3 PROJECT DESCRIPTION

3.1 INTRODUCTION

The proposed Land Use Plan Amendment (LUPA) for Miller/Knox Regional Shoreline (Miller/Knox or park) is the subject of this Draft Program Environmental Impact Report (PEIR). The LUPA is a long-range planning document that evaluates park resources, documents and recommends programs for managing and conserving these resources, discusses key planning issues, indicates relevant policies, and offers proposals for future recreational and service facilities to provide for the range of public recreational needs in the park. The primary purpose of the LUPA is to protect park resources while providing quality regional recreational access at Miller/Knox.

3.2 MILLER/KNOX LOCATION

Miller/Knox is located at 900 Dornan Drive in the southwestern portion of the City of Richmond in the community known as Point Richmond (Exhibit 3-1). Main roadway access to Miller/Knox is provided by Dornan Drive from the north and Seacliff Drive/Brickyard Cove Road from the east. Regional access to Point Richmond and the Miller/Knox vicinity is provided by Interstate 580 (I-580), which is north of the park.

Dornan Drive divides Miller/Knox into an east and west section. The area east of Dornan Drive includes hiking trails in the ridgeland area, which is a part of the Potrero Hills. The area west of Dornan Drive includes Ferry Point at the southern end and Keller Beach at the northern end with the lagoon and the Bray property between them. Miller/Knox is bounded by the San Francisco Bay to the west along the length of the park’s bay shoreline and to the south at Ferry Point. Residential neighborhoods are adjacent to Miller/Knox on the north (Point Richmond community) and south (Brickyard Cove and Seacliff). Brickyard Cove Marina and Richmond Yacht Club are south of the Brickyard Cove development. Industrial uses associated with Port Richmond are located east of Miller/Knox.

3.3 DESCRIPTION OF THE PROPOSED LUPA

The East Bay Regional Park District (District) is proposing the Miller/Knox LUPA to update the 1983 Land Use Development Plan (LUDP); to incorporate the Bray property, which was acquired by the District in 1999; and to create a comprehensive plan to integrate all areas of Miller/Knox. The Miller/Knox LUPA would serve as the long-term planning framework for the implementation of recreation facilities at Miller/Knox and management of its natural, cultural, and recreational resources. It would be used as a tool to guide project development decisions by the District, define park management strategies, and support applications for implementation funding.

The overall goals and objectives of the LUPA have guided the development of specific goals and recommendations within five geographic planning areas of Miller/Knox: Ferry Point Planning Area, Bray Planning Area, Bay Shore Planning Area, Lagoon Planning Area, and the Ridgeland Planning Area (Exhibit 3-2). This Draft PEIR analyzes the potential environmental effects of implementing the Miller/Knox LUPA recommendations described in more detail below for each of the five planning areas.
Exhibit 3-2
Miller/Knox Land Use Plan Amendment Planning Areas
3.4 EXISTING LAND USES, LAND USE DESIGNATIONS, AND SURROUNDING DEVELOPMENT PROPOSALS

Miller/Knox is a regional shoreline park that supports substantial recreational use from the residents of the surrounding Richmond community and the greater East Bay region, as well as visitors to the region seeking a public shoreline of the San Francisco Bay. The park contains a variety of recreation, scenic, natural, and cultural resources, including a long bay shoreline, panoramic views of the Bay and San Francisco skyline, segments of the Bay Trail, a Bay Water Trail shoreline site, several picnic areas, large turf play areas, a playground, Ferry Point Beach, Keller Beach, a kayak launch point and washing area, fish washing station, hiking trails, historic buildings and pier on Ferry Point, Golden State Model Railroad Museum, and other public recreation amenities.

The City of Richmond 2030 General Plan land use designation for Miller/Knox is Parks and Recreation. Adjacent to Miller/Knox, the land is designated Hillside Residential to the north; Low Density Residential, Medium Density Residential, Neighborhood Mixed Use, and Marine and Waterfront Commercial designations to the south; and Port, Business/Light Industrial, Industrial, and Public, Cultural, and Institutional to the east.

The Miller/Knox Land Use Development Plan (LUDP), which was adopted by the District’s Board of Directors in December 1983, covered approximately 263 acres that included most of what the LUPA considers the Lagoon Planning Area, Keller Beach, and the Ridgeland Planning Area. The LUDP designated the Lagoon Planning Area and Keller Beach as active recreation and the Ridgeland Planning Area as passive recreation. The Land Use Development Plan Amendment (LUDPA) for Ferry Point Pier and Ferry Point Terminal was adopted by the District’s Board of Directors in 1995 following acquisition of those properties. The LUDPA designated the ten-acre land area as a recreation unit and designated Ferry Point Terminal and Ferry Point Pier as special protection units due to there being National Register Contributing Elements. The Checklist Amendment approved by the District’s Board of Directors in April 2000 for acquisition of the property that defines the LUPA’s Bray Property Planning Area did not include land use designations. The LUPA is designating the Ridgeland Planning Area as a natural unit and the remainder of Miller/Knox as a recreation/staging unit. Ferry Point Pier and Terminal will be designated Special Protection Features and the small island within the lagoon will be designated Special Management Feature. Exhibit 3-3 illustrates the LUPA land use designations for Miller/Knox.

Several planned projects are located on Point Richmond near Miller/Knox. The Terminal One residential project will be immediately southeast of Miller/Knox, adjacent to the Richmond Yacht Club on a site designated by the City as Medium Density Residential. This development was approved by the Richmond City Council on July 5, 2016. Shea Homes, also known as Waterline Homes, is a residential project east of Brickyard Cove on a site also designated by the City as Medium Density Residential. This development was approved by the Richmond City Council on November 14, 2014. The Quarry residential project will be adjacent to the Ridgeland Planning Area just east of Miller/Knox on a site designated by the City as Parks and Recreation. This development was approved by the Richmond City Council on February 1, 2018.

3.5 MILLER/KNOX REGIONAL SHORELINE DESCRIPTION

Miller/Knox encompasses approximately 307 acres of grasslands, shrublands, woodlands, picnic areas, hiking areas, pedestrian and cycling trails, and beaches. The developed portions of the park include maintained landscaping and turf and a managed, artificial lagoon. Undeveloped areas support both native vegetation and areas of non-native, invasive species. Topographically, the portion of Miller/Knox west of Dornan Drive is mostly flat, with the exception of the land above Keller Beach. The ridgeland trail area east of Dornan Drive is hilly with elevations of up to 371 feet at Nicholl Knob. Existing recreational facilities include segments of the Bay Trail, picnic areas, beaches, turf play areas, hiking trails, and a Bay Water Trail kayak launch site. Historic resources include the Ferry Point historic pier, warehouse, and pumphouse. Operational and support facilities include four paved parking areas, the Bernardi house (a District employee security residence), sewer lift stations, and the lagoon water pumping system.

For the purposes of LUPA preparation, five planning areas have been identified. The five planning areas are shown on Exhibit 3-2 and described in more detail below.
Exhibit 3-3
East Bay Regional Park District Land Use Designations at Miller/Knox Regional Shoreline
3.5.1 Ferry Point Planning Area

The Ferry Point Planning Area is triangular property located adjacent to the Bray Planning Area at the southern tip of Miller/Knox (APNs 561-010-015, 561-010-006, and 561-010-010). In total, the Ferry Point property is approximately 28 acres, 18 of which are sub-tidal and 10 of which are on land. The District acquired the property in 1991 from Atchison, Topeka and Santa Fe Railroad (ATSF) and the California State Lands Commission (CSLC). The negotiations with CSLC required the District to undertake phased site clean-up, as well as a long-term lease for the Ferry Point Pier and associated sub-tidal areas. Remediation was completed in 2012.

The Ferry Point Planning Area features a section of the San Francisco Bay Trail; picnic areas; the Ferry Point fishing pier; the historic pier; and open areas for passive recreational use. Two National Register-eligible buildings (the pumphouse and warehouse) are located behind fencing, excluding this area from public use. Both the pumphouse and warehouse are in poor condition and covered in extensive graffiti. The historic pier has also been determined to be eligible for the National Register. Interpretive panels and benches are located along the San Francisco Bay Trail and at the fishing pier.

Typical operations and maintenance activities in the Ferry Point Planning Area include daily cleaning of the restrooms and fish cleaning station in Ferry Point Plaza, daily emptying of garbage cans, and regular grass mowing in the open space areas. Currently, the historic buildings at Ferry Point are fenced off and public access is prohibited. Once per month, District operations staff remove trash from the historic pumphouse and warehouse buildings and inspect the fishing pier. Maintenance of the historic pier occurs on an annual basis and includes general clean-up using a boat and special-made ladder at high tide.

HISTORY

Ferry Point played a pivotal role in rail, shipping, and ferry transportation in the early part of this century as the western terminus of the ATSF transcontinental railroad system from 1900 to 1975. It served as a major transportation hub for commerce in the Bay Area and transported people, freight, and mail between San Francisco and Chicago and beyond. The railroad terminus and shipping facility made the land prime for industry, and several industrial sites were built in the area, including Standard Oil of California, which contributed to the development of Point Richmond, the City of Richmond, and was the forerunner of the Port of Richmond. In 1912, a large terminal structure was constructed that included a passenger waiting area for ferry service. This structure was demolished in approximately 1970, but the paved footprint of this building remains on site. The fuel pumphouse and warehouse were constructed in the late 1920’s. Other structures, including a double garage, three residences, and five storage sheds were also constructed at this time, and were subsequently demolished in 1946.

The Ferry Point Property has been determined to be potentially eligible for the National Register of Historic Places and the California Register of Historic Resources for these reasons. Additionally, the historic pier at Ferry Point is a City of Richmond Landmark and is listed on the City’s Historic Resources Inventory. The remaining pumphouse and warehouse buildings are associated with the historic pier and, therefore, are included as part of the City’s landmark designation. The District acquired the property in 1991 and completed improvements in 1995, which included a section of the San Francisco Bay Trail, fencing, and restrooms. In 1995, the Miller/Knox Ferry Point Pier and Ferry Point Terminal Land Use Development Plan Amendment (LUDPA) and associated Negative Declaration were prepared for rehabilitation of the historic pier. The LUDPA designated the 10-acre land portion of the property as a Recreation Unit, indicating that the area is suitable for more intensive recreational use and is of sufficient size to provide the necessary infrastructure to support the use. Portions that include the historic pier and buildings were designated as a Special Protection Unit in recognition of its historic significance. The LUDPA also provided for construction of the Ferry Point Pier as a public pier that could be used for fishing, it was built in 2001. Structural evaluations were completed for the historic pier and concluded that it maintained its structural integrity, so the District
retained it for its significant landmark status and its value as a navigation feature on San Francisco Bay. The historic pumphouse and warehouse buildings also remain, adjacent to the Ferry Point Pier.

