



# BEDWELL BAYFRONT PARK

Master Plan

February 15, 2018

Accepted By:  
Menlo Park City Council  
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City of Menlo Park  
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Menlo Park, CA 94025  
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“

*The future use of the site is intended to be a Bay front park for passive recreation including nature walks...picnicking, day hiking and meadow sports, as well as just plain enjoyment of the silence, the fresh breeze and the view.*

”

— Mike Bedwell's March 27, 1974 letter to  
the US Army Corps of Engineers



# Executive Summary

The purpose of the Bedwell Bayfront Park Master Plan is to provide the City of Menlo Park with a vision to guide the development of the park for the next 25 years. The park was originally envisioned and designed to be a passive recreation park. Through a public outreach process that was completed for the project in 2017, this key characteristic of the park remains an important guiding principle. In addition, the community indicated that access to nature, scenic views, and proximity to the Bay are important considerations.

The resulting park master plan provides a graphic roadmap to guide the park's future and features recommendations for additional access and expanded passive recreation uses. Improvements to be implemented include roadway and restroom renovations in response to sea level rise, providing an accessible trail network, improving wayfinding and signage throughout the park, and rezoning the park from Flood Plain (FP) to Public Facilities (PF). The park funding plan will help ensure that the park improvements and amenities will be fiscally sustainable and maintained. The plan also responds to the request by City Council to research

and provide regulatory recommendations for the use of model gliders at the park. This report summarizes the master planning process, and contains the following sections:

**Introduction:** Explains the project purpose, summarizes the goals and objectives, and provides some background on the evolution of the site.

**Planning Process:** Provides an assessment of the existing site conditions, details about outreach methods and process, and a summary of input received from staff and public.

**Master Plan:** Explains the park master plan, park features, and design guidelines.

**Implementation:** Provides a summary of the estimated cost and related tasks for implementation and maintenance of the park master plan.

**Appendix:** Includes technical documents, meeting summaries, outreach materials and input results, detailed cost estimates, and other supplemental project information.



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## 1

# Introduction

## Background

Since its inception, Bedwell Bayfront Park has been a jewel of the City of Menlo Park's parks and open space system. Revered for its various habitats, Bay views, and passive recreation opportunities, this closed landfill site has become even more important with the influx of housing and

office developments in the area. Figure 1 is a park area map that illustrates the park's proximity with nearby development projects, transportation systems, and other open spaces. Figure 2 and Figure 3 illustrate the main park functions and how the park has evolved over the years.

The park is at a critical juncture. Improvements are needed to provide for



Figure 1 Park Area Map - a larger version of the map is in the Appendix

a growing population and respond to a changing shoreline, including challenges associated with sea level rise. Sustainable funding sources are needed to fund both short term improvements and long term maintenance and operations for the park. Additionally, maintenance and upkeep for the landfill requires significant investment.

The maintenance fund initially set up for the park has been steadily depleted. Without significant action, the fund would be depleted by 2020, leaving the park without funding, even for basic maintenance services such as trash disposal. The City recognized the critical need to identify sustainable funding sources to meet maintenance and operations requirements and to provide for the rapidly changing city-scape as populations and development increase around the park. In addition to evaluating park design and funding mechanisms, the master planning process also set out

to review and consider an amendment to Menlo Park Municipal Code Section 8.28.130.5, which addresses the use of drones and UAS (Unmanned Aircraft Systems) at Bedwell Bayfront Park.

A planning effort was commissioned by the City in 2017 to develop a community-supported park master plan. A comprehensive public outreach process was developed to determine use and design priorities for the site and evaluate funding options and strategies. Two design alternatives were initially developed, based on feedback obtained at the first community meeting and on-line survey. The park master plan developed is based on feedback obtained at three additional public meetings, through a collaborative effort with local interests groups and agencies, and with direction received from the Parks and Recreation Commission.



**passive  
recreation**



**wildlife +  
viewing**



**landfill  
operations**

**Figure 2** *Main park functions*

## Site History



**Figure 3** Timeline with events that have helped shape the park's evolution





## Goals and Policies

Goals and policies from other City documents have been reviewed to help inform the generation of goals and objectives for the Bedwell Bayfront Park Master Plan. These documents provide guiding principles that align with the integrity and vision of Bedwell Bayfront Park and provide points of inspiration for the development of project goals and objectives.

Documents that provide associated principles with the park master plan's goals and objectives include:

- Land Use and Circulation Elements Goals, Policies, and Programs from the draft General Plan update, ConnectMenlo
- Open Space/Conservation, Noise and Safety Goals, Policies, and Programs from the 2013 General Plan
- M-2 Area Zoning
- Comprehensive Bicycle Development Plan

**The project directly supports the following goals and policies identified in the ConnectMenlo Land Use element update in the General Plan:**

**Goal LU-1: Promote the orderly development of Menlo Park and its surrounding area.**

- Policy LU-1.1 Land Use Patterns. Cooperate with the appropriate agencies to help assure a coordinated land use pattern in Menlo Park

and the surrounding area.

- Policy LU-1.2 Transportation Network Expansion. Integrate regional land use planning efforts with development of an expanded transportation network focusing on mass transit rather than freeways, and encourage development that supports multi-modal transportation.
- Policy LU-1.5 Adjacent Jurisdictions. Work with adjacent jurisdictions to ensure that decisions regarding potential land use activities near Menlo Park include consideration of City and Menlo Park community objectives.

**Goal LU-6: Preserve open-space lands for recreation; protect natural resources and air and water quality; and protect and enhance scenic qualities.**

- Policy LU-6.1 Parks and Recreation System. Develop and maintain a parks and recreation system that provides areas, play fields, and facilities conveniently located and properly designed to serve the recreation needs of all Menlo Park residents.
- Policy LU-6.3 Public Open Space Design. Promote public open space design that encourages active and passive uses, and use during daytime and appropriate nighttime hours to improve quality of life.
- Policy LU-6.6 Public Bay Access. Protect and support public access to the Bay for the scenic enjoyment of open water, sloughs, and marshes, including restoration efforts, and completion of the Bay Trail.
- Policy LU-6.7 Habitat Preservation. Collaborate with neighboring jurisdictions to preserve and enhance the Bay, shoreline, San Francisquito Creek, and other wildlife habitat and ecologically fragile areas to the maximum extent possible.
- Policy LU-6.8 Landscaping in Development. Encourage extensive and appropriate landscaping in public and private development to maintain the City's tree canopy and to

- promote sustainability and healthy living, particularly through increased trees and water-efficient landscaping in large parking areas and in the public right-of-way.
- Policy LU-6.9 Pedestrian and Bicycle Facilities. Provide well-designed pedestrian and bicycle facilities for safe and convenient multi-modal activity through the use of access easements along linear parks or paseos.
  - Policy LU-6.11 Baylands Preservation. Allow development near the Bay only in already developed areas.

**Goal LU-7: Promote the implementation and maintenance of sustainable development, facilities and services to meet the needs of Menlo Park's residents, businesses, workers, and visitors.**

- Policy LU-7.1 Sustainability. Promote sustainable site planning, development, landscaping, and operational practices that conserve resources and minimize waste.
- Policy LU-7.6 Sewage Treatment Facilities. Support expansion and improvement of sewage treatment facilities to meet Menlo Park's needs, as well as regional water quality standards, to the extent that such expansion and improvement are in conformance with other City policies.
- Policy LU-7.7 Hazards. Avoid development in areas with seismic, flood, fire and other hazards to life or property when potential impacts cannot be mitigated.
- Policy LU-7.8 Cultural Resource Preservation. Promote preservation of buildings, objects, and sites with historic and/or cultural significance.
- Policy LU-7.9 Green Building. Support sustainability and green building best practices through the orientation, design, and placement of buildings and facilities to optimize their energy efficiency in preparation of State zero-net energy requirements for

residential construction in 2020 and commercial construction in 2030.

- Program LU-7.F Adaptation Plan. Work with emergency service providers to develop an adaptation plan, including funding mechanisms, to help prepare the community for potential adverse impacts related to climate change, such as sea level rise, extreme weather events, wildfire, and threats to ecosystem and species health.
- Program LU-7.G SAFER Bay Process. Coordinate with the SAFER Bay process to ensure that the Menlo Park community's objectives for sea level rise/flood protection, ecosystem enhancement, and recreational trails are adequately taken into consideration.
- Program LU-7.H Sea Level Rise. Establish requirements based on State Sea Level Rise Policy Guidance for development projects of a certain minimum scale potentially affected by sea level rise to ensure protection of occupants and property from flooding and other potential effects.

**The project directly supports the following goals and policies identified in the ConnectMenlo Circulation element update to the General Plan:**

**Goal CIRC-1: Provide and maintain a safe, efficient, attractive, user-friendly circulation system that promotes a healthy, safe, and active community and quality of life throughout Menlo Park.**

- Policy CIRC-1.4 Education and Encouragement. Introduce and promote effective safety programs for adults and youths to educate all road users as to their responsibilities.
- Policy CIRC-1.6 Emergency Response Routes. Identify and prioritize emergency response routes in the citywide circulation system.
- Policy CIRC-1.7 Bicycle Safety. Support and



improve bicyclist safety through roadway maintenance and design efforts.

- Policy CIRC-1.8 Pedestrian Safety. Maintain and create a connected network of safe sidewalk and walkways within the public right of way ensuring that appropriate facilities, traffic control, and street lighting are provided for pedestrian safety and convenience, including for sensitive populations.

#### Goal CIRC-2: Increase accessibility for and use of streets by pedestrians, bicyclists, and transit riders.

- Policy CIRC-2.1 Accommodating All Modes. Plan, design and construct transportation projects to safely accommodate the needs of pedestrians, bicyclists, transit riders, motorists, people with mobility challenges, and persons of all ages and abilities.
- Policy CIRC-2.7 Walking and Biking. Provide for the safe, efficient, and equitable use of streets by pedestrians and bicyclists through appropriate roadway design and maintenance, effective traffic law enforcement, and implementation of the City's Transportation Master Plan (following completion; until such time the Comprehensive Bicycle Development Plan, Sidewalk Master Plan and the El Camino Real/Downtown Specific Plan represent the City's proposed walking and bicycling networks).
- Policy CIRC-2.8 Pedestrian Access at Intersections. Support full pedestrian access across all legs of signalized intersections.
- Policy CIRC-2.9 Bikeway System Expansion. Expand the citywide bikeway system through appropriate roadway design, maintenance, effective traffic law enforcement, and implementation of the City's Transportation Master Plan (following completion; until such time the Comprehensive Bicycle Development Plan and the El Camino Real/Downtown Specific Plan represent the City's proposed bicycle network).

#### Goal CIRC-3: Increase mobility options to reduce traffic congestion, greenhouse gas emissions, and commute travel time.

- Policy CIRC-3.1 Vehicle-Miles Traveled. Support development and transportation improvements that help reduce per service population (or other efficiency metric) vehicle miles traveled.
- Policy CIRC-3.2 Greenhouse Gas Emissions. Support development, transportation improvements, and emerging vehicle technology that help reduce per capita (or other efficiency metric) greenhouse gas emissions.

#### Goal CIRC-4: Improve Menlo Park's overall health, wellness, and quality of life through transportation enhancements.

- Policy CIRC-4.1 Global Greenhouse Gas Emissions. Encourage the safer and more widespread use of nearly zero-emission modes, such as walking and biking, and lower emission modes like transit, to reduce greenhouse gas emissions.
- Policy CIRC-4.2 Local Air Pollution. Promote non-motorized transportation to reduce exposure to local air pollution, thereby reducing risks of respiratory diseases, other chronic illnesses, and premature death.
- Policy CIRC-4.3 Active Transportation. Promote active lifestyles and active transportation, focusing on the role of walking and bicycling, to improve public health and lower obesity.
- Policy CIRC-4.4 Safety. Improve traffic safety by reducing speeds and making drivers more aware of other roadway users.

#### Goal CIRC-5: Support local and regional transit that is efficient, frequent, convenient, and safe.

- Policy CIRC-5.5 Dumbarton Corridor. Work with SamTrans and appropriate agencies to reactivate the rail spur on the Dumbarton

Corridor with appropriate transit service from Downtown Redwood City to Willow Road with future extension across the San Francisco Bay.

- Policy CIRC-5.6 Bicycle Amenities and Transit. Encourage transit providers to improve bicycle amenities to enhance convenient access to transit, including bike share programs, secure storage at transit stations and on-board storage where feasible.

**The project directly supports the following goals and policies identified in the 2013 Open Space/Conservation, Noise elements of the General Plan:**

**Goal OSC1: Maintain, protect and enhance open space and natural resources.**

- OSC1.1 Natural Resources Integration with Other Uses. Protect Menlo Park's natural environment and integrate creeks, utility corridors, and other significant natural and scenic features into development plans.
- OSC1.2 Habitat for Open Space and Conservation Purposes. Preserve, protect, maintain and enhance water, water-related areas, plant and wildlife habitat for open space and conservation purposes.
- OSC1.3 Sensitive Habitats. Require new development on or near sensitive habitats to provide baseline assessments prepared by qualified biologists, and specify requirements relative to the baseline assessments.
- OSC1.4 Habitat Enhancement. Require new development to minimize the disturbance of natural habitats and vegetation, and require revegetation of disturbed natural habitat areas with native or non-invasive naturalized species.
- OSC1.6 South Bay Salt Pond Restoration Project and Flood Management Project. Continue to support and participate in Federal and State efforts related to the South Bay Salt Pond Restoration Project and flood

management project. Provide public access to the Bay for scenic enjoyment and recreation opportunities as well as conservation education opportunities related to the open Bay, the sloughs, and the marshes.

- OSC1.8 Regional Open Space Preservation Efforts. Support regional and subregional efforts to acquire, develop and maintain open space conservation lands.
- OSC1.10 Public Education and Stewardship. Promote public education, environmental programs, and stewardship of open space and natural resources conservation.
- OSC1.14 Protection of Conservation and Scenic Areas. Protect conservation and scenic areas from deterioration or destruction by vandalism, private actions or public actions.

**Goal OSC2: Provide parks and recreation facilities.**

- OSC2.1 Open Space for Recreation Use. Provide open space lands for a variety of recreation opportunities, make improvements, construct facilities and maintain programs that incorporate sustainable practices that promote healthy living and quality of life.
- OSC2.6 Pedestrian and Bicycle Paths. Develop pedestrian and bicycle paths consistent with the recommendations of local and regional trail and bicycle route projects, including the Bay Trail.
- OSC2.7 Conservation of Resources at City Facilities. Reduce consumption of water, energy, landfilled waste, and fossil fuels in the construction, operations and maintenance of City owned and/or operated facilities.

**Goal N1: Achieve acceptable noise levels.**

- N1.9 Transportation Related Noise Attenuation. Strive to minimize traffic noise through land use policies, traffic-calming methods to reduce traffic speed, law enforcement and street improvements, and encourage other agencies to reduce noise

levels generated by roadways, railways, rapid transit, and other facilities.

- N1.10 Nuisance Noise. Minimize impacts from noise levels that exceed community sound levels through enforcement of the City's Noise Ordinance. Control unnecessary, excessive and annoying noises within the City where not preempted by Federal and State control through implementation and updating of the Noise Ordinance.

#### Goal S1: Assure a safe community.

- S1.1 Location of Future Development. Permit development only in those areas where potential danger to the health, safety and welfare of the residents of the community can be adequately mitigated.
- S1.2 Location of Public Improvements. Avoid locating public improvements and utilities in areas with identified flood, geologic and/or soil hazards to avoid any extraordinary maintenance and operating expenses. When the location of public improvements and utilities in such areas cannot be avoided, assure that effective mitigation measures will be implemented.
- S1.21 Flood and Tsunami Hazard Planning and Mapping. Consider the threat of flooding and tsunamis in planning and management practices to minimize risk to life, environment and property and maintain up-to-date tsunami hazard zones maps and flood maps as new information is provided by FEMA and other regional agencies. Modify land use plans in areas where tsunamis and flooding are hazards, and permit only uses that will sustain acceptable levels of damage and not endanger human lives in the event of inundation.
- S1.28 Sea level rise. Consider sea level rise in siting new facilities or residences within potentially affected areas.

#### The project directly supports the proposed M-2 Area Zoning update to the General Plan:

M-2 zoning is a zoning district that allows 'General Industrial District.' In the General Plan, this is reflected by a 'Limited Industry' designation. Figure 4 shows the M-2 Area Potential Zoning Map and the relationship to Bedwell Bayfront Park, which is currently zoned as a Flood Plain (FP). The City is evaluating rezoning the park as Public Facilities (PF) to better represent the park's dual-function as a landfill and to stay consistent with the City's other public facilities. The designation will likely define the development identity of the park's neighborhood and the anticipated use patterns along the park's frontage. The new mixture of zoning districts in close proximity to the park is anticipated to influence accessibility to the park and the volume of park users.

#### The project directly supports the following goals and policies identified in the Comprehensive Bicycle Development Plan (2005):

The Comprehensive Bicycle Development Plan provides a broad vision, strategies, and actions for the improvement of bicycling in Menlo Park. The Bay Trail follows the perimeter of Bedwell Bayfront Park, and is complemented at the park by other paved and unpaved bicycle facilities. The goals and policies of the Comprehensive Bicycle Development plan help expand and enhance the existing bikeway network. Several goals and policies align with objectives for Bedwell Bayfront Park and include:

#### Goal 1: Expand and Enhance Menlo Park's Bikeway Network.

- Policy 1.1. Complete a network of bike lanes,

bike routes, and shared use paths that serve all bicycle user groups, including commuting, recreation, and utilitarian trips.

#### Goal 2: Plan for the Needs of Bicyclists.

- Policy 2.1. Accommodate bicyclists and other non-motorized users when planning, designing, and developing transportation improvements.

#### Goal 3: Provide for Regular Maintenance of the Bikeway Network.

- Policy 3.1. Develop a program to routinely repair and maintain roads and other bikeway network facilities, including regular sweeping of bikeways and shared use pathways.

#### Goal 4: Encourage and Educate Residents, Businesses and Employers in Menlo Park on Bicycling.

- Policy 4.2. Develop local adult and youth bicycle education and safety programs, such as the League of American Bicyclists courses. Consider partnering with other local jurisdictions, such as the City of Palo Alto, that

already have education programs in place.

- Policy 4.9 Promote bicycling as a healthy transportation alternative.

## Project Goals and Objectives

The goals and objectives for the Bedwell Bayfront Park Master Plan reflects the main character and purpose of the park as a significant open space for Menlo Park and the Bay Area. Development of the goals and objectives include an assessment of projects and documents that have a geographic and/or ideological relationship with the park. As a result, goals and objectives, a project mission statement, and program statements have been developed to capture the identity and value of Bedwell Bayfront Park.

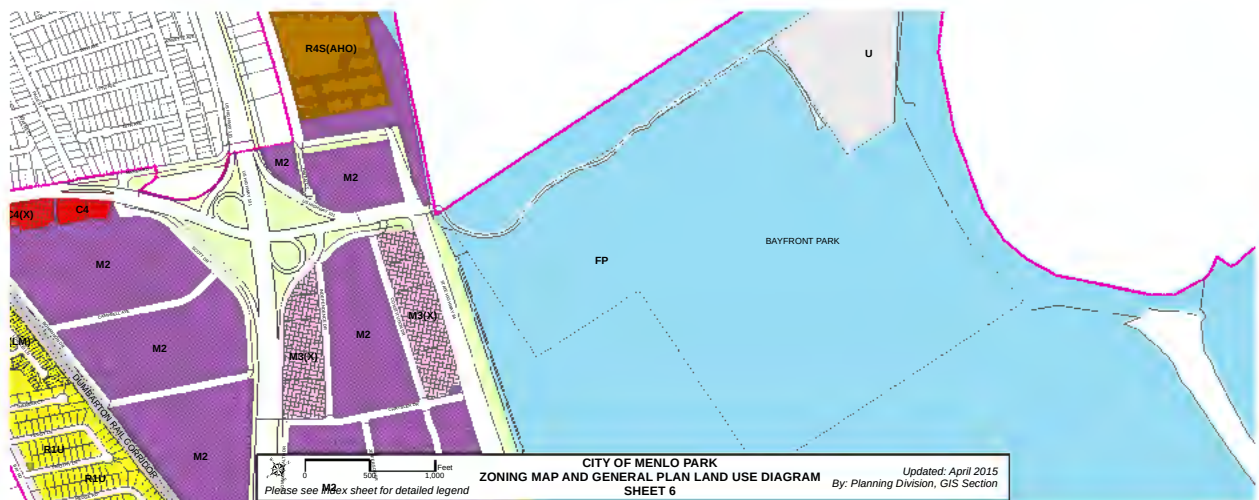


**Figure 4** M-2 zoning map - a larger version of the map is in the Appendix

- GOAL 1** Utilize an open and inclusive community outreach process to refine goals and objectives and develop a roadmap to guide park improvements over the next 25 years.
- GOAL 2** Respect prior decisions (Measure J) made regarding exclusion of active recreation on site.
- GOAL 3** Enhance the park's value as a unique community asset by increasing passive recreation and educational opportunities.
- GOAL 4** Protect existing sensitive habitats and landfill systems.
- GOAL 5** Provide Council with research on appropriate uses of non-motorized and radio controlled aircraft at other public sites and public input on issue.
- GOAL 6** Work to identify sustainable funding sources to support short term improvements and long term maintenance and operations.



## **Mission Statement**

*Since its inception, Bedwell Bayfront Park has been a jewel of the Menlo Park parks and open space system. Revered for its various habitats, Bay views, and passive recreation opportunities, this closed landfill site has become even more important with the influx of housing and office developments in the area. The park is at a critical juncture. Improvements are needed to provide access for the growing population. Sustainable funding sources are needed to fund both short term improvements and long term maintenance and operations.*



## Program Statement

A program statement for the project was created to summarize the priorities and public input that was received throughout the planning process into one summary document. The program statement includes primary objectives of the master plan for the park and guidance for future implementation efforts.

### Respect the emphasis on “passive recreation” on which the park was founded

- Support existing park uses: bird watching, walking, jogging, bike riding on Bay Trail, kite flying, orienteering, and geocaching.

### Acknowledge the need to provide for a growing population and respond to a changing shoreline

- Evaluate parking capacity and opportunity to support a bike share program from Belle Haven.
- Increase and improve general park amenities (dog bag dispensers, seating, eating areas, bike racks).
- Plan for a future with sea level rise (Figure 5).

### Support, enhance and expand activities that are complementary to passive recreation experiences

- Consider new uses: water access,

hand launched radio controlled model gliders, fitness equipment, nature play, and bike riding on paved trails.

- Support on-site youth work program (on-site job skills, youth development, and learning). Evaluate options for providing indoor gathering space for use by: concessions vendors, volunteers, docents, and a park ranger office.
- Improve wayfinding/directional signage.
- Provide mileage markers along trails.

### Address deferred maintenance and improve existing facilities

- Renovate the Great Spirit Path art piece.
- Replace steep, eroding paths (i.e., 3:1 slope) with stairs.
- Replace existing restroom and raise existing infrastructure (i.e., entrance road, parking, Bay Trail) to address sea level rise.
- Upgrade landfill gas and leachate collection and monitoring systems and fire suppression systems.
- Enable methane capture for energy generation.
- Protect existing potable water infrastructure.

### Provide a comfortable, friendly, safe and more accessible user experience

- Improve the Marsh Road/Bayfront Expressway intersection to make it

- safer for pedestrians and bicycles to access the park from surrounding neighborhoods.
- Enhance the park entrance to make it a more pleasant experience.
- Increase public access to summits and points of interest by providing all-weather, accessible trail surfaces.
- Separate uses (bikes/pedestrians/vehicular) to minimize potential conflicts.

#### **Acknowledge that future stewards of the park start with today's youth**

- Create educational opportunities, particularly for school-age children.
- Consider educational trail loops, group seating areas, and support for summer camps.

- Emphasize learning about marsh habitats and landfill systems, to reflect the park's unique history and location.
- Use "green" building methods when possible.

#### **Identify and integrate revenue generation mechanisms into the park structure, to ensure the long-term sustainability of the park**

- Consider revenue sources for both short term capital improvements and long-term maintenance requirements.
- Create revenue structure that acknowledges park use by both City residents and non-City residents.



**Figure 5** Tidal changes will be impacted by sea level rise







# 2

# Planning Process

## Existing Conditions

The master planning process took place in 2017. The City of Menlo Park engaged various community groups throughout the process. The planning process for developing the master plan included evaluating the existing conditions of the site to determine the park's needs and opportunities.

Preliminary steps included a site assessment, which included researching the park's history and reviewing park-related documents. Latter stages of the planning process included conducting outreach events to collect community input, developing preliminary and preferred concept plans, and providing an approved comprehensive document that includes a park master plan, funding

plan, design guidelines, and this summary report of the planning process.

Figure 6 is an existing conditions park map, which helps illustrate significant features in the park and the immediate area to best understand current park conditions. The existing conditions map incorporates physical park attributes (i.e., tree canopies and pathway types), and experiential attributes, such as noise and wind direction. The map also shows flooding potential and habitat areas. Figure 7 is an a map of the landfill conditions to help inform proposed improvements and identify landfill infrastructure locations. Figure 8 shows images taken during site visits to help illustrate park conditions while on-site, which include park and landfill features.



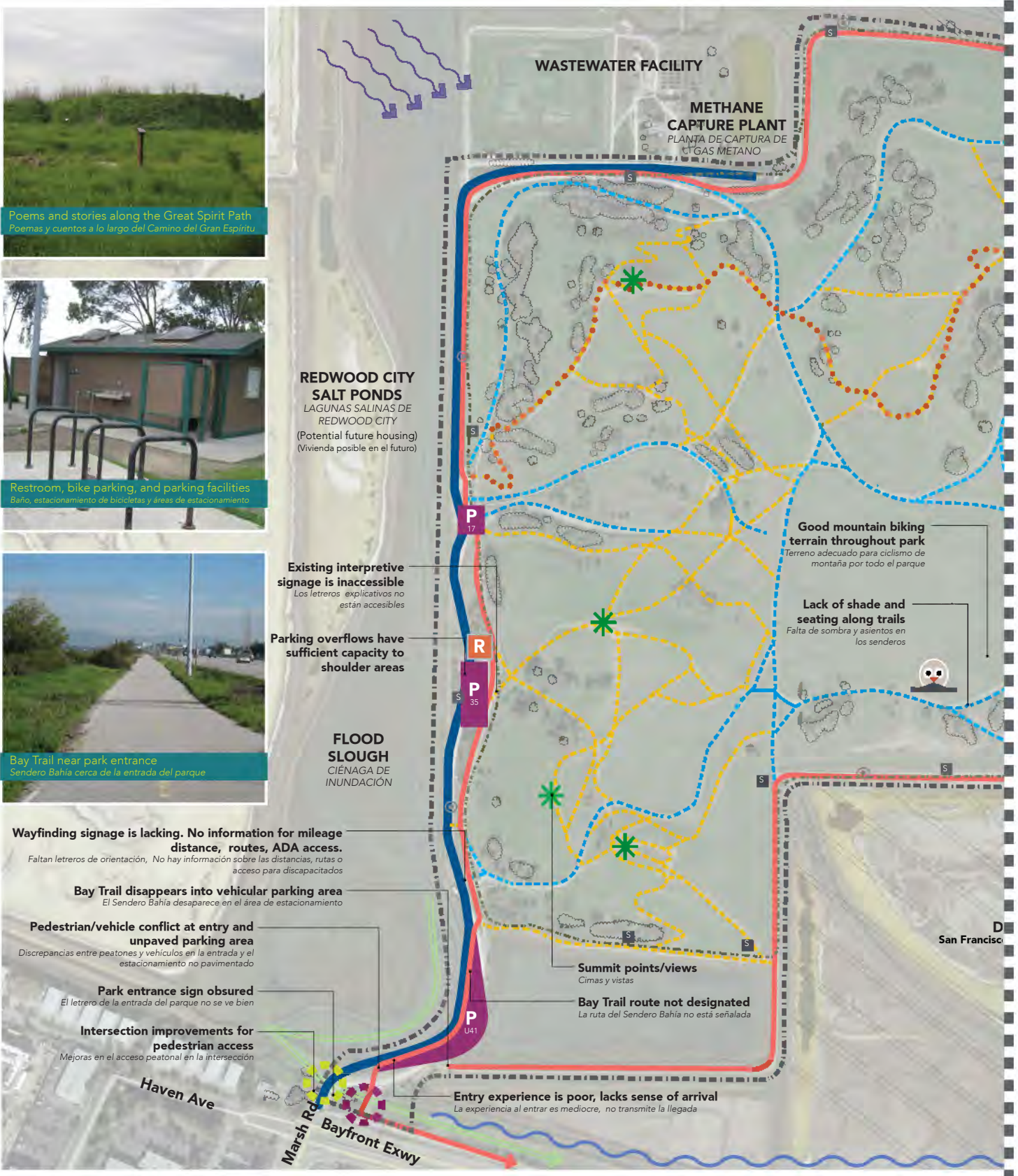


**Figure 6** Existing conditions park map





## Legend / Signos

- Project limits  
*Límites del proyecto*
  - Tree canopy  
*Follaje arbóreo*
  - Paved parking (# stalls)  
*Estacionamiento pavimentado (#espacios)*
  - Unpaved parking (# stalls)  
*Estacionamiento no pavimentado (#espacios)*
  - Restroom  
*Baños*
  - Primary pedestrian/bicycle access point  
*Punto de entrada para peatones y ciclistas*
  - Vehicular access  
*Entrada de vehículos*
  - Point of interest  
*Puntos de interés*
  - Great Spirit Path  
*El Camino del Gran Espíritu*
  - Roadway  
*Carretera*
  - Bay Trail  
*Sendero Bahía*
  - Roadway noise  
*Ruido de la carretera*
  - Windy  
*Parte ventosa*
  - Burrowing owl habitat  
*Hábitat de Búho Llanero*
- ### Pathways / Caminos
- Gravel/paved trail  
*Camino pavimentado*
  - Unpaved trail  
*Camino no pavimentado*
  - Proposed trail  
*Sendero sugerido*
  - Proposed levee/floodwall  
*Dique/muro de contención sugerido*
- ### Landfill features / Características del Vertedero
- Subsurface gas piping  
*Tubería subterránea*
  - Gas extraction well  
*Pozo de extracción*
  - Leachate extraction sump  
*Pozo de extracción de lixiviados*
  - Groundwater monitoring well  
*Pozo de control de aguas subterráneas*
  - Limit of future sea level rise  
*Área bajo agua debido a una subida del nivel del mar de 3'-0" en el futuro*
  - Protected/sensitive habitat  
*Hábitat susceptible/protegido*

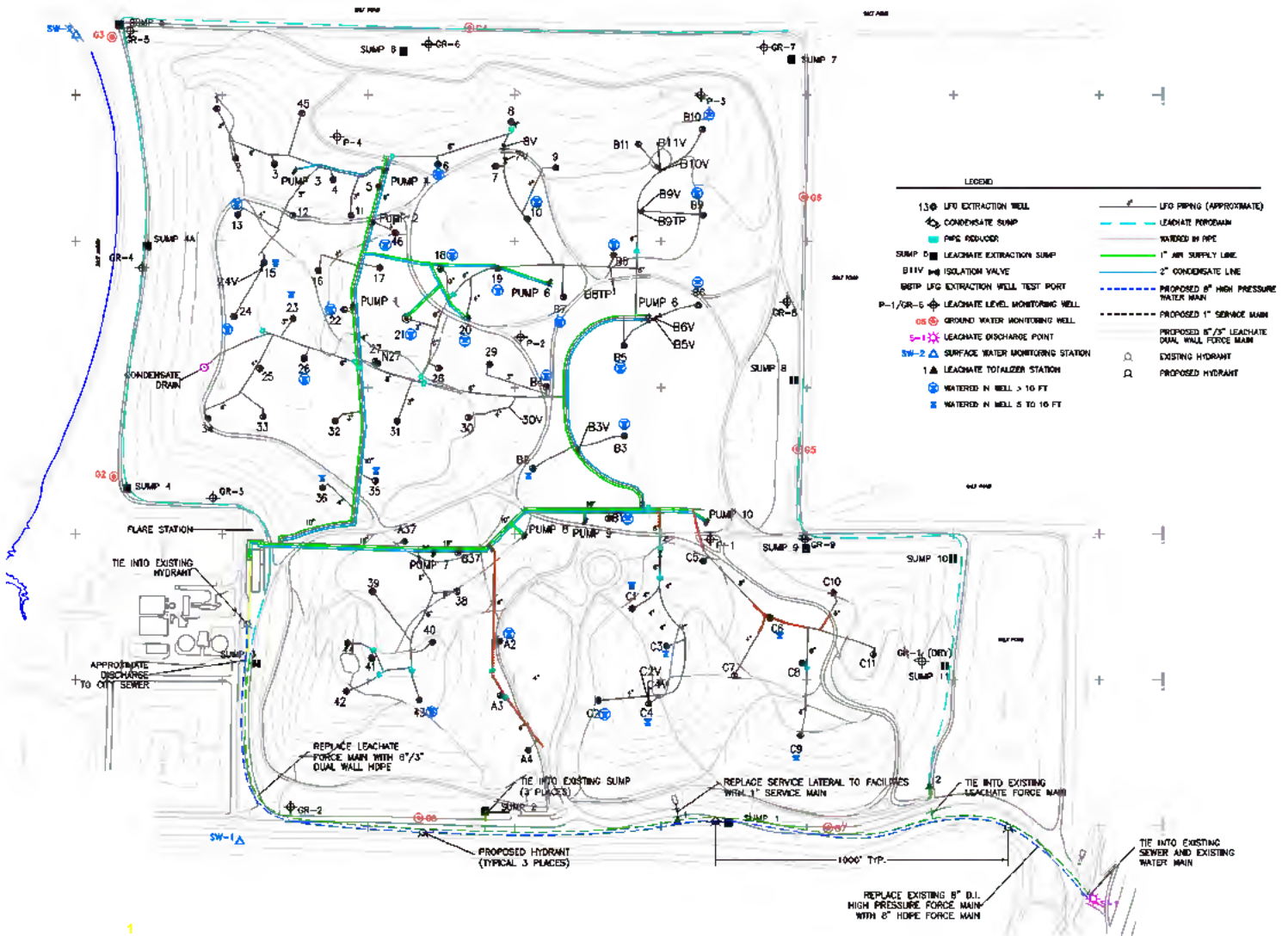


**Figure 7** Landfill conditions map - a larger version of the map is in the Appendix



## Existing Site Images



**Figure 8** Images taken during a site visit to assess existing conditions

## Site Assessment

The existing site conditions at the park were evaluated through the review of documents, site visits to the park, and conversations with local interest groups. Discussions with interest groups helped the design team learn about the park's landfill operations, local wildlife species, and concurrent planning projects around the area. Due to the park's unique location, it was also important to assess the park's vulnerability to sea level rise, the relationship the park has with the adjacent refuge and waterbodies, traffic patterns to inform park usage, the biological resources found at and around the park, and prior uses of the park, such as glider use. The next section looks at an assessment of these topics.

### Sea Level Rise Assessment

Currently, Menlo Park has shorelines that are prone to tidal flooding and sea level rise. Bedwell Bayfront Park is located on the shoreline and is vulnerable to these conditions. Figure 9 shows the sea level exposure map for the park. Figure 10 shows the impacts of sea level rise at Bedwell Bayfront Park as a section cut near the entrance road. Bedwell Bayfront Park improvements will need to be designed to meet the 2050 sea level rise scenario set as a standard in the City's 2040 General Plan, which is to accommodate sea

level rise during a 100-year flood event (projected 66" above current conditions). Elevations are based on North American Vertical Datum of 1988 (NAVD88) and uses an existing City topographic survey that lacked a benchmark. The elevations and benchmarks have been extrapolated based on other plans in the vicinity. Reconstruction of the access road and the Bay Trail need to be confirmed with topographic survey data.

Improvements to the park will need to plan for these impacts through design strategies and partnering with nearby Bayland efforts. Three efforts that are near Bedwell Bayfront Park and are currently pursuing strategies to protect Menlo Park communities, habitats, and ecosystems against sea level rise includes:

- Park and Strategy to Advance Flood Protection, Ecosystems and Recreation (SAFER) Bay
- South Bay Salt Pond (SBSP) Restoration Project
- Bayfront Canal Bypass Project

### SAFER Bay

SAFER Bay is a flood mitigation strategy created and supported by the San Francisquito Creek Joint Powers Authority (SFCJPA). SAFER Bay seeks to provide habitat restoration for the Bay's tidal marsh ecosystem and to enhance recreation opportunities along the Bay



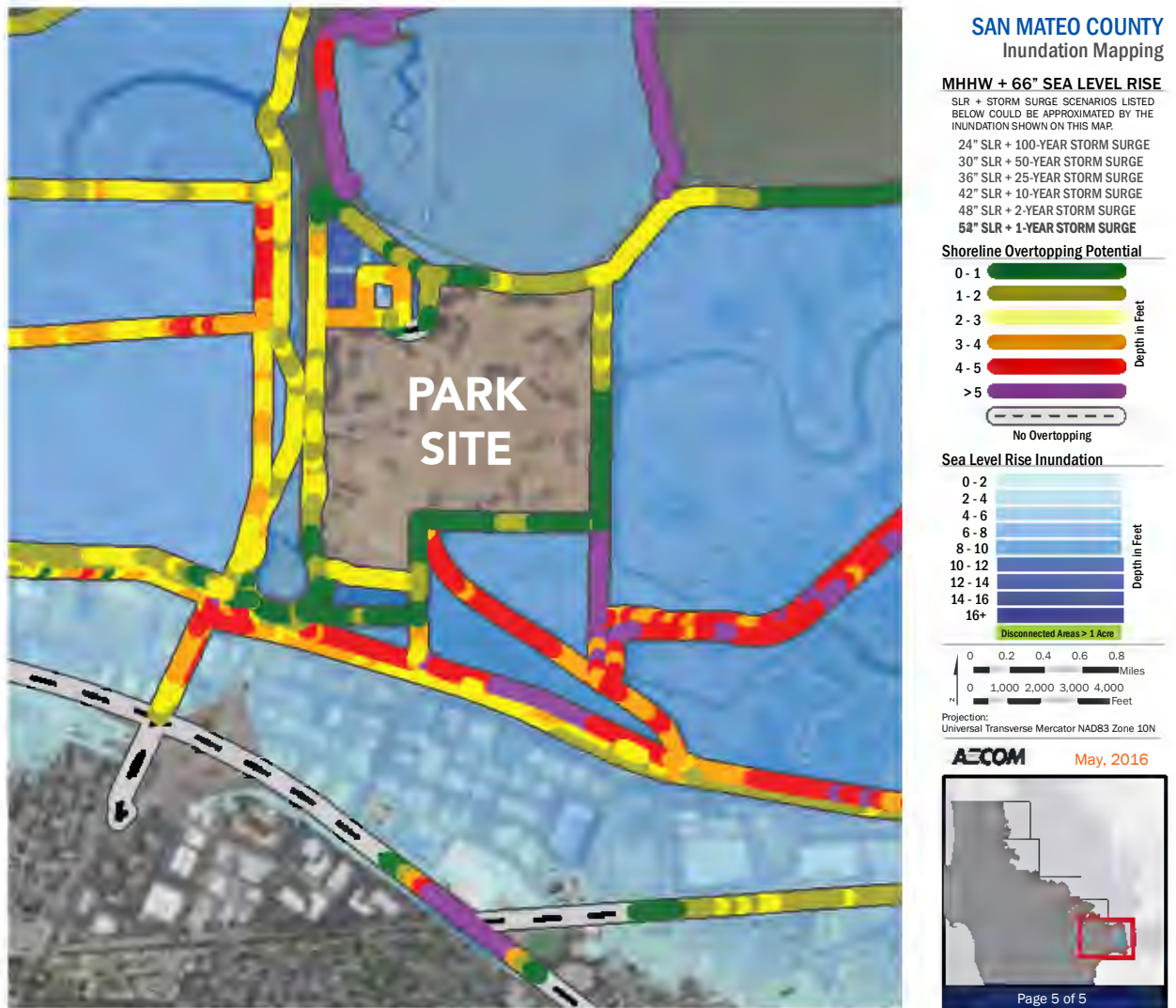
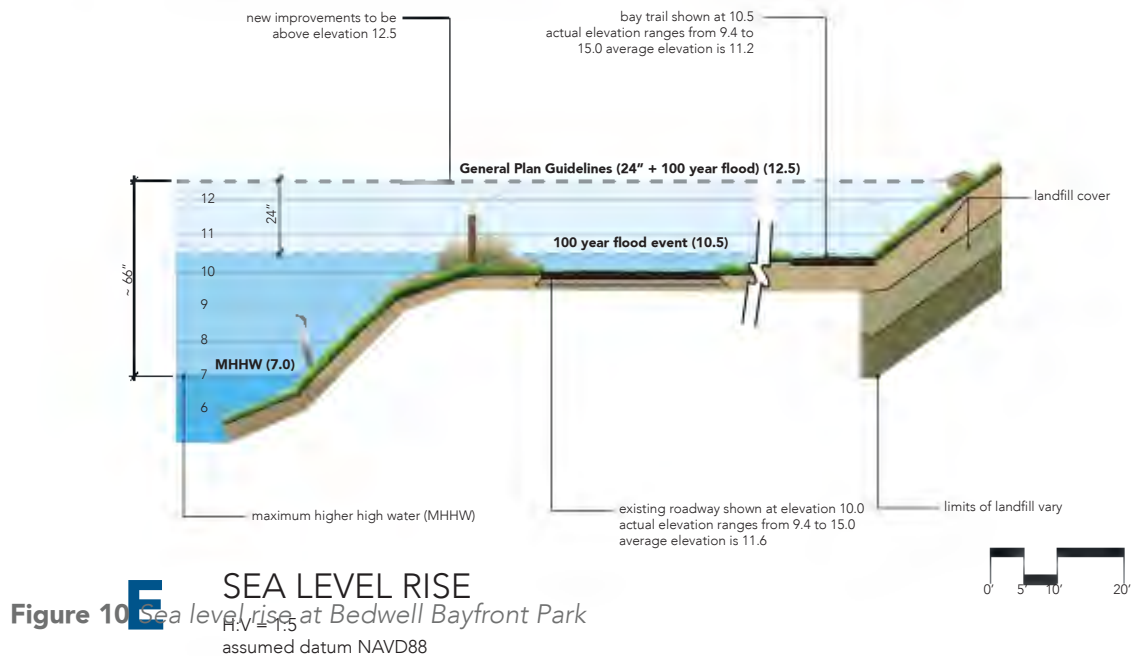


**Figure 9** Sea level rise exposure map for Bedwell Bayfront Park -  
Sea Level Rise & Overtopping Analysis for San Mateo County's Bayshore, 2016



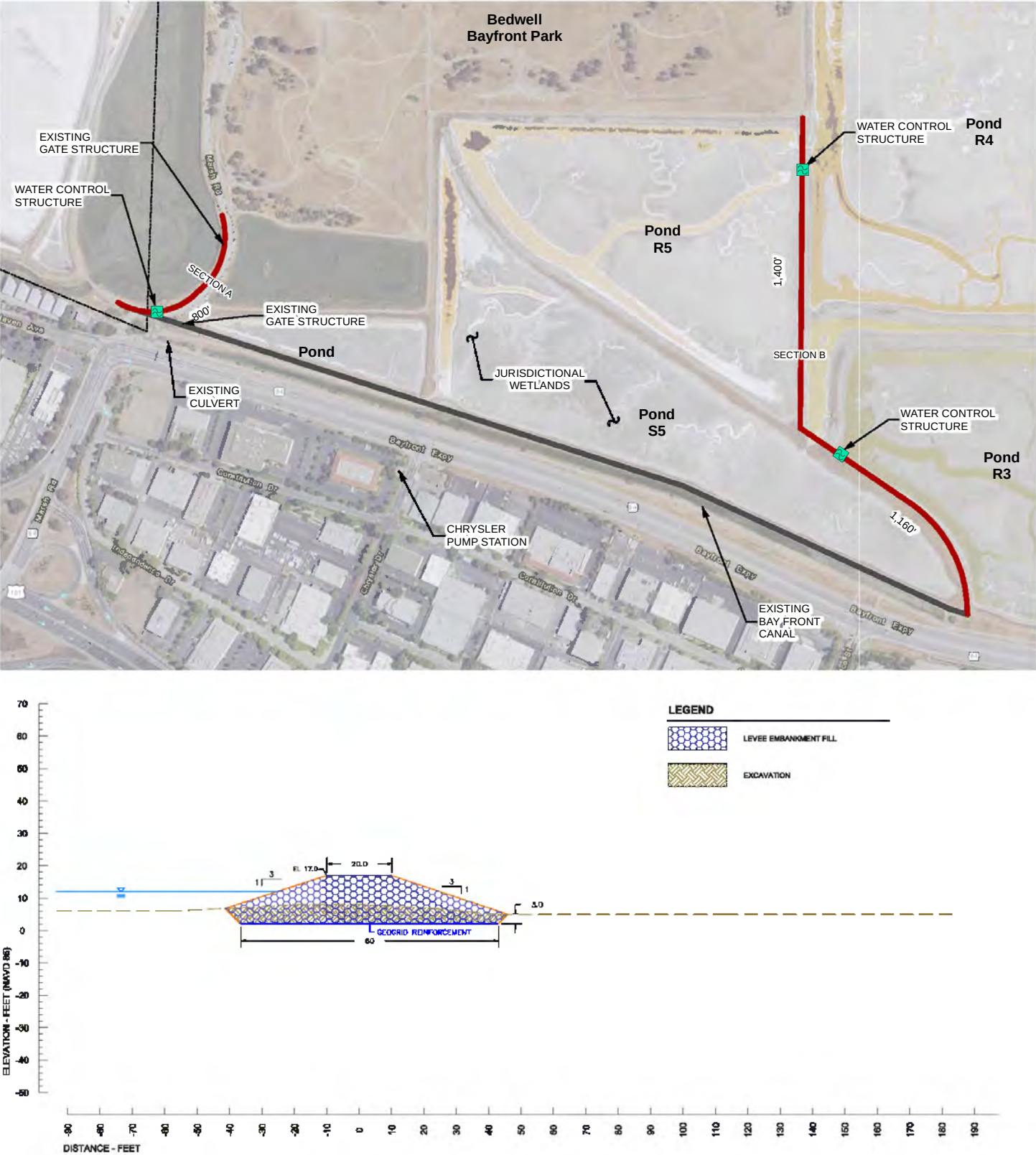


Figure 11 SAFER Bay levee options at Bedwell Bayfront Park - a larger version of the map is in the Appendix

shoreline. Although the existing salt pond levees provide some degree of protection from coastal flooding, these levees are not certified by FEMA to provide flood protection from a projected 100-year event (i.e., an event that has a 1% annual chance of occurring in any given year). Bedwell Bayfront Park is identified as a location to mitigate sea level rise. SAFER Bay proposes two options for mitigating sea level rise impacts through the implementation of levees. One option is near the park's entrance and on the lower eastern edge of the park, and the other is along Bayfront Expressway. Figure 11 shows these options.

### South Bay Salt Pond (SBSP) Restoration Project

The SBSP Restoration Project is a multi-agency effort to restore tidal marsh habitat, reconfigure managed pond habitat, maintain or improve flood protection, and provide recreation opportunities and public access. A portion of Phase 2 of this project is located at the Ravenswood Ponds, east of Bedwell Bayfront Park at the Don Edwards San Francisco Bay National Wildlife Refuge. At this location, the project would transition Pond R4 (shown in Figure 12) from a seasonal pond to tidal marsh while maintaining or improving the existing flood protection and the conversion of Ponds R5 and S5 from seasonal ponds to a variety of enhanced

managed pond habitat types.

### Bayfront Canal Bypass Project

The Canal begins in Redwood City and runs west to east along the southern edge of salt ponds owned and operated by Cargill, Inc. The Atherton Channel joins the Canal a few hundred feet west of Marsh Road and receives flow from Menlo Park and several other communities. The combined flow from the Atherton Channel and Canal empties into Flood Slough. The drainage areas along the Canal are subject to frequent flooding due to conveyance issues associated with the capacity of the Canal during large storm events as well as flow restrictions when tide levels in the Bay are high. The Canal Bypass Project would consist of a control structure routing storm flow from the Canal to Ponds R5 and S5 (R5/S5) for temporary storage which would mitigate flooding. The stormwater would flow back to the Bay during periods of low tides.

### Traffic Assessment

A traffic count was obtained in mid-March 2017 to evaluate the number of visitors over a week's time. Counts were taken each day for a week, from Tuesday March 14 to Monday March 20; counts were taken during a time with no holidays to avoid skewed counts due to irregular visitation patterns. The traffic counts showed the number of cars that entered and exited



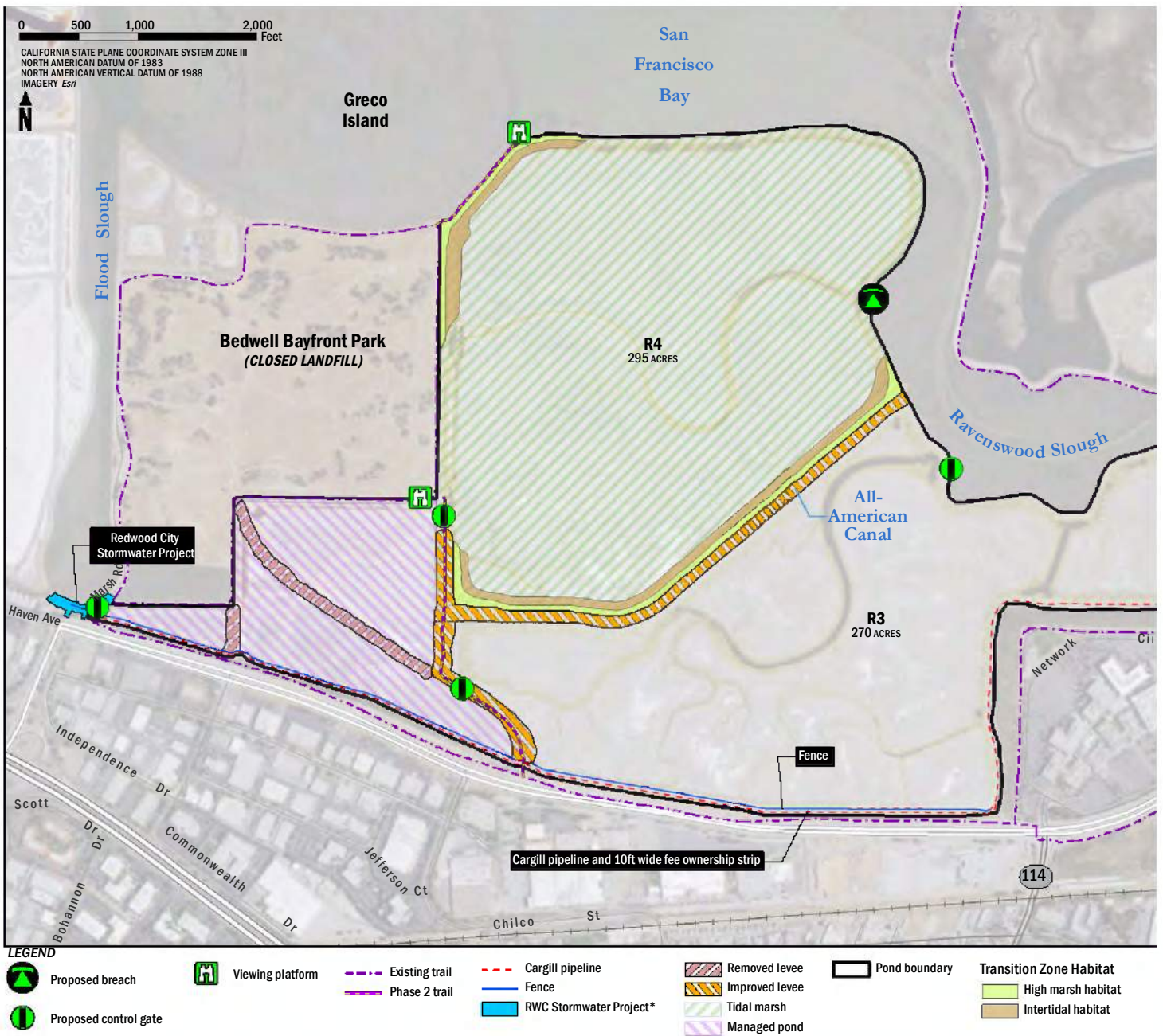


**Figure 12** SBSP Restoration Project alternative - a larger version of the map and the other alternatives are in the Appendix

each hour of the day (between 6 am and 8 pm). These numbers help illustrate turnover rates and time/day preference for park use.

On average, the park sees 859 cars a day. The highest volume day was on Saturday with 972 visits and the lowest volume was

on Monday with 625 visits. These counts and traffic patterns helped inform parking demand requirements and roadway design.

Several concurrent traffic design plans proposed as part of adjacent developments were also evaluated to



understand their impact on Bedwell Bayfront Park. There are proposed improvements at Haven Avenue and Marsh Road, near the entrance into Bedwell Bayfront Park, as well as improvements near the park's entrance at Bayfront Expressway and Marsh Road. A review of both plans shows that a green bike lane next to the crosswalks at the park's entrance and along Haven Avenue and a new crosswalk on the east side of the Marsh Road/Bayfront Expressway intersection is proposed. These improvements complement the master plan design and enhance pedestrian and bicycle access to the park, which may help manage increased vehicular travel due to nearby development. The traffic assessment and the traffic design plans can be found in the Appendix.

### Environmental Assessment

A preliminary biological assessment was conducted in late March 2017 to evaluate the feasibility of recreational uses for the park. The assessment included preparation of an Initial Study (IS) checklist. The checklist is typically used to determine if a proposed project may have a significant effect on the environment [California Environmental Quality Act (CEQA) Guidelines Section 15063 (a)]. For this project, the checklist was used as an informational planning tool to assist the project team in development of the park

master plan. The checklist included looking at environmental factors that would be potentially affected by the proposed improvements and considered the park's structure as a landfill and surrounding land uses (i.e., Don Edwards San Francisco Bay National Wildlife Refuge, Redwood City salt ponds, wastewater facility, and commercial and residential uses south of Bayfront Expressway [State Route 84]).

The environmental factors that would be potentially affected by this project, involving at least one impact that is "Less than Significant with Mitigation Incorporated" includes:

- Biological Resources
- Hydrology/Water Quality
- Transportation/Traffic

The environmental assessment and the related recommendations to mitigate significant impacts can be found in the Appendix.

### Biological Resources

Two wildlife species that are both State and Federally Endangered are known to occur nearby: Ridgeway's rail occurs on Greco Island, and salt-marsh harvest mouse has been found in parts of Flood Slough. Focused surveys for wildlife were not conducted; however, the predominance of non-native plants within the majority of the park limits the value

of the site for breeding birds. In addition, the need to occasionally control deep burrowing animals from penetrating the 6-foot deep cap on the old landfill limits the potential for burrowing owls to breed on the site, although they are occasional transient visitors. The tidal pond is likely too small of a habitat area to support a population of salt-marsh harvest mouse, and the tidal pond did not appear to have adequate areas for this species' upland refugia they need to escape high tides. No other special status species are expected to regularly inhabit or breed within the park; however, there have been occasional sighting of special status birds during migrations.

### Hydrology/Water Quality

Surface runoff from the project site currently percolates into the ground near the landfill collection system, collects as seasonally ponded water, or sheet flows toward Flood Slough or other portions of San Francisco Bay. There are no storm drain systems within the park. Development of new recreational facilities, including additional paved parking lots would potentially result in an increase in the rate and volume of surface runoff; however, the master plan includes stormwater treatment areas adjacent to the parking lots and paved trails. These stormwater treatment areas will manage the quantity and quality of storm water run-off before it enters San Francisco Bay.

### Transportation/Traffic

The proposed project is not expected to include any roadway improvements which would substantially increase traffic hazards. During construction, truck traffic entering and exiting the site access road(s) could result in a temporary intermittent impact to motor vehicle, pedestrian and bicycle use on local roads and arterials, but this would be less than significant with implementation of a construction-period traffic management plan.

### Landfill Assessment

An active landfill gas collection and control system (GCCS) has been installed and operating at the former landfill since late 1980's. The GCCS consists of approximately 72 landfill gas (LFG) extraction wells installed vertically within the waste mass connected to a network of LFG collection piping which route extracted LFG to an on-site LFG flare for combustion. The flare station is located on the east side of the property and blowers are used to impart a vacuum on all the gas extraction wells via buried piping network. Due to the age of the GCCS, many of the vertical wells have become inundated with water or have been damaged due to forces of landfill settlement. Additionally, horizontal buried piping that conveys LFG to the flare station have also settled similarly and have collected water, thereby blocking the flow of LFG to the flare station.

In addition to the LFG recovery improvements, the City is evaluating several technologies to determine the feasibility of utilizing residual LFG supplies for beneficial use as “biogas”. Beneficial uses of biogas from landfills typically includes power generation using the heating content of the LFG and generation of compressed natural gas (CNG) for use in vehicle fleets. The evaluation is currently in progress.

### **Unmanned Aircraft System (UAS) Assessment**

On August 23, 2016, the Menlo Park City Council approved Section 8.28.130.5 to prohibit all model aircraft in the City’s parks, including Bedwell Bayfront Park. The ordinance prohibits “motor-driven vehicles or models, including drones and unmanned aircraft systems, except in designated areas, and except for the use of drones by public safety personnel for emergency operations.” No areas in any of the City’s parks are currently approved for model aircraft use under the exception clause of this code; however, it was stated by the City Council that the master planning process for Bedwell Bayfront Park would provide an opportunity to consider establishing a designated area for model aircraft. Factors to be considered include: the comfort and safety of all park visitors, risk to wildlife in the park and the surrounding wilderness area, risk to manned aircraft, permit

requirements, establishment of rules for model aircraft operation, and feasibility of rules enforcement.

Model aircrafts come in all types and sizes, from the tiniest indoor free-flight hand thrown glider models to ¼-scale aircraft powered by 2-cycle internal combustion engines. Typical radio-controlled (RC) model aircraft range from unpowered gliders (Figure 13) and electric motor assisted gliders to motor/propeller driven airplanes and helicopters. Within a 36-mile radius of Menlo Park there are currently 8 privately owned model aircraft flying fields associated with AMA chartered clubs and 6 public parks or schoolyards (some associated with chartered AMA clubs) where some types of model aircraft flying are permitted. The public parks that specifically allow and regulate some types of model aircraft include Rancho San Antonio Open Space Preserve in Santa Clara County, Windy Hill Open Space Preserve in Portola Valley, Coyote Hills Park in Newark and Mission Peak Regional Park in Fremont.

Hobbyists began flying model gliders at Bedwell Bayfront Park as early as 1986, shortly after the park was opened and before trees matured. The breeze that sets up consistently in the afternoons from early Spring through late Fall is forced into updrafts in front of the various



**Figure 13** *Hand-launched radio-controlled glider*

small hills in the park. Flying gliders on these updrafts is called "slope gliding". Motor-driven model aircraft and gliders that use thermals to stay aloft have mostly been flown at the large meadow area. Most of the model aircraft hobbyists flying motor driven models tended to station themselves at the southern edge of the central meadow. Hand-launched gliders and motor assisted gliders, as well as a few gliders launched by "hi-start" (stretched rubber tubing and string serving as a glider slingshot) were mostly flown from the northern edge of the meadow. This is because the prevailing breeze generally blows from north to south and gliders naturally follow the breeze to keep up with passing thermals.

The environmental assessment noted several concerns regarding glider use at the park, and additional research to set parameters for glider use was conducted. Non-motorized radio-controlled gliders could cause potential conflicts when flown in close proximity to park users using multi-use trails and small group picnic areas. Measures are recommended to avoid/reduce hazards between gliders and the various park users if use is allowed in the park. It should be noted that prior glider use did not result in any known incidents.

Key findings included:

- The range a glider can go is dependent on the capabilities of the pilot, the glider design, and the weather.
- The meadow is a good flying area because it is large and open, and it does not have any paths that cross through it. At the launch of a glider, it takes seconds for the glider to reach 100-feet vertical clearance. By keeping the gliders in the meadow, they are visible, and the pilot can land the plane if a pedestrian is spotted around the area of the meadow.
- Landings are often the slowest part of the flight, while the launch is the quickest. Thermal climbs are faster, and the glider can reach a speed of about 15 mph. The control of the glider is dependent on the pilot, but control of the glider is not impacted by the size of the plane.
- In the past, a park ranger informed glider users to stay out of the middle of the meadow to limit the amount of foot traffic through the middle that might disrupt local wildlife. Glider pilots can launch from the north edge and can control the glider landing location, without having to walk into the meadow's interior.



## Community Process

Public participation is a prioritized aspect of this project. Four (4) public outreach events and several informational pop-up booths were hosted as a part of the outreach process. Community Meeting #1 was held on April 8th at the Menlo Park Senior Center (Figure 14), Community Meeting #2 was held on June 17th at Bedwell Bayfront Park, Community Meeting #3 was held specifically for the Belle Haven community on August 10th at the Menlo Park Senior Center, and Community Meeting #4 was held in two parts, first as a Parks and Recreation Commission

study session on October 11th and the second on October 25th at a Parks and Recreation Commission meeting to formally provide a recommendation to City Council. Materials used at each meeting can be found in the Appendix.

A significant part of the master planning process was to provide the opportunity for the public to voice their “wish list” items for the park. A long list of potential park features were proposed to the public and, through input provided at community workshops, park amenities and activities that received a majority of the community’s support were included in the master plan. Features found on



**Figure 14** Community outreach process

## Outreach events

### pop-up booths



Farmers' market



On-site pop-up booth

### community meeting #1



Off-site community meeting



### community meeting #2



On-site community meeting



**Figure 15** Images taken of various outreach events



the final plan are a product of an iterative community outreach process.

The public was notified about these events through an extensive community outreach process, part of which is shown in Figure 15. Several pop-up and outreach events were held over the course of several months to inform the public and potential project stakeholders of the upcoming input opportunities. The general community was notified via newsletters that were sent through the City's utility bills during the weeks prior to and after the first community workshop in April. Several information booths were hosted by the City and the design team to help promote the upcoming community meetings; booths were held at the Farmer's Market downtown on March 19th, on-site at the park on March 25th, April 1st, April

22nd, and May 13th, at the City's summer concert series, during the July 4th festival, and during National Night Out on August 1st. Digital notifications included City website updates, e-mail blast from the City, and posts to NextDoor and on the project Facebook page (Figure 16). Ads in the Belle Haven newsletter also helped reach neighbors in close proximity to the park. Visitors to the park were greeted by on-site posters at each of the parking areas, brochures in the entry kiosk, and a marquee/electronic reading board with upcoming meeting information. Additional notification posters were placed at kiosks and community bulletin boards at other City facilities (i.e., libraries, community centers, and parks).

Figure 17 summarizes the various notification methods used for each public meeting.



Project Facebook page



On-site posters

**Figure 16** Examples of just some of the notification methods used to get the word out

| Outreach Notification Method               | Community Meeting #1 | Community Meeting #2 | Community Meeting #3 | Community Meeting #4 |
|--------------------------------------------|----------------------|----------------------|----------------------|----------------------|
| Update City webpage                        | x                    | x                    | x                    | x                    |
| Update Facebook page                       | x                    | x                    | x                    | x                    |
| E-mail blast to various stakeholder groups | x                    | x                    | x                    | x                    |
| E-mail blast to NextDoor                   | x                    | x                    | x                    | x                    |
| Ad/notice in Belle Haven newsletter*       | x                    | x                    |                      | x                    |
| Direct utility billing*                    | x                    |                      |                      |                      |
| On-site marquee / electronic board         | x                    | x                    |                      | x                    |
| On-line survey for Open House*             | x                    | x                    | x                    | x                    |
| E-mail blast to Open House #1/#2 attendees |                      | x                    | x                    | x                    |
| Project outreach at community events       | x                    | x                    | x                    | x                    |
| Project outreach on-site                   | x                    | x                    |                      |                      |
| On-site posters*                           | x                    | x                    |                      | x                    |
| Place posters at other City parks*         | x                    |                      |                      |                      |
| On-site brochures*                         | x                    | x                    |                      | x                    |
| Event translator for Spanish speakers*     | x                    | x                    | x                    |                      |

\*Resources available in Spanish

**Figure 17** Outreach plan summarizing the various notification methods for public meetings



## Stakeholder and Agency Coordination

The planning process sought to develop as a collaborative effort between project stakeholders and related agencies. Project stakeholders were identified and sent periodic updates about the project and potential input opportunities. A stakeholder is identified based on their potential impact with shaping the project. Stakeholders included the Oversight Group, the Interagency members, and the community, which together, represent local and regional groups that contribute to the park. The Oversight Group consisted of members representing various community perspectives and helped review presentation materials before they were shared with the general public. The group consisted of representatives from an M-2 business, public-at-large, Parks and Recreation Commission, Environmental Quality Commission, Citizens Committee to Complete the Refuge, Friends of Bedwell Bayfront Park, and the City of Menlo Park. Meetings with the Oversight Group were held before each community meeting. Members of the Interagency Group who were invited to participate included:

- San Mateo County (Environmental Health and Solid Waste Program)
- United States Environmental Protection Agency (EPA) Region IX
- Bay Area Air Quality Management District (BAAQMD)
- Regional Water Quality Control Board (RWQCB)
- San Mateo County Environmental Health Services Division
- Menlo Park Fire Protection District
- CalRecycle
- West Bay Sanitary District
- APTIM (formally CB&I)
- San Francisco Bay Conservation and Development Commission (BCDC)
- Regional Water Quality Control Board
- United States Army Corps of Engineers
- Association of Bay Area Governments (ABAG)
- California Department of Fish and Wildlife Services
- U.S. Fish and Wildlife Services
- National Marine Fisheries Service
- California State Coastal Conservancy
- California Air Resources Board (CARB)
- San Francisco Bay Joint Powers Authority (SFCJPA)

Oversight Group, Interagency, and community meetings were held to shape the development of the park master plan shown in this report. A list of these meetings is shown in Figure 18.

| Meeting                                                 | Date     | Purpose                                                                                  |
|---------------------------------------------------------|----------|------------------------------------------------------------------------------------------|
| Oversight Group Meeting #1                              | 3/23/17  | Review project goals and open house format and materials                                 |
| Community Meeting #1                                    | 4/8/17   | Solicit community input on what they would like to see for Bedwell Bayfront Park         |
| Oversight Group Meeting #2                              | 6/8/17   | Review open house results and design alternatives                                        |
| Community Meeting #2                                    | 6/17/17  | Solicit community input on the three design alternatives                                 |
| Interagency Meeting                                     | 7/12/17  | Solicit input on the three design alternatives                                           |
| Community Meeting #3                                    | 8/10/17  | Solicit community input on the three design alternatives in the Belle Haven neighborhood |
| Oversight Group Meeting #3                              | 9/13/17  | Review open house results and preferred plan                                             |
| Parks and Recreation Commission #1                      | 10/11/17 | Present preferred plan to community                                                      |
| Community Meeting #4/Parks and Recreation Commission #2 | 10/25/17 | Solicit community input on the preferred plan                                            |
| City Council Meeting                                    | 11/14/17 | Solicit input and approval on the park master plan                                       |

**Figure 18** Project meetings

## Community Meetings

### Community Meeting #1

The community meetings have been a primary means to obtain input. Community Meeting #1 occurred on Saturday, April 8th at the Senior Center in Belle Haven from 10 am to 2 pm. It was a very rainy day, but 50 people signed in at the event, and 39 people completed a response packet. The packet was the primary collection tool used to gather feedback at this event and asked participants to review materials and respond to questions that helped to identify preferred activities and amenities for the park. For those who could not attend, an on-line survey was available with the same questions presented at the community meeting, but in an on-line format. 86 people completed the on-line survey.

One of the most significant questions asked at the event was for participants to define “passive recreation”. Bedwell Bayfront Park was founded as a passive recreation park, but the definition of this meaning ranges in interpretation. The public was asked to respond to a grid of images that described passive recreation from less active to more active activities. The public was also asked to respond to park amenities images to help indicate preferred amenities to include in the master plan.

A majority of participants supported more active activities, such as fitness, than less active. Participants also supported preserving the park’s natural qualities and keeping a majority of the trails unpaved. Input gathered at Community Meeting #1, both from the meeting and through the on-line survey, was utilized to generate concept alternatives. Results from Community Meeting #1 were summarized and made available at Community Meeting #2.

### Community Meeting #2

Community Meeting #2 occurred on Saturday, June 17th at Bedwell Bayfront Park from 10 am to 2 pm. In the midst of a heat wave, 60 people signed in at the event, and 56 people completed response packets. At this event, the packet asked participants to review the materials and respond to questions to help identify concept plan preferences. Similar to Community Meeting #1, an on-line survey was available to those who could not attend. 151 people completed the survey. Participants at the community meeting and through the on-line survey were presented with two (2) plan alternatives.

Each plan alternative included unique park features and varied in the design, amenities, and materials used. Participants were asked to select a preferred plan and provide input on features they liked,

disliked, or would like to change. This method allowed participants to customize the plan by providing comments on park features and describing what they would change about the design, if anything. A third option, or a “Do Nothing” option, was not provided because the design team wanted the public to respond to specific concepts and describe why certain features are desired or undesired in order to have enough qualitative data to design a preferred plan to present at Community Meeting #4.

