

Appendix A: Design Guidelines, Management Guidelines and Conservation Measures

Part 1: Design Guidelines

Part 2: Management Guidelines and Conservation Measures

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5 DESIGN GUIDELINES

The character of Saratoga Quarry Park will be defined by its natural setting, historic features, and the individual park features that comprise it. For this reason, it is important that all park components be designed and constructed to be consistent with the Park's historic character and environmental setting. Where possible, park features should be constructed with natural and durable materials, such as concrete, metal, wood, or locally-sourced stone, and designed with consideration to historic and environmental context. Guidelines for ensuring that the design of specific park features and elements reflect the natural beauty and unique history of the Park, while allowing for flexibility and innovative design solutions, are provided below.

A. GATEWAYS AND FENCING

The Park entrance should be a prominent threshold/gateway that will provide a strong sense of arrival and exemplify the character of the Park. The gateway should be constructed with natural materials that exemplify Quarry Park, such as stone, concrete, metal and wood. Gates should enable the site to be closed to the public at night and be installed at the Park entrance, as well as the Park exit from East Quarry Park Road. The gate at the Park exit should be of smaller scale and designed for utility. Gates and/or bollards should be installed, as necessary, to restrict vehicular access to the Lower Terrace Road and service for clear non-vehicular access. All gates and bollards should be made of durable materials, such as metal, with a natural finish.

Fencing should be provided at entrances to the property and around habitat restoration areas, such as along Saratoga Creek and the pond, and hazardous areas. Split-rail fencing, or other low, rustic fencing constructed of natural materials, is preferred in most locations. However, chainlink fence and guardrails should be used when necessary to protect resources and ensure safety.

B. PARKING

Parking areas should be designed for efficient circulation and to maximize permeable surfaces and shade. The surface for parking areas should be compatible with anticipated use. Parking areas that receive heavy and regular use should be paved with asphalt or porous paving systems, whereas parking areas that experience light-

er use may have unpaved surfaces with gravel or road base material. Trees should be planted around parking areas to define the space and increase shade, particularly around the lower parking lot to provide a buffer from both the ravine and Route 9.

All parking areas should include bioswales along the perimeter, and be designed to comply with the *October 2009 California Regional Water Quality Control Board San Francisco Bay Region Municipal Regional Stormwater NPDES Permit* (C.3 and SWPPP requirements). These requirements promote on-site stormwater treatment and detention, with emphasis on infiltration, water harvesting, and re-use. In addition to utilizing permeable surfaces that allow for infiltration, the use of swales and other stormwater features should be explored for all parking areas. Swales should have flat bottoms at least 18-inches wide, utilize rock cobble at points of concentrated flow, and be vegetated with native plants where possible. Swales should not be planted with turf.

C. ROADS

All roads should be designed to be as narrow as possible while accommodating anticipated use and meeting safety standards. Roads should be designed to accommodate intended uses, such as park visitor vehicles, school buses, fire apparatus vehicles, and other service vehicles.

West Quarry Park Road and Upper Terrace Road provide access to restroom structures, and therefore it is important that comply with Santa Clara County Fire Marshal Office's standard requirements for 20 feet minimal roadway width and inside turning radii of at least 42 feet. These roads should be designed for all weather, and include shoulders where feasible.

All roads that will be publically accessible should ultimately be paved to accommodate use, but most roads may be unpaved in early phases of the project. However, given the steep grades of the Upper Terrace Road and Lower Terrace Road it is recommended that these roads be paved prior to public vehicular access. Unpaved roads, including service roads that double as trails, should have compacted base materials to address long-term durability and maintenance.

D. TRAILS

Trails should utilize existing roads and routes where possible. New routes may be created when existing routes are not able to provide desired connectivity or have drainage issues or other problems that make trail sustainability infeasible. Improvements to existing roads should be designed to minimize erosion and extend the life of the trails while avoiding disturbance of the surrounding landscape. Any drainage structures, such as culverts, should be built for longevity and require minimal maintenance.

