflower fields that will not be retained as part of the site-specific Park Improvement Projects shall be reclaimed using barriers (such as boulders) to discourage use of these trails. If these reclaimed trails fail to revegetate on their own over time, re-seeding may be considered. ▶ Permanent signage shall be installed at kiosks located at the Horseshoe Lake and the Disc Golf/Trailhead Area Concept Plan sites to inform Park users of the presence and sensitivity of the wildflower field community and discourage visitors from off-trail use and trampling of vegetation. <p><i>Applies to:</i> Trails Plan, Horseshoe Lake Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p> <p><i>Timing/Implementation:</i> Before and during construction of components of the Trails Plan, Horseshoe Lake Area Concept Plan, and Disc Golf/Trailhead Area Concept Plan that occur within the immediate vicinity of wildflower fields</p> <p><i>Responsible Party:</i> City of Chico</p> <p>Implementation of Mitigation Measure BIO-3d would reduce potentially significant impacts on wildflower fields from implementation of Park Improvement Projects to a less than significant level.</p>	

Table E7-1 Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>BIO-3e: Adverse Effects of Park Improvement Projects on Northern Volcanic Mudflow Vernal Pools</p> <p>The Park contains approximately 95 acres of habitat for northern volcanic mudflow vernal pools. These pools are primarily concentrated on the north side of Upper Park Road beginning at the entrance to Middle Park and extending east to Horseshoe Lake. Additional scattered pools are located along the south rim, including a few that occur at the proposed Disc Golf/Trailhead area. No vernal pools are located in the Cedar Grove area. Vernal pools typically qualify as jurisdictional waters of the United States subject to USACE jurisdiction under Section 404 of the CWA or waters of the state subject to Central Valley RWQCB jurisdiction under the state’s Porter-Cologne Act.</p> <p>Direct impacts such as removal or degradation of vernal pools may occur as a result of implementation of the Trails Plan and Horseshoe Lake Area Concept Plan. Four small vernal pools would be lost as a result of implementation of the Disc Golf/Trailhead Area Concept Plan. Potential indirect impacts on vernal pools could result from future facility improvements, maintenance or restoration activities, and visitor use, such as soils compaction, intrusion of pets, and vegetation trampling within the pools at any Park Improvement Project site containing vernal pools.</p> <p>Loss or degradation of vernal pool habitat resulting from development of the Trails Plan, Horseshoe Lake Area Concept Plan, and Disc Golf/Trailhead Area Concept Plan would be a potentially significant impact requiring mitigation.</p> <p>Applies to: Trails Plan, Horseshoe Lake Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p> <p>Implementation of Mitigation Measure BIO-4 set forth below shall be required. Implementation of this mitigation measure would reduce potentially significant impacts on northern volcanic mudflow vernal pools from implementation of Park Improvement Projects to a less than</p>	<p>LTS</p>	<p>No mitigation is required.</p>	

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**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
significant level.			
BIO-4: ADVERSE EFFECTS OF PARK IMPROVEMENT PROJECTS ON JURISDICTIONAL WETLANDS			
Effects of the BPMMP			
<p>BIO-4a: Adverse Effects of the BPMMP on Jurisdictional Wetlands</p> <p>Wetland habitats in the Park that would be subject to USACE jurisdiction under Section 404 of the CWA include vernal pools, freshwater seep/wet meadow, and seasonal wetland. In addition, Big Chico Creek and its tributaries are jurisdictional waters of the United States, and Horseshoe Lake may also qualify as waters of the United States. Jurisdictional wetlands are not known to exist at Cedar Grove. Additional wetlands such as seeps and additional small drainages may also exist in the Park. The precise acreage and boundaries of wetland habitat in the Park that may be subject to USACE jurisdiction is not yet known, as no park-wide wetland inventory has been conducted.</p> <p>Implementation of the BPMMP is not expected to result in adverse effects on wetland and other waters of the United States because the BPMMP contains objectives and implementation strategies to inventory wetlands and protect wet meadows and other natural wetlands from incompatible recreational uses. These implementation strategies include:</p> <ul style="list-style-type: none"> ▶ Protecting sensitive habitats (e.g., vernal pools, wet meadows) from activities that cause compaction, erosion, vegetation removal, or other degradation) (I. NC-1). ▶ Native plant planting programs designed for specific areas (I. P-2). ▶ Modifying existing recreation facilities to minimize potential effects on natural wetlands (I. P-3). ▶ Cataloging natural wetlands in the Park when funding or volunteer 	LTS	No mitigation is required.	

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Table E7-1 Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>efforts are available (I. P-6).</p> <ul style="list-style-type: none"> ▶ Avoiding the creation of new roads through natural wetlands (I. P-7). ▶ Removing old roads through natural wetlands and restoring the natural hydrologic flow (I. P-8). ▶ Preventing vehicles from compacting natural wetlands (I. P-9). <p>With the implementation of these strategies, impacts on jurisdiction wetlands resulting from BPMMP implementation would be less than significant. No mitigation is required.</p>			
Effects of the four Park Improvement Projects			
<p>BIO-4b: Adverse Effects of the four Park Improvement Projects on Jurisdictional Wetlands</p> <p>Direct impacts on waters of the United States, including wetlands, may occur as a result of implementation of the Trails Plan and Horseshoe Lake Area Concept Plan. Four small vernal pools would be lost as a result of implementation of the Disc Golf/Trailhead Area Concept Plan. Potential impacts could also result from future facility improvements or from maintenance or restoration activities.</p> <p>Concept Plans will be implemented according to Natural Community Objectives O. NC-1 through O. NC-6 and Plants Objective O. P-4 of the BPMMP to minimize direct and indirect impacts on wetlands and other waters of the United States. High priority will be given to protecting wetland habitats and waters of the United States from activities that cause compaction, erosion, vegetation removal, or other degradation according to Natural Community Implementation Strategy I. NC-1. Where possible, trails, improvements, and facilities associated with implementation of the Park Improvement Projects will be constructed away from wetland habitats and other waters of the United States. Trails and other facilities will be designed to avoid wetlands to the greatest</p>	PS	<p>BIO-4: Implement Measures to Protect Jurisdictional Wetlands</p> <p>The following measures shall be implemented to mitigate impacts on waters of the United States:</p> <ul style="list-style-type: none"> ▶ Before the implementation of specific components of the Trails Plan, Horseshoe Lake Area Concept Plan, and Disc Golf/Trailhead Area Concept Plan that occur in the immediate vicinity of wetlands or other waters of the United States, a delineation of waters of the United States, including wetlands, that would be affected by the proposed projects shall be made by qualified biologists through the formal Section 404 wetland delineation process. The delineation shall be submitted to and verified by USACE. ▶ If, based on the verified delineation, it is determined that fill of waters of the United States would result from implementation of any of the site-specific Park Improvement Projects, authorization for such fill shall be secured from USACE through the Section 404 permitting 	LTS

**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>extent possible and will be constructed in a manner that will not result in grade changes that could change the natural flow of water or result in discharge of sediment and other pollutants into wetlands and waters of the United States.</p> <p>Even with implementation of the BPMMP’s objectives and implementation strategies, some fill of jurisdictional wetlands will likely occur as a result of project implementation, due to the abundance of wetlands in the Concept Plan areas. Implementation of the Disc Golf/Trailhead Area Concept Plans would result in the loss or “fill” of four small vernal pools. Fill of jurisdictional wetlands and other waters of the United States as a result of the development of the Trails Plan, Horseshoe Lake Area Concept Plan, and Disc Golf/Trailhead Area Concept Plan would be a potentially significant impact requiring mitigation.</p> <p><i>Applies to:</i> Trails Plan, Horseshoe Lake Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p>		<p>process.</p> <ul style="list-style-type: none"> ▶ The acreage of waters of the United States, including wetlands, that would be adversely affected by project construction shall be replaced or restored/enhanced on a “no net loss” basis in accordance with USACE regulations and City General Plan Policy OS. G-9. Habitat restoration, enhancement, and/or replacement shall be at a location and by methods agreeable to USACE, as determined during the Section 404 permitting process. ▶ Concurrently with the CWA Section 404 permit, the City shall obtain CWA Section 401 Clean Water Certification from the Central Valley RWQCB before project implementation. ▶ The City shall also coordinate with the Central Valley RWQCB regarding any wetland features that are not subject to USACE jurisdiction under Section 404 of the CWA, but may be subject to State regulation under the Porter Cologne Act. All conditions required by the RWQCB as part of the Section 401 Water Quality Certification process or Porter Cologne permitting process shall be implemented. <p><i>Applies to:</i> Trails Plan, Horseshoe Lake Area Concept Plan, and Disc Golf/Trailhead Area Concept Plan</p> <p><i>Timing/Implementation:</i> Before and concurrent with any component of the Trails Plan, Horseshoe Lake Area Concept Plan, and Disc Golf/Trailhead Area Concept Plan that involve ground-disturbing activities in or near jurisdictional wetlands and/or waters of the state</p> <p><i>Responsible Party:</i> City of Chico</p> <p>Implementation of Mitigation Measure BIO-4 would reduce</p>	

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Table E7-1 Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		potentially significant impacts on wetlands subject to USACE jurisdiction and wetland subject to the State’s Porter Cologne Act resulting from implementation of Park Improvement Projects to less than significant.	
<p>BIO-5: ADVERSE EFFECTS OF THE BPMMP AND PARK IMPROVEMENT PROJECTS ON WILDLIFE MOVEMENT, MIGRATION CORRIDORS AND THE EASTERN TEHAMA DEER HERD, AND NURSERY SITES</p> <p>Bidwell Park is located within a transitional area between montane and valley biotic zones. The Big Chico Creek watershed, and particularly the riparian corridor along Big Chico Creek, functions as a linkage or wildlife movement corridor between higher and lower elevation habitats. As landscapes become increasingly fragmented, organisms that occupy remaining patches of suitable habitat may experience a reduction in habitat quality and area, and become at risk to various factors that can result in increased mortality or local extinction of populations. Traditional migration corridors for the Eastern Tehama Deer Herd within the Big Chico Creek watershed have been documented, and the watershed is recognized as a critical migration corridor for the herd. Bidwell Park also has a high potential value in facilitating local and regional wildlife movements for other wildlife.</p> <p>The BPMMP includes goals and guidelines to ensure protection of natural resources and is not expected to substantially change the spatial distribution of habitats, eliminate linkages between areas, or contribute to habitat fragmentation. The amount of habitat loss as a result of implementation of the site-specific projects would be small relative to the overall size of Bidwell Park, the existing extent and distribution of wildlife habitats within the Park and regionally, and the spatial (area) requirements of most wildlife species within the Park. Also, implementation of the BPMMP and site-specific projects would not substantially disrupt the continuity of the Big Chico Creek riparian corridor or other habitats across biophysical gradients.</p>	LTS	No mitigation is required.	

**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>Potential effects on wildlife movement corridors or access to nursery sites resulting from implementation of the BPMMP and the four Park Improvement Projects would be less than significant. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p>			
<p>BIO-6: FRAGMENTATION OF WILDLIFE HABITAT</p> <p>Habitat fragmentation is a central issue of concern in conservation biology (Meffe and Carroll 1997). Several definitions of habitat fragmentation have been proposed (see Franklin et al. 2002); in general, however, fragmentation is the disintegration or subdivision of resources, ecological conditions, or habitat blocks into smaller, less continuous units. Fragmentation can result from land conversion, certain land uses (e.g., intensive timber harvest), and road development. However, the degree to which a landscape is considered “fragmented” is a complex issue and is species- and scale-dependent (Franklin et al. 2002).</p> <p>Habitat fragmentation can exacerbate more direct effects of habitat loss by diminishing the value of remaining resource conditions or habitat units. This loss in value applies particularly to species that are positively associated with interior habitats, are negatively associated with biophysical characteristics of habitat edges or abrupt transition zones, require core areas, and are sensitive to the size and spatial distribution of habitat blocks.</p> <p>The hydrologic, topographic, and elevation gradients in Bidwell Park support a diverse mix and distribution of plant communities and wildlife habitats, including riparian corridors along streams, oak woodland, pine-oak woodland, chaparral, and grassland. In addition to biophysical gradients, several other factors affect the existing distribution and quality of wildlife habitats, abundance and distribution of species, and animal community structure in Bidwell Park: recreation use, land use</p>	LTS	No mitigation is required.	

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Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>patterns and management activities, livestock grazing, natural disturbances (e.g., fire history), and demographic processes. The BPMMP includes goals and guidelines to ensure protection of natural resources and is not expected to substantially change the spatial distribution of habitats or contribute to habitat fragmentation. The Trails Plan and Disc Golf/Trailhead Area Concept Plan would be implemented in areas where habitat fragmentation could be an issue. However, the amount of habitat lost with implementation of these two Park Improvement Projects would be small relative to the overall size of Bidwell Park, the existing extent and distribution of wildlife habitats within the Park and regionally, and the spatial (area) requirements of most wildlife species within the Park. The Horseshoe Lake Area Concept Plan and Cedar Grove Area Concept Plan are not expected to result in habitat fragmentation, as the elements contained in these places present upgrades to facilities that, for the most part, already exist.</p> <p>Potential fragmentation of wildlife habitat resulting from implementation of the BPMMP and Park Improvement Projects would be less than significant both individually and cumulatively. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p>			
<p>BIO-7: CONFLICT WITH LOCAL POLICIES AND ORDINANCES</p> <p>Development of the BPMMP and Park Improvement Projects has been guided by the City of Chico General Plan and Municipal Code, and consistency with the General Plan and Municipal Code has been a fundamental objective (see Section E4.3.8, “Land Use and Planning”, impact discussion).</p> <p>Implementation of the BPMMP and the four Park Improvement Projects would not result in conflicts with local policies and ordinances, and no</p>	LTS	No mitigation is required.	

**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>impact would occur. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p>			
E4.3.4 CULTURAL RESOURCES			
CUL-1: CHANGE IN THE SIGNIFICANCE OF A HISTORIC OR UNIQUE ARCHAEOLOGICAL RESOURCE			
Effects of the BPMMP			
<p>CUL-1a: Change in Resource Significance with Implementation of the BPMMP</p> <p>The BPMMP includes goals and guidelines to protect, avoid, or minimize disturbances to significant historic resources, including archaeological sites, unique archaeological sites, and areas of special tribal spiritual value to the sovereign Nation of the Mechoopda Indian Tribe of the Chico Rancheria. While not previously evaluated for significance, documented prehistoric resources within the Park range from isolated milling features and flaked and ground stone distributions to complex village locales. At least one of these prehistoric sites appears to be the location of an ethnographic village of importance to the sovereign Nation of the Mechoopda Indian Tribe. Historic resources consist of the remains of the Humboldt Wagon Road, a flume and four early homesteads. Of the 32 documented resources, three have been assessed for eligibility, and of these three sites, two have been identified as not eligible for inclusion in the CRHR or NRHP. The third site, the Humboldt Wagon Road, has been found eligible for listing on the NRHP and CRHR.</p> <p>BPMMP objectives include extensive consideration of protecting important cultural resources, ethnographic/ Native American values, and archaeological sites. Specifically, these cultural resources</p>	LTS	No mitigation is required.	