Ferry Point Plaza was reconfigured in 2015 as a part of the Ferry Point Public Access Improvement Project to include a kayak wash area, outdoor shower, and fish cleaning station. Outdated restrooms were replaced, and new drinking fountains and picnic areas were installed. The project also improved access to the small sandy beach, which is a popular launch point for non-motorized boats and is part of the San Francisco Bay Water Trail, and developed a new concrete pathway from the Ferry Point parking area to the beach consistent with ADA requirements. The project also improved the ADA parking spaces to Ferry Point Beach and added “San Francisco Bay Water Trail” signage.

NATURAL RESOURCES

Evaluations completed before the District’s acquisition of the Ferry Point property in 1991 indicate that tidally influenced shallow groundwater may be present, and there is a potential for perched groundwater in low areas of the bedrock now buried by fill. Subsurface groundwater drains through the Ferry Point Planning Area from the adjacent Bray Planning Area to San Francisco Bay.

In the undeveloped areas of the Ferry Point Planning Area, vegetation is classified as primarily grassland, consisting of mostly non-native species, intermixed with coyote brush scrub species. These plant communities provide habitat for California ground squirrel, western fence lizard, gopher snakes, jack rabbits, and frogs. Eelgrass beds are present off-shore and provide food and habitat for fish and invertebrates.

Ferry Point attracts a variety of bird species, particularly wintering birds between November and March. Bird species include American white pelican, California brown pelican, burrowing owl, northern harrier, redhead, and white-tailed kite. The open water of San Francisco Bay provides potential migration routes for several listed fish species: chinook salmon – Central Valley spring-run evolutionary significant unit (ESU) (*Oncorhynchus tshawytscha*), chinook salmon – Sacramento River winter-run ESU (*Oncorhynchus tshawytscha*), Delta smelt (*Hypomesus transpacificus*), eulachon (*Thaleichthys pacificus*), and green sturgeon (*Acipenser medirostris*).

3.5.2 Bray Planning Area

The Bray Planning Area is relatively flat and consists of a 7.08-acre triangular parcel located off Dornan Drive between the Lagoon Planning Area and Ferry Point Planning Area. Currently, the property includes a mix of un-maintained native and non-native vegetation, user-created trails, and remnant debris from the previous structures. Portions of the Bray Planning Area are inundated during severe storm events. Typical operations and maintenance activities in the Bray Planning Area include regular trash collection.

HISTORY

In the late 1930’s and early 1940’s, the Bray Planning Area was developed as an above-ground petroleum storage facility to meet the demands of industry and shipping during WWII. By 1938, a warehouse and railroad tracks had been built on the property. The petroleum storage facility operated between 1940 until 1989 and included five tanks that ranged in capacity from 410,000 to 2,050,000 gallons. At the time of acquisition by the District in 1999, the remaining structures included a metal warehouse, shed, and railroad spur; a metal garage and concrete block office building; and a fuel island. These structures and appurtenances were determined not to meet eligibility requirements for listing in the National Register or the California Register of Historic Resources. The District’s Board of Directors approved a Land Use Plan Checklist Amendment in 2000 to authorize demolition of the structures and removal of the fuel island, pavement, remnants of the old rail spur, and the former tank farm including the old pump, concrete pump box, concrete platform adjacent to Dornan Drive, and abandoned surface pipes. The Checklist Amendment recommended removal of the Bray Planning Area from landbank status, rendering it available to public use.
Before property acquisition, a series of hazardous waste investigations were completed and all hazardous wastes and materials were removed and the existing monitoring wells were left in place. The prior site contamination has been cleaned to standards that make it suitable for public recreation. An archaeological and historical resources evaluation was conducted in 1999 and no cultural resources were identified.

**NATURAL RESOURCES**

Wetland vegetation includes curly dock (*Rumex crispus*) and spearscale (*Atriplex triangularis*). Non-wetland upland vegetation is dominated by Coyote brush (*Baccharis pilularis*). Other scrub species include sagebrush (*Artemesia californica*), California blackberry (*Rubus ursinus*), Himalayan blackberry (*Rubus discolor*), California coffeeberry (*Rhamnus californica*), toyon (*Heteromeles arbutifolia*), California rose (*Rosa cifornica*), willows (*Salix sp.*), and poison oak (*Toxicodendron diversilobum*). Tree canopy is provided by coast live oak (*Quercus agrifolia*) and Monterey pine (*Pinus radiata*). Non-native grasses include ripgut brome (*Bromus diandrus*) and wild oats (*Avena fatua*) and other non-native invasive species include French broom (*Genista monspessulana*) and Himalayan blackberry (*Rubus armeniacus*).

The scrub plant community provides habitat for small birds including western scrub jay (*Aphelocoma californica*), American robin (*Turdus migratorius*), western bluebird (*Sialia mexicana*), dark-eyed junco (*Junco hyemalis*), song sparrow (*Melospiza melodia*), and white-crowned sparrow (*Melospiza melodia*), raptors including red-tailed hawk (*Buteo jamaicensis*), sharp-shinned hawk (*Accipter striatus*), and American kestrel (*Falco spaverius*), and wild turkey (*Meleagris gallopavo*). Mammals including black-tailed jackrabbit (*Lepus californicus*), brush rabbit (*Sylvilagus bachmani*), grey squirrel (*Sciurus griseus*), raccoon, fox, and various rodents also can be found in the Bray Planning Area. A row of non-native, blue gum eucalyptus trees (*Eucalyptus globulus*) are located along the border between the Bray Planning Area and the Lagoon Planning Area.

The Bray Planning Area was formerly tidal flats before filling for development in the late 1930s and early 1940s. Borings conducted in 1999 encountered clay or silty clayey materials along with fill material for the entire depth of the borings. Depth to groundwater is assumed to be close to the surface in the natural areas of the site and where the former tank farm was located, and greater where the former paved area was located. Natural fluctuations in the groundwater gradient, for both direction and flow, are attributed to tidal influences from the San Francisco Bay.

3.5.3 **Bay Shore Planning Area**

The Bay Shore Planning Area is a narrow band of relatively flat, San Francisco Bay shoreline, starting at Keller Beach in the north, extending south to Ferry Point, and wrapping around the Ferry Point Planning Area to connect with Ferry Point Beach. Keller Beach is approximately 1.3 acres and is located at the north end of Miller/Knox near the Dornan Drive Tunnel. Keller Beach includes picnic tables, barbeques, restrooms, an outdoor shower, horseshoe pits, and landscaping. These amenities are arranged on terraces accentuated by curvilinear rock walls overlooking the beach and San Francisco Bay. Parking is available along Dornan Drive, a City of Richmond public street. Ferry Point Beach is a small beach located at the south end of Miller/Knox. A designated location on the San Francisco Water Trail, Ferry Point Beach is a popular launch location for non-motorized watercraft including canoes, kayaks, and paddleboards. A paved section of San Francisco Bay Trail exists along the shoreline between Ferry Point Beach and Ferry Point fishing pier; it continues landward into the Lagoon Planning Area.

Typical operations and maintenance activities in the Bay Shore Planning Area includes regular trash collection and grass mowing. Trash collection occurs daily at Ferry Point Beach and Keller Beach, as well as daily restroom cleaning at Keller Beach.
HISTORY

Before the 1849 gold rush, the Bay Shore Planning Area was marshland. In the early 1900’s, the ATSF began filling the area with bay mud and construction debris to create land area for industrial uses. ATSF and Standard Oil initiated industrial development of the Bay Shore Planning Area. By 1933, the areas that are in the Bay Shore and Ferry Point Planning Areas were completely filled to develop the railroad along San Francisco Bay between the Dornan Drive Tunnel and Ferry Point. The Dornan Drive Tunnel was built in 1915 and facilitated industrial development along the shoreline.

In 1970, the District acquired approximately 53 acres from ATSF, which included approximately 45.29 acres of San Francisco Bay and 8.5 acres of mudflats. In 1975, the District acquired the remaining 32.33 acres from ATSF railroad and in 1977, the District acquired Keller Beach and approximately 200 acres of underwater land and shoreline south of Keller’s Beach from the City of Richmond. This included 35 acres that were previously deeded to the City by ATSF railroad. In July 1973, the District’s Board of Directors certified the George Miller, Jr. Memorial Regional Shoreline Environmental Impact Report (EIR) and approved development of the projects described therein. Park development on the west side of the railroad tracks included approximately 8 acres of fill, increasing the shoreline by several hundred feet. Public recreation opportunities included two sandy beaches and fishing access. In December 1974, the District’s Board of Directors adopted EIRs for Phase 1 and Phase 1A for Miller/Knox. The Phase 1 Project involved the 0.16-acre easement section that was granted to the District from ATSF near Keller’s Beach to extend the Keller’s Beach shoreline for safe use by anglers and to provide the public access to the beach without having to cross ATSF property. The project repaired the existing riprap, placed gravel along the top, and added a 12-foot wide rock toe armor along the base to prevent erosion by wave action as well as provide a walking surface at low tide. Fencing was included to limit public access per the agreement between ATSF and the District as well as separate pedestrians and trains as a safety measure.

NATURAL RESOURCES

The San Francisco Bay shoreline in this area is protected from erosion by rock slope protection, which provide habitat for macroinvertebrates including mussels and barnacles that attach to the rocks. Shorebirds and wading birds forage in this area as well as in the small pocket beaches. The open water of San Francisco Bay supports beds of eelgrass (*Zostera marina*), which are classified as a rare and sensitive habitat within San Francisco Bay. Eelgrass beds are considered Essential Fish Habitat (EFH) under the Magnusson-Stevens Act. The eelgrass bed located off Keller Beach is known to be particularly robust. The saltwater mudflats in San Francisco Bay beneath the riprap is home to various species of worms, clams, shrimp, and anemones.

3.5.4 Lagoon Planning Area

The Lagoon Planning Area, located in the center of Miller/Knox, is relatively flat and includes the existing artificial lagoon and associated pedestrian facilities, group and individual picnic areas with barbeques, children’s play areas, expanses of lawn for unstructured play, three parking areas, a large concrete slab used for unstructured play, and restrooms. The key recreational features of the Lagoon Planning Area include the pedestrian path around the existing lagoon, the group picnic areas, and the children’s play areas.

The lagoon is supplied by saltwater pumped from San Francisco Bay via a water intake pipeline and electric pump installed beneath the ATSF railroad tracks and out into the Bay. Currently, the District operates water levels in the lagoon to encourage mixing and flow through the system to manage overall water quality, minimize algal blooms, and control odors. Since its construction, the lagoon has not been completely dredged and a significant amount of sedimentation has occurred, particularly at the north end near the existing outlet. The sediment is from the San Francisco Bay and is pumped into the lagoon by the intake system.
Typical operations and maintenance activities in the Lagoon Planning Area include daily restroom cleaning and trash collection. Tree maintenance, including pruning and monitoring for tree hazards, occurs on a monthly basis. Trees determined to be hazardous are removed. Spot treatment of the herbicide glyphosate occurs around signs, benches, and picnic tables approximately once a month. Lawns are mowed three times per month in May and June, twice per month in April and between July and September, and once per month between October and May. The irrigation system is maintained on a monthly basis. The lawn is irrigated generally once per month during the summer months and not at all during the rainy season. Additional operational and maintenance activities include maintaining pavement, the play area, barbeques, and drinking fountains. Graffiti abatement occurs on a monthly basis. Maintenance of the lagoon includes managing water levels and water quality. Water levels are managed manually using a pump and drain system. The pump is operated an average of two days per month throughout the year and up to five days per month between June and September with a duration of one tide cycle, or approximately twelve hours. Water levels are managed to encourage mixing and flow through the system to minimize algal blooms that contribute to adverse water quality and odor issues. Water quality is maintained by litter and algae removal on a monthly basis.