The width and grade of trails that utilize existing roads will be determined primarily by existing road width. New trails should be designed with grades of 15% or less and should be a minimum of 2-foot wide for single-use hiking trails or 6-foot wide for trails designated as multi-use as part of regional connections. All trails should have natural tread.

Rest stops with benches should be strategically located along all trails to emphasize scenic views, encourage a diversity of experiences, and provide shade and other pedestrian comforts.

E. ENTRY PLAZAS

The entry plazas located at the Quarry Floor and Upper Terrace should be designed as accessible, paved plazas with vehicle drop-offs. Each plaza should include a kiosk with informational signage, water fountains, composting toilets, and receptacles for trash and recycling. Dog and horse courtesy stations should be included as needed.

Bicycle parking should be provided at the entry plazas. Bicycle racks should be galvanized steel U-racks, looped-racks, or racks of a similar design, with a metal finish. If paint is necessary, racks should be painted with neutral tones.

F. PICNIC AREAS

Picnic areas should be sited and grouped to allow flexibility of programming, used by different sized groups, and to take advantage of existing/historic picnic areas and scenic views. See Chapter 4, Figure 14 (Use Areas) for recommended locations. A 12- to 22-foot tall shelter, with picnic tables and receptacles for trash and recycling, should be provided at the large group picnic facility, adjacent to the multi-purpose field in the Upper Terrace. As one of the larger built elements in the

Park, the shelter presents an opportunity to define the Park's character. The potential to replicate the historic roofline of the loading structure or otherwise reference the site's history should be explored when designing the shelter. In the Lower Terrace Use Area, existing stone work, picnic tables, benches, and BBQ pits in the Lower terrace should be restored to be durable and safe, while maintaining its historic aesthetic.

G. NATURAL PLAYGROUND

The playground in/adjacent to the multi-purpose field and group picnic area should be comprised of natural materials, including log balance beams, stepping stumps, boulders, and trees with unique, low, and durable branching patterns. Prefab playground equipment should not be used.

H. EVENT SPACE

The event space in the Lower Terrace should be designed to be a flexible venue for special events, such as weddings and parties, and therefore should have minimal constructed features. Brush should be cleared to create open space and enhance views, but trees in good health should be retained where possible. Planting and/or fencing should be used around the northern perimeter to protect the public from the steep slope, and existing stone work and historic features should be restored and/or retained to enhance the area's historic aesthetic.

I. LOADING STRUCTURE

The loading structure should be restored to be structurally safe and to support the future uses of the space, which could be an exhibition space for the historic information about the property. The entrance to the space should be off of the entry plaza, situated on its west side. The space to the east of the building can be used as a loading space for service vehicles. Any enhancements to the structure should be designed with consideration to the historic structure.

J. PLANTING

All new planting at the Park should be predominately native, regionally appropriate, and should not include any invasive planting, as defined on the current “Don’t Plant a Pest” list published by the California Invasive Plant Council (Cal-IPC). Any cut surfaces should be planted with native groundcovers. Recommendations for the riparian buffer and restoration planting are provided in Chapter 7 (Management Guidelines), Table 7.1.

K. SITE FURNISHINGS

Existing site furniture, such as the stone and wood seating walls in the historic picnic area, should be refurbished where possible. New furnishings should complement existing furniture with similar materials and style. As true for all park features, site furnishings should be made of durable materials, such as concrete, metal, wood, or locally-sourced stone, and should have natural or neutral colored finishes.

L. SIGNAGE

Signage should be durable and framing/support structures should be made of natural materials, where possible. Text and graphics displayed on signage should be specific to the character of Saratoga Quarry Park and should include the City of Saratoga logo. Additional discussion of wayfinding, interpretive, and hazard is provided in Chapter 4 (Preferred Design), Chapter 6 (Interpretive Program), and Chapter 8 (Implementation and Phasing).

*Part 2: Management Guidelines and Conservation
Measures*

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MANAGEMENT GUIDELINES

The management and maintenance program for Saratoga Quarry Park is divided into two categories: infrastructure operations and maintenance, and natural resources management. Guidelines for infrastructure operations and maintenance guidelines are identified as “MAINT,” and natural resource guidelines are identified as “RESOURCE.” In addition, Conservation Measures are provided for preventing impacts to the Park’s biological resources at the end of this appendix.