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Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>objectives are as follows:</p> <ul style="list-style-type: none"> ▶ Objective O.CR-1: Conduct a comprehensive Cultural Resource Assessment to identify resources for protection and preservation. ▶ Objective O.CR-2: Develop a CRMP to address proper management of cultural resources in Bidwell Park. ▶ Objective O.CR-3: Protect sensitive archaeological and cultural resources. ▶ Objective O.AS-1: Protect archaeological resources. ▶ Objective O.EB-1: Recognize natural springs and seeps as important seasonal gathering areas for botanical resources of special tribal spiritual values and maintain those areas with known cultural resource sites as compatible with other BPMMP goals. ▶ Objective O.EB-2: Protect meadows with archaeological significance. <p>The following cultural resources implementation strategies and guidelines associated with the above objectives would protect significant resources.</p> <ul style="list-style-type: none"> ▶ Implementation Strategy I. CR-1: All known and newly discovered cultural/ethnographic resources should be inventoried and recorded by a qualified cultural resources specialist. Potential conflicts between cultural resource preservation and daily Park operations and public use should be assessed. Maps shall be used internally and shall not be made available to the public. ▶ Implementation Strategy I. CR-2: For those resources for which conflicts exist, assessments of resource significance shall be completed, and/or measures to reduce or eliminate detrimental effects shall be implemented. ▶ Implementation Strategy I. CR-3: For all known cultural resources which are not being adversely affected by current Park management 			

**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>and use, a monitoring plan shall be developed and implemented to ensure that conditions do not change.</p> <ul style="list-style-type: none"> ▶ Implementation Strategy I. CR-4: Activities should be supported to increase public awareness of cultural resources, including their value as a link between the past and the present and the importance of preservation. ▶ Implementation Strategy I. CR-5: Consult with the sovereign Nation of the Mechoopda Indian Tribe of Chico Rancheria regarding the identification of traditional use areas and accessibility to native botanical resources that are necessary to the continuation of cultural traditions. These may involve the propagation and gathering of botanical resources, providing access to particular locales of special tribal spiritual value (such access and use shall be consistent with management policies of Bidwell Park), and consulting on Park management decisions that may benefit or result in adverse effects to sovereign Nation of the Mechoopda cultural sites. ▶ Implementation Strategy I. CR-6: College and university resources and other groups and organizations should be utilized, as appropriate, to develop cultural resource access policies (information access, physical access) and to implement cultural resource site protection measures. ▶ Ethnographic Background Implementation Strategy I. EB-1: A partnership with the sovereign Nation of the Mechoopda Indian Tribe should be considered to develop and implement a gathering program and identify sites traditionally used for food, crafts, and medicine that could be gathered in ways and quantities that are consistent with the overall management of Bidwell Park. ▶ Archaeological Sites Implementation Strategy I. AS-1: Use conflicts at archaeological sites shall be identified and resolved. 			

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Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>► Archaeological Sites Implementation Strategy I. AS-2: Public access to information describing the location and extent of archaeological resources within Bidwell Park shall be restricted pursuant to State law.</p> <p>Compliance with BPMMP objectives and implementation goals and strategies set forth above would ensure that the BPMMP would not result in substantial adverse effects on any historic or archaeological resource in the Park. Implementation of the BPMMP would also ensure that visitor use, development and facility expansion, maintenance and restoration, and other ground-disturbing activities would be conducted in accordance with Cultural Resources Objectives O. CR-1, O. CR-2, O. CR-3, and Archaeological Site Objective O. AS-1 and Cultural Resources Implementation Strategies and Guidelines I. CR-1 through I. CR-6, and Archaeological Sites Implementation Strategies and Guidelines I. AS-1, and I. AS-2.</p> <p>Direct and indirect impacts related to changes in the significance of historic or archaeological resources with implementation of the BPMMP would be less than significant. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP</p>			
<p>CUL-1b: Change in Resource Significance with Implementation of the four Park Improvement Projects</p> <p>Previous inventories and investigations have identified 32 prehistoric archaeological and historic sites or potential sites within the Park. Of these 32 sites, 11 have experienced direct or indirect degradation as a result of existing trails, roads, or increased access by the recreating public.</p> <p>Closure of existing unmitigated, or volunteer trails, as proposed by the Trails Plan, may result in beneficial effects on historic and archaeological resources. Closure of volunteer trails may discourage Park use in areas where cultural resources are present, resulting in reduced potential for direct and indirect impacts. The degree of the</p>	PS	<p>CUL-1: Protect Historic and Unique Archaeological Resources from Impacts</p> <p>The City shall implement the following mitigation to reduce potential direct impacts on historic and unique archaeological resources:</p> <ul style="list-style-type: none"> ► Consistent with the policies of the BPMMP, a qualified archaeologist shall conduct a cultural resources assessment of the proposed project site during project planning and design. For the Trails Plan, this can be accomplished on a segment by segment basis. ► If cultural resources are documented in the planning area, 	LTS

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**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>beneficial impact is not known because large portions of the Park within which closures may occur have not been subjected to systematic cultural inventories.</p> <p>Because resources are present in the vicinity of both existing and planned trail corridors, and only limited inventories and surveys have been conducted, there is a reasonable potential that additional undocumented cultural resources may be identified along the existing and proposed trail routes. Visitor usage along new trails has the potential to draw the public close to cultural sites, possibly resulting in indirect impacts through unauthorized collection. A review of previous research indicates that one prehistoric resource and a Works Progress Administration (WPA)–constructed dam and diversion canal dating to 1937 are located within or in the vicinity of the project site for the Horseshoe Lake Area Concept Plan. Neither of these resources has been assessed for significance to the CRHR or eligibility for the NRHP, so they are considered potentially eligible. In addition, because cultural resources inventories have not been conducted in the Horseshoe Lake area, other as-yet-unidentified resources may be present.</p> <p>A review of previous investigations indicates that the remains of a prehistoric seasonal camp (CA-BUT-187), and village site (CA-BUT-187) are located adjacent to or within the footprint of the project site for the Cedar Grove Area Concept Plan. A historic barn was previously present on the site as well but was recently destroyed by fire. While none of these resources has been assessed for significance under CEQA for inclusion in the CRHR or for eligibility for the NRHP, both prehistoric sites appear eligible based on their potential to possess archaeological data in subsurface contexts. While the barn may have been eligible based on its reported association with John Bidwell, the resource no longer exists and thus will not be impacted by project construction. While it appears that the entire Cedar Grove project area has been inventoried (see Hamusek and Jenevein 1994), previously unidentified archaeological resources could be located in subsurface contexts that may be uncovered during project implementation.</p>		<p>they shall be evaluated for their significance.</p> <ul style="list-style-type: none"> ▶ If it has been determined by a qualified archaeologist that a cultural resource is significant, the project shall be designed or redesigned to avoid these cultural resources to the greatest extent feasible. ▶ If avoidance of significant sites is not feasible, mitigation in the form of data recovery shall be applied to archaeological sites. ▶ For portions of the Humboldt Wagon Road that cannot be avoided during implementation of the Disc Golf/ Trailhead, impacts would result in destruction of a portion of the route and intrusion of newer elements that would alter the immediate surroundings. As outlined in the management plan (see Jensen, et al. 1996; Table 2). This segment of the road appears significant based upon the associated archaeological deposit (NRHP Criterion D/CRHR Criterion 4), which will not be impacted by construction, and the association of the wagon road with John Bidwell. As currently designed, neither Alternative A nor Alternative B will result in destruction or alteration of the surroundings of the archeological deposit, and would impact only a percentage of the route associated with the original person responsible for its construction, John Bidwell. The surrounding environment of this segment of the route has been previously impacted by construction of a more recent dirt road that parallels the contemporary route of Highway 32, such that the immediate surroundings have been altered from that present during the historic period. Therefore, because neither alternative would impact the archaeological deposit or substantially impair the significance of the resource as it relates to its association with a person of historic importance (NRHP 	

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Table E7-1 Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>The Disc Golf/Trailhead Area Concept Plan site has been previously subjected to a systematic archeological inventory (see Jensen and Jensen 2001). This inventory resulted in the documentation of a segment of the Humboldt Wagon Road and a rock shelter containing evidence of Native American occupation. The wagon road has been determined to be eligible for listing in the NRHP and, as such, also qualifies as a historical resource under the State CEQA Guidelines and is therefore eligible for inclusion in the CRHR. Subsequent archaeological testing of the cultural deposits contained within the rock shelter determined that the site is not a significant repository of archaeological materials subject to mitigation under Section 15064.5 of the State CEQA Guidelines, and the authors concluded that no further mitigation measures were warranted (Jensen and Jensen 2002).</p> <p>As designed, Options A and B of the Disc Golf/Trailhead Area Concept Plan would impact a 500–700 foot-long segment of the Humboldt Wagon Road, resulting in direct and indirect impact to a significant historic resource that may significantly alter the resource and its immediate surroundings such that the significance of the historical resource would be materially impaired as outlined in Section 15064.5(b)(1) of the State CEQA Guidelines.</p> <p>Construction of the proposed parking lot and associated facilities as outlined in the concept plans would directly affect a segment of the Humboldt Wagon Road, approximately 700 feet in length under Alternative A, a segment approximately 500 feet in length under Alternative B. The entire length of the recorded segment of the wagon road is approximately 1,900 feet, therefore direct impacts would compromise 26 to 37 percent of the route in this area. Based upon the intrusion of the associated facilities, the proposed Disc Golf/Trailhead has the potential to indirectly impact (or adversely change) the setting of other portions of the wagon road. A light scatter of historic artifacts associated with the route appears to be outside of the project footprint and will not be directly impacted by facilities construction.</p>		<p>Criterion B/CRHR Criterion 2), both alternatives would result in less-than-substantial adverse changes in the significance of this resource.</p> <ul style="list-style-type: none"> ▶ Mitigation of any adverse changes resulting from direct impacts caused by implementation of the Disc Golf/Trailhead Area Concept Plan shall take the form of interpretive signage presenting an historic overview and the historic importance of the route. <p>Applies to: Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan and future Park Improvement Projects</p> <p>Timing/Implementation: During final design of projects and during construction activities</p> <p>Responsible Party: City of Chico</p> <p>Implementation of Mitigation Measure CUL-1 would reduce potentially significant impacts on historic and unique archaeological resources from implementation of the four Park Improvement Projects to a less than significant level.</p>	

Table E7-1 Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>Implementation of the four Park Improvement Projects may result in direct or indirect disturbance of cultural resources, resulting in potentially significant adverse changes in historic or archaeological resources. This potentially significant impact requires mitigation.</p> <p><i>Applies to:</i> Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p>			
CUL-2: DISTURBANCE OF HUMAN REMAINS			
<p>CUL-2a: Disturbance of Human Remains with Implementation of the BPMMP</p> <p>The BPMMP is a planning document and as such, implementation of the BPMMP would not result in impacts to the physical environment. Therefore, there would be no impact with regards to the disturbance on human remains. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP</p>	NI	No mitigation is required.	
<p>CUL-2b: Disturbance of Human Remains with Implementation of the four Park Improvement Projects</p> <p>Although human remains have not been discovered thus far within Park boundaries, because of the presence of at least seven village locales, there is a strong potential for their presence. Human remains could be discovered during future inventories, during implementation of the four Park Improvement Projects, or after a natural event that exposes subsurface deposits or vegetation that was previously obscuring the ground surface.</p> <p>Disturbance of human remains resulting from implementation of the four Park Improvement Projects would be a potentially significant impact requiring mitigation.</p> <p><i>Applies to:</i> Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, and Disc Golf/Trailhead Area Concept Plan</p>	PS	<p>CUL-2b: Protect Human Remains from Vandalism and Inadvertent Destruction</p> <p>In accordance with the California Health and Safety Code, if human remains are uncovered during ground- disturbing activities related to implementation of the Park Improvement Projects, all such activities in the vicinity of the find shall be halted immediately and the City or the City’s designated representative shall be notified. The City shall immediately notify the county coroner and a qualified professional archaeologist. The coroner shall examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or state lands (Health and Safety Code Section 7050.5[b]). If the coroner determines that the remains are those of a Native American, he or she shall contact the Native American Heritage Commission (NAHC) by phone within 24 hours of making that determination (Health and</p>	LTS

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Table E7-1 Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>Safety Code Section 7050[c]). The responsibilities of the City for acting upon notification of a discovery of Native American human remains are identified in detail in the California Public Resources Code Section 5097.9. The City or its appointed representative (Park Director) and the professional archaeologist shall consult with a Most Likely Descendant (MLD) determined by the NAHC regarding the removal or preservation and avoidance of the remains and determine whether additional burials could be present in the vicinity.</p> <p><i>Applies to:</i> BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, and Disc Golf/Trailhead Area Concept Plan</p> <p><i>Timing/Implementation:</i> During construction activities</p> <p><i>Responsible Party:</i> City of Chico</p>	
E4.3.5 GEOLOGY AND SOILS			
GEO-1: EXPOSURE TO SEISMIC HAZARDS			
<p>Surface rupture is an actual cracking or breaking of the ground along a fault during an earthquake. Structures built over an active fault can be torn apart if the ground ruptures. Surface ground rupture along faults is generally limited to a linear zone a few meters wide. The Alquist-Priolo Earthquake Fault Zone Act was created to prohibit the location of structures designed for human occupancy across the traces of active faults, thereby reducing the loss of life and property from an earthquake. No faults zoned under the Alquist-Priolo Act pass through or near the project site, nor is the project site underlain by any other known active faults (Hart and Bryant 1997, Jennings 1994).</p> <p>Ground shaking, motion that occurs as a result of energy released during faulting, could potentially result in the damage or collapse of buildings and other structures, depending on the magnitude of the</p>	LTS	No mitigation is required.	