HISTORY

Early development of the transcontinental railroad and inter-modal transportation system discussed under the Ferry Point Planning Area section included railroad development in the Lagoon Planning Area. The Phase 1A Project was approved for development in 1974 and included development of approximately 8 acres for a turfed play meadow and picnic area and a 70-space parking area adjacent to Garrard Boulevard and east of the play meadow, occurring in the Lagoon Planning Area. The parking area included portable restrooms and stormwater improvements. The entire area was fenced on all sides except Garrard Boulevard per an agreement the District has with the ATSF to keep park visitors off privately-owned land. The lagoon, the central feature of the Lagoon Planning Area, was developed by the District in the early 1980’s to provide public access to a water feature, as public access to the San Francisco Bay shoreline was prohibited by ATSF Railroad. Excavation occurred in 1981, requiring removal of approximately 245,000 cubic yards of material. Topps Chemical Warehouse was located in the Lagoon Planning Area off Dornan Drive and was still in use by the Thompson Paint Company in 1983. The District removed the warehouse in the 1980’s and this area currently provides a concrete play surface and overflow parking.

NATURAL RESOURCES

The Lagoon Planning Area consists of filled land underlain by Bay mud. The relatively shallow lagoon includes four main habitat types, including open water, tidal salt marsh, a ruderal upland island, and irrigated turf grass. Vegetation in the open water areas is primarily widgeon grass (Ruppia maritima), and filamentous algae. This vegetation and phytoplankton form the backbone of the food web within the lagoon that supports resident migratory shorebirds and waterfowl including Canada goose (Branta canadensis); dabbling ducks and allies including mallard (Anas platyrhynchos), American coot (Fulica americana), and American widgeon (Anas americana); and diving ducks and allies including greater and lesser scaup (Aythya marila and Aythya affinis), bufflehead (Bucephala albeola), double-crested cormorant (Phalacrocorax auritus), western grebe (Aechmophorus occidentalis), and eared grebe (Podiceps nigricollis). Shallower areas of the lagoon support foraging by wading birds and shorebirds, including great egret (Ardea alba), great blue heron (Ardea Herodias), snowy egret (Egretta thula), American avocet (Recurvirostra americana), along with several species of gulls.

Fish species observed in the lagoon include threespine stickleback (Gasterosteus aculeatus), Bay pipefish (Syngnathus leptorhynchus), rainwater killifish (Luciania parva), yellowfin (Acanthogobius flavimanus), and Bay goby (Lepidogobius Lepidus). Jelly fish and unidentified sea-squirt organisms were also observed, as well as sponges, coralline algae, and mussel attached to submerged rocks and tree branches along the shoreline.
Small patches of salt marsh vegetation exist along the Lagoon shoreline. Pickleweed (*Salicornia pacifica*) and saltgrass (*Distichlis spicata*) are the primary vegetation. Due to their small size and lack of connection to other marsh habitat, these patches of salt marsh plants have limited wildlife value other than their contribution to the food web within the lagoon.

A small island located close to the middle of the lagoon provides nesting habitat for waterfowl, as well as foraging, roosting, and nesting habitat for local and migratory passerines. Groundcover on the island is primarily weedy, non-native upland species, Monterey pine (*Pinus radiata*), coyote bush (*Baccharis pilularis*), and other shrubs. Most of the parkland surrounding the lagoon is irrigated turf grasses, including Bermuda grass (*Cynodon dactylon*) and blue grass (*Poa ssp.*). Trees include native live oaks (*Quercus agrifolia*) and non-native ornamental trees including pines (*Pinus ssp.*), Monterey cypress (*Hesperocyparis macrocarpa*), and eucalyptus (*Eucalyptus ssp.*). The lawn area is used by waterfowl, particularly Canada geese (*Branta canadensis*), along with gulls, American white pelicans (*Pelecanus erythrorhynchos*), California brown pelicans (*Pelecanus occidentalis*), and wild turkeys (*Meleagris gallopavo*). The trees support foraging, roosting, and nesting by a broad range of passerines including western scrub jay (*Aphelocama californica*), American robin (*Turdus migratorius*), western bluebird (*Sialia Mexicana*), dark-eyed junco (*Junco hyemalis*), song sparrow (*Melospiza melodia*), and white-crowned sparrow (*Zonotrichia leucophrys*).

### 3.5.5 Ridgeland Planning Area

The Ridgeland Planning Area encompasses approximately 163 acres and is located on the east side of Dornan Drive. It features approximately 4 miles of hiking trails in open-space grassland intermixed with patches of shrubland and woodland. The high point is Nicholl Knob, a 371-foot peak accessed via the Crest Trail. Four established vista points in the Ridgeland Planning Area offer expansive views of Miller/Knox, the San Francisco Bay, and the surrounding Bay Area. Currently there are no formal staging areas associated with the Ridgeland Planning Area; parking is available off Dornan Drive adjacent to the privately owned and operated Richmond Rambler’s Motorcycle Clubhouse and along Dornan Drive. The majority of the existing trails are former jeep roads and some are showing signs of severe erosion and degradation.

Existing structures within the Ridgeland Planning Area include the Bernardi House, a False Gun site, and the Golden State Model Railroad Museum. Currently, the Bernardi House is a District security residence. The False Gun Site located at the intersection of the West Ridge Trail and the Crest Trail and is one of four established vista points with an informational panel and benches. The Golden State Model Railroad Museum (Railroad Museum) provides intricate model displays of railroad history that represent prototypical scenery in Northern and Central California. The Railroad Museum is open seasonally, April through December. The Rambler’s Motorcycle Club Clubhouse is an in-holding property, not a part of District land, at the base of the District’s existing informal parking area off Dornan Drive. The building is designed with basic gable and shed roof shapes, which give it a muted, old residential character. The Rambler’s Motorcycle Club holds regularly scheduled meetings at this location.

Typical operations and maintenance activities in the Ridgeland Planning Area includes daily trash collection and regular trail maintenance. Trail maintenance includes vegetation management, such as trimming tree branches to provide overhead clearance and removal of invasive species. The District typically includes Miller/Knox in its annual Ivan Dickson Trail Maintenance Program during which a targeted project is undertaken by volunteers under supervision by the District’s Regional Trails and Park Operations staff. Activities typically include pruning; erosion control; trailhead and travelway improvements, such as new trail construction and installation of specialized trail structures, including drain dips, retaining walls, and steps.

### HISTORY

Prior archaeological studies suggest that the Potrero Hills area was occupied by at least 1,000 B.C. and appeared to have been intensively occupied for 1,500 years (lith Middle Horizon). The Ridgeland Planning Area, while steep, includes areas of seeps and springs, which could have been the source of fresh water for
the prehistoric inhabitants. Prior archaeological studies indicated that multiple prehistoric resources had
been identified within the Ridgeland Planning Area. The area is considered a significant cultural resource.
None of the known cultural resource would be disturbed by implementation of the recommendations
included in the LUPA.

Past land disturbances, including quarry use, off-road vehicle use, and borrow activity for fill, have altered
the landform of the ridgeland. The Bernardi house was the residence of Luigi Bernardi, an early resident of
the area. The Bernardi House complex has been recognized as architecturally and historically significant. The
house is a modest, one-story “cottage farmhouse” with a gable roof and ship-lap siding characteristic of the
settlement of the Bay Area during the turn of the century. The False Gun Site was a fake anti-aircraft gun that
“defended” Kaiser Shipyard 3 during WWII. The Railroad Museum was established in 1933, and has been at
its current location in a 10,000-square foot former ATSF warehouse on property leased from the District
since 1985.

NATURAL RESOURCES

The Ridgeland Planning Area is located within the Potrero Hills, a northwest-to-southwest trending ridge that
rises from the Bay to an average height of 300–370 feet. The Potrero Hills form a peninsula connected to
the mainland by a low alluvial fill area upon which most of the City of Richmond is built. The hills consist
almost entirely of the Franciscan sandstone shale geologic formation, which date back to the Cretaceous
and Jurassic Age approximately 130–195 million years ago. Approximately 80 percent of the Ridgeland
Planning Area consists of slopes 15 percent or greater, many exceeding 30 percent. The Ridgeland Planning
Area contains several landslides, colluvial deposits, eroded slopes, and areas where gullying and badland
formation have occurred. Active gullies, 10–30 feet in width, occur along several major drainages on the
western and southwestern slopes, as well as in the engineered slope behind the existing warehouse on
Dornan Drive. In addition to gullying and badland formation, many of the hill slopes show evidence of sheet
and rill erosion from past activities. The hillslope behind the Rambler’s Motorcycle Club and the slope on the
southwestern spur ridge are badly eroded from prior off-road vehicle use.

The soil type in the Ridgeland Planning Area is Milsholm loam. Milsholm loam is a well-drained soil formed in
place by weathering of interbedded shale and fine-grain sandstone material. Milsholm soils tend to be
shallow and characteristically found on steep hillsides and ridgetops of 30-75 percent. On many of the
ridgecrests and disturbed areas within the Ridgeland Planning Area, there is little to no soil cover remaining.
The permeability of these soils is moderate and the available water-holding capacity tends to be poor with
rapid runoff. Without vegetation, this soil is easily erodible.

Prior studies found that there are four distinct drainage areas in the Ridgeland Planning Area. Each is a
crescent-shaped-bowl with very steep slopes draining onto flat fill land. One of the predominant drainage
areas drains into the wetland area just east of Dornan Drive along the Old Country Road Trail, and the
second predominant drainage area drains to the industrial areas to the east. Because of the steepness of
the slopes, thin soils, and small contributing area of each of the drainage areas, surface runoff from major
storms is very rapid. As a result, there has not been significant formation of intermittent stream channels
and instead, the existing channels that carry water during the rainy season are unstable and subject to
considerable variation, depending on the duration and intensity of a rainfall event.

The Ridgeland Planning Area consists of a mosaic of grassland, shrubland, and woodland. Dense patches of
purple needlegrass (Stipa pulchra) and California oat grass (Danthonia californica) are interspersed with
scattered patches of creeping wild-rye (Elymus triticioides) and big squirreltail (Elymus multisetus) along the
trails in the Ridgeland Planning Area. The non-native grassland species, including wild oats (Avena spp.) and
rattlesnake grass (Briza spp.), are mixed in with the native grasses and in disturbed areas. Shrubland
vegetation is northern coastal scrub typical of this area with the dominant coyote brush (Baccharis pilularis
subsp. consanguinea) and other scattered native shrubs including California sagebrush (Artemisia
californica) toyon (Heteromeles arbutilifolia) and coffee berry (Frangula californica subsp. californica). Non-
native stands of Monterey pine (Pinus radiata) and blue-gum eucalyptus (Eucalyptus globulus) are planted
along ridgetops and as a screen for the existing East Bay Municipal Utility District water tank. Scattered coast live oaks (*Quercus agrifolia*) and California buckeyes (*Aesculus californica*) occur in both grassland and shrubland areas.