Participants showed a slight preference for Plan A, but were fairly split in preference for Plan A, Plan B, and electing to select no plan. A majority of participants were in favor of preserving existing uses (i.e., walking, jogging, biking on paved paths), having accessible paths and summits, and the addition of picnic tables and educational signage. A majority of participants supported nature play and a kayak launch, where a slight majority did not support the inclusion of non-motorized hand-launched model gliders in the park master plan.

### **Community Meeting #3**

Community Meeting #3 was scheduled after Community Meeting #2 in response to the low numbers of Spanish-speaking participants involved in the input process at prior events. A significant percentage

of park users speak Spanish and live in the Belle Haven community, less than 2 miles from the park. Open House #3 used the same materials as Community Meeting #2 but used fully translated response packets and two (2) Spanish interpreters.

Turn-out at the meeting was greater than the returned number of response packets. 19 packets were turned in and a majority of the participants said they preferred neither plan. Many of the responses matched the feedback from Community Meeting #2. The greatest amount of support was for habitat restoration, trail surfacing, picnic tables, and screening trees.

### **Community Meeting #4 (Parks and Recreation Commission) + City Council**

The draft park master plan was presented to the public and the Parks and Recreation Commission (PRC) before being presented to City Council. Community Meeting #4 was held in two parts, both at the Arrillaga Family Recreation Center. The first part was held on October 11th as a PRC study session, where the project process and the park master plan were presented. The purpose of the study session was to obtain input from the Commission on items of the plan that need further refinement in preparation for a recommendation to City Council. The second part was held on October 25, 2017 at a PRC meeting, where the public was provided input



and Commission formally proposed a recommendation to City Council. The Commission expressed its desire to incorporate an outdoor classroom into the plan and remove the kayak launch from the plan. Additionally, the Commission did not recommend including an off-leash dog park or permitting gliders in the plan. This recommendation was carried forward to City Council.

The master plan and the recommendations from PRC went before City Council on November 14, 2017. City Council agreed to accept the park master plan with the recommendations from PRC to remove the kayak launch from the plan and include an outdoor classroom. Council also suggested further research on the permitted use of non-motorized hand-launched model gliders at Bedwell Bayfront Park.





# 3

# Master Plan

## Park Master Plan

The park master plan includes design recommendations that were influenced by the public during community outreach events. The plan considers key factors that the public view as significant design considerations, and include design guidelines to provide recommendations that fit the park's natural and passive recreation aesthetic.

The master plan is based on community input and interdisciplinary collaboration, and adheres to the park's character as a passive recreation destination. The master plan includes features that touch on four main points:

- Accessibility Improvements
- Educational Opportunities
- Environmental Considerations
- Publicly-supported passive recreation enhancements

The park master plan, shown in Figure 19, seeks to expand the accessible trail system while preserving the natural qualities, introduce educational learning opportunities about Bedwell Bayfront Park as an existing landfill and current habitats,

and provide site amenities that the public supported.

### Accessibility Improvements:

Accessibility improvements will provide an inclusive trail system for people of all abilities to experience the park's features. Improvements include widening, (re)paving, and (re)grading pathways, providing wheelchair access to summits, and introducing a treated trail that provides the natural qualities of a gravel trail while being a stabilized surface to meet ADA standards.

### Educational Opportunities:

Bedwell Bayfront Park is a unique open space because it exudes the look of an untampered natural environment, yet it is built above a capped landfill and is constrained by the Bay and the Don Edwards San Francisco Bay National Wildlife Refuge. This aspect of the park will be described and celebrated through a series of educational opportunities at the park's interior. Educational opportunities feature informative signage, such as the story of the landfill and explanations about the process of methane capture and the flare that can be viewed from a portion of



the park. Other informative signs discuss environmental features, such as local bird species and how water levels fluctuate in the tidal ponds.

### **Environmental Considerations:**

While the park is human-made and came to exist after the closure of the landfill, people often view the park as an environmental gem in the region. The plant and animal species that can be viewed from the park are a large attraction for visitors. It is important to protect these qualities and provide restoration and preservation, such as native plant restoration and stormwater management, wherever possible. Construction during implementation of the master plan will be carefully monitored to reduce impacts to habitat species. Sea level rise is a significant environmental consideration for the park, as most of the park's edges will be impacted by projected changes in sea level. The master plan will account for these changes and provide relief from sea level rise impacts.

### **Reinstating a Park Ranger:**

A park ranger for Bedwell Bayfront Park was removed as the available park budget dwindled. The master planning process provides the opportunity to ask the community about reinstating a ranger at the park to provide enforcement and educational support. The community strongly supported having a ranger at

the park for these purposes. The ranger would provide enforcement for off-leash dogs, monitoring parking, and ensuring appropriate park uses. The ranger would also serve as an educational docent and provide information to park users on local habitat, tidal activity, and the park's history as a landfill. The ranger would have a new office on-site to store docent materials and park equipment. The office also provides a space for the ranger to provide park information and for park users to locate the ranger when the ranger is not out monitoring the park.

### **Passive Recreation Enhancements:**

Key park features include:

- Walking/hiking/jogging
- Bird watching/kite flying
- Biking on additional paved trails
- On-leash dog walking
- Orienteering/geocaching
- Great Spirit Path
- Park ranger
- New restroom and ranger office
- Bay Trail
- Accessible paths
- Accessible summits
- Screening trees
- Habitat restoration
- Picnic tables and benches
- Fitness course
- Nature play
- Outdoor classroom
- Paved/gravel parking





Figure 19 Park master plan



**Figure 20** Don Edwards San Francisco Bay National Wildlife Refuge

## Design Guidelines

The park's Design Guidelines will be utilized to help guide the development of Bedwell Bayfront Park. They reflect unique considerations, including the park's proximity to the Don Edwards San Francisco Bay National Wildlife Refuge (Figure 20), the park's shared use as a landfill, and the emphasis on passive recreation.

The Park Design Guidelines addresses:

1. Character
2. Access and Parking
3. Trails and Pathways
4. Site Furnishings
5. Structures
6. Signage and Wayfinding
7. Landscape
8. Destinations and Points of Interest
9. Landfill
10. Other Future Considerations

Images show examples of improvements and help illustrate Design Guideline concepts. However, they do not represent selected site features. The City will approve all improvements prior to implementation.

## 1. Character

Character is selecting and designing site amenities to fit the atmosphere and geographic location of the park. The park is exposed to sea-air and full-sun conditions. Site furnishings should consist of wood or plastics that avoid corrosion and will not crack or become too hot to use. Limited use of galvanized or corten steel would also be allowed to improve aesthetics. The natural tone of wood fits the open space aesthetic of the park and is the preferred furnishing option. Wood will need to be maintained and sealed to preserve the use and quality of the product.

## 2. Access and Parking

Access and parking includes vehicular park uses, such as roadways, parking areas, and maintenance roads. See Figure 21 for an enlargement of the entrance area.

- Vehicular access will be served by Marsh Road, along Flood Slough.
- Parking areas include two (2) paved parking lots, a gravel parking lot, and gravel parking areas for parallel parking.
- Parking areas will have defined parking stalls to maximize capacity and meet parking demands. Undesignated parking is likely to continue.
- One ADA parking stall is to be provided for every 25 standard stalls.



Natural character and open space



Vehicular turn-around - Trail Link



Gravel parking - The Clove





**Figure 21** Park entrance area enlargement

- Maintenance roads will be provided on the park's perimeter via the Bay Trail and interior via asphalt trail. Maintenance access is required for trash collection, landfill operations, and emergency events.
- The park's entrance will include a turn-around before the automated control arms for vehicles who do not wish to enter the park or who arrive when the park is closed.

### 3. Trails and Pathways

Trails and pathways includes pedestrian and bicycle circulation. Pedestrian circulation includes trails (paved and

unpaved) in the park's interior and other pathways or sidewalks along the perimeter of the park. Bicycle circulation areas include the Bay Trail, bike parking, and interior bike trails. Figure 22 shows the different trail types included in the master plan.

#### Bicycle Access

- The Bay Trail will be 10'-0" wide with a 3'-0" wide shoulder on one side of the path (for joggers/pedestrians).
- Access to the park for bicycles is located at the entry to park off of the Bay Trail, shown in Figure 21.



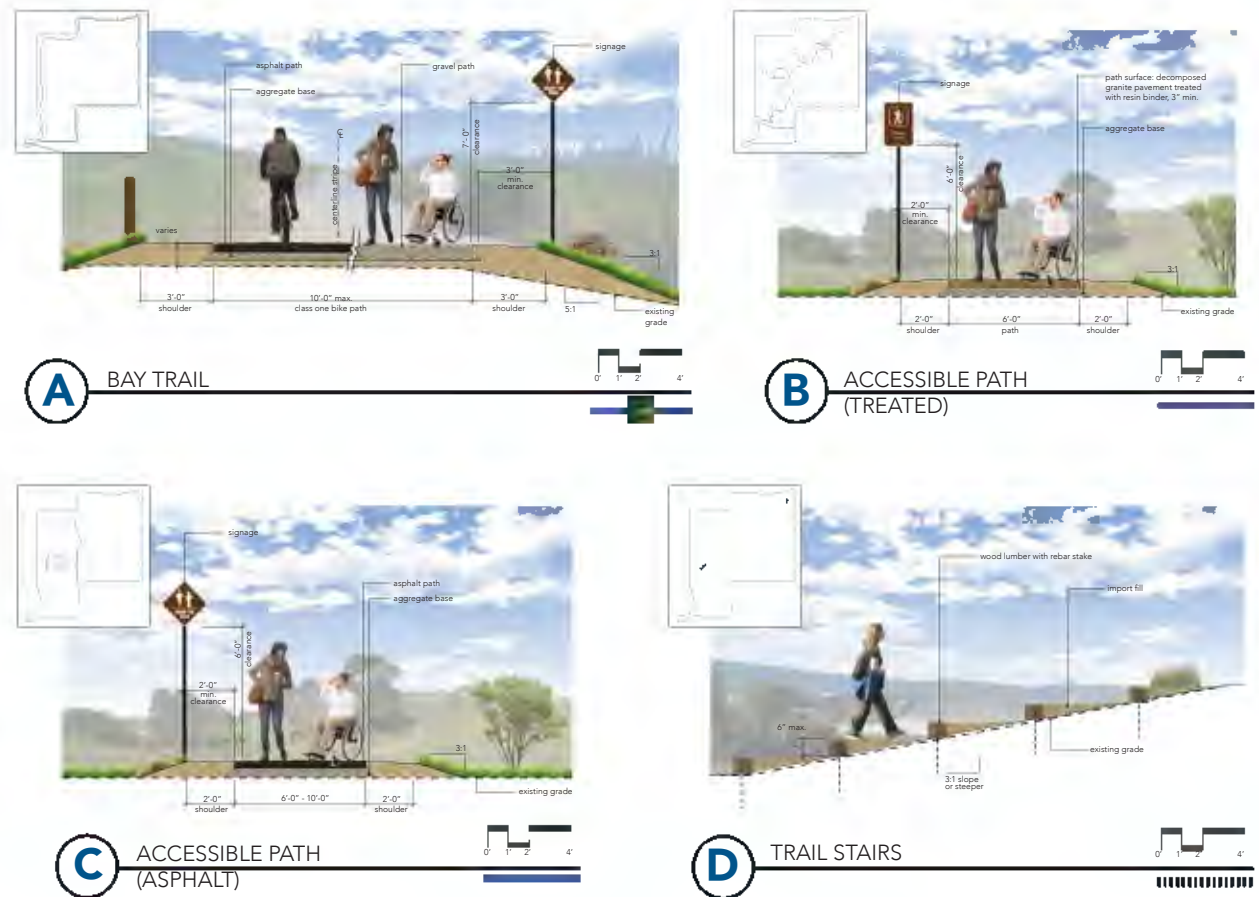


**Figure 22** Trail type sections - a larger version of the sections are in the Appendix

### Pedestrian Access

- Trail types include wheelchair accessible and non-accessible routes. Accessible routes will be paved with asphalt or treated surfacing and will be a minimum of 6'-0" wide and no more than 5% longitudinal slope. Non-accessible routes are unpaved and have varying widths and slopes.
- Treated trails use a NaturalPave XL Resin Pavement, or similar; this pavement retains the natural coloration and texture of the constituent aggregate materials and offers a stabilized surface

for accessible use with maintenance.

- Paved trails will be asphalt and should be sealed and maintained based on the operations and maintenance schedule.

### 4. Site Furnishings

Proposed site furnishings shall have a consistent design aesthetic that supports the open space qualities of the park and the Bay-side location. Colors and materials for site furnishings are to be compatible with the new buildings and other site features.



### Picnic Tables and Benches

- Provide tables and benches at various locations, as shown on the park plan. Picnic tables can be set individually or in small clusters to support conversation, for viewing activities or pleasant views, and for direct supervision of children.
- Provide a minimum of one table, per ADA and Title 24 Standards, on an accessible path. Ensure that at least one side of the table is open with four-foot (4') clearance between picnic tables or other obstructions.
- Set benches back from circulation paths so that passersby do not disturb bench sitters.
- Benches will be placed to maximize shade in the summer and sun in the winter and in areas with scenic views.
- Benches shall match existing site furniture, or as approved by the City.

### Bike Racks

- Bike racks will be provided near parking areas and primary activities.
- Bike racks will be hoop racks and allow a minimum of three (3) bikes to park at each cluster.
- Bike racks will have a galvanized finish to be corrosion resistant.

### Drinking Fountains

- The drinking fountain will be located at the restroom building and include accessible fountains and a bottle-filler.

### Trash Receptacle

- A trash receptacle will include recycling and be placed near all high-use areas, as shown on the park plan. Additional locations can be evaluated, as needed.

## **5. Structures**

A small ranger office is proposed to adjoin the new restroom and provide a place to store materials/equipment and have a small work space. Nature play uses naturally-sourced materials for creation of an exploratory play area. All proposed structures will have an aesthetic that blends with the landscape through the selection of natural colors and finishes. See Figure 23 for an enlargement of the ranger office and restroom area.

### Buildings

- Buildings will be pre-fabricated.
- Fixtures will be stainless steel and heavy duty.
- Use a polished concrete sealed on the floors with two (2) coats of anti-graffiti sealant.
- Do not use tile or brick on outdoor sinks.
- Install at least one (1) outdoor GFI quadruple outlet at each of the buildings with a heavy-duty, weather-resistant, vandal-proof, lockable cover.

### Nature Play Area

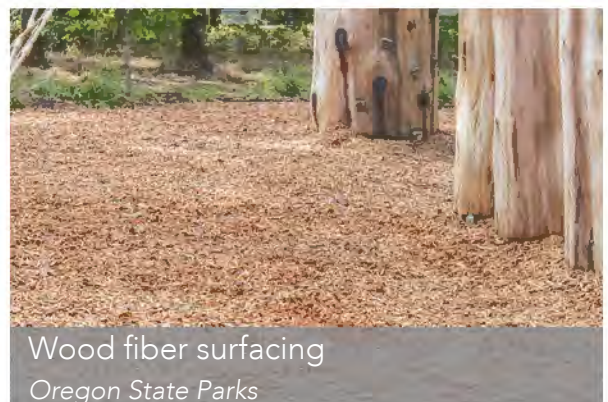
- The nature play area shall be made up



Ranger office - Royal Wolf



Nature play - Greenworks



Wood fiber surfacing  
Oregon State Parks





**Figure 23** Restroom and ranger office area enlargement

of small play clusters and total 5,000 square feet minimum.

- Nature play shall be designed for 2-12 year olds.
- Surface material will be engineered wood fiber to emulate a natural "forest floor."
- Use natural colors for play components.
- Provide shaded picnic tables and individual benches for direct supervision of children in play areas.
- Provide an access ramp into the play area.
- Playground design shall comply with the latest requirements of the American Society for Testing and Materials, ASTM F1487 – 17

(Playground Equipment for Public Use)

- Playground equipment components, if are used, shall be constructed primarily of stone and wood for a natural feel.
- Design shall consider durability and the long-term maintenance requirements of the specific equipment, as well as the potential occurrence of vandalism and graffiti.
- The design and equipment shall include a variety of play elements (slide, climb, balance).

#### Outdoor Classroom

- The outdoor classroom is a learning environment that allows for a class size (30 students) to gather for a





- professionally-led lesson (teacher, ranger, or docent-led).
- Use of the space would require coordination with the City and the park ranger, as well as possession of

- an approved day-use permit.
- Use of the space for non-educational purposes, such as social group gatherings, will not be permitted.



Outdoor classroom  
ABC About Exterior Furniture



Outdoor classroom  
Elmer W. Oliver Nature Park, Mansfield



Water activities signage  
Little Rock District



Dog use signage with dispenser



Ranger enforcement - Glacier.org

## 6. Signage

There is a hierarchal structure to the use and intention of signage types. Signage types include regulatory, informational, interpretive, wayfinding, gateway, and an overall park map. All signage shall conform to the City's signage standards.

### Regulatory

In addition to traditional park rules signs, Bedwell Bayfront Park includes several activities that require activity-specific regulatory signage to maintain a level of control in the park. Activities include on-leash dog walking and dog clean up. These activities require signs posted at entry kiosks and at areas of these activities to inform park visitors of the regulatory expectations and penalties for misconduct.

- Dog use regulations to be posted at high-use areas around the park and should be posted with a dog bag dispenser attached. All dogs shall be on a leash at all times and owners shall be responsible for picking up after their dog and disposing of waste in a trash can.
- The addition of a park ranger will support enforcement of park regulations.

### Informational

Kiosk signs are informational signs used to inform visitors of park amenities, trail routes, and notices. Kiosks also provide



the park map brochure.

- Locate at kiosk locations and at restroom area.
- Kiosks are wooden and provide a large informational space for permanent and temporary postings.
- Stone benches are built into post legs to provide resting spaces.
- Kiosks have a small overhang to provide shade.

#### Interpretive

Interpretive signs provide educational information to park visitors. Two types of interpretive signs are to be used: one for general park information and the other as an educational resource. General interpretive signage is currently available at the park. These signs are degraded and shall be replaced with new panels to match the aesthetic of other proposed park signage. General panels shall be placed at high use areas (i.e., restroom area and along accessible trails) and feature information about park history, the landfill, and other park details.

- Educational panels will provide topic information about three areas of interest: landfill infrastructure and function, local habitat found at Bedwell Bayfront Park, and Bayland behavior witnessed around the park.
- Educational signage is integrated with other site features and includes sign panels to lean on and nearby boulders



Kiosk - Wisconsin Historical Markers



Kiosk  
Grand Rounds Branding & Design



Educational panel



Exploratorium - The Exploratorium



Directional signage



Mile marker

and shade trees as resting areas.

- Partnerships with outside groups, such as the Exploratorium, may generate ideas for further enhancing educational opportunities.

### Wayfinding

A wayfinding sign is a type of directional signage used for trail routes, destination points, and overall park orientation. Bay Trail signage is a type of wayfinding sign that will continue at the park. New wayfinding signage for the park uses the same aesthetic as other signage in the park, but features pictorial graphics and icons to visually denote directional cues. Wayfinding signage is used at decision points where paths cross and along educational loops to identify the entirety of the loop. Characteristics of these sign types include:

- Signs will be of two types: large wayfinding posts with multiple directional cues and small posts for educational loops and accessible trails.
- Graphics include mile marker information, directional arrows, educational loop icon, and simple language.
- Mile markers include trail distances with trails keyed in the park map.

### Gateway Sign

- The corner at the east side of the entrance will feature a monument



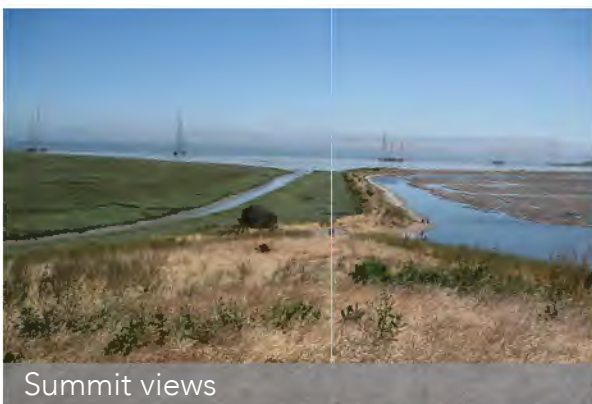
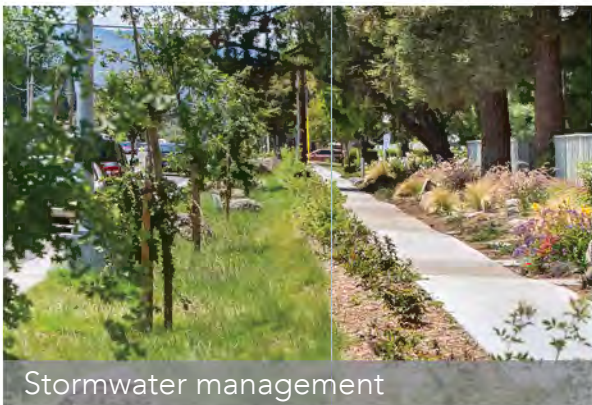
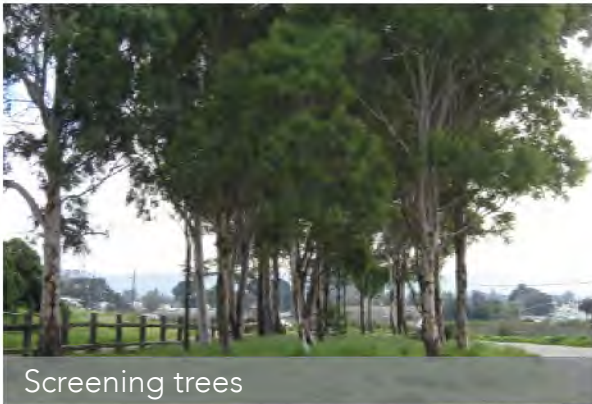
- gateway sign with low growing landscaping for sign legibility and uplighting for maximized visibility.
- The monument sign shall be oriented to be viewed from all intersection directions and will be approximately 15'-0" wide and 8'-0" tall to clearly show the City's and the park's name, or as the City's sign standard suggests.
  - The sign will be made of natural materials and utilize colors approved by the City and consistent with the City's branding.



### Park Map

A new park map will be a trifold design with trail and amenities information, park history, ecological and landfill information, and important contact information. The park map shall be updated every 5 years minimum.





## 7. Landscape

Landscaping for the park will be minimal and will be comprised mostly of natural habitat restoration vegetation, screening trees, and infill of plantings near the entrance roadway.

- Provide trees to screen the sewage facility in groves rather than in singles or rows in equal intervals to achieve natural growth pattern.
- Plant more trees of species currently found on-site and remain mindful of nesting birds and predatory species that use the tree canopies, as well as shallow soils due to the landfill.
- Use natives at infill sites along the entrance roadway in order to reduce maintenance, provide habitat, and add interest to park landscapes.
- Provide a naturalized area of low maintenance native grasses along Flood Slough (Marsh Road) in the park for stormwater management.

## 8. Destinations and Points of Interest

Points of interest within the park include the summit areas, fitness clusters, and the Great Spirit Path.

### Summits

Summits are at the highest points in the park and feature views of the park, the Bay, and the surrounding area.

- Two (2) summits will be wheelchair accessible, and all summits to include

- a paved pad with boulder and formal bench seating.
- Each paved pad ranges from 1,500 to 5,000 square feet.
- The largest summit area in the northeast corner of the park features a picnic area.

#### Fitness Clusters

- Each fitness cluster features aerobic exercise equipment for a degree of ability levels.
- Equipment is made of woods and non-corrosive materials.
- Regularly maintain equipment and post signage for appropriate use of equipment to reduce the chance of injury of equipment failure.
- Each fitness cluster has a 2 to 3 person occupancy.

#### The Great Spirit Path

The Great Spirit Path is a route that follows a curated sculptural art form. The Great Spirit Path is an existing park feature that will be refurbished and restored by placing the art pieces on a treated pavement pad, reducing maintenance requirements. Approximately half of the Great Spirit Path will be wheelchair accessible.

- Update and revise the Great Spirit Path literature. Translate the material from a brochure format to an interpretive panel and locate at the beginning and mid-point of the path.



Fitness cluster - Playcore

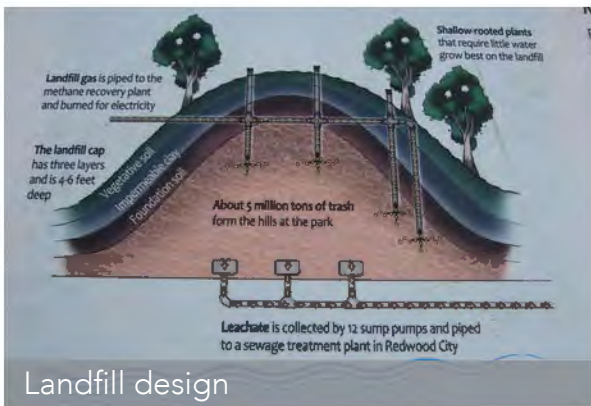


Great Spirit Path



Great Spirit Path





- Replace vandalized or absent stonework and place stones in a treated pavement to secure and be easily mowed around.
- Replace vandalized or absent stonework with Sonoma field stone or sandstone.
- City staff to supervise implementation of new stonework and stay consistent with the artwork's design.

## 9. Landfill

Bedwell Bayfront Park is built above an existing landfill. The landfill has been capped, which allowed the park to be built, but maintenance and landfill operations must continue. The park on top of a landfill is unique and provides opportunities for the City, such as energy generation.

- Decommission damaged LFG extraction wells.
- Install replacement LFG extraction wells.
- Replace watered-in piping.
- Provide pneumatic pumps within vertical extraction wells for dewatering and increased LFG extraction.
- In addition to the LFG recovery improvements, evaluate several technologies to determine the feasibility of utilizing residual LFG supplies for beneficial use as "biogas".
- Adopt ordinance to rezone the park as PF (Public Facilities) to reflect the park's dual-use as a landfill and to stay consistent with the City's other public facilities.



## 10. Other Future Considerations

During the master planning process, other items were discussed for future consideration. Several of these items will require additional research and result in possible policy impacts. These potential actionable items may be considered in future phases of the design process for Bedwell Bayfront Park.

- Change the park name to include "open space". The park is not zoned as Open Space, but park users believe the park has open space qualities and the name of the park should describe this characteristic.
- Create an ordinance to ban animal feeding at the park. To limit the use of excessive signage at the park, an ordinance may be proposed to prohibit the act of feeding animals at the park (this does not include one's personal pet).
- Address landfill liquefaction issues and minimize impacts on park usage. Review landfill operations and ensure the protection of the natural areas that surround the park.





# 4

# Implementation

## Cost Estimate

Costs for Bedwell Bayfront Park include park improvements, landfill improvements, and operation and maintenance costs. The park improvements include the community-supported features and will be implemented in phases that prioritize improvements to address flooding and those that enhance accessibility.

Cost estimate details for phased park improvements are noted in Figure 24. The operation and maintenance costs and the landfill improvement costs are separate items that may be funded and implemented differently than the park improvements. The approximate costs are based on 2017 dollars. Detailed cost estimates for all assumed expenses can be reviewed in the Appendix.

## Park Improvements

| Item                            | Estimated Cost Range               |
|---------------------------------|------------------------------------|
| Site preparation / start-up     | \$ 400,000 – \$500,000             |
| Accessible trails               | \$ 700,000 – \$800,000             |
| Parking                         | \$ 150,000 – \$250,000             |
| Uses and amenities              | \$ 1,400,000 – \$1,500,000         |
| Restroom building and utilities | \$ 600,000 – \$700,000             |
| Landscaping                     | \$ 1,000,000 – \$1,150,000         |
| Tidal flooding / Sea level rise | \$ 1,100,000 – \$1,200,000         |
| Contingencies and inflation     | \$ 3,650,000 – \$3,800,000         |
| Design and permitting           | \$ 1,000,000 – \$1,100,000         |
| <b>Estimated Project Total</b>  | <b>\$10 million – \$11 million</b> |

**Figure 24** Park improvements



### Park Annual Operations and Maintenance

| Item                                             | Estimated Cost Range        |
|--------------------------------------------------|-----------------------------|
| Salaries and services                            | \$ 250,000 – 300,000        |
| Capital repairs and maintenance                  | \$ 100,000 – 150,000        |
| Utilities, contingencies, and other expenditures | \$ 100,000                  |
| <b>Estimated Project Total</b>                   | <b>\$ 450,000 – 550,000</b> |

### Landfill Improvements

| Item                                | Estimated Cost Range                |
|-------------------------------------|-------------------------------------|
| Leachate and gas collection systems | \$ 2,000,000                        |
| Fire suppression                    | \$ 500,000                          |
| Energy generation                   | \$ (pending selection of preferred) |
| Entrance road                       | \$ 2,000,000                        |
| <b>Estimated Project Total</b>      | <b>\$ 4.5 million</b>               |

### Landfill Annual Operations and Maintenance

| Item                                               | Estimated Cost Range        |
|----------------------------------------------------|-----------------------------|
| Groundwater, leachate, and landfill gas operations | \$ 150,000                  |
| Monitoring, maintenance, and reporting services    | \$ 50,000 - 100,000         |
| <b>Estimated Project Total</b>                     | <b>\$ 200,000 - 250,000</b> |

## Phasing and Implementation

Limited available funding, permitting, and other factors require a park of this size and cost to be constructed in phases.

The project is divided into three phases that prioritizes implementation based on flood impacts, accessibility, community-supported improvements, and ease of implementation. All three phases are to be completed over the next 25 years.



## Phase 1

Timeframe: 0 to 5 years

Improvements to include the following:

- Address deferred maintenance and safety items (i.e., lack of sidewalk at Bayfront Expressway intersection, electrical panel)
- Install asphalt ADA trails
- Install treated ADA trails in the western half of the park
- Provide site furnishings and amenities: seating, dog bag dispenser, paved overlooks, bike racks, and interpretive signage
- Landfill GCCS improvements
- Install the ranger's office building
- Address the 100 year event (reconstruct segments of the access road to an elevation of 10.5') and address sea level rise by reconstructing the access road from the entrance to the first trail head to an elevation of 12.5'. The reconstruction should be in coordination with improvements planned for the Bayfront Canal.
- Coordinate with Bayfront Canal project

**Total Estimated Cost Range: \$3.3 million to \$3.6 million**

(Shown in Figure 25)

## Phase 2

Timeframe: 5 to 10 years

Improvements to include the following:

- Address sea level rise (reconstruct the segments of access road and Bay Trail to an elevation of 11.5')
- Install automatic entrance / gate system
- Install treated ADA trails in the eastern half of the park (that serve the eastern summit and Great Spirit Path)
- Provide additional site furnishings and amenities: picnic tables, and wayfinding signage
- Provide nature play, outdoor classroom, fitness stations, and observation platform, habitat restoration areas
- Provide parking improvements and related landscaping
- Replace restroom building

**Total Estimated Cost Range: \$5.7 million to \$6.1 million**

(Shown in Figure 26)

## Phase 3

Timeframe: 10 to 25 years

Improvements to include the following:

- Address sea level rise (reconstruct the segments of access road and Bay Trail to an elevation of 12.5')
- Renovate the Great Spirit Path art piece

**Total Estimated Cost Range: \$1 million to \$1.3 million**

(Shown in Figure 27)

## Phase 1: 0 to 5 years to complete



Figure 25 Phase 1

## Phase 2: 5 to 10 years to complete



Figure 26 Phase 2



### Phase 3: 10 to 25 years to complete



Figure 27 Phase 3



## Implementation Schedule

Depending on the availability of funding, construction could begin within two years. It is anticipated that environmental clearance will take 6 to 12 months to complete. If federal funds are used, this duration will likely increase due to the requirement for obtaining National Environmental Policy Act (NEPA) clearance. Construction documentation will take 9 to 18 months, depending on project phasing. Construction of the project will take 7 to 12 months, depending on phasing.

## Funding Plan

The BBP Maintenance Fund (Fund) is a sinking fund used for expenses related to the operations and maintenance of park facilities. The City imposed a tipping fee on each ton of waste disposed in the landfill until it was closed. The Fund has a balance of \$335,000 and current annual expenses of \$110,000. Recommended options for funding the park's capital improvements will include a range of funding sources and financing mechanisms, including park in lieu fees, Parks and Recreation development impact fees, proceeds from Measure T, future General Obligation bonds, existing and future development agreements, and grant funding, such

as One Bay Area Grant 2. The park is located in a Priority Conservation Area (PCA), which allows for eligibility towards One Bay Area Grant 2 funding. Potential options for funding annual operations and maintenance include an increase of the Utility Users Tax (temporary, interim solution), a citywide parcel tax (long-term solution), and a modest hotel amenity charge. In addition, the City can consider maximizing volunteer efforts. A detailed funding plan can be reviewed in the Appendix of the document.

## Agency Permitting and Approvals

The improvements included in the park plan were reviewed by the project's Interagency Group to help define regulatory and permitting requirements to accomplish the implementation of all of the project's proposed features. The Interagency Group was an integral component of the implementation aspect of the project and was comprised of agencies that move regulatory jurisdiction or would be affected by park improvements. The Interagency Group met with the project team to review the park plans and determine if there were any regulatory restrictions or concerns to be addressed.

The Interagency Group was made up of three subsections with unique specialties. These subsections include three areas of focus:

- Landfill oversight
- Bay / Bayland oversight
- Resource oversight

The following is a brief list of the agencies and regulations that affected the planning process for Bedwell Bayfront Park and a summary of the most pertinent requirements and recommendations from those agencies:

### Landfill Oversight

The Bay Area Air Quality Management District (BAAQMD) sets regulatory requirements as part of the landfill closure plan. A new flare was built in 2013 and the landfill gas is combusted in compliance with the BAAQMD permit.

The San Mateo County, Environmental Health Services Division, Health Services Department is a Local Enforcement Agency designated to regulate and inspect the solid waste landfill at Bedwell Bayfront Park.

The mission of the San Francisco Bay Regional Water Quality Control Board (RWQCB) is to preserve, enhance and restore the quality of California's water resources, which includes managing landfill-related discharge of leachate

through issuance of landfill waste discharge requirements.

The California Department of Resources Recycling and Recovery (CalRecycle), formerly CA integrated Waste Management Board) administers and provides oversight for all of the state's waste handling and recycling programs. CalRecycle provides training and ongoing support for Local Enforcement Agencies

### Bay / Bayland Oversight

The Bay Conservation and Development Commission (BCDC) has regulatory responsibility over development in San Francisco Bay and along the Bay's nine-county shoreline. BCDC is guided in its decisions by its law, the McAteer-Petris Act, the San Francisco Bay Plan, and other plans for specific areas around the Bay.

California Coastal Conservancy provides capital funds, development permits, and technical assistance to protect, restore and expand coastal-dependent recreation, commercial and industrial facilities and to expand opportunities for public access and use of urban waterfronts in conjunction with new development.

The mission of the San Francisco Bay Regional Water Quality Control Board (RWQCB) is to preserve, enhance and restore the quality of California's water resources, which includes managing

construction-related discharge of storm water runoff. The RWQCB is part of California's State Water Resources Control Board (SWRCB), which administers the U.S. EPA's storm water permitting program.

The United States Army Corps of Engineers (USACE) aims to provide sustainable solutions which manage the nation's water resources and protect the welfare of the people. Under Section 404 of the Clean Water Act and under Section 10 of the Rivers and Harbors Act, permits may be required if the project will impact Waters of the United States.

Bay Area Governments (ABAG) is the comprehensive regional planning agency and Council of Governments for the nine counties and 101 cities and towns of the San Francisco Bay Region. ABAG's Resilience Program supports recovery and mitigation research, planning, and action for a resilient Bay Area. ABAG helps facilitate cross-jurisdictional coordination and collaboration, research, advocacy, education, communication, and technical assistance to local governments.

### **Resource Oversight**

The California Department of Fish and Wildlife (CDFW) is responsible for conserving, protecting, and managing California's fish, wildlife, and native plant resources. CDFW's Environmental Review and Permitting Programs implement

sections of the California Fish and Game Code, California Code of Regulations, and other statutes and regulations. These Programs help fulfill CDFW's mission to manage California's diverse fish, wildlife, and plant resources, and the habitats upon which they depend, for their ecological values and for their use and enjoyment by the public.

U.S. Fish and Wildlife Service (USFWS) is a federal agency that issues permits under various wildlife laws and treaties at different offices at the national, regional, and/or wildlife port levels. Permits enable the public to engage in legitimate wildlife-related activities that would otherwise be prohibited by law. Service permit programs ensure that such activities are carried out in a manner that safeguards wildlife. Additionally, some permits promote conservation efforts by authorizing scientific research, generating data, or allowing wildlife management and rehabilitation activities to go forward.

National Marine Fisheries Service (NMFS), also known as NOAA Fisheries, is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce. Using the Magnuson-Stevens Act as the guide, NOAA Fisheries works in partnership with Regional Fishery Management Councils to assess and predict the status of fish stocks, set catch limits, ensure compliance with fisheries

regulations, and reduce bycatch.

Under the Menlo Park Fire Protection District all new installations and all modifications to fire protection and life safety systems are reviewed and inspected by the Fire and Life Safety Division so that the installation or modifications meet applicable fire and life-safety codes and standards.

The San Francisquito Creek Joint Powers Authority (SFCJPA ) serve the interrelated ecosystem, recreational, and disaster protection needs of the region. SFCJPA has been working on the development of projects focused on providing protection from the 100-year flood to the affected areas located in the San Francisquito Creek watershed, including the SAFER Bay Project.

## Environmental Clearance

Prior to construction, environmental clearance must be obtained in accordance with the California Environmental Quality Act (CEQA). The project may qualify for a Mitigated Negative Declaration due to the minimal anticipated impacts on the environment that would result. A Mitigated Negative Declaration is a document that describes the proposed

project, presents findings related to environmental conditions, includes a copy of the Initial Study which documents the reasons to support the findings, and includes mitigation measures, such as MM Bio-1 from the ConnectMenlo General Plan, included in the project to avoid potentially significant effects. The Initial Study is most likely to include an assessment of the traffic impacts and the impacts of sea level rise.

Environmental clearance and approval from the agencies listed above is required for the project to proceed to the design and implementation stage. The project will need to acquire appropriate permits and undergo additional studies to fully evaluate project impacts. Items listed below were identified by the Interagency Group or through the environmental review process as areas of concern and/or require regulatory enforcement. The review of potential impacts relates directly to the site assessment categories:

- Biological Resources
- Hydrology/Water Quality
- Transportation/Traffic

### Biological Resources

All improvements to Bedwell Bayfront Park and edges of the park shall be consistent with environmental impact LU-3 and mitigation measure (MM) Bio-1 from the ConnectMenlo General Plan EIR.



LU-3: Implementation of the proposed project would not conflict with any applicable habitat conservation plan or natural community conservation plan.

BIO 1: Impacts to special status species or the inadvertent loss of bird nests in active use, which would conflict with the federal Migratory Bird Treaty Act and California Fish and Game Code could occur as a result of new development potential in the Bayfront Area and from existing and ongoing development potential in the remainder of the city if adequate controls are not implemented.

As part of the discretionary review process for development projects on sites in the M2 Area, the City shall require all project applicants to prepare and submit project specific baseline biological resources assessments (BRA) if the project would occur on or within 10 feet of a site(s) containing natural habitat with features such as mature and native trees or unused structures that could support special status species and other sensitive biological resources, and active nests of common birds protected under Migratory Bird Treaty Act (MBTA).

#### Hydrology/Water Quality

- Drainage calculations are suggested for the final proposed drainage plan to determine size and configuration

of retention or detention measures to avoid increased runoff which could potentially result in localized flooding.

#### Transportation

- Actual parking time limits, restrictions, and fees would be determined by the City Council.
- Enforcement of street parking from park users seeking to avoid the parking fee would be addressed by City police/traffic department. Neighboring streets may need to include restrictions to limit overflow during certain times of the day.

#### Landfill

By permit, the landfill is allowed to modify the gas system with proper notification to the BAAQMD. Leachate management is also regulated and changes to that system would need approval by the RWQCB. Modifications would not be subject to CEQA since the operations are already permitted, and there is no change in source (either air emissions or wastewater source). However, if the City is to proceed with a compressed natural gas (CNG) fill station, that modification may be subject to CEQA review due to a potential vehicle traffic, a new fire risk, potential new air emissions, etc. Fire suppression measures, such as additional fire hydrants, will be reviewed for implementation through the same process as the CNG fill station.







## Acknowledgments

### City Council

Kirsten Keith, Mayor  
 Peter I. Ohtaki, Mayor Pro Tem  
 Ray Mueller, Councilmember  
 Catherine Carlton, Councilmember  
 Richard Cline, Councilmember

### Parks and Recreation Commission

Jennifer Baskin  
 Christopher Harris  
 Jennifer Johnson, Vice Chair  
 Laura Lane  
 Marianne Palefsky  
 Sarah Staley Shenk  
 Tucker Stanwood, Chair

### City Staff

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 Azalea Mitch, Public Works, City Engineer  
 Justin Murphy, Public Works, Director  
 Brian Henry, Public Works, Superintendent  
 David Mooney, Public Works, Parks and Trees Supervisor  
 William (Tony) Dixon, City of Menlo Park Police

### Oversight Group

Eileen McLaughlin, Citizens Committee to Complete the Refuge  
 Allan Bedwell, Friends of Bedwell Bayfront Park  
 Lauren Swezey, Facebook (M-2 Business)  
 Michelle Tate, Belle Haven Resident  
 Marianna Palefsky, Parks and Recreation Commission  
 Janelle London, Environmental Quality Commission

### Consultant - Callander Associates

Brian Fletcher, Principal  
 Marie Mai, Project Manager  
 Jana Schwartz, Designer/Graphics

## Appendix

### Technical Reports

- Environmental Assessment
- Traffic Assessment
- Funding and Financing Strategy
- Landfill Improvements Plan
- Overview of Landfill Gas Beneficial Use Technologies

### Cost Estimates

- Park Improvements
- Annual Operations and Costs

### Outreach Materials

- Community Meeting #1 Boards
- Community Meeting #2/3 Boards
- Notification Materials

### Maps from Other Plans

- M-2 Zoning
- Landfill conditions map

- Sea Level Rise Vulnerability Assessment - Zone 7
- SAFER Bay
- SBSP Restoration Project Alternatives

### Meeting Summaries

- Oversight Group Meeting #1
- Community Meeting/Online Survey #1
- Oversight Group Meeting #2
- Community Meeting #2/#3/Online Survey #1
- Oversight Group Meeting #3
- Park and Recreation Commission - Study Session
- Park and Recreation Commission - Meeting
- City Council

### References



## Technical Reports

### BEDWELL BAYFRONT PARK MASTER PLAN AND LANDFILL IMPROVEMENTS

City of Menlo Park, CA

#### PRELIMINARY ENVIRONMENTAL REVIEW

Updated October 9, 2017

#### INTRODUCTION

This checklist has been prepared to evaluate the feasibility of implementing a Park Master Plan and Community-Supported Improvements and Landfill Improvements on the Bedwell Bayfront Park property, located in Menlo Park, California. This document uses the Initial Study (IS) checklist following with the California Environmental Quality Act (CEQA), Public Resources Code Section 21000 *et. seq.*, and the State CEQA Guidelines, California Code of Regulations (CCR) Section 15000 *et. seq.* to identify potential project constraints and potential environmental issues. Several documents were reviewed as part of the environmental review, including the ConnectMenlo: General Plan Land Use and Circulation Elements and M-2 Area Update EIR (City of Menlo Park, 2016), and the South Bay Salt Ponds Restoration, Phase II, FEIS/EIR (AECOM, 2016). Limited reconnaissance-level site visits were conducted for this analysis and previously prepared reports and mapped data were reviewed and used wherever available.

The lead agency is the public agency with primary approval authority over the proposed project. The lead agency for the project is the City of Menlo Park.

#### PURPOSE AND DOCUMENT ORGANIZATION

The purpose of this document is as an informational planning tool to assist in development of the park master plan and landfill improvements. The Initial Study checklist is typically used to determine if a proposed project may have a significant effect on the environment [CEQA Guidelines Section 15063 (a)]; however, in this case, the checklist is being used as an informational planning tool to assist Callander Associates and City of Menlo Park in development of the park master plan and landfill improvements. Recommendations to avoid or minimize potential impacts of the project on the environment and/or the need for additional studies are identified. The City has the responsibility to determine if these recommendations would be implemented pursuant to further CEQA review and analysis.

This document is organized as follows:

##### Section 1 - Project Information

This section includes the objectives, location, description, and implementation of the project.

##### Section II - Environmental Checklist

This chapter includes a description of the setting and a discussion of the environmental issues (Aesthetics, Agriculture and Forestry, Air Quality, Biological Resources, Cultural Resources, Geology and Soils, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Mineral Resources, Noise, Population and Housing, Public Services, Recreation, Transportation/Traffic, Tribal Cultural Resources, and Utilities and Services Systems).

For each of these issues, the potential environmental issues from possible recreational uses on the property are identified. Recommendations are provided, where appropriate, for where additional

study may be needed or actions taken to reduce the potential impacts to a less-than-significant level, based on possible uses envisioned during preparation of the master plan.

### References

This section includes the references and sources used in the preparation of this preliminary environmental review.

#### Section I - PROJECT INFORMATION

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|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Project Title:                           | Bedwell Bayfront Park Master Plan and Landfill Improvements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 2. Lead Agency Name & Address:              | City of Menlo Park, Department of Public Works<br>701 Laurel Street<br>Menlo Park, CA 94025                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 3. Contact Person & Phone Number:           | Derek Schweigart (650) 330-2267                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 4. Project Location:                        | Terminus of Marsh Road at Highway 101                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 5. Project Sponsor Name & Address:          | City of Menlo Park, Department of Public Works                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 6. General Plan Designation:                | Baylands, Park and Recreation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 7. Zoning:                                  | Floodplain (FP)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 8. Description of Project and Project Area: | <p>Bedwell Bayfront Park is a 160-acre regional park located at the east end of the City on San Francisco Bay at Bayfront Expressway and Marsh Road, as depicted in Figure 1. It is the City's only park on the Bay. Built on top of a 155-acre closed landfill, it is surrounded on three sides by the Don Edwards San Francisco Bay National Wildlife Refuge. The park had been envisioned by its founder, former City Manager Michael Bedwell, as a "park for passive recreation including nature walks...picnicking, day hiking and meadow sports, as well as just plain enjoyment of the silence, the fresh breeze and the view." Easily accessible, the park's many trails and hills provide great views of the refuge and South Bay. People enjoy the park for various activities including hiking, running, bicycling, dog walking, bird watching, kite flying and photography. The park's hilly terrain, specifically designed for passive recreation, now serves as a landmark high point along the edge of the Bay.</p> <p>The park has an extensive trail system. Some of the interior trails are steep, crossing the park's hills, and lead to several viewpoints. Some of the park's trails are suitable for wheelchairs. The relatively flat 2.3-mile trail around the perimeter of the park is part of the San Francisco Bay Trail. Parking is available along the entrance road and in two paved lots near the back of the park. Restrooms are near the first large paved parking lot.</p> |

The landfill is adjacent to the Don Edwards San Francisco Bay National Wildlife Refuge, the Sewage Flow Equalization Facility, and the Cargill Salt Ponds (located in the City of Redwood City); commercial development occurs south of State Route 84 (Bayfront Expressway). The highest elevations are the hills in the northeast section. The park lands are maintained as non-irrigated open space and are vegetated with annual and perennial grasses/forbs and landscape trees and shrubs. These areas are designated for public recreational uses such as hiking, bird watching, photography and running.

**Master Plan Development.** Since the early construction in 1982 and its completion in 1995, the park has seen a significant increase in usage over the years and the recreational interests and needs of users have changed. A master planning process is underway to address existing maintenance and capital improvement needs and establish a park vision guiding improvements for the next 25 years. The plan will evaluate how to protect the park resources, improve amenities to enhance the park user experience, manage visitor use, plan for future park development and develop financing plan to pay for maintenance and capital cost of the park.

**Park Plan and Other Topics Addressed:**

1. The Park Master Plan and Community-Supported Improvements
2. Other Improvements to be Considered
3. Sea Level Rise
4. Document Comments

**1) The Park Master Plan and Community-Supported Improvements**

The Park Master Plan has been developed based on community feedback on their preferred amenities and activities. Existing activities (hiking, running, bicycling, dog walking, bird watching, kite flying, orienteering, geocaching, and photography) would be supplemented by additional uses including nature play areas, kayak launch, and outdoor fitness stations. Educational enhancement features such as an on-site ranger, educational learning opportunities and interpretive signage, and native habitat restoration areas will be provided. Other park improvements include dog bag dispensers, additional trash and recycling bins, bike racks, a new restroom, utility upgrades (sanitary sewer line for the restroom and a water main to service a new fire hydrant and water district facilities), and providing accessible trails and roadway improvements. An existing art piece (the Great Spirit Path) will be renovated.

**Nature Play.** Nature play components include natural materials that blend in with the park's aesthetic. Play components are low, dispersed, and do not interfere with the trees or other habitat areas. Materials for the play area include logs and boulders which support activities such as climbing, balancing, and jumping.

**Kayak Launch.** Flood Slough provides a sheltered location from which kayakers could access Westpoint Slough and the San Francisco Bay. Tidal charts and a visual analysis of Flood Slough suggests that a water depth of 2' to 8' is available throughout most of the day. Kayakers would likely launch only when there is 6' to 8' of water depth. Signs with pictures of the site at high tide and low tide will be posted to inform potential kayakers of what ideal launching conditions look like. The launch area will consist of a ramped beach launch that is ADA wheelchair accessible to the high tide line. The ramp surface will be concrete, transitioning to compacted sand or pea gravel from the high tide line to mid-tide level. An adjacent staging area will include 3 gravel parking stalls and small rigging area with turf surface and a shower tower/boat rinse. The kayak launch activity will require that additional analysis be undertaken to evaluate the rate of siltation of Flood Slough and understand whether slough hydraulics might support kayaking.

**Outdoor Fitness Stations.** The outdoor fitness stations provide low-impact aerobic exercise equipment, such as a pull-up bar or a sit-up bench, totaling 8 stations dispersed around the park. The stations are for individual use and complement circuit training and jogging activities that already take place at the park.

**Native Habitat Restoration.** Restoration would occur only along the west side of the park (Flood Slough), in the upland areas along the slough.

**Accessible Trails and Roadway Improvements.** Portions of existing gravel and dirt trails will be (re)paved with asphalt or a treated resin surfacing to enhance accessibility and minimize maintenance. The main entrance road will be utilized for emergency fire truck access and water district access, capable of fire truck traffic loads. The Bay Trail will continue to run along the perimeter of the park, but the surfacing will be asphalt in the segment facing Flood Slough and closest to the accessible amenities and gravel in the segments facing the Don Edwards San Francisco Bay Wildlife Refuge.

**Landfill Improvements.** Proposed landfill improvements include: gas and leachate system improvements and upgrades, fire suppression system improvements and upgrades, and energy generation facilities to utilize the residual landfill gas for beneficial use as "biogas", that might include generation of compressed natural gas fill station for use in vehicle fleets, the direct use of biogas in boilers, or the direct injection of biogas into the local natural gas pipeline. The City is conducting an evaluation of these options.

## 2) Other Improvements to be Considered

The above improvements were included in the Park Plan since they were supported by a majority of the community. Amenities that did not receive a majority of the community's support but the Park and Recreation Commission will be asked to consider include non-



motorized hand-launched glider use, an off-leash dog park, and outdoor classroom space. Additionally, the master plan seeks to identify sustaining revenue-generating mechanisms to support park improvements and on-going maintenance, which might include items like a parking fee.

**Glider Use.** At Bedwell Bayfront Park, prior to the Council ban, hand-launched gliders and motor-assisted gliders, as well as some gliders launched by “hi-start” (stretched rubber tubing and string serving as a glider slingshot) were typically flown from the northern edge of the meadow. Slope gliding near the northwest corner of the park also took place. The Park Plan would like to consider the use of non-motorized hand-launched gliders as a permitted use within the meadow area of the park.

If included in the Park Plan, use restrictions could include:

- Limit use to “hand-launched” radio controlled model gliders. The gliders should not have a propulsion system (i.e., non-motorized), other than a small battery to help the pilot control the wings. Motorized gliders, quadcopters, and drones should not be allowed.
- Limit use to within designated glider area defined by the large meadow.
- Gliders must maintain at least 100-feet vertical and horizontal clearance from park visitors.
- Limit use to gliders with weight less than 3 pounds and 2 meters in width so that the glider range is limited to the boundary of the meadow area.
- Post rules that gliders are not to cross pathways or encroach on the refuge.
- Limit the number of gliders flown in the meadow to five (5) at a time.
- Require glider operators to have current membership in an AMA (Academy of Model Aeronautics) Chartered Model Airplane Club, which provides liability insurance.

**Dog Park.** Bedwell Bayfront Park receives on-going complaints about off-leash dogs at the park. Concerns for personal safety and the impact on vulnerable habitats are amongst the most common complaints from the community. To help combat this user behavior, a one-acre dog park is suggested. The dog park would be fenced in and host two separate areas for large and small dogs. The proposed location is at a distance from primary trails and the refuge, as well as tucked into a valley of the park where noise can be minimized.

Including the dog park is viewed as an enforcement method when coupled with prohibited-use signage and park ranger monitoring.

**Outdoor Classroom Space.** The community recognizes the educational opportunities at the park and views the landfill and environmental resources, such as the local bird population and the

nearby refuge, as valuable park features. While the idea of having school classes visit the park for the purpose of learning about these topics was supported by the community, a physical outdoor classroom/gathering space was not. The outdoor classroom would include organized natural seating elements (i.e. logs or small boulders) for a class-size group to gather and have outdoor lessons.

The outdoor classroom space could be part of an approved day-use permit and coordinated between the school and the City.

**Parking Fees.** Paid parking at the park was not supported by the community, as were most of the proposed revenue generation ideas. The parking fee could help offset on-going costs, such as the ranger's salary.

The suggested paid parking fee would be consistent with the Council Cost Recovery Policy. An annual permit could be provided to City residents at a discount. Parking would be enforced via an automatic pay gate. Park visitors would need to pay for the parking prior to exiting at centrally located pay stations. A paid parking ticket would allow visitors to exit. Actual parking time limits, restrictions, and fees would be determined by the City Council. Enforcement of street parking from park users seeking to avoid the parking fee would be addressed by City police/ traffic department. Neighboring streets may need to include restrictions to limit overflow during certain times of the day.

### 3) Sea Level Rise (SLR)

The park is exposed to the impacts of SLR on nearly all sides. The primary means for addressing SLR are raising the perimeter of the site above the 100-year tidal flood elevation plus an additional 24" of sea level rise, which equates to approximately 66" above mean high higher water. A sea wall is also a potential option, particularly if it helps avoid fill of the duck pond area caused by the need to raise the roadway elevation. Raising the site perimeter will require import of thousands of cubic yards of soil and reconstruction of the entrance road, related parking areas, and the Bay Trail.

- |                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 9. Surrounding Land Uses & Setting:               | Open Space (Don Edwards San Francisco Bay National Wildlife Refuge), Cargill Salt Ponds, Sewage Flow Equalization facility. Commercial and residential uses south of State Route 84.                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 10. Approval Required from Other Public Agencies: | The project area supports tidal wetlands along Flood Slough (along western boundary of park) and in a seasonal pond in the southern portion of the park. If alterations to these Waters of the U.S./Waters of the State occur, permits would likely be required from resource agencies (i.e., U.S. Army Corps of Engineers, California Department of Fish and Wildlife, and Regional Water Quality Control Board). Modifications to tidal areas and areas within 100-feet of the shoreline may also be subject to permitting from the San Francisco Bay Conservation and Development Commission (BCDC). A Stormwater |

Pollution Prevention Plan (SWPP) may also be required (Regional Water Quality Control Board) as construction activities will exceed one acre.





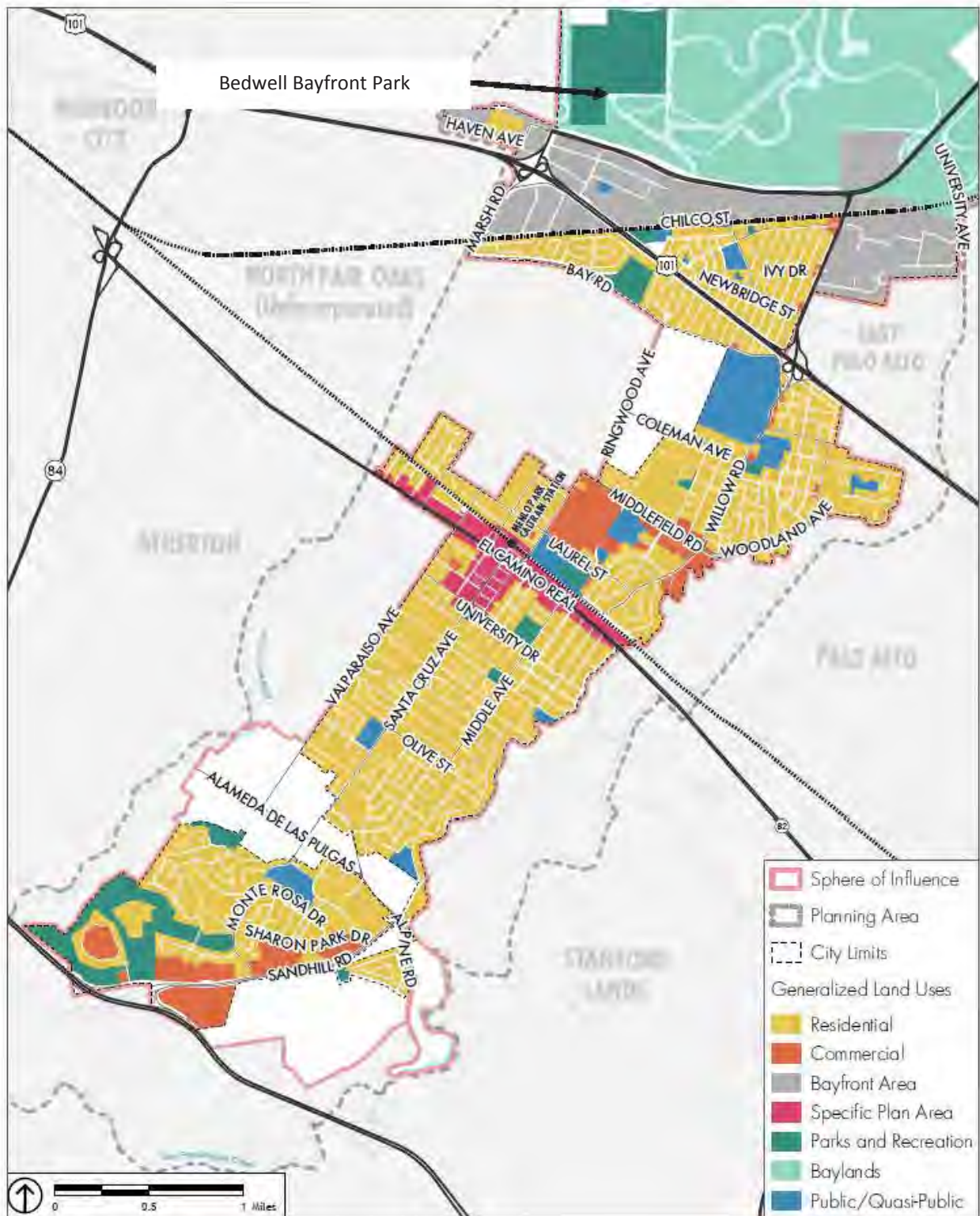


**Figure 2. General Plan Land Use Designations for Project Site and Vicinity**  
(Source: City of Menlo Park, 2016)



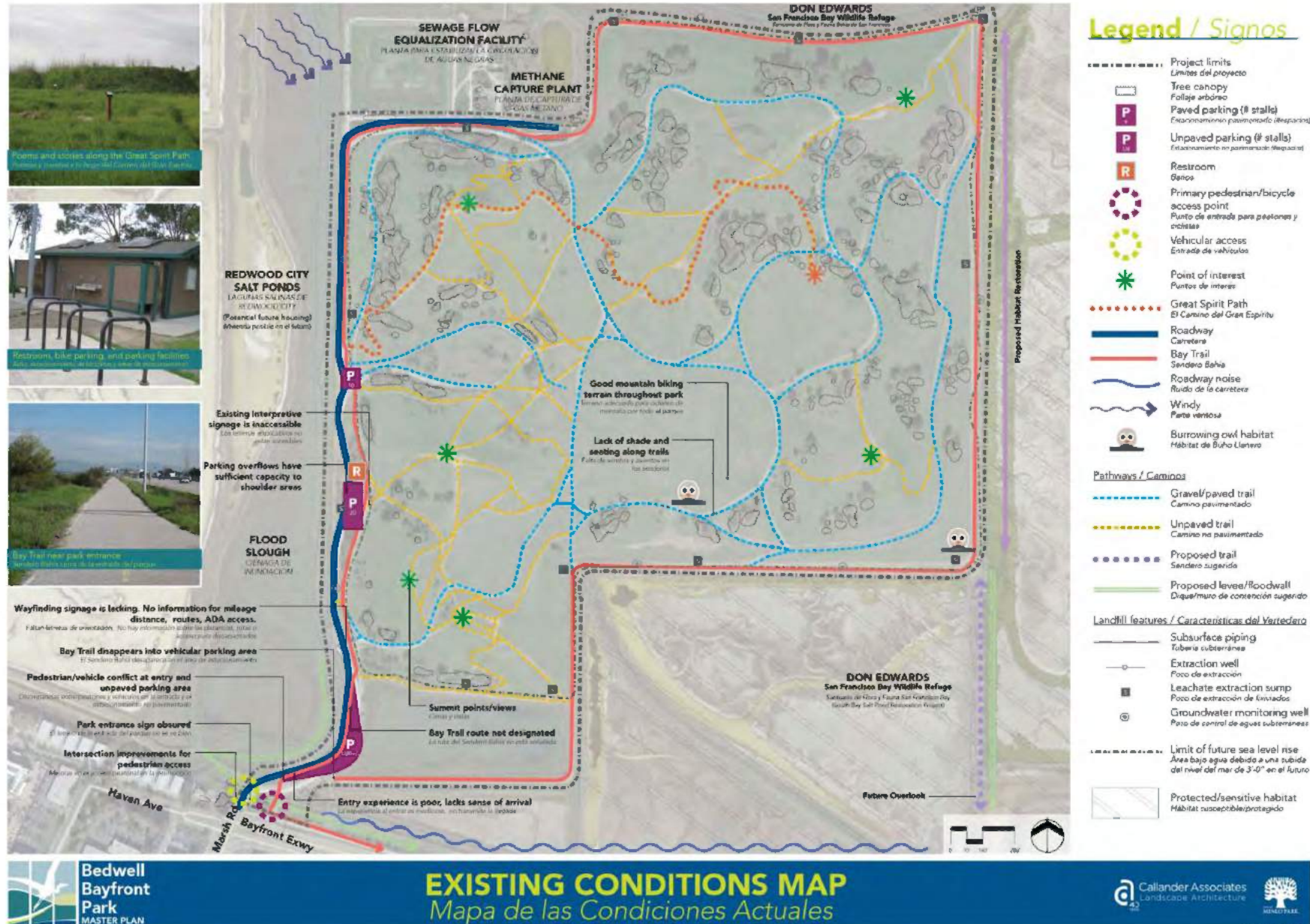


Figure 3. Existing Conditions

(Source: Callander Associates, 2017)



**Figure 4. Draft Park Plan**  
(Source: Callander Associates, 2017)



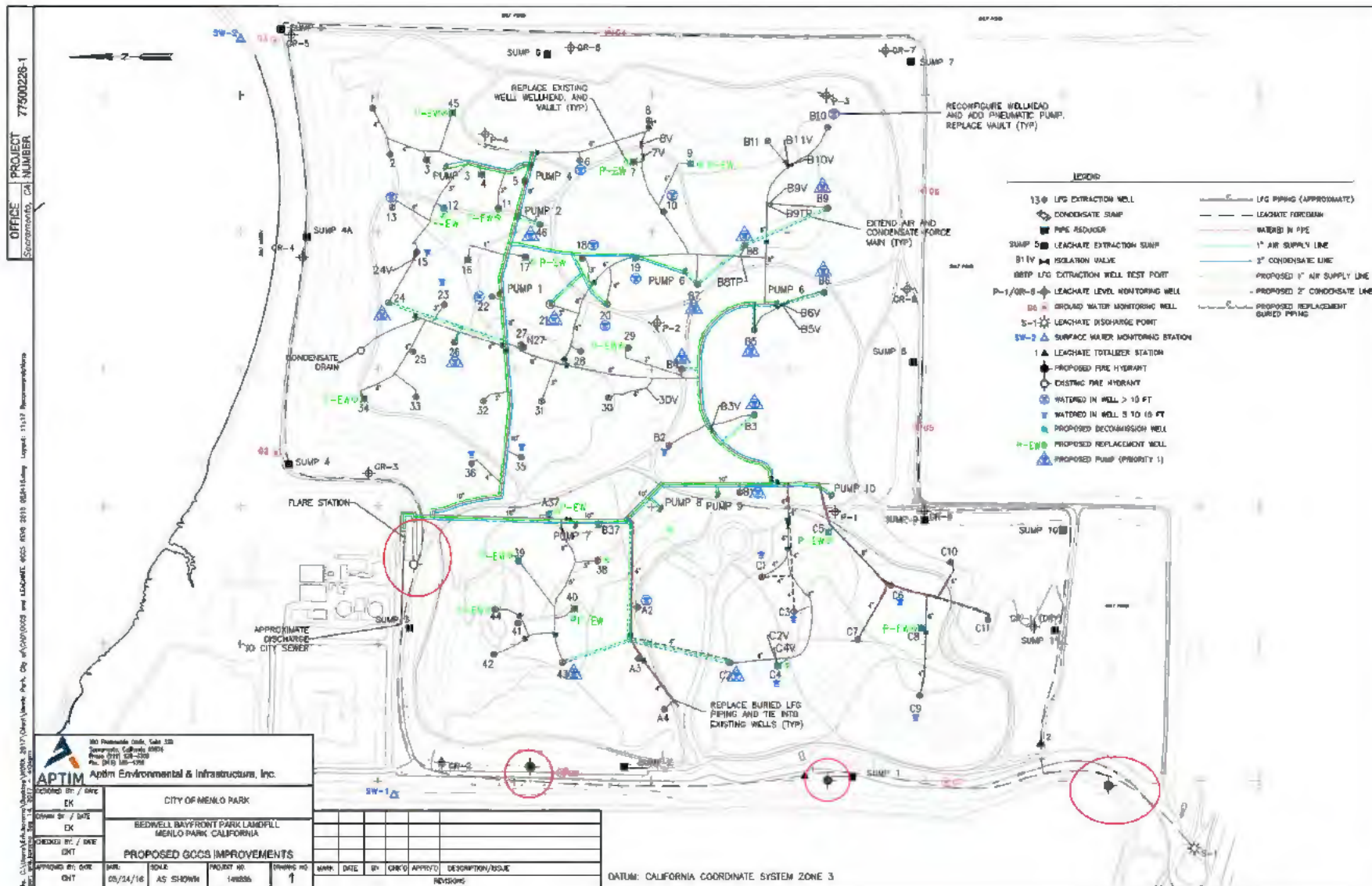


Figure 5. Landfill Improvements  
(Source: City of Menlo Park, 2017)





**Figure 6. View of existing trail in western portion of park**



**Figure 7. Landscape trees and fencing**



**Figure 8. View southeasterly of grassland, trees, and Don Edwards Wildlife Refuge**



Figure 9. Tidal pond near entrance to park off Marsh Road



Figure 10. Flood Slough along western edge of park



Figure 11. View of grassland in central portion of park

### Section II - ENVIRONMENTAL CHECKLIST

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Less than Significant with Mitigation Incorporated" as indicated by the checklist on the following pages.

|                                     |                                    |                                     |                                |                                     |                           |
|-------------------------------------|------------------------------------|-------------------------------------|--------------------------------|-------------------------------------|---------------------------|
| <input type="checkbox"/>            | Aesthetics                         | <input type="checkbox"/>            | Agriculture & Forest Resources | <input checked="" type="checkbox"/> | Air Quality               |
| <input checked="" type="checkbox"/> | Biological Resources               | <input checked="" type="checkbox"/> | Cultural Resources             | <input type="checkbox"/>            | Geology/Soils             |
| <input type="checkbox"/>            | Greenhouse Gas Emissions           | <input type="checkbox"/>            | Hazards & Hazardous Materials  | <input checked="" type="checkbox"/> | Hydrology/Water Quality   |
| <input type="checkbox"/>            | Land Use/Planning                  | <input type="checkbox"/>            | Mineral Resources              | <input type="checkbox"/>            | Noise                     |
| <input type="checkbox"/>            | Population/Housing                 | <input type="checkbox"/>            | Public Services                | <input type="checkbox"/>            | Recreation                |
| <input checked="" type="checkbox"/> | Transportation/Traffic             | <input type="checkbox"/>            | Tribal Cultural Resources      | <input type="checkbox"/>            | Utilities/Service Systems |
| <input checked="" type="checkbox"/> | Mandatory Findings of Significance |                                     |                                |                                     |                           |

| <b>I. AESTHETICS</b>                                                                                                                                     |                                |                                                    |                                     |                                     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|----------------------------------------------------|-------------------------------------|-------------------------------------|
| Would the project:                                                                                                                                       | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact        | No Impact                           |
| a) Have a substantial adverse effect on a scenic vista?                                                                                                  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| c) Substantially degrade the existing visual character or quality of the site and its surroundings?                                                      | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?                                    | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

Discussion:

- a) The project area is located at the terminus of Marsh Road, just north of State Route 84 (Bayfront Expressway) and US Highway 101. This is a relatively flat portion of the City which limits scenic vistas, yet the bay and its natural features, including the Salt Ponds and Bedwell Bayfront Park are visible from these roads. The section of US Highway 101 near the project supports a mixture of mature evergreen trees, sound walls, and existing development which limit the views of the Bay and its scenic resources; however, Bedwell Bayfront Park is visible from portions of the US Highway 101 corridor. In addition, users of State Route 84 (Bayfront Expressway) and the Bay Trail are afforded views of the park and its scenic natural features. The hills within the park also provide park users views of the surrounding baylands. Continued use of property for recreation as proposed in Draft Park Plan would not have an adverse effect on a scenic vista to or from the site. No substantial change to the vegetation or character of the site is proposed to accommodate the master plan's amenities; therefore, the scenic character of the property would not change. The proposed landfill improvements are mostly underground. The above ground improvements, such as additional fire hydrants and well heads, will not substantially affect visual quality of the area. The proposed project would not have a significant adverse effect on visual quality.
- b) The City has no designated scenic corridors. State Route 84 (Bayfront Expressway) and US Highway 101 are not designated as State scenic highways. The project will have no effect on a State scenic highway.
- c) Proposed park amenities and landfill improvements will not significantly degrade the existing visual character of the site. Screening trees are proposed in the northwest corner of the park to screen views of the adjacent Sewage Flow Equalization Facility from park users.
- d) The park is currently open sunrise to sunset; there is no night lighting. Park operation hours will remain the same with the proposed park plan A and no lighting is proposed. No light and glare would occur from the project that would adversely affect day or nighttime views.



| <b>II. AGRICULTURE AND FOREST RESOURCES</b>                                                                                                                                                                                                    | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact                           |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|----------------------------------------------------|------------------------------|-------------------------------------|
| Would the project:                                                                                                                                                                                                                             |                                |                                                    |                              |                                     |
| a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |
| b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?                                                                                                                                                           | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |
| c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)) or timberland (as defined in Public Resources Code section 4526)?                                               | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |
| d) Result in the loss of forest land or conversion of forest land to non-forest use?                                                                                                                                                           | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |
| e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?                                    | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |

Discussion:

- a) The project site and adjacent areas are not currently used for agriculture and are not identified as prime farmland, unique farmland or farmland of state importance. The project would not convert the land from farmland to a non-agricultural use.
- b) The project site is located on land with a parks and recreation general plan designation and floodplain zoning designation. The project would not conflict with existing zoning or a Williamson Act contract.
- c) Currently the area is zoned Flood Plain; however, the City is considering rezoning the site as a Public Facility. The project would not conflict with existing zoning or rezoning of forest land or timberland.
- d) The project site consists of park land. The project site also supports groves of non-native trees. The proposed recreational uses will not result in the loss of forest land or conversion of forest land to a non-forest use.
- e) The project will not result in other changes that could result in the conversion of farmland to non-agricultural use or conversion of forest land to non-forest use.

| III. AIR QUALITY<br>Would the project:                                                                                                                                                                                                                                                      | Potentially<br>Significant<br>Impact | Less Than<br>Significant with<br>Mitigation<br>Incorporated | Less Than<br>Significant<br>Impact | No<br>Impact             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|-------------------------------------------------------------|------------------------------------|--------------------------|
| a) Conflict with or obstruct implementation of the applicable air quality plan?                                                                                                                                                                                                             | <input type="checkbox"/>             | ■                                                           | <input type="checkbox"/>           | <input type="checkbox"/> |
| b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?                                                                                                                                                                          | <input type="checkbox"/>             | ■                                                           | <input type="checkbox"/>           | <input type="checkbox"/> |
| c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? | <input type="checkbox"/>             | <input type="checkbox"/>                                    | ■                                  | <input type="checkbox"/> |
| d) Expose sensitive receptors to substantial pollutant concentrations?                                                                                                                                                                                                                      | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input type="checkbox"/>           | ■                        |
| e) Create objectionable odors affecting a substantial number of people?                                                                                                                                                                                                                     | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input type="checkbox"/>           | ■                        |

**Discussion:** The project area is situated within the boundaries of the City of Menlo Park, which is located within the central portion of the San Francisco Bay Area Air Basin. This Basin is under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD) at the regional level, the California Air Resources Board (CARB) at the State level, and the United States Environmental Protection Agency (EPA) Region IX at the federal level. The BAAQMD is responsible for air monitoring, permitting, enforcement, and long range-air quality within this Basin. EPA is responsible for establishing federal standards and emission limits for sources of air pollutant. CARB is responsible for coordinating the State and federal air pollution programs within California.