**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>earthquake, the location of the epicenter, and the character and duration of the ground motion. Other important factors include the characteristics of the underlying soil and rock, the building materials used, and the workmanship of the structure. The closest active fault (i.e., fault that shows evidence of displacement during the last 11,000 years) is the Cleveland Hills Fault south of Lake Oroville, approximately 20 miles south of the project site (Jennings 1994). The Chico Monocline Fault runs through the eastern portion of the planning area; however, this fault has not been active since the early Quaternary period (approximately 1.6 million years ago) (Jennings 1994) and therefore is unlikely to generate strong seismic ground shaking. Active earthquake faults west of the project site within the Coast Ranges, and along the western margin of the Sacramento Valley, could result in strong seismic ground shaking at the project site. However, this project does not propose structures intended for human habitation.</p> <p>Soil liquefaction occurs when ground shaking from an earthquake causes a sediment layer saturated with groundwater to lose strength and take on the characteristics of a fluid. Factors determining the liquefaction potential are soil type, the level and duration of seismic ground motions, distance from the seismic source, the type and consistency of soils, and the depth to groundwater. Loose sands and peat deposits are susceptible to liquefaction, while clayey silts, silty clays, and clays deposited in freshwater environments are generally stable under the influence of seismic ground shaking. Liquefaction poses a hazard to engineered structures. The loss of soil strength can result in bearing capacity insufficient to support foundation loads, increased lateral pressure on retaining or basement walls, and slope instability. Because of the distance from the project site to known active faults, the soil types on the project site, and the fact that this project does not propose structures intended for human habitation, hazards associated with liquefaction would be minor.</p> <p>Because of the distance from the project site to known active faults that are likely to produce strong seismic ground shaking, hazards from</p>			

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<p align="center">Table E7-1 Summary of Project Impacts and Mitigation Measures</p>			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>seismically induced landslides would be minor.</p> <p>Seismic hazards resulting from implementation of the BPMMP and four Park Improvement Projects would be less than significant. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p>			
<p>GEO-2: POTENTIAL FOR SOIL EROSION</p> <p>Rock units within the Park consist of materials from the Pleistocene-age Red Bluff Formation and Modesto Formation, Pliocene-age volcanic materials of the Tuscan Formation, Miocene-age volcanic materials of the Lovejoy Basalt, and late Cretaceous-age materials of the Chico Formation (Saucedo and Wagner 1992). Weathering of these rocks over time has given rise to approximately 30 different soil types at the project site, as shown in BPMMP Exhibit 2.3.1-1 (based on the Butte County Soil Survey). Most of the project site soils have a high to very high potential for runoff, indicating that the potential for erosion by water is also high. Erosion of the underlying rock materials is a natural process that occurs throughout the surface of the earth, and it is one of the processes by which new soils are formed. However, the process of erosion can be accelerated by certain human activities, and in some cases can result in detrimental effects on the environment such as loss of plant and animal habitat, and loss of fish and other aquatic habitat as streams and lakes become clogged with sediment. The proposed BPMMP and Park Improvement Projects—particularly the Trails Plan—all identify a number of specific areas in the Park and specific trails where accelerated erosion is taking place.</p> <p>In general, erosion problems in the Park are exacerbated by two factors: creation of new paths or trails by Park users who do not stay on the marked trails, and the need for maintenance activities on existing trails. These are common challenges faced by park systems throughout the</p>	LTS	No mitigation is required.	

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Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>nation. Experience has demonstrated that it is difficult to keep park users from straying off trails and creating new, unmaintained paths. The best way to prevent this from happening is through efforts to educate park users about the detrimental effects to the environment that occur when users stray off the marked trails. In some cases, use trails are created by recreationists in locations where a new trail should be established to provide better connectivity with existing trails or to improve the recreation experience by providing access to scenic viewpoints.</p> <p>The BPMMP contains objectives and implementation strategies and guidelines to address increased user education, creation of new trails to improve connectivity and provision of more recreation opportunities, and closure of existing unauthorized trails and roads. Specifically, Trails Objectives O. T-1 and O. T-2; and Trails Implementation Strategies and Guidelines I. T-1, T-2, T-6, T-7 through T-10, T-15, T-16, and Circulation and Access Implementation Strategies and Guidelines I. C/A-7 and I. C/A-8, and Design Standard Implementation Strategy and Guideline I. DS-5 intend to address these issues.</p> <p>In addition, appropriate maintenance strategies need to be implemented on a continuing basis to control erosion. The BPMMP incorporates the following objectives and implementation strategies related to erosion:</p> <ul style="list-style-type: none"> ▶ Geology and Soils Objectives O. G/S-1 (calls for periodically assessing soil conservation and erosion potential to determine and modify protective measures), O. G/S-3 (calls for conserving shallow Park soils to the maximum extent feasible), and O. G/S-4 (calls for recognizing improperly designed roads, trails, and parking areas as sources of erosion and assessing them to form the basis for soil conservation measures), and Geology and Soils Implementation Strategies I. G/S-1 (calls for minimizing loss or degradation of unique or rare soil and hydrologic conditions from recreation uses), I. G/S-2 (calls for utilizing the Trails Manual to reduce soil erosion), I. G/S-3 (calls for using best management practices 			

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Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>[BMPs] when constructing or maintaining roads to minimize soil erosion and loss), I. G/S-5 (calls for identifying erosion and developing methods to control it and restore those sites), and I. G/S-6 (calls for assessing the condition and erodibility of the Park soils when planning and managing recreational uses).</p> <ul style="list-style-type: none"> ▶ Trails Implementation Strategies and Guidelines I. T-3, I. T-4, I. T-5 (call for a maintenance program with sufficient funding and staff, a list of priority maintenance areas, and a long-term strategy to ensure funding, respectively), I. T-11 (calls for cataloging trail conditions), I. T-12 (calls for cataloging natural resources to determine the need for mitigation measures), I. T-13 (calls for consulting with professional trail planners and natural resource scientists to develop the best ways to respond to trail management issues), and I. T-14 (calls for establishing, maintaining, and renovating trailheads and day-use areas); and ▶ Maintenance and Operations Objectives O. MS-2 (calls for establishing a dependable base funding source) and O. MS-3 (calls for periodic staff training that supports, for example, natural and cultural resource protection) and Maintenance and Operations Implementation Strategies and Guidelines I. MS-2 (calls for utilizing maintenance methods that minimize adverse effects on natural conditions), I. MS-3 (calls for staff training for resource protection and goals for recreational opportunities), I. MS-4 (calls for following BMPs), and I. MS-5 (calls for discussing the maintenance requirements when new facilities and programs are proposed). <p>The BPMMP also incorporates by reference a Best Practices Technical Manual, which includes the grading standards of the Chico Municipal Code, and also includes a Stormwater Management section with policies intended to reduce erosion potential. The BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan, and Cedar Grove Area Concept Plan all rely primarily on implementation of the standards and</p>			

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Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>guidelines for trail management contained in the Bidwell Park Trails Manual (Park Department 1999) to control erosion problems. The Trails Manual contains specific, detailed instructions for appropriate creation of new trails and maintenance of existing trails, which, when implemented, would reduce erosion impacts in the Park below existing conditions. The BPMMP and the Trails Plan also contain provisions to hire a professional, independent trails consultant and designer to implement site-specific erosion-related solutions at Monkey Face and along certain portions of the North Rim Trail.</p> <p>Environmental criteria that were included in the design process of the proposed Disc Golf/Trailhead Area Concept Plan included thin soil, erodible areas that were identified for impact minimization by minimizing the footprint of trails and tees. The design criteria also identified certain areas that were to be restored or set aside to reduce erosion effects, including portions of the short course that have been damaged by previous unmitigated use; establishment of setbacks from cliff faces; and the provision of designated areas for uses other than disc golf (i.e., staging areas, scenic view spots) to reduce the amount of off-trail use. Disc Golf Implementation Strategies and Guidelines I. DG/T-4, DG/T-9, and DG/T-10 of the BPMMP specify that construction, materials, and maintenance specifications shall be developed and approved before the start of any work at the site; that the disc golf course area shall be inspected periodically to assess potential degradation of resources, and course management and maintenance procedures shall be adjusted as necessary; and that suspension of disc golf play during wet weather conditions would be considered as a management strategy. Furthermore, construction and maintenance of proposed trails in the disc golf course area would be subject to the standards and guidelines contained in the Bidwell Park Trails Manual (Park Department 1999). The environmental criteria used in the design of the disc golf course, in combination with the BPMMP Implementation Strategies and implementation of the standards contained in the Trails Manual, would reduce erosion impacts of the</p>			

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Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>proposed Disc Golf/Trailhead Area Concept Plan.</p> <p>Adherence to the implementation strategies in the BPMMP, the City’s BMP Manual, and the methods outlined in the Trails Manual would also ensure that future trails would not result in significant erosion and that existing trail continue to be managed in a way that prevents or minimizes erosion. The Trails Plan identifies certain problem areas requiring redesign and also identifies numerous informal trails for closure. Adherence to the Trails Plan would therefore reduce the extent of erosion in the Park when compared with existing conditions.</p> <p>The potential for soil erosion resulting from implementation of the BPMMP and the Park Improvement Projects would be less than significant. No mitigation is required.</p> <p>Applies to: BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, and Disc Golf/Trailhead Area Concept Plan</p>			
<p>GEO-3: HAZARDS RELATED TO UNSTABLE SOILS</p> <p>A landslide is the downhill movement of masses of earth material under the force of gravity. This process typically involves the surface soil and an upper portion of the underlying bedrock. The factors contributing to landslide potential are steep slopes, unstable terrain, lack of vegetative cover, and depth to groundwater or amount of rainfall. Portions of the project site, particularly areas of Upper Park, contain steep slopes with potentially unstable soils; during heavy winter rain events when the soil becomes saturated, landslides could occur. The BPMMP includes goals and guidelines to address geology and soils resources in the Park. As discussed previously, implementation of the BPMMP would ensure that visitor use, development and facility expansion, maintenance and restoration, and other ground-disturbing activities would be conducted in accordance with the Bidwell Park Trails Manual and BPMMP:</p> <ul style="list-style-type: none"> ▶ Geology and Soils Objectives O. G/S-1 (calls for periodically assessing the potential for soil conservation and erosion to 	LTS	No mitigation is required.	

**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>determine and modify protective measures) and O. G/S-4 (calls for recognizing improperly designed roads, trails, and parking areas as sources of erosion and assessing them to form the basis for soil conservation measures), and Geology and Soils Implementation Strategies and Guidelines I. G/S-2 (calls for utilizing the Trails Manual to reduce soil erosion), I. G/S-3 (calls for using best management practices [BMPs] when constructing or maintaining roads), I. G/S-5 (calls for identifying erosion and developing methods to control it and restore those sites) and I. G/S-6 (calls for assessing the condition and erodibility of the Park soils when planning and managing recreational uses);</p> <ul style="list-style-type: none"> ▶ Trails Objective O. T-1 (calls for creating a multiuse trail system that considers trail maintenance, the Trail Manual standards, user demands, trail closure for habitat rehabilitation, support facilities, closure of unofficial trails, and bike routes that connect to the Chico Bicycle Pathway system), Trails Implementation Strategies and Guidelines I. T-1 through I. T-14, which call for trails to maintain the City’s Trail Plan standards; provide a variety of trail types; have sufficient funding, planning for funding sources, and staff; and have a list of priority maintenance. These strategies also call for carefully evaluating of new trail locations to avoid potential adverse effects on natural resources, identifying acceptable trail uses, creating a sign system, discouraging the creation of unofficial trails, educating users about their adverse affects on the trails, cataloging natural resources and the trail network, consulting with professionals and scientists about how to best respond to trail issues, and establishing, maintaining, and renovating trailheads and day-use areas; ▶ Maintenance and Operations Implementation Strategy and Guideline I. MS-4, which calls for sound resource preservation, horticulture, and maintenance practices following BMPs; and ▶ Design Implementation Strategy and Guideline I. DS-5, which calls for developing a signage system that guides Park users regarding 			

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Table E7-1 Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>facility locations and Park rules.</p> <p>In particular, the Bidwell Park Trails Manual (Park Department 1999) contains provisions for temporary trail closure during wet conditions. Temporary closures not only protect fragile soils from erosion, but also serve to protect users from hazards that could occur on unstable slopes.</p> <p>The potential hazard to recreational users from landslides with implementation of the BPMMP and the four Park Improvement Projects would be less than significant. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan and future Park Improvement Projects</p>			
<p>GEO-4: HAZARDS RELATED TO EXPANSIVE SOILS</p> <p>Expansive soils are composed largely of clays, which greatly increase in volume when saturated with water and shrink when dried. Because of this effect, building and road foundations may rise during the rainy season and fall during the dry season. If this expansive movement varies underneath different parts of a single building, foundations may crack, structural portions of the building may be distorted, and doors and windows may become warped so that they no longer function properly. The potential for soil to undergo shrink and swell is greatly enhanced by the presence of a fluctuating, shallow groundwater table. Most of the soils on the project site consist of gravelly loams with high percentages of cobbles, gravels, boulders, and sand. Of the 30 soil types at the project site, only three contain high (35% or more) percentages of clay; therefore, the construction of new roads and trails should not be affected by expansive soils. Furthermore, this project does not propose the construction of residences or commercial buildings where foundation damage would be a potential issue.</p> <p>Potential hazards related to expansive soils with implementation of the BPMMP and the four Park Improvement Projects would be less than</p>	LTS	No mitigation is required.	

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Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>significant. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p>			
<p>GEO-5: SOIL LIMITATIONS FOR SEPTIC SYSTEMS</p> <p>Restroom facilities in the Park currently consist of several types:</p> <ul style="list-style-type: none"> ▶ Temporary or permanent vault toilets (from which the waste is pumped on a regular basis), ▶ Composting toilets (self-contained units that include bacteria to break down waste material), ▶ Chemical toilets (self-contained units that require application of chemicals to break down waste material), or ▶ Facilities that are connected with the City’s Water Pollution Control Plant. <p>Toilets of the vault, composting, or chemical type are self-contained units from which the waste is removed, and therefore do not require installation of a septic system; these toilets do not require a permit from Butte County Department of Environmental Health (BCDEH) and their installation and use at the Park is considered a less than significant impact.</p> <p>Installation and use of toilets at the Park would result in a less than significant impact related to soils and septic systems. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p>	LTS	No mitigation is required.	