### 3.6 LUPA BACKGROUND AND NEED

The District is the primary provider of regional park facilities and activities in Alameda and Contra Costa counties. The regional park system consists of 73 regional parklands and over 1,200 miles of trails on approximately 113,000 acres. The District’s mission statement outlines the critical functions of the agency and prioritizes how the land is managed, balancing the preservation of open space with land restoration, and provision for healthful public recreation.

“The East Bay Regional Park District preserves a rich heritage of natural and cultural resources and provides open space, parks, trails, safe and healthful recreation and environmental education. An environmental ethic guides the District in all of its activities.”

On July 16, 2013, the District’s Board of Directors approved a District-wide Master Plan. This Master Plan defines the overall mission and vision for the District and contains policies and descriptions of the programs in-place for achieving the highest standards of service in resource conservation, management, interpretation, public access, and recreation. The policies contained in the plan guide the stewardship and development of the parks.

Community interest in developing a public park in the Point Richmond area began in 1964 when Contra Costa County residents voted to join the District, and the Contra Cosa Shoreline Parks Committee, along with Save the Bay, and launched a campaign for shoreline access in Richmond. At that time, public access was available on only 64 feet of Richmond’s 32-mile shoreline. In 1968, the District’s Board of Directors adopted a resolution authorizing the acquisition and development of a shoreline park at Point Richmond.

The purpose of the Miller/Knox LUPA is to enhance the existing environmental and scenic values at Miller/Knox while providing additional recreational and interpretive opportunities for park visitors, consistent with the District’s Vision and Core Mission as included in the 2013 Master Plan. The proposed Miller/Knox LUPA has been prepared to incorporate the Bray Planning Area into the plan and to create a comprehensive plan to integrate all areas of Miller/Knox. The LUPA will serve as the planning framework for Miller/Knox to guide development decisions, define park management strategies, and support applications for funding.

### 3.7 LUPA OBJECTIVES

The proposed LUPA is intended to achieve the following basic objectives. The following objectives also reflect the goals of the LUPA:

- Protect and enhance existing natural, historic, and scenic resources.
- Improve public access through additional trails, pathways, and parking.
- Enhance physical fitness opportunities.
- Provide additional interpretive and recreational programming.
- Optimize opportunities for quiet reflection and passive recreation.
- Incorporate strategies for climate adaptation, sea-level rise, and resilience.
3.8 LUPA RECOMMENDATIONS

Implementation of the proposed LUPA recommendations are the subject of environmental analysis in this Draft PEIR. The proposed recommendations specific to each planning area are provided below.

FERRY POINT PLANNING AREA

The goal for the Ferry Point Planning Area is to maximize public amenities and balance scenic vista opportunities with cultural resources protection. Implementation of the proposed LUPA recommendations would maximize public amenities in the Ferry Point Planning Area and enhance the overall usability of this area. Each of the recommendations are summarized below. Refer to Exhibit 3-4 for an existing view and simulated view with implementation of the LUPA recommendations of Ferry Point Planning Area.

1. **Develop a Promenade Connecting the Ferry Point Pier to the Lagoon Planning Area through the Bray Planning Area.**

   This recommendation would create a 10 to 15-foot-wide promenade walkway of colored concrete extending between the Ferry Point Pier through the Bray Planning Area to the Lagoon Planning Area, which would help to unify the park and provide an additional way for visitors to explore Miller/Knox. This recommendation includes the addition of benches as “gathering nodes” along the promenade, incorporation of a portion of the remnant footprint from the terminal building for the alignment, re-use abandoned railroad track after it is removed from the District’s property along the Bay Shore Planning Area to line the promenade, and would embed interpretive plaques into the concrete or provide low panels to highlight the former use and history of Ferry Point. Native plants emphasizing the coastal grassland plant community would be planted on both sides of the walkway.

2. **Provide Native Grassland in the Open Meadow Area.**

   The small hilly area in the center of the Ferry Point Planning Area is sparsely vegetated with grassland plant species. Enhancing this area with coastal grassland plants would result in a native plant community that would complement the shoreline environment. A typical coastal grassland plant palette is shown in Table 3-1 and would be considered to enhance the grassland area.

<table>
<thead>
<tr>
<th>Table 3-1</th>
<th>Typical Coastal Grassland Plants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common Name</td>
<td>Botanical Name</td>
</tr>
<tr>
<td>Diego bent grass</td>
<td>Agrostis pellens</td>
</tr>
<tr>
<td>Pacific hairgrass</td>
<td>Deschampsia cespitosa ssp. Holciformis</td>
</tr>
<tr>
<td>Blue wild rye</td>
<td>Elymus glaucus</td>
</tr>
<tr>
<td>Red fescue</td>
<td>Festuca rubra</td>
</tr>
<tr>
<td>Douglas iris</td>
<td>Iris douglasiana</td>
</tr>
<tr>
<td>Creeping wild rye</td>
<td>Leymus triticioides</td>
</tr>
<tr>
<td>Purple needle grass</td>
<td>Nassella pulchra</td>
</tr>
<tr>
<td>Blue-eyed grass</td>
<td>Sisyrinchium bellum</td>
</tr>
</tbody>
</table>

3. **Provide Additional Picnic Areas and Benches**

   Picnic areas and benches would be located at strategic locations within the Ferry Point Planning Area and would provide more opportunities for park visitors to take advantage of the open views provided at this location. Picnic areas would be of the same style of those currently located on the Ferry Point Planning Area and implemented as part of the 2015 Public Access Improvements Project.
4. **Expand Parking Adjacent to the Existing Parking Area.**

As illustrated in Exhibit 3-5, this recommendation would develop an additional 35 parking spaces, including two ADA stalls, in the area immediately adjacent to the existing Ferry Point parking area that currently is used by Park Operations. The staging area expansion would include a vehicle turn-around and paved walkways for pedestrians to access the park. The District anticipates the need for expanded parking in this area, because of new residential development adjacent to Miller/Knox.

5. **Rehabilitate the Historic Pumphouse Building for Passive Interpretive Use.**

This recommendation would implement improvements to the pumphouse building to upgrade it to current building codes and provide safe public access. The building upgrade would preserve a portion of the historic resources for public appreciation and interpretation. It would serve as a passive historical interpretive feature to expand on the existing interpretative focus of Ferry Point, highlighting the role of Ferry Point’s historic contribution to intermodal transportation, its role in World War II, and in contributing to development of the City of Richmond. The pumphouse would be structurally upgraded, concrete surfaces would be patched, and the interior elements would remain in-situ for historical interpretive uses. The many channels and pits that exist in the floor could remain as part of the historic, interpretive element, but would covered with a clear surface and safety rails could be installed around these elements to prevent falls and tripping hazards. The doors and windows of the pumphouse may be reconstructed to replicate the original construction.

While compliance with the National Register requirements may constrain certain building modifications and would require measures to mitigate building modifications and removal, there is flexibility in the SOI’s Guidelines for Rehabilitation of Historic Structures to accommodate a wide range of adapted re-uses including re-use of the pumphouse building for passive interpretive use.

6. **Replace the Historic Warehouse Building with Day-use and a Scenic Vista Point.**

The existing warehouse building would be partially demolished and a picnic area/vista point would be developed within the building footprint, which would broaden scenic access to the Bay through adaptive re-use of this historic resource. The existing concrete structural side and roof beams would be retained to delineate a structure for the picnic area. The picnic area may be covered with lattice or with solar panels, the latter providing electricity for an irrigation system for the native planting areas and for the existing lights on the fishing pier.

All demolition debris would be disposed in accordance with California Code of Regulations Title 24, Part 11. Section 5.408 of this code establishes mandatory requirements for construction waste reduction, disposal, and recycling for nonresidential building structures. In particular, Section 5.408.1 requires recycling and/or salvaging for reuse of a minimum of 50 percent of the nonhazardous construction and demolition waste. In addition, Section 5.408 requires preparation of a construction waste management plan, selection of a waste management company that can provide verifiable documentation, alternatives for waste stream reduction, and requirements for managing excavated soils and land clearing debris.

Standard stormwater and erosion controls would be incorporated into this LUPA recommendation as well as for rehabilitation of the historic pumphouse to avoid inadvertent discharges to the Bay. The District would obtain all applicable permits before any work would begin. These may include a permit from BCDC for work within 100 feet of the Bay shoreline, a Section 404 permit from USACE, if jurisdictional wetlands or waters need to be filled, and 401 Certification from the RWQCB to minimize impacts to water quality. These are described in Section 3.9 of this document. Also, the following environmental protection feature would be implemented to preserve the history of the warehouse building:

An exhibit/display of the history of the warehouse building would be incorporated to include information, such as historic and current photographs, interpretive text, drawings, videos, interactive media, and oral histories. The exhibit/display would be developed in consultation with Contra Costa County, local historical organizations, and those with an interest in the history of Miller/Knox.
Additionally, the exhibit/display would be displayed in a location within Miller/Knox that is accessible to the public and may be incorporated into the interpretive exhibit.

BRAY PLANNING AREA

The goal for the Bray Planning Area is to develop trail connections, interpretive/educational opportunities, and park facilities, while preserving a portion of the site’s habitat. The recommendations for the Bray Planning Area would provide much-needed opportunities for habitat enhancement and public education, providing an outdoor classroom for current park programs, including volunteer events and school fieldtrips. Appropriate public education panels would be included throughout the Bray Planning Area to educate park visitors about the plants, habitat values, history of the Bray Planning Area, park operations, and the value and processes of composting. Each of the recommendations are summarized below. Refer to Exhibit 3-6 for an existing view and simulated view with implementation of the LUPA recommendations of the Bray Planning Area.

1. **Provide an Area for Lagoon Dredge Disposal.**

   Up to 4 acres of the 7.08-acre Bray Planning Area would be used as the lagoon dredge disposal site associated with implementation of the Lagoon Enhancement Project, resulting in an average sediment height of approximately 18-inches on the site, although some areas may receive up to 3 feet of dredged sediment to create topographic variation in the landscape. The dredge disposal area would be prepared by removing vegetation, grading the area to provide a uniform disposal area, and establishing haul truck routes along Dornan Drive and along the Bay Trail. Vegetation removal would occur outside of bird nesting season, if possible, or after bird nesting surveys have been completed with negative results. As dredged material is placed in the disposal area, it would be spread to optimize drying time and then contoured to prepare areas of the Bray Planning Area for implementation of other LUPA recommendations, such as trails, pathways, and native gardens. Testing of lagoon dredge material before placement on the Bray property would occur to determine if any hazardous materials have entered the sediments. Recommendations such as the new District Recreational Programs and Storage Building (described in Bray Planning Area recommendation #4) and the Grand Promenade would be implemented on non-dredge disposal areas of the Bray Planning Area. Dredge material would be transported from the lagoon to the Bray Planning Area disposal area using a small portion of the Bay Trail on the western side of the lagoon and a short section of Dornan Drive on the east side of the lagoon. The portion of the Bay Trail used for dredged material transport would be temporarily closed during the dredging period, and repaired post-dredge if any damage occurs. It is anticipated that the material would be dry within one year following dredging. During this time, this area of the Bray Planning Area would be closed to the public. The District will obtain separate permits for the dredging and the 4-acre disposal site on the Bray Planning Area. A Stormwater Pollution Prevention Plan (SWPPP) with standard stormwater and erosion controls would be developed for the disposal of dredged materials associated with implementation of the Lagoon Enhancement Project.