CARB has established State ambient air quality standards for criteria pollutants, including ozone, carbon monoxide (CO), nitrogen dioxide, sulfur dioxide, suspended particulate matter (PM<sub>10</sub>), particulate matter –fine (PM<sub>2.5</sub>), sulfites, lead, hydrogen sulfide, vinyl chloride, and visibility reducing particulates. California standards for ozone, carbon monoxide, sulfur dioxide (1-hour and 24-hour), nitrogen dioxide, suspended particulate matter - PM<sub>10</sub>, and visibility reducing particles are values that are not to be exceeded. The standards for sulfates, lead, hydrogen sulfide, and vinyl chloride are not to be equaled or exceeded. If the standard is for a 1-hour, 8-hour or 24-hour average then some measurements may be excluded, such as activities that would occur less than once per year, on average. Federal standards have also been established for these criteria pollutants. The Air Basin is currently designated a nonattainment area for California and National O<sub>3</sub>, California and National PM<sub>2.5</sub>, and California PM<sub>10</sub> AAQS.

The BAAQMD recently adopted the 2017 Clean Air Plan. The 2017 Clean Air Plan, Spare the Air, Cool the Climate (2017 Plan), focuses on two closely-related goals: protecting public health and protecting the climate. Consistent with the GHG reduction targets adopted by the state of California, the plan lays the groundwork for a long-term effort to reduce Bay Area GHG emissions 40 percent below 1990 levels by

2030 and 80 percent below 1990 levels by 2050. To fulfill state ozone planning requirements, the 2017 control strategy includes all feasible measures to reduce emissions of ozone precursors, reactive organic gases (ROG) and nitrogen oxides (NO<sub>x</sub>), and reduce transport of ozone and its precursors to neighboring air basins. In addition, the Plan builds upon and enhances the Air District's efforts to reduce emissions of fine particulate matter and toxic air contaminants. The BAAQMD monitors air pollutant levels continuously throughout the nine-county Bay Area Air Basin. The nearest air monitoring station to the project site is located in Redwood City at 897 Barren Avenue. This station monitors CO, NO<sub>2</sub>, PM<sub>2.5</sub>, and O<sub>3</sub>; data from the San Jose Jackson Street Monitoring Station is used for the other criteria air pollutants. According to data analyzed for the ConnectMenlo EIR (2016), the City occasionally exceeds the state and federal O<sub>3</sub> standards, federal PM<sub>2.5</sub> standard, and state PM<sub>10</sub> standard. The state and federal SO<sub>2</sub> CO and NO<sub>2</sub> standards have not been exceeded in the last five years in the vicinity of the City. As part of the proposed upgrade to the landfill, many of the gas lines would be replaced and the leachate collection system would be modified. This would result in an improvement to the collection and handling of landfill gas. Landfill improvements may also include a natural gas fueling station. If so, there could be new air emissions, with impacts that could be significant, pending additional environmental review.

- a) As noted above, the 2017 Clean Air Plan is the air quality plan that applies to the project site. The primary source of ozone is internal combustion engines and power plants. Therefore, the proposed project would contribute to regional ozone emissions in the form of emissions from construction vehicles and emissions from motor vehicles driven to and from the project site by park users. As there will not be a substantial change in parking spaces (increase of 8 spots in Draft Park Plan), the proposed project is not anticipated to involve increased vehicle emissions or impact traffic at intersections or roadways; therefore, the BAAQMD thresholds are not expected to be reached. The project would contribute to particulate matter emissions through construction vehicle emissions and disturbance of soil within the project site during the construction period. Construction activities within the project site may include grading and earthmoving, the revegetation of disturbed areas, and the laying of new asphalt for parking lots. These activities would incrementally increase ozone and particulate matter emissions during the construction period; the length of the construction period is not known at this time. In addition, the area of ground disturbance is not known at this time; however, according to the BAAQMD, temporary, construction period air quality impacts are considered less than significant if standard BAAQMD particulate control measures are implemented.

**Recommendation AIR-1:** The project area is 166 acres; this is above the pollution screening threshold for parks (screening threshold for construction is 67 acres). As per the 2017 Clean Air Plan, the City will be required to implement the following measures:

- 1) All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- 2) All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- 3) All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- 4) All vehicle speeds on unpaved roads shall be limited to 15 mph.
- 5) All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- 6) Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of

Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.

- 7) All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- 8) Post a publicly visible sign with the telephone number and person to contact at the City of Pacifica regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Additional particulate control measures are also required to be implemented as per the 2017 BAAQMD CEQA guidelines. The City will be required to implement the following:

- 1) All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe.
- 2) All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.
- 3) Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.
- 4) The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time.
- 5) All trucks and equipment, including their tires, shall be washed off prior to leaving the site.
- 6) Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than one percent.
- 7) Minimizing the idling time of diesel powered construction equipment to two minutes.
- 8) Requiring that all construction equipment, diesel trucks, and generators be equipped with Best Available Control Technology for emission reductions of NOx and PM.
- 9) Requiring all contractors use equipment that meets CARB's most recent certification standard for off-road heavy duty diesel engines.

**Recommendation AIR-2:** The City should provide additional analysis of air quality impacts from landfill improvements if a truck fueling station is included in the improvements.

- b) According to BAAQMD, temporary, construction period air quality impacts (for all pollutants) are considered less-than-significant if standard BAAQMD particulate matter control measures are implemented, as outlined under item (a) and incorporation of Recommendations AIR-1 and AIR-2.
- c) The San Francisco Bay Air Basin is considered a nonattainment area for particulate matter and for one-hour ozone levels. Construction activities associated with the proposed project would result in a short-term release of particulate matter into the atmosphere, and could contribute to existing future particulate matter violations. However, according to BAAQMD, temporary, construction period air quality impacts (for all pollutants) are considered less-than-significant if standard BAAQMD particulate matter control measures are implemented, as outlined under item (a). It is not known at this time the potential increase in motor vehicle trips from increased use of the property; however, they are expected to be minimal relative to air quality standards and



impacts to air quality would be less-than-significant. It is expected that an increase in vehicular trips associated with recreational activities would not result in any criteria air pollutant emissions at a level that would violate any air quality standard or contribute substantially to any air quality violations.

- d) Under CEQA, residences, schools, daycare centers, and health care facilities, such as hospitals, or retirement and nursing homes, are considered sensitive receptors. The closest sensitive receptors are residential uses, Flood Park, and Joseph B. Kelly Park, yet, they are all located over 0.25 mile away; north and south of State Highway 101. Park users in the vicinity of work areas may be temporarily exposed to diesel engine exhaust during the construction period due to the operation of construction equipment. It is anticipated that recreational improvements will require the use of several construction vehicles, including heavy equipment, such as a bobcat, backhoe-loader, concrete mixer, asphalt truck, dump truck, and possibly utility trucks, that would be located within the project site at any given time (some or all of which would be active). Construction period diesel emissions would be released during the construction period. Diesel-specific mitigation is not required due to the short duration of construction in specific locations within the project site. The concentration of diesel emissions on the site and the duration of exposure to these emissions and potential adverse health effects on sensitive receptors are considered less than significant.
- e) Development of recreational facilities is not a land use typically associated with objectionable odors. Equipment used for construction activities may emit objectionable odors associated with diesel fuel. The construction activities requiring diesel fueled equipment would be short-term. The project would not result in an impact to a substantial number of people. Implementation of the proposed project would not result in the removal or disturbance of large quantities of saturated or hydric soils with high proportions of organic matter that would cause objectionable odors when the soil dries. Other components of the proposed project, including the installation of landscaping and signage, and landfill improvements would not create objectionable odors compared to existing conditions.

| <b>IV. BIOLOGICAL RESOURCES</b><br>Would the project:                                                                                                                                                                                                                                                                | Potentially<br>Significant<br>Impact | Less Than<br>Significant with<br>Mitigation<br>Incorporated | Less Than<br>Significant<br>Impact | No<br>Impact             |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|-------------------------------------------------------------|------------------------------------|--------------------------|
| a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service? | <input type="checkbox"/>             | ■                                                           | <input type="checkbox"/>           | <input type="checkbox"/> |
| b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?                                                               | <input type="checkbox"/>             | ■                                                           | <input type="checkbox"/>           | <input type="checkbox"/> |
| c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?                                                 | <input type="checkbox"/>             | ■                                                           | <input type="checkbox"/>           | <input type="checkbox"/> |
| d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?                                                                                   | <input type="checkbox"/>             | ■                                                           | <input type="checkbox"/>           | <input type="checkbox"/> |
| e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?                                                                                                                                                                                  | <input type="checkbox"/>             | ■                                                           | <input type="checkbox"/>           | <input type="checkbox"/> |
| f) Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?                                                                                                                                 | <input type="checkbox"/>             | <input type="checkbox"/>                                    | ■                                  | <input type="checkbox"/> |

**Environmental Setting:** A preliminary review of biological resources on and adjacent to Bedwell Bayfront Park was conducted for preparation of this checklist. The project area is a former municipal landfill that now supports a mosaic of annual grassland and landscape trees/shrubs. A tidal pond is located in the southwestern corner of the park. The pond supports a mosaic of open water and coastal salt marsh. The western boundary of the park abuts Flood Slough; this tidal slough supports open water and coastal salt marsh. A narrow band of coastal salt marsh grows along the park boundary. The northern, and eastern boundaries of the park abut a mixture of former salt ponds (in restoration) and coastal salt marsh associated with the Don Edwards San Francisco Bay National Wildlife Refuge.

The annual grassland supports a mosaic of grasses and forbs; many are non-native. Commonly observed grasses include wild oat (*Avena fatua*), ryegrass (*Lolium perenne*), foxtail (*Hordeum leporinum*), ripgut brome (*Bromus diandrus*), canary grass (*Phalaris sp.*), and rattail fescue (*Festuca myuros*). Non-native forbs are numerous; commonly observed species include curly dock (*Rumex crispus*), fennel (*Foeniculum vulgare*), cut-leaved plantain (*Plantago coronopus*), bur clover (*Medicago polymorpha*), cheeseweed (*Malva spp.*), Bermuda buttercup (*Oxalis pes-caprae*), filaree (*Erodium botrys*), wild radish (*Raphanus sativa*), sow thistle (*Sonchus sp.*), fiddle dock (*Rumex acetosella*), bristly ox-tongue (*Picris echinoides*), wild mustard (*Brassica spp.*), Italian thistle (*Carduus pycnocephalus*), stinkwort (*Dittrichia graveolens*), pineapple weed (*Chamomilla suaveolens*), vetch (*Vicia sativa*), summer mustard (*Hirschfeldia incana*), hawksbeard (*Crepis sp.*), red clover (*Trifolium pretense*), hoary cress (*Cardaria draba*), pepperweed (*Lepidium sp.*), African daisy (*Arctotis stoechadifolia*), geranium (*Geranium sp.*), and California poppy (*Eschscholzia californica*). Small depressions in the landfill were observed to be seasonally wet in winter 2017. Plant species tolerant of seasonally wet areas were observed in these areas, such as ryegrass, curly dock, brass buttons (*Cotula coronopifolia*), swamp prickly grass (*Crypsis schoenoides*), and birds foot trefoil (*Lotus corniculatus*).

Landscape trees and shrubs are dispersed throughout the park. Dominant tree species include eucalyptus (*Eucalyptus spp.*), acacia (*Acacia spp.*), she-oak (*Casuarina sp.*), pine (*Pinus sp.*), melaleuca (*Melaleuca sp.*), palm (*Phoenix sp.*), olive (*Olea europaea*), and myoporum (*Myoporum sp.*). Shrubs and sub-shrubs are also present. Commonly observed are coyote brush (*Baccharis pilularis*), French broom (*Genista monspessulana*), Russian thistle (*Salsola tragus*), giant reed (*Arundo donax*), and purple sage (*Salvia leucophylla*).

Portions of the tidal pond and the edge of Flood Slough supports coastal salt marsh. Plants tolerant of the tidal influences of San Francisco Bay include pickleweed (*Salicornia pacifica*), alkali heath (*Frankenia grandiflora*), salt grass (*Distichlis spicata*), jaumea (*Jaumea carnosa*), gumplant (*Grindelia sp.*), and cordgrass (*Spartina sp.*). The wetland band along Flood Slough quickly transitions to upland habitat that supports plants typical to the annual grassland; Mediterranean barley (*Hordeum marianum ssp. gussoneanum*), fennel, and saltbush (*Atriplex sp.*) are common.

The overall value of the majority of the park habitats to native wildlife is moderated by the predominance of non-native plants, which often times are not utilized for forage by native species. The primary value of the habitats on the site are for common bird species that can tolerate the forage available and the passive recreational uses, both seasonal migrant birds that may stop over to rest and year-round birds that may nest in the habitats. A few of the common bird species that have been observed on the site and likely nest at least in some years include mallard, red-tailed hawk, mourning dove, black-necked stilt, black phoebe, Bewick's wren, northern mockingbird, western meadowlark, red-winged blackbird, and house finch. Common mammals that may inhabit some areas include jackrabbit, brush rabbit, California vole, and striped skunk.

Sensitive habitats are defined by local, State, or Federal agencies as those habitats that support special status species, provide important habitat values for wildlife, represent areas of unusual or regionally restricted habitat types, and/or provide high biological diversity. The coastal salt marsh wetlands associated with the tidal pond and Flood Slough are considered sensitive habitat. This vegetation type (pickleweed mats) is ranked S3 (impaired) by CDFW (CDFW, 2010).

Plant species of concern include those listed by either the Federal or State resource agencies as well as those identified as rare by CNPS. Based on a search of the CNPS and CNDDB inventories for the project quadrangle no special status plant species have been recorded from the 166-acre project site; however, species have been recorded from the greater project vicinity. There are a number of historical or extirpated records from nearby. There are records of Point Reyes bird's beak (*Chloropyron*

*maritimum* ssp. *palustre*), alkali milk vetch (*Astragalus tener* var. *tener*), and Hoover's button celery (*Eryngium aristulatum* var. *hooveri*) being collected along the bay in the early 1900s, but are mostly believed to be extirpated (CNDDDB 2017). Numerous occurrences of Congdon's tarplant (*Centromadiaa parryi* ssp. *congdonii*), prostrate navarretia (*Navarretia prostrata*), alkali milk vetch (*Astragalus tener* var. *tener*), Contra Costa goldfields (*Lasthenia conjugens*), and San Joaquin spearscale (*Atriplex joaquiniana*) have been documented in the vicinity of the Alviso and Congdon's tarplant has been recorded adjacent to Stevens Creek, at Sunnyvale Baylands, and near Ravenswood (ConnectMenlo EIR, 2016 and CNDDDB, 2017). Based on visual observations of the 166-acre project site in March and June 2017, the potential for plant species of concern is considered extremely low due to the sites history as a municipal landfill and the clay material imported for the landfill cap. This evaluation is based on a review of CNDDDB records, the lack of suitable habitat for sensitive plant species (e.g., absence of native grassland, oak woodlands, serpentine) and the previously disturbed nature of the project area.

Special status wildlife species include those listed, proposed or candidate species by the Federal or the State resource agencies as well as those identified as State species of special concern. In addition, all raptor nests are protected by Fish and Game Code, and all migratory bird nests are protected by the Federal Migratory Bird Treaty Act. Special status wildlife species were evaluated for their potential presence. Two wildlife species that are both State and Federally Endangered are known to occur nearby: Ridgeway's rail occurs on Greco Island, and salt-marsh harvest mouse has been found in parts of Flood Slough. The occurrence of these species within the park boundary has not been documented, but the only potentially suitable habitat would be in the tidal pond near the entrance. Burrowing owl (a California species of special concern) has been a past winter resident in the park grasslands, and transient burrowing owls have been observed by local birders in 2005, 2011 and more recently in March 2017 (Friends of Bedwell Bayfront Park web site, ebird records, and utube record sighting reported by Ryan Thorndeck [March 1, 2017]).

#### Discussion:

- a) To assess the potential occurrence of special status biotic resources, two electronic databases were accessed to determine recorded occurrences of sensitive plant communities and sensitive species. Information was obtained from the California Native Plant Society's (CNPS) Electronic Inventory (2017), and California Department of Fish & Wildlife (CDFW) RareFind database (CDFG, 2017) for the Palo Alto USGS quadrangle and surrounding quadrangles. The ConnectMenlo EIR (2016) and South Bay Salt Pond Restoration Project Phase 2 FEIS/EIR were also reviewed. Plant species of concern include those listed by either the Federal or State resource agencies as well as those identified as rare by CNPS (List 1B). The search of the CNPS and CNDDDB inventories identified the special status plant species with potential to occur in the project area (see Appendix A). Surveys for rare plants were not conducted for this project; however, given the urban, developed condition of the project area and past use of the area as a municipal landfill (placement of clay cap), the potential occurrence of special status plant species is considered to be very low. Some special status plant species are known to inhabit seasonally moist grasslands nearby (e.g., Congdon's tarplant at Ravenswood Open Space, located approximately 3.5 miles southeast of the project site) and portions of the project area may provide suitable habitat for these species, yet none have been detected to date. No impacts are expected to special status plant species from implementation of the Draft Park Plan or landfill improvements.

Special status wildlife species include those listed, proposed or candidate species by the Federal or the State resource agencies as well as those identified as State species of special concern (see Appendix A). In addition, all raptor nests are protected by State Fish and Wildlife Code, and all migratory bird nests are protected by the Federal Migratory Bird Treaty Act. Special status wildlife species were evaluated for their potential presence in the project area. Focused surveys for wildlife were not conducted for this report; however, the predominance of non-native plants



within the majority of the park limits the value of the site for breeding birds. In addition, the need to occasionally control deep burrowing animals from penetrating the 6-foot deep cap on the old landfill, limits the potential for burrowing owls to breed on the site, although they are occasional transient visitors. The tidal pond is likely too small of a habitat area to support a population of salt-marsh harvest mouse, and the tidal pond did not appear to have adequate areas for this species' upland refugia they need to escape high tides. It is unlikely that salt-marsh harvest mouse occurs within the park; the narrow fringe of pickleweed in the area of the proposed boat launch is inadequate to provide habitat for this mouse. Ridgeway's rail may occasionally inhabit the tidal pond on the site, but it is unknown if any breed there. No other special status species are expected to regularly inhabit or breed within the park; however, there have been occasional sighting of special status birds during migrations.

Several common bird species have been observed in the park and likely breed in some of the grasslands, shrubs, and trees, where their nests are protected. The only proposed new use in the Draft Park Plan that may possibly have an impact to nesting birds is the Glider Area. An article by Kempf and Huppopp (1998) titled "What effect do airplanes have on birds?" reviewed 161 publications on this topic. Several studies that the authors reviewed showed that model airplanes and gliders showed a significant disturbance to nesting birds; however, there are several factors to consider: the sensitivity of individual species, height of the aircraft, and other adjacent uses (e.g., people walking, dogs). They note that it was surprising that even gliders had a disturbing effect on nesting birds, and speculated that the appearance of low flying gliders may reduce the chances that birds become habituated which was seen in motorized planes.

The relatively small areas proposed in the Draft Park Plan for a nature play playground is not expected to cause significant impacts to nesting birds, as the park contains many other sites of similar habitats.

Measures are described under d) to avoid or reduce potential impacts to protected wildlife species (see Recommendation BIO-2).

- b) The project area was found to support coastal salt marsh along the edge of Flood Slough and within the tidal pond. This vegetation type is ranked S3 (imperiled) by CDFW (CDFW, 2010) and is considered a sensitive habitat. Development of a boat launch facility along the Flood Slough shoreline could result in significant impacts to coastal salt marsh, depending upon the exact location selected for this recreational feature. Please see item c, below (see Recommendation BIO-1).
- c) The coastal salt marsh along Flood Slough as well as vegetated tidal flats in the tidal pond meet the definition of federally protected wetlands as defined by Section 404 of the Clean Water Act, as these areas are within the tidal prism of San Francisco Bay and are dominated by hydrophytic vegetation. As a narrow band of wetland runs the entire length of the Flood Slough, development of a boat launch facility along the Flood Slough shoreline would impact federally protected wetlands. The exact amount of impact will depend upon the exact location selected for this recreational feature and the project feature (i.e., re-sloped channel edge or dock). Impacts to federally protected wetlands would be a significant impact, yet can be mitigated with implementation of Recommendation BIO-1.

**Recommendation BIO-1:** As jurisdictional wetlands and/or waters are suspected to be present along Flood Slough where a boat launch is proposed, a jurisdictional delineation confirmed by the U.S. Army Corps of Engineers (USACE) should be prepared for the proposed boat launch area. The delineation should be a component of a biological

resources assessment. The assessment should identify measures to avoid, minimize, and compensate for direct impacts to federally protected wetlands and associated open water habitat of Flood Slough. Based on the preliminary review conducted to date, the following measures are identified:

- Implement a worker education program to educate all construction personnel of measures to prevent indirect impacts to wetlands and water resources.
- Protect coastal salt marsh vegetation adjacent to the boat launch work areas from inadvertent construction impacts by the placement of construction mesh fencing.
- Implement erosion control measures during and following construction to avoid deposition of sediment into adjacent coastal salt marsh and Flood Slough. Install and maintain perimeter silt fencing or hay bales and implement post-construction erosion control seeding.
- Utilize native plant species in the revegetation of disturbed areas.
- Implement a coastal marsh restoration/revegetation program to provide compensation for permanent impacts to the coastal marsh from the boat launch facility. The program should restore/revegetate coastal marsh at a minimum 1:1 impact to restoration ratio. Suitable low-elevation areas within the project area should be selected for marsh restoration and these areas should be revegetated with native coastal marsh plant species. Seed from locally collected native coastal salt marsh plant species should be used for the restoration work. The success of the restoration program should be monitored yearly for a period of 3 years. Monitoring should consist of a yearly survey of plant cover within the restored areas. The revegetation program should be deemed successful if there is a minimum of 30% native plant cover each year for 3 years. If this performance standard is not met in any of the monitoring years, the City should implement remedial revegetation actions, such as re-seeding, weeding, or other actions, as determined by a qualified restoration ecologist, until performance standards are met.
- Placement of boat launch abutments or pier (if a dock is constructed) will be subject to permitting under Section 404 of the Clean Water Act, Section 1601 of the Fish and Game Code, and water quality certification from the Regional Water Quality Control Board. Obtain all permits and certifications prior to construction, if so required by regulatory agencies.
- One year after boat launch construction; the City should monitor the recovery of all coastal salt marsh areas temporarily affected by construction and/or equipment/worker access. If native coastal salt marsh vegetation has not naturally recovered within the disturbed area and providing at least 30% plant cover, the City should implement remedial seeding of the disturbed areas to encourage marsh restoration. Seed from locally collected native coastal salt marsh plant species should be used for the restoration work. The success of the marsh recovery/revegetation program should be monitored yearly for a period of 3 years. Monitoring shall consist of a yearly survey of plant cover within the affected areas. The revegetation program shall be deemed successful if there is a minimum of 30% native plant cover each year for 3 years. If this performance standard is not met in any of the monitoring years, the City should implement remedial revegetation actions, such as re-seeding, weeding, or other actions, as determined by a qualified restoration ecologist, until performance standards are met.

d) Migratory birds and raptors may utilize the project site for nesting. Trail improvements and other

construction activities may impact nesting birds, if any are present. Recreational uses within the project area may also affect wildlife utilization. In addition, recreational activities are also proposed within close proximity to the Don Edwards San Francisco Bay National Wildlife Refuge and within Flood Slough, areas that support nesting birds, including species of special status. These impacts can be mitigated with implementation of Recommendation BIO-2 and BIO-3 (see item e).

**Recommendation BIO-2:** To avoid potential impacts to wildlife implement the following:

- The City should schedule construction (including vegetation removal) to occur during the non-nesting season for birds (e.g. between September 1 and March 1 of any given year. If this is not practicable, the City should hire a qualified biologist to conduct pre-construction nesting bird surveys no more than two weeks prior to construction. If nesting birds are observed, the biologist shall establish a buffer zone of adequate size where no construction will take place until the chicks have fledged the nest.
  - The City should provide trash cans and other receptacles that secure food waste and reduce access to trash by raccoons, skunks, crows, and ravens.
  - The City should provide interpretive signs at the boat launch about minimizing user conflicts with diving ducks and other waterfowl that utilize Flood Slough and Greco Island, including information on flushing distances for birds, importance of remaining in kayak (or other non-motorized vessels) and not entering the salt marsh areas of Flood Slough, Greco Island, or other wetlands.
  - Use of radio-controlled hand-launched model gliders should be restricted to the grassland area identified in the Draft Park Plan. Gliders should not be allowed to fly over other areas within the park or over adjacent baylands, including over adjacent existing and/or restored salt ponds. Glider use over the designated grassland may impact nesting birds if any are found within the grassland and adjacent areas. Prior to use of the area for gliders, a qualified ornithologist should conduct a nesting bird survey of the area proposed for this activity and areas within 100-feet of the area to document the baseline condition. A follow-up comparison survey should be conducted in the first year of glider use. If any birds nesting in the immediate vicinity are observed being significantly disturbed by glider activity (i.e., birds cannot adequately sit on nests or forage, or they abandon nests), then the glider activity should be curtailed. If no such effects are observed, no further mitigation is recommended.
  - Continue to coordinate with USFWS and others in achieving effective control of the risks associated with undesirable predatory species, such as feral cats and red fox. Within the closed landfill, implement measures to control ground squirrels and soil burrowing in a manner that does not have collateral damage on non-target species.
- e) The City's General Plan (ConnectMenlo EIR 2016) maps the Bedwell Bayfront Park as supporting Annual Grasses and Forbs and Northern Coastal Salt Marsh (wetland). The general plan EIR identifies the need for a biological resources assessment if the project would occur on or adjacent to a parcel containing natural habitat with features such as mature and native trees, unused structures that could support special-status bat species, other sensitive biological resources, and/or active nests of common birds protected under the Migratory Bird Treaty Act (MBTA). Sensitive biological resources triggering the need for the assessment include: wetlands, occurrences or suitable habitat for special-status species, sensitive natural communities, and important movement corridors for wildlife such as creek corridors and shorelines.

The Bedwell Bayfront Park project meets the requirements for a biological resources assessment,

as the site supports habitat for nesting birds and the site is located adjacent to parcels supporting sensitive biological resources (i.e., lands of the Don Edwards San Francisco Bay National Wildlife Refuge and Flood Slough). This requirement is outlined in Recommendation BIO-3, below.

The City also recognizes heritage trees and the Municipal Code establishes regulations for heritage trees. Heritage trees are: 1) Trees of historical significance, special character or community benefit, specifically designated by resolution of the City Council; 2) An oak tree (*Quercus* sp.), which is native to California and has a trunk with a circumference of 31.4 inches (diameter of 10 inches) or more, measured at 54 inches above natural grade; and 3) All trees other than oaks, which have a trunk with a circumference of 47.1 inches (diameter of 15 inches) or more, measured 54 inches above natural grade, with the exception of trees that are less than 12 feet in height, which will be exempt from this section. To protect heritage trees, a tree protection plan, prepared by a certified arborist, is to be submitted for any work performed within a tree protection zone, which is an area ten times the diameter of the tree. Furthermore, all tree protection plans should be reviewed and approved by the Director of Community Development or his or her designee prior to issuance of any permit for grading or construction.

**Recommendation BIO-3:** As the project is located adjacent to lands of the Don Edwards San Francisco Bay National Wildlife Refuge a biological resources assessment should be prepared, as per the ConnectMenlo EIR. As per the General Plan, the biological resources assessment should provide a determination on whether any sensitive biological resources are present on the site, including jurisdictional wetlands and waters, essential habitat for special-status species, and sensitive natural communities. If jurisdictional wetlands and/or waters are suspected to be present on the site, a jurisdictional delineation confirmed by the U.S. Army Corps of Engineers (USACE) should be provided as part of the baseline assessment. The assessment should also include consideration of possible sensitive biological resources on any adjacent undeveloped lands that could be affected by the project and lands of the Don Edwards San Francisco Bay National Wildlife Refuge. Details for the assessment are contained in the Connect Menlo EIR. The assessment should include proposed avoidance, minimization, and mitigation of these adverse impacts, including Recommendations BIO-1 and BIO-2, above.

- f) There are no adopted Habitat Conservation Plans, Natural Community Conservation Plans or other approved local, regional, or State habitat conservation plan that are specific to the Bedwell Bayfront Park; however, plans have been prepared and adopted for adjacent properties. In 2012 the U.S. Fish and Wildlife Service (USFWS) completed a Final Comprehensive Conservation Plan (CCP) for the Refuge, including those portions of the project study area recognized as existing Refuge lands and areas for potential additions to the Refuge. While the CCP is not an adopted habitat conservation plan under the CEQA significance criteria, it does provide important management guidance for Refuge lands by describing desired future conditions and long-range guidance to accomplish the purposes for which the Refuge was established. Other plans that have been approved for the region include the South Bay Salt Pond Restoration Project (SBSRP) and the Recovery Plan for Tidal Marsh Ecosystems of Northern and Central California, which is an expansion and revision of The California Clapper Rail and Salt Marsh Harvest Mouse Recovery Plan prepared by the USFWS in 1984. Recreational activities proposed in the Draft Park Plan, with recommended measures as listed in Recommendations BIO-1, BIO-2, and BIO-3, will not significantly conflict with the goals and policies presented in these plans.



| <b>V. CULTURAL RESOURCES</b><br>Would the project:                                                                                                  | Potentially<br>Significant<br>Impact | Less Than<br>Significant with<br>Mitigation<br>Incorporated | Less Than<br>Significant<br>Impact | No<br>Impact                        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|-------------------------------------------------------------|------------------------------------|-------------------------------------|
| a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5 of the <i>CEQA Guidelines</i> ?    | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input type="checkbox"/>           | <input checked="" type="checkbox"/> |
| b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 of the <i>CEQA Guidelines</i> ? | <input type="checkbox"/>             | <input checked="" type="checkbox"/>                         | <input type="checkbox"/>           | <input type="checkbox"/>            |
| c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?                                             | <input type="checkbox"/>             | <input checked="" type="checkbox"/>                         | <input type="checkbox"/>           | <input type="checkbox"/>            |
| d) Disturb any human remains, including those interred outside of formal cemeteries?                                                                | <input type="checkbox"/>             | <input checked="" type="checkbox"/>                         | <input type="checkbox"/>           | <input type="checkbox"/>            |

### Discussion

- a) According to the City General Plan EIR (ConnectMenlo EIR, 2016) there are no designated historical resources in the project vicinity. As indicated by previous use of the site as a municipal landfill, the site re-contoured to accommodate this municipal use and covered by a clay cap. Structures over 50 years of age should be evaluated as part of the development review process; however, it is likely that any historical resources that may have existed were removed at the time of landfill development, leaving no traces on the property. Given the substantial prior disturbance of the site, findings of the historic resources records from the City General Plan, no impacts to historic resources are anticipated as a result of the proposed project.
- b) The area surrounding San Francisco Bay, including what would become Menlo Park, was populated by Native Americans, specifically the Ohlone People (ConnectMenlo, 2016). The Ohlone People lived a seasonal hunter gatherer lifestyle, relying on the abundant foodstuffs and natural resources provided by the San Francisco Bay ecosystem and trading with neighboring Native American groups. Artifacts from the lives of these early residents of what is now Menlo Park are still being discovered today. As recently as 2012, Native American remains were found at a construction site along Willow Road, in Menlo Park. Additionally, Native American remains were found at the Prologis commercial development site in the Bayfront Area. No archaeological resources are known from the Bedwell Bayfront Park. The site's previous use as a municipal landfill, which resulted in the placement of fill, grading and re-contouring makes it unlikely that any archaeological resources are present. Although archaeological resources or human burials are not anticipated within the project site, there is a possibility that cultural resources could be found during excavation and grading of the project site. Implementation of the Mitigation Measure CULT-2a and CULT-2b from the ConnectMenlo EIR and listed below as Recommendation CULT 1 and CULT-2 will reduce this impact to less than significant.

**Recommendation CULT-1:** If a potentially significant subsurface cultural resource is encountered during ground disturbing activities on any parcel in the city, all construction activities within a 100-foot radius of the find shall cease until a qualified archeologist determines whether the resource requires further study. All developers in the study area

shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. Any previously undiscovered resources found during construction activities shall be recorded on appropriate forms and evaluated for significance in terms of the California Environmental Quality Act (CEQA) criteria by a qualified archeologist. If the resource is determined significant under CEQA, the qualified archaeologist shall prepare and implement a research design and archaeological data recovery plan that will capture those categories of data for which the site is significant. The archaeologist shall also perform appropriate technical analyses; prepare a comprehensive report complete with methods, results, and recommendations; and provide for the permanent curation of the recovered resources. The report shall be submitted to the City of Menlo Park, Northwest Information Center (NWIC), and State Historic Preservation Office (SHPO), if required.

**Recommendation CULT-2:** As part of the City’s application approval process and prior American Tribes with ancestral ties to the Menlo Park city limits regarding General Plan Amendments in the city and land use policy changes. Upon receipt of an application for proposed project that requires a General Plan Amendment or a land use policy change, the City shall submit a request for a list of Native American Tribes to be contacted about the proposed project to the Native American Heritage Commission (NAHC). Upon receipt of the list of Native American Tribes from the NAHC, the City shall submit a letter to each Tribe on the provided list requesting consultation with the Native American Tribe about the proposed project via the City’s preferred confirmation of receipt correspondence tracking method (e.g., Federal Express, United States Postal Service Certified Mail, etc.).

- c) There are no identified unique paleontological or geologic features within the project site. Much of the project site was previously disturbed during use as a municipal landfill. Although, no impacts to paleontological resources are anticipated because the site has been previously disturbed and includes fill material, implementation of the Mitigation Measure CULT-3 from the ConnectMenlo EIR will reduce this impact to less than significant. This measure is listed below as Recommendation CULT -3.

**Recommendation CULT-3:** In the event that fossils or fossil bearing deposits are discovered during ground disturbing activities anywhere in the city, excavations within a 50-foot radius of the find shall be temporarily halted or diverted. Ground disturbance work shall cease until a City approved qualified paleontologist determines whether the resource requires further study. The paleontologist shall document the discovery as needed (in accordance with Society of Vertebrate Paleontology standards [Society of Vertebrate Paleontology 1995]), evaluate the potential resource, and assess the significance of the find under the criteria set forth in CEQA Guidelines Section 15064.5. The paleontologist shall notify the appropriate agencies to determine procedures that would be followed before construction activities are allowed to resume at the location of the find. If avoidance is not feasible, the paleontologist shall prepare an excavation plan for mitigating the effect of construction activities on the discovery. The excavation plan shall be submitted to the City of Menlo Park for review and approval prior to implementation, and all construction activity shall adhere to the recommendations in the excavation plan.

- d) Although human remains are not anticipated within the project site, there is a possibility that this resource could be found during excavation and grading of the project site. Implementation of the

Mitigation Measure CULT-4 from the ConnectMenlo EIR will reduce this impact to less than significant. This measure is listed below as Recommendation CULT -4.

**Recommendation CULT-4:** Procedures of conduct following the discovery of human remains citywide have been mandated by Health and Safety Code Section 7050.5, Public Resources Code Section 5097.98 and the California Code of Regulations Section 15064.5(e) (CEQA). According to the provisions in CEQA, if human remains are encountered at the site, all work in the immediate vicinity of the discovery shall cease and necessary steps to ensure the integrity of the immediate area shall be taken. The San Mateo County Coroner shall be notified immediately. The Coroner shall then determine whether the remains are Native American. If the Coroner determines the remains are Native American, the Coroner shall notify the NAHC within 24 hours, who will, in turn, notify the person the NAHC identifies as the Most Likely Descendant (MLD) of any human remains. Further actions shall be determined, in part, by the desires of the MLD. The MLD has 48 hours to make recommendations regarding the disposition of the remains following notification from the NAHC of the discovery. If the MLD does not make recommendations within 48 hours, the owner shall, with appropriate dignity, reinter the remains in an area of the property secure from further disturbance. Alternatively, if the owner does not accept the MLD's recommendations, the owner or the descendant may request mediation by the NAHC.

| <b>VI. GEOLOGY AND SOILS</b><br>Would the project:                                                                                                                                                                                                                                     | Potentially<br>Significant<br>Impact | Less Than<br>Significant with<br>Mitigation<br>Incorporated | Less Than<br>Significant<br>Impact  | No<br>Impact                        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|-------------------------------------------------------------|-------------------------------------|-------------------------------------|
| a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:                                                                                                                                                       |                                      |                                                             |                                     |                                     |
| i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| ii) Strong seismic ground shaking?                                                                                                                                                                                                                                                     | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| iii) Seismic-related ground failure, including liquefaction?                                                                                                                                                                                                                           | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| iv) Landslides?                                                                                                                                                                                                                                                                        | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| b) Result in substantial soil erosion or the loss of topsoil?                                                                                                                                                                                                                          | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?                                                     | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?                                                                                                                                       | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?                                                                                                   | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

### Discussion

Bedwell Bayfront Park is a roughly rectangular area that supports flat meadows and rolling hills. The park is ringed by levees that separate it from Flood Slough to the west and low-elevation salt marsh and baylands to the north, east and south. The site is a former landfill on fill that supports a clay cap. The most prevalent soil in the surrounding area is bay mud, which is a mixture of silty clay, sand, gravel, and peat (NRCS, 2017).

- a, i) The project site is located within a seismically active region. At least eight major earthquake faults are distributed throughout the San Francisco Bay Area. These northwesterly-trending faults have generated 14 earthquakes of magnitude (M) 6.0 or greater in the region during historical



times. The San Andreas fault, which generated the magnitude 7.9 (Mw) San Francisco Earthquake of 1906, is located about 2.5 miles west of the project site. The Monte Vista Shannon Fault is situated about 3 miles to the south and also has a potential for producing significant ground shaking at the site. Other known active faults capable of producing significant ground shaking at the site include the San Gregorio and Hayward faults located about 13 miles southwest and 13 miles north of the site, respectively (ConnectMenlo, 2016). There are no active fault zones or risk of fault rupture within the park property. Fault rupture through the project site is not anticipated.

- a, ii) The project site could be subjected to moderate to strong seismic shaking, depending upon the fault movement. The project may result in a slight increase use of the project site for recreational uses, including hiking and other recreational activities; however, this increased use would not substantially increase the exposure of the public to injury or death should a seismic event occur. Landfill improvements will also be subject to seismic shaking. The exposure to seismic shaking would be less than significant with incorporation of standard building requirements that meet current earthquake construction standards.
- a, iii) Based on existing reports, Bedwell Bayfront Park is comprised of artificial fill and a landfill cap, all situated over bay mud. Areas with bay mud are susceptible to liquefaction. According to hazard maps, areas around the park are in a liquefaction hazard zone; however, the park (former landfill) is excluded. The proposed recreational uses and landfill improvements on the site are not expected to substantially increase the exposure of the public to injury or death should seismic related ground failure or liquefaction occur. Therefore, the exposure of people or structures to potential adverse impacts would be less than significant.
- a, iv) The project site has gentle slopes and, combined with compacted condition of the landfill cap, has a low potential for slope failures or landsliding. Improvements to existing trail is unlikely to impact the stability of the site slopes; therefore, no impact is expected.
- b) Construction associated with trail improvements and other recreational features could result in erosion and sediment delivery to the baylands if erosion occurs or sediments leave the project work area during the construction period. As the total area to be disturbed by the project is one acre or more, a Storm Water Pollution Prevention Plan (SWPPP) would be prepared prior to construction. Implementation of standard construction BMPs's and measures in the SWWPP would reduce the potential impacts to less than significant.
- c) The park is not known to support expansive soils such that construction of a structure or other recreational features would create substantial risks to life or property.
- d) The proposed project does not include septic tanks or alternative wastewater disposal systems.

| <b>VII. GREENHOUSE GAS EMISSIONS</b><br>Would the project:                                                                                     | Potentially<br>Significant<br>Impact | Less Than<br>Significant with<br>Mitigation<br>Incorporated | Less Than<br>Significant<br>Impact | No<br>Impact             |
|------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|-------------------------------------------------------------|------------------------------------|--------------------------|
| a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?                    | <input type="checkbox"/>             | <input type="checkbox"/>                                    | ■                                  | <input type="checkbox"/> |
| b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases? | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input type="checkbox"/>           | ■                        |

### Discussion

- a) The proposed project would not generate any new sources of stationary greenhouse gas emissions. The proposed landfill gas/leachate improvements would allow the City to collect more landfill gas than existing. This upgrade will reduce greenhouse gas emissions. The use of the existing recreational facilities and construction of additional recreational facilities may result in a higher level of use as compared to the existing conditions. This use may result in an increase in traffic-generated greenhouse emissions; however, given the relatively small size of the project construction area and limited parking availability, these traffic-generated emissions are expected to be less than significant.
- b) The proposed project, with its recreational features, will not conflict with City plans, policies or regulations adopted for the purpose of reducing greenhouse gas emissions. BAAQMD is the agency responsible for ensuring that the National and California ambient air quality standards are attained and maintained in the San Francisco Bay Area Air Basin. A *Plan Bay Area* was adopted in 2013 to address air quality and greenhouse gases. In that plan, the baylands, including Bedwell Bayfront Park, was identified as a Priority Conservation Area which recognizes the significance of the open space and long-term protection. The Draft Park Plan includes trails and bicycle paths, which is consistent with Land Use Policy LU-6.9 that encourages well-designed pedestrian and bicycle facilities for safe and convenient multi-modal activity.

| <b>VIII. HAZARDS AND HAZARDOUS MATERIALS</b><br>Would the project:                                                                                                                                                                                               | Potentially<br>Significant<br>Impact | Less Than<br>Significant with<br>Mitigation<br>Incorporated | Less Than<br>Significant<br>Impact | No<br>Impact                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|-------------------------------------------------------------|------------------------------------|-------------------------------------|
| a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?                                                                                                                          | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input type="checkbox"/>           | <input checked="" type="checkbox"/> |
| b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?                                                                  | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input type="checkbox"/>           | <input checked="" type="checkbox"/> |
| c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?                                                                                                  | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input type="checkbox"/>           | <input checked="" type="checkbox"/> |
| d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?                                   | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input type="checkbox"/>           | <input checked="" type="checkbox"/> |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area? | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input type="checkbox"/>           | <input checked="" type="checkbox"/> |
| f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?                                                                                                      | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input type="checkbox"/>           | <input checked="" type="checkbox"/> |
| g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?                                                                                                                                        | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input type="checkbox"/>           | <input checked="" type="checkbox"/> |
| h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?                                             | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input type="checkbox"/>           | <input checked="" type="checkbox"/> |

### Discussion

The park is located on a closed landfill. The landfill was established in 1957 and closed in 1984; however, the closed site is still considered a Class III non-hazardous solid waste management facility. The facility manages for methane gas and leachate from the closed landfill as per permits with RWQCB, BAAQMD, BCDC and San Mateo County (Environmental Health and Solid Waste Program). The facility includes a

gas wellfield that includes 72 gas extraction wells and a network of gas collection pipes embedded just beneath the surface of the landfill cap. In addition, leachate from the landfill is collected from 12 extraction sumps that are located along the perimeter of the landfill. The project includes improvements to these landfill features. No hazardous materials are known from the property.

- a) The project would not include the transport, use, or disposal of hazardous materials.
- b) Project construction may require the use of certain hazardous materials such as fuels and oils for construction equipment. Any fueling would be minimal and would occur at designated construction staging area(s), consistent with the projects SWPPP.
- c) The project is not located within ¼- mile from any school and the project would not emit hazardous emissions or involve handling of hazardous or acutely hazardous materials, or waste.
- d) The project site is not included on the California Department of Toxic Substance Control and State Water Resources Control Board list of hazardous materials sites.
- e) The project site is not located within two miles of a public airport. The closest airport is the Palo Alto Airport, located approximately 4 miles southeast of the park. The San Carlos Airport is located approximately 4 miles northwest of the park. Larger airports include Moffett Field (9 miles to the southeast), Hayward Airport (11 miles to the northeast), San Jose international Airport (11 miles to the southeast), Oakland International Airport (11 miles to the north) and San Francisco International Airport (14 miles to the northwest).
- f) The project site is not located within the vicinity of a private airstrip.
- g) The Bedwell Bayfront Park is accessed from Marsh Road, an existing public road. The internal park road is a narrower asphalt road. These roads currently provide emergency access and evacuation routes for the existing park uses. Improvements to the internal roadway will improve emergency access for public use spaces/activities. Improvements may also be required for the landfill improvements.
- h) The park is not considered wildlands as the park supports managed (seasonally mowed) grassland and tree/shrub groves. The site is managed to prevent wildfire consistent with landfill closure requirements. The landfill improvements include an improved fire suppression system (additional fire hydrants).



| <b>IX. HYDROLOGY AND WATER QUALITY</b><br>Would the project:                                                                                                                                                                                                                                                                                                                                  | Potentially<br>Significant<br>Impact | Less Than<br>Significant with<br>Mitigation<br>Incorporated | Less Than<br>Significant<br>Impact  | No<br>Impact                        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|-------------------------------------------------------------|-------------------------------------|-------------------------------------|
| a) Violate any water quality standards or waste discharge requirements?                                                                                                                                                                                                                                                                                                                       | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?                                                                                                                                                            | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?                                                                                                                     | <input type="checkbox"/>             | <input checked="" type="checkbox"/>                         | <input type="checkbox"/>            | <input type="checkbox"/>            |
| e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?                                                                                                                                                                                                         | <input type="checkbox"/>             | <input checked="" type="checkbox"/>                         | <input type="checkbox"/>            | <input type="checkbox"/>            |
| f) Otherwise substantially degrade water quality?                                                                                                                                                                                                                                                                                                                                             | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?                                                                                                                                                                                                                          | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?                                                                                                                                                                                                                                                                                           | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?                                                                                                                                                                                                                            | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| j) Inundation by seiche, tsunami, or mudflow?                                                                                                                                                                                                                                                                                                                                                 | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

### Discussion

Bedwell Bayfront Park does not support any drainage channels, other than low areas amid the grassland, the tidal pond, and a portion of Flood Slough. Low areas amid the grassland collect surface runoff and precipitation during the winter months, yet are ephemeral, with surface water drying by late spring/summer. These low areas do not contribute flow to any watercourses. Rainfall and runoff from Marsh Road, paved parking lots and other impervious surfaces appears to drain onto natural surfaced areas and vegetated areas, although they may be some input into Flood Slough and the tidal pond.

Many low-lying areas along the bay shoreline are located within the 100-year floodplain that is subject to tidal flooding from San Francisco Bay; however, Bedwell Park is outside this zone. The site is subject to effects from sea level rise. The BCDC predicts a sea level rise of 16 inches by 2050 and 55 inches by 2100. The project proposes to elevate the Bay Trail and restrooms to address sea level rise.

- a) Water quality of Flood Slough and the tidal pond could be affected by potential soil erosion, sedimentation, and other degradation of water quality during construction activities associated with new recreational facilities and other site improvements. As the project area to be disturbed by construction activities is greater than one acre and will require a Storm Water Pollution Prevention Plan (SWPPP), implementation of the SWPP will reduce this potential impact to a less than significant. Runoff from the parking lots, other impervious surfaces or other improvements could contain sediment or pollutants from construction equipment; however, the Draft Park Plan includes stormwater treatment areas adjacent to the parking lots and paved trails. These stormwater treatment areas will manage the quantity and quality of storm water run-off before it enters San Francisco Bay.
- b) The proposed project would not substantially deplete groundwater supplies. No wells are known in close proximity to the site. There will be no impact to groundwater recharge and supplies.
- c) The site includes a portion of Flood Slough. Construction of a boat launch facility along this waterway would not substantially alter the course of this waterway. Measures outlined in Recommendation BIO-1 will reduce impacts to this waterway to less than significant level.
- d) Surface runoff from the project site currently percolates into the ground, collects as seasonally ponded water, or flows by sheet flow toward Flood Slough or other portions of San Francisco Bay. There are no storm drain systems within the park. Development of new recreational facilities, including additional paved parking lots would potentially result in an increase in the rate and volume of surface runoff. The City's drainage policy states that any project cannot increase the amount of surface runoff. Also, all drainage systems must drain to the slough and away from the landfill. Therefore, the proposed park plan includes stormwater treatment areas adjacent to the parking lots and paved trails. These stormwater treatment areas will manage the quantity and quality of storm water run-off before it enters San Francisco Bay. Drainage calculations for the final proposed drainage plan will be needed to confirm the retention or detention measures will be sufficient to avoid increased runoff which could potentially result in localized flooding.

**Recommendation HYDRO-1:** As part of design plans, conduct drainage calculations for the final proposed drainage plan to determine size and configuration of retention or detention measures to avoid increased runoff which could potentially result in localized flooding.

- e) Runoff from the project site ultimately reaches San Francisco Bay. Replacement of the existing natural ground surface with impervious recreational facilities would potentially increase the amount and rate of runoff from the project site. Drainage calculations for the final proposed drainage plan will be needed to determine if runoff water from the proposed project would exceed the capacity of existing or planned storm water drainage systems. Drainage calculations for the final proposed drainage plan will be needed to confirm the retention or detention measures would be sufficient such that the proposed project would not exceed the capacity of existing or planned storm water drainage systems. Implementation of **Recommendation HYDRO-1** would reduce the potential impact to less than significant.
- f) See discussion under (e) above.
- g) The project site is not located within a FEMA Special Flood Hazard Area, as mapped in the ConnectMenlo EIR. proposed project does not involve construction of housing thus, there would be no impact.
- h) The proposed project would not affect flooding, thus there would be no impact.
- i) The project would not involve construction of new structures or expose people to flooding as a result of a levee or dam failure.
- j) The project site is located outside of the tsunami inundation zone, as mapped in the ConnectMenlo EIR. The project site would not be subject to mudflows or seiches.

| <b>X. LAND USE AND PLANNING</b><br>Would the project:                                                                                                                                                                                                                                                       | Potentially<br>Significant<br>Impact | Less Than<br>Significant with<br>Mitigation<br>Incorporated | Less Than<br>Significant<br>Impact | No<br>Impact |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|-------------------------------------------------------------|------------------------------------|--------------|
| a) Physically divide an established community?                                                                                                                                                                                                                                                              | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input type="checkbox"/>           | ■            |
| b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input type="checkbox"/>           | ■            |
| c) Conflict with any applicable habitat conservation plan or natural community conservation plan?                                                                                                                                                                                                           | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input type="checkbox"/>           | ■            |

### Discussion

- a) The project would not include any features that would divide this community; trails and other infrastructure improvements may provide additional connections from one residential area to another. No impact to an established community would occur as a result of the project.
- b) The project site is located within the City of Menlo Park. The project is located east of the Bayfront Area, yet the park and surrounding areas were included in the City of Menlo Park General Plan Land Use Element (ConnectMenlo) (Draft, October 2015). The Bayfront Area is generally bounded by San Francisco Bay to the north; Redwood City to the west; East Palo Alto to the southeast; and the Menlo Park neighborhoods of Belle Haven, Flood Triangle, Suburban Park, and Lorelei Manor to the south. Currently, the Bayfront Area includes Residential/Residential Mixed-Use, Industrial/Business Park, Baylands and Parks and Recreation, Open Space/Conservation Area and Commercial General Plan land use designations. The following goals and policies in ConnectMenlo EIR (2016) are applicable to the Bedwell Bayfront Park project:
- Goal LU-6: Preserve open-space lands for recreation; protect natural resources and air and water quality; and protect and enhance scenic qualities.
    - Policy Lu 6.1. Parks and Recreation System. Develop and maintain a parks and recreation system that provides areas, play fields, and facilities conveniently located and properly designed to serve the recreation needs of all Menlo Park residents.
    - Policy LU 6.6: Public Bay Access. Protect and support public access to the Bay for the scenic enjoyment of open water, sloughs, and marshes, including restoration efforts, and completion of the Bay Trail.
    - Policy LU-6.7: Habitat Preservation. Collaborate with neighboring jurisdictions to preserve and enhance the Bay, shoreline, San Francisquito Creek, and other wildlife habitat and ecologically fragile areas to the maximum extent possible.
  - Goal OSC-1: Maintain, Protect and Enhance Open Space and Natural Resources.
    - Policy OSC-1.2: Habitat for Open Space and Conservation Purposes. Preserve, protect, maintain, and enhance water, water-related areas, and plant and wildlife habitat for open space and conservation purposes.



- Policy OSC-1.3: Sensitive Habitats. Require new development on or near sensitive habitats to provide baseline assessments prepared by qualified biologists, and specify requirements relative to the baseline assessments.
- Policy OSC-1.4: Habitat Enhancement. Require new development to minimize the disturbance of natural habitats and vegetation, and requires revegetation of disturbed natural habitat areas with native or non-invasive naturalized species.
- Policy OSC-1.5: Invasive, Non-Native Plant Species. Avoid the use of invasive, non-native species, as identified on the lists of invasive plants maintained at the California Invasive Plant Inventory and United States Department of Agriculture invasive and noxious weeds database, or other authoritative sources, in landscaping on public property.
- Policy OSC-1.6: South Bay Salt Pond Restoration Project and Flood Management Project. Continue to support and participate in Federal and State efforts related to the South Bay Salt Pond Restoration Project and flood management project. Provide public access to the Bay for the scenic enjoyment and recreation opportunities as well as conservation education opportunities related to the open Bay, the sloughs, and the marshes.

The development of the park master plan is consistent with the General Plan goals and does not conflict with any other land use plans for the region.

- c) There are presently no habitat conservation plans or natural community conservation plans for the Bedwell Bayfront Park. The project site is located outside the permit area for the Santa Clara Valley Habitat Plan.

| <b>XI. MINERAL RESOURCES</b><br>Would the project:                                                                                                                    | Potentially<br>Significant<br>Impact | Less Than<br>Significant with<br>Mitigation<br>Incorporated | Less Than<br>Significant<br>Impact | No<br>Impact                        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|-------------------------------------------------------------|------------------------------------|-------------------------------------|
| a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?                                | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input type="checkbox"/>           | <input checked="" type="checkbox"/> |
| b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input type="checkbox"/>           | <input checked="" type="checkbox"/> |

Discussion

- a) The project would not result in the loss of availability of a known mineral resource.
- b) The Project site is not delineated as a locally important mineral resource by the California Geological Survey (CGS) or on any County or City land use plan. The San Mateo County General Plan Mineral Resources Map does not specify that the Project site contains any significant mineral resources. However, according to this map, the project site is located south of an area delineated as Salines, which are salt evaporation ponds. Nonetheless, construction and operational activities associated with the project would have no impact on mineral resources.

| <b>XII. NOISE</b><br>Would the project result in:                                                                                                                                                                                                                   | Potentially<br>Significant<br>Impact | Less Than<br>Significant with<br>Mitigation<br>Incorporated | Less Than<br>Significant<br>Impact  | No<br>Impact                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|-------------------------------------------------------------|-------------------------------------|-------------------------------------|
| a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?                                                                                 | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| b) Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?                                                                                                                                                           | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?                                                                                                                                      | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?                                                                                                                          | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?                                                                                                      | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

### Discussion

- a) The project site is located north of State Route 84 (Bayfront Expressway) and near US Route 101. No single-family residences or schools are located nearby. Use of the property for recreation as identified in the Draft Park Plan or landfill improvements would not likely generate noise levels that exceed the City's noise ordinance. The Draft Park Plan does not propose amplified sound or motorized aircraft.
- b) Construction of the project is not expected to require the use of explosives, pile driving, or other equipment which would generate excessive ground borne vibration or ground borne noise levels; however, some short duration construction noise may occur during construction of new facilities.
- c) Ambient noise at the project site is limited to commercial airplane traffic, noise from the sewage flow equalization facility and existing passive recreational activities. With the exception of intermittent commercial airplane noise, the ambient noise is low. Development of additional recreational facilities could increase the types of use in the park, such as a glider area (non-motorized), kayak launch and access to Flood Slough (non-motorized boats), fitness area, picnic

areas and improvements to existing trails. None of these uses are expected to result in a substantial permanent increase in ambient noise levels.

- d) Construction activities would result in a temporary or periodic increase in ambient noise levels in the project vicinity. According to the City Municipal Code, construction activities are exempted from the noise ordinance between the hours of 8:00 a.m. and 6:00 p.m. Monday through Friday; The temporary periodic increase ambient noise levels associated with project construction would be less than significant.
- e) The project is not located within an area covered by an airport land use plan or within two miles of a public airport or public use airport.
- f) The project is not located within the vicinity of a private airstrip.



| <b>XIII. POPULATION AND HOUSING</b><br>Would the project:                                                                                                                                                 | Potentially<br>Significant<br>Impact | Less Than<br>Significant with<br>Mitigation<br>Incorporated | Less Than<br>Significant<br>Impact | No<br>Impact                        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|-------------------------------------------------------------|------------------------------------|-------------------------------------|
| a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input type="checkbox"/>           | <input checked="" type="checkbox"/> |
| b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?                                                                                     | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input type="checkbox"/>           | <input checked="" type="checkbox"/> |
| c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?                                                                                               | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input type="checkbox"/>           | <input checked="" type="checkbox"/> |

Discussion

- a) The project does not include new homes, businesses, extension of roads, or other infrastructure. No growth inducing impacts would occur as a result of the project.
- b) The project site does not support any residences.
- c) The project would not displace a substantial number of any population.

| <b>XIV. PUBLIC SERVICES</b>                                                                                                                                                                                                                                                                                                                                                                                                 | <b>Potentially<br/>Significant<br/>Impact</b> | <b>Less Than<br/>Significant with<br/>Mitigation<br/>Incorporated</b> | <b>Less Than<br/>Significant<br/>Impact</b> | <b>No<br/>Impact</b> |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|-----------------------------------------------------------------------|---------------------------------------------|----------------------|
| a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: |                                               |                                                                       |                                             |                      |
| Fire protection?                                                                                                                                                                                                                                                                                                                                                                                                            | <input type="checkbox"/>                      | <input type="checkbox"/>                                              | <input type="checkbox"/>                    | ■                    |
| Police protection?                                                                                                                                                                                                                                                                                                                                                                                                          | <input type="checkbox"/>                      | <input type="checkbox"/>                                              | <input type="checkbox"/>                    | ■                    |
| Schools?                                                                                                                                                                                                                                                                                                                                                                                                                    | <input type="checkbox"/>                      | <input type="checkbox"/>                                              | <input type="checkbox"/>                    | ■                    |
| Parks?                                                                                                                                                                                                                                                                                                                                                                                                                      | <input type="checkbox"/>                      | <input type="checkbox"/>                                              | <input type="checkbox"/>                    | ■                    |
| Other public facilities?                                                                                                                                                                                                                                                                                                                                                                                                    | <input type="checkbox"/>                      | <input type="checkbox"/>                                              | <input type="checkbox"/>                    | ■                    |

#### Discussion

- a) The project would create new uses within a public park and some existing uses would be modified to accommodate additional public access. The project also includes landfill improvements. The Menlo Park Fire Protection District (MPFPD) provides fire protection services to the park. The fire suppression system will be expanded within the park as part of the landfill improvements, as required by the City's Fire Marshall. Road improvements may also be required to accommodate fire truck access, as required by the Fire Marshall. The park is maintained by the Menlo Park Community Services Department. Police service is provided by the City of Menlo Park Police Department. The proposed recreational facilities and landfill improvements would need to comply with state and local fire codes and ensure adequate safety features. With these features implemented, the project is not expected to result in adverse service levels for fire and police protection or park maintenance. If MPFPD has interest in using the proposed boat launch, which would involve motorized watercraft, additional review would be required to evaluate noise, biological issues, hazardous materials and other potential impacts.

| <b>XV. RECREATION</b>                                                                                                                                                                                          | <b>Potentially Significant Impact</b> | <b>Less Than Significant with Mitigation Incorporated</b> | <b>Less Than Significant Impact</b> | <b>No Impact</b>                    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|-----------------------------------------------------------|-------------------------------------|-------------------------------------|
| a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? | <input type="checkbox"/>              | <input type="checkbox"/>                                  | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?                        | <input type="checkbox"/>              | <input type="checkbox"/>                                  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |

#### Discussion

- a) The project will establish new recreational uses within the park and provide improvements to existing amenities. The project also identified future trail connections to adjacent open space areas that may increase the public's access to such areas. The project identifies the need for an entry/parking fee that will provide funds for plan implementation, such that facilities do not substantially deteriorate.
- b) The proposed project may have an adverse impact on biological resources during construction, water quality, erosion, siltation, and storm water drainage. The City's implementation of the recommended measures for these resource topics would ensure potential impacts to these resources would be less than significant.

| <b>XVI. TRANSPORTATION/TRAFFIC</b><br>Would the project:                                                                                                                                                                                                                                                                                                                 | Potentially<br>Significant<br>Impact | Less Than<br>Significant with<br>Mitigation<br>Incorporated | Less Than<br>Significant<br>Impact  | No<br>Impact                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|-------------------------------------------------------------|-------------------------------------|-------------------------------------|
| a) Exceed the capacity of the existing circulation system, based on an applicable measure of effectiveness (as designated in a general plan policy, ordinance, etc.), taking into account all relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit? | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?                                                                                                           | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?                                                                                                                                                                                                          | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?                                                                                                                                                                                                                   | <input type="checkbox"/>             | <input checked="" type="checkbox"/>                         | <input type="checkbox"/>            | <input type="checkbox"/>            |
| e) Result in inadequate emergency access?                                                                                                                                                                                                                                                                                                                                | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| f) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?                                                                                                                                                                                                                                         | <input type="checkbox"/>             | <input checked="" type="checkbox"/>                         | <input type="checkbox"/>            | <input type="checkbox"/>            |

### Discussion

The project area is serviced by a mixed-use collector street, Marsh Road. Mixed use collector streets provide intra-city travel and access to the freeway system, and connect with other transportation facilities. In an emergency situation, these collector streets serve as emergency service and evacuation routes, or if the highway is blocked, collector streets provide alternative east-west and north-south connections. Mixed use collector streets include Haven Drive, Independence Drive, Constitution Drive, Chrysler Drive and Chico Street.

The City General Plan Land Use contains a policy (Policy LU-1.2 Transportation Network Expansion) that encourages integrations of land use planning efforts with development of an expanded transportation network focusing on mass transit rather than freeways, and support multimodal transit development that coordinates with Menlo Park land uses. If these actions were implemented, this could reduce transportation time to reach Bedwell Bayfront Park.

Currently, there are no bike lanes on the local streets in the immediate project vicinity, except for a portion of Chilco Street and the Bay Trail. Pedestrian circulation is also limited in the project area. The



General Plan identifies examples of improvements that could be done, such as a US 101 Pedestrian & Bicycle Overcrossing at Marsh Road and Marsh Road Corridor Pedestrian & Bicycle Improvements (Haven Avenue to Marsh Road/Bay Road): This project would provide pedestrian and bicycle circulation between the Bayfront Area east of US 101 with the area circulation system west of US 101 along Marsh Road. Another option is to provide continuous sidewalks with controlled pedestrian crossings and Class IV protected bicycle lanes on the Marsh Road overpass. These actions would improve pedestrian and bicycle access to Bedwell Bayfront Park. In addition, Phase 2 of the Salt Pond Restoration Project plans to install a new trail connection from the Bay Trail to Bedwell Bayfront Park, crossing through the Refuge. Phase 2 will also add other refuge trails and an overlook adjacent to Bedwell Bayfront Park.

- a,b) The entrance to the project area is located at the intersection of Marsh Road and State Route 84 (Bayfront Expressway). The park provides road-edge, dirt turnout, and paved parking areas. There is no on-street parking on Marsh Road or State Route 84. San Mateo County Transit District (SamTrans) Route 270 provides transit to the site. The closest bus stops are located on Haven Avenue and Marsh Road, near the park entrance. Route 270 provides a connection to CalTrain at the Redwood City Transit Center.

Park visitors would likely arrive by motor vehicles, foot, bicycle, or transit. Due to parking area limitations, the Draft Park Plan proposes eight additional parking spaces than the existing condition; therefore, the project would not result in a significant increase in vehicle trips.

Project construction activities would also occur on the site. During construction of park improvements and landfill improvements, there would be temporary and intermittent traffic impacts resulting from additional vehicle and truck trips to and from the project site. The total number of construction-related vehicle trips is not known at this time; however, the project could result in temporary and intermittent impact to transportation. The increase in construction vehicle and truck trips could potentially conflict with motor vehicle, pedestrian, and bicycle use on nearby local roads and at nearby intersections. Construction traffic control measures, such as a traffic control plan, would likely be needed when delivery/off-haul trucks and construction equipment are entering and leaving the construction site as determined by a traffic engineer and the City, such that the proposed project would not generate significant additional vehicular traffic or exceed a level of service standard or conflict with any applicable transportation/traffic plan, ordinance, policy, or congestion management program.

- c) The proposed project would not result in any change in air traffic patterns.
- d) The proposed project is not expected to include any roadway improvements which would substantially increase traffic hazards. During construction, truck traffic entering and exiting the site access road(s) could result in a temporary intermittent impact to the motor vehicle, pedestrian and bicycle use on local roads and arterials, but this would be less than significant with implementation of a construction-period traffic management plan (see item b).