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Table E7-1 Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
E4.3.6 HAZARDS AND HAZARDOUS MATERIALS			
HAZ-1: USE OF HAZARDOUS MATERIALS ON-SITE			
<p>HAZ-1a: Use of Hazardous Materials with Implementation of the BPMMP</p> <p>Implementation of the goals, objectives, and implementation strategies and guidelines contained in the BPMMP would not create a significant hazard to the public or the environment through routine transport, use, or disposal of hazardous materials. The proposed trail maintenance, upgrade, and abandonment would not involve the use or transport of hazardous materials. No handling or delivery of hazardous materials, substances, or waste is anticipated as a part of the BPMMP.</p> <p>However, Objective Golf Course Objective O. GC-1 of the BPMMP states that a public golf course will continue to be provided in Bidwell Park. Golf course maintenance personnel regularly apply insecticides, herbicides, fertilizers, and fungicides to the fairways and greens on the course. These chemicals can be toxic or otherwise harmful to humans, fish, or wildlife. For this reason, limitations are placed on their use and methods of application are restricted. The Butte County Agricultural Commissioner’s Office administers state laws regulating the application of these materials and carefully controls the use of these materials and disposal of waste and containers. Controls include concentrations of mixtures, methods, and timing of applications, and worker handling of materials. These restrictions would limit the exposure of golfers continuing to play on the existing golf course to hazardous materials. Furthermore, the golf course conducts quarterly sampling using standard protocols and submits the results to the City. To date, all results have been negative. Impacts to Hydrology and Water quality are discussed in Section E 4.3.7.</p> <p>With the implementation of the BPMMP’s protective objectives, effects related to use of hazardous materials would be less than significant.</p>	LTS	No mitigation is required.	

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**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>No mitigation is required.</p> <p><i>Applies to:</i> BPMMP</p>			
<p>HAZ-1b: Use of Hazardous Materials with Implementation of Park Improvement Projects</p> <p>The renovation, upgrade, and/or abandonment of existing trails as described in the Trails Plan does not include the use, transport, or disposal of hazardous materials.</p> <p>Implementation of the Horseshoe Lake Area Concept Plan includes the expansion of parking lots, installation of a restroom and picnic areas and installation of trails. Edge conditions proposed for Horseshoe Lake include boulders, wetland edges, and gravel edges. None of these improvements would involve the use, transport, or disposal of hazardous materials.</p> <p>Improvements planned for the Cedar Grove area include the expansion of paved parking lots and construction of an interpretive center, maintenance barn, and an information/orientation plaza. Informational signs and seating areas are also planned. None of these improvements would involve the use, transport, or disposal of hazardous materials.</p> <p>Removal, expansion, upgrade, and rerouting of existing fairways and tees, as well as installation of a parking lot, restroom, trails, scenic overlook and signage at the Disc Golf/Trailhead area would not involve the use, transport, or disposal of hazardous materials.</p> <p>Implementation of the four Park Improvement Projects would have no impact related to use of hazardous materials. No mitigation is required.</p> <p><i>Applies to:</i> Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p>	NI	No mitigation is required.	

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<p align="center">Table E7-1 Summary of Project Impacts and Mitigation Measures</p>			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>HAZ-2: POTENTIAL FOR RELEASE OF HAZARDOUS MATERIALS INTO THE ENVIRONMENT</p> <p>No active hazardous materials sites are located on or near Bidwell Park and there is a low potential for unrecorded contamination to occur in Bidwell Park. The only known location of hazardous materials (former skeet/rifle and pistol ranges) underwent a cleanup effort in 2005 and no longer poses a threat to the environment.</p> <p>The activities proposed in the BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, and Disc Golf/Trailhead Area Concept Plan would not require the use of hazardous materials. No fueling stations, chemical storage areas, or other sources of hazardous materials are proposed or would be required for implementation of the BPMMP or the Park Improvement Plans. Minor amounts of hazardous materials may be stored on-site during construction or present in construction vehicles. Provisions to protect the public and the environment from discharge of these materials used during construction are to be included in Storm Water Pollution Prevention Plans, which are required as part of construction projects (please refer to Section E4.3.7, “Hydrology and Water Quality”). Neither construction nor implementation of proposed activities is likely to cause a release of hazardous materials into the environment.</p> <p>The potential for release of hazardous materials resulting from implementation of the BPMMP and Park Improvement Projects would be less than significant. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p>	LTS	No mitigation is required.	
<p>HAZ-3: HAZARDS WITHIN 1/4 MILE OF A SCHOOL</p> <p>Parkview Elementary School is located adjacent to the southeastern edge of Cedar Grove. No other schools are located within ¼ mile of Bidwell Park. The Big Chico Creek Nature Center, while not a school,</p>	LTS	No mitigation is required.	

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**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>serves as an indoor and outdoor “classroom” for children from the local community. The Park uses proposed in the BPMMP and implementation of the four Park Improvement Projects would not emit hazardous substances, nor would they handle hazardous or acutely hazardous materials, substances, or waste.</p> <p>Implementation of the BPMMP and Park Improvement Projects would not result in hazards within ¼ mile of a school, resulting in no impact. No mitigation is required.</p>			
<p>HAZ-4: LOCATION ON A SITE THAT IS INCLUDED ON A LIST OF HAZARDOUS MATERIALS SITES COMPILED PURSUANT TO GOVERNMENT CODE SECTION 65962.5 AND, AS A RESULT, CREATION OF A SIGNIFICANT HAZARD TO THE PUBLIC OR THE ENVIRONMENT</p> <p>Bidwell Park contains a former military practice range near Horseshoe Lake. Exposure of the public to lead and other metals at this site was a concern in the past. In 2005, the City completed work under a Voluntary Clean-up Agreement with DTSC for the former skeet/rifle and pistol ranges. The containment cell is under permanent protection and will be maintained as required by the Agreement. As such, the site does not pose a threat to the public or the environment. Bidwell Park does not include any additional sites that are included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Therefore, implementation of the BPMMP and four Park Improvement Projects would not result in a significant hazard to the Public or the environment. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, and Disc Golf/Trailhead Area Concept Plan</p>	LTS	No mitigation is required.	

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Table E7-1 Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>HAZ-5: AIRPORT-RELATED SAFETY HAZARDS FOR RESIDENTS OR WORKERS IN THE PROJECT AREA</p> <p>Bidwell Park is not located either within an airport land use plan or within the vicinity of a private airstrip. Therefore, there is no potential for safety hazards for residents or workers in the project area related to the presence or proximity of an airport.</p> <p>No airport-related safety hazards would result from implementation of the BPMMP or Park Improvement Projects, resulting in no impact. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p>	NI	No mitigation is required.	
<p>HAZ-6: IMPAIRMENT OF OR INTERFERENCE WITH AN ADOPTED EMERGENCY RESPONSE PLAN OR EMERGENCY EVACUATION PLAN</p> <p>Implementation of the goals, objectives, and implementation strategies and guidelines in the BPMMP and implementation of the four Park Improvement Projects would not impair implementation of or physically interfere with emergency response or evacuation plans. Beneficial impacts may result from implementation of Public Safety and Emergency Services Implementation Strategy and Guideline I. PS/ES-5, which stipulates that an emergency response plan for Bidwell Park should be established. In addition, Public Safety and Emergency Services Implementation Strategy I. PS/ES-6 calls for information centers, safety and liability signage, and telephone service to be strategically located to reduce emergency response times within the Park. Upper Park Implementation Strategy and Guideline I. Upper-11 calls for the development of an emergency access plan for Upper Park.</p> <p>The BPMMP and Park Improvement Projects would have a less than significant impact on emergency response and evacuation plans. No</p>	LTS	No mitigation is required.	

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Table E7-1 Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>mitigation is required.</p> <p><i>Applies to:</i> BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p>			
<p>HAZ-7: RISKS TO PEOPLE OR STRUCTURES INVOLVING WILDLAND FIRES</p> <p>The BPMMP calls for prescribed fire management as a tool to protect and enhance habitats (Prescribed Fire Objective O. PF-1). Prescribed Fire Implementation Strategy and Guideline I. PF-1 stipulates that the need for and location of prescribed burning and related vegetation management shall be determined to reduce catastrophic fire risk, and Prescribed Fire Implementation Strategy and Guideline I. PF-2 calls for the implementation of fire management guidelines contained in Section 5 of the NRMP (Appendix C to the BPMMP). Implementation of the fire management objectives and implementation strategies and guidelines contained in the BPMMP and Appendix C may have a beneficial effect on the threat of wildland fires. In addition, the BPMMP and Park Improvement Projects do not propose construction of residences in wildland fire areas.</p> <p>The threat of wildland fires as a result of implementation of the BPMMP and the four Park Improvement Projects would be less than significant. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p>	LTS	No mitigation is required.	
<p>HAZ-8: CONFLICT WITH LOCAL POLICIES AND ORDINANCES</p> <p>The BPMMP and four Park Implementation Projects have been developed consistent with local policies and ordinances pertaining to hazards and hazardous materials. Implementation of the BPMMP and</p>	NI	No mitigation is required.	

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<p align="center">Table E7-1 Summary of Project Impacts and Mitigation Measures</p>			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>the Park Improvement Plans therefore is not expected to result in any conflicts with local policies and ordinances.</p> <p>Implementation of the BPMMP and the four Park Improvement Projects would not result in any conflicts with local policies and ordinances, and no impact would occur. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p>			
E4.3.7 HYDROLOGY AND WATER QUALITY			
HYDRO-1: POTENTIAL FOR DEGRADATION OF WATER QUALITY			
<p>HYDRO-1a: Potential for Water Quality Degradation with Implementation of the BPMMP</p> <p>The BPMMP includes Goals, Objectives and Implementation Strategies and Guidelines that aim to protect, avoid, or minimize impacts related to water quality and waste discharge. Impacts on water quality in Bidwell Park are caused by erosion resulting from improper trail use and/or maintenance, the creation and use of informal trails (particularly in highly erodible areas), and from runoff from trails, roadways, and the golf course (pesticides, insecticides, etc.) that can result in sediments, oils, and heavy metals entering Big Chico Creek and its tributaries. The BPMMP also addresses water quality in terms of private and public use and for fish and terrestrial wildlife. The following is a summary of the Objectives and Implementing Strategies and Guidelines that apply to water quality issues:</p> <ul style="list-style-type: none"> Implementation of Geology and Soils Objective O. G/S-1 would result in the periodic assessment of soil conservation and soil erosion potential to determine and modify protective measures. This objective also specifies that priority shall be assigned to high-use 	LTS	No mitigation is required.	

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Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>erodible and/or sensitive areas.</p> <ul style="list-style-type: none"> ▶ Geology and Soils Objective O. G/S-3 calls for the conservation of shallow Park soils to the maximum extent feasible. ▶ Geology and Soils Objective O. G/S-4 addresses improperly designed roads, trails, and parking areas. It calls for these areas to be assessed periodically as potential sources of erosion, and for soil conservation measures to be applied based on the assessment. ▶ Reduction of soil erosion is also addressed in Geology and Soils Implementation Strategy and Guideline I. G/S-2. This implementation strategy stipulates that the City-approved Trails Manual be used for trail development and maintenance to reduce soil erosion. ▶ Geology and Soils Implementation Strategy and Guideline I. G/S-3 calls for the use of BMPs in the construction and maintenance of roads to minimize soil erosion and loss. ▶ Geology and Soils Implementation Strategy and Guideline I. G/S-5 stipulates that areas of active erosion be identified, and that methods be developed for controlling erosion and restoring active erosion sites. ▶ Geology and Soils Implementation Strategy and Guideline I. G/S-6 calls for the assessment of Park soils when planning and managing current and projected recreational opportunities. ▶ Trails Objective O. T-1 protects water quality by requiring trail maintenance to conform to acceptable standards specified in the Trail Manual. ▶ Trails Implementation Strategy and Guideline I. T-11 stipulates that the trail network in Bidwell Park be monitored regularly to identify areas with trail degradation. ▶ Patterns and Levels of Recreational Use Implementation Strategy 			

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**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>and Guideline I. PRU-1 calls for soil conditions within the Park to be inspected and use levels and patterns identified periodically so that management and maintenance of specific sites and uses can be adjusted to minimize degradation of resources.</p> <p>Implementation of these Objectives and Implementing Strategies would ensure that erosion and sedimentation would be less than is occurring under current conditions.</p> <p>Where waste discharge is concerned, the BPMMP calls for permanent restrooms to replace year-round portable toilets in high-use areas. These restrooms would be connected to the City sewer system, as specified in Restroom Implementation Strategy and Guideline I. Rstrm-2. Restroom Implementation Strategy and Guideline I. Rstrm-3 stipulates that all restrooms shall be reviewed on a periodic basis.</p> <p>Where water quality for human and wildlife resources use is concerned, Hydrology and Water Quality Objective O. H/WQ-1 calls for the preservation and enhancement of Big Chico Creek surface and groundwater quality, and Hydrology and Water Quality Objective O. H/WQ-7 strives to reduce point-source and nonpoint-source pollution in Big Chico Creek, and stipulates that additional stormwater outlets should not be permitted. Hydrology and Water Quality Implementation Strategy and Guideline I. H/WQ-5 calls for development of measures to protect water quality in Big Chico Creek.</p> <p>Compliance with BPMMP Goals and Objectives and Implementation Strategies and Guidelines would assist in reducing impacts and enhancing existing water quality considerations, including those pertaining to waste discharge and erosion. As a result, implementation of the BPMMP would not violate any water quality standards or waste discharge requirements, resulting in a less than significant impact. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP</p>			

**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>HYDRO-1b: Potential for Water Quality Degradation with Implementation of the four Park Improvement Projects</p> <p>The Trails Plan calls for the maintenance of existing trails and discourages off-trail use. The Plan stipulates that trails in known erosion prone areas such as Monkey Face, the Jeep Trail, North Rim Trail, B Trail, and Bloody Pin Trail, should be maintained, upgraded, or rerouted. The Trails Plan prioritizes these problem areas for attention and funding. Several informal trails also exist in Bidwell Park; the Trails Plan calls for these to be either closed or established as official trails to be restored and maintained to applicable standards outlined in the Trails Manual.</p> <p>Closure of existing informal trails as proposed under the Trails Plan may result in beneficial impacts on water quality, as highly erodible areas would no longer be accessible to hiking, biking, and horseback riding. However, restoration of existing trails, as well as construction of new trails, in Bidwell Park has the potential to violate water quality standards because construction activities could potentially expose and release sediment into Big Chico Creek and tributary waterways. Construction of new trails and upgrades existing trails to the standard specified in the Trails Manual also would result in beneficial impacts to water quality when compared with existing conditions.</p> <p>The Horseshoe Lake Area Concept Plan proposes measures that have the potential to prevent future creation of informal trails, such as trail consolidation and upgrading, parking lot expansion, and installation of educational/ restoration-related signage. In addition, it proposes three types of edge treatments along the shores of Horseshoe Lake that would reduce the potential for erosion: a boulder edge, a wetlands edge, and a gravel edge. The concept plan also includes parking lot expansions, including restrooms that are a part of the City sewer system and additional trails which could result in impacts on water quality during construction.</p>	PS	<p>HYDRO-1b: Comply with Water Quality Standards and Waste Discharge Requirements</p> <p>When required, the City shall obtain a General Permit for Discharges of Storm Water associated with Construction Activity (Construction General Permit), which pertains to water pollution resulting from project construction. In compliance with permit requirements, the City shall file a Notice of Intent (NOI) with the State Water Resources Control Board (SWRCB) and prepare a Storm Water Pollution Prevention Plan (SWPPP) before commencement of construction activities. The SWPPP will incorporate BMPs to prevent, or reduce to the greatest extent feasible, adverse effects on water quality from erosion and sedimentation. In addition, all new trails shall be designed, constructed, and maintained per the City’s Trails Manual.</p> <p><i>Applies to:</i> Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, and Disc Golf/ Trailhead Area Concept Plan</p> <p><i>Timing/Implementation:</i> Before commencement of construction activities</p> <p><i>Responsible Party:</i> City of Chico</p> <p>Implementation of Mitigation Measure HYDRO-1b would reduce potentially significant water quality impacts from implementation of Park Improvement Projects to a less than significant level.</p>	LTS