A. Infrastructure Operations and Maintenance

Protection of park resources and maintenance of park facilities will require various levels of efforts. Areas with high visitation will require regular maintenance and facilities upkeep, while areas with lower use and fewer facilities will require less frequent maintenance.

1. Park Access

Two Park gates are located along Route 9. In addition, bollards are located at the base of Lower Terrace Road. Both of these barriers, gates and bollards, are to be operated by City Staff as described below:

- MAINT.1 **Daily Park Opening and Closing.** In order to reduce risk of vandalism and accidental injury, the park will operate primarily as a dawn to dusk park. The City will address other unique opportunities programmatically, such as organized stargazing and night use. City staff will be responsible for opening and closing park gates each day.
- MAINT.2 **Provision of ADA Access to the Lower Terrace.** City staff will remove the bollards to Lower Terrace Road to provide access for ADA vehicles on an as-needed basis.
- MAINT.3 **Closing Park during threat of Fire.** The park’s gated entries will be closed by City staff during threat of fire to prevent accidental injury.

2. Infrastructure Maintenance and Facility Security

- MAINT.4 **Restroom Security and Maintenance.** Restrooms are to be locked each day when the park gates are closed. The bathroom maintenance schedule will be determined by use volume. Patrols through park will be conducted by City staff.
- MAINT.5 **Trash Removal.** The schedule for emptying trash receptacles will be determined by use volume. Maintenance will be performed by City staff. Debris, such as PVC pipe, should also be removed from the site when found to improve overall aesthetics and habitat value.
- MAINT.6 **Trail Maintenance.** Trails will be maintained on an as-needed basis. Maintenance will include clearing vegetation, proactively addressing drainage issues, and ensuring stable tread.

B. Natural Resources

This section discusses how native vegetation and habitat will be protected and enhanced at Saratoga Quarry Park through controls on visitor access, implementation of an effective interpretive program, and management of designated vegetation and habitat zones. Emphasis will be placed on protecting the relatively intact areas of native vegeta-

tion, controlling and working to eradicate highly invasive exotic plants, and encouraging the spread and natural succession of native communities on the site.

1. Riparian Buffers

The following guidelines provide specific recommendations for protecting riparian areas in the park, such as Saratoga Creek, the pond, and other areas with notable hydraulic patterns, including the historic picnic site.

RESOURCE.1 Avoid development and disturbance within 100-feet of the creek top of bank and pond, where possible, per County General Plan (Section R-RC 37, Part 2). In addition, alterations to hydrologic patterns of existing seeps and rivulets should be avoided to the extent feasible and any bridge improvements should span the active creek channel.

RESOURCE.2 Enhance creek buffer adjacent to the lower parking lots to protect the sensitive riparian corridor from disturbance by park users, enhance habitat, and improve water quality.

- a. Stabilize the existing dirt berms located between the lower parking lots and top of creek bank so they do not erode sediment into the stream. This may require light grading, seeding, erosion control blanket, and/or planting of trees and shrubs. Due to the proximity of these areas to the stream any plantings should be consistent with the general approach for riparian planting described under Resource 17. Denser plantings are recommended where possible to better buffer wildlife within the riparian corridor from adjacent human uses.
- b. Plant between the parking areas and the edge of the riparian corridor (or top of bank) with dense shrubs and trees.

RESOURCE.3 Balance any encroachments within the pond buffer with other on-site activities such as removal and control of invasive species, revegetation with native plants, introduction of erosion control measures to reduce sediment into aquatic systems, and restoration of natural hydrology along site drainages.

RESOURCE.4 Install wildlife friendly fencing and signage to discourage park users from entering riparian and wetland areas. Place fencing 25- to 100-feet from the pond and utilize fencing types, such as split rail, that do not restrict movement of wildlife species. Distance between fencing and these sensitive habitats can be lesser (e.g. 25-feet) when adjacent uses are less intensive (trails) and greater (e.g. up to 100-feet) when more intensive (roads, parking, picnic areas).