Landfill improvements may also increase truck traffic, depending upon whether natural gas is captured from the landfill and a City truck fueling station is created. Additional study will be needed on potential transportation impacts from these improvements (see Recommendation TRANS-1, below).

**Recommendation TRANS-1:** The City should provide an analysis of traffic from landfill improvements if a truck fueling station is included in the improvements. The City should incorporate mitigations, if needed, to reduce impacts to a less-than-significant level.

The project may increase hazards due to incompatible uses, specifically use of radio-controlled hand-launched model gliders in close proximity to multi-use trails, pedestrian trails, an amphitheater, and small group picnic areas. There could be hazardous conditions, including collisions between gliders and other park users, if there is inadequate airspace between park uses. Measures are recommended to avoid/reduce hazards between the various park users (see Recommendation TRANS-2, below).

**Recommendation TRANS-2:** The City should develop guidelines for radio-controlled hand-launched model gliders. Guidelines developed by other municipalities, include:

- Limit use to “hand-launched” radio controlled model gliders. The gliders should not have a propulsion system (i.e., non-motorized), other than a small battery to help the pilot control the wings.
- Limit use within designated glider area (both gliders and pilots).
- Gliders must maintain at least 100-feet vertical and horizontal clearance from all other park features (i.e., trails, structures, visitors).
- Limit use to gliders with weight less than 3 pounds and 2 meters in width so that the glider can be retained within the boundary of the meadow area.
- Post rules that gliders are not to cross pathways or encroach on the refuge.
- Limit the number of gliders flown in the meadow to five (5) at a time.
- Require glider operators to have current membership in an AMA Chartered Model Airplane Club (Academy of Model Aeronautics), which provides liability insurance.
- Comply with all applicable Federal Aviation Administration (FAA) regulations.

- e) The project area is accessed for emergencies from existing local roads, one street (Marsh Road) and State Route 84 (Bayfront Expressway). These roads will provide emergency access/evacuation routes for recreational or public facilities.
- f) Implementation of the Draft Park Plan is not expected to require off-street parking. The park provides adequate parking for the recreational uses proposed and it not expected to significantly impact local roadways. The proposed project is not expected to result in any permanent changes to public transit, bicycle, or pedestrian facilities. Pedestrian access may be increased within the project area, particularly if trail connections are provided to and from nearby open space lands and City roadways, which is consistent with City policies for alternative transportation. If additional project uses are approved which may exceed the available parking, or if parking fees are levied which may encourage park users to park on local streets, traffic and/or parking control measures may be needed (see Recommendation TRANS-3, below).

**Recommendation TRANS-3:** The City should provide an analysis of parking and traffic from off-site parking if additional park uses are added to the site and/or park fees encourage park users to use local streets for parking. The City should incorporate mitigations, if needed, to reduce impacts to a less-than-significant level.

| <b>XIII. TRIBAL CULTURAL RESOURCES</b><br>Would the project:                                                                                                                                                                                                                                                                                                                                                             | Potentially<br>Significant<br>Impact | Less Than<br>Significant with<br>Mitigation<br>Incorporated | Less Than<br>Significant<br>Impact  | No<br>Impact                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|-------------------------------------------------------------|-------------------------------------|-------------------------------------|
| Would the project result in substantial change in the significance of a tribal cultural resources, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:                                   |                                      |                                                             |                                     |                                     |
| a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1 (k)?                                                                                                                                                                                                                             | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe. | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |

- a,b) Due to the preliminary nature of this environmental review, the Native American Heritage Commission (NAHC) was not contacted about tribal cultural resources within the project vicinity. There has not been any contact or consultation with any tribe from the NAHC's contact list. Based on ConnectMenlo (2016), there are no identified historical features within the project site. Much of the project site was previously disturbed during use as a municipal landfill. Although, no impacts to tribal resources are anticipated because the site has been previously disturbed and includes fill material associated with the former landfill, implementation of the Connect Menlo EIR Mitigation Measures for cultural resources will reduce this impact to less than significant.

| <b>XIV. UTILITIES AND SERVICE SYSTEMS</b><br>Would the project:                                                                                                                                                                   | Potentially<br>Significant<br>Impact | Less Than<br>Significant with<br>Mitigation<br>Incorporated | Less Than<br>Significant<br>Impact  | No<br>Impact                        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|-------------------------------------------------------------|-------------------------------------|-------------------------------------|
| a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?                                                                                                                               | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?                            | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?                                     | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?                                                                            | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?                                                                                                            | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| g) Comply with federal, state, and local statutes and regulations related to solid waste?                                                                                                                                         | <input type="checkbox"/>             | <input type="checkbox"/>                                    | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

### Discussion

- a) The proposed project proposes a new restroom, but no significant expansion in additional wastewater services or facilities (i.e., restrooms). No conflicts or impacts to wastewater treatment requirements will occur.
- b) The proposed project includes additional fire suppression (fire hydrants) as part of the landfill improvements. The additional fire hydrants do not require construction of new water or wastewater treatment facilities or the expansion of an existing facility.
- c) The proposed project includes new storm water retention/detention improvements. The City's implementation of a drainage plan and BMPs would ensure potential impacts to environmental resources are less than significant.



- d) The proposed project is not likely to require additional water services. Minor improvements to water service are proposed in the restroom area.
- e-g) The proposed project would not result in a significant increase in wastewater and solid waste. This increase would not impact the wastewater treatment plant or landfill capacity to provide service to the recreational facility. The project will comply with federal, state, and local statutes and regulations related to solid waste.

## REFERENCES

### References

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### Personal Communications

- Marie Mai and Jana Schwartz (Callander Associates) and Kathleen Lyons (Biotic Resources Group), Phone and email communication on proposed recreational uses, June 2017, September 2017, October 2017.

## APPENDICES

## APPENDIX A

Table 1. Special Status Plant Species Evaluated for Occurrence at Bedwell Bayfront Park

| Species                                                                    | Status            | Habitat                                           | Known Occurrence on Site/Vicinity<br>Potential Habitat within Project Area?                                             |
|----------------------------------------------------------------------------|-------------------|---------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| <i>Acanthomintha duttonii</i><br>San Mateo thornmint                       | FE, SE, List 1B.1 | Valley and foothill grassland, serpentine         | Near Menlo County Club Golf Course, likely extirpated (1915)<br>No suitable habitat present; not observed               |
| <i>Allium peninsulare</i> var. <i>franciscanum</i><br>Franciscan onion     | List 1B.2         | Grasslands, oak woodlands; often on serpentine    | Jasper Ridge, Page Mill Road, Farm Hill Blvd (Stulsaft Park)<br>No suitable habitat; not observed                       |
| <i>Astragalus tener</i> var. <i>tener</i><br>Alkali milk-vetch             | List 1B.1         | Alkaline vernal pools, moist grassland            | Recent record from Fremont in seasonal wetland.<br>Slight potential in mesic areas, yet not observed                    |
| <i>Atriplex depressa</i><br>Brittlescale                                   | List 1B.1         | Chenopod scrub, playas, moist grassland           | Recent record from Fremont in seasonal wetland.<br>Slight potential in mesic areas, yet not observed                    |
| <i>Atriplex joaquiniana</i><br>San Joaquin saltbush                        | List 1B.1         | Chenopod scrub, playas, moist grassland           | Slight potential in mesic areas, yet not observed                                                                       |
| <i>Atriplex minuscula</i><br>Lesser saltscale                              | List 1B.1         | Chenopod scrub, playas, moist grassland           | Recent record from Fremont in seasonal wetland.<br>Slight potential in mesic areas, yet not observed                    |
| <i>Centromadia parryi</i> ssp. <i>congdonii</i><br>Congdon's tarplant      | List 1B.2         | Grasslands. Often mesic, can be alkaline          | Ravenswood area of East Palo Alto, S out RR Tracks CNDDDB Occ. #54<br>Slight potential in mesic areas, yet not observed |
| <i>Chloropyron maritimum</i> ssp. <i>palustre</i><br>Pt. Reyes bird's beak | List 1B.1         | Coastal salt marsh, with pickleweed and saltgrass | Known from refuge in Fremont.<br>Slight potential along Flood Slough and tidal pond, yet not observed                   |
| <i>Cirsium fontinale</i> var. <i>fontinale</i><br>Fountain thistle         | FE, SE, List 1B.1 | Chaparral, grassland, serpentine                  | Stulsaft Park in Redwood City, E of Woodside Glen<br>No suitable habitat; not observed                                  |
| <i>Cirsium praeteriens</i><br>Lost thistle                                 | List 1A           | Unknown                                           | Considered extinct; historic occurrence from Palo Alto<br>Not observed                                                  |
| <i>Collinsia multicolor</i><br>San Francisco collinsia                     | List 1B.2         | Pine forests, coastal scrub, often on serpentine  | Stanford University (1913)<br>No suitable habitat; not observed                                                         |
| <i>Chorizanthe robusta</i> var. <i>robusta</i><br>Robust spineflower       | FE, List 1B.1     | Coastal dunes, scrub, sandy                       | Historic occurrence within 5 miles, likely extirpated<br>No suitable habitat present; not observed                      |



| Species                                                                               | Status               | Habitat                                             | Known Occurrence on Site/Vicinity<br>Potential Habitat within Project Area?                                                                                |
|---------------------------------------------------------------------------------------|----------------------|-----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Dirca occidentalis</i><br>Western leatherwood                                      | List 1B.2            | Upland forests,<br>chaparral                        | Jasper Ridge Area: Los Trancos Creek and<br>San Francisquito Creek<br>No suitable habitat; not observed                                                    |
| <i>Eryngium aristulatum</i> var.<br><i>hooveri</i><br>Hoover's button celery          | List 1B.2            | Vernal swales, mesic<br>grassland                   | Foothills near Stanford<br>Potentially suitable habitat in moist<br>portions of grassland; not observed                                                    |
| <i>Fritillaria liliacea</i><br>Fragrant fritillary                                    | List 1B.2            | Woodlands, prairie,<br>coastal scrub;<br>serpentine | Hills near Stanford (herbarium, 1934)<br>No suitable habitat; not observed                                                                                 |
| <i>Hesperolinum congestum</i><br>Marin western flax                                   | FT, ST, List<br>1B.1 | Chaparral, grassland,<br>serpentine                 | Stulsaft Park, Redwood City<br>No suitable habitat; not observed                                                                                           |
| <i>Lasthenia conjugens</i><br>Contra Costa goldfields                                 | FE, List 1B.1        | Saline/alkaline vernal<br>pools, moist<br>grassland | Historical record from Newark along bay<br>shore.<br>Slight potential in mesic areas, yet not<br>observed                                                  |
| <i>Malacothamnus arcuatus</i><br>Arcuate bush-mallow                                  | List 1B.2            | Chaparral                                           | Jasper Ridge, Arastradero Preserve, Los<br>Trancos Creek<br>No suitable habitat; not observed                                                              |
| <i>Malacothamnus davidsonii</i><br>Davidson's bush-mallow                             | List 1B.2            | Chaparral, scrub                                    | No suitable habitat; not observed                                                                                                                          |
| <i>Malacothamnus hallii</i><br>Halls' bush-mallow                                     | List 1B.2            | Chaparral, scrub                                    | Foothills near Stanford (1936)<br>No suitable habitat; not observed                                                                                        |
| <i>Monolopia gracilens</i><br>Woodland woollythreads                                  | List 1B.2            | Grasslands,<br>woodlands                            | Jasper Ridge, Road to La Honda (1929)<br>No suitable habitat; not observed                                                                                 |
| <i>Navarretia prostrata</i><br>Prostrate navarretia                                   | List 1B.2            | Seasonal wetlands<br>and vernal pools               | Historical record from Newark along bay<br>shore.<br>Slight potential in mesic areas, yet not<br>observed                                                  |
| <i>Plagiobothrys chorisianus</i> var.<br><i>chorisianus</i><br>Choris' popcorn flower | List 1B.2            | Chaparral, coastal<br>scrub and coastal<br>prairie  | El Corte Madera Creek area (1898)<br>No suitable habitat; not observed                                                                                     |
| <i>Plagiobothrys glaber</i><br>Hairless popcorn flower                                | List 1A              | Alkali meadows and<br>coastal salt marshes          | Presumed extinct<br>Slight potential in mesic areas, yet not<br>observed; not observed                                                                     |
| <i>Suaeda californica</i><br>California seablite                                      | FE, List 1B.1        | Salt marsh with<br>sandy substrate                  | Recorded in salt marsh areas along bay<br>Low potential along Flood Slough; steep<br>slope reduces habitat suitability. Slight<br>potential in tidal pond. |
| <i>Trifolium hydrophilum</i><br>Saline clover                                         | List 1B.1            | Alkali meadows, edge<br>of salt marshes             | Historic record from Belmont, Recent<br>record from Fremont<br>Slight potential in mesic areas, yet not<br>observed; not observed                          |

|                                                                 |           |                                            |                                                                                                              |
|-----------------------------------------------------------------|-----------|--------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| <i>Tropidocarpum capparideum</i><br>Caper-fruited tropidocarpum | List 1B.1 | Valley and foothill<br>grassland, alkaline | Foothills near Stanford<br>Potentially suitable habitat in moist<br>portions of grassland/pond; not observed |
|-----------------------------------------------------------------|-----------|--------------------------------------------|--------------------------------------------------------------------------------------------------------------|

**Table 2. Special Status Wildlife Species and Their Predicted Occurrence at the Bedwell Bayfront Park Project Area, June 2017**

| Species                                                                            | Status <sup>1</sup> | Habitat                                                                                                                                          | Potential Occurrence on Site                                                                                              |
|------------------------------------------------------------------------------------|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| <b>Invertebrates</b>                                                               |                     |                                                                                                                                                  |                                                                                                                           |
| Bay checkerspot butterfly<br><i>Euphydryas editha bayensis</i>                     | FE                  | Grasslands with larval host plant<br><i>Sedum spathulifolium</i>                                                                                 | None. No suitable habitat on site.                                                                                        |
| <b>Amphibians</b>                                                                  |                     |                                                                                                                                                  |                                                                                                                           |
| California tiger salamander<br><i>Ambystoma californiense</i>                      | FT, CSC             | Freshwater ponds for breeding, grasslands with burrows for upland habitat                                                                        | None, no suitable habitat on site.                                                                                        |
| California red-legged frog<br><i>Rana aurora draytonii</i>                         | FT, CSC             | Riparian, marshes, estuaries and ponds with still water at least into June for breeding.                                                         | None, no suitable freshwater habitat.                                                                                     |
| <b>Reptiles</b>                                                                    |                     |                                                                                                                                                  |                                                                                                                           |
| Western pond turtle<br><i>Actinemmys marmorata</i>                                 | CSC                 | Creeks and ponds with water of sufficient depth for escape cover, and structure for basking; grasslands or bare areas for nesting.               | None, no suitable freshwater habitat.                                                                                     |
| San Francisco garter snake<br><i>Thamnophis sirtalis tetrataenia</i>               | FE, SE              | Freshwater creeks and ponds with adjacent open grasslands for upland refugia                                                                     | None, no suitable habitat on site.                                                                                        |
| <b>Birds</b>                                                                       |                     |                                                                                                                                                  |                                                                                                                           |
| California Ridgway's rail<br>(=California clapper rail)<br><i>Rallus obsoletus</i> | SE, FE              | Nests in salt marshes with sloughs and dense pickleweed and cordgrass, as well as in fresh/brackish water marshes with dense bulrush or cattails | Not known to nest in tidal pond, but known from nearby Greco Island; may occasionally be present for foraging or resting. |
| California black rail<br><i>Laterallus jamaicensis coturniculus</i>                | ST                  | Nests in fresh and salt water marshes with dense vegetation such as cattails, pickleweed, cordgrass                                              | Not known to nest on site; may be occasionally present for foraging or resting.                                           |
| Western snowy plover<br><i>Charadrius alexandrinus nivosus</i>                     | FT                  | Nests in salt pond levees, alkali flats, sandy beaches                                                                                           | Nesting habitat absent on site or immediately adjacent to site.                                                           |
| California least tern<br><i>Sterna antillarum browni</i>                           | SE, FE              | Nests in coasts and bay margins with sandy beach, alkali flat, open bare ground                                                                  | Nesting habitat absent on site or immediately adjacent to site.                                                           |
| Saltmarsh common yellowthroat<br><i>Geothlypis trichas sinuosa</i>                 | CSC                 | Nests in dense vegetation (cattails, rushes) at water's edge of freshwater ponds, estuaries, creeks                                              | Nesting habitat absent on site.                                                                                           |
| Alameda song sparrow<br><i>Melospiza melodia pusillula</i>                         | CSC                 | Nests in dense bulrush and/or cattail vegetation adjacent to freshwater marshes                                                                  | Nesting habitat absent on site.                                                                                           |
| <b>Mammals</b>                                                                     |                     |                                                                                                                                                  |                                                                                                                           |

**Table 2. Special Status Wildlife Species and Their Predicted Occurrence at the Bedwell Bayfront Park Project Area, June 2017**

| Species                                                                 | Status <sup>1</sup> | Habitat                                                                         | Potential Occurrence on Site                                                                                                      |
|-------------------------------------------------------------------------|---------------------|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| Pallid bat<br><i>Antrozous pallidus</i>                                 | CSC                 | Roosts in rock outcroppings, caves, hollow trees, mines, buildings and bridges. | None, no suitable habitat.                                                                                                        |
| Salt-marsh wandering shrew<br><i>Sorex vagrans halicoetes</i>           | CSC                 | Medium to high salt marsh with abundant drift wood.                             | Habitat absent on site.                                                                                                           |
| Salt-marsh harvest mouse<br><i>Reithrodontomys raviventris</i>          | SE, FE              | Pickleweed salt marshes of San Francisco Bay                                    | Known to occur in dense areas of Flood Slough, but tidal pond too small to support a population and lacks suitable upland escape. |
| San Francisco dusky-footed woodrat<br><i>Neotoma fuscipes annectens</i> | CSC                 | Oak, pine and riparian woodlands                                                | Possible in tree groves.                                                                                                          |
| American badger<br><i>Taxidea taxus</i>                                 | CSC                 | Grasslands with friable soils                                                   | None, no suitable habitat.                                                                                                        |

<sup>1</sup> Key to status: FE=Federally listed as endangered species; FT=Federally listed as threatened species; SE=State listed as endangered species; ST=State listed as threatened species; CSC=California species of special concern

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Site Code: 1  
 Station ID:  
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| Start Time | 14-Mar-17 Tue | ENTER      | EXIT       |   |   |   |   |   |   | Total      |
|------------|---------------|------------|------------|---|---|---|---|---|---|------------|
| 12:00 AM   |               | 0          | 0          |   |   |   |   |   |   | 0          |
| 01:00      |               | 0          | 0          |   |   |   |   |   |   | 0          |
| 02:00      |               | 0          | 0          |   |   |   |   |   |   | 0          |
| 03:00      |               | 0          | 0          |   |   |   |   |   |   | 0          |
| 04:00      |               | 0          | 0          |   |   |   |   |   |   | 0          |
| 05:00      |               | 0          | 0          |   |   |   |   |   |   | 0          |
| 06:00      |               | 7          | 1          |   |   |   |   |   |   | 8          |
| 07:00      |               | 23         | 18         |   |   |   |   |   |   | 41         |
| 08:00      |               | 30         | 30         |   |   |   |   |   |   | 60         |
| 09:00      |               | 38         | 27         |   |   |   |   |   |   | 65         |
| 10:00      |               | 56         | 62         |   |   |   |   |   |   | 118        |
| 11:00      |               | <b>75</b>  | <b>69</b>  |   |   |   |   |   |   | <b>144</b> |
| 12:00 PM   |               | 80         | 89         |   |   |   |   |   |   | 169        |
| 01:00      |               | 58         | 61         |   |   |   |   |   |   | 119        |
| 02:00      |               | 62         | 56         |   |   |   |   |   |   | 118        |
| 03:00      |               | 53         | 56         |   |   |   |   |   |   | 109        |
| 04:00      |               | 50         | 50         |   |   |   |   |   |   | 100        |
| 05:00      |               | 75         | 51         |   |   |   |   |   |   | 126        |
| 06:00      |               | <b>160</b> | 79         |   |   |   |   |   |   | 239        |
| 07:00      |               | 68         | <b>186</b> |   |   |   |   |   |   | <b>254</b> |
| 08:00      |               | 0          | 0          |   |   |   |   |   |   | 0          |
| 09:00      |               | 0          | 0          |   |   |   |   |   |   | 0          |
| 10:00      |               | 0          | 0          |   |   |   |   |   |   | 0          |
| 11:00      |               | 0          | 0          |   |   |   |   |   |   | 0          |
| Total      |               | 835        | 835        |   |   |   |   |   |   | 1670       |
| Percent    |               | 50.0%      | 50.0%      |   |   |   |   |   |   |            |
| AM Peak    | -             | 11:00      | 11:00      | - | - | - | - | - | - | 11:00      |
| Vol.       | -             | 75         | 69         | - | - | - | - | - | - | 144        |
| PM Peak    | -             | 18:00      | 19:00      | - | - | - | - | - | - | 19:00      |
| Vol.       | -             | 160        | 186        | - | - | - | - | - | - | 254        |



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Site Code: 1  
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| Start Time | 15-Mar-17 |       |       |   |   |   |   |   |   |       |
|------------|-----------|-------|-------|---|---|---|---|---|---|-------|
|            | Wed       | ENTER | EXIT  |   |   |   |   |   |   | Total |
| 12:00 AM   |           | 0     | 0     |   |   |   |   |   |   | 0     |
| 01:00      |           | 0     | 0     |   |   |   |   |   |   | 0     |
| 02:00      |           | 0     | 0     |   |   |   |   |   |   | 0     |
| 03:00      |           | 0     | 0     |   |   |   |   |   |   | 0     |
| 04:00      |           | 0     | 0     |   |   |   |   |   |   | 0     |
| 05:00      |           | 0     | 0     |   |   |   |   |   |   | 0     |
| 06:00      |           | 22    | 1     |   |   |   |   |   |   | 23    |
| 07:00      |           | 60    | 39    |   |   |   |   |   |   | 99    |
| 08:00      |           | 63    | 50    |   |   |   |   |   |   | 113   |
| 09:00      |           | 71    | 85    |   |   |   |   |   |   | 156   |
| 10:00      |           | 72    | 76    |   |   |   |   |   |   | 148   |
| 11:00      |           | 53    | 77    |   |   |   |   |   |   | 130   |
| 12:00 PM   |           | 81    | 77    |   |   |   |   |   |   | 158   |
| 01:00      |           | 59    | 69    |   |   |   |   |   |   | 128   |
| 02:00      |           | 57    | 54    |   |   |   |   |   |   | 111   |
| 03:00      |           | 64    | 68    |   |   |   |   |   |   | 132   |
| 04:00      |           | 67    | 59    |   |   |   |   |   |   | 126   |
| 05:00      |           | 107   | 72    |   |   |   |   |   |   | 179   |
| 06:00      |           | 87    | 136   |   |   |   |   |   |   | 223   |
| 07:00      |           | 1     | 3     |   |   |   |   |   |   | 4     |
| 08:00      |           | 0     | 0     |   |   |   |   |   |   | 0     |
| 09:00      |           | 0     | 0     |   |   |   |   |   |   | 0     |
| 10:00      |           | 0     | 0     |   |   |   |   |   |   | 0     |
| 11:00      |           | 0     | 0     |   |   |   |   |   |   | 0     |
| Total      |           | 864   | 866   |   |   |   |   |   |   | 1730  |
| Percent    |           | 49.9% | 50.1% |   |   |   |   |   |   |       |
| AM Peak    | -         | 10:00 | 09:00 | - | - | - | - | - | - | 09:00 |
| Vol.       | -         | 72    | 85    | - | - | - | - | - | - | 156   |
| PM Peak    | -         | 17:00 | 18:00 | - | - | - | - | - | - | 18:00 |
| Vol.       | -         | 107   | 136   | - | - | - | - | - | - | 223   |

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Site Code: 1  
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| Start Time | 16-Mar-17 Thu | ENTER      | EXIT      |   |   |   |   |   |   | Total      |
|------------|---------------|------------|-----------|---|---|---|---|---|---|------------|
| 12:00 AM   |               | 0          | 0         |   |   |   |   |   |   | 0          |
| 01:00      |               | 0          | 0         |   |   |   |   |   |   | 0          |
| 02:00      |               | 0          | 0         |   |   |   |   |   |   | 0          |
| 03:00      |               | 0          | 0         |   |   |   |   |   |   | 0          |
| 04:00      |               | 0          | 0         |   |   |   |   |   |   | 0          |
| 05:00      |               | 0          | 0         |   |   |   |   |   |   | 0          |
| 06:00      |               | 20         | 0         |   |   |   |   |   |   | 20         |
| 07:00      |               | 65         | 50        |   |   |   |   |   |   | 115        |
| 08:00      |               | 74         | 74        |   |   |   |   |   |   | 148        |
| 09:00      |               | <b>89</b>  | <b>80</b> |   |   |   |   |   |   | <b>169</b> |
| 10:00      |               | 61         | 79        |   |   |   |   |   |   | 140        |
| 11:00      |               | 74         | 58        |   |   |   |   |   |   | 132        |
| 12:00 PM   |               | 86         | 90        |   |   |   |   |   |   | 176        |
| 01:00      |               | 61         | 73        |   |   |   |   |   |   | 134        |
| 02:00      |               | 53         | 78        |   |   |   |   |   |   | 131        |
| 03:00      |               | 56         | 54        |   |   |   |   |   |   | 110        |
| 04:00      |               | 51         | 52        |   |   |   |   |   |   | 103        |
| 05:00      |               | 75         | 58        |   |   |   |   |   |   | 133        |
| 06:00      |               | <b>117</b> | <b>97</b> |   |   |   |   |   |   | <b>214</b> |
| 07:00      |               | 28         | 64        |   |   |   |   |   |   | 92         |
| 08:00      |               | 0          | 0         |   |   |   |   |   |   | 0          |
| 09:00      |               | 0          | 0         |   |   |   |   |   |   | 0          |
| 10:00      |               | 0          | 0         |   |   |   |   |   |   | 0          |
| 11:00      |               | 0          | 0         |   |   |   |   |   |   | 0          |
| Total      |               | 910        | 907       |   |   |   |   |   |   | 1817       |
| Percent    |               | 50.1%      | 49.9%     |   |   |   |   |   |   |            |
| AM Peak    | -             | 09:00      | 09:00     | - | - | - | - | - | - | 09:00      |
| Vol.       | -             | 89         | 80        | - | - | - | - | - | - | 169        |
| PM Peak    | -             | 18:00      | 18:00     | - | - | - | - | - | - | 18:00      |
| Vol.       | -             | 117        | 97        | - | - | - | - | - | - | 214        |

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Site Code: 1  
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| Start Time | 17-Mar-17 Fri | ENTER      | EXIT       | Total      |
|------------|---------------|------------|------------|------------|
| 12:00 AM   |               | 0          | 0          | 0          |
| 01:00      |               | 0          | 0          | 0          |
| 02:00      |               | 0          | 0          | 0          |
| 03:00      |               | 0          | 0          | 0          |
| 04:00      |               | 0          | 0          | 0          |
| 05:00      |               | 0          | 0          | 0          |
| 06:00      |               | 15         | 0          | 15         |
| 07:00      |               | 41         | 33         | 74         |
| 08:00      |               | 72         | 53         | 125        |
| 09:00      |               | <b>98</b>  | 83         | <b>181</b> |
| 10:00      |               | 78         | <b>94</b>  | 172        |
| 11:00      |               | 57         | 64         | 121        |
| 12:00 PM   |               | 77         | 69         | 146        |
| 01:00      |               | 50         | 69         | 119        |
| 02:00      |               | 66         | 73         | 139        |
| 03:00      |               | 57         | 67         | 124        |
| 04:00      |               | 57         | 58         | 115        |
| 05:00      |               | 97         | 61         | 158        |
| 06:00      |               | <b>112</b> | <b>109</b> | <b>221</b> |
| 07:00      |               | 38         | 83         | 121        |
| 08:00      |               | 0          | 0          | 0          |
| 09:00      |               | 0          | 0          | 0          |
| 10:00      |               | 0          | 0          | 0          |
| 11:00      |               | 0          | 0          | 0          |
| Total      |               | 915        | 916        | 1831       |
| Percent    |               | 50.0%      | 50.0%      |            |
| AM Peak    | -             | 09:00      | 10:00      | 09:00      |
| Vol.       | -             | 98         | 94         | 181        |
| PM Peak    | -             | 18:00      | 18:00      | 18:00      |
| Vol.       | -             | 112        | 109        | 221        |

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Site Code: 1  
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| Start Time | 18-Mar-17 |       |       |   |   |   |   |   |   |   |       |
|------------|-----------|-------|-------|---|---|---|---|---|---|---|-------|
|            | Sat       | ENTER | EXIT  |   |   |   |   |   |   |   | Total |
| 12:00 AM   |           | 0     | 0     |   |   |   |   |   |   |   | 0     |
| 01:00      |           | 0     | 0     |   |   |   |   |   |   |   | 0     |
| 02:00      |           | 0     | 0     |   |   |   |   |   |   |   | 0     |
| 03:00      |           | 0     | 0     |   |   |   |   |   |   |   | 0     |
| 04:00      |           | 0     | 0     |   |   |   |   |   |   |   | 0     |
| 05:00      |           | 0     | 0     |   |   |   |   |   |   |   | 0     |
| 06:00      |           | 13    | 2     |   |   |   |   |   |   |   | 15    |
| 07:00      |           | 99    | 28    |   |   |   |   |   |   |   | 127   |
| 08:00      |           | 86    | 72    |   |   |   |   |   |   |   | 158   |
| 09:00      |           | 98    | 96    |   |   |   |   |   |   |   | 194   |
| 10:00      |           | 91    | 115   |   |   |   |   |   |   |   | 206   |
| 11:00      |           | 93    | 109   |   |   |   |   |   |   |   | 202   |
| 12:00 PM   |           | 70    | 89    |   |   |   |   |   |   |   | 159   |
| 01:00      |           | 58    | 52    |   |   |   |   |   |   |   | 110   |
| 02:00      |           | 62    | 72    |   |   |   |   |   |   |   | 134   |
| 03:00      |           | 51    | 45    |   |   |   |   |   |   |   | 96    |
| 04:00      |           | 80    | 69    |   |   |   |   |   |   |   | 149   |
| 05:00      |           | 90    | 80    |   |   |   |   |   |   |   | 170   |
| 06:00      |           | 68    | 79    |   |   |   |   |   |   |   | 147   |
| 07:00      |           | 13    | 33    |   |   |   |   |   |   |   | 46    |
| 08:00      |           | 0     | 0     |   |   |   |   |   |   |   | 0     |
| 09:00      |           | 0     | 0     |   |   |   |   |   |   |   | 0     |
| 10:00      |           | 0     | 0     |   |   |   |   |   |   |   | 0     |
| 11:00      |           | 0     | 0     |   |   |   |   |   |   |   | 0     |
| Total      |           | 972   | 941   |   |   |   |   |   |   |   | 1913  |
| Percent    |           | 50.8% | 49.2% |   |   |   |   |   |   |   |       |
| AM Peak    | -         | 07:00 | 10:00 | - | - | - | - | - | - | - | 10:00 |
| Vol.       | -         | 99    | 115   | - | - | - | - | - | - | - | 206   |
| PM Peak    | -         | 17:00 | 12:00 | - | - | - | - | - | - | - | 17:00 |
| Vol.       | -         | 90    | 89    | - | - | - | - | - | - | - | 170   |



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Site Code: 1  
 Station ID:  
 BAYFRONT PARK

| Start Time | 19-Mar-17 |       |       |   |   |   |   |   |   |       |
|------------|-----------|-------|-------|---|---|---|---|---|---|-------|
|            | Sun       | ENTER | EXIT  |   |   |   |   |   |   | Total |
| 12:00 AM   |           | 0     | 0     |   |   |   |   |   |   | 0     |
| 01:00      |           | 0     | 0     |   |   |   |   |   |   | 0     |
| 02:00      |           | 0     | 0     |   |   |   |   |   |   | 0     |
| 03:00      |           | 0     | 0     |   |   |   |   |   |   | 0     |
| 04:00      |           | 0     | 0     |   |   |   |   |   |   | 0     |
| 05:00      |           | 1     | 1     |   |   |   |   |   |   | 2     |
| 06:00      |           | 13    | 0     |   |   |   |   |   |   | 13    |
| 07:00      |           | 32    | 16    |   |   |   |   |   |   | 48    |
| 08:00      |           | 58    | 35    |   |   |   |   |   |   | 93    |
| 09:00      |           | 90    | 64    |   |   |   |   |   |   | 154   |
| 10:00      |           | 80    | 93    |   |   |   |   |   |   | 173   |
| 11:00      |           | 83    | 90    |   |   |   |   |   |   | 173   |
| 12:00 PM   |           | 82    | 70    |   |   |   |   |   |   | 152   |
| 01:00      |           | 81    | 90    |   |   |   |   |   |   | 171   |
| 02:00      |           | 70    | 78    |   |   |   |   |   |   | 148   |
| 03:00      |           | 78    | 70    |   |   |   |   |   |   | 148   |
| 04:00      |           | 88    | 82    |   |   |   |   |   |   | 170   |
| 05:00      |           | 73    | 76    |   |   |   |   |   |   | 149   |
| 06:00      |           | 62    | 84    |   |   |   |   |   |   | 146   |
| 07:00      |           | 14    | 50    |   |   |   |   |   |   | 64    |
| 08:00      |           | 2     | 3     |   |   |   |   |   |   | 5     |
| 09:00      |           | 0     | 0     |   |   |   |   |   |   | 0     |
| 10:00      |           | 0     | 0     |   |   |   |   |   |   | 0     |
| 11:00      |           | 0     | 0     |   |   |   |   |   |   | 0     |
| Total      |           | 907   | 902   |   |   |   |   |   |   | 1809  |
| Percent    |           | 50.1% | 49.9% |   |   |   |   |   |   |       |
| AM Peak    | -         | 09:00 | 10:00 | - | - | - | - | - | - | 10:00 |
| Vol.       | -         | 90    | 93    | - | - | - | - | - | - | 173   |
| PM Peak    | -         | 16:00 | 13:00 | - | - | - | - | - | - | 13:00 |
| Vol.       | -         | 88    | 90    | - | - | - | - | - | - | 171   |

All Traffic Data Services, Inc  
 9660 W 44th Ave  
 Wheat Ridge, CO 80033  
 www.alltrafficdata.net



Site Code: 1  
 Station ID:  
 BAYFRONT PARK

| Start Time | 20-Mar-17 Mon | ENTER     | EXIT       |   |   |   |   |   |   | Total      |
|------------|---------------|-----------|------------|---|---|---|---|---|---|------------|
| 12:00 AM   |               | 0         | 0          |   |   |   |   |   |   | 0          |
| 01:00      |               | 0         | 0          |   |   |   |   |   |   | 0          |
| 02:00      |               | 0         | 0          |   |   |   |   |   |   | 0          |
| 03:00      |               | 0         | 0          |   |   |   |   |   |   | 0          |
| 04:00      |               | 0         | 0          |   |   |   |   |   |   | 0          |
| 05:00      |               | 0         | 0          |   |   |   |   |   |   | 0          |
| 06:00      |               | 16        | 1          |   |   |   |   |   |   | 17         |
| 07:00      |               | 44        | 37         |   |   |   |   |   |   | 81         |
| 08:00      |               | 77        | 52         |   |   |   |   |   |   | 129        |
| 09:00      |               | <b>83</b> | <b>78</b>  |   |   |   |   |   |   | <b>161</b> |
| 10:00      |               | 61        | 76         |   |   |   |   |   |   | 137        |
| 11:00      |               | 58        | 62         |   |   |   |   |   |   | 120        |
| 12:00 PM   |               | <b>62</b> | <b>77</b>  |   |   |   |   |   |   | <b>139</b> |
| 01:00      |               | 47        | 59         |   |   |   |   |   |   | 106        |
| 02:00      |               | 36        | 46         |   |   |   |   |   |   | 82         |
| 03:00      |               | 12        | 26         |   |   |   |   |   |   | 38         |
| 04:00      |               | 26        | 19         |   |   |   |   |   |   | 45         |
| 05:00      |               | 41        | 23         |   |   |   |   |   |   | 64         |
| 06:00      |               | 43        | 45         |   |   |   |   |   |   | 88         |
| 07:00      |               | 17        | 28         |   |   |   |   |   |   | 45         |
| 08:00      |               | 0         | 0          |   |   |   |   |   |   | 0          |
| 09:00      |               | 0         | 0          |   |   |   |   |   |   | 0          |
| 10:00      |               | 0         | 0          |   |   |   |   |   |   | 0          |
| 11:00      |               | 0         | 0          |   |   |   |   |   |   | 0          |
| Total      |               | 623       | 629        |   |   |   |   |   |   | 1252       |
| Percent    |               | 49.8%     | 50.2%      |   |   |   |   |   |   |            |
| AM Peak    | -             | 09:00     | 09:00      | - | - | - | - | - | - | 09:00      |
| Vol.       | -             | 83        | 78         | - | - | - | - | - | - | 161        |
| PM Peak    | -             | 12:00     | 12:00      | - | - | - | - | - | - | 12:00      |
| Vol.       | -             | 62        | 77         | - | - | - | - | - | - | 139        |
| Total      |               | 6026      | 5996       |   |   |   |   |   |   | 12022      |
| Percent    |               | 50.1%     | 49.9%      |   |   |   |   |   |   |            |
| ADT        |               | ADT 1,717 | AADT 1,717 |   |   |   |   |   |   |            |

**Table - Bedwell Bayfront Park Parking Occupancy**

| Count Date:                                                                                                      | Tues., March, 14, 2017                         | Wed., March, 15, 2017                          | Thurs., March,                                 | Fri., March, 17, 2017                          | Sat., March, 18, 2017                          | Sun., March, 19, 2017                          | Mon., March, 20, 2017                          |
|------------------------------------------------------------------------------------------------------------------|------------------------------------------------|------------------------------------------------|------------------------------------------------|------------------------------------------------|------------------------------------------------|------------------------------------------------|------------------------------------------------|
| Time                                                                                                             | Est. Number of<br>Parked Vehicles <sup>1</sup> | Est. Number of<br>Parked Vehicles <sup>1</sup> | Est. Number of<br>Parked Vehicles <sup>1</sup> | Est. Number of<br>Parked Vehicles <sup>1</sup> | Est. Number of<br>Parked Vehicles <sup>1</sup> | Est. Number of<br>Parked Vehicles <sup>1</sup> | Est. Number of<br>Parked Vehicles <sup>1</sup> |
| 12:00 AM                                                                                                         | 0                                              | 0                                              | 0                                              | 0                                              | 0                                              | 0                                              | 0                                              |
| 1:00 AM                                                                                                          | 0                                              | 0                                              | 0                                              | 0                                              | 0                                              | 0                                              | 0                                              |
| 2:00 AM                                                                                                          | 0                                              | 0                                              | 0                                              | 0                                              | 0                                              | 0                                              | 0                                              |
| 3:00 AM                                                                                                          | 0                                              | 0                                              | 0                                              | 0                                              | 0                                              | 0                                              | 0                                              |
| 4:00 AM                                                                                                          | 0                                              | 0                                              | 0                                              | 0                                              | 0                                              | 0                                              | 0                                              |
| 5:00 AM                                                                                                          | 0                                              | 0                                              | 0                                              | 0                                              | 0                                              | 0                                              | 0                                              |
| 6:00 AM                                                                                                          | 6                                              | 21                                             | 20                                             | 15                                             | 11                                             | 13                                             | 15                                             |
| 7:00 AM                                                                                                          | 11                                             | 42                                             | 35                                             | 23                                             | 82                                             | 29                                             | 22                                             |
| 8:00 AM                                                                                                          | 11                                             | 55                                             | 35                                             | 42                                             | 96                                             | 52                                             | 47                                             |
| 9:00 AM                                                                                                          | 22                                             | 41                                             | 44                                             | 57                                             | 98                                             | 78                                             | 52                                             |
| 10:00 AM                                                                                                         | 16                                             | 37                                             | 26                                             | 41                                             | 74                                             | 65                                             | 37                                             |
| 11:00 AM                                                                                                         | 22                                             | 13                                             | 42                                             | 34                                             | 58                                             | 58                                             | 33                                             |
| 12:00 PM                                                                                                         | 13                                             | 17                                             | 38                                             | 42                                             | 39                                             | 70                                             | 18                                             |
| 1:00 PM                                                                                                          | 10                                             | 7                                              | 26                                             | 23                                             | 45                                             | 61                                             | 6                                              |
| 2:00 PM                                                                                                          | 16                                             | 10                                             | 1                                              | 16                                             | 35                                             | 53                                             | 0                                              |
| 3:00 PM                                                                                                          | 13                                             | 6                                              | 3                                              | 6                                              | 41                                             | 61                                             | 0                                              |
| 4:00 PM                                                                                                          | 13                                             | 14                                             | 2                                              | 5                                              | 52                                             | 67                                             | 0                                              |
| 5:00 PM                                                                                                          | 37                                             | 49                                             | 19                                             | 41                                             | 62                                             | 64                                             | 7                                              |
| 6:00 PM                                                                                                          | 118                                            | 0                                              | 39                                             | 44                                             | 51                                             | 42                                             | 5                                              |
| 7:00 PM                                                                                                          | 0                                              | 0                                              | 3                                              | 0                                              | 31                                             | 6                                              | 0                                              |
| 8:00 PM                                                                                                          | 0                                              | 0                                              | 3                                              | 0                                              | 31                                             | 5                                              | 0                                              |
| 9:00 PM                                                                                                          | 0                                              | 0                                              | 3                                              | 0                                              | 31                                             | 5                                              | 0                                              |
| 10:00 PM                                                                                                         | 0                                              | 0                                              | 3                                              | 0                                              | 31                                             | 5                                              | 0                                              |
| 11:00 PM                                                                                                         | 0                                              | 0                                              | 3                                              | 0                                              | 31                                             | 5                                              | 0                                              |
| <b>Data Summary</b>                                                                                              |                                                |                                                |                                                |                                                |                                                |                                                |                                                |
| Number of Occurrences with Parking Occupancy > 0.80 <sup>2</sup> :                                               |                                                |                                                |                                                |                                                |                                                |                                                |                                                |
| Number of Occurrences with Parking Occupancy > 0.85 <sup>2</sup> :                                               |                                                |                                                |                                                |                                                |                                                |                                                |                                                |
| Number of Occurrences with Parking Occupancy > 0.90 <sup>2</sup> :                                               |                                                |                                                |                                                |                                                |                                                |                                                |                                                |
| <b>Notes</b>                                                                                                     |                                                |                                                |                                                |                                                |                                                |                                                |                                                |
| <sup>1</sup> Estimated number of parked vehicles is derived from the tube counts collected at the park entrance. |                                                |                                                |                                                |                                                |                                                |                                                |                                                |

## EXECUTIVE SUMMARY

To: Derek Schweigart and Azalea Mitch  
City of Menlo Park

Cc: Brian Fletcher, Marie Mai, and Jana Schwartz  
Callander Associates

From: Ashleigh Kanat and Teifion Rice-Evans

Subject: Bedwell Bayfront Park Funding Strategy; EPS #161177

Date: February 8, 2018

*The Economics of Land Use*



In support of the Bedwell Bayfront Park (BBP) Master Plan process, Economic & Planning Systems, Inc. (EPS) is preparing this funding strategy to guide implementation of the proposed park improvements. Based on the Master Plan concept, associated improvements, and capital and operations and maintenance cost estimates prepared by Callander Associates, this strategy summarizes the estimated costs by phase and describes potential funding sources and financing mechanisms. The funding strategy is based on information learned through discussions with City staff and during the community meetings, subsequent targeted research, and prior EPS experience.

As part of the pending Citywide Parks and Recreation Facilities Master Plan process, the City may want to consider the role of BBP as well as how to fund BBP's required improvements and operations and maintenance in the context of the City's other park and open space resources.

## Findings and Recommendations

**1. The Bedwell Bayfront Park (BBP) will require new investment in the coming years as the established Maintenance Fund is nearing depletion and a number of capital improvements are required.**

The BBP Maintenance Fund is a sinking fund used for expenses related to the operations and maintenance of park facilities.<sup>1</sup> The Fund has a balance of \$335,000 and current annual operating and maintenance expenses are about \$110,000, suggesting full depletion in three years. The 2016 Development Agreement with Facebook

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<sup>1</sup> The City imposed a tipping fee on each ton of waste disposed in the landfill until the landfill was closed in 1982.



stipulates that Facebook will pay \$1 million to be deposited into the BBP Maintenance Fund. Nevertheless, the City needs to identify a long-term funding source to cover these maintenance and operations costs. In addition, as described further below, the BBP Master Plan process has identified a number of capital improvement investments and associated operating and maintenance costs that are required to provide both basic and enhanced park improvements. The City also must continue to address the required landfill improvements and management costs as well as a range of costs associated with addressing sea level rise.

**2. The Bedwell Bayfront Park Master Plan process has identified park improvements of \$13.9 million, the funding of which will require a broad array of funding sources.**

As shown in **Table 1**, capital cost estimates are provided both with and without costs related to complying with landfill regulatory requirements. With landfill-related improvements, total estimated costs are approximately \$13.9 million. Without landfill-related improvements, estimated costs are approximately \$8.8 million. Of the \$13.9 million estimate, less than 11 percent of the estimated costs is related to “basic park” improvements,<sup>2</sup> while approximately 35 percent of costs is to implement “enhanced park” features, and 18 percent is related to addressing sea level rise. The remainder of the capital costs is landfill-related, which is expected to be funded from the Bedwell Bayfront Park Landfill Fund. As park improvements are implemented (consistent with the proposed BBP phasing), annual operations and maintenance costs are estimated to range from \$330,000 per year after Phase 1 improvements are installed to \$480,000 per year in Phase 3.

**Table 1 Estimate of Capital Costs (Rounded, in 2017 Dollars)**

| Improvement Category                     | Phase 1<br>0 to 5 Years | Phase 2<br>5 to 10 Years | Phase 3<br>10 to 25 Years | Total               | Share of<br>Total |
|------------------------------------------|-------------------------|--------------------------|---------------------------|---------------------|-------------------|
| Basic Park Improvements                  | \$882,500               | \$361,400                | \$225,000                 | \$1,468,900         | 10.6%             |
| Enhanced Park Improvements               | \$1,322,300             | \$3,482,900              | \$0                       | \$4,805,200         | 34.7%             |
| Sea Level Rise                           | \$1,542,100             | \$612,800                | \$389,600                 | \$2,544,500         | 18.4%             |
| Landfill Related                         | \$3,223,600             | \$1,820,900              | \$0                       | \$5,044,500         | 36.4%             |
| <b>Total [1]</b>                         | <b>\$6,970,500</b>      | <b>\$6,278,000</b>       | <b>\$614,600</b>          | <b>\$13,863,100</b> | <b>100.0%</b>     |
| <i>Total, without Landfill Costs [2]</i> | <i>\$3,746,900</i>      | <i>\$4,457,100</i>       | <i>\$614,600</i>          | <i>\$8,818,600</i>  |                   |

Note: Cost details are available in Appendix A of the Bedwell Bayfront Park Funding Strategy.

[1] Total costs include project start-up, demolition, earthwork and grading, site construction, site furnishings, buildings and utilities, irrigation, soil preparation, planting, contingencies, and professional services. Project start-up, contingency, and professional services costs are included on a proportional basis within each of the improvement categories. Costs exclude permit fees, methane capture, and credit for partial fill by SAFER/Salt Pond Restoration projects.

[2] Capital improvements related to the landfill are expected to be funded through the Bedwell Bayfront Park Landfill Fund.

Sources: Callander Associates; Economic & Planning Systems, Inc.

<sup>2</sup> “Basic Park” improvements address deferred maintenance and safety items as well as ADA accessibility improvements.

**3. There are a range of potential funding sources for investments in BBP capital improvements and ongoing operations and maintenance.**

Recommended options for funding the Park's capital improvements include a range of funding sources and financing mechanisms, including proceeds from Measure T (when capital improvements can be shown to have a useful life of 30 years or more), park in-lieu fees, park and recreations development impact fees, existing and future development agreements, grant funding, and perhaps future General Obligation bonds as well.

Potential options for funding annual operations and maintenance include dedicated user fees (e.g., revenue from charging for parking), an increase of the Utility Users Tax, which would augment the General Fund (perhaps on a temporary basis, as an interim solution until a holistic approach to funding the Citywide park system is in place), and a citywide parcel tax. In addition, the City can consider maximizing volunteer efforts.

**4. As the BBP Master Plan process has identified a range of capital improvements needed at the Park, and as the BBP Maintenance Fund is nearing depletion, it is an appropriate time for the City to consider how to fund required improvements and operations and maintenance in the context of the City's other park and open space resources.**

The 160-acre Bedwell Bayfront Park is a regional asset that draws visitors from across the Bay Area, and it is one of the City's few open space resources east of Highway 101. There are significant new development projects occurring in this part of the City, and as new growth brings new residents and employees, Bedwell Bayfront Park will play an increasingly important role in the City's parks and open space system. Until now, Bedwell Bayfront Park has been maintained with funds from the BBP Maintenance Fund and has been considered somewhat apart from the rest of the City's park and open space resources. As part of the pending Citywide Parks and Recreation Facilities Master Plan process, the City may want to consider the role of BBP as well as how to fund required improvements and operations and maintenance in the context of the City's other park and open space resources.

**Sources of Funds and Cost Categories by Phase**

There are a range of funding sources and financing mechanisms that may be available to fund improvements and ongoing maintenance at Bedwell Bayfront Park. Whether a particular funding source is appropriate for a given improvement or cost category depends on a number of factors, such as whether the funding is needed for capital improvements or ongoing operations and maintenance, the type of improvement, the geographic area of benefit, how the combined burden of fees and/or assessments and taxes affect development feasibility, and the timing of funding sources versus the need for improvements. It is also important to consider and plan for the long-term fiscal implications of capital improvements.

**Table 2** presents a sample strategy to address capital and operations and maintenance costs. The City already makes use of some of these, while others are options for future consideration.

**Table 2 Sample Funding Strategy for Bedwell Bayfront Park**

| <b>Funding Sources and Uses</b>                 | <b>Phase 1<br/>0 to 5 Years</b> | <b>Phase 2<br/>5 to 10 Years</b> | <b>Phase 3<br/>10 to 25 Years</b> |
|-------------------------------------------------|---------------------------------|----------------------------------|-----------------------------------|
| <b>One-Time Capital Improvements</b>            |                                 |                                  |                                   |
| <b>Cost Estimate (2017 \$\$)</b>                | \$6,970,500                     | \$6,278,000                      | \$614,600                         |
| 1) Bedwell Bayfront Park Landfill Fund          | X                               | X                                | X                                 |
| 2) General Obligation Bond (Measure T)          | X                               | X                                |                                   |
| 3) Recreation In-Lieu Fees                      | X                               | X                                | X                                 |
| 4) Park Impact Fees                             |                                 | X                                | X                                 |
| 5) Development Agreement Commitments (Existing) | X                               |                                  |                                   |
| 6) Development Agreement Commitments (Future)   | X                               | X                                | X                                 |
| 7) Grants                                       | X                               | X                                | X                                 |
| <b>Annual Operations and Maintenance</b>        |                                 |                                  |                                   |
| <b>Annual Cost Estimate (2017 \$\$)</b>         | \$330,000                       | \$450,000                        | \$480,000                         |
| 1) Balance of Maintenance Fund                  | X                               |                                  |                                   |
| 2) Dedicated User Fees (e.g., Parking Fees)     | X                               | X                                | X                                 |
| 3) Development Agreement Commitments (Existing) | X                               |                                  |                                   |
| 4) Development Agreement Commitments (Future)   | X                               | X                                | X                                 |
| 5) Dedicated Parks Parcel Tax                   |                                 | X                                | X                                 |
| 6) General Fund, UUT Increase                   | X                               | X                                | X                                 |
| 7) General Fund                                 | X                               | X                                | X                                 |

Sources: Callander Associates; Economic &amp; Planning Systems, Inc.

# **Status and Summary Report Bedwell Bayfront Park Landfill GCCS Evaluation**

**Prepared for:**



701 Laurel Street  
Menlo Park, California 94025

August 2016

**Prepared by:**



180 Promenade Circle, Suite 320  
Sacramento, CA 95834  
Ph. 760-977-8106

Project: 149335



## ***Executive Summary***

---

CB&I Environmental & Infrastructure, Inc., performed an evaluation of the Gas Collection and Control System (GCCS) at the Bedwell Bayfront Park, formerly known as the Marsh Road Landfill, in the City of Menlo Park, CA. With the exception of a relatively new enclosed landfill gas flare and blower station, the GCCS at Bedwell Bayfront Park dates back to the 1980's and limited modifications or improvements have been done since. The goals of this evaluation were to locate and assess the vertical landfill gas recovery wells, update the site's components map, determine the liquid level or integrity within each recovery well, incorporate site conditions by the Third Party Operator (Fortistar), collect and review landfill gas wellfield readings, and determine what improvements could be made in order to improve gas recovery operations to protect human health and the environment and to support a potential beneficial use project in the future.

A well and wellfield features location program was conducted via hand-held Global Positioning System equipment alongside Fortistar, and was further enhanced via ground survey such that the overall site plan of the GCCS could be updated.

During site visits, the condition of each well at the ground surface was inspected and photographed. The type, size, and condition of the wellheads were also documented. Following multiple field visits, CB&I determined that a considerable amount of the gas recovery wells are severely watered in causing the blockage of the screened piping interval for landfill gas recovery under vacuum. The results of the sounding indicate that 35 wells contained at least five (5) or more feet of water. Of these 35 wells, fourteen (14) have water in over half of their total depth, while seven (7) have water in over one third of their total depth. The remaining wells have less than a third of their total depth filled with water. Two (2) of the wells were found to have water, but no methane production was observed.

Wellfield conditions were categorized into wells that should be decommissioned, wells that are severely watered in, and wells that are partially watered in. CB&I has determined that aggressive dewatering by using pneumatic down-hole pumps and replacing certain damaged wells are required to improve landfill gas recovery at the site. As an added benefit, aggressive dewatering from within the wellfield (within the waste mass), will improve the goals of the leachate management program and eventually reduce and possibly eliminate the need to pump liquids at the perimeter of the site.

CB&I prepared a phased approach to GCCS improvements in the body of this report and recommendations for improvements are shown in the Drawing attached. CB&I included the estimated costs of each phase of improvements to assist the City of Menlo Park in budgeting and implementing well field improvements.

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## 1.0 Introduction

---

CB&I Environmental and Infrastructure, Inc. (CB&I) is pleased to present the following summary of our observations and recommendations for the landfill gas (LFG) wellfield at the Bedwell Bayfront Park Landfill (Landfill) located in Menlo Park, California for the City of Menlo Park (City). In accordance with our Proposal dated May 12, 2014, CB&I conducted an overall review of the landfill gas collection and control system (GCCS) and focused the study on the following areas:

- Data gathering and review of the existing GCCS system;
- Inspection of the wellfield components (physical and operational condition and integrity); and
- Independent wellfield monitoring and liquid level measurements to determine the condition (LFG quality) of each well.

The following report summarizes our findings and recommendations for the Landfill. Based on the data reviewed, CB&I has illustrated site conditions to the best of our knowledge on Drawing 1 in Appendix A, which contains visual presentations of currently known conditions and modifications that are recommended for improving LFG recovery. CB&I has also provided the City with a preliminary construction cost estimate for the various recommended wellfield design improvements. In order to obtain a more accurate construction cost, detailed design drawings would be needed as well as a construction project walk-through.

## 2.0 *Landfill GCCS Evaluation*

---

CB&I evaluated the GCCS at the Landfill based on input from Fortistar, by collecting landfill gas well sounding data, by reviewing several months of wellfield data, and conducting our own visual site inspection. Our evaluation identified issues with several wells, many of which involve water in the casings or damage which is inhibiting LFG recovery. The following summarizes our observations and findings.

The color-coded wellfield maps in Appendix A illustrate the various wellfield conditions and where recommended improvements should be made to improve LFG recovery and the effectiveness of the GCCS. In addition, CB&I has provided photographs of each well inspected to show the condition of the wellhead and protective containment vault. Further details regarding these observations are discussed later in the Report.

### 2.1 *Background and General Observations*

The gas wellfield at the landfill was installed in two phases, with the first phase around 1984 and the second phase around 1987. The wellfield consists of 72 gas extraction wells primarily connected with polyvinyl chloride (PVC) piping with newer sections consisting of high-density polyethylene piping (HDPE). The LFG generated in the landfill is collected through wells connected to lateral piping and main header piping that operate under a vacuum. The piping directs the gas to the flare, where it is combusted in compliance with Bay Area Air Quality Management District (BAAQMD) Permit to Operate No. 25623, Plant No. 3499. A new flare (A-3) was installed in 2013. The system also includes condensate piping and pumps. The condensate collected is disposed into the domestic sewer system.

Fortistar provided CB&I a map depicting the location of extraction wells, sumps, LFG piping, compressed air and condensate force main piping (Fortistar, March 2014). Based on LFG extraction well details provided to CB&I, it was determined that most of the vertical casings consist of solid 4-inch diameter PVC, with the perforated pipe sections consists of 6-inch PVC. City personnel walked the wellfield with Fortistar to locate monitoring wells. Locations were later surveyed and placed onto an updated Site Plan (Appendix A).

From the wellfield reconnaissance, there appear to be a variety of wellhead configurations, but in general, the majority of the wellheads are 2-inch, 3-inch, and 4-inch in diameter. In some cases, the vertical riser consists of only an isolation valve. All of the valves are in concrete vaults of varying dimensions. It does not appear that the vaults or wellheads were serviced routinely and contain varying amounts of mud, debris, snails, etc. Many of the wells lack of sampling ports, which affects the ability to measure landfill gas temperature and system pressure for example. None of the observed wellheads have a flow measuring device installed.

Based on a review of the well monitoring and sounding data collected, it appears that the wellfield is considerably “watered-in” and several wells appear to be damaged (shallow depth) affecting landfill gas recovery operations. The followings sections further detail on various wellfield conditions noted. It should be noted, that most of the landfill gas piping is buried under final cover soils making it impossible to determine if the piping is properly graded to drain condensate or if low spots are present which may be filled with condensate reducing or effectively blocking the vacuum from reaching the wells.

## **2.2 Results of Independent Wellfield Monitoring**

Monitoring of LFG composition was conducted at all located gas extraction wells by CB&I using a handheld gas analyzer on May 28, 29, and 30, 2014. During this monitoring, the flare was operating at approximately 250 standard cubic feet per minute (scfm) of landfill gas at approximately 17 inches of water column vacuum. During our three days of monitoring, the landfill gas quality data recorded with the handheld gas analyzer for site averaged as follows:

- Methane: 50.7%
- Carbon dioxide: 37.9%
- Oxygen: 0.7%
- Balance: 10.7%

The gas quality readings were found to be consistent with Fortistar’s readings and indicate typical makeup of landfill gas. During monitoring, we found over 20 wells with positive pressure (i.e., not under vacuum). No field adjustments to individual wells were made by CB&I personnel at any time during the investigation. Some monitoring data was not available to be obtained by CB&I, as the lack of sample ports prohibited collection of landfill gas temperature during monitoring and many wells had no identification (ID) or had conflicting IDs.

## **2.3 Review of Historical Data and Trends**

In addition to data collected by CB&I’s technician, CB&I reviewed several months of wellfield monitoring data collected by Fortistar. CB&I’s data and Fortistar’s data were compiled into a spreadsheet that is attached to this Report, see Appendix B. CB&I reviewed data for the months of January, February, March, April, and May of 2014, and the months of October and November 2015. The following is our summary of findings:

- Vacuum adjustments do not appear to be regular. There are several months of data with positive pressure (no vacuum) and various months where vacuum was applied to the wells. In consistent maintenance on a wellfield makes it difficult to establish well performance trends. It is not known if the positive pressure is due to improper adjustments or watered-in vacuum laterals.



- Vacuum adjustments have a wide range for the same well; adjustments should be made in small increments over regular monitoring periods to help maintain a “healthy” LFG composition extraction rate on the wellfield.
- Accuracy or applicability of temperature data is unknown due to the lack of a temperature ports or temperature gauges on the wells.
- Many wells appear to be sensitive to over-pulled (a condition that occurs when the vacuum on a well is increased beyond the performance threshold, resulting in non-ideal gas composition, biological stress, and air intrusion), which could be attributed to age of waste, well condition, or poor wellhead configuration. The performance threshold is the ability to capture the volume of LFG that is being generated naturally by the waste mass over time. In older areas of the landfill where waste decomposition or LFG generation has tapered off, improperly tuned or oversized wells can have difficulty extracting the lower amount LFG being generated at the proper rate. More specifically, as less gas is being generated (methane), an uncontrolled vacuum will pull gas from wherever it can find available gas. In the cases where LFG supplies have diminished the uncontrolled well will often pull gas from the surface. This commonly referred to as air infiltration or air intrusion. Air intrusion will effectively lower the quality of LFG and in some cases can cause landfill fires within the waste mass.
- Adjustments to individual wells will not have global effects until the wellfield is properly balanced and tuned on a regular basis. Monthly, each well should be monitored and its vacuum adjusted in response to gas quality and composition. During routine monitoring, the valves on all wells should be adjusted correctly to ensure vacuum is applied where needed. Any vacuum deficiencies should be noted such that corrective actions can be taken.
- Flow is not currently monitored at the wellheads. There are no flow monitoring devices in place except instantaneous and total flow at the flare.

## 2.4 *Watered-in Extraction Wells*

CB&I conducted “sounding” (measuring the fluid levels within the well casings) of the LFG extractions wells in two phases. Sounding consisted of using a weighted tape measure to check the total depth of the well casing and the depth to water from the top of the well casing. The first phase was completed in 2014. Several wells located during the first phase could not be accessed in 2014 and were subsequently modified and sounded in March 2015. Following additional surveying to assist in locating several wells, the last round of sounding was completed in October 2015. The results of well soundings are shown in Table 1 below.

In general, water appears to have impacted many of the landfill gas extraction wells, which can more than likely be attributed to site being located on the South San Francisco Bay and the absence of a landfill liner system. The results of the sounding indicate that 35 wells contained at least five (5) or more feet of water as shown on Table 1 below and on Drawing 1 in Appendix A. Of these 35 wells, fourteen (14) have water in over half of their total depth, while seven (7) have water in over one third of their total depth. The remaining wells have

less than a third of their total depth filled with water. Two (2) of the wells, C4 and 9, were found to have water within the well casing, but no methane production was observed.

To improve the gas extraction efficiency of the wellfield, CB&I recommends that a number of wells should have dewatering pumps installed to lower the liquid levels and expose the perforated sections of the gas collection piping. For purposes of this assessment, it has been assumed that the wells consist of four (4)-inch- diameter casing which can accommodate a down-hole pump for dewatering. If the casing is a smaller diameter, smaller diameter pumps are available. To lower the liquid levels a pump, typically pneumatic, would be lowered and installed into the well casing within the water column. Using air pressure supplied by a dedicated compressor and a network of compressed air force main piping, water is pumped from the well casing and discharged into the local force main. To supply compressed air to new pumps, nearby compressed air force main will be tapped into where available. In some cases, new air force main piping will need to be installed to reach the nearest existing force main. Force main typically consists of two-inch diameter HDPE pipe, which can be buried within the top soil. Liquid force main piping of similar material will also be installed at all new pump locations and will be connected to the nearest existing liquid force main piping where available. Liquid removed from the pumping activities will be combined with current pumping operations and will enter the sanitary sewer connection. The City will need to apply for a modification of the existing discharge permit to allow for increased discharge once dewatering pumps are put on line.

Starting the in the 1990's, landfill owners began extracting leachate from wells installed within the waste mass. Because these wells are within the deeper sections of the waste mass they are more effective in reducing the level of leachate within the landfill. Typically landfill gas wells fitted with pumps extract leachate as well as condensate from the wells. The extraction of leachate from the landfill gas wells can also improve gas extraction efficiency because it lowers the leachate level. Therefore, dual purpose wells are one of the most efficient and commonly used practices to control leachate levels and improve LFG extraction from saturated landfills.

The existing leachate extraction system at the Bedwell Bayfront Park landfill was installed about 30 years ago to control leachate seepage from the waste mass. The existing leachate sumps extract leachate from the perimeter of the landfill. In the mid 1980's leachate control was typically accomplished by perimeter leachate sumps. One of the problems with the use of sumps around the perimeter of the landfill is that the sumps may also pull groundwater into them, which can limit their effectiveness.

Using new and existing liquid force main, pumped liquids will be routed to a sump at the former landfill gas power plant north of the flare station. From the sump, liquids will be

pumped to a holding tank, and finally pumped and discharged to the City sewer tie-in location on site.

Various styles of pumps are available, however, the more common pneumatic styles utilize an internal float that rises in the presence of liquid and then trigger the release of pressurized air, which displaces the liquid up and out of the well casing. As the liquid level is drawn down, additional perforations in the vertical LFG well piping are exposed and the ability of the well to extract LFG is improved.

Prior to purchasing and installing a pump kits for LFG wells, it is recommended that each well be evaluated by exposing the well casing and determining the proper sized pump is selected for dewatering. If the wells cannot accommodate a pump, a new well with an appropriately sized casing may be needed to improved LFG recovery.

For Wells C4 and 19, it is recommended that these wells be decommissioned, as they are not producing any methane and dewatering would not be expected to help. Decommissioning would entail the closing of the valve to the well and documenting that it is decommissioned. The wells can also be physically disconnected and decommissioned. This can be done at a later date, if desired.

Based on the depth of the water found in the wells, those with water levels exceeding half of the well depth were assigned a Priority 1 classification (see Table 1). These wells would be the most critical to dewater. Priority 2 classifications were given to those that have a third of their depth filled with water, while a Priority 3 classification was given to those wells found to have more than 5 feet of water.

**Table 1**  
**Wells with Greater than Five Feet of Water**

| DEVICE ID | TOTAL DEPTH (FT)* | FEET OF WATER IN WELL (FT)* | PUMPING PRIORITY** |
|-----------|-------------------|-----------------------------|--------------------|
| 6         | 50                | 21                          | 2                  |
| 10        | 49                | 22                          | 2                  |
| 13        | 47                | 15                          | 3                  |
| 15        | 36                | 7                           | 3                  |
| 18        | 51                | 23                          | 2                  |
| 19        | 32                | 14                          | DECOM              |
| 20        | 48                | 22                          | 2                  |
| 21        | 51                | 28                          | 1                  |
| 22        | 49                | 18                          | 2                  |
| 23        | 38                | 6                           | 3                  |
| 24        | 54                | 53                          | 1                  |
| 26        | 49                | 32                          | 1                  |
| 27        | 50                | 8                           | 3                  |
| 35        | 44                | 6                           | 3                  |

| DEVICE ID | TOTAL DEPTH<br>(FT)* | FEET OF WATER IN<br>WELL (FT)* | PUMPING<br>PRIORITY** |
|-----------|----------------------|--------------------------------|-----------------------|
| 36        | 49                   | 6                              | 3                     |
| 43        | 62                   | 60                             | 1                     |
| 46        | 35                   | 19                             | 1                     |
| A2        | 65                   | 22                             | 2                     |
| B1        | 37                   | 18                             | 1                     |
| B2        | 23                   | 7                              | 3                     |
| B3        | 33                   | 16                             | 1                     |
| B4        | 48                   | 28                             | 1                     |
| B5        | 35                   | 24                             | 1                     |
| B6        | 33                   | 18                             | 1                     |
| B7        | 44                   | 29                             | 1                     |
| B8        | 48                   | 28                             | 1                     |
| B9        | 52                   | 32                             | 1                     |
| B10       | 49                   | 21                             | 2                     |
| C1        | 45                   | 6                              | 3                     |
| C2        | 45                   | 37                             | 1                     |
| C3        | 79                   | 6                              | 3                     |
| C4        | 80                   | 9                              | DECOM                 |
| C6        | 45                   | 7                              | 3                     |
| C9        | 62                   | 7                              | 3                     |
| N27       | 50                   | 8                              | 3                     |

\*Data from Fortistar sounding March 2014 and CB&I sounding June 2014, March 2015, and November 2015. Well 8 could not be located by the sounding technician.

\*\*Priority 1 wells have over 50% of their depth watered in and should be the highest priority for pumping. Priority 2 wells have more than 30% of their depth with water. Priority 3 wells are remaining wells with more than 5 feet of water.

## 2.5 *Compromised Extractions Wells*

Based on our review of the as-built data and sounding data, we have determined that several extraction wells are damaged near ground surface or have very poor landfill gas quality under low vacuum conditions (less than 1 inch of water column). These wells are listed in Table 2. Certain wells found in poor condition that are at the exterior of the waste mass, where waste is shallow and near the border of the Bay do not need to be replaced unless odors or emissions are evident. Wells decommissioned toward the center of mass should be replaced where LFG generation is higher, particularly if they are near walking trails, or if any odors exist in their surrounding area.

Decommissioning a well can be done in several ways;

- Close the valve provided the valve is in proper working order;
- Remove the wellhead and cap the casing of both the well and the vacuum riser;
- Backfill the well casing with soil, and cut and cap the casing and vacuum lateral two to three feet below ground surface and backfill the excavation with bentonite and final cover.

In either approach, decommissioning the well should be documented in the site records.