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Table E7-1 Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>The Cedar Grove Area Concept Plan calls for the construction of a paved parking lot, several new trail segments, and an information/orientation plaza. Construction of these facilities could have similar temporary adverse effects on water quality.</p> <p>The Disc Golf/Trailhead Area Concept Plan identifies areas of thin erodible soil as high priority for impact minimization. It also identifies areas slated for restoration, including portions of the short course that have been damaged by intensive use. The Plan recommends protecting areas located outside of disc golf tees and targets and associated trails by cementing tees to prevent them from expanding, which may also lessen expanded compaction of the soil around the tees. Redesign of the existing unmitigated disc golf course would also include (depending upon the selected alternative) construction of new tees, shortening or lengthening of existing tees, replacement of existing tees, and construction of new connecting trails, a parking lot, interpretive facilities, picnic benches and a scenic overlook which could result in impacts on water quality during construction.</p> <p>For all four of the Park Improvement Projects, upgrades planned to existing trails and recreation areas, and construction of new facilities have the potential to adversely affect water quality through temporary construction activities and through the introduction of impervious surfaces for parking lots, road improvements, ADA-compliant trails, and restrooms.</p> <p>Adverse effects on water quality from project construction and the introduction of impervious surfaces would be a potentially significant impact requiring mitigation.</p> <p>Applies to: Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p>			
<p>HYDRO-2: CHANGES IN GROUNDWATER LEVELS</p> <p>The BPMMP does not contain goals, objectives, or implementation strategies and guidelines that would result in substantial depletion of</p>	LTS	No mitigation is required.	

**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>groundwater supplies or interfere with groundwater recharge, including the introduction of large impermeable surfaces to the Park. No new uses that rely on additional groundwater are proposed as part of the BPMMP or the four Park Improvement Projects. Air Quality Implementation Strategy and Guideline I.</p> <p>AQ-2 does mention alternatives to unpaved roads and parking areas, but these areas are not large enough to be considered significant for recharge purposes. In addition, Facilities Implementation Strategy and Guideline I. F-2 calls for the use of materials that have the least adverse effect and greatest benefit on the environment in the future development of facilities within Bidwell Park.</p> <p>The Trails Plan calls for upgrades of existing trails to standards specified in the Trails Manual, decommissioning of existing informal trails, and in some cases the creation of new trails. As previously mentioned, it also notes that any and all new and/or altered trail facilities shall comply with the ADA. However, none of these activities have the potential to substantially affect groundwater supplies or recharge.</p> <p>Implementation of the Horseshoe Lake Area Concept Plan would result in the expansion of impermeable surfaces in the Horseshoe Lake area through the expansion of Parking Lots B, C, and E, and through the installation of restrooms and picnic areas. However, the areas of increased impermeable surface are limited, particularly in relation to the expanse of permeable surfaces in the area of Horseshoe Lake.</p> <p>The Cedar Grove Area Concept Plan calls for the installation of three paved parking lots (one for 40 vehicles, one for 49 vehicles, and an overflow parking lot for 48 vehicles), which would increase impermeable surfaces in the Cedar Grove area. However, the area that would be paved is limited, so project construction would result in only a small increase in impermeable surface relative to the entire Cedar Grove area.</p>			

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Table E7-1 Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>Implementation of the Disc Golf/Trailhead Area Concept Plan calls for the creation of cement tees, a picnic area and parking lot, a scenic overlook, and restroom facilities, which would increase impermeable surfaces in the Disc Golf/Trailhead area. However, the areas of increased impermeable surface are limited, particularly in relation to the expanse of permeable surfaces in the area of the Disc Golf/Trailhead area.</p> <p>Implementation of the BPMMP as well as the four Park Improvement Plans would result in less than significant impacts related to groundwater supplies and recharge. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p>			
<p>HYDRO-3: CHANGES IN EXISTING DRAINAGE PATTERN, AND INCREASED RISK OF FLOODING AND ADDITIONAL POLLUTED RUNOFF FROM INCREASED STORMWATER RUNOFF</p> <p>Implementation of Goals, Objectives, and Implementation Strategies and Guidelines contained within the BPMMP would not result in changes to existing drainage patterns, nor would it introduce substantial amounts of impermeable surfaces or impediments to stream flow, thus causing and increased risk of flooding. The Air Quality section of the BPMMP calls for implementation of dust pollution control measures through Parking Implementation Measure and Guideline I. Parking-3, which recommends the consideration of asphalt and alternative parking materials and treatments for large parking lots. Use of such materials and treatments would introduce impermeable surfaces where currently there are none. However, the potential introduction of these impermeable surfaces would be small relative to the amount of permeable surfaces existing in Bidwell Park. Surface-water runoff, including that polluted with oils and heavy metals, would be minimal, and would be directed toward newer existing storm drains.</p>	LTS	No mitigation is required.	

**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>Implementation of the BPMMP therefore would have only a minimal impact on the City’s stormwater drainage system.</p> <p>Improvements to existing trails as specified by the Trails Plan such as trail construction, trail realignment, and trail closure would not significantly increase impermeable surfaces within the Park, nor would they contribute significant amounts to increased runoff or significantly alter existing drainage patterns. Implementation of ADA-compliant trails has the potential to slightly increase surface runoff by introducing impermeable surfaces where there is none. However, exceptions to ADA compliance for new/altered trails are made for the protection of natural resources, and where compliance would not be feasible because of steep terrain. Adherence to BMPs contained in the City’s Trail Manual and site analysis proposed in the Trails Plan would ensure that trail construction, improvement, or closure would not increase the amount of stormwater runoff, or pollution contained within the runoff. Because implementation of the Trails Plan would also involve upgrades of existing trails to standards specified in the Trails Manual, and because all new trails would be constructed to these standards, and because the Trails Plan calls for the closure and rehabilitation on unmitigated trails and upgrades/redesign for trails in know problem areas, implementation of the Trails Plan would be expected to reduce current problems related to drainage and stormwater runoff when compared with existing conditions.</p> <p>The implementation of improvements contained in the Horseshoe Lake Area Concept Plan, such as expanded parking areas, addition of restrooms, and installation of picnic areas, would increase the amount of impermeable surfaces at Horseshoe Lake, which could potentially result in increased surface runoff. However, these improvements would be constructed in compliance with federal, state, and local regulations regarding stormwater runoff, including the City’s adopted Storm Drainage Master Plan (2000). Proposed improvements in the Horseshoe Lake Area Concept Plan also include three types of lake edge treatments intended to reduce potential erosion while providing safe</p>			

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<p>access to the lake’s shores. Where access is desired, a boulder edge condition is proposed. The proposed wetlands edge would create wildlife habitat and separate the perimeter trail from the lake edge. The proposed gravel edge is similar to the current lake edge condition and would allow users direct access to the water. Regardless of edge type selected, the Horseshoe Lake Area Concept Plan proposes planting of additional native trees, shrubs, and grasses. None of these proposed improvement and subsequent visitor activities would substantially alter existing drainage patterns, nor would they contribute to increased erosion.</p> <p>Improvements contained in the Cedar Grove Area Concept Plan include the construction of paved parking areas, which would increase the amount of impermeable surfaces in the Cedar Grove area. However, implementation of the Cedar Grove Area Concept Plan would not result in a significant amount of additional impermeable surfaces, relative to the amount of permeable surface at the site. In addition, any construction would adhere to federal, state, and local regulations regarding stormwater runoff, including the City’s adopted Storm Drainage Master Plan (2000).</p> <p>Construction of improved fairways and tees, realignment of existing fairways and tees, and the closure of existing fairways and tees as well as the construction of the parking lot, trails, scenic overlook and other improvement proposed under the Disc Golf/Trailhead Area Concept Plan are not expected to substantially alter drainage patterns or increase impermeable surfaces at the disc golf site. In addition, any construction would adhere to federal, state, and local regulations regarding stormwater runoff. Individual projects will be designed and constructed in accordance with the City’s adopted Storm Drainage Master Plan to address potential drainage issues. Improvement of fairways and tees may result in beneficial impact to site hydrology, such as reduction of erosion and sedimentation impacts on Big Chico Creek, as these improvements would reduce the overall area of the disc golf course</p>			

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<p>footprint by more clearly aligning trails, tees, and targets.</p> <p>Impacts of the BPMMP and Park Improvement Projects related to existing drainage patterns, increased surface runoff and stormwater drainage capacity and additional polluted runoff would be less than significant.</p> <p><i>Applies to:</i> BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p>			
<p>HYDRO-4: LOCATION OF STRUCTURES WITHIN A 100-YEAR FLOOD HAZARD AREA AND RESULTING REDIRECTION OF FLOOD FLOWS</p> <p>The Goals, Objectives, and Implementation Strategies and Guidelines contained within the BPMMP will not result in the placement of any structures within the 100-year flood hazard area within the Park. Facilities Objective O. F-3 stipulates that facilities in the Park should be located, designed, and constructed to avoid and minimize adverse environmental effects, and Facilities Implementation Strategy and Guideline I. F-1 states that facilities should be planned, sited, and developed based on accepted uses for specific areas of the Park, environmental sensitivities, compatible recreation interests, educational interests, safety, and other factors. Restroom Objective O. Rstrm-1 provides restrooms adjacent to high-use areas and other locations as needed, such as trailheads.</p> <p>The Trails Plan does not call for the construction of a new bridge in Upper Park. However, the Plan does not include the construction of any other permanent structures or any residential structures within the Park.</p> <p>Implementation of the Horseshoe Lake Area Concept Plan includes the construction of a restroom at Parking Lot B. However, the Plan does not include the construction of any other permanent structures or any residential structures within the Park.</p>	LTS	No mitigation is required.	

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Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>The Cedar Grove Area Concept Plan includes construction of an information/orientation plaza, as well as information signs, regulatory signs, and seating areas at the entry plaza. However, the Plan does not include the construction of any other permanent real property or any residential structures within the Park.</p> <p>The Disc Golf/Trailhead Area Concept Plan includes construction of a restroom facility, picnic area, parking lot, and information and regulatory signs. However, is does not include the construction of any permanent real property or residential structures. Furthermore, the Disc Golf/Trailhead Concept Plan site is located well above the 100-year floodplain of Big Chico Creek.</p> <p>It should be noted, in relation to flooding, that Big Chico Creek is a free-flowing stream down to Five-Mile Dam in Bidwell Park. At Five-Mile Dam, Big Chico Creek’s flow during higher flows is partially diverted into Lindo Channel (historically known as Sandy Gulch). Lindo Channel is an ephemeral stream that formed as a natural channel on the Chico alluvial fan, but was historically modified for flood control purposes in the early 1960s. Lindo Channel runs parallel to Big Chico Creek for almost 8 miles before rejoining the creek about 2 1/2 miles from Big Chico Creek’s confluence with the Sacramento River. Lindo Channel is still used today as a diversion channel to relieve flood flows in Big Chico Creek. The construction of the Lindo Channel and Sycamore Creek Diversions and their use as flood control facilities has removed any threat of serious flooding from Big Chico Creek to the City of Chico. Minor flooding does occur annually during heavy rains at Annie’s Glen, which is a low-lying area along Vallombrosa Avenue, downstream of the Mangrove Bridge. The slight flooding that occurs has not affected city streets or bridges, and only the picnic area receives floodwaters.</p> <p>In addition, the City of Chico General Plan provides protection for structures exposed to 100-year flood hazards. Any project that is subject to flooding must comply with the City requirement that states that either</p>			

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**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>the project must demonstrate adequate flood protection for structures, or meet a determination by the City that no increase in flood hazard will occur based on a capacity analysis. The BPMMP and the four Park Improvement Projects would comply with these flood protection measures.</p> <p>Implementation of the four Park Improvement Plans, as well as the overall BPMMP, would result in less than significant impacts related to redirection of flood flows within a 100-year flood hazard area. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf Area Concept Plan</p>			
<p>HYDRO-5: EXPOSURE OF PEOPLE OR STRUCTURES TO A SIGNIFICANT RISK OF FLOODING AS A RESULT OF THE FAILURE OF A LEVEE OR DAM</p> <p>Implementation of the BPMMP and the four Park Improvement Projects would not expose people or structures to significant risks involving flooding. Please see the discussion above regarding Lindo Channel’s ability to reduce the risk of flooding along Big Chico Creek during high-water events. In addition, Public Services and Emergency Services Objective O. PS/ES-3 in the BPMMP stipulates that appropriate locations for safety and liability signage be determined, and Public Safety and Emergency Services Implementation Strategy I. PS/ES-5 calls for the establishment of an Emergency Response Plan. There are no dams located upstream of Five-Mile Dam. In addition, Upper Park is closed to the public during high-water events.</p> <p>Implementation of the four Park Improvement Plans, as well as the overall BPMMP, would result in less than significant impacts related to flooding risks from levee or dam failure. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept</p>	LTS	No mitigation is required.	