Annual maintenance dredging up to 200 cubic yards of sediment per year as needed, consistent with the District’s existing Routine Maintenance Agreement permit, will continue separate from the Lagoon Enhancement Project. The annual maintenance dredging activity is not subject to the LUPA, however, the LUPA is defining the area within the Bray Planning Area for disposal of the dredge material. Routine dredging would improve the function of the lagoon and associated pump facilities, improve aesthetics, and improve conditions for wildlife. The lagoon sediments would be tested each year before the annual maintenance dredging activity to ensure no hazardous materials are present. Per the CDFW Routine Maintenance Agreement, the dredge area cannot exceed 2,000 square feet in one year. The District is planning for 10 years of maintenance dredging at the disposal area located in the Bray Planning Area.

2. **Develop a Promenade Connecting the Ferry Point Pier to the Lagoon Planning Area through the Bray Planning Area.**

   Refer to Ferry Point Planning Area Recommendation #1. The promenade would be located outside of the dredge disposal area.
Exhibit 3-5

Ferry Point Planning Area Staging Area Expansion

Source: Image prepared and provided by EBRPD in 2018
3. Establish Native Plant Communities as Demonstration Gardens with Connecting Paths.

This recommendation would create an outdoor classroom of native plants in small garden-like settings with trails, benches, and picnic tables. Interconnecting pathways would be developed throughout the Bray Planning Area. The area would include public education panels including information about the coastal plant communities and habitats, history of the Bray Planning Area, and other interpretive topics. Plant palettes for individual gardens could include coastal grasslands, coastal scrub plants, coastal live oak woodland plants, and wetland plants.

4. Develop Recreational Programs and Storage Building for District Use in Outdoor Education, Interpretive Programs, and Volunteer Activities.

The recreational programs and storage building would be located across from the existing Ferry Point overflow parking area along the eastern edge of the Bray Planning Area, outside of the dredge disposal area, and would provide sheltered space from which the District could hold interpretive programs and volunteer efforts. In concept, the Recreational Programs and Storage Building would be a maximum of 2,000 square feet.

5. Provide a Green-Waste Storage Area for Park Operations and Public Education.

Currently, green waste is stored in the overflow parking area at Ferry Point, an area that the LUPA is recommending be converted to permanent parking. This recommendation would relocate the green-waste storage area, up to 0.5-acre, outside of the dredge disposal area at the southeastern point of the Bray Planning Area, adjacent to Dornan Drive and the existing Bay Trail. This area would be used by park operations staff to store green waste accumulated from ongoing park maintenance activities for future off-site composting. Public education could include information on the composting process and the environmental benefits of composting green waste.

BAY SHORE PLANNING AREA

The main goal for the Bay Shore Planning Area is to improve public access along the shoreline. Currently, the trail connection between Keller Beach and Ferry Point along the Bay shoreline consists of a natural-surface pathway adjacent to abandoned railroad tracks interrupted by a small area where no public access is permitted. Recommendations for the Bay Shore Planning Area are summarized below.

1. Remove the Abandoned Railroad Tracks within District Jurisdiction and Develop a Section of the San Francisco Bay Trail Between Keller Beach and Ferry Point.

ATSF currently maintains ownership of the abandoned railroad track located upon District-owned property. Removal of the abandoned railroad tracks and development of a section of the San Francisco Bay Trail within District jurisdiction was approved by voters for the District’s Measure CC in 2004; however, ATSF has been unwilling to allow for removal to date. The LUPA recommendation acknowledges the voter-approved project and assumes that the District will successfully resolve the current impediment to remove the abandoned railroad track. The trail would be a paved surface for multi-use recreation along the San Francisco Bay shoreline and would be developed consistent with the San Francisco Bay Trail Design Guidelines and Toolkit to the greatest degree possible within the existing constraints of the area. The trail would be 12 feet wide with 3-foot-wide shoulders on each side, space permitting. The trail surface would be paved and include a permeable surface for the shoulders. The abandoned railroad track could then be repurposed to provide edging for the “Grand Promenade” described above in the Ferry Point Planning Area and Bray Planning Area.

Standard stormwater and erosion controls would be incorporated into this LUPA recommendation to avoid any inadvertent discharges to the Bay. These are described in Section 3.9. The District would also obtain all applicable permits before any work would begin. These would include a permit from BCDC for work within 100 feet of the Bay shoreline, and potentially a SWPPP, Section 404 permit from USACE, if jurisdictional...
wetlands or waters need to be filled, and Section 401 Certification from the RWQCB to minimize impacts to water quality.

2. **Formalize Access Between the Bay Shore and Lagoon Planning Areas.**

Currently, there is no formal access established between the Bay Shore and Lagoon Planning Areas, partly because of the access restrictions across the ATSF property. Unauthorized access points have been created by park visitors, opening connections between the Lagoon Planning Area and Keller Beach. This recommendation would establish access points on District-owned property by developing short trails to connect these areas of Miller/Knox.

3. **Develop and implement habitat restoration projects to protect, restore, and enhance the San Francisco Bay.**

Habitat restoration including removal of invasive plant species, such as French broom, would be conducted to improve habitat and enhance park visitor experience along the shoreline.

4. **Upgrade landscaping and amenities including the restroom, drinking fountain, outdoor shower, picnic tables and benches at Keller Beach.**

Existing landscaping would be enhanced utilizing drought-tolerant, climate-smart vegetation. Existing picnic areas and benches, restrooms, drinking fountains, and the outdoor shower would be upgraded by removal and replacement to match the style of the 2015 Public Access Improvements Project at Ferry Point. These upgrades would improve access, aesthetics, and overall visitor experience at Keller Beach.

5. **Conduct Engineering Design Development Study along the Bay Shoreline and Implement Shoreline Features to Improve Resilience and Sea-level Rise Adaptation.**

An engineering design development study would be conducted during the first phase of implementation of LUPA recommendations (0-5 years) to define the shoreline protection opportunities for climate change adaptation. This effort would guide design development along the shoreline and the District would implement shoreline features to improve resilience and sea-level rise (SLR) adaptation. All future shoreline work would be accomplished through construction techniques entirely on dry land and no in-water work or disturbance of Bay tidal flats would occur as feasible. If avoiding disturbance to Bay tidal flats proves infeasible as project-level design is refined, applicable permits would be obtained and future CEQA evaluations would be conducted as required. Standard stormwater and erosion controls would be incorporated into this LUPA recommendation to avoid inadvertent discharges to the Bay. These are described in Section 3.9.

**LAGOON PLANNING AREA**

The goal of the Lagoon Planning Area is to enhance active recreation and improve lagoon habitat and water quality. This would be accomplished through the following recommendations.

1. **Implement the Lagoon Enhancement Project.**

This recommendation would improve water quality in the lagoon that has resulted from sedimentation. The recommendation would dredge an estimated 10,000 cubic yards\(^1\) of sediment from the lagoon and would dispose of the dredged material in the adjacent Bray Planning Area.

In preparation for dredging, the existing water intake from San Francisco Bay would be closed, preventing the lagoon from further filling. Dredging would occur in stages by isolating areas of the lagoon using coffer dams. After an area is isolated, the remaining water would be drained through the existing vault and outfall to the San Francisco Bay and by utilizing a floating pump with a filter to pump it to adjacent areas of the lagoon outside of the coffer dam. After each area of the lagoon is dewatered, excavators would remove

\(^1\) Estimated based on surface area of the lagoon is 5.75 acres and an average of one-foot depth of dredging.
accumulated sediment and it would be taken to the Bray Planning Area via a haul truck. Two excavators and up to eight 10-yard haul truck would be used. After dredging in one area of the lagoon occurs, the coffer dam would be relocated, and the process would occur in the next area of the lagoon. Improvements to the lagoon’s water circulation system may occur while areas of the lagoon are dewatered. Dredging of the entire lagoon is expected to take a total of 12 weeks between August 1st and October 31st. During this time, the immediate work area would be closed to the public.

As described in the Bray Planning Area recommendations, dredge material would be transported from the lagoon to the Bray property disposal area using a short section of the Bay Trail and Dornan Drive. The alignment for the recommended new trail (Lagoon Planning Area recommendation #2) on the east side of the lagoon would be used for this purpose and the formal trail would be developed after the dredging is complete.

Annual maintenance dredging would occur before the comprehensive dredging begins and would continue on an ongoing basis, as needed, to help maintain the benefits achieved from the comprehensive dredging. Under existing regulatory permits, the District can remove up to 200 cubic yards per year of material from the lagoon and dispose of the dredged material at the Bray property. The District would obtain individual permits from CDFW (Fish and Game Code Section 1602) and RWQCB (Clean Water Act Section 401), as well as develop a SWPPP, to implement the Lagoon Enhancement Project. Maintenance dredging would occur between August 1st and October 31st with the goal of avoiding the presence of special-status species and nesting birds within the project vicinity. The District would include the annual maintenance dredging activity in its Annual Report, which is reviewed by the RWQCB and CDFW.


Currently, a paved one-mile trail loop exists around the lagoon and is located close to the lagoon shore on the westerly edge and is closer to the staging areas on the easterly edge, depriving visitors of a lagoon shoreline trail on the easterly edge of the lagoon. This LUPA recommends that the trail be augmented to provide a new section along the easterly edge of the lagoon. The width of the trail would match that of the existing trail and could be paved, native ground, compacted gravel, or decomposed granite. The alignment of this trail could be delineated before the comprehensive lagoon dredging occurs and utilized to transport dredged material from the lagoon to the Bray Planning Area for disposal. The trail would be formally developed after lagoon dredging is completed. In addition to providing an additional recreational benefit at Miller/Knox, this trail would also reduce the amount of turf and therefore reduce water usage and turf maintenance.

3. Designate the Lagoon Island as a Special Management Feature.

A small ruderal island located within the lagoon provides nesting habitat for waterfowl as well as foraging, roosting, and nesting habitat for local and migratory passerines. Groundcover on the island is primarily weedy, non-native upland species, Monterey pine (Pinus radiata), coyote bush (Baccharis pilularis), and other shrubs. This recommendation would designate the island as a Special Management Feature and it would remain off-limits to the public. The designation would require specific treatment protocols for dredging, such as excluding the island from dredging and conducting the dredging outside of waterfowl nesting and roosting season.