**Table 2**  
**Physically Damaged or Impacted Extraction Wells**

| DEVICE ID | WELL COMPLICATION                      | REASON                                                                                                               | RECOMMENDED COURSE OF ACTION                                                                            |
|-----------|----------------------------------------|----------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| 04        | Damaged/not flowing                    | Poor gas quality. All air. Shallow.                                                                                  | Decommission                                                                                            |
| 07        | Easily over-pulled                     | Air intrusion with little vacuum                                                                                     | Decommission and Replace                                                                                |
| 09        | Not flowing                            | High methane content, warm temperature, no change with extra vacuum applied, well is dry but shallow. Next to trail. | Decommission and Replace. Potential good producer of LFG.                                               |
| 11        | Damaged/not flowing                    | Poor gas quality. All air. Shallow.                                                                                  | Decommission and Replace                                                                                |
| 12        | Shallow/not flowing                    | High methane content, no change with extra vacuum applied, well is dry but shallow. Next to trail.                   | Decommission and Replace. Potential good producer of LFG.                                               |
| 16        | Shallow/not flowing                    | High methane content, warm temperature, no change with extra vacuum applied, well is dry but shallow.                | Decommission but do not replace. Not near trail. See how pumping nearby wells helps gas recovery first. |
| 17        | Damaged/not flowing                    | Poor gas quality. All air. Shallow.                                                                                  | Decommission and Replace                                                                                |
| 19        | Damaged/not flowing                    | No gas production. All air. Shallow.                                                                                 | Decommission but do not replace yet. Not near trail. Test effects of dewatering nearby wells.           |
| 29        | Damaged. Shallow. Not flowing.         | High methane content under high vacuum.                                                                              | Decommission and replace. Potential good producer. Good location to have a new well.                    |
| 34        | Damaged/not flowing                    | Very shallow. All air. Next to trail.                                                                                | Decommission and Replace. Next to trail.                                                                |
| A37       | Damaged. Shallow. Not flowing.         | High methane content under high vacuum. Not flowing. Near trail.                                                     | Decommission and Replace. Potential good producer.                                                      |
| B37       | Badly damaged. Very shallow.           | No gas. All air.                                                                                                     | Decommission.                                                                                           |
| 40        | Shallow. Dry.                          | High methane content.                                                                                                | Decommission and Replace. Potential good producer.                                                      |
| 45        | Damaged/not flowing. All air. Shallow. | No wells in area. Near trail.                                                                                        | Decommission and Replace.                                                                               |

| DEVICE ID | WELL COMPLICATION                                  | REASON                               | RECOMMENDED COURSE OF ACTION                                                          |
|-----------|----------------------------------------------------|--------------------------------------|---------------------------------------------------------------------------------------|
| C4        | No gas production. Well seems deep. Minimal water. | All air.                             | Decommission. There does not appear to be any gas production. Well is not watered in. |
| C5        | Shallow. Has gas but overpulls.                    | Near trails. No other wells in area. | Decommission and Replace. Potential good producer.                                    |
| C8        | Shallow. Has gas but overpulls.                    | Near trails. No other wells in area. | Decommission and Replace. Potential good producer.                                    |

## 2.6 Header / Lateral Piping Issues

A total of approximately 1,700 feet of piping is claimed to be “watered-in” according to Fortistar. While this claim could not be assessed due to the buried nature of the piping, water present in the GGCS system will block or reduce the vacuum to wells. Not only does this inhibit landfill gas recovery but it also prevents us from evaluating the performance potential of the LFG extraction wells. Watered-in piping should be either abandoned and replaced or realigned for proper drainage.

Table 3 summarizes the sections of the piping network containing water which should be abandoned in place and replaced. A contractor would locate the existing vacuum lateral connection to the primary header, cut and cap it, and run new buried piping at appropriate slope for draining liquids away from the wells back to the header where liquids drain toward sumps.

**Table 3**  
**Watered-in Piping Requiring Replacement**

| LOCATION*                            | LENGTH OF PIPE | PIPE SIZE | ISSUES                                                                                                                                                                           |
|--------------------------------------|----------------|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Lateral between well 38 and well 40  | ~70'           | 6"        | Operator indicates sections of piping are full of water. This blocks vacuum to wells 40, 43, 41, 42, and 44.                                                                     |
| Lateral between well 40 and well 43. | ~100'          | 6"        |                                                                                                                                                                                  |
| Piping to wells A2, A3, and A4.      | ~400           | 8"        | Operator indicates sections of piping are full of water. No data has been collected on these wells to further assess their performance because they have not had vacuum to them. |
|                                      | ~120'          | 6"        |                                                                                                                                                                                  |
|                                      | ~210           | 4"        |                                                                                                                                                                                  |

| LOCATION*                                                         | LENGTH OF PIPE | PIPE SIZE | ISSUES                                                   |
|-------------------------------------------------------------------|----------------|-----------|----------------------------------------------------------|
| Piping serving wells C1, C2, C3, and C4.                          | ~60            | 8"        | Operator indicates sections of piping are full of water. |
| Various pipe sections servicing C5, C6, C7, C8, C9, C10, and C11. | ~150           | 8"        | Operator indicates sections of piping are full of water. |
|                                                                   | ~525'          | 6"        |                                                          |
|                                                                   | ~40'           | 4"        |                                                          |

\*Appendix A shows pipe runs listed above that are claimed to be watered in. Others may exist.

## 2.7 Condensate Management Improvements

The condensate from the wellfield is pumped by a compressed air actuated pump into a holding tank in the former power plant yard. The condensate in the holding tank is then pumped by another air actuated pump into the landfill leachate collection system's header located at leachate sump #3, where the condensate is combined with leachate which is gravity fed to the sewer line for disposal.

The existing Curtis compressor is rated for 102 scfm at 175 psi. There are currently 10 pumps in the wellfield according to the site plan. New pumps typically demand about 2 scfm per pump when operating. Thus, if the City were to add roughly 32 more permanent pumps to address water in the "Priority 1" and "Priority 2" wells (Table 1), an additional 65 to 70 SCFM would be needed to serve those pumps assuming there are no leaks in the field piping. A more conservative estimate would be 100 scfm additional demand at 100 psi. Currently there is no air dryer on the compressed air supply. New pumps require dry air for proper operation. An air dryer, either desiccant or refrigerated, would need to be added in addition to a larger compressor. This air demand assumes that all new pumps operate at the same time. Is it expected that over time the liquid levels in the wells should decline with liquid removal, and the pumps will require less air supply to maintain the liquid levels.

## 2.8 Extraction Wells and Equipment Improvements

CB&I reviewed the wellheads currently in use at the Landfill. Pictures of most wellheads are provided with this report in Appendix C. The wellheads in use primarily consist of:

- 2-inch wellhead with control valve, flex hose, union connection,
- 2-inch valve mated to PVC piping
- 3-inch valve mated to PVC piping,
- 4-inch valve mated to PVC piping, and

- Various configurations of sample ports.

It should be noted that no flow metering devices (e.g. orifice plate or pitot tubes) were found to be installed on the wellheads.

None of the current configurations are considered industry standard. The current configurations are lacking flow metering devices, system-side vacuum sampling ports, temperature monitoring ports or temperature gauges, ports or couplings for routine sounding. The wellheads in use are approaching 30 years-old, are deteriorating, do not provide accurate vacuum control, and may be attributing to air leaks. Although flow metering is not a regulatory requirement, updating the current wellheads industry standards will yield the following benefits:

- Indicate if a well is flowing or not without having to sound the wells or perform other tests;
- Help identify which wells should be decommissioned which will help eliminate unnecessary or troublesome monitoring points;
- Provide a means to monitor temperature;
- Provide precise vacuum adjustment;
- Can provide connections and ports to install down-hole pumps for dewatering;
- Provide ports for sounding without having to remove the wellhead; and
- Contain ports to monitor for problems in the vacuum distribution system (system side)

Photographs of landfill gas wells are provided in Appendix C.

**Table 4**  
**Recommended Modifications to Landfill Gas Extraction Wells and Equipment**

| DEVICE ID OR LOCATION | ISSUES                                                                                | ACTION ITEM                                                                                                                                                                   |
|-----------------------|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| All                   | Improper wellheads, poor vacuum control, insufficient ports, deteriorating, air leaks | Following dewatering or completion of replacement wells, replace wellheads with industry standard (some with and without pump configuration, i.e., dual extraction wellhead). |

## **2.9 Perimeter Leachate Pumping Modifications**

Currently the City pumps leachate from 12 perimeter sumps located around the perimeter of the landfill. These are electric pumps are designed to extract leachate from around the perimeter of the landfill. CB&I suspects that due to the landfill's proximity to the Bay, these pumps are likely



pumping primarily Bay water versus landfill leachate and they are not assisting with lowering liquids within beneath the landfill and not contributing to landfill gas recovery.

Therefore, were the City to proceed in installing dewatering pumps within existing and new vertical landfill gas extraction wells, these pumps would have an improved effect at lowering the liquid levels in the wellfield and improving landfill gas recovery. Ultimately, by dewatering from within the landfill itself, the perimeter sump pumps could possibly be decommissioned at some point in the future. Other historical landfills on the Bay, such as the American Canyon Landfill in American Canyon, CA, have had good results in pumping landfill liquids from the center of the landfill versus perimeter pumping and were able to cease the use perimeter pumps.

## **2.10 GCCS Operational Status and Summary Report Conclusions**

Based on CB&I's review of the data available, the wellfield has a number of issues that should be addressed to improve landfill gas recovery operations. Several wells contain water that is blocking perforated sections and inhibiting landfill gas extraction. Several wells are damaged (crushed) as evident by sounding data and need to be decommissioned. Wellheads are in poor condition and lack industry standards for collecting performance data or making precise vacuum adjustments.

CB&I provides the following recommendations for landfill wellfield operations and maintenance, these are summarized in a Phased Approach in Section 2.11.

- Install industry standard wellheads. Wellheads should have a properly sized flow-metering device specific to the expected well yield, temperature and pressure monitoring means, and system-side monitoring port;
- If wellheads are not replaced, add more sampling ports to assess total vacuum available at the wells (used to check for water in piping) and to monitor gas temperature
- Replace vaults as necessary to accommodate industry standard wellheads;
- Dewater gas wells according to the priority rating in Table 1 above;
- Re-monitor dewatered wells and further assess for performance;
- Move toward central dewatering of the site versus dewatering at the perimeter of the site.
- Address condensate blockages and replace or regrade watered-in piping using a small construction crew;
- Decommission damaged wells or wells with poor landfill gas quality (Table 2);
- Develop landfill gas quality guidelines and tune each well individually to meet established guidelines.
- Install additional sampling ports throughout the collection system header lines in order to chase down, isolate, and eliminate oxygen leaks.
- Collect system-side vacuum readings at all wells (once new wellheads are installed with system-side ports). Use to assess vacuum losses and need for upsizing header piping or gas mover equipment.

- Sound wells annually to check for the presence of water, pinching, damage, or obstructions in the well casings.
- Locate and repair air leaks and locate possible blockages in the air supply lines.
- Tune the wellfield twice per month using stable vacuum to help assess well performance. All wells should be under vacuum at all times for emission control and to assess well performance.
- Reevaluate wells after 3 months of tuning toward quality and flow goals.
- Replace or decommission select wells following reassessment.
- Add more wells where there are gaps in coverage or where any odors are present following tuning efforts.

As shown in Appendix A, CB&I provided the City with initial recommended locations for well decommissioning and replacement/new well installations for consideration. Once the new wells are operating and assessed, CB&I will be able determine whether or not more of the existing wells should be replaced with new wells and what the potential for additional LFG is to support as an end use.

## **2.11 Wellfield Improvements Conceptual Design and Preliminary Construction Cost Estimate**

It should be noted that the ultimate costs for improving the site are somewhat unknown due to the fact that the site needs to be improved in phases. For example dewatering the wells may be impossible if the well is directly connected to the surrounding waters, thus replacing them may not be warranted. Secondly, if a well does not improve performance following dewatering, it may need to be decommissioned and replaced. However, CB&I is providing a very preliminary cost table below which identifies work items and potential costs of implementation.

CB&I recommends a phased approach to wellfield improvements. A phased approach with ballpark cost estimates are shown below in Table 6 in order of importance relative to completing assessment and improving landfill gas recovery.

**Table 5**  
**Phased Approach to Improvements**

| PHASE   | APPROACH                                                                                                                                                                                                                                                                                                                                                                                                       | Ball Park Cost Estimate<br>Parts and Labor*                                                                                                                                                                                                                                            |
|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Phase 1 | Decommission 7 wells that aren't recovering landfill gas or are damaged. This can be done simply by closing or removing the valve, and permanently capping the vertical casing if accessible.<br><br>APPLIES TO WELLS: 1, 3, 4, 16, 19, B37, C4                                                                                                                                                                | This can be completed by the 3 <sup>rd</sup> Party O&M Contractor (Fortistar). They can simply close the well valve and document that it has been decommissioned. Physical decommissioning can be done at a later date and we can provide pricing if interested. No more than \$1,500. |
| Phase 2 | Repair or replace watered-in piping to further assess wells that may not have continuous or proper vacuum available.                                                                                                                                                                                                                                                                                           | \$70,000-\$90,000                                                                                                                                                                                                                                                                      |
| Phase 3 | Install 21 pumps in wells with greater than 10 feet of water. Install/extend air and condensate force main where needed. Upsize compressor if necessary. Modify wellheads to accept pump and hoses. Sound wellfield after 6 months of pumping.<br><br>APPLIES TO WELLS:<br><br><b>Priority 1</b> -21, 24, 26, 43, 46, B1, B3, B4, B5, B6, B7, B8, B9, C2<br><br><b>Priority 2</b> - 6, 10, 18, 20, 22, A2, B10 | \$300,000 - \$350,000                                                                                                                                                                                                                                                                  |
| Phase 4 | Replace wells shown in Table 2 (12 wells). Conduct wellfield sounding.<br><br>APPLIES TO WELLS: 7, 9, 11, 12, 17, 29, 34, A37, 40, 45, C5, C8                                                                                                                                                                                                                                                                  | \$200,000 - \$250,000                                                                                                                                                                                                                                                                  |
| Phase 5 | Dewater wells with five to ten feet of water in casings (12 wells). Install air and condensate force main where needed.<br><br>APPLIES TO WELLS: 13, 15, 23, 27, 35, 36, B2, C1, C3, C6, C9, N27                                                                                                                                                                                                               | \$125,000 - \$175,000                                                                                                                                                                                                                                                                  |
| Phase 6 | Replace all remaining wellheads and vaults with current industry standard (20 wells).                                                                                                                                                                                                                                                                                                                          | \$250,000 to \$300,000                                                                                                                                                                                                                                                                 |

As each phase is completed, assessment of the wellfield performance and identifying potential for increase landfill gas recovery may be further refined. A detailed ballpark cost estimate is provided in Appendix E. Detailed design drawings would be needed as well as a construction project walk-through in order to obtain more accurate pricing.

**Table 6**  
**LFG Extraction Well Summary of Findings and Recommendations**

| DEVICE ID | FINDINGS                         |                                   |                    |                    |              | RECOMMENDATIONS                   |         |              |         |
|-----------|----------------------------------|-----------------------------------|--------------------|--------------------|--------------|-----------------------------------|---------|--------------|---------|
|           | WATER LEVEL GREATER THAN 10 FEET | WATER LEVEL BETWEEN 5 AND 10 FEET | LOW LFG PRODUCTION | CRUSHED OR PINCHED | SHALLOW WELL | CONTINUE MONITORING AND REPORTING | DEWATER | DECOMMISSION | REPLACE |
| 01        |                                  |                                   | X                  | X                  | X            |                                   |         | X            |         |
| 02        |                                  |                                   |                    |                    |              | X                                 |         |              |         |
| 03        |                                  |                                   | X                  | X                  | X            |                                   |         | X            |         |
| 04        |                                  |                                   | X                  | X                  | X            |                                   |         | X            |         |
| 05        |                                  |                                   | X                  |                    |              | X                                 |         |              |         |
| 06        | X                                |                                   |                    |                    |              | X                                 | X       |              |         |
| 07        |                                  |                                   |                    |                    |              |                                   |         | X            | X       |
| 08        |                                  |                                   |                    |                    |              | X                                 |         |              |         |
| 09        |                                  |                                   | X                  | X                  |              |                                   |         | X            | X       |
| 10        | X                                |                                   |                    |                    |              | X                                 | X       |              |         |
| 11        |                                  |                                   | X                  | X                  |              |                                   |         | X            | X       |
| 12        |                                  |                                   |                    | X                  |              |                                   |         | X            | X       |
| 13        | X                                |                                   |                    |                    |              | X                                 | X       |              |         |
| 15        |                                  | X                                 |                    |                    |              | X                                 | X       |              |         |
| 16        |                                  |                                   | X                  | X                  |              |                                   |         | X            |         |
| 17        |                                  |                                   | X                  |                    |              |                                   |         | X            | X       |
| 18        | X                                |                                   |                    |                    |              | X                                 | X       |              |         |
| 19        | X                                |                                   |                    |                    |              |                                   |         | X            |         |
| 20        | X                                |                                   |                    |                    |              | X                                 | X       |              |         |
| 21        | X                                |                                   |                    |                    |              | X                                 | X       |              |         |
| 22        | X                                |                                   |                    |                    |              | X                                 | X       |              |         |
| 23        |                                  | X                                 |                    |                    |              | X                                 | X       |              |         |
| 24        | X                                |                                   |                    |                    |              | X                                 | X       |              |         |
| 25        |                                  |                                   | X                  |                    |              | X                                 |         |              |         |
| 26        | X                                |                                   |                    |                    |              | X                                 | X       |              |         |
| 27        |                                  | X                                 |                    |                    | X            | X                                 | X       |              |         |
| 28        |                                  |                                   |                    |                    | X            | X                                 |         |              |         |
| 29        |                                  |                                   |                    |                    | X            |                                   |         | X            | X       |
| 30        |                                  |                                   |                    |                    | X            | X                                 |         |              |         |
| 31        |                                  |                                   | X                  |                    |              | X                                 |         |              |         |
| 32        |                                  |                                   | X                  |                    |              | X                                 |         |              |         |
| 33        |                                  |                                   | X                  |                    |              | X                                 |         |              |         |
| 34        |                                  |                                   | X                  | X                  |              |                                   |         | X            | X       |
| 35        |                                  | X                                 |                    |                    |              | X                                 | X       |              |         |
| 36        |                                  | X                                 |                    |                    |              | X                                 | X       |              |         |
| A37       |                                  |                                   |                    |                    | X            |                                   |         | X            | X       |
| B37       |                                  |                                   | X                  | X                  | X            |                                   |         | X            |         |

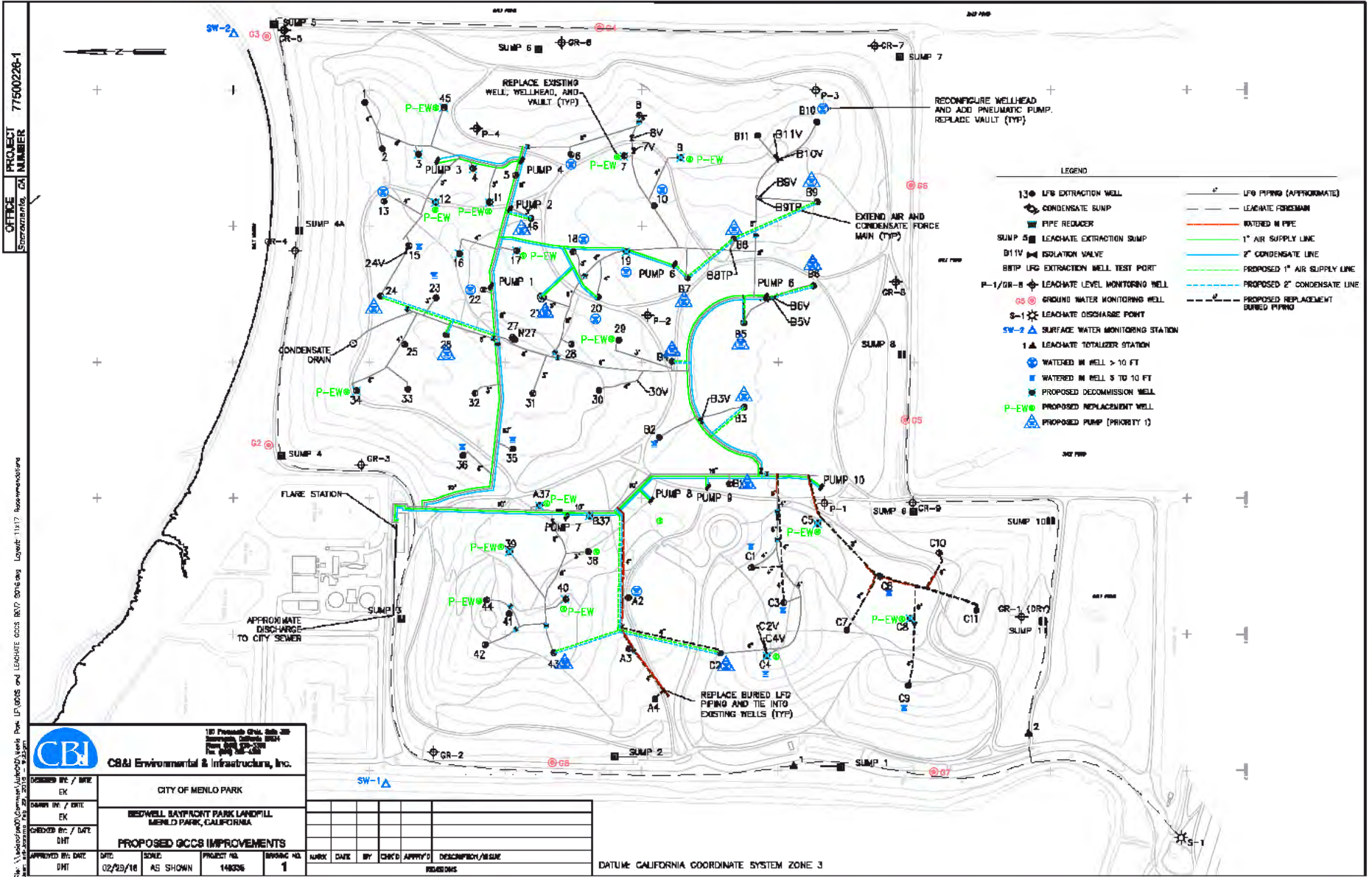
| DEVICE ID | FINDINGS                               |                                         |                       |                       |              | RECOMMENDATIONS                         |         |              |         |
|-----------|----------------------------------------|-----------------------------------------|-----------------------|-----------------------|--------------|-----------------------------------------|---------|--------------|---------|
|           | WATER LEVEL<br>GREATER THAN<br>10 FEET | WATER LEVEL<br>BETWEEN 5 AND<br>10 FEET | LOW LFG<br>PRODUCTION | CRUSHED OR<br>PINCHED | SHALLOW WELL | CONTINUE<br>MONITORING<br>AND REPORTING | DEWATER | DECOMMISSION | REPLACE |
| 38        |                                        |                                         | X                     |                       | X            | X                                       |         |              |         |
| 39        |                                        |                                         | X                     |                       |              | X                                       |         |              |         |
| 40        |                                        |                                         |                       |                       | X            |                                         |         | X            | X       |
| 41        |                                        |                                         |                       |                       |              | X                                       |         |              |         |
| 42        |                                        |                                         |                       |                       |              | X                                       |         |              |         |
| 43        | X                                      |                                         |                       |                       |              | X                                       | X       |              |         |
| 44        |                                        |                                         |                       |                       |              | X                                       |         |              |         |
| 45        |                                        |                                         | X                     | X                     | X            |                                         |         | X            | X       |
| 46        | X                                      |                                         |                       |                       |              | X                                       | X       |              |         |
| A1        |                                        |                                         |                       |                       |              |                                         |         |              |         |
| A2        | X                                      |                                         |                       |                       |              | X                                       | X       |              |         |
| A3        |                                        |                                         |                       |                       |              | X                                       |         |              |         |
| A4        |                                        |                                         |                       |                       |              | X                                       |         |              |         |
| B1        | X                                      |                                         |                       |                       |              | X                                       | X       |              |         |
| B2        |                                        | X                                       |                       |                       |              | X                                       | X       |              |         |
| B3        | X                                      |                                         |                       |                       |              | X                                       | X       |              |         |
| B4        | X                                      |                                         |                       |                       |              | X                                       | X       |              |         |
| B5        | X                                      |                                         |                       |                       |              | X                                       | X       |              |         |
| B6        | X                                      |                                         |                       |                       |              | X                                       | X       |              |         |
| B7        | X                                      |                                         |                       |                       |              | X                                       | X       |              |         |
| B8        | X                                      |                                         |                       |                       |              | X                                       | X       |              |         |
| B9        | X                                      |                                         |                       |                       |              | X                                       | X       |              |         |
| B10       | X                                      |                                         |                       |                       |              | X                                       | X       |              |         |
| B11       |                                        |                                         |                       |                       | X            | X                                       |         |              |         |
| C1        |                                        | X                                       |                       |                       |              | X                                       | X       |              |         |
| C2        | X                                      |                                         |                       |                       |              | X                                       | X       |              |         |
| C3        |                                        | X                                       |                       |                       |              | X                                       | X       |              |         |
| C4        |                                        | X                                       | X                     |                       |              |                                         |         | X            |         |
| C5        |                                        |                                         |                       |                       |              | X                                       |         | X            | X       |
| C6        |                                        | X                                       | X                     |                       |              | X                                       |         |              |         |
| C7        |                                        |                                         |                       |                       |              | X                                       |         |              |         |
| C8        |                                        |                                         |                       |                       |              | X                                       |         | X            | X       |
| C9        |                                        | X                                       |                       |                       |              | X                                       | X       |              |         |
| C10       |                                        |                                         |                       |                       |              | X                                       |         |              |         |
| C11       |                                        |                                         |                       |                       |              | X                                       |         |              |         |
| N27       |                                        | X                                       |                       |                       |              | X                                       | X       |              |         |

Notes: Well 8 and Well A1 could not be located for sounding or assessment.



## ***Appendix A***

### ***Drawing 1***



## ***Appendix B***

### ***Wellfield Database***

| Device ID | Date            | Time  | CH4  | CO2  | O2   | Balance | Static Press. | Gas Temp | Forister Comments                  | Total Depth of Well (ft) | Feet of Water in Well (ft) | CBSI Comments                                                      |
|-----------|-----------------|-------|------|------|------|---------|---------------|----------|------------------------------------|--------------------------|----------------------------|--------------------------------------------------------------------|
| MENL0014  |                 |       |      |      |      |         |               |          |                                    |                          |                            |                                                                    |
| MENL0001  | 1/15/2014 8:11  | 57.8  | 35.1 | 1.1  | 6.0  | -0.3    | 52            |          | Opened Valve 1/2 turn or less..... | 36.75                    | 0                          | Decommissioned                                                     |
| MENL0001  | 2/10/2014 9:53  | 37.4  | 32.4 | 0.5  | 29.7 | -0.4    | 57            |          | Closed Valve 1/2 turn or less..... | 36.75                    | 0                          | Overpulls easily, low production.                                  |
| MENL0001  | 3/18/2014 8:07  | 51.9  | 33.8 |      | 14.3 | -0.4    | 76            |          | No Change.....                     | 36.75                    | 0                          | Overpulls easily, low production.                                  |
| MENL0001  | 04/08/14        | 46.5  | 33.6 | 0    | 16.9 | -0.3    | 61            |          | Opened Valve 1/2 turn or less..... | 36.75                    | 0                          | Overpulls easily, low production.                                  |
| MENL0001  | 5/9/2014 9:23   | 49    | 33.4 | 0    | 17.6 | -0.3    | 77            |          | No Change.....                     | 36.75                    | 0                          | Overpulls easily, low production.                                  |
| MENL0001  | 05/29/14        | 60.4  | 36.3 | 0    | 3.3  | -0.2    | 87            |          | Opened Valve 1/2 turn or less..... | 36.75                    | 0                          | Overpulls easily, low production.                                  |
| MENL0002  | 1/15/2014 8:14  | 57.7  | 35.1 | 0    | 7.2  | -0.4    | 51            |          | Closed Valve 1/2 turn or less..... | 51                       | 0.1                        | Inconclusive                                                       |
| MENL0002  | 2/10/2014 9:46  | 26.5  | 28.1 | 0    | 45.4 | -0.4    | 72            |          | Closed Valve 1/2 turn or less..... | 51                       | 0.1                        | Inconclusive                                                       |
| MENL0002  | 3/18/2014 8:09  | 49.5  | 33.6 | 0    | 16.9 | -0.6    | 55            |          | No Change.....                     | 51                       | 0.1                        | Inconclusive                                                       |
| MENL0002  | 04/08/14        | 46.1  | 33.7 | 0    | 17.2 | -0.2    | 77            |          | No Change.....                     | 51                       | 0.1                        | Inconclusive                                                       |
| MENL0002  | 5/9/2014 9:27   | 46    | 33.3 | 0    | 20.7 | -0.8    | 69            |          | Closed Valve 1/2 turn or less..... | 51                       | 0.1                        | Inconclusive                                                       |
| MENL0002  | 05/29/14        | 42.9  | 32.4 | 0    | 24.7 | -0.2    | 80            |          | Closed Valve 1/2 turn or less..... | 51                       | 0.1                        | Inconclusive                                                       |
| MENL0003  | 1/15/2014 8:27  | 49.1  | 27.9 | 0.9  | 22.1 | -4.2    | 64            |          | Closed Valve 1/2 turn or less..... | 25                       | 0                          | Not flowing                                                        |
| MENL0003  | 2/10/2014 9:56  | 61.7  | 34.5 | 0.7  | 3.1  | -11.1   | 59            |          | No Change.....                     | 25                       | 0                          | Not flowing                                                        |
| MENL0003  | 3/18/2014 8:13  | 65.5  | 26.5 | 2.1  | 5.9  | -11.1   | 56            |          | Opened Valve 1/2 turn or less..... | 25                       | 0                          | Not flowing                                                        |
| MENL0003  | 04/08/14        | 63.7  | 35.5 | 0.6  | 0.2  | -9.3    | 64            |          | No Change.....                     | 25                       | 0                          | Not flowing                                                        |
| MENL0003  | 5/9/2014 9:35   | 61.1  | 34.3 | 0.9  | 3.7  | -14.9   | 64            |          | No Change.....                     | 25                       | 0                          | Not flowing                                                        |
| MENL0003  | 05/29/14        | 62.6  | 34.8 | 0.8  | 1.8  | -14.0   | 79            |          | No Change.....                     | 25                       | 0                          | Not flowing                                                        |
| MENL0004  | 1/15/2014 8:31  | 0.3   | 2.6  | 16   | 81.1 | -5.3    | 69            |          | Closed Valve 1/2 turn or less..... | 20                       | 1.3                        | Decom                                                              |
| MENL0004  | 2/15/2014 8:33  | 0.2   | 2.6  | 16.3 | 80.9 | -1.7    | 70            |          | No Change.....                     | 20                       | 1.3                        | Decom                                                              |
| MENL0004  | 2/10/2014 10:04 | 0.3   | 0.8  | 16.7 | 82.2 | -4.5    | 66            |          | Closed Valve 1/2 turn or less..... | 20                       | 1.3                        | Decom                                                              |
| MENL0004  | 2/10/2014 10:06 | 0.3   | 0.8  | 16.1 | 82.8 | -2.9    | 67            |          | No Change.....                     | 20                       | 1.3                        | Decom                                                              |
| MENL0004  | 3/18/2014 8:19  | 0.7   | 7.9  | 16.1 | 75.3 | -4.2    | 56            |          | Closed Valve 1/2 turn or less..... | 20                       | 1.3                        | Decom                                                              |
| MENL0004  | 3/18/2014 8:22  | 0.4   | 5.4  | 17.7 | 76.5 | -3.8    | 56            |          | No Change.....                     | 20                       | 1.3                        | Decom                                                              |
| MENL0004  | 04/08/14        | 0.5   | 8.1  | 16.3 | 75.1 | -1.1    | 80            |          | Closed Valve 1/2 turn or less..... | 20                       | 1.3                        | Decom                                                              |
| MENL0004  | 04/08/14        | 0.6   | 8.2  | 16   | 75.2 | -0.7    | 81            |          | No Change.....                     | 20                       | 1.3                        | Decom                                                              |
| MENL0004  | 5/9/2014 9:29   | 0.5   | 6.4  | 15.2 | 77.9 | -2.5    | 73            |          | Closed Valve 1/2 turn or less..... | 20                       | 1.3                        | Decom                                                              |
| MENL0004  | 5/9/2014 9:31   | 0.4   | 5.8  | 16.3 | 77.5 | -1.6    | 77            |          | No Change.....                     | 20                       | 1.3                        | Decom                                                              |
| MENL0004  | 05/29/14        | 62.7  | 34.3 | 0.4  | 2.6  | -2.4    | 83            |          | No system pressure port            | 20                       | 1.3                        | Decom                                                              |
| MENL0005  | 1/15/2014 8:36  | 52.5  | 28.3 | 0.7  | 18.5 | -6.9    | 70            |          | Closed Valve 1/2 turn or less..... | 20                       | 1.3                        | Inconclusive                                                       |
| MENL0005  | 2/10/2014 10:08 | 47.3  | 26.4 | 1    | 25.3 | -3.1    | 71            |          | Closed Valve 1/2 turn or less..... | 20                       | 1.3                        | Inconclusive                                                       |
| MENL0005  | 3/18/2014 8:25  | 43.3  | 25.4 | 0.7  | 30.6 | -4.7    | 57            |          | Closed Valve 1/2 turn or less..... | 20                       | 1.3                        | Inconclusive                                                       |
| MENL0005  | 04/08/14        | 48.6  | 26.6 | 0.6  | 24.2 | -3.9    | 73            |          | No Change.....                     | 20                       | 1.3                        | Inconclusive                                                       |
| MENL0005  | 5/9/2014 9:40   | 38.4  | 25.2 | 0.9  | 35.5 | -5.7    | 74            |          | Closed Valve 1/2 turn or less..... | 20                       | 1.3                        | Inconclusive                                                       |
| MENL0006  | 1/15/2014 8:42  | 67.8  | 31.8 | 0.2  | 0.2  | -3.3    | 87            |          | No Change.....                     | 20                       | 1.3                        | Overpulls easily, low production.                                  |
| MENL0006  | 2/10/2014 10:12 | 68.8  | 30.8 | 0.1  | 0.3  | -0.8    | 88            |          | Opened Valve 1/2 turn or less..... | 20                       | 1.3                        | Overpulls easily, low production.                                  |
| MENL0006  | 3/18/2014 8:31  | 60.2  | 30   | 0.4  | 9.4  | -1.3    | 86            |          | Opened Valve 1/2 turn or less..... | 20                       | 1.3                        | Overpulls easily, low production.                                  |
| MENL0006  | 04/08/14        | 51.8  | 28.5 | 0.5  | 19.2 | -1.5    | 87            |          | No Change.....                     | 20                       | 1.3                        | Overpulls easily, low production.                                  |
| MENL0006  | 5/9/2014 9:44   | 54.1  | 28.8 | 0.1  | 17   | -0.8    | 87            |          | Opened Valve 1/2 turn or less..... | 20                       | 1.3                        | Overpulls easily, low production.                                  |
| MENL0006  | 05/29/14        | 47.4  | 28.3 | 0.1  | 24.2 | -1.8    | 94            |          | No Change.....                     | 20                       | 1.3                        | Overpulls easily, low production.                                  |
| MENL0006  | 11/04/15        |       |      |      |      |         |               |          | Vacuum - Y                         | 49.5                     | 20.9                       |                                                                    |
| MENL0007  | 1/15/2014 8:47  | 40.8  | 30.2 | 0    | 29   | -1.0    | 90            |          | Closed Valve 1/2 turn or less..... | 31.3                     | 0                          | Overpulls easily, low production.                                  |
| MENL0007  | 2/10/2014 10:15 | 47.2  | 30.2 | 0    | 22.6 | -0.3    | 87            |          | No Change.....                     | 31.3                     | 0                          | Overpulls easily, low production.                                  |
| MENL0007  | 3/18/2014 8:34  | 33    | 28.2 | 0    | 38.8 | -0.5    | 87            |          | Closed Valve 1/2 turn or less..... | 31.3                     | 0                          | Overpulls easily, low production.                                  |
| MENL0007  | 04/08/14        | 36.1  | 28.6 | 0    | 35.3 | -0.4    | 83            |          | Closed Valve 1/2 turn or less..... | 31.3                     | 0                          | Overpulls easily, low production.                                  |
| MENL0007  | 5/9/2014 9:48   | 34.0  | 28.7 | 0    | 36.7 | -0.5    | 86            |          | Closed Valve 1/2 turn or less..... | 31.3                     | 0                          | Overpulls easily, low production.                                  |
| MENL0007  | 05/29/14        | 15:07 | 34.2 | 29.7 | 0    | 36.1    | 0.0           | 92       | No Change.....                     | 31.3                     | 0                          | Overpulls easily, low production.                                  |
| MENL0008  | 1/15/2014 8:49  | 60.3  | 39.4 | 0.2  | 0.1  | -0.5    | 49            |          | No Change.....                     | No access                |                            | Increase vacuum and remonitor                                      |
| MENL0008  | 2/10/2014 10:19 | 59.6  | 38.8 | 0.3  | 1.3  | -0.6    | 65            |          | No Change.....                     | No access                |                            | Increase vacuum and remonitor                                      |
| MENL0008  | 3/18/2014 8:39  | 60    | 38.7 | 0.8  | 0.5  | -0.5    | 56            |          | Opened Valve 1/2 turn or less..... | No access                |                            | Increase vacuum and remonitor                                      |
| MENL0008  | 04/08/14        | 59.8  | 39   | 0.8  | 0.4  | -0.5    | 66            |          | No Change.....                     | No access                |                            | Increase vacuum and remonitor                                      |
| MENL0008  | 5/9/2014 9:55   | 59.6  | 38.4 | 0.7  | 1.3  | -0.5    | 70            |          | Opened Valve 1/2 turn or less..... | No access                |                            | Increase vacuum and remonitor                                      |
| MENL0008  | 05/29/14        | 59.2  | 40.2 | 0.4  | 0.2  | -0.4    | N/A           |          | No Temperature port                | No access                |                            | Increase vacuum and remonitor                                      |
| MENL0008  | 11/04/15        | 15:15 | 59.2 | 40.2 | 0.4  | 0.2     | N/A           |          | No Temperature port                | No access                |                            | Could not locate                                                   |
| MENL0009  | 1/15/2014 8:53  | 61    | 38.9 | 0    | 0.1  | -6.5    | 106           |          | No Change.....                     | 30.5                     | 0                          | Questionable flow and temperature. Replace well head and remonitor |
| MENL0009  | 2/10/2014 10:28 | 61.7  | 38.2 | 0    | 0.1  | -6.5    | 106           |          | No Change.....                     | 30.5                     | 0                          | Questionable flow and temperature. Replace well head and remonitor |
| MENL0009  | 3/18/2014 8:44  | 61.3  | 38.6 | 0    | 0.1  | -5.4    | 106           |          | Opened Valve 1/2 turn or less..... | 30.5                     | 0                          | Questionable flow and temperature. Replace well head and remonitor |
| MENL0009  | 04/08/14        | 60.9  | 39   | 0    | 0.1  | -6.3    | 106           |          | No Change.....                     | 30.5                     | 0                          | Questionable flow and temperature. Replace well head and remonitor |
| MENL0009  | 5/9/2014 9:58   | 58    | 37.6 | 0    | 4.4  | -12.2   | 106           |          | No Change.....                     | 30.5                     | 0                          | Questionable flow and temperature. Replace well head and remonitor |
| MENL0009  | 05/29/14        | 57.4  | 38.2 | 0    | 4.4  | -11.4   | 106           |          | No Change.....                     | 30.5                     | 0                          | Questionable flow and temperature. Replace well head and remonitor |

Bedwell Bayfront Park  
GCSS Evaluation  
Wellfield Data

| Device ID | Date            | Time  | CH4  | CO2  | O2   | Balance | Static Press. | Gas Temp | Fortistar Comments                           | Total Depth of Well (ft) | Feet of Water in Well (ft) | C&I Comments                                            |
|-----------|-----------------|-------|------|------|------|---------|---------------|----------|----------------------------------------------|--------------------------|----------------------------|---------------------------------------------------------|
| MEN0010   | 1/15/2014 8:55  |       | 65.3 | 34.5 | 0    | 0.2     | -8.9          | 80       | No Change.....                               | Flanged                  |                            | Questionable flow. Remove flange and sound.             |
| MEN0010   | 2/10/2014 10:31 |       | 66.1 | 33.7 | 0    | 0.2     | -5.9          | 78       | No Change.....                               | Flanged                  |                            | Questionable flow. Remove flange and sound.             |
| MEN0010   | 3/18/2014 8:48  |       | 61.9 | 33.6 | 0    | 4.5     | -4.5          | 78       | Opened Valve 1/2 turn or less.....           | Flanged                  |                            | Questionable flow. Remove flange and sound.             |
| MEN0010   | 04/08/14        | 8:45  | 66   | 33.6 | 0    | 0.4     | -6.3          | 78       | No Change.....                               | Flanged                  |                            | Questionable flow. Remove flange and sound.             |
| MEN0010   | 5/9/2014 10:01  |       | 56.3 | 29.9 | 1    | 12.8    | -10.6         | 81       | No Change.....                               | Flanged                  |                            | Questionable flow. Remove flange and sound.             |
| MEN0011   | 05/29/14        | 14:42 | 49.5 | 32.3 | 0    | 18.2    | -11.2         | 86       | No Change.....                               | Flanged                  |                            | Questionable flow. Remove flange and sound.             |
| MEN0011   | 1/15/2014 8:58  |       | 0.3  | 3.1  | 15.8 | 80.8    | -6.3          | 79       | Closed Valve 1/2 turn or less.....           | 19.6                     | 0                          | Decom. Not flowing. Damaged.                            |
| MEN0011   | 1/15/2014 9:01  |       | 0.3  | 2.8  | 16.4 | 80.5    | -4.5          | 79       | No Change.....                               | 19.6                     | 0                          | Decom. Not flowing. Damaged.                            |
| MEN0011   | 2/10/2014 10:39 |       | 0.3  | 1    | 17.1 | 81.6    | -6.1          | 70       | Closed Valve 1/2 turn or less.....           | 19.6                     | 0                          | Decom. Not flowing. Damaged.                            |
| MEN0011   | 2/10/2014 10:35 |       | 0.2  | 0.8  | 16.9 | 82.1    | -4.5          | 70       | No Change.....                               | 19.6                     | 0                          | Decom. Not flowing. Damaged.                            |
| MEN0011   | 3/18/2014 8:51  |       | 0.5  | 7    | 16.5 | 76      | -5.5          | 64       | Closed Valve 1/2 turn or less. Watering..... | 19.6                     | 0                          | Decom. Not flowing. Damaged.                            |
| MEN0011   | 3/18/2014 8:54  |       | 0.6  | 7.8  | 15.3 | 76.3    | -3.8          | 65       | No Change. Watering.....                     | 19.6                     | 0                          | Decom. Not flowing. Damaged.                            |
| MEN0011   | 04/08/14        | 8:50  | 0.8  | 8.3  | 16.5 | 74.4    | -3.7          | 61       | Closed Valve 1/2 turn or less. Watering..... | 19.6                     | 0                          | Decom. Not flowing. Damaged.                            |
| MEN0011   | 04/08/14        | 8:52  | 0.7  | 7.6  | 15.8 | 75.9    | -2.6          | 61       | No Change. Watering.....                     | 19.6                     | 0                          | Decom. Not flowing. Damaged.                            |
| MEN0011   | 5/9/2014 10:04  |       | 0.6  | 6    | 15.6 | 77.8    | -5.4          | 70       | Closed Valve 1/2 turn or less. Watering..... | 19.6                     | 0                          | Decom. Not flowing. Damaged.                            |
| MEN0011   | 5/9/2014 10:06  |       | 0.6  | 5.8  | 15.2 | 78.4    | -4.0          | 70       | No Change. Watering.....                     | 19.6                     | 0                          | Decom. Not flowing. Damaged.                            |
| MEN0011   | 05/29/14        | 12:25 | 20.8 | 11.9 | 12.9 | 54.4    | -0.2          | 85       | No system pressure port                      | 19.6                     | 0                          | Decom. Not flowing. Damaged.                            |
| MEN0012   | 1/15/2014 9:11  |       | 64.7 | 12.7 | 3.4  | 19.2    | -13.3         | 52       | Closed Valve 1/2 turn or less.....           | 21.5                     | 0                          | Does not appear to be flowing. Shallow. Decom           |
| MEN0012   | 2/10/2014 10:38 |       | 63.3 | 32.2 | 0.6  | 3.9     | -4.5          | 70       | No Change.....                               | 21.5                     | 0                          | Does not appear to be flowing. Shallow. Decom           |
| MEN0012   | 3/18/2014 9:14  |       | 64.1 | 15.4 | 3.8  | 16.7    | -11.1         | 54       | Closed Valve 1/2 turn or less.....           | 21.5                     | 0                          | Does not appear to be flowing. Shallow. Decom           |
| MEN0012   | 04/08/14        | 8:54  | 66.1 | 32.7 | 0.1  | 1.1     | -2.6          | 75       | No Change.....                               | 21.5                     | 0                          | Does not appear to be flowing. Shallow. Decom           |
| MEN0012   | 5/9/2014 10:08  |       | 54.5 | 32.1 | 0    | 13.4    | -6.1          | 75       | No Change.....                               | 21.5                     | 0                          | Does not appear to be flowing. Shallow. Decom           |
| MEN0012   | 05/29/14        | 13:49 | 56.6 | 13.2 | 3.5  | 26.7    | 0.0           | 79       | Closed Valve 1/2 turn or less.....           | 21.5                     | 0                          | Does not appear to be flowing. Shallow. Decom           |
| MEN0013   | 1/15/2014 9:17  |       | 62.2 | 37.7 | 0    | 0.1     | -1.0          | 53       | Closed Valve 1/2 turn or less.....           | 47                       | 15.29                      | Dewater, tune, and remonitor.                           |
| MEN0013   | 2/10/2014 10:53 |       | 36.5 | 32.3 | 0    | 31.2    | -0.3          | 57       | Closed Valve 1/2 turn or less.....           | 47                       | 15.29                      | Dewater, tune, and remonitor.                           |
| MEN0013   | 3/18/2014 9:20  |       | 62.6 | 37.1 | 0    | 0.3     | -0.5          | 64       | Opened Valve 1/2 turn or less.....           | 47                       | 15.29                      | Dewater, tune, and remonitor.                           |
| MEN0013   | 04/08/14        | 9:12  | 60.3 | 39.6 | 0    | 0.1     | -0.9          | 86       | Opened Valve 1/2 turn or less.....           | 47                       | 15.29                      | Dewater, tune, and remonitor.                           |
| MEN0013   | 5/9/2014 10:12  |       | 57.9 | 37.7 | 0.8  | 3.6     | -0.4          | 73       | No Change.....                               | 47                       | 15.29                      | Dewater, tune, and remonitor.                           |
| MEN0013   | 05/29/14        | 9:39  | 60.5 | 37.8 | 0    | 1.7     | -0.1          | 90       | No system pressure port                      | 47                       | 15.29                      | Dewater, tune, and remonitor.                           |
| MEN0015   | 1/15/2014 9:20  |       | 53.6 | 36.7 | 0    | 9.7     | -8.7          | 93       | No Change.....                               | 36                       | 7.26                       | Partially watered in. Continue monitoring.              |
| MEN0015   | 2/10/2014 10:57 |       | 60.7 | 38.1 | 0    | 1.2     | -2.7          | 89       | Opened Valve 1/2 turn or less.....           | 36                       | 7.26                       | Partially watered in. Continue monitoring.              |
| MEN0015   | 3/18/2014 9:24  |       | 61.7 | 38.2 | 0    | 0.1     | -1.5          | 86       | Opened Valve 1/2 turn or less.....           | 36                       | 7.26                       | Partially watered in. Continue monitoring.              |
| MEN0015   | 04/08/14        | 9:16  | 55.7 | 37.2 | 0    | 7.1     | -7.9          | 93       | No Change.....                               | 36                       | 7.26                       | Partially watered in. Continue monitoring.              |
| MEN0015   | 5/9/2014 10:23  |       | 49   | 34.8 | 0    | 16.2    | -9.1          | 93       | No Change.....                               | 36                       | 7.26                       | Partially watered in. Continue monitoring.              |
| MEN0015   | 05/29/14        | 9:20  | 48.9 | 35.6 | 0    | 15.5    | -9.7          | 98       | No Change.....                               | 36                       | 7.26                       | Partially watered in. Continue monitoring.              |
| MEN0016   | 1/15/2014 9:30  |       | 60.1 | 39.8 | 0    | 0.1     | -3.6          | 98       | No Change.....                               | 25.35                    | 0                          | Questionable flow. Increase vac and remonitor. Shallow. |
| MEN0016   | 2/10/2014 11:03 |       | 60.6 | 39.3 | 0    | 0.1     | -5.2          | 100      | Opened Valve 1/2 turn or less.....           | 25.35                    | 0                          | Questionable flow. Increase vac and remonitor. Shallow. |
| MEN0016   | 3/18/2014 9:37  |       | 60   | 39.9 | 0    | 0.1     | -0.7          | 96       | Opened Valve 1/2 turn or less.....           | 25.35                    | 0                          | Questionable flow. Increase vac and remonitor. Shallow. |
| MEN0016   | 04/08/14        | 9:29  | 59.8 | 40.1 | 0    | 0.1     | -5.5          | 99       | Opened Valve 1/2 turn or less.....           | 25.35                    | 0                          | Questionable flow. Increase vac and remonitor. Shallow. |
| MEN0016   | 5/9/2014 10:33  |       | 58.4 | 38.1 | 0    | 3.5     | -5.7          | 99       | Opened Valve 1/2 turn or less.....           | 25.35                    | 0                          | Questionable flow. Increase vac and remonitor. Shallow. |
| MEN0016   | 05/29/14        | 12:48 | 57.4 | 38.3 | 0    | 4.3     | -7.6          | 101      | Closed Valve 1/2 turn or less.....           | 25.35                    | 0                          | Decom. Not flowing. Damaged.                            |
| MEN0017   | 1/15/2014 9:33  |       | 0.3  | 3    | 16.4 | 80.3    | -4.1          | 86       | No Change.....                               | 22.5                     | 1.5                        | Decom. Not flowing. Damaged.                            |
| MEN0017   | 1/15/2014 9:35  |       | 0.3  | 2.8  | 16.1 | 80.8    | -3.7          | 81       | No Change.....                               | 22.5                     | 1.5                        | Decom. Not flowing. Damaged.                            |
| MEN0017   | 2/10/2014 11:08 |       | 0.3  | 1.1  | 16.6 | 82      | -5.7          | 72       | Closed Valve 1/2 turn or less. Watering..... | 22.5                     | 1.5                        | Decom. Not flowing. Damaged.                            |
| MEN0017   | 2/10/2014 11:09 |       | 0.3  | 1.1  | 15.7 | 82.9    | -2.9          | 66       | No Change. Watering.....                     | 22.5                     | 1.5                        | Decom. Not flowing. Damaged.                            |
| MEN0017   | 3/18/2014 9:27  |       | 0.5  | 7.6  | 15.9 | 76      | -2.8          | 71       | Closed Valve 1/2 turn or less. Watering..... | 22.5                     | 1.5                        | Decom. Not flowing. Damaged.                            |
| MEN0017   | 3/18/2014 9:29  |       | 0.5  | 7.3  | 15.8 | 76.4    | -1.4          | 72       | No Change. Watering.....                     | 22.5                     | 1.5                        | Decom. Not flowing. Damaged.                            |
| MEN0017   | 04/08/14        | 9:32  | 0.8  | 9.2  | 15.4 | 74.6    | -2.1          | 70       | Closed Valve 1/2 turn or less. Watering..... | 22.5                     | 1.5                        | Decom. Not flowing. Damaged.                            |
| MEN0017   | 04/08/14        | 9:34  | 0.7  | 8.7  | 15.3 | 75.3    | -1.6          | 69       | No Change. Watering.....                     | 22.5                     | 1.5                        | Decom. Not flowing. Damaged.                            |
| MEN0017   | 5/9/2014 10:36  |       | 0.7  | 7.3  | 15.1 | 76.9    | -3.5          | 82       | Closed Valve 1/2 turn or less. Watering..... | 22.5                     | 1.5                        | Decom. Not flowing. Damaged.                            |
| MEN0017   | 5/9/2014 10:37  |       | 0.7  | 7.3  | 15.1 | 76.9    | -3.5          | 82       | Closed Valve 1/2 turn or less. Watering..... | 22.5                     | 1.5                        | Decom. Not flowing. Damaged.                            |
| MEN0017   | 05/29/14        | 12:57 | 4.7  | 1.1  | 20.1 | 74.1    | -0.3          | 75       | Closed Valve 1/2 turn or less.....           | 22.5                     | 1.5                        | Decom. Not flowing. Damaged.                            |
| MEN0018   | 1/15/2014 9:40  |       | 49   | 30.5 | 0.1  | 20.4    | -8.9          | 65       | Closed Valve 1/2 turn or less.....           | Flanged                  |                            | Remove flange and sound                                 |
| MEN0018   | 2/10/2014 11:12 |       | 60.6 | 39.2 | 0.1  | 0.1     | -4.3          | 64       | No Change.....                               | Flanged                  |                            | Remove flange and sound                                 |
| MEN0018   | 3/18/2014 9:42  |       | 64.7 | 35.2 | 0    | 0.1     | -1.5          | 61       | Opened Valve 1/2 turn or less.....           | Flanged                  |                            | Remove flange and sound                                 |
| MEN0018   | 04/08/14        | 9:36  | 60.6 | 39.2 | 0    | 0.2     | -4.7          | 92       | Opened Valve 1/2 turn or less.....           | Flanged                  |                            | Remove flange and sound                                 |
| MEN0018   | 5/9/2014 10:50  |       | 43.8 | 28.8 | 0    | 27.9    | -9.0          | 74       | Closed Valve 1/2 turn or less.....           | Flanged                  |                            | Remove flange and sound                                 |
| MEN0018   | 05/29/14        | 17:05 | 53.4 | 31   | 0    | 15.6    | -5.1          | 81       | No Change.....                               | Flanged                  |                            | Remove flange and sound                                 |
| MEN0018   | 11/04/15        | 17:05 | 53.4 | 31   | 0    | 15.6    | -5.1          | 81       | No Change.....                               | 51                       | 22.6                       | Vacuum - Y                                              |
| MEN0019   | 1/15/2014 9:44  |       | 0.3  | 2.5  | 16.1 | 81.1    | -8.6          | 66       | Closed Valve 1/2 turn or less.....           | 32                       | 13.49                      | Dewater and remonitor                                   |
| MEN0019   | 1/15/2014 9:47  |       | 0.3  | 2.5  | 15.9 | 81.3    | -6.4          | 66       | No Change.....                               | 32                       | 13.49                      | Dewater and remonitor                                   |



# Bedwell Bayfront Park Master Plan

| Device ID | Date            | Time  | CH4  | CO2  | O2   | Balance | Static Press. | Gas Temp | Fortitair Comments                           | Total Depth of Well (ft) | Feet of Water in Well (ft) | CBI Comments                                                      |
|-----------|-----------------|-------|------|------|------|---------|---------------|----------|----------------------------------------------|--------------------------|----------------------------|-------------------------------------------------------------------|
| MENLO019  | 2/10/2024 11:15 |       | 0.3  | 1.1  | 16.6 | 82      | -5.1          | 66       | Closed Valve 1/2 turn or less, Watering..... | 32                       | 13.49                      | Deviator and remonitor                                            |
| MENLO019  | 2/10/2024 11:18 |       | 0.3  | 1.1  | 15.6 | 83      | -13.3         | 66       | No Change, Watering.....                     | 32                       | 13.49                      | Deviator and remonitor                                            |
| MENLO019  | 3/18/2024 9:45  |       | 0.7  | 7.9  | 16.3 | 75.1    | -3.6          | 66       | Closed Valve 1/2 turn or less, Watering..... | 32                       | 13.49                      | Deviator and remonitor                                            |
| MENLO019  | 3/18/2024 9:47  |       | 0.7  | 7.7  | 15.6 | 76      | -3.2          | 70       | No Change, Watering.....                     | 32                       | 13.49                      | Deviator and remonitor                                            |
| MENLO019  | 04/08/14        | 9:40  | 0.7  | 8.6  | 16.1 | 74.6    | -3.0          | 71       | Closed Valve 1/2 turn or less, Watering..... | 32                       | 13.49                      | Deviator and remonitor                                            |
| MENLO019  | 04/08/14        | 9:42  | 0.4  | 5.8  | 17.3 | 76.5    | -0.9          | 70       | No Change, Watering.....                     | 32                       | 13.49                      | Deviator and remonitor                                            |
| MENLO019  | 5/9/2024 10:52  |       | 0.8  | 7.4  | 15.5 | 76.8    | -7.8          | 88       | Closed Valve 1/2 turn or less, Watering..... | 32                       | 13.49                      | Deviator and remonitor                                            |
| MENLO019  | 5/9/2024 10:54  |       | 0.6  | 6.4  | 15.9 | 77.1    | -5.5          | 88       | No Change, Watering.....                     | 32                       | 13.49                      | Deviator and remonitor                                            |
| MENLO019  | 05/29/14        | 16:56 | 0    | 4.7  | 17.5 | 77.8    | 0.0           | 95       | No system pressure port                      | 32                       | 13.49                      | Deviator and remonitor                                            |
| MENLO020  | 1/15/2024 9:50  |       | 66.8 | 32.4 | 0.4  | 0.4     | -3.5          | 56       | No Change.....                               | Flanged                  |                            | Remove flange and sound                                           |
| MENLO020  | 2/10/2024 11:22 |       | 58.5 | 37   | 1    | 3.5     | -5.7          | 66       | No Change.....                               | Flanged                  |                            | Remove flange and sound                                           |
| MENLO020  | 3/18/2024 9:51  |       | 67.5 | 32.3 | 0    | 0.2     | -1.4          | 59       | Opened Valve 1/2 turn or less.....           | Flanged                  |                            | Remove flange and sound                                           |
| MENLO020  | 04/08/14        | 9:44  | 61.1 | 38.6 | 0.1  | 0.2     | -5.9          | 73       | No Change.....                               | Flanged                  |                            | Remove flange and sound                                           |
| MENLO020  | 5/9/2024 10:58  |       | 54.3 | 30.6 | 0    | 15.1    | -5.7          | 72       | No Change.....                               | Flanged                  |                            | Remove flange and sound                                           |
| MENLO020  | 05/29/14        | 16:41 | 56.9 | 31.6 | 0    | 11.5    | -4.9          | 87       | No system pressure port                      | Flanged                  |                            | Remove flange and sound                                           |
| MENLO020  | 11/04/15        | 16:41 | 56.9 | 31.6 | 0    | 11.5    | -4.9          | 87       | No system pressure port                      | 48.2                     | 22.45                      | Vacuum - Y                                                        |
| MENLO021  | 1/15/2024 9:53  |       | 46.6 | 28.5 | 0    | 25.9    | -0.6          | 82       | Closed Valve 1/2 turn or less.....           | Flanged                  |                            | Remove flange and sound                                           |
| MENLO021  | 2/10/2024 11:29 |       | 57.3 | 37.2 | 1    | 4.5     | -6.0          | 62       | No Change.....                               | Flanged                  |                            | Remove flange and sound                                           |
| MENLO021  | 3/18/2024 10:00 |       | 53.9 | 27   | 0.1  | 19      | -0.8          | 85       | No Change.....                               | Flanged                  |                            | Remove flange and sound                                           |
| MENLO021  | 04/08/14        | 9:51  | 32.5 | 25.1 | 0    | 42.4    | -2.8          | 89       | Closed Valve 1/2 turn or less.....           | Flanged                  |                            | Remove flange and sound                                           |
| MENLO021  | 5/9/2024 11:01  |       | 53.9 | 30.6 | 0    | 15.5    | -2.6          | 73       | No Change.....                               | Flanged                  |                            | Remove flange and sound                                           |
| MENLO021  | 05/30/14        | 11:24 | 66   | 28   | 0.3  | 5.7     | -0.1          | 81       | No system pressure port                      | 50.8                     | 27.8                       | Vacuum - Y                                                        |
| MENLO021  | 11/04/15        | 16:41 | 56.9 | 31.6 | 0    | 11.5    | -4.9          | 87       | No system pressure port                      | 48.5                     | 18.43                      | Deviator and remonitor                                            |
| MENLO022  | 1/15/2024 9:59  |       | 0.3  | 3.4  | 16.3 | 80      | -4.1          | 49       | Closed Valve 1/2 turn or less.....           | 48.5                     | 18.43                      | Deviator and remonitor                                            |
| MENLO022  | 1/15/2024 10:02 |       | 0.2  | 2.7  | 16.4 | 80.7    | -2.0          | 48       | No Change.....                               | 48.5                     | 18.43                      | Deviator and remonitor                                            |
| MENLO022  | 2/10/2024 11:34 |       | 0.3  | 1.1  | 16.3 | 82.3    | -5.6          | 64       | Closed Valve 1/2 turn or less, Watering..... | 48.5                     | 18.43                      | Deviator and remonitor                                            |
| MENLO022  | 2/10/2024 11:36 |       | 0.3  | 0.9  | 16.7 | 82.1    | -1.7          | 69       | No Change, Watering.....                     | 48.5                     | 18.43                      | Deviator and remonitor                                            |
| MENLO022  | 3/18/2024 9:54  |       | 0.6  | 7.5  | 16.6 | 75.3    | -4.0          | 58       | Closed Valve 1/2 turn or less, Watering..... | 48.5                     | 18.43                      | Deviator and remonitor                                            |
| MENLO022  | 3/18/2024 9:56  |       | 0.5  | 6.8  | 16.6 | 76.1    | -1.4          | 58       | No Change, Watering.....                     | 48.5                     | 18.43                      | Deviator and remonitor                                            |
| MENLO022  | 04/08/14        | 9:58  | 0.8  | 7.9  | 16.1 | 75.2    | -3.8          | 72       | Closed Valve 1/2 turn or less, Watering..... | 48.5                     | 18.43                      | Deviator and remonitor                                            |
| MENLO022  | 04/08/14        | 10:00 | 0.9  | 8.4  | 15.7 | 75      | -3.2          | 72       | No Change, Watering.....                     | 48.5                     | 18.43                      | Deviator and remonitor                                            |
| MENLO022  | 5/9/2024 11:07  |       | 0.8  | 7.1  | 15.7 | 76.4    | -7.7          | 81       | Closed Valve 1/2 turn or less, Watering..... | 48.5                     | 18.43                      | Deviator and remonitor                                            |
| MENLO022  | 11/04/15        |       | 0.8  | 6.9  | 15.7 | 76.6    | -5.0          | 84       | No Change, Watering.....                     | 48.5                     | 18.43                      | Deviator and remonitor                                            |
| MENLO022  | 05/28/14        | 2:48  | 63.4 | 36.5 | 0    | 0.1     | -0.2          |          | Closed Valve 1/2 turn or less.....           | 48.5                     | 18.43                      | Deviator and remonitor                                            |
| MENLO023  | 2/10/2024 10:07 |       | 40.3 | 37.8 | 0    | 21.9    | -4.5          | 101      | Closed Valve 1/2 turn or less.....           | 37.5                     | 6.29                       | Partially watered in. Continue monitoring.                        |
| MENLO023  | 2/10/2024 11:39 |       | 58   | 38.7 | 0.1  | 3.2     | -1.1          | 93       | No Change.....                               | 37.5                     | 6.29                       | Partially watered in. Continue monitoring.                        |
| MENLO023  | 3/18/2024 10:10 |       | 60.3 | 39.6 | 0    | 0.1     | -0.7          | 93       | No Change, Valve 100% open.....              | 37.5                     | 6.29                       | Partially watered in. Continue monitoring.                        |
| MENLO023  | 04/08/14        | 9:26  | 60   | 39.9 | 0    | 0.1     | -0.6          | 93       | No Change.....                               | 37.5                     | 6.29                       | Partially watered in. Continue monitoring.                        |
| MENLO023  | 5/9/2024 11:40  |       | 35.2 | 32.1 | 0    | 32.7    | -1.4          | 95       | Closed Valve 1/2 turn or less.....           | 37.5                     | 6.29                       | Partially watered in. Continue monitoring.                        |
| MENLO023  | 05/28/14        | 2:36  | 59.5 | 40.4 | 0    | 0.1     | -0.1          |          | Closed Valve 1/2 turn or less.....           | 37.5                     | 6.29                       | Partially watered in. Continue monitoring.                        |
| MENLO024  | 1/15/2024 9:27  |       | 51   | 35.4 | 0.8  | 12.8    | -9.4          | 71       | Closed Valve 1/2 turn or less.....           | No access                |                            | Questionable flow. No access for sounding. Reconfigure and sound. |
| MENLO024  | 2/10/2024 11:20 |       | 57.3 | 36.3 | 0.8  | 5.6     | -11.7         | 72       | No Change.....                               | No access                |                            | Questionable flow. No access for sounding. Reconfigure and sound. |
| MENLO024  | 3/18/2024 9:33  |       | 58.6 | 36.5 | 0.9  | 4       | -6.3          | 73       | Opened Valve 1/2 turn or less.....           | No access                |                            | Questionable flow. No access for sounding. Reconfigure and sound. |
| MENLO024  | 04/08/14        | 9:19  | 50.1 | 33.9 | 1.5  | 14.5    | -11.0         | 73       | Closed Valve 1/2 turn or less.....           | No access                |                            | Questionable flow. No access for sounding. Reconfigure and sound. |
| MENLO024  | 5/9/2024 10:25  |       | 63   | 36.9 | 0    | 0.1     | -14.0         | 75       | No Change.....                               | No access                |                            | Questionable flow. No access for sounding. Reconfigure and sound. |
| MENLO024  | 05/29/14        | 9:05  | 55.2 | 35   | 0    | 9.8     | 0.0           | 75       | No Change.....                               | No access                |                            | Questionable flow. No access for sounding. Reconfigure and sound. |
| MENLO024  | 05/29/14        | 9:28  | 62.8 | 37.1 | 0    | 0.1     | -14.0         | 80       | Closed Valve 1/2 turn or less.....           | No access                |                            | Questionable flow. No access for sounding. Reconfigure and sound. |
| MENLO024  | 11/4/2015       | 9:28  | 62.8 | 37.1 | 0    | 0.1     | -14.0         | 80       | Closed Valve 1/2 turn or less.....           | 54.3                     | 53.52                      | vacuum - No                                                       |
| MENLO025  | 1/15/2024 10:11 |       | 42.7 | 32.8 | 0    | 24.5    | -1.9          | 83       | Closed Valve 1/2 turn or less.....           | 42.25                    | 0                          | Overpulls easily. Low production. Continue monitoring.            |
| MENLO025  | 2/10/2024 11:44 |       | 44.8 | 31.8 | 0    | 23.4    | -2.0          | 83       | Closed Valve 1/2 turn or less.....           | 42.25                    | 0                          | Overpulls easily. Low production. Continue monitoring.            |
| MENLO025  | 3/18/2024 10:15 |       | 45.8 | 30.8 | 0.1  | 23.3    | -0.6          | 82       | Closed Valve 1/2 turn or less.....           | 42.25                    | 0                          | Overpulls easily. Low production. Continue monitoring.            |
| MENLO025  | 04/08/14        | 10:31 | 47.9 | 31.4 | 0    | 20.7    | -1.4          | 69       | No Change.....                               | 42.25                    | 0                          | Overpulls easily. Low production. Continue monitoring.            |
| MENLO025  | 5/9/2024 11:55  |       | 41.3 | 30.1 | 0    | 28.6    | -2.1          | 85       | Closed Valve 1/2 turn or less.....           | 42.25                    | 0                          | Overpulls easily. Low production. Continue monitoring.            |
| MENLO025  | 05/28/14        | 3:57  | 45.9 | 30.5 | 0    | 23.6    | -1.7          |          | Closed Valve 1/2 turn or less.....           | 42.25                    | 0                          | Overpulls easily. Low production. Continue monitoring.            |
| MENLO025  | 05/29/14        | 8:41  | 44.5 | 31.8 | 0    | 23.7    | -1.9          | 85       | Closed Valve 1/2 turn or less.....           | 42.25                    | 0                          | Overpulls easily. Low production. Continue monitoring.            |
| MENLO026  | 1/15/2024 10:16 |       | 46.5 | 38.4 | 0    | 13.1    | -0.9          | 79       | Closed Valve 1/2 turn or less.....           | 49                       | 32.11                      | Deviator and remonitor                                            |
| MENLO026  | 2/10/2024 11:48 |       | 55   | 37.7 | 0    | 7.3     | -0.2          | 77       | No Change.....                               | 49                       | 32.11                      | Deviator and remonitor                                            |
| MENLO026  | 3/18/2024 10:20 |       | 58.9 | 39.8 | 0    | 1.3     | -0.4          | 84       | Opened Valve 1/2 turn or less.....           | 49                       | 32.11                      | Deviator and remonitor                                            |
| MENLO026  | 04/08/14        | 10:29 | 20.3 | 26.9 | 0    | 52.8    | -1.4          | 66       | Closed Valve 1/2 turn or less.....           | 49                       | 32.11                      | Deviator and remonitor                                            |
| MENLO026  | 5/9/2024 11:50  |       | 25   | 26.7 | 0    | 48.3    | -0.7          | 84       | Closed Valve 1/2 turn or less.....           | 49                       | 32.11                      | Deviator and remonitor                                            |
| MENLO026  | 05/29/14        | 8:49  | 50.7 | 37.6 | 0    | 11.7    | 0.0           | 70       | No Change.....                               | 49                       | 32.11                      | Deviator and remonitor                                            |
| MENLO027  | 1/15/2024 10:19 |       | 48.2 | 37.2 | 0    | 14.6    | -7.0          | 65       | No Change.....                               | 29.5                     | 0                          | Shallow. Continue monitoring.                                     |
| MENLO027  | 2/10/2024 11:51 |       | 52.7 | 37.1 | 0    | 10.2    | -7.0          | 62       | No Change.....                               | 29.5                     | 0                          | Shallow. Continue monitoring.                                     |