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**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Plan			
<p>HYDRO-6: EXPOSURE OF PEOPLE OR STRUCTURES TO A SIGNIFICANT RISK OF INUNDATION BY SEICHE, TSUNAMI, OR MUDFLOW</p> <p>Bidwell Park is located too far inland to be inundated by any foreseeable tsunami. The nearest impoundment capable of failure during a seiche is Shasta Dam, approximately 80 miles northwest of Chico. Shasta Dam is sufficiently distant from Bidwell Park to allow ample advance warning and evacuation of Park users present so that no loss of life would occur. Because of the lack of appreciable soils on steep slopes in Bidwell Park, a mudflow is not anticipated, even during storm events.</p> <p>Implementation of the four Park Improvement Plans, as well as the overall BPMMP, would result in less than significant impacts related to exposure to inundation risks from seiche, tsunami, or mudflow. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p>	LTS	No mitigation is required.	
<p>HYDRO-7: CONSISTENCY WITH LOCAL POLICIES AND ORDINANCES</p> <p>The BPMMP and four Park Improvement Projects have been developed consistent with local policies and ordinances pertaining to the protection of hydrology and water quality. Implementation of the BPMMP and the Park Improvement Plans therefore is not expected to result in any conflicts with local policies and ordinances.</p> <p>Implementation of the four Park Improvement Plans, as well as the overall BPMMP, would result in no impact related to consistency with local policies and ordinances. No mitigation is required.</p>	NI	No mitigation is required.	

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**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<i>Applies to:</i> BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan			
E4.3.8 LAND USE AND PLANNING			
<p>LU-1: INCONSISTENCY WITH LOCAL POLICIES, ZONING REGULATIONS, OR RESOURCE MANAGEMENT OR RESOURCE CONSERVATION PLANS</p> <p>Bidwell Park is located within the planning area of the City of Chico’s General Plan (City of Chico 1999b). The broad purpose of the General Plan is to express the policies that will guide the City’s decisions on future growth, development, and resource protection. Specific plans, area plans, zonings, subdivisions, local agency projects, and other local land use decisions must be consistent with the Chico General Plan. The City of Chico General Plan sets the policy direction for land use in Bidwell Park and acknowledges the BPMMP as the more refined guidance document for management of the Park. The BPMMP represents the applicable resource management plan for Bidwell Park.</p> <p>Bidwell Park is designated Parks in the Land Use element of the General Plan. In addition, nearly the entire park is identified as a Resource Conservation Area (RCA). RCAs are designated to recognize the presence of sensitive and valuable habitat requiring protection and conservation in perpetuity, including seasonal and permanent wetlands, riparian woodlands, valley oak woodlands, riverine habitats, areas known to support special status species, and areas known to serve as important wildlife movement corridors. Application of the RCA designation varies considerably within Bidwell Park as it covers the more intensively developed locations near downtown as well as the more remote reaches of Upper Park. The General Plan requires the preparation of a long-term comprehensive planning program for RCAs to ensure the long-term viability of these areas. The BPMMP and its associated Environmental Impact Report implement this General Plan requirement for Bidwell Park by inventorying sensitive resources and</p>	NI	No mitigation is required.	

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**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>establishing comprehensive resource management policies and programs for all areas of the Park. Consistent with the General Plan, these resource management policies and programs are balanced with policies pertaining to providing various recreational opportunities throughout the Park.</p> <p>The General Plan elements most relevant to the BPMMP Update include the Community Design; Land Use; Parks, Public Facilities, and Services; Open Space and Environmental Conservation; and the Safety and Safety Services elements. The Community Design element addresses the importance of the creek corridors to the identity of the City and establishes policies that protect the creeks as natural resources while providing enhanced opportunities for views and access. The Land Use element establishes land use designations within the City, which detail the types and intensities of permissible uses and special classifications.</p> <p>The Parks, Public Facilities, and Services element specifically addresses current and future needs of Bidwell Park, establishing City policy to provide recreation opportunities at a variety of scales for all residents and to protect views, open space, and sensitive resources while expanding Upper Bidwell Park. The Open Space and Environmental Conservation element expresses the policies that comprise the City’s approach to managing and conserving various natural resources including air quality, biological resources, cultural resources, water resources, open space, soils, and geology. In the Safety and Safety Services element, policies are expressed that address wild land fires, fire safety and law enforcement. The Chico General Plan and Municipal Code include many policies that apply to Bidwell Park. Due to the large number of policies and codes, they are included as Appendix J of this document.</p> <p>Bidwell Park is zoned OS-1 (primary open space) in Title 19 (Land Use and Development Regulations) of the Chico Municipal Code, which is consistent with the Parks General Plan land use designation. While the</p>			

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**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>OS-1 zoning classification identifies the types of land uses generally considered appropriate for parks and open space areas on a city-wide basis, the BPMMP’s recognized as the detailed planning document for Bidwell Park, specifying allowable uses by area and establishing a set of management practices to follow.</p> <p>Aside from the General Plan, two other plans have guided the provision of park and recreation facilities in the City of Chico: the 1988 Park and Recreation Plan, a CARD document, and the 1990 Bidwell Park Master Management Plan (BPMMP), adopted by the City Council and the Bidwell Park and Playground Commission (BPPC).</p> <p>The Bidwell Park Master Management Plan adopted in 1990 includes park-wide goals, objectives, and design standards, as well as recommendations for each of 32 management zones. The BPMMP Update document comprises a comprehensive update of the 1990 Bidwell Park Master Management Plan. Goals, objectives, design standards, and management recommendations were updated to reflect current conditions. Management zones were combined to make the document more user friendly and easier to understand. Furthermore, this BPMMP Update includes a variety of technical Appendices including Annie Bidwell’s Deed (Appendix A), a Visitor and Community Survey Summary (Appendix B), a Natural Resources Management Plan (NRMP) (Appendix C), and an annotated outline for a Cultural Resources Management Plan (Appendix D). Also included are a Trails Plan (Appendix E), and site specific concept plans for the Horseshoe Lake and Cedar Grove areas, and the proposed Disc Golf Facility/Trailhead at the SR 32 site (Appendices F, G, and H). Information on the overall regulatory context pertaining to BPMMP implementation and relevant City of Chico Policies are included in Appendices I and J, respectively. Appendix K (confidential) includes a cultural resources inventory, Appendix L contains updated design standards, and Appendix M includes the City of Chico Bench Policy. Appendix N has been established as a depository of future written</p>			

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Table E7-1 Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>guidance from the BPPC on interpretation of the BPMMP.</p> <p>The City of Chico and Butte County General Plan land use elements govern land uses in and around the Park. Lower Park is adjacent to urban, residential, and commercial land found within the City of Chico, as well as the California State University at Chico (CSUC). Middle Park is surrounded by undeveloped ranch land to the north and residential zoning to the south. Upper Park is surrounded by various properties including the Brown Ranch to the north, the State-owned Big Chico Creek Ecological Reserve to the east and several private parcels including the Canyon Oaks residential development and SR 32 to the south.</p> <p>The BPMMP and associated Park Improvement Projects have been developed consistent with the General Plan and Municipal Code and no zoning changes are proposed. In addition, Objective O. MC-1 specifically calls for the management of Bidwell Park consistent with the BPMMP, General Plan, and Municipal Code. Objective O. MC-2 calls for the establishment of resource or management zone designations to help guide the type and extent of resource protection and/or allowable uses for specific Park locations, where appropriate. This objective aims to further refine site-specific management.</p> <p>Implementation of the BPMMP and the four Park Improvement Projects would not result in conflicts with local policies or zoning regulations, or with any applicable resource management plan; no impact would occur. No mitigation is required.</p> <p>Applies to: BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p>			
<p>LU-2: PHYSICAL DIVISION OF AN ESTABLISHED COMMUNITY OR CHANGES TO THE SURROUNDING COMMUNITY</p> <p>Implementation of the BPMMP and associated Park Improvement</p>	NI	No mitigation is required.	

**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>Projects would not result in any changes of Park boundaries or the physical relationship of the Park to its surroundings, the community of Chico, or rural Butte County. Because any proposed changes and improvements would affect only the Park, implementation of the BPMMP and Park Improvement Projects would not result in changes in the character, aesthetics, or functioning of the surrounding community. Furthermore, the BPMMP and specific Park Improvement Projects aim to better accommodate the current and projected future uses of the Park.</p> <p>Implementation of the BPMMP and Park Improvement Projects would not physically divide the Park, nor would it change the Park’s relationship to surrounding communities or change the character of those communities; no impact would occur. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p>			
<p>LU-3: CONFLICT WITH ANY APPLICABLE RESOURCE MANAGEMENT OR RESOURCE CONSERVATION PLAN</p> <p>The BPMMP is the specific resource management plan for Bidwell Park. The Park Improvement Projects have been designed consistent with the BPMMP. No other resource management or resource conservation plans apply to the management of Park lands.</p> <p>Implementation of the BPMMP and associated Park Improvement Projects therefore would not result in conflict with other applicable plans and no impact would occur. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p>	NI	No mitigation is required.	

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Table E7-1 Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>LU-4: RESULT IN SUBSTANTIAL CONFLICT WITH THE ESTABLISHED CHARACTER, AESTHETICS, OR FUNCTIONING OF THE SURROUNDING COMMUNITY</p> <p>Implementation of the BPMMP and associated Park Improvement Project will not adversely affect the established character, aesthetics of functioning of the surrounding community, because the Park will continue to be managed and used consistent with current land uses. No impact will occur and no mitigation is required.</p> <p><i>Applies to:</i> BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p>	NI	No mitigation is required.	
<p>LU-5: INCLUSION IN A LARGER PROJECT INVOLVING A SERIES OF CUMULATIVE ACTIONS</p> <p>Implementation of the Park Improvement Projects is part of BPMMP implementation. However, implementation of both the BPMMP and the Park Improvement Projects is not expected to result in any cumulative actions/changes on land use, as all aspects of the BPMMP and the Park Improvement Projects have been developed in the context of and consistent with local and regional land use planning and zoning regulations.</p> <p>Implementation of the BPMMP and the four Park Improvement Projects would result in no impact with regard to larger projects and cumulative actions. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p>	NI	No mitigation is required.	
<p>LU-6: DISPLACEMENT OF PEOPLE OR BUSINESS ACTIVITY</p> <p>Implementation of the BPMMP and Park Improvement Projects would not result in the displacement of people or business activities, as no</p>	NI	No mitigation is required.	

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**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>changes to the current use of the Park are proposed. Implementation of the Park Improvement Projects is not expected to result in displacement of business activity, as proposed changes would not result in off-site effects on local businesses.</p> <p>No people or businesses would be displaced with implementation of the BPMMP and the four Park Improvement Projects, and no impact would occur. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p>			
<p>LU-7: CONVERSION OF AGRICULTURAL LAND TO NONAGRICULTURAL USE, OR CONFLICTS WITH EXISTING AGRICULTURAL OPERATIONS</p> <p>As discussed above under Section E4.2.1, “Agricultural Resources,” the Park does not include areas designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on maps prepared under the Farmland Mapping and Monitoring Program, and it does not include lands under Williamson Act contracts. Implementation of the BPMMP and Park Improvement Projects is not expected to conflict with existing agricultural operations in the vicinity of the Park.</p> <p>Implementation of the BPMMP and the four Park Improvement Projects would result in no impact on agricultural lands or operations. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p>	NI	No mitigation is required.	

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Table E7-1 Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
E4.3.9 NOISE			
NOISE-1: EXPOSURE OF SENSITIVE RECEPTORS TO EXCESSIVE NOISE LEVELS FROM PROJECT CONSTRUCTION			LTS
<p>NOISE-1a: Exposure of Sensitive Receptors from Implementation of BPMMP</p> <p>The BPMMP is a policy document aimed at providing guidance for the management of Bidwell Park in the long term. Implementation of the BPMMP itself does not include any construction related projects or any project aspects that would result in changes to current noise levels.</p> <p>Implementation of the BPMMP will not result in the exposure of residents to noise levels in excess of applicable standards, and there would be no impact. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP</p>	NI	No mitigation is required.	
<p>NOISE-1b: Exposure of Sensitive Receptors from Implementation of Park Improvement Projects</p> <p>On-site Construction Equipment</p> <p>If all four Park Improvement Projects were constructed sequentially, construction could occur over a approximately 14-month period. Construction related activities could include site preparation (e.g., staging, excavation, grading, demolition, and clearing), material transport, construction of related-support structures, and other miscellaneous activities. Specific construction equipment that would be required for the improvements is not known at this time, but could likely include earth-moving equipment including scrapers, dozers, loaders, graders, excavators, paving equipment, and trucks. According to the U.S. Environmental Protection Agency, noise levels for individual equipment can range from 79 to 91 dBA at 50 feet, as indicated in Table E4.3.9-5.</p>	PS	<p>Noise-1: Construction Related Noise</p> <p>The following measures shall be implemented to mitigate for construction noise control associated with the Park Improvement Projects:</p> <ul style="list-style-type: none"> ▶ Construction equipment shall be properly maintained and equipped with noise control, such as mufflers, in accordance with manufacturers' specifications ▶ Construction activities shall be limited to the hours of 7:00 a.m.–9:00 p.m., Monday through Saturday, and to 10:00 a.m.–6:00 p.m. on Sundays and holidays. ▶ Construction equipment shall be arranged to minimize travel adjacent to occupied residences and turned off during prolonged periods of non-use. <p><i>Applies to:</i> Cedar Grove Concept Plan, Disc Golf Area</p>	LTS

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**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>The simultaneous operation of on-site construction equipment associated with the project, as identified above, could result in combined intermittent noise levels up to approximately 91 dBA at 50 feet from the site with no feasible noise control devices installed or no attenuation from intervening barriers or vegetation. Based on these equipment noise levels and a typical noise-attenuation rate of 6 dBA per doubling of distance, exterior noise levels at noise-sensitive receptors located within 100 feet from the construction activities could exceed 85 dBA without feasible noise controls.</p> <p>Most of the Disc Golf/Trailhead Concept Plan Area, the Horseshoe Lake area, and most segments of the Trails Plan to be constructed are located well beyond 100 feet from any permanent sensitive receptors. One residence is found in the vicinity of the Disc Golf/Trailhead Concept Plan Area, and residences are located in close vicinity to the Cedar Grove Concept Plan Area. For these areas, the City of Chico Noise ordinance would apply.</p> <p>According to the City of Chico Noise Ordinance (Section 9.38.060), as stated above in the regulatory setting, noise from construction operations which occurs within the hours of 7:00 a.m. and 9:00 p.m. Monday through Saturday, and from 10:00 a.m. and 6:00 p.m. Sundays and holidays, is limited to 86 dBA at any point outside a project boundary. If construction were to occur during the more noise-sensitive hours (e.g., 9:00 p.m. through 7:00 a.m. Monday through Saturday, or from 6:00 p.m. to 10:00 a.m. on Sundays and holidays) or construction equipment is not properly equipped with noise control devices, construction-generated source noise could result in annoyance and/or sleep disruption to occupants of any existing noise-sensitive land uses in the project vicinity and create a substantial temporary increase in ambient noise levels.</p> <p>As a result, noise impacts associated with construction in the Cedar Grove Concept Area and near the residence adjacent to the Disc Golf/Trailhead area is considered potentially significant.</p>		<p>Concept Plan, future Park Improvement projects near sensitive receptors</p> <p>Timing/Implementation: During construction of Park Improvement Projects</p> <p>Responsible Party: City of Chico</p>	

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Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>Implementation of the following mitigation measures would reduce this impact to a less than significant level.</p> <p>Off-site Construction Traffic</p> <p>As described in the methods section above, a worst case scenario was assumed for construction traffic. Construction of the proposed project would require approximately 10 on-site employees at any given time. Assuming two total trips per day per employee and five roundtrips per day associated with the transport of equipment and materials, project construction would result in a maximum of approximately 30 one-way daily trips. Typically, traffic volumes have to double before the associated increase in noise levels is noticeable [3 dBA (CNEL/Ldn)] along roadways. Therefore, the addition of these daily trips on the local roadway system to existing volumes would be minor. Consequently, construction of the project would not result in a noticeable change in the traffic noise contours of area roadways. In addition, such increases in traffic would be temporary and occur during the less noise-sensitive daytime hours. Thus, short-term off-site construction traffic source noise would not result in the exposure of persons to or generation of noise levels in excess of applicable standards or create a substantial temporary increase in ambient noise levels in the project vicinity.</p> <p>As a result, this impact is considered less than significant. No mitigation is required.</p> <p><i>Applies to:</i> Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p>			
<p>NOISE-2: EXPOSURE OF SENSITIVE RECEPTORS TO EXCESSIVE NOISE LEVELS FROM PROJECT OPERATION</p>			
<p>NOISE 2a: Exposure of Sensitive Receptors to Excessive Noise Levels from Project Operation of the BPMMP</p> <p>The BPMMP is a policy document aimed at providing guidance for the management of Bidwell Park in the long term. Implementation of the</p>	NI	No mitigation is required.	