4. Refurbish Existing Amenities, Including Picnic Areas and Barbeques.

The Lagoon Planning Area currently includes several picnic areas, most equipped with barbeques. This recommendation includes improvements to the existing picnic areas to match the newly installed picnic areas and barbeques installed as part of the 2016 Public Access Improvement Project in the Ferry Point Planning Area. The existing picnic tables would be replaced, and up to five new picnic areas would be provided.
5. **Replace Under-Utilized Areas of Irrigated Turf with Drought-Tolerant, Climate-Friendly Vegetation.**

This recommendation would expand the conversion of under-utilized areas of irrigated turf with turfgrasses that are demonstrated to be drought-tolerant and climate-friendly. Implementation of this recommendation would reduce overall water use at Miller/Knox by decreasing areas requiring irrigation and would improve natural habitat values around the lagoon.

**RIDGELAND PLANNING AREA**

The goal for the Ridgeland Planning Area is to improve public access and enhance the existing trail system. The LUPA recommendations would improve the existing trail system in the Ridgeland Planning Area, rendering trails more stable, and enhance vista points for an improved visitor experience. The trail recommendations include 12 trail closures and development of two new trails. Implementation of recommendations for vegetation management would complement the trail improvement recommendations while reducing potential fuel loads and improving habitat. Currently, there are no developed trailhead staging areas providing access to the Ridgeland Planning Area; development of two staging areas is recommended in the LUPA to improve public access to the area. Specific recommendations for the Ridgeland Planning Area are further described below.

1. **Develop New Staging Areas off Dornan Drive and Canal Boulevard.**

This recommendation would provide developed staging areas and trailheads off Dornan Drive near the Rambler’s Clubhouse, and off Canal Boulevard, to improve visitor access to the ridgeland trails. On Dornan Drive, three options for a staging area have been under consideration and on Canal Boulevard, two options have been considered. The District has selected preferred alternatives for both locations (maximum buildout options), which are described below and illustrated in Exhibits 3-6 and 3-7. The remaining options are discussed in Chapter 5, Alternatives Analysis.

**Dornan Drive Staging Area**

Currently, visitors park in an open, unimproved dirt parking area adjacent to the Rambler’s Motorcycle Club. Conceptually, the formalized Dornan Drive staging area would provide a total of 83 parking spaces in a paved parking lot, including four ADA parking stalls. It would be located on District and City-owned properties; an easement from the City of Richmond would be required. The staging area would include signage, a two-unit, sewer-connected restroom, drinking water, picnic tables, and improved access to the immediate trails. No tree removal would be required.

**Canal Boulevard Staging Area**

Currently, park visitors park on the shoulders of the driveway off Canal Boulevard. Development of the Canal Boulevard staging area would provide a safer parking area and trailhead entry for park visitors. The Canal Boulevard staging area would be developed on an access easement held by the District on property owned by the City of Richmond and on separate property owned by the City of Richmond. Conceptually, the staging area would include 29 parking spaces in a paved lot, including two ADA parking stalls and a sidewalk connection to a restroom. A small portion of the San Francisco Bay Trail would be rerouted to accommodate the staging area, and may require a retaining wall. Implementation could require the removal of trees, potentially 24 eucalyptus trees with breast-height diameter ranging between 3-inches and 36-inches and one toyon. This staging area would include signage and a two-unit, sewer-connected restroom. A new sidewalk would connect the parking area to the restroom.
2. Develop Trailheads and New Vista Points, Repair Trails Damaged by Erosion, and Decommission Trails too Damaged for Repair.

This recommendation would improve the existing trail system in the Ridgeland Planning area, rendering them more stable and operationally sustainable, and enhance existing vista points. To achieve this, improvements of existing trail segments have been categorized according to condition and need, as shown in Exhibit 3-8: routine maintenance, heavy repairs, new sustainable trails, and trail closure. Mechanized grading of existing trails would occur, which could include use of heavy machines such as bulldozers, backhoes, graders, and dump trucks to manipulate the trail tread into the desired condition. Mechanized grading would occur to trails that need to accommodate District park operations and emergency vehicles and/or have bedrock or other hardened surfaces that render it prohibitively difficult to address with hand tools alone. Specific trail recommendations are presented below.

Routine Trail Maintenance
Approximately 3.98 miles of existing trails are in the best condition and would undergo minor upkeep and maintenance activities. Routine maintenance activities would include trail edge berm removal; drain/water bar cleaning and repairs; tread repair involving slough removal, out-sloping tread, and clearing debris; and clearing brush and trees that are encroaching on the trail corridor.

Heavy Trail Repairs
Approximately 0.54 mile of existing trails would require more intensive repairs than routine maintenance, including incorporation of drainage feature, such as check steps, water bars, and drain dips to slow or divert water off trail; addition of fill/tread material to ruts in trail tread; construction of retaining walls; replacement/repair of boardwalks and steps; and narrowing of trail tread by reseeding, planting native vegetation, and placing native rocks and logs along the sides of the trails to encourage users to stay on-trail and minimize stormwater runoff.

New Sustainable Trails
Approximately 0.18 mile of new trails is recommended to improve user experience and maintain trail network connectivity. New trails would include the following elements:

- Maximum grade should be no more than 15 percent, with an average of no more than 10 percent and out-slope tread 6-10 percent.
- Use of natural contours and grade reversals to encourage sheet flow.
- Trail grade should not exceed half the grade of the side-slope.
- Avoid building trails on flat ground to minimize water collection.
- Route trails to positive control points, such as viewpoints and interpretive sites, and away from negative control points, such as sensitive habitat and unstable ground.

Trail Closures
Approximately 0.82 mile of trails has been deemed redundant, unsafe, or impractical to repair. These trails are often user created short cuts that collect water. Closures would include removal of bridges, boardwalks, and steps; decommission of trail tread soils; reestablishment of natural hillside grade; installation of check dams and water bars to slow/disperse stormwater runoff; installation of jute netting, native seed, and debris placement (e.g., rocks) to obscure the trail; and installation of signage and fencing to discourage further use and explaining the reason for the closure.
Exhibit 3-8

Ridgeland Planning Area Trail Recommendations

Source: Image prepared and provided by EBRPD in 2018
Trailheads
There are currently seven trail access points around the Ridgeland Planning Area. The following are recommendations for each:

- **Trailhead 1**: Provides access to Old Country Road from Belvedere Avenue. Currently, there is very limited street side parking outside of the park boundary. It is recommended that the District coordinate with City of Richmond to maintain the trailhead, and install and/or replace signage, trail brochure dispenser, debris can, and dog waste bag station.

- **Trailhead 2**: Provides access to Crest and Marine View Trails from Crest Avenue outside of the park boundary. Currently, there is very limited street side parking within the park boundary. Coordinate with the City of Richmond to maintain the trailhead, establish or define parking stalls on the edge of the park boundary, install and/or replace signage, trail brochure dispenser, debris can, and dog waste bag station.

- **Trailhead 3**: Provides access to the Dornan Grove Trail, the Ramblers’ Trail, and the Boardwalk Trail. Currently, Trailhead 3 is a large and unorganized gravel parking area. It is recommended that the previously described recommendation to develop a new staging area off Dornan Drive is implemented.

- **Trailhead 4**: Provides access to the Old Country Road Trail off Dornan Drive. It is located adjacent to the existing Richmond Ramblers’ clubhouse on District property off Dornan Drive. Currently, there is no parking for this trailhead access and no available right-of-way to develop a staging area at this location. Visitors wishing to access the Old Country Road Trail at this location must walk from other staging areas. It is recommended that the District work with the City of Richmond to install a pedestrian crossing on Dornan Drive to provide safe pedestrian access from the Miller/Knox staging areas at Ferry Point or the Lagoon Planning Area, and install and/or replace signage, a park brochure dispenser, debris cans, and a dog waste bag station.

- **Trailhead 5**: Provides access to the West Ridge Trail. Currently, there is no parking for this trailhead access and no available right-of-way to develop a staging area at this location. Visitors wishing to access the West Ridge Trail at this location must walk from other staging areas. It is recommended that the District work with the City of Richmond to install a pedestrian crossing on Dornan Drive to provide safe pedestrian access from the Miller/Knox staging areas at Ferry Point or the Lagoon Planning Area, and install and/or replace signage, park brochure dispenser, debris cans, and a dog waste bag station.

- **Trailhead 6**: Provides access to the Brickyard Cove Trail off Brickyard Cove Road. Currently, this is an unofficial trailhead with limited parking at what appears to be an abandoned parking lot. It is recommended that the District install and/or replace signage, a park brochure dispenser, debris cans, and a dog waste bag station on District property.

- **Trailhead 7**: Provides access to the East Trail and the Crest Trail from a narrow driveway off Canal Boulevard. Currently, there is limited on-street parking for Park visitors along the driveway which is on City property. It is recommended that the previously described recommendation to develop a new staging area off Canal Boulevard is implemented.


**Wildfire Hazard Reduction and Resource Management Plan**
The Wildfire Hazard Reduction and Resource Management Plan (WHRRMP) provides long-term strategies for reducing fuel loads and managing vegetation to minimize the risk of wind-driven, catastrophic wildfire along the wildland-urban interface, while also protecting and enhancing ecological values and resources. The
WHRRMP and associated EIR were approved and certified by the District’s Board of Directors in 2010, and identified the following five recommended treatment areas within the Ridgeland Planning Area:

- **MK001**: 5.9 acres at the northern edge of District property south of the tunnel, extending eastward into the Ridgeland Planning Area. Vegetation is a mix of grassland, scrubland, and woodland. The vegetation management goals identified for this treatment area are to generally maintain the existing vegetation types with increasing proportion of oak-bay woodland and grass, and less scrub and pine (manage the area to stop pine seedling growth). Mechanical and hand labor treatments are recommended for this treatment area to reduce shrubs, limb up trees of lower branches, remove all pines smaller than 12 inches in diameter to approximately 20-foot minimum spacing, remove all dead pines, and selectively remove shrubs on the north aspect. All oaks and bays on north aspect are recommended for retention, as well as pines which screen antennas on top of Nicholl Knob.

- **MK002**: 0.4 acre at the most northeastern point of District property near Nicholl Knob. Vegetation is primarily scrubland. The vegetation management goals identified for this treatment area is to manage vegetation for landscaping, including annual grassland, scattered shrubs, pruned oaks and pines. Hand labor is recommended to create and maintain spacing according to defensible space performance standards.

- **MK003**: 2.7 acres of grassland intermixed with scrubland located in the vicinity of the Bernardi House. The goals identified for this treatment area is to manage vegetation for landscaping, including annual grassland, scattered shrubs, pruned oaks, and pines by creating and maintaining spacing according to defensible space standards.