Bedwell Bayfront Park  
GCC Evaluation  
Wellfield Data

| Device ID | Date            | Time  | CH4  | CO2  | O2   | Balance | Static Press. | Gas Temp | Fertilizer Comments                            | Total Depth of Well (ft) | Feet of Water in Well (ft) | C&I Comments                                                  |
|-----------|-----------------|-------|------|------|------|---------|---------------|----------|------------------------------------------------|--------------------------|----------------------------|---------------------------------------------------------------|
| MENLO027  | 3/18/2014 10:28 |       | 52   | 37.1 | 0.1  | 10.8    | -1.0          | 66       | No Change.....                                 | 29.5                     | 0                          | Shallow. Continue monitoring.                                 |
| MENLO027  | 04/08/14        | 10:19 | 47.1 | 34.6 | 0    | 18.1    | -2.5          | 75       | No Change.....                                 | 29.5                     | 0                          | Shallow. Continue monitoring.                                 |
| MENLO027  | 5/9/2014 11:32  |       | 38   | 33.6 | 0    | 28.4    | -11.2         | 71       | Closed Valve 1/2 turn or less.....             | 29.5                     | 0                          | Shallow. Continue monitoring.                                 |
| MENLO027  | 05/28/14        | 2:19  | 49.1 | 31.9 | 0    | 19      | -0.1          | 79       |                                                | 29.5                     | 0                          | Shallow. Continue monitoring.                                 |
| MENLO027  | 05/30/14        | 10:19 | 41.2 | 34.3 | 0.3  | 24.2    | -11.0         | 97       | Closed Valve 1/2 turn or less.....             | 32.8                     | 0                          | Overpulls easily. Low production. Continue monitoring. Sound. |
| MENLO028  | 1/15/2014 10:25 |       | 38.2 | 33.6 | 0    | 26.2    | -0.6          | 95       | Closed Valve 1/2 turn or less.....             | 32.8                     | 0                          | Overpulls easily. Low production. Continue monitoring. Sound. |
| MENLO028  | 2/10/2014 11:57 |       | 40.2 | 33   | 0    | 26.8    | -0.6          | 95       | Closed Valve 1/2 turn or less.....             | 32.8                     | 0                          | Overpulls easily. Low production. Continue monitoring. Sound. |
| MENLO028  | 3/18/2014 10:36 |       | 39.6 | 32.5 | 0    | 27.9    | -0.7          | 95       | Closed Valve 1/2 turn or less.....             | 32.8                     | 0                          | Overpulls easily. Low production. Continue monitoring. Sound. |
| MENLO028  | 04/08/14        | 10:10 | 38.8 | 32.5 | 0    | 28.7    | -0.9          | 96       | Closed Valve 1/2 turn or less.....             | 32.8                     | 0                          | Overpulls easily. Low production. Continue monitoring. Sound. |
| MENLO028  | 5/9/2014 11:21  |       | 37.3 | 31.6 | 0    | 31.1    | -0.5          | 96       | Closed Valve 1/2 turn or less.....             | 32.8                     | 0                          | Overpulls easily. Low production. Continue monitoring. Sound. |
| MENLO028  | 05/30/14        | 11:04 | 38.1 | 33.2 | 0.3  | 28.4    | -0.6          | 97       | No Change.....                                 | 32.8                     | 0                          | Questionable flow. Remove flange and sound.                   |
| MENLO029  | 1/15/2014 10:27 |       | 59.6 | 31.6 | 0    | 8.8     | -10.3         | 81       | No Change.....                                 | Flanged                  |                            | Questionable flow. Remove flange and sound.                   |
| MENLO029  | 2/10/2014 12:00 |       | 60.1 | 30.2 | 0    | 9.7     | -7.2          | 80       | No Change.....                                 | Flanged                  |                            | Questionable flow. Remove flange and sound.                   |
| MENLO029  | 3/18/2014 10:30 |       | 59   | 30   | 0    | 11      | -5.7          | 80       | No Change.....                                 | Flanged                  |                            | Questionable flow. Remove flange and sound.                   |
| MENLO029  | 04/08/14        | 10:07 | 59.8 | 29.8 | 0    | 10.4    | -5.8          | 80       | No Change.....                                 | Flanged                  |                            | Questionable flow. Remove flange and sound.                   |
| MENLO029  | 5/9/2014 11:18  |       | 52.6 | 29.7 | 0    | 17.7    | -2.3          | 82       | No Change.....                                 | Flanged                  |                            | Questionable flow. Remove flange and sound.                   |
| MENLO029  | 05/30/14        | 13:28 | 54.9 | 29.7 | 0    | 15.4    | -7.9          | 85       | No Change.....                                 | Flanged                  |                            | Questionable flow. Remove flange and sound.                   |
| MENLO029  | 11/04/15        |       | 48.8 | 36.1 | 0    | 15.1    | -5.6          | 70       | No Change.....                                 | 22.9                     |                            | Vacuum - Y                                                    |
| MENLO030  | 1/15/2014 10:20 |       | 48.8 | 36.1 | 0    | 15.1    | -5.6          | 70       | No Change.....                                 | No access                |                            | Continue monitoring. No sounding access.                      |
| MENLO030  | 2/10/2014 12:02 |       | 57.9 | 35.5 | 0    | 6.6     | -1.8          | 60       | Opened Valve 1/2 turn or less.....             | No access                |                            | Continue monitoring. No sounding access.                      |
| MENLO030  | 3/18/2014 10:42 |       | 52.6 | 34   | 0    | 13.4    | -1.7          | 65       | No Change.....                                 | No access                |                            | Continue monitoring. No sounding access.                      |
| MENLO030  | 04/08/14        | 10:03 | 56.2 | 34.4 | 0.1  | 9.3     | -2.4          | 67       | No Change.....                                 | No access                |                            | Continue monitoring. No sounding access.                      |
| MENLO030  | 5/9/2014 11:15  |       | 45.6 | 33   | 0    | 21.4    | -4.7          | 81       | Closed Valve 1/2 turn or less.....             | No access                |                            | Continue monitoring. No sounding access.                      |
| MENLO030  | 05/30/14        | 13:17 | 54.4 | 34.3 | 0    | 11.3    | -1.8          | 86       | one 2ft sample tube only, no system side port. | No access                |                            | Continue monitoring. No sounding access.                      |
| MENLO030  | 11/04/15        | 13:17 | 54.4 | 34.3 | 0    | 11.3    | -1.8          | 86       | one 2ft sample tube only, no system side port. | 27.85                    |                            | Vacuum - Y                                                    |
| MENLO031  | 1/15/2014 10:33 |       | 46.5 | 36.4 | 0    | 17.1    | -1.5          | 59       | Closed Valve 1/2 turn or less.....             | 49                       | 0.5                        | Overpulls easily. Low production. Continue monitoring.        |
| MENLO031  | 2/10/2014 12:07 |       | 60.1 | 37.2 | 0    | 2.7     | -0.4          | 62       | No Change.....                                 | 49                       | 0.5                        | Overpulls easily. Low production. Continue monitoring.        |
| MENLO031  | 3/18/2014 10:49 |       | 41.7 | 33.5 | 0    | 24.8    | -0.7          | 64       | Closed Valve 1/2 turn or less.....             | 49                       | 0.5                        | Overpulls easily. Low production. Continue monitoring.        |
| MENLO031  | 04/08/14        | 10:14 | 55.6 | 36.3 | 0    | 8.1     | -0.4          | 63       | Closed Valve 1/2 turn or less.....             | 49                       | 0.5                        | Overpulls easily. Low production. Continue monitoring.        |
| MENLO031  | 5/9/2014 11:25  |       | 50.1 | 34.3 | 0    | 15.0    | -0.4          | 74       | Opened Valve 1/2 turn or less.....             | 49                       | 0.5                        | Overpulls easily. Low production. Continue monitoring.        |
| MENLO031  | 05/30/14        | 9:53  | 48.7 | 35.7 | 0.2  | 21.5    | -3.3          | N/A      | Opened Valve 1/2 turn or less.....             | 49                       | 0.5                        | Overpulls easily. Low production. Continue monitoring.        |
| MENLO032  | 1/15/2014 10:37 |       | 42   | 36.5 | 0    | 15.1    | -3.3          | 99       | Closed Valve 1/2 turn or less.....             | 41                       | 0                          | Overpulls easily. Low production. Continue monitoring.        |
| MENLO032  | 2/10/2014 12:12 |       | 48.4 | 36   | 0    | 15.6    | -1.2          | 98       | No Change.....                                 | 41                       | 0                          | Overpulls easily. Low production. Continue monitoring.        |
| MENLO032  | 3/18/2014 10:53 |       | 43.1 | 34.3 | 0    | 22.6    | -1.2          | 98       | Closed Valve 1/2 turn or less.....             | 41                       | 0                          | Overpulls easily. Low production. Continue monitoring.        |
| MENLO032  | 04/08/14        | 10:17 | 47.4 | 34   | 0    | 18.6    | -1.1          | 97       | No Change.....                                 | 41                       | 0                          | Overpulls easily. Low production. Continue monitoring.        |
| MENLO032  | 5/9/2014 10:42  |       | 51.5 | 34.7 | 0.9  | 12.9    | -1.0          | 69       | No Change.....                                 | 41                       | 0                          | Overpulls easily. Low production. Continue monitoring.        |
| MENLO032  | 05/28/14        | 3:06  | 48.4 | 35.8 | 0    | 15.8    | -1.2          | 78       | Two ports                                      | 41                       | 0                          | Overpulls easily. Low production. Continue monitoring.        |
| MENLO033  | 1/15/2014 10:58 |       | 44.5 | 33.6 | 0    | 21.9    | -0.4          | 81       | Closed Valve 1/2 turn or less.....             | No data                  |                            | Sound and remonitor. Overpulls easily.                        |
| MENLO033  | 2/10/2014 12:22 |       | 46.9 | 32.7 | 0    | 20.4    | -0.6          | 81       | Closed Valve 1/2 turn or less.....             | No data                  |                            | Sound and remonitor. Overpulls easily.                        |
| MENLO033  | 3/18/2014 11:02 |       | 43.2 | 33.5 | 0    | 23.3    | -0.8          | 72       | Closed Valve 1/2 turn or less.....             | No data                  |                            | Sound and remonitor. Overpulls easily.                        |
| MENLO033  | 04/08/14        | 10:34 | 41.7 | 31   | 0    | 27.3    | -0.4          | 76       | No Change.....                                 | No data                  |                            | Sound and remonitor. Overpulls easily.                        |
| MENLO033  | 5/9/2014 11:58  |       | 36.3 | 30.2 | 0    | 35.3    | -0.5          | 86       | Closed Valve 1/2 turn or less.....             | No data                  |                            | Sound and remonitor. Overpulls easily.                        |
| MENLO033  | 05/28/14        | 3:28  | 63.2 | 36.7 | 0    | 0.1     | 0.1           |          |                                                | No data                  |                            | Sound and remonitor. Overpulls easily.                        |
| MENLO033  | 11/04/15        | 3:28  | 63.2 | 36.7 | 0    | 0.1     | 0.1           |          |                                                | No data                  |                            | Vacuum - Y                                                    |
| MENLO034  | 1/15/2014 10:42 |       | 0.3  | 3.6  | 15.5 | 80.6    | -2.2          | 67       | Closed Valve 1/2 turn or less.....             | 35                       |                            | Decom. Not flowing. Damaged.                                  |
| MENLO034  | 1/15/2014 10:45 |       | 0.2  | 2.6  | 17.4 | 79.8    | -1.5          | 64       | No Change.....                                 | 19                       | 0                          | Decom. Not flowing. Damaged.                                  |
| MENLO034  | 2/10/2014 12:15 |       | 0.3  | 1.2  | 16.1 | 82.4    | -2.9          | 78       | Closed Valve 1/2 turn or less.....             | 19                       | 0                          | Decom. Not flowing. Damaged.                                  |
| MENLO034  | 2/10/2014 12:17 |       | 0.3  | 1    | 16.5 | 82.2    | -2.2          | 85       | No Change.....                                 | 19                       | 0                          | Decom. Not flowing. Damaged.                                  |
| MENLO034  | 3/18/2014 10:57 |       | 0.6  | 9.5  | 15.8 | 74.1    | -1.4          | 73       | Closed Valve 1/2 turn or less, Watering.....   | 19                       | 0                          | Decom. Not flowing. Damaged.                                  |
| MENLO034  | 3/18/2014 10:59 |       | 0.6  | 8.9  | 16.2 | 74.3    | -1.3          | 73       | No Change, Watering.....                       | 19                       | 0                          | Decom. Not flowing. Damaged.                                  |
| MENLO034  | 04/08/14        | 10:40 | 0.5  | 7    | 17.1 | 75.4    | -1.4          | 76       | Closed Valve 1/2 turn or less, Watering.....   | 19                       | 0                          | Decom. Not flowing. Damaged.                                  |
| MENLO034  | 04/08/14        | 10:43 | 0.6  | 7.4  | 16.1 | 75.9    | -0.8          | 75       | No Change, Watering.....                       | 19                       | 0                          | Decom. Not flowing. Damaged.                                  |
| MENLO034  | 5/9/2014 11:43  |       | 0.7  | 8.9  | 15.5 | 74.9    | -1.4          | 78       | Closed Valve 1/2 turn or less, Watering.....   | 19                       | 0                          | Decom. Not flowing. Damaged.                                  |
| MENLO034  | 5/9/2014 11:45  |       | 0.6  | 8.3  | 16   | 75.1    | -0.9          | 72       | No Change, Watering.....                       | 19                       | 0                          | Decom. Not flowing. Damaged.                                  |
| MENLO034  | 05/28/14        | 3:42  | 40.9 | 32.8 | 0    | 26.3    | 0.1           |          |                                                | 19                       | 0                          | Decom. Not flowing. Damaged.                                  |
| MENLO035  | 1/15/2014 10:51 |       | 30.3 | 30   | 0.2  | 29.5    | -1.3          | 88       | Closed Valve 1/2 turn or less.....             | 44                       | 5.76                       | Partially watered in. Overpulls easily. Continue monitoring.  |
| MENLO035  | 2/10/2014 12:27 |       | 38.8 | 31   | 0    | 30.2    | -0.7          | 87       | Closed Valve 1/2 turn or less.....             | 44                       | 5.76                       | Partially watered in. Overpulls easily. Continue monitoring.  |
| MENLO035  | 2/10/2014 11:07 |       | 40.8 | 29.7 | 0    | 29.5    | -1.4          | 80       | Closed Valve 1/2 turn or less.....             | 44                       | 5.76                       | Partially watered in. Overpulls easily. Continue monitoring.  |
| MENLO035  | 04/08/14        | 10:48 | 40.5 | 29.2 | 0.5  | 29.8    | -1.0          | 86       | Closed Valve 1/2 turn or less.....             | 44                       | 5.76                       | Partially watered in. Overpulls easily. Continue monitoring.  |
| MENLO035  | 4/30/14         | 12:16 | 43.3 | 29   | 0    | 27.7    | -0.7          | 79       | Closed Valve 1/2 turn or less.....             | 44                       | 5.76                       | Partially watered in. Overpulls easily. Continue monitoring.  |
| MENLO035  | 05/30/14        | 9:09  | 45.8 | 31.1 | 0.3  | 22.8    | -0.5          | 82       | Closed Valve 1/2 turn or less.....             | 44                       | 5.76                       | Partially watered in. Overpulls easily. Continue monitoring.  |
| MENLO036  | 2/10/2014 10:54 |       | 43.6 | 29.4 | 0    | 27      | -0.5          | 74       | Closed Valve 1/2 turn or less.....             | 48.5                     | 5.89                       | Partially watered in. Overpulls easily. Continue monitoring.  |
| MENLO036  | 3/18/2014 11:21 |       | 36.4 | 29.1 | 0    | 34.5    | -0.5          | 81       | Closed Valve 1/2 turn or less.....             | 48.5                     | 5.89                       | Partially watered in. Overpulls easily. Continue monitoring.  |
| MENLO036  | 3/18/2014 11:20 |       | 52.2 | 30.2 | 0    | 17.6    | -0.3          | 80       | No Change.....                                 | 48.5                     | 5.89                       | Partially watered in. Overpulls easily. Continue monitoring.  |
| MENLO036  | 04/08/14        | 9:48  | 48.5 | 30.7 | 0    | 20.8    | -1.5          | 68       | Closed Valve 1/2 turn or less.....             | 48.5                     | 5.89                       | Partially watered in. Overpulls easily. Continue monitoring.  |

| Device ID | Date            | Time  | CH4  | CO2  | O2   | Balance | Static Press. | Gas Temp | Fortistar Comments                           | Total Depth of Well (ft) | Feet of Water in Well (ft) | C&I Comments                                                 |
|-----------|-----------------|-------|------|------|------|---------|---------------|----------|----------------------------------------------|--------------------------|----------------------------|--------------------------------------------------------------|
| MENLO036  | 5/9/2014 12:07  |       | 56.9 | 31.6 | 0    | 11.5    | -0.2          | 82       | No Change.....                               | 48.5                     | 5.89                       | Partially watered in. Overpulls easily. Continue monitoring. |
| MENLO036  | 05/20/14        | 9:22  | 61.6 | 32.5 | 0.2  | 5.7     | 0.4           | 66       |                                              | 48.5                     | 5.89                       | Partially watered in. Overpulls easily. Continue monitoring. |
| MENLO038  | 1/15/2014 11:11 |       | 56.7 | 34.4 | 0    | 8.9     | -4.8          | 80       | No Change.....                               | 18.1                     | 0                          | Damaged. Shallow. Continue monitoring.                       |
| MENLO038  | 2/10/2014 12:47 |       | 58   | 33.9 | 0    | 8.1     | -1.7          | 80       | Opened Valve 1/2 turn or less.....           | 18.1                     | 0                          | Damaged. Shallow. Continue monitoring.                       |
| MENLO038  | 3/18/2014 9:41  |       | 48.6 | 33.8 | 0    | 17.6    | -3.1          | 79       | Closed Valve 1/2 turn or less.....           | 18.3                     | 0                          | Damaged. Shallow. Continue monitoring.                       |
| MENLO038  | 04/08/14        | 9:22  | 59.8 | 34.6 | 0    | 5.6     | -0.2          | 77       | Opened Valve 1/2 turn or less.....           | 18.3                     | 0                          | Damaged. Shallow. Continue monitoring.                       |
| MENLO038  | 5/9/2014 12:48  |       | 60.3 | 34.3 | 0    | 5.4     | -1.2          | 80       | Opened Valve 1/2 turn or less.....           | 18.3                     | 0                          | Damaged. Shallow. Continue monitoring.                       |
| MENLO038  | 05/28/14        | 10:19 | 57.6 | 34.7 | 0    | 2.7     | -2.3          |          |                                              | 18.3                     | 0                          | Damaged. Shallow. Continue monitoring.                       |
| MENLO038  | 1/15/2014 11:13 |       | 49.6 | 32.6 | 1    | 16.8    | -3.2          | 57       | Closed Valve 1/2 turn or less.....           | 32                       | 0                          | Overpulls easily. Continue monitoring.                       |
| MENLO038  | 2/10/2014 12:50 |       | 53.1 | 32.7 | 0    | 14.2    | -0.3          | 73       | No Change.....                               | 32                       | 0                          | Overpulls easily. Continue monitoring.                       |
| MENLO038  | 3/18/2014 9:09  |       | 53   | 32.2 | 0    | 14.8    | -1.5          | 65       | No Change.....                               | 32                       | 0                          | Overpulls easily. Continue monitoring.                       |
| MENLO039  | 04/08/14        | 8:59  | 53.5 | 33.2 | 0    | 13.3    | -3.8          | 71       | No Change.....                               | 32                       | 0                          | Overpulls easily. Continue monitoring.                       |
| MENLO039  | 5/9/2014 12:25  |       | 47.8 | 31.4 | 0    | 20.8    | -1.7          | 76       | No Change.....                               | 32                       | 0                          | Overpulls easily. Continue monitoring.                       |
| MENLO039  | 05/28/14        | 10:37 | 46.8 | 30.4 | 0    | 22.8    | -2.5          |          |                                              | 32                       | 0                          | Overpulls easily. Continue monitoring.                       |
| MENLO040  | 1/15/2014 11:17 |       | 62.9 | 37   | 0    | 0.1     | -0.4          | 74       | No Change.....                               | 29.5                     | 0                          | Shallow. Continue monitoring.                                |
| MENLO040  | 2/10/2014 12:54 |       | 59.7 | 35.4 | 0    | 4.9     | -0.2          | 78       | No Change.....                               | 29.5                     | 0                          | Shallow. Continue monitoring.                                |
| MENLO040  | 3/18/2014 9:31  |       | 62.2 | 37.7 | 0    | 0.1     | -0.1          | 67       | Opened Valve 1/2 turn or less.....           | 29.5                     | 0                          | Shallow. Continue monitoring.                                |
| MENLO040  | 04/08/14        | 9:16  | 62.3 | 37.6 | 0    | 0.1     | -0.4          | 74       | Opened Valve 1/2 turn or less.....           | 29.5                     | 0                          | Shallow. Continue monitoring.                                |
| MENLO040  | 5/9/2014 12:43  |       | 62.9 | 37   | 0    | 0.1     | -0.3          | 86       | No Change.....                               | 29.5                     | 0                          | Shallow. Continue monitoring.                                |
| MENLO040  | 05/28/14        | 12:20 | 39.8 | 30.8 | 0    | 29.4    | -0.2          |          |                                              | 29.5                     | 0                          | Shallow. Continue monitoring.                                |
| MENLO040  | 05/31/14        | 10:06 | 40.2 | 30.8 | 0.2  | 28.8    | 0.0           | 87       |                                              | 29.5                     | 0                          | Shallow. Continue monitoring.                                |
| MENLO041  | 1/15/2014 11:31 |       | 42.3 | 31.4 | 0    | 26.3    | -1.4          | 93       | Closed Valve 1/2 turn or less.....           | 47                       | 0                          | Overpulled. Continue monitoring.                             |
| MENLO041  | 2/10/2014 13:11 |       | 42.7 | 29.8 | 0    | 27.5    | -1.0          | 86       | Closed Valve 1/2 turn or less.....           | 47                       | 0                          | Overpulled. Continue monitoring.                             |
| MENLO041  | 3/18/2014 9:17  |       | 43.3 | 30.4 | 0    | 26.3    | -0.9          | 72       | Closed Valve 1/2 turn or less.....           | 47                       | 0                          | Overpulled. Continue monitoring.                             |
| MENLO041  | 04/08/14        | 9:06  | 46   | 29.9 | 0    | 24.1    | -0.6          | 87       | Closed Valve 1/2 turn or less.....           | 47                       | 0                          | Overpulled. Continue monitoring.                             |
| MENLO041  | 5/9/2014 12:29  |       | 45.8 | 30.1 | 0    | 24.1    | -0.5          | 90       | No Change.....                               | 47                       | 0                          | Overpulled. Continue monitoring.                             |
| MENLO041  | 05/28/14        | 11:30 | 45.7 | 29.3 | 0    | 25      | -0.8          |          | Two ports                                    | 47                       | 0                          | Overpulled. Continue monitoring.                             |
| MENLO042  | 1/15/2014 11:23 |       | 31.9 | 29.5 | 0    | 38.6    | -0.9          | 65       | Closed Valve 1/2 turn or less.....           | 75.75                    | 154                        | Overpulled. Continue monitoring.                             |
| MENLO042  | 2/10/2014 13:02 |       | 30.8 | 28.2 | 0    | 41      | -0.4          | 65       | Closed Valve 1/2 turn or less.....           | 75.75                    | 154                        | Overpulled. Continue monitoring.                             |
| MENLO042  | 3/18/2014 9:20  |       | 31.8 | 28.8 | 0    | 39.4    | -1.3          | 67       | Closed Valve 1/2 turn or less.....           | 75.75                    | 154                        | Overpulled. Continue monitoring.                             |
| MENLO042  | 04/08/14        | 9:10  | 31.3 | 28.6 | 0    | 40.1    | -0.7          | 76       | Closed Valve 1/2 turn or less.....           | 75.75                    | 154                        | Overpulled. Continue monitoring.                             |
| MENLO042  | 5/9/2014 12:37  |       | 31.1 | 28.1 | 0    | 40.8    | -0.4          | 78       | Closed Valve 1/2 turn or less.....           | 75.75                    | 154                        | Overpulled. Continue monitoring.                             |
| MENLO042  | 05/28/14        | 11:51 | 30.5 | 27.1 | 0    | 42.4    | -0.6          |          | one port                                     | 75.75                    | 154                        | Overpulled. Continue monitoring.                             |
| MENLO043  | 1/15/2014 11:20 |       | 50.6 | 37   | 0    | 12.4    | -3.3          | 97       | No Change.....                               | 60.17                    | 0                          | Sound. Remonitor.                                            |
| MENLO043  | 2/10/2014 12:58 |       | 52.1 | 35.7 | 0    | 12.2    | -1.1          | 95       | Opened Valve 1/2 turn or less.....           | 60.17                    | 0                          | Sound. Remonitor.                                            |
| MENLO043  | 3/18/2014 9:24  |       | 46.7 | 35.5 | 0    | 17.8    | -2.4          | 92       | Closed Valve 1/2 turn or less.....           | 60.17                    | 0                          | Sound. Remonitor.                                            |
| MENLO043  | 04/08/14        | 9:13  | 58.4 | 37.4 | 0    | 4.3     | -1.1          | 92       | No Change.....                               | 60.17                    | 0                          | Sound. Remonitor.                                            |
| MENLO043  | 5/9/2014 12:40  |       | 58.4 | 36.9 | 0    | 4.7     | -1.0          | 95       | Opened Valve 1/2 turn or less.....           | 60.17                    | 0                          | Sound. Remonitor.                                            |
| MENLO043  | 05/28/14        | 12:06 | 55.5 | 36.4 | 0    | 7.1     | -1.3          |          |                                              | 60.17                    | 0                          | Sound. Remonitor.                                            |
| MENLO043  | 3/10/4/15       | 12:06 | 56.5 | 36.4 | 0    | 7.1     | -1.3          |          |                                              | 61.6                     | 59.6                       | Vacuum - Y                                                   |
| MENLO044  | 1/15/2014 11:28 |       | 36.4 | 35.3 | 0    | 30.3    | -0.5          | 75       | Closed Valve 1/2 turn or less.....           | 69.5                     | 0                          | Overpulled. Continue monitoring.                             |
| MENLO044  | 2/10/2014 13:07 |       | 35.1 | 32   | 0    | 32.9    | -0.5          | 78       | Closed Valve 1/2 turn or less.....           | 69.5                     | 0                          | Overpulled. Continue monitoring.                             |
| MENLO044  | 3/18/2014 9:14  |       | 40.5 | 28.9 | 0.8  | 29.8    | -1.0          | 69       | Closed Valve 1/2 turn or less.....           | 69.5                     | 0                          | Overpulled. Continue monitoring.                             |
| MENLO044  | 04/08/14        | 9:08  | 36.5 | 31.3 | 0    | 32.2    | -0.7          | 77       | Closed Valve 1/2 turn or less.....           | 69.5                     | 0                          | Overpulled. Continue monitoring.                             |
| MENLO044  | 5/9/2014 12:33  |       | 45.2 | 30   | 0    | 24.8    | -0.3          | 76       | Closed Valve 1/2 turn or less.....           | 69.5                     | 0                          | Overpulled. Continue monitoring.                             |
| MENLO045  | 05/28/14        | 11:24 | 36.4 | 30.8 | 0    | 32.8    | -0.3          | 80       | Closed Valve 1/2 turn or less.....           | 69.5                     | 0                          | Overpulled. Continue monitoring.                             |
| MENLO045  | 1/15/2014 11:39 |       | 0.4  | 3.5  | 15.9 | 80.2    | -2.0          | 80       | Closed Valve 1/2 turn or less.....           | 15                       | 3                          | Decom. Not flowing. Damaged.                                 |
| MENLO045  | 2/10/2014 11:41 |       | 0.4  | 3.5  | 16.7 | 79.4    | -0.9          | 80       | No Change.....                               | 15                       | 3                          | Decom. Not flowing. Damaged.                                 |
| MENLO045  | 1/15/2014 13:23 |       | 0.4  | 1.2  | 15.8 | 82.6    | -1.9          | 64       | Closed Valve 1/2 turn or less. Watering..... | 15                       | 3                          | Decom. Not flowing. Damaged.                                 |
| MENLO045  | 2/10/2014 13:26 |       | 0.4  | 1.3  | 15.3 | 83      | -1.5          | 63       | No Change. Watering.....                     | 15                       | 3                          | Decom. Not flowing. Damaged.                                 |
| MENLO045  | 3/18/2014 11:11 |       | 0.4  | 6.6  | 17   | 76      | -1.6          | 69       | Closed Valve 1/2 turn or less. Watering..... | 15                       | 3                          | Decom. Not flowing. Damaged.                                 |
| MENLO045  | 3/18/2014 11:13 |       | 0.4  | 6.3  | 17.1 | 76.2    | -0.6          | 69       | No Change. Watering.....                     | 15                       | 3                          | Decom. Not flowing. Damaged.                                 |
| MENLO045  | 04/08/14        | 9:49  | 0.3  | 4.1  | 19   | 76.6    | -1.0          | 85       | Closed Valve 1/2 turn or less. Watering..... | 15                       | 3                          | Decom. Not flowing. Damaged.                                 |
| MENLO045  | 04/08/14        | 9:51  | 0.3  | 4.1  | 19   | 76.4    | -1.0          | 85       | No Change. Watering.....                     | 15                       | 3                          | Decom. Not flowing. Damaged.                                 |
| MENLO045  | 5/9/2014 12:10  |       | 1.3  | 9.3  | 15.6 | 79.4    | -1.9          | 72       | Closed Valve 1/2 turn or less. Watering..... | 15                       | 3                          | Decom. Not flowing. Damaged.                                 |
| MENLO046  | 04/08/14        |       | 1    | 8.9  | 15.7 | 74.4    | -1.1          | 73       | No Change. Watering.....                     | 15                       | 3                          | Decom. Not flowing. Damaged.                                 |
| MENLO046  | 1/15/2014 11:42 |       | 53.2 | 34.2 | 0.2  | 12.4    | -1.2          | 59       | No Change.....                               | 35                       | 18.9                       | Dewater and remonitor                                        |
| MENLO046  | 2/10/2014 10:47 |       | 35.5 | 22.5 | 2.6  | 39.4    | -3.2          | 57       | Closed Valve 1/2 turn or less.....           | 35                       | 18.9                       | Dewater and remonitor                                        |
| MENLO046  | 3/18/2014 9:04  |       | 30.9 | 21.9 | 3.1  | 44.1    | -7.1          | 60       | Closed Valve 1/2 turn or less.....           | 35                       | 18.9                       | Dewater and remonitor                                        |
| MENLO046  | 04/08/14        | 9:08  | 39.8 | 23.4 | 2.1  | 34.7    | -1.8          | 68       | Closed Valve 1/2 turn or less.....           | 35                       | 18.9                       | Dewater and remonitor                                        |
| MENLO046  | 5/9/2014 10:17  |       | 32.3 | 21.3 | 3    | 43.4    | -1.7          |          | Closed Valve 1/2 turn or less.....           | 35                       | 18.9                       | Dewater and remonitor                                        |
| MENLO046  | 05/29/14        | 13:16 | 28.3 | 19.7 | 3    | 48.2    | -0.6          | N/A      | No system pressure port                      | 35                       | 18.9                       | Dewater and remonitor                                        |
| MENLO046  | 05/27/14        | 10:42 | 0.8  | 9.7  | 13.9 | 75.6    | 0.0           | 108      | Well watered in, no gas to sample            | 65                       | 22                         | Dewater and remonitor                                        |
| MENLO042  | 3/15/2014 0:00  |       | ND   | ND   | ND   | ND      | ND            | ND       | Well watered in, no gas to sample            | 65                       | 22                         | Dewater and remonitor                                        |
| MENLO042  | 3/15/2014 0:00  |       | ND   | ND   | ND   | ND      | ND            | ND       | Well watered in, no gas to sample            | 65                       | 22                         | Dewater and remonitor                                        |
| MENLO042  | 3/15/2014 0:00  |       | ND   | ND   | ND   | ND      | ND            | ND       | Well watered in, no gas to sample            | 65                       | 22                         | Dewater and remonitor                                        |
| MENLO042  | 04/08/14        | 6:00  | ND   | ND   | ND   | ND      | ND            | ND       | Well watered in, no gas to sample            | 65                       | 22                         | Dewater and remonitor                                        |
| MENLO042  | 4/8/2014 0:00   |       | ND   | ND   | ND   | ND      | ND            | ND       | Well watered in, no gas to sample            | 47                       | 4                          | Remonitor                                                    |
| MENLO043  | 1/15/2014 0:00  |       | ND   | ND   | ND   | ND      | ND            | ND       | Well watered in, no gas to sample            | 47                       | 4                          | Remonitor                                                    |
| MENLO043  | 2/10/2014 0:00  |       | ND   | ND   | ND   | ND      | ND            | ND       | Well watered in, no gas to sample            | 47                       | 4                          | Remonitor                                                    |
| MENLO043  | 3/18/2014 0:00  |       | ND   | ND   | ND   | ND      | ND            | ND       | Well watered in, no gas to sample            | 47                       | 4                          | Remonitor                                                    |

| Device ID | Date            | Time  | CH4  | CO2  | O2   | Balance | Static Press. | Gas Temp | Foristat Comments                             | Total Depth of Well (ft) | Feet of Water in Well (ft) | CH&L Comments                              |
|-----------|-----------------|-------|------|------|------|---------|---------------|----------|-----------------------------------------------|--------------------------|----------------------------|--------------------------------------------|
| MENLO0A3  | 04/08/14        | 0:00  | ND   | ND   | ND   | ND      | ND            | ND       | Well watered in, no gas to sample             | 47                       | 4                          | Remonitor                                  |
| MENLO0A3  | 4/8/2014 0:00   |       | ND   | ND   | ND   | ND      | ND            | ND       | Well watered in, no gas to sample             | 47                       | 4                          | Remonitor                                  |
| MENLO0A4  | 3/15/2014 0:00  |       | ND   | ND   | ND   | ND      | ND            | ND       | Well watered in, no gas to sample             | 29                       | 2                          | Remonitor                                  |
| MENLO0A4  | 2/10/2014 0:00  |       | ND   | ND   | ND   | ND      | ND            | ND       | Well watered in, no gas to sample             | 29                       | 2                          | Remonitor                                  |
| MENLO0A4  | 3/18/2014 0:00  |       | ND   | ND   | ND   | ND      | ND            | ND       | Well watered in, no gas to sample             | 29                       | 2                          | Remonitor                                  |
| MENLO0A4  | 04/08/14        | 0:00  | ND   | ND   | ND   | ND      | ND            | ND       | Well watered in, no gas to sample             | 29                       | 2                          | Remonitor                                  |
| MENLO0A4  | 4/8/2014 0:00   |       | ND   | ND   | ND   | ND      | ND            | ND       | Well watered in, no gas to sample             | 29                       | 2                          | Remonitor                                  |
| MENLO0B1  | 2/11/2014 9:55  |       | 43.2 | 32.2 | 0.2  | 24.4    | -1.4          | 65       | Closed Valve 1/2 turn or less                 | Flanged                  |                            | Remove large and sound                     |
| MENLO0B1  | 3/18/2014 8:07  |       | 44.3 | 31.8 | 0.2  | 23.7    | -0.3          | 64       | Closed Valve 1/2 turn or less                 | Flanged                  |                            | Remove large and sound                     |
| MENLO0B1  | 5/1/2014 12:48  | 8:05  | 57   | 32.5 | 0    | 13      | -0.4          | 63       | No Change                                     | Flanged                  |                            | Remove large and sound                     |
| MENLO0B1  | 05/01/14 18     |       | 54.5 | 32.1 | 0    | 13      | -0.4          | 63       | No Change                                     | Flanged                  |                            | Remove large and sound                     |
| MENLO0B1  | 05/01/14 18     |       | 49.7 | 32.1 | 0    | 18.2    | -0.5          | 71       | No Change                                     | Flanged                  |                            | Remove large and sound                     |
| MENLO0B1  | 12/47           | 12:47 | 49.7 | 32.1 | 0    | 18.2    | -0.5          | 71       | No Change                                     | 36.75                    | 18.43                      | Vacuum, Y                                  |
| MENLO0B2  | 1/16/2014 9:33  |       | 55.1 | 34.2 | 0    | 10.7    | -7.3          | 60       | No Change                                     | 22.75                    | 6.95                       | Partially watered in, Continue monitoring. |
| MENLO0B2  | 3/18/2014 9:59  |       | 56.1 | 33.9 | 0    | 10.1    | -5.4          | 64       | No Change                                     | 22.75                    | 6.95                       | Partially watered in, Continue monitoring. |
| MENLO0B2  | 04/08/14        | 8:09  | 63   | 34.1 | 0    | 5.9     | -5.7          | 56       | No Change                                     | 22.75                    | 6.95                       | Partially watered in, Continue monitoring. |
| MENLO0B2  | 5/12/2014 9:02  |       | 50.1 | 33.3 | 0.1  | 15.2    | -10.6         | 75       | No Change                                     | 22.75                    | 6.95                       | Partially watered in, Continue monitoring. |
| MENLO0B3  | 05/30/14        | 8:16  | 50.9 | 33.8 | 0.1  | 16.5    | -8.7          | 71       | No wellhead port Possible system side only    | 22.75                    | 6.95                       | Partially watered in, Continue monitoring. |
| MENLO0B3  | 1/16/2014 9:37  |       | 65.2 | 34.6 | 0    | 0.2     | -0.8          | 57       | Opened Valve 1/2 turn or less                 | 33                       | 16.44                      | Dewater and remonitor                      |
| MENLO0B3  | 04/08/14        |       | 62.8 | 34.6 | 0.1  | 0.2     | -0.8          | 57       | Opened Valve 1/2 turn or less                 | 33                       | 16.44                      | Dewater and remonitor                      |
| MENLO0B3  | 3/18/2014 8:12  |       | 62.8 | 35.3 | 0.2  | 0.1     | -0.9          | 57       | Opened Valve 1/2 turn or less                 | 33                       | 16.44                      | Dewater and remonitor                      |
| MENLO0B3  | 04/08/14        | 8:11  | 65.3 | 34.8 | 0    | 0.1     | -0.4          | 66       | Opened Valve 1/2 turn or less                 | 33                       | 16.44                      | Dewater and remonitor                      |
| MENLO0B3  | 5/12/2014 9:06  |       | 65.4 | 34.5 | 0    | 0.1     | -0.4          | 68       | Opened Valve 1/2 turn or less                 | 33                       | 16.44                      | Dewater and remonitor                      |
| MENLO0B3  | 05/30/14        | 15:59 | 64.7 | 34.8 | 0.3  | 0.2     | -0.7          | 78       | Closed Valve 1/2 turn or less                 | 33                       | 16.44                      | Dewater and remonitor                      |
| MENLO0B4  | 1/16/2014 9:41  |       | 61.2 | 32.3 | 1.6  | 4.9     | -11.4         | 56       | Closed Valve 1/2 turn or less                 | 48                       | 28.38                      | Dewater and remonitor                      |
| MENLO0B4  | 2/11/2014 10:14 |       | 0.3  | 1    | 15.4 | 83.3    | -3.7          | 58       | Closed Valve 1/2 turn or less                 | 48                       | 28.38                      | Dewater and remonitor                      |
| MENLO0B4  | 3/18/2014 8:24  |       | 0.3  | 1    | 16.3 | 82.4    | -2.1          | 59       | No Change                                     | 48                       | 28.38                      | Dewater and remonitor                      |
| MENLO0B4  | 3/18/2014 8:15  | 8:18  | 62.9 | 32.4 | 1.2  | 3.5     | -8.8          | 58       | No Change                                     | 48                       | 28.38                      | Dewater and remonitor                      |
| MENLO0B4  | 04/08/14        |       | 61.7 | 31.2 | 1.6  | 5.5     | -9.8          | 62       | No Change                                     | 48                       | 28.38                      | Dewater and remonitor                      |
| MENLO0B4  | 5/12/2014 10    |       | 59.6 | 31.4 | 3.1  | 1.7     | -10.4         | 64       | No Change                                     | 48                       | 28.38                      | Dewater and remonitor                      |
| MENLO0B4  | 05/30/14 09:32  | 8:04  | 29.6 | 14.9 | 12.5 | 43.7    | -14.7         | 64       | Closed Valve 1/2 turn or less                 | 48                       | 28.38                      | Dewater and remonitor                      |
| MENLO0B5  | 1/16/2014 9:47  |       | 2    | 15.5 | 6.2  | 82.3    | -5.9          | 67       | Closed Valve 1/2 turn or less                 | 35                       | 24                         | Dewater and remonitor                      |
| MENLO0B5  | 1/16/2014 9:49  |       | 0.1  | 1.9  | 15.9 | 82.1    | -3.6          | 67       | No Change                                     | 35                       | 24                         | Dewater and remonitor                      |
| MENLO0B5  | 2/11/2014 10:22 |       | 0.3  | 0.8  | 16.4 | 82.5    | -6.4          | 78       | Closed Valve 1/2 turn or less                 | 35                       | 24                         | Dewater and remonitor                      |
| MENLO0B5  | 2/11/2014 10:24 |       | 0.3  | 0.8  | 15.5 | 83.4    | -4.4          | 76       | No Change                                     | 35                       | 24                         | Dewater and remonitor                      |
| MENLO0B5  | 3/18/2014 8:23  |       | 0.4  | 4.6  | 17.9 | 77.1    | -8.4          | 56       | Closed Valve 1/2 turn or less                 | 35                       | 24                         | Dewater and remonitor                      |
| MENLO0B5  | 3/18/2014 8:24  |       | 0.1  | 1.8  | 20.1 | 78      | -1.5          | 60       | No Change                                     | 35                       | 24                         | Dewater and remonitor                      |
| MENLO0B5  | 04/08/14        | 8:30  | 0.3  | 4.3  | 19.1 | 76.3    | -2.3          | 64       | Closed Valve 1/2 turn or less                 | 35                       | 24                         | Dewater and remonitor                      |
| MENLO0B5  | 04/08/14        | 8:31  | 0.3  | 4.6  | 19   | 76.1    | -0.8          | 66       | No Change                                     | 35                       | 24                         | Dewater and remonitor                      |
| MENLO0B5  | 5/1/2014 12:48  |       | 54.5 | 32.1 | 0    | 13      | -0.4          | 63       | Closed Valve 1/2 turn or less                 | 35                       | 24                         | Dewater and remonitor                      |
| MENLO0B5  | 5/12/2014 9:37  |       | 59.2 | 6.4  | 15.2 | 77.9    | -7.3          | 80       | No Change                                     | 35                       | 24                         | Dewater and remonitor                      |
| MENLO0B6  | 1/16/2014 9:51  |       | 59.2 | 32.9 | 0    | 7.9     | -7.9          | 89       | No Change                                     | 33                       | 17.8                       | Dewater and remonitor                      |
| MENLO0B6  | 2/11/2014 10:26 |       | 60.5 | 30.3 | 0.3  | 8.9     | -5.7          | 79       | No Change                                     | 33                       | 17.8                       | Dewater and remonitor                      |
| MENLO0B6  | 3/18/2014 8:25  |       | 54.2 | 29.5 | 0.2  | 16.1    | -1.7          | 61       | No Change                                     | 33                       | 17.8                       | Dewater and remonitor                      |
| MENLO0B6  | 04/08/14        | 8:22  | 57.2 | 29.7 | 0.4  | 12.7    | -0.8          | 62       | No Change                                     | 33                       | 17.8                       | Dewater and remonitor                      |
| MENLO0B6  | 5/12/2014 9:41  |       | 51.4 | 29.4 | 0.1  | 18.1    | -11.4         | 82       | No Change                                     | 33                       | 17.8                       | Dewater and remonitor                      |
| MENLO0B6  | 05/30/14        | 15:16 | 51.5 | 28.1 | 0.4  | 20      | -0.1          | 82       | Closed Valve 1/2 turn or less                 | 33                       | 17.8                       | Dewater and remonitor                      |
| MENLO0B7  | 1/16/2014 9:55  |       | 0.2  | 2.5  | 15.6 | 81.7    | -3.8          | 60       | No Change                                     | 43.5                     | 28.79                      | Dewater and remonitor                      |
| MENLO0B7  | 3/18/2014 9:57  |       | 0.2  | 2.6  | 15   | 82.2    | -2.1          | 62       | No Change                                     | 43.5                     | 28.79                      | Dewater and remonitor                      |
| MENLO0B7  | 04/08/14        |       | 0.2  | 2.8  | 15.2 | 81.9    | -3.8          | 62       | Closed Valve 1/2 turn or less                 | 43.5                     | 28.79                      | Dewater and remonitor                      |
| MENLO0B7  | 2/11/2014 9:38  |       | 0.2  | 0.8  | 15.5 | 83.5    | -3.8          | 57       | No Change                                     | 43.5                     | 28.79                      | Dewater and remonitor                      |
| MENLO0B7  | 3/18/2014 8:28  |       | 0.4  | 4.5  | 17.3 | 77.8    | -4.3          | 61       | Closed Valve 1/2 turn or less                 | 43.5                     | 28.79                      | Dewater and remonitor                      |
| MENLO0B7  | 3/18/2014 8:30  |       | 0.2  | 3.5  | 17.8 | 78.5    | -0.9          | 64       | No Change                                     | 43.5                     | 28.79                      | Dewater and remonitor                      |
| MENLO0B7  | 04/08/14        | 8:35  | 0.3  | 2.9  | 19.6 | 77.2    | -1.0          | 64       | Closed Valve 1/2 turn or less                 | 43.5                     | 28.79                      | Dewater and remonitor                      |
| MENLO0B7  | 04/08/14        | 8:37  | 0.3  | 4.6  | 18.6 | 76.5    | -0.7          | 64       | No Change                                     | 43.5                     | 28.79                      | Dewater and remonitor                      |
| MENLO0B7  | 5/12/2014 9:36  |       | 0.4  | 6.8  | 15.5 | 77.3    | -6.2          | 81       | Closed Valve 1/2 turn or less                 | 43.5                     | 28.79                      | Dewater and remonitor                      |
| MENLO0B7  | 5/12/2014 9:38  |       | 0.5  | 7    | 15.6 | 76.9    | -2.3          | 84       | No Change                                     | 43.5                     | 28.79                      | Dewater and remonitor                      |
| MENLO0B7  | 05/29/14        | 16:22 | 12   | 6.3  | 16.9 | 64.8    | -14.3         | 93       | No Change                                     | 43.5                     | 28.79                      | Dewater and remonitor                      |
| MENLO0B8  | 1/16/2014 10:02 |       | 0.2  | 2.4  | 16   | 81.4    | -4.9          | 66       | Closed Valve 1/2 turn or less                 | 48                       | 28.38                      | Dewater and remonitor                      |
| MENLO0B8  | 2/11/2014 9:39  |       | 0.2  | 2.4  | 15.9 | 83.6    | -5.6          | 69       | No Change                                     | 48                       | 28.38                      | Dewater and remonitor                      |
| MENLO0B8  | 3/18/2014 8:35  |       | 0.3  | 4.5  | 15.9 | 83.3    | -4.6          | 70       | No Change                                     | 48                       | 28.38                      | Dewater and remonitor                      |
| MENLO0B8  | 2/11/2014 10:41 |       | 0.3  | 0.9  | 15.5 | 83.3    | -4.6          | 70       | No Change                                     | 48                       | 28.38                      | Dewater and remonitor                      |
| MENLO0B8  | 3/18/2014 8:40  |       | 0.4  | 4.9  | 16.9 | 82      | -2.6          | 62       | Closed Valve 1/2 turn or less                 | 48                       | 28.38                      | Dewater and remonitor                      |
| MENLO0B8  | 3/18/2014 8:42  |       | 0.3  | 4.6  | 17.5 | 77.6    | -0.6          | 66       | No Change                                     | 48                       | 28.38                      | Dewater and remonitor                      |
| MENLO0B8  | 04/08/14        | 8:40  | 0.3  | 4.2  | 18.7 | 76.8    | -2.3          | 66       | Closed Valve 1/2 turn or less                 | 48                       | 28.38                      | Dewater and remonitor                      |
| MENLO0B8  | 04/08/14        | 8:42  | 0.2  | 2.6  | 19.5 | 77.7    | -1.1          | 66       | No Change                                     | 48                       | 28.38                      | Dewater and remonitor                      |
| MENLO0B8  | 5/12/2014 9:44  |       | 0.6  | 6.7  | 15.9 | 76.8    | -9.7          | 75       | Closed Valve 1/2 turn or less                 | 48                       | 28.38                      | Dewater and remonitor                      |
| MENLO0B8  | 5/12/2014 9:46  |       | 0.6  | 6.3  | 16.2 | 76.9    | -7.5          | 73       | No Change                                     | 48                       | 28.38                      | Dewater and remonitor                      |
| MENLO0B8  | 05/30/14        | 13:51 | 52.1 | 31.3 | 18.6 | 73.5    | 0.0           | 68       | one 2ft sample tube only no system side port. | 48                       | 28.38                      | Dewater and remonitor                      |
| MENLO0B9  | 1/16/2014 9:43  |       | 52.1 | 31.3 | 18.6 | 73.5    | 0.0           | 68       | No Change                                     | 48                       | 28.38                      | Dewater and remonitor                      |
| MENLO0B9  | 3/18/2014 8:35  |       | 52.1 | 33.6 | 0.2  | 70      | -5.6          | 70       | No Change                                     | 52                       | 31.3                       | Dewater and remonitor                      |
| MENLO0B9  | 3/18/2014 8:35  |       | 52.1 | 33.7 | 0.3  | 12.9    | -6.5          | 58       | No Change                                     | 52                       | 31.3                       | Dewater and remonitor                      |
| MENLO0B9  | 04/08/14        | 8:27  | 54.3 | 33.7 | 0.1  | 12.1    | -8.6          | 63       | No Change                                     | 52                       | 31.5                       | Dewater and remonitor                      |
| MENLO0B9  | 5/12/2014 9:51  |       | 45.9 | 31.7 | 0.4  | 22      | -14.5         | 70       | Closed Valve 1/2 turn or less                 | 52                       | 31.5                       | Dewater and remonitor                      |
| MENLO0B9  | 05/30/14        | 13:57 | 45.5 | 36.3 | 0.1  | 22.1    | -14.9         | 71       | No system side port                           | 52                       | 31.5                       | Dewater and remonitor                      |
| MENLO0C1  | 1/16/2014 11:16 |       | 45.4 | 36.3 | 0    | 18.3    | -0.6          | 56       | Closed Valve 1/2 turn or less                 | 45                       | 5.95                       | Partially watered in, Continue monitoring. |
| MENLO0C1  | 2/11/2014 11:45 |       | 45.5 | 34.1 | 0    | 20.4    | -1.1          | 64       | Closed Valve 1/2 turn or less                 | 45                       | 5.95                       | Partially watered in, Continue monitoring. |
| MENLO0C1  | 3/18/2014 7:19  | 7:21  | 64.4 | 35   | 0.4  | 0.2     | -0.4          | 58       | Opened Valve 1/2 turn or less                 | 45                       | 5.95                       | Partially watered in, Continue monitoring. |
| MENLO0C1  | 04/08/14        |       | 33.3 | 32   | 0    | 34.7    | -0.6          | 66       | Closed Valve 1/2 turn or less                 | 45                       | 5.95                       | Partially watered in, Continue monitoring. |
| MENLO0C1  | 5/12/2014 10:26 |       | 62.4 | 37.4 | 0    | 0.2     | -0.3          | 72       | Opened Valve 1/2 turn or less                 | 45                       | 5.95                       | Partially watered in, Continue monitoring. |

| Device ID | Date            | Time  | CH4  | CO2  | O2   | Balance | Static Press. | Gas Temp | Foristat Comments                        | Total Depth of Well (ft) | Feet of Water in Well (ft) | C&I Comments                                         |
|-----------|-----------------|-------|------|------|------|---------|---------------|----------|------------------------------------------|--------------------------|----------------------------|------------------------------------------------------|
| MEN0001   | 05/31/14        | 9:43  | 43.7 | 34.6 | 0.2  | 31.5    | -0.1          | 78       | No system side port                      | 45                       | 5.95                       | Partially watered in. Continue monitoring.           |
| MEN0002   | 1/16/2014 11:08 |       | 59.3 | 40.6 | 0.2  | 0.1     | -0.8          | 58       | Opened Valve 1/2 turn or less.           | No access                |                            | No access for sounding.                              |
| MEN0002   | 1/16/2014 11:50 |       | 55.7 | 38.1 | 0.1  | 6.2     | -1.1          | 58       | No Change.                               | No access                |                            | No access for sounding.                              |
| MEN0002   | 3/18/2014 7:25  |       | 56.4 | 38.9 | 0.1  | 4.6     | -1.2          | 48       | No Change.                               | No access                |                            | No access for sounding.                              |
| MEN0002   | 04/08/14        | 7:29  | 42.6 | 35.8 | 0    | 21.6    | -3.8          | 63       | Closed Valve 1/2 turn or less.           | No access                |                            | No access for sounding.                              |
| MEN0002   | 5/12/2014 10:30 |       | 49.7 | 36.3 | 0    | 14      | -1.0          | 74       | No Change.                               | No access                |                            | No access for sounding.                              |
| MEN0002   | 05/31/14        | 9:19  | 50.9 | 35.7 | 0.2  | 13.2    | -0.9          | 91       | No system side port                      | 45.2                     | 37.53                      | Vacuum - Y                                           |
| MEN0003   | 1/16/2014 11:20 |       | 59.3 | 40.6 | 0    | 0.1     | -0.4          | 60       | No Change.                               | 78.5                     | 5.6                        | Partially watered in. Continue monitoring.           |
| MEN0003   | 3/18/2014 7:22  |       | 62   | 37.5 | 0.1  | 0.4     | -0.2          | 62       | Opened Valve 1/2 turn or less.           | 78.5                     | 5.6                        | Partially watered in. Continue monitoring.           |
| MEN0003   | 04/08/14        | 7:24  | 56.9 | 37.8 | 0.3  | 5       | -0.6          | 70       | No Change.                               | 78.5                     | 5.6                        | Partially watered in. Continue monitoring.           |
| MEN0003   | 5/12/2014 10:34 |       | 52.6 | 36.2 | 0.2  | 0.1     | -0.8          | 66       | Opened Valve 1/2 turn or less.           | 78.5                     | 5.6                        | Partially watered in. Continue monitoring.           |
| MEN0004   | 1/16/2014 10:31 | 15:56 | 52.2 | 35.8 | 0    | 0.1     | -0.2          | 54       | No Change.                               | 80                       | 9                          | Partially watered in. Continue monitoring.           |
| MEN0004   | 1/16/2014 10:33 |       | 53   | 3.2  | 15.3 | 81.2    | -1.1          | 54       | Closed Valve 1/2 turn or less.           | 80                       | 9                          | Partially watered in. Continue monitoring.           |
| MEN0004   | 2/16/2014 11:08 |       | 0.3  | 3.2  | 15.4 | 81.1    | -1.8          | 54       | No Change.                               | 80                       | 9                          | Partially watered in. Continue monitoring.           |
| MEN0004   | 2/16/2014 11:10 |       | 0.1  | 0.7  | 16.3 | 82.9    | -0.8          | 58       | Closed Valve 1/2 turn or less.           | 80                       | 9                          | Partially watered in. Continue monitoring.           |
| MEN0004   | 3/18/2014 7:29  |       | 0.4  | 6.3  | 15.2 | 78.1    | -0.9          | 56       | Closed Valve 1/2 turn or less.           | 80                       | 9                          | Partially watered in. Continue monitoring.           |
| MEN0004   | 04/08/14        | 7:32  | 0.3  | 4.4  | 16.9 | 78.4    | -0.2          | 55       | No Change.                               | 80                       | 9                          | Partially watered in. Continue monitoring.           |
| MEN0004   | 04/08/14        | 7:33  | 0.3  | 4.4  | 19.4 | 75.9    | -2.0          | 63       | Closed Valve 1/2 turn or less.           | 80                       | 9                          | Partially watered in. Continue monitoring.           |
| MEN0004   | 04/08/14        |       | 0.3  | 4.9  | 18.8 | 76      | -0.8          | 64       | No Change.                               | 80                       | 9                          | Partially watered in. Continue monitoring.           |
| MEN0004   | 5/12/2014 10:05 |       | 0.5  | 6.2  | 17.3 | 76      | -1.6          | 69       | Closed Valve 1/2 turn or less.           | 80                       | 9                          | Partially watered in. Continue monitoring.           |
| MEN0004   | 5/12/2014 10:07 |       | 0.7  | 7.6  | 16.4 | 75.3    | -1.4          | 69       | No Change.                               | 80                       | 9                          | Partially watered in. Continue monitoring.           |
| MEN0004   | 5/12/2014 10:23 |       | 68.6 | 35   | 0.3  | 0.1     | -0.4          | 72       | No Change.                               | 80                       | 9                          | Partially watered in. Continue monitoring.           |
| MEN0004   | 05/31/14 2:20   | 9:23  | 59.4 | 40.8 | 0.2  | 13.4    | -0.3          | 58       | No system side port                      | 29                       | 0.95                       | Partially watered in. Continue monitoring.           |
| MEN0005   | 1/16/2014 10:29 |       | 59.4 | 40.8 | 0.3  | 0.1     | -0.3          | 58       | Opened Valve 1/2 turn or less.           | 29                       | 0.95                       | Partially watered in. Continue monitoring.           |
| MEN0005   | 2/16/2014 10:59 |       | 40.8 | 36   | 0    | 23.2    | -0.4          | 58       | Closed Valve 1/2 turn or less.           | 29                       | 0.95                       | Partially watered in. Continue monitoring.           |
| MEN0005   | 3/18/2014 8:01  |       | 59   | 40.7 | 0.1  | 0.2     | -0.1          | 56       | Opened Valve 1/2 turn or less.           | 29                       | 0.95                       | Partially watered in. Continue monitoring.           |
| MEN0005   | 04/08/14        | 8:02  | 59.7 | 40.2 | 0.1  | 0.1     | -0.2          | 66       | Opened Valve 1/2 turn or less.           | 29                       | 0.95                       | Partially watered in. Continue monitoring.           |
| MEN0005   | 5/12/2014 11:13 |       | 54.8 | 36.3 | 1.1  | 7.8     | -0.4          | 81       | Closed Valve 1/2 turn or less.           | 29                       | 0.95                       | Partially watered in. Continue monitoring.           |
| MEN0005   | 05/30/14        | 16:25 | 53.3 | 35.4 | 2.5  | 8.8     | 0.0           | 80       | No system side port                      | 45                       | 7.24                       | Partially watered in. Continue monitoring.           |
| MEN0006   | 1/16/2014 10:40 |       | 59.1 | 40.7 | 0.1  | 0.1     | -0.4          | 52       | No Change.                               | 45                       | 7.24                       | Partially watered in. Continue monitoring.           |
| MEN0006   | 2/16/2014 11:05 |       | 16.1 | 23.3 | 0    | 60.6    | -0.6          | 54       | Closed Valve 1/2 turn or less.           | 45                       | 7.24                       | Partially watered in. Continue monitoring.           |
| MEN0006   | 3/18/2014 7:56  |       | 58.9 | 41   | 0    | 0.1     | -0.3          | 58       | Opened Valve 1/2 turn or less.           | 45                       | 7.24                       | Partially watered in. Continue monitoring.           |
| MEN0006   | 04/08/14        | 7:58  | 60   | 39.8 | 0.1  | 0.1     | -0.4          | 65       | No Change.                               | 45                       | 7.24                       | Partially watered in. Continue monitoring.           |
| MEN0006   | 5/12/2014 11:07 |       | 60.8 | 39.1 | 0    | 0.1     | -0.3          | 77       | Opened Valve 1/2 turn or less.           | 45                       | 7.24                       | Partially watered in. Continue monitoring.           |
| MEN0006   | 05/31/14 8:15   | 8:15  | 59.4 | 40.5 | 0    | 0.1     | 0.0           | 72       | No system side port                      | 45                       | 7.24                       | Partially watered in. Continue monitoring.           |
| MEN0007   | 1/16/2014 10:57 |       | 59.4 | 40.5 | 0    | 0.1     | 0.0           | 58       | Opened Valve 1/2 turn or less.           | 44.8                     | 0.7                        | Overpulls easily. Continue monitoring.               |
| MEN0007   | 2/16/2014 11:03 |       | 36.5 | 23   | 0.3  | 31.4    | -1.5          | 55       | Opened Valve 1/2 turn or less.           | 44.8                     | 0.7                        | Overpulls easily. Continue monitoring.               |
| MEN0007   | 3/18/2014 7:33  |       | 60.9 | 39   | 0    | 0.2     | -0.2          | 55       | Opened Valve 1/2 turn or less.           | 44.8                     | 0.7                        | Overpulls easily. Continue monitoring.               |
| MEN0007   | 04/08/14        | 7:37  | 60.9 | 39   | 0    | 0.1     | -0.1          | 69       | Opened Valve 1/2 turn or less.           | 44.8                     | 0.7                        | Overpulls easily. Continue monitoring.               |
| MEN0007   | 5/12/2014 10:40 |       | 48.3 | 34.9 | 0    | 16.8    | -0.4          | 79       | No Change.                               | 44.8                     | 0.7                        | Overpulls easily. Continue monitoring.               |
| MEN0007   | 05/30/14        | 16:42 | 47.3 | 35   | 0    | 17.7    | -0.3          | 79       | No system side port                      | 44.8                     | 0.7                        | Overpulls easily. Continue monitoring.               |
| MEN0008   | 1/16/2014 10:44 |       | 63.8 | 36.1 | 0    | 0.1     | -0.4          | 49       | Opened Valve 1/2 turn or less.           | 33                       | 0.38                       | Incremental valve and remonitor                      |
| MEN0008   | 2/16/2014 11:21 |       | 29.1 | 29.2 | 0    | 41.7    | -0.5          | 59       | Closed Valve 1/2 turn or less.           | 33                       | 0.38                       | Incremental valve and remonitor                      |
| MEN0008   | 3/18/2014 7:38  |       | 64.2 | 35.5 | 0.2  | 0.1     | -0.2          | 54       | Opened Valve 1/2 turn or less.           | 33                       | 0.38                       | Incremental valve and remonitor                      |
| MEN0008   | 04/08/14        | 7:41  | 64.8 | 35.1 | 0    | 0.1     | -0.2          | 73       | Opened Valve 1/2 turn or less.           | 33                       | 0.38                       | Incremental valve and remonitor                      |
| MEN0008   | 5/12/2014 10:44 |       | 59   | 34.3 | 0    | 6.7     | -0.3          | 65       | No Change.                               | 33                       | 0.38                       | Incremental valve and remonitor                      |
| MEN0008   | 05/31/14        | 8:39  | 66.4 | 34.4 | 0    | 0.2     | 0.0           | 71       | No system side port                      | 33                       | 0.38                       | Incremental valve and remonitor                      |
| MEN0009   | 1/16/2014 10:57 |       | 59.3 | 33.8 | 0    | 0.1     | -0.4          | 74       | No Change.                               | 62                       | 6.98                       | Partially watered in. Continue monitoring.           |
| MEN0009   | 2/16/2014 11:06 |       | 41.7 | 34.8 | 0    | 24.3    | -0.5          | 60       | Closed Valve 1/2 turn or less.           | 62                       | 6.98                       | Partially watered in. Continue monitoring.           |
| MEN0009   | 3/18/2014 7:43  |       | 43.9 | 33.2 | 0    | 22.9    | -1.8          | 62       | Closed Valve 1/2 turn or less.           | 62                       | 6.98                       | Partially watered in. Continue monitoring.           |
| MEN0009   | 04/08/14        | 7:45  | 43.9 | 33.2 | 0    | 25      | -0.4          | 76       | Closed Valve 1/2 turn or less.           | 62                       | 6.98                       | Partially watered in. Continue monitoring.           |
| MEN0009   | 5/12/2014 10:49 |       | 60.6 | 39.2 | 0.1  | 0.1     | 0.0           | 76       | No system side port                      | 62                       | 6.98                       | Partially watered in. Continue monitoring.           |
| MEN0037   | 1/15/2014 11:08 | 8:52  | 66.1 | 33.5 | 0.2  | 0.2     | -8.1          | 58       | No Change.                               | Check ID                 |                            | Check ID. Resound if necessary. Looks watered in.    |
| MEN0037   | 2/10/2014 12:40 |       | 66.3 | 33.6 | 0    | 0.1     | -8.3          | 59       | No Change.                               | Check ID                 |                            | Check ID. Resound if necessary. Looks watered in.    |
| MEN0037   | 3/18/2014 9:00  |       | 65.5 | 34.4 | 0    | 0.1     | -6.5          | 65       | No Change.                               | Check ID                 |                            | Check ID. Resound if necessary. Looks watered in.    |
| MEN0037   | 04/08/14        | 8:55  | 65.6 | 34.3 | 0    | 0.1     | -5.5          | 67       | No Change.                               | Check ID                 |                            | Check ID. Resound if necessary. Looks watered in.    |
| MEN0037   | 5/9/2014 12:22  |       | 66.8 | 33.1 | 0    | 0.1     | -5.5          | 74       | No Change.                               | No access                |                            | No access for sounding. Looks watered in.            |
| MEN0037   | 1/16/2014 10:17 |       | 62   | 37.9 | 0    | 0.1     | -2.9          | 58       | No Change.                               | No access                |                            | No access for sounding. Looks watered in.            |
| MEN0037   | 2/16/2014 10:48 |       | 60.9 | 36.1 | 0.1  | 2.9     | -2.4          | 60       | Opened Valve 1/2 turn or less.           | No access                |                            | No access for sounding. Looks watered in.            |
| MEN0037   | 3/18/2014 8:48  |       | 62.9 | 35.8 | 0    | 1.4     | -1.6          | 68       | No Change.                               | No access                |                            | No access for sounding. Looks watered in.            |
| MEN0037   | 04/08/14        | 8:33  | 62.9 | 35.8 | 0    | 1.4     | -1.6          | 68       | No Change.                               | No access                |                            | No access for sounding. Looks watered in.            |
| MEN0037   | 5/12/2014 10:58 |       | 63.9 | 35.9 | 0.1  | 0.1     | -0.7          | 72       | Opened Valve 1/2 turn or less.           | No access                |                            | No access for sounding. Looks watered in.            |
| MEN0037   | 05/30/14        | 14:34 | 62.9 | 35.9 | 0    | 0.2     | -0.7          | 79       | Opened Valve 1/2 turn or less.           | No access                |                            | No access for sounding. Looks watered in.            |
| MEN0037   | 11/04/15        | 14:34 | 62.9 | 35.9 | 0    | 0.2     | -0.7          | 79       | Opened Valve 1/2 turn or less.           | 49.3                     | 21.45                      | Vacuum - Y                                           |
| MEN0037   | 1/16/2014 10:19 |       | 51.3 | 36.9 | 0    | 11.8    | -2.3          | 79       | Opened Valve 1/2 turn or less.           | No access                |                            | No access for sounding. Looks watered in.            |
| MEN0037   | 2/11/2014 10:50 |       | 50.5 | 35   | 0    | 14.5    | -1.9          | 77       | No Change.                               | No access                |                            | No access for sounding. Looks watered in.            |
| MEN0037   | 3/18/2014 8:47  |       | 49.4 | 34.1 | 0.1  | 16.4    | -7.1          | 67       | No Change.                               | No access                |                            | No access for sounding. Looks watered in.            |
| MEN0037   | 04/08/14        | 8:43  | 50.8 | 34   | 0    | 15.2    | -1.1          | 76       | No Change.                               | No access                |                            | No access for sounding. Looks watered in.            |
| MEN0037   | 5/12/2014 10:03 |       | 55.5 | 35.2 | 0    | 9.3     | -1.4          | 83       | Opened Valve 1/2 turn or less.           | No access                |                            | No access for sounding. Looks watered in.            |
| MEN0037   | 05/30/14        | 14:40 | 54.6 | 35.8 | 0    | 9.6     | -1.5          | 88       | No Change.                               | No data                  |                            | Decom. Not flowing. Damaged Check for sounding data. |
| MEN0037   | 11/04/15        | 14:40 | 54.6 | 35.8 | 0    | 9.6     | -1.5          | 88       | No Change.                               | No data                  |                            | Decom. Not flowing. Damaged Check for sounding data. |
| MEN0037   | 1/15/2014 11:00 |       | 0.4  | 4.3  | 15.7 | 79.6    | -2.2          | 84       | Closed Valve 1/2 turn or less.           | No data                  |                            | Decom. Not flowing. Damaged Check for sounding data. |
| MEN0037   | 2/10/2014 11:36 |       | 0.3  | 0.9  | 17.3 | 81.1    | -2.6          | 83       | Closed Valve 1/2 turn or less.           | No data                  |                            | Decom. Not flowing. Damaged Check for sounding data. |
| MEN0037   | 2/10/2014 11:36 |       | 0.2  | 0.8  | 17.3 | 81.7    | -1.3          | 89       | No Change.                               | No data                  |                            | Decom. Not flowing. Damaged Check for sounding data. |
| MEN0037   | 3/18/2014 9:02  |       | 0.5  | 5.8  | 18.1 | 75.6    | -6.3          | 64       | Closed Valve 1/2 turn or node. Watering. | No data                  |                            | Decom. Not flowing. Damaged Check for sounding data. |
| MEN0037   | 3/18/2014 9:06  |       | 1.8  | 1.8  | 19.9 | 76.5    | -0.4          | 65       | No Change. Watering.                     | No data                  |                            | Decom. Not flowing. Damaged Check for sounding data. |
| MEN0037   | 04/08/14        | 9:20  | 0.3  | 4.6  | 19   | 76.1    | -0.2          | 66       | No Change. Watering.                     | No data                  |                            | Decom. Not flowing. Damaged Check for sounding data. |