RESOURCE.5 Plant Place fencing 25- to 100-feet from the pond and utilize fencing types, such as split rail, that do not restrict movement of wildlife species. Distance between fencing and these sensitive habitats can be lesser (e.g. 25-feet) when adjacent uses are less intensive (trails) and greater (e.g. up to 100-feet) when more intensive (roads, parking, picnic areas).

RESOURCE.6 Direct any down and away from riparian and wetland areas (see Conservation Measure 7).

RESOURCE.7 Riparian and wetland buffer areas with diverse native species wherever possible to expand these valuable habitats and reduce the impacts of adjacent human uses on the resident wildlife. Dense plantings of na-

tive shrubs and trees are ideal as they provide new habitat area, provide a visual buffer that reduces disturbance of wildlife, and may diminish human intrusion into the habitat. The selection and layout of species to be planted should be directed by a qualified biologist. Section D., *Revegetation*, for typical planting approaches.

2. Protection of Special-Status Species Habitat

Guidelines for the protection of special-status species habitat are provided below. Additional avoidance and minimization measures for special-status species and their habitats are described in Appendix A, Conservation Measures.

RESOURCE.8 **Buffer Design.** Develop buffers around riparian and wetland habitat in consultation with a qualified biologist to ensure that any alterations benefit special-status species that may be present, such as the California red-legged frog (*Rana draytonii*) and San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*).

RESOURCE.9 **California Red-Legged Frog Protection.** Incorporate design measures aimed to eliminate or minimize habitat for the bullfrog (*Rana catesbeiana*), which preys on the California red-legged frog and is likely already present in the pond, into any plans to alter the pond or any other wetland features on the site.

RESOURCE.10 **Bat Protection.** Avoid any lighting near potential habitat for special-status bats or large colonies of more common species and ensure review of project designs near cave-like habitats (mines, large concrete structures with cavities, etc.) by a qualified biologist.

3. Invasive Species Control

These guidelines are intended to control non-native vegetation throughout the Park, in order to encourage the further establishment of native riparian woodland and scrub plant communities.

RESOURCE.11 **Target Species.** Target the following invasive species: French Broom (*Genista monspessulana*), Spanish Broom (*Spartium junceum*), Yellow Star Thistle (*Centaurea solstitialis*), Poison Hemlock (*Conium maculatum*), and Pampas Grass (*Cortaderia selloana*). The California Invasive Plant Council (Cal-IPC) Profiles webpage, which provides information on invasive plant species and should be consulted if new invasive plant species establish on the site.¹

RESOURCE.12 **IPM Program.** Develop an Integrated Pest Management (IPM) program to effectively control invasive plant species. The IPM program may involve short-term intense mechanical and possibly chemical eradication efforts, followed by on-going monitoring and maintenance practices that select for native species and less invasive, naturalized species. While limited herbicide application may be required to effectively control resprouting of these target species, non-toxic removal through repeated mechanical methods is generally preferred and will be used whenever feasible. Removal of invasive plants typically entails sev-

¹ California Invasive Plant Council (Cal-IPC) Profiles webpage: http://www.calipc.org/ip/management/plant_profiles/index.php. Two other useful invasive plant species websites are <http://www.cal-ipc.org/ip/management/ipcw/online.php> and http://www.wildwork.org/webdocs/Plague_of_Plants.pdf.

eral years of careful monitoring and re-growth removal. Removal of invasive plants typically entails several years of careful monitoring and re-growth removal.

RESOURCE.13 **Target Areas.** Begin removal in the most heavily used public areas, trails and construction areas, and gradually expand out from there as feasible. Invasive plant species control activities should continue to focus in specific areas until a high level of control is achieved before expanding to new control areas.

RESOURCE.14 **Implementation.** Involve the community in removal activities through organized volunteer stewardship events.

4. Revegetation

The following guidelines provide recommendations for planting in the Park to enhance habitat. Planting activities within wetlands or riparian habitats may require permits from various regulatory agencies, and habitat restoration plantings installed as mitigation for biological impacts per CEQA or project regulatory permits will require special protection, maintenance, and monitoring per the regulatory requirements. Recommended plant species for restoration planting is provided in Table 7-1.