- **MK004**: 3.2 acres of scrubland and woodland located near the Old Country Road trailhead off Dornan Drive. The vegetation management goals identified for this treatment area are to encourage an open pine stand. Mechanical methods are recommended to thin the existing pine stand to 50 percent canopy closure, selecting smaller, unhealthy pine trees for removal as well as all trees below the ridgeline for a distance equal to the height of the tree to prevent ember spread across the ridgeline under a westerly wind. Removal of all understory is also recommended.

- **MK005**: 10 acres of grassland intermixed with some scrubland and woodland wrapping around the southeastern portion of MK004 and extending easterly along the Crest Trail towards Canal Boulevard. The vegetation management goals identified for this treatment area are to remove invasive species using chemical control measures such as cut stump techniques and application of the herbicide Garlon 4 where necessary; thinning shrubs and pruning trees according to scrub vegetation performance standards leaving buckeye trees intact; pile burning; and cutting pines within 50 feet of the ridgetop, scattering cut branch pieces on site.

Because these treatments and treatment areas were included and evaluated in the WHRRMP and associated EIR that was certified by the District in 2010, they have been approved for implementation. Therefore, they are not evaluated further in this PEIR and are included for informational purposes only.

**Integrated Pest Management**

Integrated Pest Management (IPM) recommendations for the Ridgeland Planning Area would improve native plant habitats and reduce fire risk, and include:

- Control of various perennial weedy species, most importantly *Genista monspessulana* (French broom), *Foeniculum vulgare* (fennel) that is encroaching on native grasslands using an integrated vegetation management approach including hand tools to dig out and brush cutting and spot treating with herbicide.

- Remove ailing Monterrey pine plantation and accumulated woody debris to enhance coastal prairie.
Remove encroaching eucalyptus plantation and maintain property line on East Bay Municipal Utility District reservoir property boundary.

Begin control of French broom infestation in and adjacent to the *Stipa pulchra* (purple needlegrass) dominated quarry using the same integrated vegetation management approach described above.

Engage the public and school groups to create a volunteer presence to maintain and monitor coastal prairie habitat areas.

Support volunteer groups in rehabilitation projects, invasive plant removal, and citizen monitoring.

Control woody species, native and non-native by mechanical, cultural, and chemical methods to reduce fuel loading and to preserve and enhance coastal prairie grasslands. Mechanical methods may include hand-pulling, cutting, or brush mowing. Cultural methods may include target grazing. Pile burning, green waste disposal, or chipping bay be utilized to remove woody material.

**Vegetation Management Recommendations**

The vegetation communities in the Ridgeland Planning Area would require ongoing management for biodiversity enhancement, wildlife habitat and public enjoyment. Without disturbance like fire, mechanical treatment, or herbivory, grasslands along the coast of California become increasing invaded by woody shrubs and trees. The coastal prairie contains the highest number of native grass species in the District. This high native grass species richness is threatened by an invasion of coyote brush, French broom (*Genista monspessulana*) and a multitude of other weedy herbaceous species. Grassland, shrubland, and woodland vegetation communities would be managed to maintain open coastal prairie grassland as well as a diversity of northern coastal scrub plants and other native trees. Grassland management/restoration recommendations are as follows:

- Use targeted goat grazing for short durations to reduce grassland nonnative plant species, as well as the coyote brush and Monterey pine invasion.

- Remove eucalyptus and pine trees that are encroaching on the grassland area using hand pruning and followed with the herbicide Garlon 4 where applicable.

- Thin eucalyptus and pine woodlands where native understory plants, like oaks, are located.

- Remove dead or diseased pine trees from woodland areas, as needed, and when not considered to be wildlife habitat. In cases of large tree die off, care should be used to remove trees in phases, e.g., remove one dead tree and leave one dead tree to not diminish wildlife habitat or trail aesthetics.

- Any native plant introductions or landscaping should use locally sourced native plant species or plant seed from remnant native grasslands or shrublands within Miller/Knox, Point Molate, or adjacent historically native vegetation.

- If possible, collect local seed from perennial grass species like purple needlegrass and Idaho fescue (*Festuca idahoensis*) before the planned restoration. Contract a nursery, or use in-house facility, to grow plugs or enhance seed stock for restoration purposes.

**Grazing Recommendations**

The District’s Wildland Vegetation Manager recommends that grazing be utilized in the Ridgeland Planning Area for vegetation management to maintain and enhance the remnant native grassland; reduce weedy species, such as fennel, mustards, and thistles; and reduce or maintain encroaching coyote brush shrubland. Goats or sheep or a combination of the two have been determined to be most appropriate livestock for the steep hillsides and the intended results. Properly managed livestock could be used for short duration in spring or fall to target weedy plants, reduce seed stock, and reduce plant biomass. The hooves of
goats and sheep break down the skeletons of old plant material and break up plant material, allowing it to decay faster, thus opening up areas of the soil to sunlight and moisture and allowing new plants the opportunity to grow. Contracted goat and sheep grazing is commonly used for fuel reduction reasons in early summer with the primary goal of reducing fuel loads and providing a defensible space along the park – urban interface.

3.9 LUPA ENVIRONMENTAL PROTECTION FEATURES

The LUPA recommendations include environmental protection features to avoid and minimize impacts to sensitive resources and the environment. Environmental protection features that have been incorporated into the LUPA are described below in Table 3-2.

<table>
<thead>
<tr>
<th>Area of Concern</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biological Resources: water quality, special-status species, and potentially hazardous materials</td>
<td>All future shoreline work (such as reinforcement of riprap from land-based equipment) would be accomplished through construction techniques entirely on dry land and no in water work or disturbance of Bay tidal flats would occur, to the degree feasible. If avoiding disturbance to Bay muds proves infeasible as project-level design is refined, applicable permits would be obtained and future CEQA evaluations would be conducted as required.</td>
</tr>
</tbody>
</table>
| Hydrology and Water Quality: water quality | Standard stormwater runoff and erosion controls to avoid inadvertent discharges to the Bay include the following:
- Runoff control BMPs: These measures include grading surfaces to control sheet flow, barriers or berms that force sheet flows around protected areas, and stormwater conveyances such as channels, drains, and swales. These practices and features collect runoff and redirect it to prevent contamination to surface waters. Calculations will be made for anticipated runoff, and the stormwater conveyances would be constructed, designed, and located to accommodate these flows.
- Erosion control blankets/mats, geotextiles, plastic covers: These erosion control methods will be used on flat or sloped surfaces to keep soil in place and can be used to cover disturbed soil to prevent runoff.
- Gravel/sandbag barrier: A temporary sediment barrier will be constructed using gravel or sand filled bags to prevent sediment from disturbed areas from reaching existing drainages by reducing the volume of sheet flows.
- Hydraulic, straw, and wood mulch: The use of these various mulches will temporarily stabilize soil on surfaces with little or no slope.
- Preservation of existing vegetation: Preserving the existing vegetation to the maximum extent possible will provide protection of exposed surfaces from erosion and can keep sediment in place.
- Scheduling and planning: Appropriate scheduling and planning provide ways to minimize disturbed areas, which reduces the amount of activity in the project area that requires protection and minimizes the duration of exposure of disturbed soils to erosion.
- Stabilized construction entrance/exit: A graveled area or pad can be built at points where vehicles enter and leave a construction site. This BMP provides a buffer area where vehicles can drop their mud and sediment to avoid transporting it onto public roads, to control erosion from surface runoff and to help control dust.
- Storm drain inlet protection: Protection consists of devices and procedures that detain or filter sediment from runoff, thereby preventing them from reaching drainage systems that will be used following construction, as well as surface waters.
- Spill prevention and control: Any spills or releases of materials will be cleaned up immediately and comprehensively. Appropriate and easily accessible cleanup equipment, including spill kits containing absorbents, will be located in several areas around the site. Used cleanup materials will be disposed of properly and in accordance with applicable regulations. Hazardous or toxic material spills must be treated as hazardous waste and be treated and disposed of accordingly. |
### Table 3-2  Environmental Protection Features of the LUPA

<table>
<thead>
<tr>
<th>Area of Concern</th>
<th>Actions</th>
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</thead>
<tbody>
<tr>
<td>Hydrology and Water Quality: Water Quality</td>
<td>A comprehensive suite of BMPs would protect water quality during vegetation management at Miller/Knox. The following BMPs would be applied as applicable:</td>
</tr>
<tr>
<td></td>
<td><strong>Hand Treatment BMPs</strong></td>
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<td>▶ Treatment actions shall not be conducted during storms.</td>
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<td>▶ Treatment actions shall avoid, when feasible, excessive foot traffic on steep slopes which could cause compaction and/or erosion to occur.</td>
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<td></td>
<td>▶ Hand labor personnel shall avoid driving support and haul trucks off established roads. If such traffic is determined by the District and hand labor personnel to be necessary, inspection will be conducted to ensure that the ground is not saturated before traveling off-road, and that the ground can fully support the vehicles without excessive rutting of surface soils. Any ruts created as a result of off-road activities will be repaired and covered with mulch and/or wood chips to reduce potential runoff from these areas and reduce their potential for erosion.</td>
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<td>▶ Hand labor personnel shall take care to handle fuels and lubricants such that spilling and runoff of these substances does not occur.</td>
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<td></td>
<td><strong>Mechanical Treatment BMPs</strong></td>
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<td>▶ Use caution when conducting any mechanical treatment actions during the area’s rainy season. Treatment actions shall be stopped temporarily if rainfall or other inclement weather makes access inadvisable, or if continued vehicular travel or mechanical action is determined to cause unacceptable damage to roads, trails, or other lands.</td>
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<td>▶ Surveys shall be conducted that identify and delineate on-site soil and hydrological conditions before initiation of any mechanical treatment techniques. Any planned mechanical treatment actions shall include all necessary measures to minimize activity in sensitive areas that could be wetter than normal, or in areas near hydrological resources. Wet areas will be clearly marked for high visibility and avoided by treatment operations until such time as they are determined to be sufficiently capable of supporting any mechanical treatment activities without causing excess rutting, erosion, or sedimentation to occur.</td>
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<td>▶ All mechanical treatment actions shall use equipment, methods, and/or techniques that minimize ground disturbance and alterations to the existing soil structure.</td>
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<td>▶ Mechanical treatment actions shall be temporarily stopped and alternative treatment or removal methods considered if a single pass of equipment produces ruts deeper than 6 inches across a significant area of the site.</td>
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<td>▶ Materials shall not be dragged across park roads and drainage areas unless specifically allowed by the District, and only then along routes recommended by equipment operators and approved by the District.</td>
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<tr>
<td></td>
<td>▶ Personnel will avoid driving support and haul trucks off of established roads. Where this is necessary, personnel shall ensure that the ground is not saturated before traveling off road and that the ground can support the vehicles without excessive rutting. Any ruts created shall be repaired and covered with mulch and/or wood chips.</td>
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<td>▶ Personnel will install and use brush barriers, vehicle turnouts, straw bales, wattle, or other methods as needed to control and capture potential runoff resulting from mechanical treatment actions. Other methods for controlling and capturing potential runoff could include broad-based dips, creating ditchlines inside of current drainage patterns (i.e., closer to treatment actions to capture runoff before reaching the drainage area), crossdrains, filter areas, sediment traps or pits, silt fences, hay bales, check dams or the in/out-sloping and crowning of roads.</td>
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<td>▶ Maintain all roads in a desirable condition to prevent problems that may result from their use, such as washouts, slumping, clogging or bending culverts, and drainage erosion. Any damages that occur to roads as a direct result of treatment actions shall be repaired upon completion of the treatment action.</td>
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<td>▶ Refueling areas will be designated for larger projects requiring mechanical treatment actions. Fuel tanks and refueling areas will be provided with secondary containment, where feasible.</td>
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</table>
### Environmental Protection Features of the LUPA