Bedwell Bayfront Park  
CCCS Evaluation  
Wellfield Data

| Device ID | Date            | Time  | CH4  | CO2  | O2   | Balance | Static Press. | Gas Temp | Fortistar Comments                           | Total Depth of Well (ft) | Feet of Water in Well (ft) | CBI Comments                                          |
|-----------|-----------------|-------|------|------|------|---------|---------------|----------|----------------------------------------------|--------------------------|----------------------------|-------------------------------------------------------|
| MENLOB37  | 04/08/14        | 9:19  | 0.4  | 4.4  | 19   | 76.2    | -0.4          | 67       | No Change. Watering.....                     | No data                  |                            | Decom. Not flowing. Damaged. Check for sounding data. |
| MENLOB37  | 5/9/2014 12:01  |       | 0.9  | 9.5  | 15.3 | 74.3    | -1.5          | 81       | Closed Valve 1/2 turn or less. Watering..... | No data                  |                            | Decom. Not flowing. Damaged. Check for sounding data. |
| MENLOB37  | 5/9/2014 12:03  |       | 0.9  | 8.9  | 15.6 | 74.6    | -0.9          | 82       | No Change. Watering.....                     | No data                  |                            | Decom. Not flowing. Damaged. Check for sounding data. |
| MENLOB37  | 05/28/14        | 10:04 | 20.7 | 12.3 | 15.4 | 51.6    | -14.9         |          | one port, one 2ft tubing port for system     | No data                  |                            | Decom. Not flowing. Damaged. Check for sounding data. |
| MENLOB37  | 1/19/2014 10:48 |       | 64   | 35.9 | 0    | 0.1     | -5.9          | 53       | No Change.....                               | 37                       | 4.76                       | Increase vac and remonitor                            |
| MENLOB37  | 2/17/2014 10:46 |       | 64.1 | 35.9 | 0    | 0.1     | -5.9          | 53       | No Change.....                               | 37                       | 4.76                       | Increase vac and remonitor                            |
| MENLOB37  | 3/18/2014 12:32 |       | 64.2 | 35.2 | 0    | 0.1     | -3.3          | 52       | Closed Valve 1/2 turn or less.....           | 37                       | 4.76                       | Increase vac and remonitor                            |
| MENLOB37  | 04/08/14 7:54   |       | 64.5 | 35.4 | 0    | 0.1     | -0.2          | 62       | Opened Valve 1/2 turn or less.....           | 37                       | 4.76                       | Increase vac and remonitor                            |
| MENLOB37  | 5/12/2014 13:01 |       | 60.7 | 32.9 | 0    | 6.4     | -0.5          | 70       | No Change.....                               | 37                       | 4.76                       | Increase vac and remonitor                            |
| MENLOB37  | 05/31/14        | 7:59  | 63.3 | 35.2 | 0    | 1.5     | 0.0           | 70       | No system side port. 2ft sample tube         | 37                       | 4.76                       | Increase vac and remonitor                            |
| MENLOB37  | 1/16/2014 10:52 |       | 63.2 | 37.7 | 0    | 0.1     | -0.5          | 80       | No Change.....                               | 56.5                     | 0.99                       | Increase vac and remonitor                            |
| MENLOB37  | 2/11/2014 11:31 |       | 39.5 | 32.5 | 0    | 28      | -0.4          | 83       | Closed Valve 1/2 turn or less.....           | 56.5                     | 0.99                       | Increase vac and remonitor                            |
| MENLOB37  | 3/18/2014 7:47  |       | 46.2 | 34.8 | 0    | 17      | -0.7          | 69       | Closed Valve 1/2 turn or less.....           | 56.5                     | 0.99                       | Increase vac and remonitor                            |
| MENLOB37  | 04/08/14        | 7:50  | 46.5 | 33.6 | 0    | 19.9    | -0.3          | 80       | Closed Valve 1/2 turn or less.....           | 56.5                     | 0.99                       | Increase vac and remonitor                            |
| MENLOB37  | 5/12/2014 10:55 |       | 61.9 | 37.3 | 0    | 0.8     | -0.3          | 82       | No Change.....                               | 56.5                     | 0.99                       | Increase vac and remonitor                            |
| MENLOB37  | 05/31/14        | 7:43  | 54.8 | 36.1 | 0    | 9.1     | 0.0           | 83       | No system side port                          | 50.21                    | 8.43                       | Partially watered in. Continue monitoring.            |
| MENLOB37  | 1/19/2014 10:22 |       | 52.1 | 34.1 | 0    | 13.8    | -0.8          | 64       | No Change.....                               | 50.21                    | 8.43                       | Partially watered in. Continue monitoring.            |
| MENLOB37  | 2/17/2014 10:22 |       | 52.1 | 34.1 | 0    | 13.8    | -0.8          | 64       | No Change.....                               | 50.21                    | 8.43                       | Partially watered in. Continue monitoring.            |
| MENLOB37  | 3/18/2014 10:32 |       | 43.2 | 35.9 | 0    | 24.9    | -1.0          | 91       | Closed Valve 1/2 turn or less.....           | 50.21                    | 8.43                       | Partially watered in. Continue monitoring.            |
| MENLOB37  | 04/08/14        | 10:24 | 32.1 | 33   | 0    | 34.9    | -0.7          | 81       | Closed Valve 1/2 turn or less.....           | 50.21                    | 8.43                       | Partially watered in. Continue monitoring.            |
| MENLOB37  | 5/9/2014 11:29  |       | 43.1 | 32.8 | 0    | 24.1    | -0.5          | 70       | Closed Valve 1/2 turn or less.....           | 50.21                    | 8.43                       | Partially watered in. Continue monitoring.            |
| MENLOB37  | 05/30/14        | 10:09 | 48.9 | 31.9 | 0.3  | 18.9    | 0.0           | 72       |                                              | 26.5                     |                            | Vacuum - Y                                            |
| MENLOB37  | 11/04/15        |       |      |      |      |         |               |          |                                              | 3.55'                    |                            | Vacuum - Y                                            |
| MENLO ?   | 11/04/15        |       |      |      |      |         |               |          |                                              | 21.25                    |                            | not recorded                                          |
| SYNILET   | 05/28/14        | 8:55  | 49.7 | 32.7 | 0    | 17.6    | 7.8           |          | Flare flow 250 scfm                          |                          |                            |                                                       |
| SYNILET   | 05/29/14        | 8:07  | 50.4 | 34.5 | 0    | 15.1    | 7.4           | 67       |                                              |                          |                            |                                                       |
| SYNILET   | 05/30/14        | 17:25 | 51.1 | 33   | 0.2  | 15.7    | 8.0           | 0        |                                              |                          |                            |                                                       |
| SYNILET   | 05/31/14        | 7:14  | 50.8 | 33.9 | 0.2  | 15.1    | 8.1           | 0        |                                              |                          |                            |                                                       |

## ***Appendix C***

### ***Well Photographic Documentation***



CB&I  
180 Promenade Circle, Suite 320  
Sacramento, California 95834  
916.928.3300  
Fax: 916.565.4356

**APPENDIX C  
LANDFILL GAS WELL PHOTOS WITH  
ID NUMBERS**

|                                                                                    |                                                                                     |                                                                                      |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|  |  |  |
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| 15                                                                                  | 16                                                                                  | 17                                                                                   |

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Appendix C

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| 18                                                                                | 19                                                                                 | 20                                                                                  |

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| 21                                                                                 | 22                                                                                  | 23                                                                                   |

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| 24                                                                                  | 25                                                                                   | 26                                                                                    |

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| 29                                                                                 | 30                                                                                 | 31                                                                                  |

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| 32                                                                                  | 34                                                                                  | 35                                                                                   |



Appendix C

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| 36                                                                                | 37                                                                                 | 37A                                                                                 |

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| 38                                                                                 | 39                                                                                  | 40                                                                                   |

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| 44                                                                                | 46                                                                                | Photo 1632 (NO ID)                                                                 |

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| B1                                                                                 | B2                                                                                 | B3                                                                                  |

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| B4                                                                                  | B6                                                                                  | B7                                                                                   |



## Appendix C

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| B8                                                                                | B9                                                                                 | B10                                                                                 |

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| B11                                                                                | C1                                                                                  | C2                                                                                   |

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| C3                                                                                  | C4                                                                                   | C5                                                                                    |

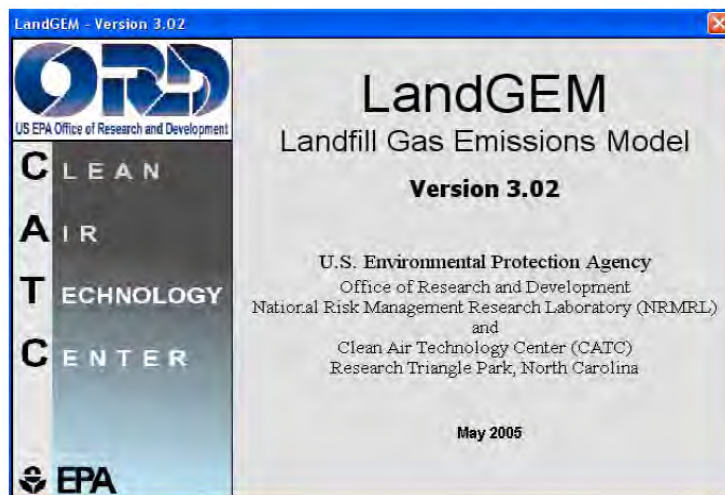
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| C6                                                                                  | C7                                                                                  | C8                                                                                    |
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| C9                                                                                  | C10                                                                                 | C11                                                                                   |



## ***Appendix D***

### ***Landgem Gas Modeling Output***



## Summary Report

**Landfill Name or Identifier:** Menlo Park

**Date:** Monday, June 02, 2014

### Description/Comments:

#### About LandGEM:

First-Order Decomposition Rate Equation:

$$Q_{CH_4} = \sum_{i=1}^n \sum_{j=0.1}^1 k L_o \left( \frac{M_i}{10} \right) e^{-k t_{ij}}$$

Where,

$Q_{CH_4}$  = annual methane generation in the year of the calculation ( $m^3/year$ )

$i$  = 1-year time increment

$n$  = (year of the calculation) - (initial year of waste acceptance)

$j$  = 0.1-year time increment

$k$  = methane generation rate ( $year^{-1}$ )

$L_o$  = potential methane generation capacity ( $m^3/Mg$ )

$M_i$  = mass of waste accepted in the  $i^{th}$  year ( $Mg$ )

$t_{ij}$  = age of the  $j^{th}$  section of waste mass  $M_i$  accepted in the  $i^{th}$  year (decimal years, e.g., 3.2 years)

LandGEM is based on a first-order decomposition rate equation for quantifying emissions from the decomposition of landfilled waste in municipal solid waste (MSW) landfills. The software provides a relatively simple approach to estimating landfill gas emissions. Model defaults are based on empirical data from U.S. landfills. Field test data can also be used in place of model defaults when available. Further guidance on EPA test methods, Clean Air Act (CAA) regulations, and other guidance regarding landfill gas emissions and control technology requirements can be found at <http://www.epa.gov/ttnatw01/landfill/landflpg.html>.

LandGEM is considered a screening tool — the better the input data, the better the estimates. Often, there are limitations with the available data regarding waste quantity and composition, variation in design and operating practices over time, and changes occurring over time that impact the emissions potential. Changes to landfill operation, such as operating under wet conditions through leachate recirculation or other liquid additions, will result in generating more gas at a faster rate. Defaults for estimating emissions for this type of operation are being developed to include in LandGEM along with defaults for conventional landfills (no leachate or liquid additions) for developing emission inventories and determining CAA applicability. Refer to the Web site identified above for future updates.

Menlo LFG Model 2014

6/2/2014

**Input Review****LANDFILL CHARACTERISTICS**

Landfill Open Year **1960**  
 Landfill Closure Year (with 80-year limit) **1984**  
*Actual Closure Year (without limit)* **1984**  
 Have Model Calculate Closure Year? **No**  
 Waste Design Capacity **short tons**

**MODEL PARAMETERS**

Methane Generation Rate, k **0.020** *year<sup>-1</sup>*  
 Potential Methane Generation Capacity, L<sub>0</sub> **100** *m<sup>3</sup>/Mg*  
 NMOC Concentration **4,000** *ppmv as hexane*  
 Methane Content **50** *% by volume*

**GASES / POLLUTANTS SELECTED**

Gas / Pollutant #1: **Total landfill gas**  
 Gas / Pollutant #2: **NMOC**  
 Gas / Pollutant #3: **Carbon dioxide**  
 Gas / Pollutant #4: **Methane**

**WASTE ACCEPTANCE RATES**

| Year | Waste Accepted |                   | Waste-In-Place |              |
|------|----------------|-------------------|----------------|--------------|
|      | (Mg/year)      | (short tons/year) | (Mg)           | (short tons) |
| 1960 | 116,364        | 128,000           | 0              | 0            |
| 1961 | 121,818        | 134,000           | 116,364        | 128,000      |
| 1962 | 127,273        | 140,000           | 238,182        | 262,000      |
| 1963 | 132,727        | 146,000           | 365,455        | 402,000      |
| 1964 | 138,182        | 152,000           | 498,182        | 548,000      |
| 1965 | 143,636        | 158,000           | 636,364        | 700,000      |
| 1966 | 149,091        | 164,000           | 780,000        | 858,000      |
| 1967 | 154,545        | 170,000           | 929,091        | 1,022,000    |
| 1968 | 160,000        | 176,000           | 1,083,636      | 1,192,000    |
| 1969 | 165,455        | 182,000           | 1,243,636      | 1,368,000    |
| 1970 | 170,909        | 188,000           | 1,409,091      | 1,550,000    |
| 1971 | 176,364        | 194,000           | 1,580,000      | 1,738,000    |
| 1972 | 181,818        | 200,000           | 1,756,364      | 1,932,000    |
| 1973 | 187,273        | 206,000           | 1,938,182      | 2,132,000    |
| 1974 | 192,727        | 212,000           | 2,125,455      | 2,338,000    |
| 1975 | 198,182        | 218,000           | 2,318,182      | 2,550,000    |
| 1976 | 203,636        | 224,000           | 2,516,364      | 2,768,000    |
| 1977 | 209,091        | 230,000           | 2,720,000      | 2,992,000    |
| 1978 | 214,545        | 236,000           | 2,929,091      | 3,222,000    |
| 1979 | 220,000        | 242,000           | 3,143,636      | 3,458,000    |
| 1980 | 225,455        | 248,000           | 3,363,636      | 3,700,000    |
| 1981 | 230,909        | 254,000           | 3,589,091      | 3,948,000    |
| 1982 | 236,364        | 260,000           | 3,820,000      | 4,202,000    |
| 1983 | 241,818        | 266,000           | 4,056,364      | 4,462,000    |
| 1984 | 247,273        | 272,000           | 4,298,182      | 4,728,000    |
| 1985 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 1986 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 1987 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 1988 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 1989 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 1990 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 1991 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 1992 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 1993 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 1994 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 1995 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 1996 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 1997 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 1998 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 1999 | 0              | 0                 | 4,545,455      | 5,000,000    |

## WASTE ACCEPTANCE RATES (Continued)

| Year | Waste Accepted |                   | Waste-In-Place |              |
|------|----------------|-------------------|----------------|--------------|
|      | (Mg/year)      | (short tons/year) | (Mg)           | (short tons) |
| 2000 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 2001 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 2002 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 2003 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 2004 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 2005 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 2006 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 2007 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 2008 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 2009 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 2010 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 2011 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 2012 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 2013 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 2014 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 2015 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 2016 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 2017 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 2018 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 2019 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 2020 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 2021 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 2022 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 2023 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 2024 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 2025 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 2026 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 2027 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 2028 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 2029 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 2030 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 2031 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 2032 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 2033 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 2034 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 2035 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 2036 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 2037 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 2038 | 0              | 0                 | 4,545,455      | 5,000,000    |
| 2039 | 0              | 0                 | 4,545,455      | 5,000,000    |

**Pollutant Parameters**

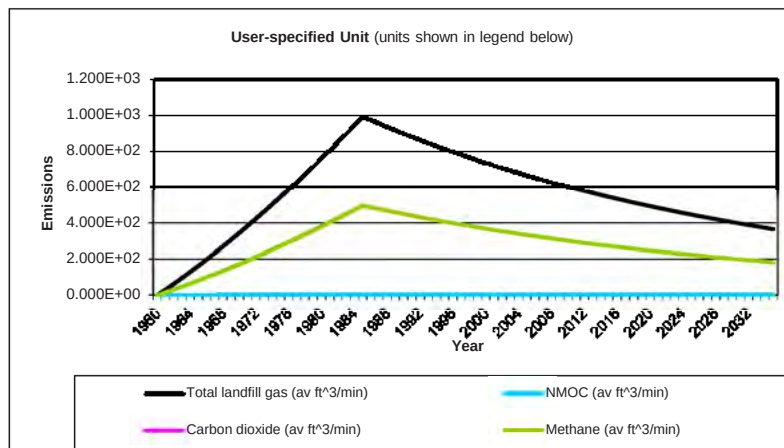
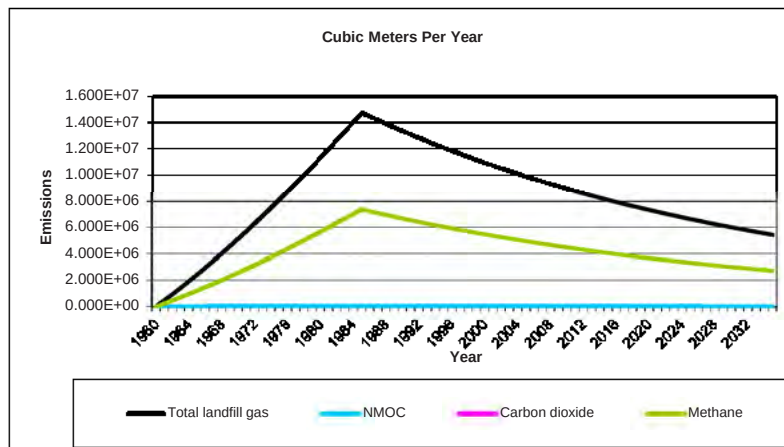
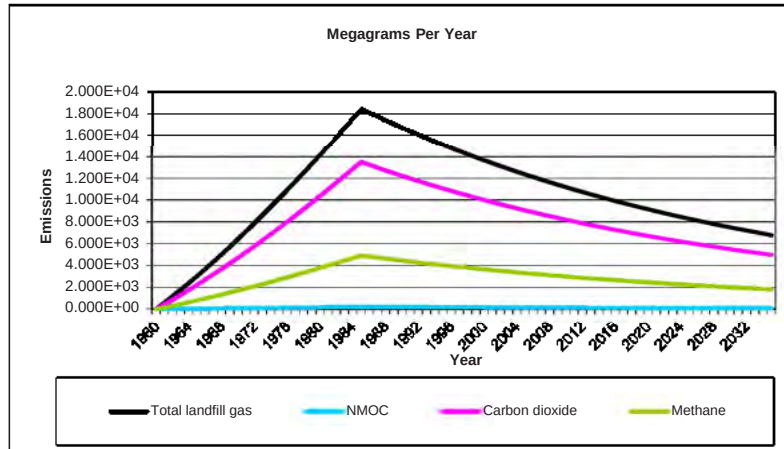
| <b>Gas / Pollutant Default Parameters:</b> |                                                      |                      |                  | <b>User-specified Pollutant Parameters:</b> |                  |
|--------------------------------------------|------------------------------------------------------|----------------------|------------------|---------------------------------------------|------------------|
|                                            | Compound                                             | Concentration (ppmv) | Molecular Weight | Concentration (ppmv)                        | Molecular Weight |
| <b>Gases</b>                               | Total landfill gas                                   |                      | 0.00             |                                             |                  |
|                                            | Methane                                              |                      | 16.04            |                                             |                  |
|                                            | Carbon dioxide                                       |                      | 44.01            |                                             |                  |
|                                            | NMOC                                                 | 4,000                | 86.18            |                                             |                  |
| <b>Pollutants</b>                          | 1,1,1-Trichloroethane (methyl chloroform) - HAP      | 0.48                 | 133.41           |                                             |                  |
|                                            | 1,1,2,2-Tetrachloroethane - HAP/VOC                  | 1.1                  | 167.85           |                                             |                  |
|                                            | 1,1-Dichloroethane (ethylidene dichloride) - HAP/VOC | 2.4                  | 98.97            |                                             |                  |
|                                            | 1,1-Dichloroethene (vinylidene chloride) - HAP/VOC   | 0.20                 | 96.94            |                                             |                  |
|                                            | 1,2-Dichloroethane (ethylene dichloride) - HAP/VOC   | 0.41                 | 98.96            |                                             |                  |
|                                            | 1,2-Dichloropropane (propylene dichloride) - HAP/VOC | 0.18                 | 112.99           |                                             |                  |
|                                            | 2-Propanol (isopropyl alcohol) - VOC                 | 50                   | 60.11            |                                             |                  |
|                                            | Acetone                                              | 7.0                  | 58.08            |                                             |                  |
|                                            | Acrylonitrile - HAP/VOC                              | 6.3                  | 53.06            |                                             |                  |
|                                            | Benzene - No or Unknown Co-disposal - HAP/VOC        | 1.9                  | 78.11            |                                             |                  |
|                                            | Benzene - Co-disposal - HAP/VOC                      | 11                   | 78.11            |                                             |                  |
|                                            | Bromodichloromethane - VOC                           | 3.1                  | 163.83           |                                             |                  |
|                                            | Butane - VOC                                         | 5.0                  | 58.12            |                                             |                  |
|                                            | Carbon disulfide - HAP/VOC                           | 0.58                 | 76.13            |                                             |                  |
|                                            | Carbon monoxide                                      | 140                  | 28.01            |                                             |                  |
|                                            | Carbon tetrachloride - HAP/VOC                       | 4.0E-03              | 153.84           |                                             |                  |
|                                            | Carbonyl sulfide - HAP/VOC                           | 0.49                 | 60.07            |                                             |                  |
|                                            | Chlorobenzene - HAP/VOC                              | 0.25                 | 112.56           |                                             |                  |
|                                            | Chlorodifluoromethane                                | 1.3                  | 86.47            |                                             |                  |
|                                            | Chloroethane (ethyl chloride) - HAP/VOC              | 1.3                  | 64.52            |                                             |                  |
|                                            | Chloroform - HAP/VOC                                 | 0.03                 | 119.39           |                                             |                  |
|                                            | Chloromethane - VOC                                  | 1.2                  | 50.49            |                                             |                  |
|                                            | Dichlorobenzene - (HAP for para isomer/VOC)          | 0.21                 | 147              |                                             |                  |
|                                            | Dichlorodifluoromethane                              | 16                   | 120.91           |                                             |                  |
|                                            | Dichlorofluoromethane - VOC                          | 2.6                  | 102.92           |                                             |                  |
|                                            | Dichloromethane (methylene chloride) - HAP           | 14                   | 84.94            |                                             |                  |
|                                            | Dimethyl sulfide (methyl sulfide) - VOC              | 7.8                  | 62.13            |                                             |                  |
|                                            | Ethane                                               | 890                  | 30.07            |                                             |                  |
|                                            | Ethanol - VOC                                        | 27                   | 46.08            |                                             |                  |



**Pollutant Parameters (Continued)**

| Gas / Pollutant Default Parameters: |                                               |                      |                  | User-specified Pollutant Parameters: |                  |
|-------------------------------------|-----------------------------------------------|----------------------|------------------|--------------------------------------|------------------|
|                                     | Compound                                      | Concentration (ppmv) | Molecular Weight | Concentration (ppmv)                 | Molecular Weight |
| Pollutants                          | Ethyl mercaptan (ethanethiol) - VOC           | 2.3                  | 62.13            |                                      |                  |
|                                     | Ethylbenzene - HAP/VOC                        | 4.6                  | 106.16           |                                      |                  |
|                                     | Ethylene dibromide - HAP/VOC                  | 1.0E-03              | 187.88           |                                      |                  |
|                                     | Fluorotrichloromethane - VOC                  | 0.76                 | 137.38           |                                      |                  |
|                                     | Hexane - HAP/VOC                              | 6.6                  | 86.18            |                                      |                  |
|                                     | Hydrogen sulfide                              | 36                   | 34.08            |                                      |                  |
|                                     | Mercury (total) - HAP                         | 2.9E-04              | 200.61           |                                      |                  |
|                                     | Methyl ethyl ketone - HAP/VOC                 | 7.1                  | 72.11            |                                      |                  |
|                                     | Methyl isobutyl ketone - HAP/VOC              | 1.9                  | 100.16           |                                      |                  |
|                                     | Methyl mercaptan - VOC                        | 2.5                  | 48.11            |                                      |                  |
|                                     | Pentane - VOC                                 | 3.3                  | 72.15            |                                      |                  |
|                                     | Perchloroethylene (tetrachloroethylene) - HAP | 3.7                  | 165.83           |                                      |                  |
|                                     | Propane - VOC                                 | 11                   | 44.09            |                                      |                  |
|                                     | t-1,2-Dichloroethene - VOC                    | 2.8                  | 96.94            |                                      |                  |
|                                     | Toluene - No or Unknown Co-disposal - HAP/VOC | 39                   | 92.13            |                                      |                  |
|                                     | Toluene - Co-disposal - HAP/VOC               | 170                  | 92.13            |                                      |                  |
|                                     | Trichloroethylene (trichloroethene) - HAP/VOC | 2.8                  | 131.40           |                                      |                  |
|                                     | Vinyl chloride - HAP/VOC                      | 7.3                  | 62.50            |                                      |                  |
|                                     | Xylenes - HAP/VOC                             | 12                   | 106.16           |                                      |                  |
|                                     |                                               |                      |                  |                                      |                  |
|                                     |                                               |                      |                  |                                      |                  |
|                                     |                                               |                      |                  |                                      |                  |
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|                                     |                                               |                      |                  |                                      |                  |
|                                     |                                               |                      |                  |                                      |                  |
|                                     |                                               |                      |                  |                                      |                  |

## Graphs



**Results**

| Year | Total landfill gas |                        |                           | NMOC      |                        |                           |
|------|--------------------|------------------------|---------------------------|-----------|------------------------|---------------------------|
|      | (Mg/year)          | (m <sup>3</sup> /year) | (av ft <sup>3</sup> /min) | (Mg/year) | (m <sup>3</sup> /year) | (av ft <sup>3</sup> /min) |
| 1960 | 0                  | 0                      | 0                         | 0         | 0                      | 0                         |
| 1961 | 5.761E+02          | 4.613E+05              | 3.099E+01                 | 6.614E+00 | 1.845E+03              | 1.240E-01                 |
| 1962 | 1.168E+03          | 9.351E+05              | 6.283E+01                 | 1.341E+01 | 3.740E+03              | 2.513E-01                 |
| 1963 | 1.775E+03          | 1.421E+06              | 9.548E+01                 | 2.038E+01 | 5.684E+03              | 3.819E-01                 |
| 1964 | 2.397E+03          | 1.919E+06              | 1.289E+02                 | 2.752E+01 | 7.676E+03              | 5.158E-01                 |
| 1965 | 3.033E+03          | 2.429E+06              | 1.632E+02                 | 3.483E+01 | 9.716E+03              | 6.528E-01                 |
| 1966 | 3.684E+03          | 2.950E+06              | 1.982E+02                 | 4.230E+01 | 1.180E+04              | 7.929E-01                 |
| 1967 | 4.349E+03          | 3.483E+06              | 2.340E+02                 | 4.994E+01 | 1.393E+04              | 9.360E-01                 |
| 1968 | 5.028E+03          | 4.027E+06              | 2.705E+02                 | 5.773E+01 | 1.611E+04              | 1.082E+00                 |
| 1969 | 5.721E+03          | 4.581E+06              | 3.078E+02                 | 6.568E+01 | 1.832E+04              | 1.231E+00                 |
| 1970 | 6.427E+03          | 5.146E+06              | 3.458E+02                 | 7.379E+01 | 2.058E+04              | 1.383E+00                 |
| 1971 | 7.146E+03          | 5.722E+06              | 3.845E+02                 | 8.204E+01 | 2.289E+04              | 1.538E+00                 |
| 1972 | 7.877E+03          | 6.308E+06              | 4.238E+02                 | 9.044E+01 | 2.523E+04              | 1.695E+00                 |
| 1973 | 8.621E+03          | 6.904E+06              | 4.639E+02                 | 9.898E+01 | 2.761E+04              | 1.855E+00                 |
| 1974 | 9.378E+03          | 7.509E+06              | 5.045E+02                 | 1.077E+02 | 3.004E+04              | 2.018E+00                 |
| 1975 | 1.015E+04          | 8.125E+06              | 5.459E+02                 | 1.165E+02 | 3.250E+04              | 2.184E+00                 |
| 1976 | 1.093E+04          | 8.749E+06              | 5.879E+02                 | 1.254E+02 | 3.500E+04              | 2.351E+00                 |
| 1977 | 1.172E+04          | 9.383E+06              | 6.305E+02                 | 1.345E+02 | 3.753E+04              | 2.522E+00                 |
| 1978 | 1.252E+04          | 1.003E+07              | 6.737E+02                 | 1.438E+02 | 4.011E+04              | 2.695E+00                 |
| 1979 | 1.334E+04          | 1.068E+07              | 7.175E+02                 | 1.531E+02 | 4.271E+04              | 2.870E+00                 |
| 1980 | 1.416E+04          | 1.134E+07              | 7.619E+02                 | 1.626E+02 | 4.536E+04              | 3.047E+00                 |
| 1981 | 1.500E+04          | 1.201E+07              | 8.068E+02                 | 1.722E+02 | 4.803E+04              | 3.227E+00                 |
| 1982 | 1.584E+04          | 1.269E+07              | 8.524E+02                 | 1.819E+02 | 5.074E+04              | 3.409E+00                 |
| 1983 | 1.670E+04          | 1.337E+07              | 8.984E+02                 | 1.917E+02 | 5.349E+04              | 3.594E+00                 |
| 1984 | 1.757E+04          | 1.407E+07              | 9.451E+02                 | 2.017E+02 | 5.626E+04              | 3.780E+00                 |
| 1985 | 1.844E+04          | 1.477E+07              | 9.922E+02                 | 2.117E+02 | 5.907E+04              | 3.969E+00                 |
| 1986 | 1.808E+04          | 1.447E+07              | 9.726E+02                 | 2.075E+02 | 5.790E+04              | 3.890E+00                 |
| 1987 | 1.772E+04          | 1.419E+07              | 9.533E+02                 | 2.034E+02 | 5.675E+04              | 3.813E+00                 |
| 1988 | 1.737E+04          | 1.391E+07              | 9.344E+02                 | 1.994E+02 | 5.563E+04              | 3.738E+00                 |
| 1989 | 1.702E+04          | 1.363E+07              | 9.159E+02                 | 1.955E+02 | 5.453E+04              | 3.664E+00                 |
| 1990 | 1.669E+04          | 1.336E+07              | 8.978E+02                 | 1.916E+02 | 5.345E+04              | 3.591E+00                 |
| 1991 | 1.636E+04          | 1.310E+07              | 8.800E+02                 | 1.878E+02 | 5.239E+04              | 3.520E+00                 |
| 1992 | 1.603E+04          | 1.284E+07              | 8.626E+02                 | 1.841E+02 | 5.135E+04              | 3.450E+00                 |
| 1993 | 1.572E+04          | 1.258E+07              | 8.455E+02                 | 1.804E+02 | 5.034E+04              | 3.382E+00                 |
| 1994 | 1.540E+04          | 1.233E+07              | 8.288E+02                 | 1.769E+02 | 4.934E+04              | 3.315E+00                 |
| 1995 | 1.510E+04          | 1.209E+07              | 8.124E+02                 | 1.734E+02 | 4.836E+04              | 3.249E+00                 |
| 1996 | 1.480E+04          | 1.185E+07              | 7.963E+02                 | 1.699E+02 | 4.740E+04              | 3.185E+00                 |
| 1997 | 1.451E+04          | 1.162E+07              | 7.805E+02                 | 1.666E+02 | 4.647E+04              | 3.122E+00                 |
| 1998 | 1.422E+04          | 1.139E+07              | 7.650E+02                 | 1.633E+02 | 4.555E+04              | 3.060E+00                 |
| 1999 | 1.394E+04          | 1.116E+07              | 7.499E+02                 | 1.600E+02 | 4.464E+04              | 3.000E+00                 |
| 2000 | 1.366E+04          | 1.094E+07              | 7.350E+02                 | 1.569E+02 | 4.376E+04              | 2.940E+00                 |
| 2001 | 1.339E+04          | 1.072E+07              | 7.205E+02                 | 1.537E+02 | 4.289E+04              | 2.882E+00                 |
| 2002 | 1.313E+04          | 1.051E+07              | 7.062E+02                 | 1.507E+02 | 4.204E+04              | 2.825E+00                 |
| 2003 | 1.287E+04          | 1.030E+07              | 6.922E+02                 | 1.477E+02 | 4.121E+04              | 2.769E+00                 |
| 2004 | 1.261E+04          | 1.010E+07              | 6.785E+02                 | 1.448E+02 | 4.040E+04              | 2.714E+00                 |
| 2005 | 1.236E+04          | 9.899E+06              | 6.651E+02                 | 1.419E+02 | 3.960E+04              | 2.660E+00                 |
| 2006 | 1.212E+04          | 9.703E+06              | 6.519E+02                 | 1.391E+02 | 3.881E+04              | 2.608E+00                 |
| 2007 | 1.188E+04          | 9.511E+06              | 6.390E+02                 | 1.364E+02 | 3.804E+04              | 2.556E+00                 |
| 2008 | 1.164E+04          | 9.322E+06              | 6.264E+02                 | 1.337E+02 | 3.729E+04              | 2.505E+00                 |
| 2009 | 1.141E+04          | 9.138E+06              | 6.140E+02                 | 1.310E+02 | 3.655E+04              | 2.456E+00                 |

**Results (Continued)**

| Year | Total landfill gas |                        |                           | NMOC      |                        |                           |
|------|--------------------|------------------------|---------------------------|-----------|------------------------|---------------------------|
|      | (Mg/year)          | (m <sup>3</sup> /year) | (av ft <sup>3</sup> /min) | (Mg/year) | (m <sup>3</sup> /year) | (av ft <sup>3</sup> /min) |
| 2010 | 1.119E+04          | 8.957E+06              | 6.018E+02                 | 1.284E+02 | 3.583E+04              | 2.407E+00                 |
| 2011 | 1.096E+04          | 8.779E+06              | 5.899E+02                 | 1.259E+02 | 3.512E+04              | 2.360E+00                 |
| 2012 | 1.075E+04          | 8.606E+06              | 5.782E+02                 | 1.234E+02 | 3.442E+04              | 2.313E+00                 |
| 2013 | 1.053E+04          | 8.435E+06              | 5.668E+02                 | 1.209E+02 | 3.374E+04              | 2.267E+00                 |
| 2014 | 1.033E+04          | 8.268E+06              | 5.555E+02                 | 1.185E+02 | 3.307E+04              | 2.222E+00                 |
| 2015 | 1.012E+04          | 8.104E+06              | 5.445E+02                 | 1.162E+02 | 3.242E+04              | 2.178E+00                 |
| 2016 | 9.921E+03          | 7.944E+06              | 5.338E+02                 | 1.139E+02 | 3.178E+04              | 2.135E+00                 |
| 2017 | 9.724E+03          | 7.787E+06              | 5.232E+02                 | 1.116E+02 | 3.115E+04              | 2.093E+00                 |
| 2018 | 9.532E+03          | 7.632E+06              | 5.128E+02                 | 1.094E+02 | 3.053E+04              | 2.051E+00                 |
| 2019 | 9.343E+03          | 7.481E+06              | 5.027E+02                 | 1.073E+02 | 2.993E+04              | 2.011E+00                 |
| 2020 | 9.158E+03          | 7.333E+06              | 4.927E+02                 | 1.051E+02 | 2.933E+04              | 1.971E+00                 |
| 2021 | 8.977E+03          | 7.188E+06              | 4.830E+02                 | 1.031E+02 | 2.875E+04              | 1.932E+00                 |
| 2022 | 8.799E+03          | 7.046E+06              | 4.734E+02                 | 1.010E+02 | 2.818E+04              | 1.894E+00                 |
| 2023 | 8.625E+03          | 6.906E+06              | 4.640E+02                 | 9.902E+01 | 2.762E+04              | 1.856E+00                 |
| 2024 | 8.454E+03          | 6.769E+06              | 4.548E+02                 | 9.706E+01 | 2.708E+04              | 1.819E+00                 |
| 2025 | 8.286E+03          | 6.635E+06              | 4.458E+02                 | 9.514E+01 | 2.654E+04              | 1.783E+00                 |
| 2026 | 8.122E+03          | 6.504E+06              | 4.370E+02                 | 9.325E+01 | 2.602E+04              | 1.748E+00                 |
| 2027 | 7.961E+03          | 6.375E+06              | 4.283E+02                 | 9.141E+01 | 2.550E+04              | 1.713E+00                 |
| 2028 | 7.804E+03          | 6.249E+06              | 4.199E+02                 | 8.960E+01 | 2.500E+04              | 1.679E+00                 |
| 2029 | 7.649E+03          | 6.125E+06              | 4.116E+02                 | 8.782E+01 | 2.450E+04              | 1.646E+00                 |
| 2030 | 7.498E+03          | 6.004E+06              | 4.034E+02                 | 8.608E+01 | 2.402E+04              | 1.614E+00                 |
| 2031 | 7.349E+03          | 5.885E+06              | 3.954E+02                 | 8.438E+01 | 2.354E+04              | 1.582E+00                 |
| 2032 | 7.204E+03          | 5.769E+06              | 3.876E+02                 | 8.271E+01 | 2.307E+04              | 1.550E+00                 |
| 2033 | 7.061E+03          | 5.654E+06              | 3.799E+02                 | 8.107E+01 | 2.262E+04              | 1.520E+00                 |
| 2034 | 6.921E+03          | 5.542E+06              | 3.724E+02                 | 7.947E+01 | 2.217E+04              | 1.490E+00                 |
| 2035 | 6.784E+03          | 5.433E+06              | 3.650E+02                 | 7.789E+01 | 2.173E+04              | 1.460E+00                 |
| 2036 | 6.650E+03          | 5.325E+06              | 3.578E+02                 | 7.635E+01 | 2.130E+04              | 1.431E+00                 |
| 2037 | 6.518E+03          | 5.220E+06              | 3.507E+02                 | 7.484E+01 | 2.088E+04              | 1.403E+00                 |
| 2038 | 6.389E+03          | 5.116E+06              | 3.438E+02                 | 7.336E+01 | 2.046E+04              | 1.375E+00                 |
| 2039 | 6.263E+03          | 5.015E+06              | 3.370E+02                 | 7.190E+01 | 2.006E+04              | 1.348E+00                 |
| 2040 | 6.139E+03          | 4.916E+06              | 3.303E+02                 | 7.048E+01 | 1.966E+04              | 1.321E+00                 |
| 2041 | 6.017E+03          | 4.818E+06              | 3.237E+02                 | 6.908E+01 | 1.927E+04              | 1.295E+00                 |
| 2042 | 5.898E+03          | 4.723E+06              | 3.173E+02                 | 6.772E+01 | 1.889E+04              | 1.269E+00                 |
| 2043 | 5.781E+03          | 4.629E+06              | 3.110E+02                 | 6.637E+01 | 1.852E+04              | 1.244E+00                 |
| 2044 | 5.667E+03          | 4.538E+06              | 3.049E+02                 | 6.506E+01 | 1.815E+04              | 1.220E+00                 |
| 2045 | 5.555E+03          | 4.448E+06              | 2.988E+02                 | 6.377E+01 | 1.779E+04              | 1.195E+00                 |
| 2046 | 5.445E+03          | 4.360E+06              | 2.929E+02                 | 6.251E+01 | 1.744E+04              | 1.172E+00                 |
| 2047 | 5.337E+03          | 4.273E+06              | 2.871E+02                 | 6.127E+01 | 1.709E+04              | 1.149E+00                 |
| 2048 | 5.231E+03          | 4.189E+06              | 2.814E+02                 | 6.006E+01 | 1.676E+04              | 1.126E+00                 |
| 2049 | 5.127E+03          | 4.106E+06              | 2.759E+02                 | 5.887E+01 | 1.642E+04              | 1.103E+00                 |
| 2050 | 5.026E+03          | 4.025E+06              | 2.704E+02                 | 5.770E+01 | 1.610E+04              | 1.082E+00                 |
| 2051 | 4.926E+03          | 3.945E+06              | 2.651E+02                 | 5.656E+01 | 1.578E+04              | 1.060E+00                 |
| 2052 | 4.829E+03          | 3.867E+06              | 2.598E+02                 | 5.544E+01 | 1.547E+04              | 1.039E+00                 |
| 2053 | 4.733E+03          | 3.790E+06              | 2.547E+02                 | 5.434E+01 | 1.516E+04              | 1.019E+00                 |
| 2054 | 4.640E+03          | 3.715E+06              | 2.496E+02                 | 5.327E+01 | 1.486E+04              | 9.985E-01                 |
| 2055 | 4.548E+03          | 3.642E+06              | 2.447E+02                 | 5.221E+01 | 1.457E+04              | 9.787E-01                 |
| 2056 | 4.458E+03          | 3.569E+06              | 2.398E+02                 | 5.118E+01 | 1.428E+04              | 9.593E-01                 |
| 2057 | 4.369E+03          | 3.499E+06              | 2.351E+02                 | 5.017E+01 | 1.400E+04              | 9.403E-01                 |
| 2058 | 4.283E+03          | 3.430E+06              | 2.304E+02                 | 4.917E+01 | 1.372E+04              | 9.217E-01                 |
| 2059 | 4.198E+03          | 3.362E+06              | 2.259E+02                 | 4.820E+01 | 1.345E+04              | 9.035E-01                 |
| 2060 | 4.115E+03          | 3.295E+06              | 2.214E+02                 | 4.724E+01 | 1.318E+04              | 8.856E-01                 |

**Results (Continued)**

| Year | Total landfill gas |                        |                           | NMOC      |                        |                           |
|------|--------------------|------------------------|---------------------------|-----------|------------------------|---------------------------|
|      | (Mg/year)          | (m <sup>3</sup> /year) | (av ft <sup>3</sup> /min) | (Mg/year) | (m <sup>3</sup> /year) | (av ft <sup>3</sup> /min) |
| 2061 | 4.033E+03          | 3.230E+06              | 2.170E+02                 | 4.631E+01 | 1.292E+04              | 8.680E-01                 |
| 2062 | 3.954E+03          | 3.166E+06              | 2.127E+02                 | 4.539E+01 | 1.266E+04              | 8.508E-01                 |
| 2063 | 3.875E+03          | 3.103E+06              | 2.085E+02                 | 4.449E+01 | 1.241E+04              | 8.340E-01                 |
| 2064 | 3.799E+03          | 3.042E+06              | 2.044E+02                 | 4.361E+01 | 1.217E+04              | 8.175E-01                 |
| 2065 | 3.723E+03          | 2.981E+06              | 2.003E+02                 | 4.275E+01 | 1.193E+04              | 8.013E-01                 |
| 2066 | 3.650E+03          | 2.922E+06              | 1.964E+02                 | 4.190E+01 | 1.169E+04              | 7.854E-01                 |
| 2067 | 3.577E+03          | 2.865E+06              | 1.925E+02                 | 4.107E+01 | 1.146E+04              | 7.699E-01                 |
| 2068 | 3.506E+03          | 2.808E+06              | 1.887E+02                 | 4.026E+01 | 1.123E+04              | 7.546E-01                 |
| 2069 | 3.437E+03          | 2.752E+06              | 1.849E+02                 | 3.946E+01 | 1.101E+04              | 7.397E-01                 |
| 2070 | 3.369E+03          | 2.698E+06              | 1.813E+02                 | 3.868E+01 | 1.079E+04              | 7.250E-01                 |
| 2071 | 3.302E+03          | 2.644E+06              | 1.777E+02                 | 3.791E+01 | 1.058E+04              | 7.107E-01                 |
| 2072 | 3.237E+03          | 2.592E+06              | 1.742E+02                 | 3.716E+01 | 1.037E+04              | 6.966E-01                 |
| 2073 | 3.173E+03          | 2.541E+06              | 1.707E+02                 | 3.643E+01 | 1.016E+04              | 6.828E-01                 |
| 2074 | 3.110E+03          | 2.490E+06              | 1.673E+02                 | 3.571E+01 | 9.961E+03              | 6.693E-01                 |
| 2075 | 3.048E+03          | 2.441E+06              | 1.640E+02                 | 3.500E+01 | 9.764E+03              | 6.560E-01                 |
| 2076 | 2.988E+03          | 2.393E+06              | 1.608E+02                 | 3.431E+01 | 9.571E+03              | 6.431E-01                 |
| 2077 | 2.929E+03          | 2.345E+06              | 1.576E+02                 | 3.363E+01 | 9.381E+03              | 6.303E-01                 |
| 2078 | 2.871E+03          | 2.299E+06              | 1.545E+02                 | 3.296E+01 | 9.195E+03              | 6.178E-01                 |
| 2079 | 2.814E+03          | 2.253E+06              | 1.514E+02                 | 3.231E+01 | 9.013E+03              | 6.056E-01                 |
| 2080 | 2.758E+03          | 2.209E+06              | 1.484E+02                 | 3.167E+01 | 8.835E+03              | 5.936E-01                 |
| 2081 | 2.704E+03          | 2.165E+06              | 1.455E+02                 | 3.104E+01 | 8.660E+03              | 5.819E-01                 |
| 2082 | 2.650E+03          | 2.122E+06              | 1.426E+02                 | 3.043E+01 | 8.488E+03              | 5.703E-01                 |
| 2083 | 2.598E+03          | 2.080E+06              | 1.398E+02                 | 2.982E+01 | 8.320E+03              | 5.590E-01                 |
| 2084 | 2.546E+03          | 2.039E+06              | 1.370E+02                 | 2.923E+01 | 8.156E+03              | 5.480E-01                 |
| 2085 | 2.496E+03          | 1.999E+06              | 1.343E+02                 | 2.865E+01 | 7.994E+03              | 5.371E-01                 |
| 2086 | 2.446E+03          | 1.959E+06              | 1.316E+02                 | 2.809E+01 | 7.836E+03              | 5.265E-01                 |
| 2087 | 2.398E+03          | 1.920E+06              | 1.290E+02                 | 2.753E+01 | 7.681E+03              | 5.161E-01                 |
| 2088 | 2.350E+03          | 1.882E+06              | 1.265E+02                 | 2.699E+01 | 7.529E+03              | 5.058E-01                 |
| 2089 | 2.304E+03          | 1.845E+06              | 1.240E+02                 | 2.645E+01 | 7.380E+03              | 4.958E-01                 |
| 2090 | 2.258E+03          | 1.808E+06              | 1.215E+02                 | 2.593E+01 | 7.233E+03              | 4.860E-01                 |
| 2091 | 2.214E+03          | 1.773E+06              | 1.191E+02                 | 2.541E+01 | 7.090E+03              | 4.764E-01                 |
| 2092 | 2.170E+03          | 1.737E+06              | 1.167E+02                 | 2.491E+01 | 6.950E+03              | 4.670E-01                 |
| 2093 | 2.127E+03          | 1.703E+06              | 1.144E+02                 | 2.442E+01 | 6.812E+03              | 4.577E-01                 |
| 2094 | 2.085E+03          | 1.669E+06              | 1.122E+02                 | 2.393E+01 | 6.677E+03              | 4.486E-01                 |
| 2095 | 2.043E+03          | 1.636E+06              | 1.099E+02                 | 2.346E+01 | 6.545E+03              | 4.398E-01                 |
| 2096 | 2.003E+03          | 1.604E+06              | 1.078E+02                 | 2.300E+01 | 6.415E+03              | 4.311E-01                 |
| 2097 | 1.963E+03          | 1.572E+06              | 1.056E+02                 | 2.254E+01 | 6.288E+03              | 4.225E-01                 |
| 2098 | 1.924E+03          | 1.541E+06              | 1.035E+02                 | 2.209E+01 | 6.164E+03              | 4.142E-01                 |
| 2099 | 1.886E+03          | 1.510E+06              | 1.015E+02                 | 2.166E+01 | 6.042E+03              | 4.060E-01                 |
| 2100 | 1.849E+03          | 1.481E+06              | 9.948E+01                 | 2.123E+01 | 5.922E+03              | 3.979E-01                 |



**Results (Continued)**

| Year | Carbon dioxide |                        |                           | Methane   |                        |                           |
|------|----------------|------------------------|---------------------------|-----------|------------------------|---------------------------|
|      | (Mg/year)      | (m <sup>3</sup> /year) | (av ft <sup>3</sup> /min) | (Mg/year) | (m <sup>3</sup> /year) | (av ft <sup>3</sup> /min) |
| 1960 | 0              | 0                      | 0                         | 0         | 0                      | 0                         |
| 1961 | 4.222E+02      | 2.306E+05              | 1.550E+01                 | 1.539E+02 | 2.306E+05              | 1.550E+01                 |
| 1962 | 8.558E+02      | 4.675E+05              | 3.141E+01                 | 3.119E+02 | 4.675E+05              | 3.141E+01                 |
| 1963 | 1.301E+03      | 7.105E+05              | 4.774E+01                 | 4.740E+02 | 7.105E+05              | 4.774E+01                 |
| 1964 | 1.756E+03      | 9.596E+05              | 6.447E+01                 | 6.402E+02 | 9.596E+05              | 6.447E+01                 |
| 1965 | 2.223E+03      | 1.214E+06              | 8.160E+01                 | 8.102E+02 | 1.214E+06              | 8.160E+01                 |
| 1966 | 2.700E+03      | 1.475E+06              | 9.911E+01                 | 9.841E+02 | 1.475E+06              | 9.911E+01                 |
| 1967 | 3.188E+03      | 1.741E+06              | 1.170E+02                 | 1.162E+03 | 1.741E+06              | 1.170E+02                 |
| 1968 | 3.685E+03      | 2.013E+06              | 1.353E+02                 | 1.343E+03 | 2.013E+06              | 1.353E+02                 |
| 1969 | 4.193E+03      | 2.291E+06              | 1.539E+02                 | 1.528E+03 | 2.291E+06              | 1.539E+02                 |
| 1970 | 4.710E+03      | 2.573E+06              | 1.729E+02                 | 1.717E+03 | 2.573E+06              | 1.729E+02                 |
| 1971 | 5.237E+03      | 2.861E+06              | 1.922E+02                 | 1.909E+03 | 2.861E+06              | 1.922E+02                 |
| 1972 | 5.773E+03      | 3.154E+06              | 2.119E+02                 | 2.104E+03 | 3.154E+06              | 2.119E+02                 |
| 1973 | 6.318E+03      | 3.452E+06              | 2.319E+02                 | 2.303E+03 | 3.452E+06              | 2.319E+02                 |
| 1974 | 6.873E+03      | 3.755E+06              | 2.523E+02                 | 2.505E+03 | 3.755E+06              | 2.523E+02                 |
| 1975 | 7.436E+03      | 4.062E+06              | 2.729E+02                 | 2.710E+03 | 4.062E+06              | 2.729E+02                 |
| 1976 | 8.008E+03      | 4.375E+06              | 2.939E+02                 | 2.919E+03 | 4.375E+06              | 2.939E+02                 |
| 1977 | 8.588E+03      | 4.692E+06              | 3.152E+02                 | 3.130E+03 | 4.692E+06              | 3.152E+02                 |
| 1978 | 9.177E+03      | 5.013E+06              | 3.368E+02                 | 3.345E+03 | 5.013E+06              | 3.368E+02                 |
| 1979 | 9.773E+03      | 5.339E+06              | 3.587E+02                 | 3.562E+03 | 5.339E+06              | 3.587E+02                 |
| 1980 | 1.038E+04      | 5.670E+06              | 3.809E+02                 | 3.782E+03 | 5.670E+06              | 3.809E+02                 |
| 1981 | 1.099E+04      | 6.004E+06              | 4.034E+02                 | 4.006E+03 | 6.004E+06              | 4.034E+02                 |
| 1982 | 1.161E+04      | 6.343E+06              | 4.262E+02                 | 4.232E+03 | 6.343E+06              | 4.262E+02                 |
| 1983 | 1.224E+04      | 6.686E+06              | 4.492E+02                 | 4.460E+03 | 6.686E+06              | 4.492E+02                 |
| 1984 | 1.287E+04      | 7.033E+06              | 4.725E+02                 | 4.692E+03 | 7.033E+06              | 4.725E+02                 |
| 1985 | 1.352E+04      | 7.384E+06              | 4.961E+02                 | 4.926E+03 | 7.384E+06              | 4.961E+02                 |
| 1986 | 1.325E+04      | 7.237E+06              | 4.863E+02                 | 4.828E+03 | 7.237E+06              | 4.863E+02                 |
| 1987 | 1.299E+04      | 7.094E+06              | 4.767E+02                 | 4.733E+03 | 7.094E+06              | 4.767E+02                 |
| 1988 | 1.273E+04      | 6.954E+06              | 4.672E+02                 | 4.639E+03 | 6.954E+06              | 4.672E+02                 |
| 1989 | 1.248E+04      | 6.816E+06              | 4.580E+02                 | 4.547E+03 | 6.816E+06              | 4.580E+02                 |
| 1990 | 1.223E+04      | 6.681E+06              | 4.489E+02                 | 4.457E+03 | 6.681E+06              | 4.489E+02                 |
| 1991 | 1.199E+04      | 6.549E+06              | 4.400E+02                 | 4.369E+03 | 6.549E+06              | 4.400E+02                 |
| 1992 | 1.175E+04      | 6.419E+06              | 4.313E+02                 | 4.282E+03 | 6.419E+06              | 4.313E+02                 |
| 1993 | 1.152E+04      | 6.292E+06              | 4.228E+02                 | 4.198E+03 | 6.292E+06              | 4.228E+02                 |
| 1994 | 1.129E+04      | 6.167E+06              | 4.144E+02                 | 4.115E+03 | 6.167E+06              | 4.144E+02                 |
| 1995 | 1.107E+04      | 6.045E+06              | 4.062E+02                 | 4.033E+03 | 6.045E+06              | 4.062E+02                 |
| 1996 | 1.085E+04      | 5.926E+06              | 3.981E+02                 | 3.953E+03 | 5.926E+06              | 3.981E+02                 |
| 1997 | 1.063E+04      | 5.808E+06              | 3.903E+02                 | 3.875E+03 | 5.808E+06              | 3.903E+02                 |
| 1998 | 1.042E+04      | 5.693E+06              | 3.825E+02                 | 3.798E+03 | 5.693E+06              | 3.825E+02                 |
| 1999 | 1.021E+04      | 5.580E+06              | 3.749E+02                 | 3.723E+03 | 5.580E+06              | 3.749E+02                 |
| 2000 | 1.001E+04      | 5.470E+06              | 3.675E+02                 | 3.649E+03 | 5.470E+06              | 3.675E+02                 |
| 2001 | 9.814E+03      | 5.362E+06              | 3.602E+02                 | 3.577E+03 | 5.362E+06              | 3.602E+02                 |
| 2002 | 9.620E+03      | 5.255E+06              | 3.531E+02                 | 3.506E+03 | 5.255E+06              | 3.531E+02                 |
| 2003 | 9.430E+03      | 5.151E+06              | 3.461E+02                 | 3.437E+03 | 5.151E+06              | 3.461E+02                 |
| 2004 | 9.243E+03      | 5.049E+06              | 3.393E+02                 | 3.369E+03 | 5.049E+06              | 3.393E+02                 |
| 2005 | 9.060E+03      | 4.949E+06              | 3.325E+02                 | 3.302E+03 | 4.949E+06              | 3.325E+02                 |
| 2006 | 8.880E+03      | 4.851E+06              | 3.260E+02                 | 3.237E+03 | 4.851E+06              | 3.260E+02                 |
| 2007 | 8.705E+03      | 4.755E+06              | 3.195E+02                 | 3.173E+03 | 4.755E+06              | 3.195E+02                 |
| 2008 | 8.532E+03      | 4.661E+06              | 3.132E+02                 | 3.110E+03 | 4.661E+06              | 3.132E+02                 |
| 2009 | 8.363E+03      | 4.569E+06              | 3.070E+02                 | 3.048E+03 | 4.569E+06              | 3.070E+02                 |

**Results (Continued)**

| Year | Carbon dioxide |                        |                           | Methane   |                        |                           |
|------|----------------|------------------------|---------------------------|-----------|------------------------|---------------------------|
|      | (Mg/year)      | (m <sup>3</sup> /year) | (av ft <sup>3</sup> /min) | (Mg/year) | (m <sup>3</sup> /year) | (av ft <sup>3</sup> /min) |
| 2010 | 8.198E+03      | 4.478E+06              | 3.009E+02                 | 2.988E+03 | 4.478E+06              | 3.009E+02                 |
| 2011 | 8.035E+03      | 4.390E+06              | 2.949E+02                 | 2.929E+03 | 4.390E+06              | 2.949E+02                 |
| 2012 | 7.876E+03      | 4.303E+06              | 2.891E+02                 | 2.871E+03 | 4.303E+06              | 2.891E+02                 |
| 2013 | 7.720E+03      | 4.218E+06              | 2.834E+02                 | 2.814E+03 | 4.218E+06              | 2.834E+02                 |
| 2014 | 7.567E+03      | 4.134E+06              | 2.778E+02                 | 2.758E+03 | 4.134E+06              | 2.778E+02                 |
| 2015 | 7.418E+03      | 4.052E+06              | 2.723E+02                 | 2.703E+03 | 4.052E+06              | 2.723E+02                 |
| 2016 | 7.271E+03      | 3.972E+06              | 2.669E+02                 | 2.650E+03 | 3.972E+06              | 2.669E+02                 |
| 2017 | 7.127E+03      | 3.893E+06              | 2.616E+02                 | 2.597E+03 | 3.893E+06              | 2.616E+02                 |
| 2018 | 6.986E+03      | 3.816E+06              | 2.564E+02                 | 2.546E+03 | 3.816E+06              | 2.564E+02                 |
| 2019 | 6.847E+03      | 3.741E+06              | 2.513E+02                 | 2.496E+03 | 3.741E+06              | 2.513E+02                 |
| 2020 | 6.712E+03      | 3.667E+06              | 2.464E+02                 | 2.446E+03 | 3.667E+06              | 2.464E+02                 |
| 2021 | 6.579E+03      | 3.594E+06              | 2.415E+02                 | 2.398E+03 | 3.594E+06              | 2.415E+02                 |
| 2022 | 6.449E+03      | 3.523E+06              | 2.367E+02                 | 2.350E+03 | 3.523E+06              | 2.367E+02                 |
| 2023 | 6.321E+03      | 3.453E+06              | 2.320E+02                 | 2.304E+03 | 3.453E+06              | 2.320E+02                 |
| 2024 | 6.196E+03      | 3.385E+06              | 2.274E+02                 | 2.258E+03 | 3.385E+06              | 2.274E+02                 |
| 2025 | 6.073E+03      | 3.318E+06              | 2.229E+02                 | 2.213E+03 | 3.318E+06              | 2.229E+02                 |
| 2026 | 5.953E+03      | 3.252E+06              | 2.185E+02                 | 2.170E+03 | 3.252E+06              | 2.185E+02                 |
| 2027 | 5.835E+03      | 3.188E+06              | 2.142E+02                 | 2.127E+03 | 3.188E+06              | 2.142E+02                 |
| 2028 | 5.719E+03      | 3.124E+06              | 2.099E+02                 | 2.084E+03 | 3.124E+06              | 2.099E+02                 |
| 2029 | 5.606E+03      | 3.063E+06              | 2.058E+02                 | 2.043E+03 | 3.063E+06              | 2.058E+02                 |
| 2030 | 5.495E+03      | 3.002E+06              | 2.017E+02                 | 2.003E+03 | 3.002E+06              | 2.017E+02                 |
| 2031 | 5.386E+03      | 2.943E+06              | 1.977E+02                 | 1.963E+03 | 2.943E+06              | 1.977E+02                 |
| 2032 | 5.280E+03      | 2.884E+06              | 1.938E+02                 | 1.924E+03 | 2.884E+06              | 1.938E+02                 |
| 2033 | 5.175E+03      | 2.827E+06              | 1.900E+02                 | 1.886E+03 | 2.827E+06              | 1.900E+02                 |
| 2034 | 5.073E+03      | 2.771E+06              | 1.862E+02                 | 1.849E+03 | 2.771E+06              | 1.862E+02                 |
| 2035 | 4.972E+03      | 2.716E+06              | 1.825E+02                 | 1.812E+03 | 2.716E+06              | 1.825E+02                 |
| 2036 | 4.874E+03      | 2.663E+06              | 1.789E+02                 | 1.776E+03 | 2.663E+06              | 1.789E+02                 |
| 2037 | 4.777E+03      | 2.610E+06              | 1.754E+02                 | 1.741E+03 | 2.610E+06              | 1.754E+02                 |
| 2038 | 4.683E+03      | 2.558E+06              | 1.719E+02                 | 1.707E+03 | 2.558E+06              | 1.719E+02                 |
| 2039 | 4.590E+03      | 2.507E+06              | 1.685E+02                 | 1.673E+03 | 2.507E+06              | 1.685E+02                 |
| 2040 | 4.499E+03      | 2.458E+06              | 1.651E+02                 | 1.640E+03 | 2.458E+06              | 1.651E+02                 |
| 2041 | 4.410E+03      | 2.409E+06              | 1.619E+02                 | 1.607E+03 | 2.409E+06              | 1.619E+02                 |
| 2042 | 4.323E+03      | 2.361E+06              | 1.587E+02                 | 1.575E+03 | 2.361E+06              | 1.587E+02                 |
| 2043 | 4.237E+03      | 2.315E+06              | 1.555E+02                 | 1.544E+03 | 2.315E+06              | 1.555E+02                 |
| 2044 | 4.153E+03      | 2.269E+06              | 1.524E+02                 | 1.514E+03 | 2.269E+06              | 1.524E+02                 |
| 2045 | 4.071E+03      | 2.224E+06              | 1.494E+02                 | 1.484E+03 | 2.224E+06              | 1.494E+02                 |
| 2046 | 3.990E+03      | 2.180E+06              | 1.465E+02                 | 1.454E+03 | 2.180E+06              | 1.465E+02                 |
| 2047 | 3.911E+03      | 2.137E+06              | 1.436E+02                 | 1.426E+03 | 2.137E+06              | 1.436E+02                 |
| 2048 | 3.834E+03      | 2.094E+06              | 1.407E+02                 | 1.397E+03 | 2.094E+06              | 1.407E+02                 |
| 2049 | 3.758E+03      | 2.053E+06              | 1.379E+02                 | 1.370E+03 | 2.053E+06              | 1.379E+02                 |
| 2050 | 3.683E+03      | 2.012E+06              | 1.352E+02                 | 1.342E+03 | 2.012E+06              | 1.352E+02                 |
| 2051 | 3.611E+03      | 1.972E+06              | 1.325E+02                 | 1.316E+03 | 1.972E+06              | 1.325E+02                 |
| 2052 | 3.539E+03      | 1.933E+06              | 1.299E+02                 | 1.290E+03 | 1.933E+06              | 1.299E+02                 |
| 2053 | 3.469E+03      | 1.895E+06              | 1.273E+02                 | 1.264E+03 | 1.895E+06              | 1.273E+02                 |
| 2054 | 3.400E+03      | 1.858E+06              | 1.248E+02                 | 1.239E+03 | 1.858E+06              | 1.248E+02                 |
| 2055 | 3.333E+03      | 1.821E+06              | 1.223E+02                 | 1.215E+03 | 1.821E+06              | 1.223E+02                 |
| 2056 | 3.267E+03      | 1.785E+06              | 1.199E+02                 | 1.191E+03 | 1.785E+06              | 1.199E+02                 |
| 2057 | 3.202E+03      | 1.749E+06              | 1.175E+02                 | 1.167E+03 | 1.749E+06              | 1.175E+02                 |
| 2058 | 3.139E+03      | 1.715E+06              | 1.152E+02                 | 1.144E+03 | 1.715E+06              | 1.152E+02                 |
| 2059 | 3.077E+03      | 1.681E+06              | 1.129E+02                 | 1.121E+03 | 1.681E+06              | 1.129E+02                 |
| 2060 | 3.016E+03      | 1.648E+06              | 1.107E+02                 | 1.099E+03 | 1.648E+06              | 1.107E+02                 |

**Results (Continued)**

| Year | Carbon dioxide |                        |                           | Methane   |                        |                           |
|------|----------------|------------------------|---------------------------|-----------|------------------------|---------------------------|
|      | (Mg/year)      | (m <sup>3</sup> /year) | (av ft <sup>3</sup> /min) | (Mg/year) | (m <sup>3</sup> /year) | (av ft <sup>3</sup> /min) |
| 2061 | 2.956E+03      | 1.615E+06              | 1.085E+02                 | 1.077E+03 | 1.615E+06              | 1.085E+02                 |
| 2062 | 2.898E+03      | 1.583E+06              | 1.064E+02                 | 1.056E+03 | 1.583E+06              | 1.064E+02                 |
| 2063 | 2.840E+03      | 1.552E+06              | 1.042E+02                 | 1.035E+03 | 1.552E+06              | 1.042E+02                 |
| 2064 | 2.784E+03      | 1.521E+06              | 1.022E+02                 | 1.015E+03 | 1.521E+06              | 1.022E+02                 |
| 2065 | 2.729E+03      | 1.491E+06              | 1.002E+02                 | 9.945E+02 | 1.491E+06              | 1.002E+02                 |
| 2066 | 2.675E+03      | 1.461E+06              | 9.818E+01                 | 9.748E+02 | 1.461E+06              | 9.818E+01                 |
| 2067 | 2.622E+03      | 1.432E+06              | 9.623E+01                 | 9.555E+02 | 1.432E+06              | 9.623E+01                 |
| 2068 | 2.570E+03      | 1.404E+06              | 9.433E+01                 | 9.366E+02 | 1.404E+06              | 9.433E+01                 |
| 2069 | 2.519E+03      | 1.376E+06              | 9.246E+01                 | 9.181E+02 | 1.376E+06              | 9.246E+01                 |
| 2070 | 2.469E+03      | 1.349E+06              | 9.063E+01                 | 8.999E+02 | 1.349E+06              | 9.063E+01                 |
| 2071 | 2.420E+03      | 1.322E+06              | 8.884E+01                 | 8.821E+02 | 1.322E+06              | 8.884E+01                 |
| 2072 | 2.372E+03      | 1.296E+06              | 8.708E+01                 | 8.646E+02 | 1.296E+06              | 8.708E+01                 |
| 2073 | 2.325E+03      | 1.270E+06              | 8.535E+01                 | 8.475E+02 | 1.270E+06              | 8.535E+01                 |
| 2074 | 2.279E+03      | 1.245E+06              | 8.366E+01                 | 8.307E+02 | 1.245E+06              | 8.366E+01                 |
| 2075 | 2.234E+03      | 1.221E+06              | 8.201E+01                 | 8.143E+02 | 1.221E+06              | 8.201E+01                 |
| 2076 | 2.190E+03      | 1.196E+06              | 8.038E+01                 | 7.981E+02 | 1.196E+06              | 8.038E+01                 |
| 2077 | 2.147E+03      | 1.173E+06              | 7.879E+01                 | 7.823E+02 | 1.173E+06              | 7.879E+01                 |
| 2078 | 2.104E+03      | 1.149E+06              | 7.723E+01                 | 7.668E+02 | 1.149E+06              | 7.723E+01                 |
| 2079 | 2.062E+03      | 1.127E+06              | 7.570E+01                 | 7.517E+02 | 1.127E+06              | 7.570E+01                 |
| 2080 | 2.022E+03      | 1.104E+06              | 7.420E+01                 | 7.368E+02 | 1.104E+06              | 7.420E+01                 |
| 2081 | 1.982E+03      | 1.082E+06              | 7.273E+01                 | 7.222E+02 | 1.082E+06              | 7.273E+01                 |
| 2082 | 1.942E+03      | 1.061E+06              | 7.129E+01                 | 7.079E+02 | 1.061E+06              | 7.129E+01                 |
| 2083 | 1.904E+03      | 1.040E+06              | 6.988E+01                 | 6.939E+02 | 1.040E+06              | 6.988E+01                 |
| 2084 | 1.866E+03      | 1.019E+06              | 6.850E+01                 | 6.801E+02 | 1.019E+06              | 6.850E+01                 |
| 2085 | 1.829E+03      | 9.993E+05              | 6.714E+01                 | 6.667E+02 | 9.993E+05              | 6.714E+01                 |
| 2086 | 1.793E+03      | 9.795E+05              | 6.581E+01                 | 6.535E+02 | 9.795E+05              | 6.581E+01                 |
| 2087 | 1.757E+03      | 9.601E+05              | 6.451E+01                 | 6.405E+02 | 9.601E+05              | 6.451E+01                 |
| 2088 | 1.723E+03      | 9.411E+05              | 6.323E+01                 | 6.278E+02 | 9.411E+05              | 6.323E+01                 |
| 2089 | 1.689E+03      | 9.224E+05              | 6.198E+01                 | 6.154E+02 | 9.224E+05              | 6.198E+01                 |
| 2090 | 1.655E+03      | 9.042E+05              | 6.075E+01                 | 6.032E+02 | 9.042E+05              | 6.075E+01                 |
| 2091 | 1.622E+03      | 8.863E+05              | 5.955E+01                 | 5.913E+02 | 8.863E+05              | 5.955E+01                 |
| 2092 | 1.590E+03      | 8.687E+05              | 5.837E+01                 | 5.796E+02 | 8.687E+05              | 5.837E+01                 |
| 2093 | 1.559E+03      | 8.515E+05              | 5.721E+01                 | 5.681E+02 | 8.515E+05              | 5.721E+01                 |
| 2094 | 1.528E+03      | 8.347E+05              | 5.608E+01                 | 5.568E+02 | 8.347E+05              | 5.608E+01                 |
| 2095 | 1.498E+03      | 8.181E+05              | 5.497E+01                 | 5.458E+02 | 8.181E+05              | 5.497E+01                 |
| 2096 | 1.468E+03      | 8.019E+05              | 5.388E+01                 | 5.350E+02 | 8.019E+05              | 5.388E+01                 |
| 2097 | 1.439E+03      | 7.861E+05              | 5.281E+01                 | 5.244E+02 | 7.861E+05              | 5.281E+01                 |
| 2098 | 1.410E+03      | 7.705E+05              | 5.177E+01                 | 5.140E+02 | 7.705E+05              | 5.177E+01                 |
| 2099 | 1.382E+03      | 7.552E+05              | 5.074E+01                 | 5.039E+02 | 7.552E+05              | 5.074E+01                 |
| 2100 | 1.355E+03      | 7.403E+05              | 4.974E+01                 | 4.939E+02 | 7.403E+05              | 4.974E+01                 |