RESOURCE.15 **Target areas.** Target revegetation activities in areas that are disturbed by project construction, cleared of invasive plant species, subject to erosion due to barren soil slopes, and habitat restoration areas.

RESOURCE.16 **General Planting.** Prepare planting sites and select species with consideration to hydrology and soils conditions. Most planting areas will require preparation of planting holes, soil amendment and either installation of an irrigation system or provisions for truck watering. Protection from browse will also be necessary for most plants. Revegetation areas that are designated as habitat restoration or buffer areas should at a minimum have signage to deter trampling or disturbance; fencing may be appropriate when adjacent to high use areas.

RESOURCE.17 **Woodland Planting.** Intermix trees, shrubs and understory plants where the intent is to create native riparian, broad leaved upland forest, or mixed woodland habitat. That structure will provide the highest habitat values. Tree densities, depending on the site and plant species, should generally range from 10-16 feet on-center and shrubs 6-10 feet on-center. Planting should take place in the fall/early winter when rains have moistened the soil.

RESOURCE.18 **Wetland Planting.** Undertake wetland planting from February through early March when possible; and ensure oversight by a qualified restoration ecologist.

RESOURCE.19 **Maintenance.** Maintain native revegetation maintenance (weeding, watering, replanting, etc.) for a period of three years after planting. Wetlands generally require less maintenance, and are sometimes fully established after one to two years, depending on the hydrology conditions.

RESOURCE.20 **Implementation.** Involve community or volunteer groups with small planting projects under the supervision of a qualified individual. Where a more significant effort is undertaken, or if the intent is to establish or buffer high quality native habitat then revegetation planning should be overseen by a quali-

fied restoration ecologist or landscape architect and revegetation should be implemented by experienced crews.

5. Erosion Control

The following erosion control guidelines should be implemented at Saratoga Quarry Park in order to minimize potential impacts to habitat and water quality caused by erosion. Additional measures for reducing impacts of erosion are identified in Conservation Measure *CM-2* (Stormwater Pollution Prevention BMPs).

RESOURCE.21 Stabilize, revegetate, and abandon existing roads that do not have the potential for future use as trails due to ongoing erosion problems. Prioritize maintenance and/or restoration of roads based on level of erosion and sedimentation of watercourses and wetlands.

RESOURCE.22 Minimize potential alterations of natural drainage patterns by utilizing erosion control materials and structures where applicable, and removing culverts and drainage diversions where appropriate.

RESOURCE.23 Design and locate new trails to maintain or restore natural drainage patterns, to minimize potential disturbance to vegetation and soil, and minimize potential water pollution due to erosion. Erosion control materials and structures should be used where applicable, and culverts and drainage diversions should be removed where appropriate.

RESOURCE.24 Limit development in riparian and other wetland areas to protect them from disturbance.

RESOURCE.25 Minimize soil disturbance associated with construction and maintenance operations, and prevent removal of naturally occurring soil to the extent possible.

RESOURCE.26 Revegetate disturbed ground, including any cut slopes, using native seeds and/or groundcover, and utilize mulch where there is potential for sedimentation of watercourses or wetlands.

CONSERVATION MEASURES

The following conservation measures (CM) are intended to prevent adverse effects on wildlife species and other biological resources:

CM-1. Prepare and Present a Worker Environmental Awareness Program

The City will retain a qualified biologist to prepare a Worker Environmental Awareness Program that will be presented to all construction personnel and employees before any ground-disturbing activities commence at the Project site. This presentation shall explain to construction personnel how best to avoid impacts on special-status species during construction. The program shall consist of a brief presentation explaining special-status species concerns to all personnel involved in the Project. The program shall include a description of special-status species potentially on the Project site and their habitat needs; an explanation of the status of the species and their protection under the federal Endangered Species Act (FESA), the California Endangered Species Act (CESA), the Migratory Bird Treaty Act

(MBTA), and/or the California Fish and Game Code; specific Conservation Measures applicable to special-status species; and the penalties for impacts.