<table>
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<tr>
<th>Area of Concern</th>
<th>Actions</th>
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<td>Materials and supplies needed to promptly clean up spills will be adequately maintained and located on-site, and personnel will be familiar with proper cleanup and disposal techniques. Examples of containment and cleanup methods and materials include using drip pans and absorbent pads for all vehicle and equipment fueling; equipping all fuel nozzles with automatic shut-off capability to contain fuel dripping and leakage; ensuring all vehicle fueling operations are not left unattended; inspecting vehicles and equipment each day to identify any fuel, oil, or hydraulic leaks; and repairing any identified leaks immediately before further use or storage of the leaking equipment to minimize further impact to the site. Vehicles with persistent or recurring leaks will be removed from the site until such leaks are properly repaired. On-site fueling of vehicles and equipment will only be performed when off-site fueling is determined by the District to be impractical.</td>
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<tr>
<td></td>
<td>Chemical Treatment BMPs</td>
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<td></td>
<td>The District and its contractors will ensure that any pesticide or other chemical applications are performed only by licensed or certified pest control operators registered to perform such services in the County where the treatment is to take place, and only under a prescription prepared by a licensed pesticide advisor. The pest control operator must record and provide written accounts of the total amount of pesticides and other chemicals applied each month, as well as type(s) of pesticides or chemicals used and total areas treated with each pesticide or other chemical. These data must be reported to the County Agricultural Commissioner as well as to the District’s Integrated Pest Management Program. Operators must maintain accurate and calibrated application equipment to ensure correct amounts of pesticides and other chemicals are applied.</td>
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<td>Any chemical treatment actions must be performed according to the District integrated pest management (IPM) policies and practices; pest control operators selected by the District or its contractors shall consult and use the advice and recommendations of the District’s integrated pest management specialists and adhere to District pest management guidelines. For example, species-specific (instead of broad-spectrum) herbicides shall be used wherever possible to avoid injury to non-target plants.</td>
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<td>IPM specialists will oversee chemical application practices to ensure compliance with state and federal regulations and District IPM policies. Pesticide application prescriptions will include suitable distances from wetlands and water bodies, in compliance with the California Department of Food and Agriculture Regulations and state-approved product labeling. District IPM specialists will review application data to ensure the minimum amount of suitable chemicals are used during treatment actions to achieve the desired results.</td>
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**Geology and Soils: landslide/slope instability**

The potential for vegetation management activities in Miller/Knox to increase landslide activity or slope instability was previously addressed in the 2009 Wildfire Hazard Reduction and Resource Management Plan (WHRRMP) EIR prepared by the District. The District will implement the following before any vegetation removal activity in areas of slope instability or with high landslide potential:

**District staff shall refer to:**

- the most currently available landslide mapping from the U.S. Geologic Survey or the California Geological Survey for Miller/Knox (for example, the USGS 1997, Summary Distribution of Slides and Earth Flows in the San Francisco Bay Region, California. OFR 97-745c); or
- GIS slope steepness mapping for Miller/Knox.

If all of the following criteria are satisfied, then no further action to address potential landslide activation would be required:

- the area to be treated within the recommended treatment area is located in an area listed as “stable,” “few landslides,” or equivalent;
- the average slope steepness of the recommended treatment area is less than 10 degrees (about 18 percent);
- there is no visible evidence of landslide activity (e.g., scarps, crooked trees, landslide-generated debris piles) within the recommended treatment area, as documented by a field reconnaissance; and
Table 3-2  Environmental Protection Features of the LUPA

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<th>Area of Concern</th>
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<td>▶ there are no habitable structures within 100 feet of the toe of the slope downgradient of the recommended treatment area. District staff shall determine on a case-by-case basis whether to retain a qualified professional (e.g., engineering geologist or geotechnical engineer) to conduct a geotechnical reconnaissance to evaluate the potential impacts of vegetation reduction activities or vegetation type conversion on future landslide potential if:</td>
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<td>▶ habitable structure(s) are located within 100 feet of the toe of the slope downhill of the treatment area; and</td>
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<td>▶ the prescribed treatment would include the use of heavy equipment or machinery and significant ground disturbing activities (i.e., this requirement would not apply to methods such as hand treatment, weed-eating, or chemical treatment), and one or more of the following conditions is identified:</td>
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<td>▶ the treatment area is listed as “unstable,” “many landslides” on applicable slope stability mapping;</td>
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<td>▶ the average slope steepness of the treatment area is greater than 10 degrees (about 18 percent);</td>
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<td>▶ there is visible evidence of landslide activity (e.g., scarps, crooked trees, landslide-generated debris piles) within the treatment area, as documented by a field reconnaissance; or</td>
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<tr>
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<td>▶ all recommendations of the qualified professional (which may include avoidance of the proposed activity) shall be documented in writing, provided to the District, and implemented.</td>
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</tbody>
</table>

Cultural Resources: historic resources

An exhibit/display of the history of the warehouse building would be incorporated into the Ferry Point Planning Area to include information such as historic and current photographs, interpretive text, drawings, videos, interactive media, and oral histories. The exhibit/display would be developed in consultation with Contra Costa County, local historical organizations, and those with an interest in the history of Miller/Knox. Additionally, the exhibit/display would be displayed in a location within Miller/Knox that is accessible to the public and may be incorporated into the interpretive exhibit.

Public Services and Utilities: solid waste and construction debris

All demolition debris would be disposed in accordance with California Code of Regulations Title 24, Part 11. Section 5.408 of this code establishes mandatory requirements for construction waste reduction, disposal, and recycling for nonresidential building structures. In particular, Section 5.408.1 requires recycling and/or salvaging for reuse of a minimum of 50 percent of the nonhazardous construction and demolition waste. In addition, Section 5.408 requires preparation of a construction waste management plan, selection of a waste management company that can provide verifiable documentation, alternatives for waste stream reduction, and requirements for managing excavated soils and land clearing debris.

3.10  CONSTRUCTION/IMPLEMENTATION SCHEDULE

The LUPA recommendations would be implemented over the course of 10 years or potentially more. Key construction actions expected to occur are listed below, by phase, for the purposes of assessing construction-phase environmental impacts. Work would occur on weekdays, between 7:00 a.m. and 7:00 p.m., and, if weekend work is required, it would occur between 9:00 a.m. and 6:00 p.m. in accordance with Chapter 9 (9.52.110) of the Richmond Municipal Code.
PHASE 1 KEY ACTIONS (YEARS 0-5)

- Designate the lagoon island as a Special Management Feature (Lagoon Planning Area).
- Implement the Lagoon Enhancement Project (Lagoon Planning Area).
- Establish a new trail on the east side of lagoon (Lagoon Planning Area).
- Refurbish existing amenities, Including picnic areas and barbeques (Lagoon Planning Area).
- Establish an area for disposal of dredging spoils from the lagoon (Bray Planning Area).
- Provide a green-waste storage area for operations and public education (Bray Planning Area).
- Provide drought-tolerant, climate-friendly vegetation in open turf area (Ferry Point Planning Area).
- Provide additional picnic areas and benches (Ferry Point Planning Area).
- Remove the abandoned railroad tracks within District jurisdiction and develop a section of the San Francisco Bay Trail between Keller Beach and Ferry Point (Bay Shore Planning Area).
- Establish access between the Bay Shore and the Lagoon Planning Areas (Bay Shore Planning Area).
- Conduct engineering design development along the Bay shoreline and implement shoreline features to improve resilience and SLR adaptation (Bay Shore Planning Area).

PHASE 2 KEY ACTIONS (YEARS 5-10)

- Replace under-utilized area of irrigated turf with drought-tolerant, climate-friendly vegetation (Lagoon Planning Area).
- Develop a promenade connecting the Ferry Point Pier to the Lagoon Planning Area through the Bray Property Planning Area (Bray Property and Ferry Point Planning Areas).
- Establish native plant communities as demonstration gardens with connecting paths (Bray Planning Area).
- Develop a recreational programs and storage building for District use (Bray Planning Area).
- Expand the Ferry Point parking area adjacent to the existing parking area (Ferry Point Planning Area).
- Develop new staging areas off Dornan Drive and off Canal Boulevard (Ridgeland Planning Area).

PHASE 3 KEY ACTIONS (YEAR 10+)

- Rehabilitate the historic pumphouse building for passive interpretive use (Ferry Point Planning Area).
- Replace the historic warehouse building with day-use and scenic vista point area (Ferry Point Planning Area).
- Upgrade landscaping at Keller Beach (Bay Shore Planning Area)
- Upgrade amenities including the restroom, drinking fountain, outdoor shower, picnic tables and benches at Keller Beach (Bay Shore Planning Area)
**ONGOING/FUTURE ACTIONS**

- Develop trailheads and new vista points, repair trails damaged by erosion, and decommission trails too damaged for repair (*Ridgeland Planning Area*).

- Implement the District’s WHRRMP recommendations, Integrated Pest Management recommendations, vegetation management recommendations, and grazing recommendations (*Ridgeland Planning Area*).

- Implement shoreline features recommended in the engineering design development study to improve resiliency and SLR adaptation (*Bay Shore Planning Area*).

**3.11 PERMITS AND APPROVALS**

Table 3-3 discloses the potential permits and approvals that would be required to implement the LUPA.

<table>
<thead>
<tr>
<th>Table 3-3</th>
<th>Potential Permits and Approvals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permit</td>
<td>Agency</td>
</tr>
<tr>
<td>Section 404 Permit (Nationwide or Regional General Permit)</td>
<td>U.S. Army Corps of Engineers</td>
</tr>
<tr>
<td>Section 401 Water Quality Certification</td>
<td>San Francisco Bay Regional Water Quality Control Board</td>
</tr>
<tr>
<td>Section 402 NPDES General Construction Stormwater Discharge Permit</td>
<td>State Water Resources Control Board</td>
</tr>
<tr>
<td>Section 1602 Fish and Game Code Lake and Streambed Alteration Agreement</td>
<td>California Department of Fish and Wildlife</td>
</tr>
<tr>
<td>Surface and Submerged Lands Lease</td>
<td>State Lands Commission</td>
</tr>
<tr>
<td>Administrative or Major Permit</td>
<td>San Francisco Bay Conservation and Development Commission</td>
</tr>
<tr>
<td>Access Approval</td>
<td>BNSF Railway Co.</td>
</tr>
<tr>
<td>Easement; Encroachment Permit</td>
<td>City of Richmond</td>
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</tbody>
</table>
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