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**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>BPMMP itself does not include any operational noise related projects or any project aspects that would result in changes to current noise levels.</p> <p>Implementation of the BPMMP will not result in the exposure of residents to noise levels in excess of applicable standards, and there would be no impact. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP</p>			
<p>NOISE-2b: Exposure of Sensitive Receptors to Excessive Noise Levels from Project Operation of the Park Improvement Projects</p> <p>On-site Equipment</p> <p>Long-term operation of the four proposed Park Improvement Projects would not result in the operation of any new noise-generating stationary equipment. In addition, area source noise associated with landscaping and maintenance activities would take place at the same level as without the project. Thus, long-term on-site stationary- and area-source noise would not result in the exposure of persons to or generation of noise levels in excess of applicable standards or create a substantial permanent increase in ambient noise levels in the project vicinity.</p> <p>Off-site Operational Traffic</p> <p>Long-term operation of the proposed project would not require significant additional employees. Therefore, only minor additional daily trips would be added to the local roadway system; consequently, operation of the project would not result in a noticeable change in the traffic noise contours of area roadways. In addition, it is anticipated that potential users of the Park Improvement Projects would consist predominantly of existing users, resulting in negligible additional trip generation from recreational users. Thus, long-term off-site operational traffic source noise would not result in the exposure of persons to or generation of noise levels in excess of applicable standards or create a substantial permanent increase in ambient noise levels in the project vicinity.</p>	LTS	No mitigation is required.	

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Table E7-1 Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>As a result, implementation of the four Park Improvement Projects would not result in the exposure of persons to or generation of excessive noise levels. This impact would be considered less than significant. No mitigation is required.</p> <p><i>Applies to:</i> Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p>			
<p>NOISE-3: EXPOSURE OF PERSONS TO OR GENERATION OF EXCESSIVE GROUNDBORNE VIBRATION OF GROUNDBORNE NOISE LEVELS</p>	NI	No mitigation is required.	
<p>Noise-3a: Exposure to Vibration of the BPMMP</p> <p>The BPMMP is a policy document aimed at providing guidance for the management of Bidwell Park in the long term. Implementation of the BPMMP itself does not include any vibration-generating projects or any project aspects that would result in exposure of receptors to groundborne vibration.</p> <p>Implementation of the BPMMP will not result in the exposure of residents to vibration levels in excess of applicable standards, and there would be no impact. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP</p>			
<p>Noise-3b: Exposure to Vibration (Park Improvement Projects)</p> <p>Construction activities have the potential to result in varying degrees of temporary groundborne vibration, depending on the specific construction equipment used and operations involved. Vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. Table E4.3.9-6 displays vibration levels for typical construction equipment.</p> <p>As discussed above, specific on-site construction equipment needed for the four Park Improvement projects is not known at this time, but would be expected to include dozers, trucks, loaders, paving equipment,</p>	LTS	No mitigation is required.	

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Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>excavators, and graders. According to the Federal Transit Administration (FTA) and as shown in Table E4.3.9-6, vibration levels associated with the use of large bulldozers are 0.089 in/sec PPV and 87 VdB (referenced to 1 μin/sec and based on the RMS velocity amplitude) at 25 feet. Using FTA’s recommended procedure for applying a propagation adjustment to these reference levels, predicted worst-case vibration levels of approximately 0.01 in/sec PPV and 81 VdB at the closest existing noise-sensitive receptor to construction operations (approximately 100 feet away) could occur from use of large dozers during construction near sensitive receptors such as in the Cedar Grove area. These vibration levels would not exceed Caltrans’s recommended standard of 0.2 in/sec PPV (Caltrans 2002) with respect to the prevention of structural damage for normal buildings and FTA’s maximum-acceptable vibration standard of 75 VdB (Federal Transit Administration 2006) with respect to human annoyance for residential uses. In addition, the long-term operation of the proposed project (i.e., use and maintenance of the proposed trails, disc golf course, and other facilities) would not include any vibration sources.</p> <p>Implementation of the four Park Improvement Projects would not result in the exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels. As a result, this impact is considered less than significant. No mitigation is required.</p> <p><i>Applies to:</i> Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/ Trailhead Area Concept Plan</p>			
E4.3.10 PUBLIC SERVICES			
<p>PS-1: FIRE PROTECTION</p> <p>Fire protection in Bidwell Park is provided by the City of Chico Fire Department, with the Butte County Fire Department and California Department of Forestry (CDF) also providing response for the more remote areas of the Park under mutual aid agreements. CDF also operates an Air Attack Base Station on property leased from the Chico</p>	NI	No mitigation is required.	

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**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>Municipal Airport. The risk of wildlife in Bidwell Park, and especially in Upper Park is generally considered high. Implementation of the Disc Golf/Trailhead Area Concept Plan will provide additional facilities in an area of the Park that is considered extremely fire prone. The potential impacts of increased risk of wildfire are addressed in Section 4.3.6.4 (Hazards and Hazardous Materials) of the BPMMP, which shows that all potential hazards and hazardous material impacts, based on Appendix G of the State CEQA Guidelines, would be less than significant. Implementation of the BPMMP or the four Park Improvement Projects would not extend the service area of the City’s fire department, nor would the projects necessitate construction of new fire protection facilities or the alternation of existing facilities. In fact, the new creek crossing in Upper Park would provide enhanced access for wildfire fighting capability.</p> <p>Implementation of the BPMMP and the four Park Improvement Projects would have no impact on fire protection services in the City or the region. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p>			
<p>PS-2: POLICE PROTECTION</p> <p>Security Services for Bidwell Park are provided by the City of Chico Police Department and Park Rangers. Implementation of the BPMMP and the four Park Improvement Projects is not expected to result in a significant increase in the need for police response, nor would it necessitate the construction of new police protection facilities or the alternation of existing facilities.</p> <p>Implementation of the BPMMP and the four Park Improvement Projects would have no impact on police protection services in the City and the region. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan,</p>	<p>NI</p>	<p>No mitigation is required.</p>	

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**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan			
<p>PS-3: SCHOOLS</p> <p>The BPMMP is a master plan that provides a long term management framework for Bidwell Park. The four Park Improvement Projects present upgrades to exiting facilities and creation of new facilities to enhance the recreational experience in the Park, while preserving sensitive biological, cultural, aesthetic, and other resources. Neither the BPMMP, nor the four Park Improvement Projects include any residential uses, nor would they increase the number of residents in the area, which would in turn increase the number of students or requirements for construction of new school facilities.</p> <p>Implementation of the BPMMP and the four Park Improvement Projects would have no impact to schools. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p>	NI	No mitigation is required.	
<p>PS-4: PARKS</p> <p>Both the BPMMP and the four Park Improvement Projects aim at improving the management of the Park and to enhance the enjoyment of the people using the Park while preserving the many important resources it contains. None of the proposed projects would add residences to the project area that could result in increased demand for additional city or county parks or contain any components that would lead to increased demand on other parks in the City or region.</p> <p>Implementation of the BPMMP and the four Park Improvement Projects would have no impact to other City and regional parks. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan,</p>	NI	No mitigation is required.	

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Table E7-1 Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan			
<p>PS-5: MAINTENANCE OF PUBLIC FACILITIES, INCLUDING ROADS, CANALS, ETC</p> <p>Implementation of the BPMMP would not result in an increased need for the maintenance of public facilities. The four Park Improvement Projects, once implemented, will provide additional public facilities such as trails, parking areas, a play structure, restrooms, picnic tables, interpretive kiosks, benches, trash receptacles etc. which will need to be maintained on order to function properly. However, implementation of any of the four Park Improvement Projects would not move forward until adequate funding for construction and maintenance of the projects has been secured. This would include adequate funding for staff to maintain the upgraded and new facilities.</p> <p>Implementation of the BPMMP and the four Park Improvement Projects would have a less than significant impact to the maintenance of public facilities. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p>	LTS	No mitigation is required.	
<p>PS-6: OTHER PUBLIC FACILITIES</p> <p>Implementation of the BPMMP and the four Park Improvement Projects is expected to enhance the use of the Park, to provide upgrades and enhancements to facilities that are already available in the Park, and to provide a some additional public facilities such as additional parking, picnic areas, interpretive kiosks and signage, new bridges, scenic viewpoints, and an official disc golf facility. The projects are not expected to have any adverse effects on offsite public facilities or result in the need for any other new or expanded public services elsewhere in the City of the region.</p>	NI	No mitigation is required.	

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**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>Implementation of the BPMMP and the four Park Improvement Projects would have no impact on other public facilities. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p>			
E4.3.11 RECREATION			
<p>REC-1: POTENTIAL FOR INCREASE IN USE OF LOCAL AND REGIONAL RECREATIONAL FACILITIES RESULTING IN DETERIORATION OF THE FACILITIES</p> <p>Implementation of the BPMMP and the four Park Improvement Projects would result in improved management and upgrades of recreational facilities in Bidwell Park. The projects are not intended to increase overall use of the Park or attract more visitors to the Park. They are designed to better manage existing uses, facilitate circulation, reduce user conflict, and abate resource degradation. As such, implementation of the project would not result in adverse effects on the recreational facilities in the Park. Implementation of the project likewise would not result in an increase in use of other local and regional parks, because the BPMMP and Concept Plans do not include any components that would result in a displacement of existing Park uses.</p> <p>Implementation of the BPMMP and Park Improvement Projects would result no impact with regards to an increase in the use of local and regional recreational facilities. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p>	NI	No mitigation is required.	

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Table E7-1 Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>REC-2: CONSTRUCTION OR EXPANSION OF RECREATIONAL FACILITIES WITH ADVERSE PHYSICAL EFFECT ON THE ENVIRONMENT</p> <p>Implementation of the BPMMP and the four Park Improvement Projects would result in the redesign and upgrade of existing facilities in the Park, as well as in the construction of additional picnic areas, scenic overviews, signage, and restrooms. The BPMMP contains multiple goals and guidelines aimed at resource protection, as well as design standards for upgrades to existing and construction of new facilities. This EIR describes and analyzes the effects of implementation of the proposed Park Improvement Projects concept plans on the environment. Where potentially significant impacts have been identified for a particular resource area, mitigation measures to reduce these impacts to less than significant levels are provided. In addition, the Disc Golf/Trailhead Area Concept Plan has been specifically designed to avoid or minimize resource damage and, therefore, when compared with existing conditions, which have resulted in a degradation of resources on the site due to unmitigated use, would result in a beneficial effect on the environment. The Trails Plan and Horseshoe Lake Area Concept Plan likewise contain elements intended to reduce ongoing resource damage, such as consolidation of trails, closure and restoration of informal trails, realignment of trails in problem areas, upgrade of trails to standards provided in the City’s Trails Manual, and delineation of parking. Therefore, implementation of the BPMMP and Park Improvement Projects, in coordination with the mitigation measures identified for the various resource topics in this EIR, would not cause adverse effects on the physical environment resulting from the construction of new recreational facilities.</p> <p>Implementation of the BPMMP and Park Improvement Projects would result in less than significant effects on the environment resulting from the construction or expansion of recreational facilities. No mitigation is required.</p>	LTS	No mitigation is required.	

Table E7-1 Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<i>Applies to:</i> BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan			
E4.3.12 TRANSPORTATION AND TRAFFIC			
<p>TRAFFIC-1: POTENTIAL FOR INCREASE IN TRAFFIC LEVELS</p> <p>Circulation and Access Objective O. C/A-3 of the BPMMP calls for restricting the development of new north-south roadways that would bisect Bidwell Park in favor of improving existing north-south roadways within the Park. No new roads would be constructed with implementation of the BPMMP or any of the Park Improvement Projects, and none of the improvements planned under the Park Improvement Projects represent new facilities that would result in a substantial increase in the number of visitors to the Park. The proposed Disc Golf/Trailhead Concept Plan, like the other Park Improvement Projects, is intended to accommodate an existing use. However, implementation of this Concept Plan calls for the development of a new trailhead providing access to destinations in Upper Park, and development of an enhanced, mitigated, and City-sanctioned disc golf course, both of which could serve as a draw to new users. Vehicle trips generated by new users are not intended to be significant, would be spread out over the course of a day, and would not result in a reduction of the level of service along this stretch of SR 32.</p> <p>Issues related to safe ingress and egress to and from the Disc Golf/Trailhead site would require review by Caltrans, including the issuance of an encroachment permit, which would ensure that adequate lines of sight and that acceleration and deceleration lanes, if necessary, were properly engineered (see Mitigation Measure TRAFFIC-1).</p> <p>All four Park Improvement Projects contain elements that seek to improve the existing parking or the addition of new parking. However, these improvements aim to accommodate current levels of Park use and</p>	NI	No mitigation is required.	