The program shall also explain to construction personnel how to avoid impacts on areas subject to the jurisdiction of the U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and California Department of Fish and Wildlife (CDFW). The program shall include a description of these respective jurisdictional areas on the site, specifically permitted impacts, and measures to protect jurisdictional areas to be avoided. It will include maps showing the locations of jurisdictional areas and permitted impacts.

The Worker Environmental Awareness Program will be implemented by the City before the start of initial ground disturbance and will be continued through all phases of construction.

CM-2. Stormwater Pollution Prevention BMPs

Stormwater pollution prevention best management practices (BMPs) designed to prevent construction-related discharge into all surface waters shall be implemented. These BMPs must consider not only mobilization of sediments during construction (which will likely occur primarily in dry conditions), but also the potential for sediments loosened by Project activities to be moved downstream during the following wet season. These BMPs shall include, but not be limited to, the following:

- No debris, soil, silt, sand, bark, slash, sawdust, cement, concrete, washings, petroleum products or other organic or earthen material will be allowed to enter into or be placed where it may be washed by rainfall or runoff into waters of the U.S./State or aquatic habitat.
- No equipment will be operated in a live stream channel.
- Equipment shall be regularly maintained to prevent fluid leaks. Any leaks shall be captured in containers until the equipment is moved to a repair location. A spill prevention and response plan will be prepared prior to construction and will be implemented immediately for cleanup of fluid or hazardous materials spills.
- Standard erosion control and slope stabilization measures will be required for ground-disturbing activities performed in any area where erosion could lead to sedimentation of a waterbody.

CM-3. Minimize Impacts on Special-status Plants and Sensitive Natural Communities including Wetlands

All Project construction activities will be preceded by a pre-construction survey during which a qualified botanist will identify sensitive natural vegetation communities, including wetlands and other waters, within the activity area and clearly map or delineate them as needed in order to avoid and/or minimize disturbance. The botanist will use the results of the pre-construction survey, as well as information available from the California Natural Diversity Database (CNDDDB), Initial Study, and/or other suitable tools to determine whether habitat for special-status plants is present in or adjacent to the activity area. If the qualified botanist determines that no special-status plants are reasonably expected to occur within the activity area, no further action will be warranted. If the biologist determines that suitable habitat for special-status plants is present, the botanist shall conduct a focused survey for special-status plants during the appropriate time of the year to adequately identify special-status plants that could occur within the activity area.

To the extent feasible, the City will avoid and/or minimize impacts on sensitive natural communities and special-status plants by implementing one or more of the following, as appropriate, per the botanist's recommendation:

- Flag or otherwise delineate in the field the special-status plant populations and/or sensitive natural community to be protected. All such areas to be avoided shall be clearly marked on construction plans and designated as “no construction” zones.
- Allow adequate buffers around plants or habitat; the location of the buffer zone will be shown on the design drawings and marked in the field with stakes and/or flagging in such a way that exclusion zones are visible to construction personnel without excessive disturbance of the sensitive habitat or population itself (e.g., from installation of fencing).
- Time construction or other activities during dormant and/or non-critical life cycle period;
- Limit the operation of construction equipment to established roads whenever possible.

If special-status plant species or sensitive communities are present, then a qualified botanist will determine if a specific method of vegetation management is ecologically appropriate for a given area.

CM-4. Minimize Impacts on Special-status Amphibian and Reptile Species

The following measures shall be implemented prior to and during any ground-disturbing Project activities to avoid or minimize impacts on special-status amphibians and reptiles:

- Initial ground-disturbing activities within areas where California red-legged frogs (*Rana draytonii*) and western pond turtles (*Actinemys marmorata*) are most likely to occur (i.e., on-site pond, Saratoga Creek, and areas within 200 feet of these features) shall be performed during the dry season to the extent practicable.
- A qualified biologist will conduct one daytime and one nighttime survey within a 48-hour period preceding the onset of construction activities. Such surveys shall focus on wetlands, streams, ponds, riparian habitats, and areas within 200 feet of these features, but they shall also include a pedestrian survey of the entire impact area to survey for California red-legged frogs and western pond turtles in vegetation, under debris, in culverts, or in other areas that could provide refugia for these species.
- A qualified biologist will be present during all initial ground-disturbing activities performed in suitable habitat for the California red-legged frog or western pond turtle.
- If a California red-legged or western pond turtle (or any animal that personnel think may be one of these species), the following protocol shall be implemented:
 - All work that could result in direct injury, disturbance, or harassment of the individual animal shall immediately cease.
 - A dedicated Project contact (e.g., a supervisor) shall be immediately notified.
 - If adults or non-larval juveniles of one of these species are present, the individuals will be allowed to leave the activity area undisturbed or they will be captured and relocated by a qualified biologist (with USFWS and/or CDFW approval, depending on the listing status of the species in question), after which work may proceed. The candidate sites for relocation shall be identified before construction begins and shall be selected based on the size and type of habitat present, the potential for negative interactions with resident species, and the species’ range (e.g. in pools within Saratoga Creek immediately upstream or downstream of the study area).

- If eggs or larvae of one of these species are found, a buffer will be established around the location of the eggs/larvae and work may proceed outside of the buffer zone. No work will occur within the buffer zone. Work within the buffer zone will be rescheduled until the time that eggs have hatched and/or larvae have metamorphosed, at which time the following measure shall be implemented.
- A qualified biologist will be present to monitor all vegetation removal within aquatic or riparian habitats, and such vegetation removal will be conducted by hand.
- Vehicles will observe a 15-mile-per-hour speed limit during construction. Off-road traffic outside of the designated development area will be prohibited.
- To eliminate an attraction to the predators of the California red-legged frog, western pond turtle, or other special-status wildlife species, all food-related trash items such as wrappers, cans, bottles, and food scraps will be disposed of in solid, closed containers (trash cans) and removed at the end of each working day from the entire construction site.
- Tightly woven fiber netting or similar material will be used for erosion control or other purposes at the Project site to ensure that individuals are not trapped. This limitation will be communicated to the contractor through use of Special Provisions included in the bid solicitation package. Plastic monofilament netting (erosion control matting) or similar material will not be used at the Project site because California red-legged frogs may become entangled or trapped in it.
- The use of pesticides in or near all wetlands and riparian areas should be avoided to the extent possible, must be in compliance with the City of Saratoga's Integrated Pest Management policy, and must also comply with a Stipulated Injunction that applies to "buffer areas around certain habitats of the California red-legged frog, and disallows use of certain pesticides within those habitats and buffer zones" (<http://www.epa.gov/espp/litstatus/redleg-frog/steps-info.htm>).

CM-5. Minimize Impacts on Nesting Birds

Project construction activities that occur between 1 February and 31 August will be preceded by a survey for nesting birds. Activity areas will be checked by a qualified biologist for nesting birds no more than one week prior to starting work. If a lapse in Project-related work of one week or longer occurs, another focused survey will be conducted before Project work can be reinitiated.

If an active nest is found sufficiently close to the Project work area (i.e., within 300 feet for raptors or 100 feet for non-raptors), a qualified biologist will determine the extent of a disturbance-free buffer zone to be established around the nest (typically 300 feet for raptors and 100 feet for non-raptors), to ensure that no nests of species protected by the MBTA and California Fish and Game Code will be disturbed during Project implementation. The buffer distance is measured as the straight-line distance between an active nest and the activity, taking both horizontal and vertical distance into account. No Project-related activities will be performed within the buffer until the young have fledged or the nest has been determined to be inactive by a qualified ornithologist. The boundary of each buffer zone will be marked with fencing, flagging, or other easily identifiable marking if work will occur immediately outside the buffer zone.

Reductions in the standard buffers (i.e., to buffers less than 100 feet for non-raptors and less than 300 feet for raptors) may be allowed where circumstances suggest the birds will not abandon the active nest with a reduced buffer size. A qualified biologist, in consultation with CDFW, will determine whether reducing the buffer is likely to substantially increase disturbance of nesting birds and if not, what reduced buffer is appropriate.