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Table E7-1 Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>to better regulate parking to reduce resource damage. In addition, the BPMMP includes several implementation strategies and guidelines that seek to promote non-motorized use of the Park. Specifically, Circulation and Access Guideline I. C/A-1 calls for the Park to be connected to the city via a bicycle pathway system, where appropriate. Circulation and Access Guideline I. C/A-3 calls for the evaluation of Park access corridors from surrounding neighborhoods and city-wide to determine potential improvements, including multiple types of access. Circulation and Access Guideline I. C/A-13 specifically encourages car pooling during special events to limit the number of vehicles in the Park. As a result of all these specific measures contained in the BPMMP and the overall purpose of the Park Improvement Projects to accommodate current use levels, traffic levels in the Park and in the City are not expected to increase compared with existing conditions as a result of implementation of the BPMMP or the Park Improvement Projects.</p> <p>Implementation of the BPMMP and Park Improvement Projects would not result in an increase in traffic levels in the Park, and no impact would occur. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p>			
<p>TRAFFIC-2: POTENTIAL FOR ADVERSE EFFECTS ON THE LOCAL TRANSIT SYSTEM</p> <p>Implementation of the BPMMP and the four Park Improvement Projects is not expected to have an adverse effect on the local transit system. The BPMMP contains several objectives that seek to enhance the use of the local transit system by Park users. Specifically, Circulation and Access Objective O. C/A-1 calls for the provision of multi-modal accessibility to the Park and within the Park, and Circulation and Access Objective O. C/A-6 calls for the encouragement to establish additional bus routes and access by public transportation to the Park. If implemented, these</p>	NI	No mitigation is required.	

**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>objectives would contribute to an enhanced transit system in the Park and City. Circulation and Access Implementation Strategies and Guidelines include I. C/A-1, which calls for the connection of Park bicycle routes to the citywide pathway system, where appropriate. I. C/A-3 calls for the evaluation of Park access corridors from surrounding neighborhoods and citywide to determine if/where improvements could be made, including multiple types of access and appropriate locations. I. C/A-4 calls for using existing city streets beyond Park boundaries for motor vehicle circulation. I. C/A-9 calls for the Park to be closed to motor vehicles at night, with the hours set by the City, except in approved night use areas. I. C/A-12 calls for providing access points to the Park for nonmotorized uses with appropriate sight distance for safe entry. I. C/A-13 calls for encouraging carpooling to reduce the number of vehicles in the Park. None of the four specific Park Improvement Projects contains any component expected to put an increased burden on the local transit system, because they are not designed to increase the use of any specific area. Instead, they are intended to accommodate and manage the uses that already occur. The Horseshoe Lake Area in Middle Park and the Disc Golf/Trailhead Area in Upper Park are not currently served by the local transit system, so any changes to these facilities therefore would not affect local transit systems.</p> <p>Implementation of the BPMMP and Park Improvement Plans would not adversely affect the local transit system, and no impact would occur. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p>			
<p>TRAFFIC-3: EFFECTS ON EXISTING PARKING OR DEMAND FOR NEW PARKING</p> <p>The BPMMP contains several elements that improve the parking situation in the Park. Objective O-Parking-1. of the BPMMP calls for the use of centralized parking at appropriate locations and the design of</p>	NI	No mitigation is required.	

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**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>parking areas to avoid user conflict. Objectives O.- Parking-2 through O.-Parking-4 call for the minimization of parking in inappropriate areas, minimization of adverse effect of parking on resources during special event, and the delineation of parking lots to minimize resources damage. Implementation Strategies and Guidelines for parking include: I. Parking-1, which calls for identifying and periodically reviewing the usage intensity of existing parking lots; I. Parking-4 calls for improvements to parking for access to Upper Park on the South Side; I. Parking-5 calls for considering the uses of satellite carpooling facilities; and I. Parking-6 calls for clearly identifying carpooling areas.</p> <p>Design Standard 2 in Appendix L of the BPMMP shows a typical parking lot delineation recommended for clarifying parking patterns and minimizing resource damage. Implementation of the Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, and Disc Golf/Trailhead Area Concept Plan would result in an increase in the number of parking spaces available to Park visitors, at each of these specific locations, thus resulting in and improved parking situation during high demand times. Provision of these improved parking facilities would result in an overall positive effect on existing parking, as it would eliminate the need to park along roadsides, off shoulders, and within natural areas during high use time.</p> <p>Implementation of the BPMMP and Park Improvement Projects would not result in adverse effects on existing parking or in the demand for new parking and no impact would occur. No mitigation is required.</p> <p>Applies to: BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p>			

Table E7-1 Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
TRAFFIC-4: INCREASE IN CIRCULATION HAZARDS TO MOTOR VEHICLES, BICYCLES, PEDESTRIAN, EQUESTRIAN OR OTHER TRAFFIC			
<p>Traffic-4a: Increase in Circulation Hazard with Implementation of the BPMMP</p> <p>The BPMMP is a policy document and as such would not result in any changes to the physical environment. Implementation of the BPMMP would have no impact on circulation hazards in the Park. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP</p>	NI	No mitigation is required.	
<p>Traffic-4b: Increase in Circulation Hazards with Implementation of the four Park Improvement Projects</p> <p>Implementation of the Trails Plan calls for the installation of a bridge in Upper Park to provide improved access and safe crossing. All four Park Improvement Projects contain trail elements that are aimed at improved circulation and reducing user conflict; therefore, implementation of the Concept Plans could potentially lead to a decrease in circulation hazards.</p> <p>Access to the Disc Golf/Trailhead Area Concept Plan site requires a left turn off of eastbound SR 32 into the proposed parking lot. Extensive sight distance is available for the proposed access point. An encroachment permit from Caltrans would be required for construction of the access and parking lot portions of the Concept Plan, as the plan occupies a portion of an existing Caltrans Right-of-Way. With implementation of the Disc Golf/Trailhead Area Concept Plan, the area would become an official destination in Upper Park as a trailhead and for disc golf. This could result in a potential increase in circulation hazards to motor vehicles traveling westbound along SR 32.</p> <p>Implementation of the Disc Golf/Trailhead Area Concept Plan could result in impacts on local traffic through an increase in circulation</p>	PS	<p>Traffic-4: Coordinate with Caltrans</p> <p>To address the potential increase in traffic hazards resulting from implementation of the Disc Golf/Trailhead Area Concept Plan, the City shall coordinate with Caltrans to obtain an encroachment permit for construction of the site access and parking lot for the Disc Golf/Trailhead area. As part of the consultation with Caltrans, the City shall address the potential need for additional signage and/or a left turning lane to address traffic safety along SR 32. The City shall implement any measures deemed necessary by Caltrans as a condition of the encroachment permit or as a result of the consultation on safety.</p> <p><i>Applies to:</i> Disc Golf/Trailhead Area Concept Plan</p> <p><i>Timing/Implementation:</i> Prior to construction of the Disc Golf/Trailhead Area Concept Plan</p> <p><i>Responsible Party:</i> City of Chico</p> <p>Implementation of Mitigation Measure Traffic-1 would reduce potentially significant impacts on traffic safety resulting from implementation of the Disc Golf/Trailhead</p>	LTS

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<p align="center">Table E7-1 Summary of Project Impacts and Mitigation Measures</p>			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>hazards to Park users at the Disc Golf/Trailhead Area project site. This would be a potentially significant impact subject to mitigation.</p> <p><i>Applies to:</i> Disc Golf/Trailhead Area Concept Plan</p>		Area Concept Plan to a less than significant level.	
<p>TRAFFIC-5: POTENTIAL FOR INADEQUATE EMERGENCY ACCESS</p> <p>The BPMMP contains several elements addressing the need for adequate emergency access in Bidwell Park. Specifically, BPMMP Public Safety and Emergency Access Implementation Strategy I. PS/ES-5 stipulates that an emergency response plan for Bidwell Park should be established, and Upper Park Implementation Strategy I. Upper-11 calls for the development of an emergency access plan for Upper Park, helping to ensure the continued adequacy of emergency access. As described in Impact TRAFFIC-1 above, implementation of the BPMMP and Park Improvement Projects is not expected result in an increase in traffic levels in the Park. In addition, no facilities would be constructed that would require increased access to the Park by emergency vehicles. Safe access to the Disc Golf/Trailhead Area would be addressed as part of the consultation with Caltrans and the implementation of any additional measures deemed necessary to provide access as discussed under Mitigation Measure Traffic-1 above. The construction of a bridge in Upper Park will provide improved access for both park visitors and emergency responders. Therefore, implementation of the BPMMP and the four Park Improvement Projects is not expected to result in the potential for inadequate emergency access.</p> <p>Impacts of the BPMMP and Park Improvement Projects on emergency access to the Park would be less than significant. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p>	LTS	No mitigation is required.	

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**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>TRAFFIC-6: CONFLICT WITH LOCAL POLICIES SUPPORTING ALTERNATIVE TRANSPORTATION</p> <p>The BPMMP and Park Improvement Projects have been developed consistent with local policies and ordinances pertaining to alternative transportation. Implementation of the BPMMP and the Park Improvement Projects therefore is not expected to result in any conflicts with local policies and ordinances.</p> <p>Implementation of the BPMMP and the four Park Improvement Projects would not result in any conflicts with local policies regarding alternative transportation, and no impact would occur. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p>	NI	No mitigation is required.	
<p>E4.3.13 UTILITIES AND SERVICE SYSTEMS</p>			
<p>UTIL-1: DECREASED AVAILABILITY OF WATER, NATURAL GAS, OR TELEPHONE SERVICE OR OTHER COMMUNICATION SERVICES</p> <p>Neither the BPMMP nor the four Park Improvement Projects contain any elements that would affect the supply of water or availability of natural gas in the Park or surrounding areas. Telephone Service Objective O. TS-1 of the BPMMP calls for telephone service in the Park, and Internet and Cell Phone Objective O. I/CP-1 calls for the consideration of Internet and cell phone access for some areas of the Park. The Implementation Strategies and Guidelines I. TS-1 through I. TS-3 call for analyzing the existing public telephone locations and increasing their availability as funding allows, as well as providing and expanding emergency telephones. I. I/CP-1 calls for enhancing cell phone coverage and prioritizing opportunities for emergency calls. If implemented, these objectives and the associated implementation</p>	B	No mitigation is required.	

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<p align="center">Table E7-1 Summary of Project Impacts and Mitigation Measures</p>			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>strategies and guidelines would improve the availability of telephone service or other communications.</p> <p>Implementation of the BPMMP as well as the four Park Improvement Projects would result in no impact on the availability of water and natural gas and might result in beneficial impacts on the availability of telephone service and other communications. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p>			
<p>UTIL-2: EXCEEDANCE OF WASTEWATER TREATMENT REQUIREMENTS OR CAPACITY OR INCREASED DEMAND FOR WASTEWATER TREATMENT</p> <p>Neither the BPMMP nor the four Park Improvement Projects contain any elements that would result in exceedance of the Central Valley Regional Water Quality Control Board’s wastewater treatment requirements, nor would they require the construction of new wastewater treatment facilities or the expansion of existing ones. Only the Horseshoe Lake Area Concept Plan calls for porta-potties, currently available at this location, to be replaced with permanent bathrooms. These bathrooms would likely be composting toilets, but would not be on a septic system. Overall, implementation of the BPMMP and the four Park Improvement Projects would not result in substantial additional demand for wastewater treatment. In addition, if necessary, the City has adequate capacity to serve the BPMMP and Park Improvement Projects in addition to their existing commitments.</p> <p>Implementation of the BPMMP as well as the four Park Improvement Projects would result in a less than significant impact on wastewater treatment requirements and capacity. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept</p>	LTS	No mitigation is required.	

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Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Plan			
<p>UTIL-3: POTENTIAL NEED FOR NEW OR EXPANDED STORMWATER DRAINAGE FACILITIES</p> <p>The BPMMP does not contain any element that would require the construction of new or expansion of existing stormwater facilities. As discussed in Section E 4.3.7, “Hydrology and Water Quality,” of this EIR, each of the four Park Improvement Projects would result in a minor increase in the amount of hardened surfaces in the Park. However, the increase is negligible compared to the overall size of the Park and the widespread presence of natural surfaces in the immediate vicinity of all Park Improvement Projects locations; therefore, it is not expected to substantially increase the amount of stormwater runoff, which in turn would require construction of new or expansion of existing stormwater drainage facilities.</p> <p>Implementation of the BPMMP and the four Park Improvement Plans would result in less than significant impacts on stormwater facilities. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p>	LTS	No mitigation is required.	
<p>UTIL-4: POTENTIAL INCREASED DEMAND FOR CURRENT WATER SUPPLIES</p> <p>Implementation of the BPMMP and the four Park Improvement Projects would not result in any new facilities that would place an additional demand on the current water supply in Bidwell Park. No new or expanded entitlements would be required, and sufficient water supply would be available.</p> <p>Implementation of the BPMMP as well as the four Park Improvement Plans would result in no impact on local water supply. No mitigation is</p>	NI	No mitigation is required.	

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Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>required.</p> <p><i>Applies to:</i> BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p>			
<p>UTIL-5: POTENTIAL FOR INSUFFICIENT LANDFILL CAPACITY</p> <p>Bidwell Park’s solid-waste disposal needs are not expected to change a result of implementation of the BPMMP and the four Park Improvement Projects. Recycling receptacles will be provided in high use areas. Increases in Park usership have the potential result in an increase in demand on solid-waste disposal needs; however, neither the BPMMP nor the Park Improvement Projects aim to increase Park usership. Therefore, the BPMMP and Park Improvement Projects would not result in a substantial increase in the amount of solid waste disposed of at local landfills.</p> <p>Implementation of the BPMMP as well as the four Park Improvement Plans would result in no impact related to demands on the capacity of local landfills. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p>	NI	No mitigation is required.	
<p>UTIL-6: CONFLICT WITH LOCAL POLICIES AND ORDINANCES RELATED TO SOLID WASTE</p> <p>Implementation of the BPMMP and the four Park Improvement Projects would comply with the City’s adopted policies related to solid waste, including recycling. No conflicts with local policies and ordinances are expected.</p> <p>Implementation of the BPMMP as well as the four Park Improvement Plans would not result in conflicts with local policies and ordinances</p>	NI	No mitigation is required.	

**Table E7-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>related to solid waste, and no impact would occur. No mitigation is required.</p> <p><i>Applies to:</i> BPMMP, Trails Plan, Horseshoe Lake Area Concept Plan, Cedar Grove Area Concept Plan, Disc Golf/Trailhead Area Concept Plan</p>			

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