CM-6. Minimize Impacts on San Francisco Dusky-footed Woodrats

The following measures will be implemented prior to and during any ground-disturbing Project activities to avoid or minimize impacts on San Francisco dusky-footed woodrats:

- Prior to any clearing of, or work within, woodland, forest, riparian, and scrub habitats, a qualified biologist will conduct a survey for San Francisco dusky-footed woodrat nests. If active nests are determined to be present within or very close to the impact areas, the following measures will be implemented.
 - Dusky-footed woodrats are year-round residents. Therefore, avoidance measures are limited to restricting Project activities to avoid direct impacts on woodrats and their active nests to the extent feasible. Ideally, a minimum 10-foot buffer will be maintained between Project activities and each nest to avoid disturbance. In some situations, a smaller buffer may be allowed if, in the opinion of a qualified biologist, removing the nest would be a greater impact than that anticipated as a result of Project activities.
 - If avoidance of active nests is not feasible, then the woodrats will be evicted from their nests prior to the removal of the nests and onset of any clearing or ground-disturbing activities to avoid injury or mortality of the woodrats. The nests will be dismantled and the nesting material moved to a new location outside the Project's impact areas so that it can be used by woodrats to construct new nests. Prior to nest deconstruction, each active nest will be disturbed by a qualified wildlife biologist to the degree that all woodrats leave the nest and seek refuge out of the impact area. Whether the nest is on the ground or in a tree, the nest will be nudged to cause the woodrats to flee. For tree nests, a tarp will be placed below the nest and the nest dismantled using hand tools (either from the ground or from a lift). The nest material will then be piled at the base of a nearby hardwood tree or shrub (preferably an oak with refuge sites among the tree roots or with dense vegetation or other refugia nearby) outside of the impact area. The spacing between relocated nests will not be less than 100 feet, unless a qualified biologist has determined that the habitat can support higher densities of nests.

CM-7. Lighting

During construction and operation, low-intensity lighting, downcast lighting, or other appropriate lighting technology shall be incorporated into the design where lighting is to be placed adjacent to sensitive habitat for wildlife, to reduce potential adverse effects of wildlife movements. During operations, lighting will be limited to that necessary for public safety.

CM-8. Work Site Housekeeping

- Employees and contractors will maintain the work site in neat and orderly conditions on a daily basis, and will leave the site in a neat, clean, and orderly condition when work is complete.
- For activities that last more than one day, materials or equipment left on the site overnight will be stored to avoid erosion, leaks, or other potential impacts to water quality.
- All trash that is brought to a Project site (e.g., plastic water bottles, plastic lunch bags, cigarettes) will be collected at the site daily and removed or stored in a secured container.

CM-9. Invasive Species Control Measures

In order to minimize the potential for Project activities to result in the introduction or spread of non-native plant species, the following measures will be implemented:

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- Potential sources of weed propagule spread will be removed by cleaning equipment used in vegetation removal or ground disturbance. Prior to beginning work involving vegetation removal or ground disturbance, all hand tools and equipment used in these activities will be thoroughly washed at a location where wash water is deposited into a sanitary sewer (i.e., wash water potentially containing weed seeds will not be deposited in habitats or areas where this could cause new weed infestations). After being used at the Project site, and before being used at another Project site, the equipment will be washed again using these same methods.
- Following the completion of any work involving vegetation removal or trimming, invasive vegetation trimmed from within the study area will be collected and taken to a composting facility capable of neutralizing invasive plant material through high-heat composting or similar methods.

CM-10. Herbicide Use

A qualified biologist will determine presence/absence of sensitive resources in designated herbicide use areas. A certified pest control advisor will then prepare a written recommendation including site-specific control methods (including the use of approved herbicide and surfactants), which will include, but not be limited to, the following:

- All applications of herbicides and adjuvants will occur in accordance with federal and state regulations.
- Herbicide application shall not occur when wind conditions may result in drift.

CM-11. Restore Temporarily Impacted Areas Habitats

Temporarily impacted habitats are generally those habitat types that support herbaceous vegetation and can be reestablished within one growing season of the impacts. Areas where temporary, construction-related impacts have taken place shall be restored to pre-project conditions. Temporary impacts would include ground disturbance and removal of non-native groundcovers. Restoration would typically include decompacting and finish-grading the soil surface and applying appropriate erosion control measures, including seeding.