## ***Appendix E***

### ***Detailed Cost Estimates (Budgetary)***

## Phase 2 - Replace Watered-in Piping

| Item               | Description                                                                                                                                                                 | Cost Per Unit | Unit               | No of Units | Line Item Total |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------------------|-------------|-----------------|
| 1                  | Mobilization                                                                                                                                                                | \$ 10,000     | LS                 | 1           | \$ 10,000       |
| 2                  | Replacement Well (\$/vf) (13 @ 50 feet each)                                                                                                                                | \$ 150.00     | vertical foot (vf) |             | \$ -            |
| 3                  | Install Industry Standard Wellhead (No pump fittings)                                                                                                                       | \$ 800.00     | ea                 |             | \$ -            |
| 4                  | New 24x36 Vault (Not Traffic Rated)                                                                                                                                         | \$ 750.00     | ea                 |             | \$ -            |
| 5                  | Replace vault box (assumes half day per location)                                                                                                                           | \$ 3,000.00   | ea                 |             | \$ -            |
| 6                  | Down-hole Pump Kit - Priority 1 wells only.                                                                                                                                 | \$ 6,000.00   | ea                 |             | \$ -            |
| 7                  | Install Down-hole Pump Kit - Priority 1 wells and new vault box                                                                                                             | \$ 3,000.00   | ea                 |             | \$ -            |
| 8                  | Industry Standard Well head with Pump Fittings - Priority 1 wells                                                                                                           | \$ 550.00     | ea                 |             | \$ -            |
| 9                  | 4-inch HDPE SDR-17<br>\$15.35 - 33 11 13.35.0100 - Pipe only (butt fused) - 4" SDR-21 (no excavation or backfill)                                                           | \$ -          | lf                 | 0           | \$ -            |
| 10                 | Install 4-inch HDPE SDR-17 (buried)<br>\$1.24 - 31 23 16.14.2250 - Chain trencher, 40 h.p., Operator Riding - 6" wide trench and backfill, 48" deep added 1\$/lf for SDR-17 | \$ 15.00      | lf                 | 2300        | \$ 34,500       |
| 11                 | 6-inch HDPE SDR-17<br>\$20.50 - 33 11 13.35.0200 - Pipe only butt fused - 6" SDR-21 (no excavation or backfill) added \$2/lf for SDR-17                                     | \$ 20.00      | lf                 | 1200        | \$ 24,000       |
| 12                 | Install 6-inch HDPE SDR-17 (buried)                                                                                                                                         | \$ -          | lf                 |             | \$ -            |
| 13                 | Decommission Extraction Well (includes removal of vault, cutting and capping pipe ends, burial.                                                                             |               | ea                 |             | \$ -            |
| 14                 | Excavate and tie into existing piping                                                                                                                                       | \$ 1,000.00   | LS                 | 16          | \$ 16,000       |
| 15                 | Install 1-inch HDPE SDR-9 Air lines (buried)                                                                                                                                | \$ 12.00      | lf                 | 0           | \$ -            |
| 16                 | Install 2-inch HDPE SDR-11 Condensate lines (buried) - same trench                                                                                                          | \$ 3.00       | lf                 | 0           | \$ -            |
| 17                 | Fitting and valves                                                                                                                                                          | \$ 2,500.00   | ea                 | 1           | \$ 2,500        |
| 18                 | New Compressor and Dryer                                                                                                                                                    | \$ 35,000.00  | ea                 |             | \$ -            |
| 19                 | Electrical                                                                                                                                                                  | \$ 5,000.00   | ea                 |             | \$ -            |
| Construction Total |                                                                                                                                                                             |               |                    |             | \$ 84,500       |



# Bedwell Bayfront Park Master Plan

## Phase 3 - Dewatering

| Item               | Description                                                                                                                                                                 | Cost Per Unit | Unit               | No of Units | Line Item Total |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------------------|-------------|-----------------|
| 1                  | Mobilization                                                                                                                                                                | \$ 10,000     | LS                 | 1           | \$ 10,000       |
| 2                  | Replacement Well (\$/vf) (14 @ 50 feet each)                                                                                                                                | \$ 150.00     | vertical foot (vf) | 0           | \$ -            |
| 3                  | Install Industry Standard Wellhead (No pump fittings)                                                                                                                       | \$ 500.00     | ea                 | 0           | \$ -            |
| 4                  | New 24x36 Vault (Not traffic rated)                                                                                                                                         | \$ 750.00     | ea                 | 14          | \$ 10,500       |
| 5                  | Replace vault box (assumes half day per location)                                                                                                                           | \$ 3,000.00   | ea                 | 0           | \$ -            |
| 6                  | Down-hole Pump Kit - Priority 1 wells only.                                                                                                                                 | \$ 6,000.00   | ea                 | 14          | \$ 84,000       |
| 7                  | Install Down-hole Pump Kit - Priority 1 wells and new vault box                                                                                                             | \$ 3,000.00   | ea                 | 14          | \$ 42,000       |
| 8                  | Industry Standard Well head with Pump Fittings - Priority 1 wells                                                                                                           | \$ 550.00     | ea                 | 14          | \$ 7,700        |
| 9                  | 4-inch HDPE SDR-17<br>\$15.35 - 33 11 13.35.0100 - Pipe only (butt fused) - 4" SDR-21 (no excavation or backfill)                                                           | \$ -          | lf                 | 0           | \$ -            |
| 10                 | Install 4-inch HDPE SDR-17 (buried)<br>\$1.24 - 31 23 16.14.2250 - Chain trencher, 40 h.p., Operator Riding - 6" wide trench and backfill, 48" deep added 1\$/lf for SDR-17 | \$ 15.00      | lf                 | 2300        | \$ 34,500       |
| 11                 | 6-inch HDPE SDR-17<br>\$20.50 - 33 11 13.35.0200 - Pipe only butt fused - 6" SDR-21 (no excavation or backfill) added \$2/lf for SDR-17                                     | \$ -          | lf                 | 0           | \$ -            |
| 12                 | Install 6-inch HDPE SDR-17 (buried)                                                                                                                                         | \$ 23.00      | lf                 | 1200        | \$ 27,600       |
| 13                 | Decommission Extraction Well (includes removal of vault, cutting and capping pipe ends, burial.                                                                             |               | ea                 |             | \$ -            |
| 14                 |                                                                                                                                                                             |               | LS                 | 0           | \$ -            |
| 15                 | Install 1-inch HDPE SDR-9 Air lines (buried)                                                                                                                                | \$ 12.00      | lf                 | 3000        | \$ 36,000       |
| 16                 | Install 2-inch HDPE SDR-11 Condensate lines (buried) - same trench                                                                                                          | \$ 3.00       | lf                 | 3000        | \$ 9,000        |
| 17                 | Fitting and valves                                                                                                                                                          | \$ 5,000.00   | ea                 | 1           | \$ 5,000        |
| 18                 | New Compressor and Dryer                                                                                                                                                    | \$ 35,000.00  | ea                 | 1           | \$ 35,000       |
| 19                 | Electrical                                                                                                                                                                  | \$ 10,000.00  | ea                 | 1           | \$ 10,000       |
| Construction Total |                                                                                                                                                                             |               |                    |             | \$ 311,300      |

Phase 4 - Replace Vertical Wells

| Item               | Description                                                                                                                                                                                                          | Cost Per Unit | Unit               | No of Units | Line Item Total |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------------------|-------------|-----------------|
| 1                  | Mobilization                                                                                                                                                                                                         | \$ 25,000     | LS                 | 1           | \$ 25,000       |
| 2                  | Replacement Well (\$/vf) (14 @ 50 feet each)                                                                                                                                                                         | \$ 150.00     | vertical foot (vf) | 700         | \$ 105,000      |
| 3                  | Provide Industry Standard Horizontal Wellhead (No pump fittings)                                                                                                                                                     | \$ 400.00     | ea                 | 14          | \$ 5,600        |
| 4                  | New 24x36 Vault (Not traffic rated)                                                                                                                                                                                  | \$ 750.00     | ea                 | 14          | \$ 10,500       |
| 5                  | Replace vault box (assumes half day per location)                                                                                                                                                                    | \$ 3,000.00   | ea                 | 14          | \$ 42,000       |
| 6                  | Down-hole Pump Kit - Priority 1 wells only.                                                                                                                                                                          | \$ 6,000.00   | ea                 | 0           | \$ -            |
| 7                  | Install Down-hole Pump Kit - Priority 1 wells and new vault box                                                                                                                                                      | \$ 3,000.00   | ea                 | 0           | \$ -            |
| 8                  | Industry Standard Well head with Pump Fittings - Priority 1 wells                                                                                                                                                    | \$ 550.00     | ea                 | 0           | \$ -            |
| 9                  | 4-inch HDPE SDR-17<br>\$15.35 - 33 11 13.35.0100 - Pipe only (butt fused) - 4" SDR-21 (no excavation or backfill)                                                                                                    | x             | lf                 | 0           | \$ -            |
| 10                 | Install 4-inch HDPE SDR-17 (buried) and connect new wells to existing piping<br>\$1.24 - 31 23 16.14.2250 - Chain trencher, 40 h.p., Operator Riding - 6" wide trench and backfill, 48" deep added 1\$/lf for SDR-17 | \$ 15.00      | lf                 | 1000        | \$ 15,000       |
| 11                 | 6-inch HDPE SDR-17<br>\$20.50 - 33 11 13.35.0200 - Pipe only butt fused - 6" SDR-21 (no excavation or backfill) added \$2/lf for SDR-17                                                                              | \$ -          | lf                 | 0           | \$ -            |
| 12                 | Install 6-inch HDPE SDR-17 (buried)                                                                                                                                                                                  | x             | lf                 |             | \$ -            |
| 13                 | Decommission Extraction Well (includes removal of vault, cutting and capping pipe ends, burial.                                                                                                                      |               | ea                 |             | \$ -            |
| 14                 | Tie into existing vacuum lateral                                                                                                                                                                                     | \$ 1,000.00   | LS                 | 0           | \$ -            |
| 15                 | Install 1-inch HDPE SDR-9 Air lines (buried)                                                                                                                                                                         | \$ 12.00      | lf                 | 0           | \$ -            |
| 16                 | Install 2-inch HDPE SDR-11 Condensate lines (buried) - same trench                                                                                                                                                   | \$ 3.00       | lf                 | 0           | \$ -            |
| 17                 | Fittings                                                                                                                                                                                                             | \$ 10,000.00  | ea                 | 1           | \$ 10,000       |
| 18                 | New Compressor and Dryer                                                                                                                                                                                             | \$ 35,000.00  | ea                 | 0           | \$ -            |
| 19                 | Electrical                                                                                                                                                                                                           | \$ 5,000.00   | ea                 | 0           | \$ -            |
| Construction Total |                                                                                                                                                                                                                      |               |                    |             | \$ 213,100      |



# Bedwell Bayfront Park Master Plan

## Phase 5 - Additional Dewatering

| Item               | Description                                                                                                                                                                 | Cost Per Unit | Unit               | No of Units | Line Item Total |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------------------|-------------|-----------------|
| 1                  | Mobilization of Drill Rig (Place Holder)                                                                                                                                    | \$ 15,000     | LS                 | 1           | \$ 15,000       |
| 2                  | Replacement Well (\$/vf) (13 @ 50 feet each)                                                                                                                                | \$ 150.00     | vertical foot (vf) | 0           | \$ -            |
| 3                  | Install Industry Standard Wellhead (No pump fittings)                                                                                                                       | \$ 800.00     | ea                 | 0           | \$ -            |
| 4                  | New 24x36 Vault (Not Traffic Rated)                                                                                                                                         | \$ 750.00     | ea                 | 7           | \$ 5,250        |
| 5                  | Replace vault box (assumes half day per location)                                                                                                                           | \$ 3,000.00   | ea                 | 7           | \$ 21,000       |
| 6                  | Down-hole Pump Kit                                                                                                                                                          | \$ 6,000.00   | ea                 | 7           | \$ 42,000       |
| 7                  | Install Down-hole Pump Kit - Priority 1 wells and new vault box                                                                                                             | \$ 3,000.00   | ea                 | 7           | \$ 21,000       |
| 8                  | Industry Standard Well head with Pump Fittings - Priority 1 wells                                                                                                           | \$ 550.00     | ea                 | 7           | \$ 3,850        |
| 9                  | 4-inch HDPE SDR-17<br>\$15.35 - 33 11 13.35.0100 - Pipe only (butt fused) - 4" SDR-21 (no excavation or backfill)                                                           | x             | lf                 |             | \$ -            |
| 10                 | Install 4-inch HDPE SDR-17 (buried)<br>\$1.24 - 31 23 16.14.2250 - Chain trencher, 40 h.p., Operator Riding - 6" wide trench and backfill, 48" deep added 1\$/lf for SDR-17 | \$ 1,500.00   | lf                 |             | \$ -            |
| 11                 | 6-inch HDPE SDR-17<br>\$20.50 - 33 11 13.35.0200 - Pipe only butt fused - 6" SDR-21 (no excavation or backfill) added \$2/lf for SDR-17                                     | \$ 1,500.00   | lf                 |             | \$ -            |
| 12                 | Install 6-inch HDPE SDR-17 (buried)                                                                                                                                         | x             | lf                 |             | \$ -            |
| 13                 | Decommision Extraction Well (includes removal of vault, cutting and capping pipe ends, burial.                                                                              |               | ea                 |             | \$ -            |
| 14                 |                                                                                                                                                                             |               | LS                 | 1           | \$ -            |
| 15                 | Install 1-inch HDPE SDR-9 Air lines (buried)                                                                                                                                | \$ 12.00      | lf                 | 2000        | \$ 24,000       |
| 16                 | Install 2-inch HDPE SDR-11 Condensate lines (buried) - same trench                                                                                                          | \$ 3.00       | lf                 | 2000        | \$ 6,000        |
| 17                 | Fitting and valves for air and condensate force main                                                                                                                        | \$ 10,000.00  | ea                 | 1           | \$ 10,000       |
| 18                 | New Compressor and Dryer                                                                                                                                                    | \$ 35,000.00  | ea                 | 0           | \$ -            |
| 19                 | Electrical                                                                                                                                                                  | \$ 5,000.00   | ea                 | 0           | \$ -            |
| Construction Total |                                                                                                                                                                             |               |                    |             | \$ 148,100      |

Phase 6 - Upgrade Well Heads

| Item               | Description                                                                                                                                                                                                                                                                                                                                                                                                   | Cost Per Unit | Unit               | No of Units | Line Item Total |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------------------|-------------|-----------------|
| 1                  | Mobilization of Drill Rig (Place Holder)                                                                                                                                                                                                                                                                                                                                                                      | \$ 10,000     | LS                 | 1           | \$ 10,000       |
| 2                  | Replacement Well (\$/vf) (13 @ 50 feet each)                                                                                                                                                                                                                                                                                                                                                                  | \$ 150.00     | vertical foot (vf) | 0           | \$ -            |
| 3                  | Install Industry Standard Wellhead (No pump fittings)                                                                                                                                                                                                                                                                                                                                                         | \$ 800.00     | ea                 | 50          | \$ 40,000       |
| 4                  | New 24x36 Vault (Not traffic rated)                                                                                                                                                                                                                                                                                                                                                                           | \$ 750.00     | ea                 | 50          | \$ 37,500       |
| 5                  | Replace vault box (assumes half day per location)                                                                                                                                                                                                                                                                                                                                                             | \$ 3,000.00   | ea                 | 50          | \$ 150,000      |
| 6                  | Down-hole Pump Kit - Priority 1 wells only.                                                                                                                                                                                                                                                                                                                                                                   | \$ 6,000.00   | ea                 | 0           | \$ -            |
| 7                  | Install Down-hole Pump Kit - Priority 1 wells and new vault box                                                                                                                                                                                                                                                                                                                                               | \$ 3,000.00   | ea                 | 0           | \$ -            |
| 8                  | Industry Standard Well head with Pump Fittings - Priority 1 wells                                                                                                                                                                                                                                                                                                                                             | \$ 550.00     | ea                 | 0           | \$ -            |
| 9                  | 2-inch HDPE SDR-7 Air Supply Force Main<br>\$10.25 - Pipe only (butt fused) - 33 11 13.35.0100 - 2" (*) SDR-21 (no excavation or backfill) Note - (*) extrapolated costs as RS Menas only goes to 4" HDPE<br>Length estimated along marked gas line paths, from existing lines to proposed wells to pump and install. From marked lines to wells to pump 1855 ft. Additional lines to proposed wells 2845 ft. | x             | lf                 | 0           | \$ -            |
| 10                 | Install buried 2-inch HDPE SDR-7 Air Supply Force Main<br>\$1.24 - 31 23 16.14.2250 - Chain trencher, 40 h.p., Operator Riding - 6" wide trench and backfill, 48" deep. Estimate does not include 50 ft vertical at each well.                                                                                                                                                                                | x             | lf                 | 0           | \$ -            |
| 11                 | 4-inch HDPE SDR-17<br>\$15.35 - 33 11 13.35.0100 - Pipe only (butt fused) - 4" SDR-21 (no excavation or backfill)                                                                                                                                                                                                                                                                                             | x             | lf                 | 0           | \$ -            |
| 12                 | Install 4-inch HDPE SDR-17 (buried)<br>\$1.24 - 31 23 16.14.2250 - Chain trencher, 40 h.p., Operator Riding - 6" wide trench and backfill, 48" deep added 1\$/lf for SDR-17                                                                                                                                                                                                                                   | \$ 15.00      | lf                 | 1000        | \$ 15,000       |
| 13                 | 6-inch HDPE SDR-17<br>\$20.50 - 33 11 13.35.0200 - Pipe only butt fused - 6" SDR-21 (no excavation or backfill) added \$2/lf for SDR-17                                                                                                                                                                                                                                                                       |               | lf                 | 0           | \$ -            |
| 14                 | Install 6-inch HDPE SDR-17 (buried)                                                                                                                                                                                                                                                                                                                                                                           | x             | lf                 |             | \$ -            |
| 15                 | Decommission Extraction Well (includes removal of vault, cutting and capping pipe ends, burial.                                                                                                                                                                                                                                                                                                               |               | ea                 |             | \$ -            |
| 16                 |                                                                                                                                                                                                                                                                                                                                                                                                               |               | LS                 | 1           | \$ -            |
| 17                 | Install 1-inch HDPE SDR-9 Air lines (buried)                                                                                                                                                                                                                                                                                                                                                                  | \$ 12.00      | lf                 | 0           | \$ -            |
| 18                 | Install 2-inch HDPE SDR-11 Condensate lines (buried)                                                                                                                                                                                                                                                                                                                                                          | \$ 3.00       | lf                 | 0           | \$ -            |
| 19                 | Fitting and valves for air and condensate force main                                                                                                                                                                                                                                                                                                                                                          | \$ 5,000.00   | ea                 | 0           | \$ -            |
| 20                 | New Compressor and Dryer                                                                                                                                                                                                                                                                                                                                                                                      | \$ 50,000.00  | ea                 | 0           | \$ -            |
| 21                 | Electrical                                                                                                                                                                                                                                                                                                                                                                                                    | \$ 5,000.00   | ea                 | 0           | \$ -            |
| Construction Total |                                                                                                                                                                                                                                                                                                                                                                                                               |               |                    |             | \$ 252,500      |

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## Overview of Landfill Gas Beneficial Use Technologies

### Background

A portion of Bedwell Bayfront Park encompasses the Marsh Road Landfill, a former municipal waste disposal site that was officially closed to the public in 1984. The City of Menlo Park (City) owns and operates the closed landfill at the northeastern end of Marsh Road. In 1986, a landfill gas (LFG) recovery system, consisting of 72 wells, was installed in order to collect methane gas generated within the landfill as a result of solid waste decomposition typically associated with municipal waste disposal. Initially, a LFG-to Energy power plant was built at the former landfill and connected to the utility grid to produce and sell power generated by methane in the LFG. Large interior combustion engines mated to electrical generators operated on site until the end of 1993, when the power purchase agreement with what is now Pacific Gas and Electric (PG&E) expired. When the power plant ceased operation, the City was forced to flare (burn) the landfill gas in order to meet the Bay Area Air Quality Management District permit requirements and Assembly Bill 32, Methane Mitigation Measures for Municipal Solid Waste Landfills.

Although the quantity and quality of the LFG has declined over the years since the landfill was officially closed, LFG recovery operations continue to demonstrate that there are remaining LFG stores that could serve a beneficial use such as power generation or conversion to compressed natural gas (CNG) for vehicle use. As part of the Landfill Gas Beneficial Use Feasibility Study, Aptim Environmental & Infrastructure Inc. (APTIM) estimated the remaining LFG generation using samples collected from the landfill and modeling software. The Landfill Gas Emissions Model (LandGEM) Version 3.02 was developed by the United States Environmental Protection Agency (USEPA) and is used to estimate and quantify decomposition and emission rates for total landfill gas, methane, carbon dioxide, non-methane organic compounds, and individual air pollutants from municipal solid waste landfills. The results of the gas sample analysis and modeling are summarized as follows:

- Landfill gas sampled at the time of collection contained approximately 48% methane with a gross heating value of 6.816 Million British thermal units (MMBTU);
- The gas is considered “old” and is low in hydrogen sulfide;
- Siloxanes (measured as Total Silicon) concentrations indicate that filtration would be needed for using the landfill gas in microturbines and filtration should be considered for use in internal combustion engines;
- Nitrogen was well above the maximum 4% allowable for use in vehicle fuel as compressed natural gas, indicating that additional equipment would be needed to remove the nitrogen from the landfill gas prior to utilization.

A full discussion of the LFG sampling, analysis, and modeling results, including methodology and inputs, is presented as an attachment to this report.

### Review of Potential Beneficial Use Technologies

As part of the Landfill Gas Beneficial Use Feasibility Study, APTIM contacted five (5) alternative energy vendors who specialize in the beneficial reuse/utilization of LFG. Based on the responses from the vendors, a total of three (3) specific utilization technologies were reviewed for this report:



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- Internal Combustion Engines
- Microturbines
- Oxidation Conversion to compressed natural gas (CNG)

Each of the above technologies have advantages and disadvantages based on the quantity and quality of the LFG, and each has varying costs to permit, procure, install, and operate the equipment. In addition, other technologies are potentially available for the beneficial reuse of LFG, such as oxidation of methane; however these technologies were not evaluated in this report due to limited available information/lack of response from appropriate vendors or consultants.

Below, APTIM has prepared a brief summary of the technologies and vendors that were consulted for interest followed by preliminary costs. Additional information on these technologies is available as separate attachments.

Internal Combustion Engines

Internal combustion (IC) engines are a popular technology for utilizing the methane, or heat content, in LFG. Internal combustion engines can be modified to run on alternative fuels such as natural gas, which is roughly 99.9% methane, or LFG, at roughly 50% methane. Popular IC engine manufacturers include Caterpillar, GE-Jenbacher, Waukeshaw, and Cooper Superior, among others. These are tried and tested engines that when paired with an electrical generator, are considered the “go to” industry standard option for alternative energy generation from LFG since the 1980’s. Operating IC engines on LFG has the following advantages:

- Proven reliable technology
- Not sensitive to LFG impurities such as siloxanes
- Readily available parts
- Operate similarly to heavy diesel engines

However, IC engines are not the cleanest technology, and they require routine maintenance and overhauls similar to heavy machinery depending on the purity of the LFG and the hours of operation. They are also fairly expensive to procure and install, and require a routine parts and maintenance program. Additionally, in some states, including California, stringent emissions limits require additional scrubbing of the IC engine exhaust in order to meet emission standards. This technological exhaust treatment can cost up to 30% - 50% of the IC engine and turbine generator sets alone.

Certain vendors, including GE-Jenbacher, have proven successful at manufacturing smaller IC engines that are fairly self-contained in shipping containers, compact and relatively easy to install, and have models capable of generating power with limited LFG supply. Additionally, they can be paired with exhaust scrubbing technology when necessary to meet local emission standards. Western Energy System provided a proposal for a GE-Jenbacher system that comes equipped with exhaust scrubbing to meet local air quality requirements. Details of this proposed system are provided in the attachments to this report and estimated costs are shown below.

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*Footprint*

As shown in the attachments to this report, The GE-Jenbacher Model JGS312 comes self-contained in a J2 shipping container measuring 36'x9'x9'. There is room for this unit at the existing flare station and former LFG-to-Energy power plant area.

*Environmental Impacts*

The Marsh Road Landfill and Bedwell Bayfront Park are located within the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). The BAAQMD has strict air emissions requirements for numerous compounds; typical IC generator sets alone do not meet these emissions requirements, in particular, the requirement for oxides of nitrogen, or NOx. However, IC engine exhaust can be equipped with selective catalytic conversions which convert the NOx to elemental nitrogen and water, typically through the addition of an ammonia compound such as urea.

Air quality permits will need to be obtained in order to construction and operate long term. An Authorization to Construct will be needed which will be converted into a Permit to Operate following passing performance testing results.

Overall, this technology's footprint and emissions would have negligible impact at the site and could be installed within the existing infrastructure.

Microturbines

Microturbines are a relatively new distributed generation technology being used for stationary energy generation applications. They are a type of combustion turbine that produces both heat and electricity on a comparatively small scale with some of the lowest emissions of the renewable fuels technologies available. Microturbines offer several potential advantages compared to other technologies for small-scale power generation, including: a small number of moving parts, compact size, lightweight, greater efficiency, lower emissions, lower electricity costs, and opportunities to utilize waste fuels. Because of their small size, relatively low capital costs, expected low operations and maintenance costs, and automatic electronic control, microturbines are expected to capture a significant share of the distributed generation market.

*Footprint*

APTIM has evaluated the use of several microturbines, and proposes the use of the Capstone 1000S package. The Capstone 1000S is a self-contained unit that is roughly 10'x 30' x 10'. There is adequate room available on site at the flare station and former power plant facility to accommodate the proposed microturbine power station.

*Environmental Impacts*

Turbine technology has some of the lowest emissions of equipment that utilizes LFG. In fact, turbine technology is the only combustion technology that can be permitted in the BAAQMD without further exhaust treatment to meet emission requirements. Thus, the emissions from the utilization of LFG by the microturbine are extremely low.

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Air quality permits will need to be obtained in order to construction and operate long term. An Authorization to Construct will be needed which will be converted into a Permit to Operate following passing performance testing results.

Overall, this technology's footprint and emissions would have negligible impact at the site and could be installed within the existing infrastructure.

*Compressed Natural Gas (CNG)*

With the increasing costs of petroleum based fuels, and the mandates for fleet vehicles to commit a percentage of fleet operations to natural gas or bio-gas operation in order to meet climate change initiatives and reduce greenhouse gas emissions, CNG from natural gas supplies and CNG from bio-gas derived field sources such as landfills, are becoming increasingly popular in urban areas.

Fleet vehicles that operate on natural gas or bio-gas require nearly 100% methane gas for proper operation. Because LFG is only 50% methane, the remaining carbon dioxide and nitrogen must be removed (stripped) from the LFG using various technologies.

The next challenge with CNG facilities is handling and storage of CNG that is produced by the facility. Thus, a critical component of a CNG facility is to 1) determine the expected production rate of CNG from remaining LFG supplies and; 2) identify one of more fleets of vehicles that will utilize the CNG upon production. CNG facilities require adequate real estate for storage tanks, fill stations, LFG conditioning (treatment) equipment, safety measures, and a means to dispose of excess CNG and impurities stripped from the LFG supply. This is usually done with a "waste gas" flare.

Another challenge with CNG facilities is the extra traffic produced by fleet vehicles accessing the fill station. At Bedwell Bayfront Park, there is only one access road that is shared with residential vehicles, City vehicles, pedestrians, bicyclists, joggers, and pets. Should it decide to research and implement the conversion of LFG to CNG, the City will need to conduct a traffic study to identify and evaluate what impacts would occur from CNG vehicles accessing a fill station on site.

APTIM obtained information and preliminary cost estimates from BioCNG, a Tetra Tech, Inc. company that has been successful at converting LFG or BioGas to CNG at seven (7) facilities of various size across the United States, including a South San Francisco area food and green waste processing facility (Blue Line Transfer, Inc.) and a Sacramento South Area organic digestion facility.

Bio-CNG has determined that CNG is feasible for the former Marsh Road Landfill. However, as noted in the introduction, due to the age of the landfill, the remaining LFG expected to be generated will be high in nitrogen content (>4%), and due to the Renewable Fuel Standards for use in vehicles, the system would require the installation of specific nitrogen removal (stripping) equipment, which could exceed the costs of the CNG conversion facility altogether and render this option financially infeasible. Based on historical data for the LFG at the site, nitrogen concentration is typically in the 10% to 20% range. Therefore, nitrogen removal technology would be required and would result in significant additional costs.

*Footprint*

Photos and a typical footprint of a BioCNG facility are provided in the attachments to this report. The BioCNG facility for Bedwell Bayfront Park would occupy a footprint of roughly 55 feet by 75 feet, as well

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as the area necessary for a fill station and access roadway. Of the technologies reviewed for this report, the BioCNG would occupy the largest footprint at the site. At this time, a suitable location at Bedwell Bayfront Park has not been identified or evaluated.

#### *Environmental Impacts*

The process of converting LFG to CNG involves the removal or “stripping” of various components of the LFG in order for the end product to meet vehicle fuel standards. Gases that are stripped out include carbon dioxide, nitrogen, oxygen, and non-methane organic compounds. The stripping process typically results in the production of 95% to 98% methane, versus the incoming methane in the raw LFG which varies from 43% to 53%. The gases that are stripped are managed by a combination of release to atmosphere or destruction by oxidation either in a thermal oxidizer or by injecting into the LFG flare. The BioCNG facility would need to permit emissions limits set by the BAAQMD.

In summary, due to the size of the facility, the BioCNG option would have the largest impact in terms of land use required. In addition, the fill station would generate traffic at Bedwell Bayfront Park which would need to be quantified and evaluated. Based on the proposed model and LFG supply at the Park, the BioCNG facility is estimated to produce between 800 and 1250 gallons of gasoline equivalents per day which could supply 100 vehicles per day or more. Excess CNG would need to be combusted in the onsite flare station.

Permits will need to be obtained in order to construction and operate long term. An Authorization to Construct will be needed which will be converted into a Permit to Operate following passing performance testing results.

#### *Oxidation of Methane*

Another identified new technology relies on the heat produced by the oxidation of methane to operate a microturbine such as the microturbines previously discussed. By oxidizing the methane in LFG, heat is produced with sufficient pressure to operate a turbine, which in turn makes electricity to upload to the local utility grid. Originally founded in 2008 as Flex Energy, Ener-Core designs and manufactures innovative systems for producing continuous energy from a broad range of sources, including previously unusable ultra-low quality gas. The Ener-Core Power Oxidizer, a patented oxidation technology, enables the conversion of the lowest known associated emissions into useful heat and power. With the Ener-Core Power Oxidizer matched to gas turbines, Ener-Core offers systems with fuel flexibility and pollution control for power generation.

Ener-Core has developed the 250 kilowatt (kW) Ener-Core Powerstation EC250, and its larger counterpart, the 2-megawatt (MW) Ener-Core Powerstation KG2-3GEF/PO, to transform methane gas, especially “ultra-low Btu gas” from landfills, coal mines, oil fields and other low quality methane sources into continuous clean electricity with near-zero emissions. As of the writing of this report, Ener-Core has yet to provide a proposal for the proposed development of this technology for use at Bedwell Bayfront Park. Therefore, an evaluation of the methane oxidation technology, as implemented by Ener-Core, is not included further at this time.

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### **Summary**

The selection of a beneficial reuse option will depend upon the City's preferences, capital costs, long-term operations and maintenance costs, and other factors relative to the integration of the technology with the Bedwell Bayfront Park Master Plan. Aptim is continuing a review of the costs and incentive programs available to the City and will amend this report to encompass that information in the next revision.



## Cost Estimates

prepared for the  
City of Menlo Park

| Item #   | Description                                                 | Cost     | Unit | Phase #1 |            |           |
|----------|-------------------------------------------------------------|----------|------|----------|------------|-----------|
|          |                                                             |          |      | Qty      | Item Total | Subtotal  |
| <b>A</b> | <b>Project Start-Up</b>                                     |          |      |          |            |           |
| 1.       | Bonding and mobilization                                    | Allow    | 4%   | Allow    | \$88,411   |           |
| 2.       | Construction staking                                        | Allow    | LS   | Allow    | \$15,000   |           |
| 3.       | Traffic control                                             | Allow    | LS   | Allow    | \$15,000   |           |
| 4.       | Tree protection                                             | Allow    | LS   | Allow    | \$5,000    |           |
| 5.       | SWPPP provisions                                            | Allow    | 1%   | Allow    | \$22,103   |           |
|          |                                                             |          |      |          |            | \$145,510 |
| <b>B</b> | <b>Demolition</b>                                           |          |      |          |            |           |
| 1.       | Clear and grub, ADA ac                                      | \$0.50   | SF   | 8,000    | \$4,000    |           |
| 2.       | Clear and grub, ADA treated trails                          | \$0.70   | SF   | 1,000    | \$700      |           |
| 3.       | Clear and grub (picnic, overlooks, seating, fitness)        | \$0.50   | SF   | 14,200   | \$7,100    |           |
| 4.       | Clear and grub, observation platform and slough path        | \$0.50   | SF   | 0        | \$0        |           |
| 5.       | Tree removal                                                | \$750.00 | EA   | 0        | \$0        |           |
| 6.       | Split rail fence                                            | \$8.00   | LF   | 1,500    | \$12,000   |           |
| 7.       | Signage                                                     | Allow    | LS   | Allow    | \$0        |           |
| 8.       | Bayfront Exwy intersection-related removals                 | Allow    | LS   | Allow    | \$10,000   |           |
| 9.       | Miscellaneous removals                                      | Allow    | LS   | Allow    | \$4,000    |           |
|          |                                                             |          |      |          |            | \$37,800  |
| <b>C</b> | <b>Earthwork &amp; Grading</b>                              |          |      |          |            |           |
| 1.       | Rough grading, ADA paths and trails                         | \$60.00  | CY   | 300      | \$18,000   |           |
| 2.       | Rough grading (picnics, overlooks, seating, fitness)        | \$60.00  | CY   | 140      | \$8,400    |           |
|          |                                                             |          |      |          |            | \$26,400  |
| <b>D</b> | <b>Site Construction</b>                                    |          |      |          |            |           |
| 1.       | Entrance gate arm                                           | Allow    | LS   | Allow    | \$0        |           |
| 2.       | Entrance sign                                               | Allow    | LS   | Allow    | \$0        |           |
| 3.       | Concrete curb (vertical, 8")                                | \$40.00  | LF   | 0        | \$0        |           |
| 4.       | Concrete curb (at grade)                                    | \$20.00  | LF   | 0        | \$0        |           |
| 5.       | Parking pavement, ac                                        | \$7.00   | SF   | 0        | \$0        |           |
| 6.       | Parking pavement, gravel                                    | \$3.00   | SF   | 5,300    | \$15,900   |           |
| 7.       | Parking lot striping                                        | Allow    | LS   | Allow    | \$0        |           |
| 8.       | ADA path, 6' to 10' wide asphalt pavement                   | \$6.00   | SF   | 35,700   | \$214,200  |           |
| 9.       | ADA path, 6' wide treated pavement                          | \$12.00  | SF   | 5,000    | \$60,000   |           |
| 10.      | Stairway, wood timber and gravel                            | \$30.00  | LF   | 260      | \$7,800    |           |
| 11.      | Split rail fence                                            | \$40.00  | LF   | 2,000    | \$80,000   |           |
| 12.      | Slough observation platform                                 | \$25.00  | SF   | 0        | \$0        |           |
| 13.      | Slough path                                                 | \$12.00  | SF   | 0        | \$0        |           |
| 14.      | Concrete (entry plaza, restroom, rangers office, path)      | \$25.00  | SF   | 3,600    | \$90,000   |           |
| 15.      | Treated pavement (overlooks, picnic area, seating, fitness) | \$12.00  | SF   | 20,000   | \$240,000  |           |
| 16.      | Miscellaneous treated pads                                  | \$6.00   | SF   | 1,500    | \$9,000    |           |

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## Estimate of Probable Construction Costs Bedwell Bayfront Park Master Plan

prepared on: 12/19/17  
prepared by: JS  
checked by: MM

| Phase #2 |            |           | Phase #3 |            |          | Segments  |
|----------|------------|-----------|----------|------------|----------|-----------|
| Qty      | Item Total | Subtotal  | Qty      | Item Total | Subtotal | Subtotal  |
|          |            |           |          |            |          |           |
|          |            |           |          |            |          |           |
| Allow    | \$118,586  |           | Allow    | \$14,970   |          |           |
| Allow    | \$10,000   |           | Allow    | \$5,000    |          |           |
| Allow    | \$5,000    |           | Allow    | \$10,000   |          |           |
| Allow    | \$5,000    |           | Allow    | \$5,000    |          |           |
| Allow    | \$29,647   |           | Allow    | \$3,742    |          |           |
|          |            | \$168,230 |          |            | \$38,710 | \$352,450 |
|          |            |           |          |            |          |           |
| 0        | \$0        |           | 0        | \$0        |          |           |
| 0        | \$0        |           | 0        | \$0        |          |           |
| 2,900    | \$1,450    |           | 0        | \$0        |          |           |
| 3,700    | \$1,850    |           | 0        | \$0        |          |           |
| 3        | \$2,250    |           | 0        | \$0        |          |           |
| 500      | \$4,000    |           | 0        | \$0        |          |           |
| Allow    | \$1,000    |           | Allow    | \$0        |          |           |
| Allow    | \$0        |           | Allow    | \$0        |          |           |
| Allow    | \$4,000    |           | Allow    | \$2,000    |          |           |
|          |            | \$14,550  |          |            | \$2,000  | \$54,350  |
|          |            |           |          |            |          |           |
| 0        | \$0        |           | 0        | \$0        |          |           |
| 60       | \$3,600    |           | 0        | \$0        |          |           |
|          |            | \$3,600   |          |            | \$0      | \$30,000  |
|          |            |           |          |            |          |           |
| Allow    | \$15,000   |           | Allow    | \$0        |          |           |
| Allow    | \$15,000   |           | Allow    | \$0        |          |           |
| 1,480    | \$59,200   |           | 0        | \$0        |          |           |
| 435      | \$8,700    |           | 0        | \$0        |          |           |
| 16,500   | \$115,500  |           | 0        | \$0        |          |           |
| 14,900   | \$44,700   |           | 0        | \$0        |          |           |
| Allow    | \$3,000    |           | Allow    | \$0        |          |           |
| 0        | \$0        |           | 0        | \$0        |          |           |
| 41,340   | \$496,080  |           | 0        | \$0        |          |           |
| 0        | \$0        |           | 0        | \$0        |          |           |
| 500      | \$20,000   |           | 0        | \$0        |          |           |
| 230      | \$5,750    |           | 0        | \$0        |          |           |
| 3,300    | \$39,600   |           | 0        | \$0        |          |           |
| 900      | \$22,500   |           | 0        | \$0        |          |           |
| 20,000   | \$240,000  |           | 0        | \$0        |          |           |
| 0        | \$0        |           | 0        | \$0        |          |           |

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| Item #    | Description                                       | Cost        | Unit | Phase #1 |            |           |
|-----------|---------------------------------------------------|-------------|------|----------|------------|-----------|
|           |                                                   |             |      | Qty      | Item Total | Subtotal  |
| 17.       | Intersection-related striping, sidewalk, curbs    | Allow       | LS   | Allow    | \$20,000   |           |
| 18.       | Great Spirit Art, pavement                        | Allow       | LS   | Allow    | \$0        |           |
| 19.       | Great Spirit Art, refurbish boulders and signs    | Allow       | LS   | Allow    | \$0        |           |
| 20.       | Outdoor Classroom                                 | Allow       | LS   | Allow    | \$0        |           |
| 21.       | Nature play areas, 13,500 sf total                | Allow       | LS   | Allow    | \$0        |           |
|           |                                                   |             |      |          |            | \$736,900 |
| <b>E</b>  | <b>Site Furnishings</b>                           |             |      |          |            |           |
| 1.        | Recycle/trash receptacle                          | \$2,000.00  | EA   | 16       | \$32,000   |           |
| 2.        | Picnic bench and table                            | \$6,000.00  | EA   | 0        | \$0        |           |
| 4.        | Bike rack loops                                   | \$2,000.00  | EA   | 4        | \$8,000    |           |
| 5.        | Dog bag dispensers                                | \$1,000.00  | EA   | 6        | \$6,000    |           |
| 7.        | Bench seating                                     | \$2,500.00  | EA   | 12       | \$30,000   |           |
| 8.        | Boulders to delineate gravel parking              | \$200.00    | EA   | 70       | \$14,000   |           |
| 9.        | Boulders for seating at summit                    | \$300.00    | EA   | 20       | \$6,000    |           |
| 10.       | Information kiosk                                 | \$8,000.00  | EA   | 5        | \$40,000   |           |
| 11.       | Directional/regulatory/mileage/wayfinding signage | Allow       | LS   | Allow    | \$0        |           |
| 12.       | Interpretive signage                              | \$10,000.00 | EA   | 7        | \$70,000   |           |
|           |                                                   |             |      |          |            | \$206,000 |
| <b>F</b>  | <b>Buildings and Utilities</b>                    |             |      |          |            |           |
| 1.        | Restroom building with office, 400 sf             | Allow       | LS   | Allow    | \$0        |           |
| 2.        | Photovoltaic panel and system                     | Allow       | LS   | Allow    | \$0        |           |
| 3.        | Building pad preparation                          | Allow       | LS   | Allow    | \$6,000    |           |
| 4.        | Electrical system                                 | Allow       | LS   | Allow    | \$8,000    |           |
| 5.        | Gas ventilation system                            | Allow       | LS   | Allow    | \$1,500    |           |
| 6.        | Electrical panel upgrades                         | Allow       | LS   | Allow    | \$150,000  |           |
| 7.        | Miscellaneous upgrades                            | Allow       | LS   | Allow    | \$50,000   |           |
| 9.        | GLC liner for utility trench                      | \$10.00     | LF   | 200      | \$2,000    |           |
| 10.       | Rangers office, 400 sf                            | Allow       | LS   | Allow    | \$150,000  |           |
|           |                                                   |             |      |          |            | \$367,500 |
| <b>G</b>  | <b>Irrigation</b>                                 |             |      |          |            |           |
| 1.        | Water meter                                       | \$2,000.00  | EA   | 0        | \$0        |           |
| 2.        | Backflow preventer                                | \$8,000.00  | EA   | 0        | \$0        |           |
| 3.        | Controller                                        | \$8,000.00  | EA   | 0        | \$0        |           |
| 4.        | Master valve and flow sensor                      | \$6,000.00  | EA   | 0        | \$0        |           |
| 5.        | Mainline                                          | \$10.00     | LF   | 0        | \$0        |           |
| 6.        | Drip irrigation system                            | \$4.00      | SF   | 0        | \$0        |           |
| 7.        | Drainage System                                   | \$1.50      | SF   | 0        | \$0        |           |
|           |                                                   |             |      |          |            | \$0       |
| <b>H.</b> | <b>Soil Preparation</b>                           |             |      |          |            |           |

## Estimate of Probable Construction Costs Bedwell Bayfront Park Master Plan

prepared on: 12/19/17

prepared by: JS

checked by: MM

| Phase #2 |            |             | Phase #3 |            |           | Segments    |
|----------|------------|-------------|----------|------------|-----------|-------------|
| Qty      | Item Total | Subtotal    | Qty      | Item Total | Subtotal  | Subtotal    |
| Allow    | \$0        |             | Allow    | \$0        |           |             |
| Allow    | \$0        |             | Allow    | \$35,000   |           |             |
| Allow    | \$0        |             | Allow    | \$100,000  |           |             |
| Allow    | \$10,000   |             | Allow    | \$0        |           |             |
| Allow    | \$150,000  |             | Allow    | \$0        |           |             |
|          |            | \$1,245,030 |          |            | \$135,000 | \$2,116,930 |
| 0        | \$0        |             | 0        | \$0        |           |             |
| 20       | \$120,000  |             | 0        | \$0        |           |             |
| 0        | \$0        |             | 0        | \$0        |           |             |
| 0        | \$0        |             | 0        | \$0        |           |             |
| 0        | \$0        |             | 0        | \$0        |           |             |
| 0        | \$0        |             | 0        | \$0        |           |             |
| 0        | \$0        |             | 0        | \$0        |           |             |
| 0        | \$0        |             | 0        | \$0        |           |             |
| Allow    | \$15,000   |             | Allow    | \$0        |           |             |
| 0        | \$0        |             | 0        | \$0        |           |             |
|          |            | \$135,000   |          |            | \$0       | \$341,000   |
| Allow    | \$250,000  |             | Allow    | \$0        |           |             |
| Allow    | \$30,000   |             | Allow    | \$0        |           |             |
| Allow    | \$4,000    |             | Allow    | \$0        |           |             |
| Allow    | \$2,000    |             | Allow    | \$0        |           |             |
| Allow    | \$1,500    |             | Allow    | \$0        |           |             |
| Allow    | \$0        |             | Allow    | \$0        |           |             |
| Allow    | \$0        |             | Allow    | \$0        |           |             |
| 100      | \$1,000    |             | 0        | \$0        |           |             |
| Allow    | \$0        |             | Allow    | \$0        |           |             |
|          |            | \$288,500   |          |            | \$0       | \$656,000   |
| 1        | \$2,000    |             | 0        | \$0        |           |             |
| 1        | \$8,000    |             | 0        | \$0        |           |             |
| 1        | \$8,000    |             | 0        | \$0        |           |             |
| 1        | \$6,000    |             | 0        | \$0        |           |             |
| 2,500    | \$25,000   |             | 0        | \$0        |           |             |
| 70,000   | \$280,000  |             | 0        | \$0        |           |             |
| 70,000   | \$105,000  |             | 0        | \$0        |           |             |
|          |            | \$434,000   |          |            | \$0       | \$434,000   |

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| Item #    | Description                                        | Cost       | Unit | Phase #1 |            |          |
|-----------|----------------------------------------------------|------------|------|----------|------------|----------|
|           |                                                    |            |      | Qty      | Item Total | Subtotal |
| 1.        | Soil preparation and fine grading                  | \$0.80     | SF   | 0        | \$0        |          |
| 2.        | Import soil, landscape areas                       | \$50.00    | CY   | 0        | \$0        |          |
| 3.        | Bioretention soil, landscape areas                 | \$10.00    | SF   | 0        | \$0        |          |
| 4.        | Mulch                                              | \$0.80     | SF   | 0        | \$0        |          |
|           |                                                    |            |      |          |            | \$0      |
| <b>I.</b> | <b>Planting</b>                                    |            |      |          |            |          |
| 1.        | Trees, 24" box                                     | \$500.00   | EA   | 0        | \$0        |          |
| 2.        | Shrubs and groundcover, 4' o.c.                    | \$3.00     | SF   | 0        | \$0        |          |
| 3.        | Hydroseed                                          | \$0.50     | SF   | 12,000   | \$6,000    |          |
|           |                                                    |            |      |          |            | \$6,000  |
| <b>J.</b> | <b>Habitat Restoration Planting</b>                |            |      |          |            |          |
| 1.        | Planting, 3' o.c.                                  | \$3.00     | SF   | 0        | \$0        |          |
| 2.        | Irrigation                                         | \$4.00     | SF   | 0        | \$0        |          |
|           |                                                    |            |      |          |            | \$0      |
| <b>K.</b> | <b>Landscape Maintenance</b>                       |            |      |          |            |          |
| 1.        | Landscape Maintenance                              | \$4,000.00 | MO   | 0        | \$0        |          |
|           |                                                    |            |      |          |            | \$0      |
| <b>L</b>  | <b>Sea Level Rise Improvements</b>                 |            |      |          |            |          |
| 1.        | Clear and grub, roadway                            | \$0.35     | SF   | 6,700    | \$2,345    |          |
| 2.        | Clear and grub, parking                            | \$0.50     | SF   | 4,000    | \$2,000    |          |
| 3.        | Clear and grub, Bay Trail (outside SAFER)          | \$0.35     | SF   | 53,000   | \$18,550   |          |
| 4.        | Clear and grub, Bay Trail (inside SAFER)           | \$0.35     | SF   | 24,000   | \$8,400    |          |
| 5.        | Prepare ac roadway                                 | \$1.00     | SF   | 16,000   | \$16,000   |          |
| 6.        | Prepare ac parking                                 | \$1.00     | SF   | 0        | \$0        |          |
| 7.        | Regrade gravel, Bay Trail (outside SAFER)          | \$0.50     | SF   | 30,500   | \$15,250   |          |
| 8.        | Regrade gravel, Bay Trail (inside SAFER)           | \$0.50     | SF   | 9,500    | \$4,750    |          |
| 9.        | Roadway pavement, ac                               | \$8.00     | SF   | 16,000   | \$128,000  |          |
| 10.       | Bay Trail pavement, ac                             | \$6.50     | SF   | 55,550   | \$361,075  |          |
| 11.       | Bay Trail pavement, gravel (outside SAFER)         | \$4.00     | SF   | 27,200   | \$108,800  |          |
| 12.       | Bay Trail pavement, gravel (inside SAFER)          | \$4.00     | SF   | 12,500   | \$50,000   |          |
| 13.       | Rough grading, roadway                             | \$60.00    | CY   | 75       | \$4,500    |          |
| 14.       | Rough grading, parking                             | \$60.00    | CY   | 0        | \$0        |          |
| 15.       | Rough grading, Bay Trail (outside SAFER)           | \$60.00    | CY   | 550      | \$33,000   |          |
| 16.       | Rough grading, Bay Trail (inside SAFER)            | \$60.00    | CY   | 170      | \$10,200   |          |
| 17.       | Import fill, roadway                               | \$40.00    | CY   | 860      | \$34,400   |          |
| 18.       | Import fill, parking                               | \$40.00    | CY   | 0        | \$0        |          |
| 19.       | Import fill, Bay Trail (outside SAFER/pond retor.) | \$4.00     | CY   | 800      | \$3,200    |          |
| 20.       | Import fill, Bay Trail (inside SAFER/pond retor.)  | \$40.00    | CY   | 730      | \$29,200   |          |
| 21.       | Storm drain, parking                               | Allow      | LS   | Allow    | \$0        |          |

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## Estimate of Probable Construction Costs Bedwell Bayfront Park Master Plan

prepared on: 12/19/17

prepared by: JS

checked by: MM

| Phase #2 |            |           | Phase #3 |            |          | Segments  |
|----------|------------|-----------|----------|------------|----------|-----------|
| Qty      | Item Total | Subtotal  | Qty      | Item Total | Subtotal | Subtotal  |
| 70,000   | \$56,000   |           | 0        | \$0        |          |           |
| 2,470    | \$123,500  |           | 0        | \$0        |          |           |
| 3,600    | \$36,000   |           | 0        | \$0        |          |           |
| 70,000   | \$56,000   |           | 0        | \$0        |          |           |
|          |            | \$271,500 |          |            | \$0      | \$271,500 |
| 8        | \$4,000    |           | 0        | \$0        |          |           |
| 70,000   | \$210,000  |           | 0        | \$0        |          |           |
| 3,000    | \$1,500    |           | 0        | \$0        |          |           |
|          |            | \$215,500 |          |            | \$0      | \$221,500 |
| 30,000   | \$90,000   |           | 0        | \$0        |          |           |
| 30,000   | \$120,000  |           | 0        | \$0        |          |           |
|          |            | \$210,000 |          |            | \$0      | \$210,000 |
| 3        | \$12,000   |           | 0        | \$0        |          |           |
|          |            | \$12,000  |          |            | \$0      | \$12,000  |
| 0        | \$0        |           | 4,200    | \$1,470    |          |           |
| 23,100   | \$11,550   |           | 0        | \$0        |          |           |
| 21,000   | \$7,350    |           | 12,000   | \$4,200    |          |           |
| 0        | \$0        |           | 19,000   | \$6,650    |          |           |
| 0        | \$0        |           | 10,000   | \$10,000   |          |           |
| 15,900   | \$15,900   |           | 0        | \$0        |          |           |
| 11,800   | \$5,900    |           | 7,000    | \$3,500    |          |           |
| 0        | \$0        |           | 7,400    | \$3,700    |          |           |
| 0        | \$0        |           | 10,000   | \$80,000   |          |           |
| 0        | \$0        |           | 0        | \$0        |          |           |
| 10,600   | \$42,400   |           | 6,000    | \$24,000   |          |           |
| 0        | \$0        |           | 10,000   | \$40,000   |          |           |
| 0        | \$0        |           | 50       | \$3,000    |          |           |
| 40       | \$2,400    |           | 0        | \$0        |          |           |
| 220      | \$13,200   |           | 130      | \$7,800    |          |           |
| 0        | \$0        |           | 130      | \$7,800    |          |           |
| 0        | \$0        |           | 540      | \$21,600   |          |           |
| 500      | \$20,000   |           | 0        | \$0        |          |           |
| 320      | \$1,280    |           | 180      | \$720      |          |           |
| 0        | \$0        |           | 570      | \$22,800   |          |           |
| Allow    | \$15,000   |           | Allow    | \$0        |          |           |

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| Item #   | Description                                 | Cost         | Unit | Phase #1 |            |                    |
|----------|---------------------------------------------|--------------|------|----------|------------|--------------------|
|          |                                             |              |      | Qty      | Item Total | Subtotal           |
|          |                                             |              |      |          |            | \$829,670          |
| <b>M</b> | <b>Subtotal</b>                             |              |      |          |            | \$2,355,780        |
| <b>N</b> | <b>Contingencies</b>                        |              |      |          |            |                    |
| 1.       | Design contingency                          | Allow        | 25%  | Allow    | \$588,945  |                    |
| 2.       | Bid contingency                             | Allow        | 10%  | Allow    | \$235,578  |                    |
|          |                                             |              |      |          |            | \$824,520          |
| <b>O</b> | <b>Total Estimated Construction Costs</b>   |              |      |          |            | <b>\$3,180,300</b> |
| <b>P</b> | <b>Professional Services</b>                |              |      |          |            |                    |
| 1.       | Design development                          | Allow        | 2.5% | Allow    | \$79,508   |                    |
| 2.       | Construction documents                      | Allow        | 10%  | Allow    | \$318,030  |                    |
| 3.       | Construction administration                 | Allow        | 1.5% | Allow    | \$47,705   |                    |
| 4.       | Pre-construction wildlife surveys           | Allow        | 0.3% | Allow    | \$9,541    |                    |
| 5.       | Testing and inspection                      | Allow        | 1%   | Allow    | \$31,803   |                    |
| 6.       | Environmental clearance                     | Allow        | LS   | Allow    | \$75,000   |                    |
| 7.       | Permitting assistance                       | Allow        | LS   | Allow    | \$5,000    |                    |
| 8.       | Interpretive signage programming and design | Allow        | LS   | Allow    | \$0        |                    |
| 9.       | Great spirit art redesign/layout            | Allow        | LS   | Allow    | \$0        |                    |
|          |                                             |              |      |          |            | \$566,590          |
| <b>Q</b> | <b>Project Subtotal</b>                     |              |      |          |            | <b>\$3,746,890</b> |
| <b>R</b> | <b>Inflation</b>                            | 3%           | YR   | 2        | \$224,813  |                    |
|          |                                             |              |      |          |            | \$224,813          |
| <b>S</b> | <b>Project Total</b>                        |              |      |          |            | <b>\$3,971,703</b> |
| <b>T</b> | <b>Landfill Systems Upgrades</b>            |              |      |          |            |                    |
| 1.       | Phase 1 (decommission 7 wells)              | \$1,500.00   | LS   | Allow    | \$1,500    |                    |
| 2.       | Phase 2 (repair/replace watered-in piping)  | \$80,000.00  | LS   | Allow    | \$80,000   |                    |
| 3.       | Phase 3 (install pumps in wells)            | \$325,000.00 | LS   | Allow    | \$325,000  |                    |
| 4.       | Phase 4 (replace 12 wells)                  | \$225,000.00 | LS   | Allow    | \$225,000  |                    |
| 5.       | Phase 5 (dewater wells)                     | \$150,000.00 | LS   | Allow    | \$150,000  |                    |
| 6.       | Phase 6 (replace remaining wells/vaults)    | \$275,000.00 | LS   | Allow    | \$275,000  |                    |

## Estimate of Probable Construction Costs Bedwell Bayfront Park Master Plan

prepared on: 12/19/17  
prepared by: JS  
checked by: MM

| Phase #2 |              |             | Phase #3 |            |           | Segments     |
|----------|--------------|-------------|----------|------------|-----------|--------------|
| Qty      | Item Total   | Subtotal    | Qty      | Item Total | Subtotal  | Subtotal     |
|          |              | \$134,980   |          |            | \$237,240 | \$1,201,890  |
|          |              | \$3,132,890 |          |            | \$412,950 | \$5,901,620  |
| Allow    | \$783,223    |             | Allow    | \$103,238  |           |              |
| Allow    | \$313,289    |             | Allow    | \$41,295   |           |              |
|          |              | \$1,096,510 |          |            | \$144,530 | \$2,065,560  |
|          |              | \$4,229,400 |          |            | \$557,480 | \$7,967,180  |
| Allow    | \$27,413     |             | Allow    | \$3,613    |           |              |
| Allow    | \$109,651    |             | Allow    | \$14,453   |           |              |
| Allow    | \$16,448     |             | Allow    | \$2,168    |           |              |
| Allow    | \$3,290      |             | Allow    | \$434      |           |              |
| Allow    | \$10,965     |             | Allow    | \$1,445    |           |              |
| Allow    | \$0          |             | Allow    | \$0        |           |              |
| Allow    | \$10,000     |             | Allow    | \$10,000   |           |              |
| Allow    | \$50,000     |             | Allow    | \$0        |           |              |
| Allow    | \$0          |             | Allow    | \$25,000   |           |              |
|          |              | \$227,770   |          | \$0        | \$57,110  | \$851,470    |
|          |              | \$4,457,170 |          |            | \$614,590 | \$8,818,650  |
| 7        | \$936,005.70 |             | 12       | \$221,252  |           |              |
|          |              | \$936,006   |          |            | \$221,252 | \$1,382,072  |
|          |              | \$5,393,176 |          |            | \$835,842 | \$10,200,722 |
| Allow    | \$0          |             | Allow    | \$0        |           |              |
| Allow    | \$0          |             | Allow    | \$0        |           |              |
| Allow    | \$0          |             | Allow    | \$0        |           |              |
| Allow    | \$0          |             | Allow    | \$0        |           |              |
| Allow    | \$0          |             | Allow    | \$0        |           |              |
| Allow    | \$0          |             | Allow    | \$0        |           |              |

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**City of Menlo Park**

| Item # | Description                                         | Cost    | Unit | Phase #1 |            |                    |
|--------|-----------------------------------------------------|---------|------|----------|------------|--------------------|
|        |                                                     |         |      | Qty      | Item Total | Subtotal           |
| 7.     | Fire suppression system                             | Allow   | LS   | Allow    | \$500,000  |                    |
| 8.     | Energy generation system                            | Allow   | LS   | Allow    | \$0        |                    |
| 9.     | Contingencies                                       | Allow   | 40%  | Allow    | \$622,600  |                    |
| 10.    | Design/permitting assistance                        | Allow   | 20%  | Allow    | \$311,300  |                    |
| 11.    | Raise landfill structures to grade                  | Allow   | LS   | Allow    | \$15,000   |                    |
| 12.    | Clear and grub, roadway                             | \$0.35  | SF   | 10,900   | \$3,815    |                    |
| 13.    | Prepare ac roadway                                  | \$1.00  | SF   | 25,000   | \$25,000   |                    |
| 14.    | Roadway pavement, ac                                | \$8.00  | SF   | 25,000   | \$200,000  |                    |
| 15.    | Rough grading, roadway                              | \$60.00 | CY   | 125      | \$7,500    |                    |
| 16.    | Import fill, roadway                                | \$40.00 | CY   | 1,400    | \$56,000   |                    |
| 17.    | Import fill, flow equalization facility/cogen levee | \$40.00 | CY   | 2,500    | \$100,000  |                    |
| 18.    | Contingencies                                       | Allow   | 55%  | Allow    | \$224,023  |                    |
| 19.    | Design/permitting assistance                        | Allow   | 25%  | Allow    | \$101,829  |                    |
|        |                                                     |         |      |          |            | <b>\$3,223,570</b> |

Based on drawing titled "Park Master Plan", dated 11/14/17

Excludes: permit fees and credit for partial fill by SAFER/Salt Pond Restoration projects

The above items, amounts, quantities, and related information are based on Callander Associates' judgment at this level of document preparation and is offered only as reference data. Callander Associates has no control over construction quantities, costs and related factors affecting costs, and advises the client that significant variation may occur between costs and related factors affecting costs, and advises the client that significant variation may occur between this estimate of probable construction costs and actual construction prices.

## Estimate of Probable Construction Costs Bedwell Bayfront Park Master Plan

prepared on: 12/19/17  
prepared by: JS  
checked by: MM

| Phase #2 |              |                    | Phase #3 |            |            | Segments           |
|----------|--------------|--------------------|----------|------------|------------|--------------------|
| Qty      | Item Total   | Subtotal           | Qty      | Item Total | Subtotal   | Subtotal           |
| Allow    | \$0          |                    | Allow    | \$0        |            |                    |
| Allow    | \$0          |                    | Allow    | \$0        |            |                    |
| Allow    | \$374,402    |                    | Allow    | \$0        |            |                    |
| Allow    | \$187,201    |                    | Allow    | \$0        |            |                    |
| Allow    | \$15,000     |                    | Allow    | \$0        |            |                    |
| 21,800   | \$7,630      |                    | 0        | \$0        |            |                    |
| 50,000   | \$50,000     |                    | 0        | \$0        |            |                    |
| 50,000   | \$400,000    |                    | 0        | \$0        |            |                    |
| 250      | \$15,000     |                    | 0        | \$0        |            |                    |
| 2,800    | \$112,000    |                    | 0        | \$0        |            |                    |
| 2,500    | \$100,000    |                    | 0        | \$0        |            |                    |
| Allow    | \$384,797    |                    | Allow    | \$0        |            |                    |
| Allow    | \$174,907.50 |                    | Allow    | \$0        |            |                    |
|          |              | <b>\$1,820,940</b> |          |            | <b>\$0</b> | <b>\$5,044,510</b> |



prepared for the  
**City of Menlo Park**

| Item #   | Description                           | Cost          | Unit | Phase #1 |            |          |
|----------|---------------------------------------|---------------|------|----------|------------|----------|
|          |                                       |               |      | Qty      | Item Total | Subtotal |
| <b>A</b> | <b>Salaries and Wages</b>             |               |      |          |            |          |
| 1.       | Salaries - regular                    | \$8,226.00    | LS   | Allow    | \$4,113.00 |          |
| 2.       | Bilingual                             | \$21.00       | LS   | Allow    | \$21.00    |          |
| 3.       | Auto allowance                        | \$38.00       | LS   | Allow    | \$38.00    |          |
|          |                                       |               |      |          |            | \$4,170  |
| <b>B</b> | <b>Fringe Benefits</b>                |               |      |          |            |          |
| 1.       | Retirement (PERS)                     | \$1,493.00    | LS   | Allow    | \$0        |          |
| 2.       | Health Insurance                      | \$2,268.00    | LS   | Allow    | \$0        |          |
| 3.       | Dental and Vision Insurance           | \$198.00      | LS   | Allow    | \$0        |          |
| 4.       | Medicare and FICA                     | \$119.00      | LS   | Allow    | \$0        |          |
| 5.       | Life insurance and Disability         | \$68.00       | LS   | Allow    | \$0        |          |
| 6.       | Management HAS                        | \$20.00       | LS   | Allow    | \$0        |          |
| 7.       | Workers comp internal service charge  | \$344.00      | LS   | Allow    | \$0        |          |
| 8.       | OPEB internal service charge          | \$284.00      | LS   | Allow    | \$0        |          |
|          |                                       |               |      |          |            | \$0      |
| <b>C</b> | <b>Operating Expense</b>              |               |      |          |            |          |
| 1.       | Department supplies                   | \$2,000.00    | LS   | Allow    | \$1,000    |          |
| 2.       | General liability internal service    | \$187.00      | LS   | Allow    | \$187      |          |
| 3.       | Miscellaneous                         | \$500.00      | LS   | Allow    | \$500      |          |
| 4.       | IT internal service center            | \$2,934.00    | LS   | Allow    | \$0        |          |
|          |                                       |               |      |          |            | \$1,690  |
| <b>D</b> | <b>Utilities</b>                      |               |      |          |            |          |
| 1.       | Gas and electric                      | \$100.00      | MO   | 12       | \$1,200.00 |          |
| 2.       | Water, potable                        | \$2,500.00    | LS   | Allow    | \$2,500.00 |          |
| 3.       | Water, irrigation                     | \$5,000.00    | LS   | Allow    | \$0.00     |          |
|          |                                       |               |      |          |            | \$3,700  |
| <b>E</b> | <b>Site Furnishings</b>               |               |      |          |            |          |
| 1.       | Landscaping services (mowing)         | \$ 13,000.00  | EA   | 2        | \$26,000   |          |
| 2.       | Landscaping services (pruning)        | \$ 1,000.00   | MO   | 0        | \$0        |          |
| 3.       | Administrative services - consultants | \$ 4,000.00   | LS   | Allow    | \$4,000    |          |
| 4.       | Restroom                              | \$ 5,000.00   | LS   | Allow    | \$5,000    |          |
| 5.       | Ranger office building                | \$ 1,000.00   | LS   | Allow    | \$1,000    |          |
| 6.       | Office supplies                       | \$ 3,000.00   | LS   | Allow    | \$3,000    |          |
| 7.       | Recycle/trash pick-up                 | \$ 200.00     | EA   | 104      | \$20,800   |          |
| 8.       | Dog bag station                       | \$ 25.00      | EA   | 24       | \$600      |          |
| 9.       | Ranger service                        | \$ 130,000.00 | LS   | Allow    | \$130,000  |          |
| 10.      | Contract services (restroom cleaning) | \$ 43,000.00  | LS   | Allow    | \$43,000   |          |
| 11.      | Slough observation platform           | \$ 500.00     | MO   | 0        | \$0        |          |
| 12.      | Other services                        | \$ 5,000.00   | LS   | Allow    | \$5,000    |          |
| 13.      | Nature play area                      | \$ 500.00     | MO   | 0        | \$0        |          |
| 14.      | Graffiti control                      | \$ 50.00      | MO   | 12       | \$600      |          |

## Annual Operation and Maintenance Estimate Bedwell Bayfront Park Master Plan

prepared on: 12/20/2017

prepared by: JS

checked by: MM

| Phase #2 |            |          | Phase #3 |            |          | Segments |
|----------|------------|----------|----------|------------|----------|----------|
| Qty      | Item Total | Subtotal | Qty      | Item Total | Subtotal | Subtotal |
|          |            |          |          |            |          |          |
| Allow    | \$4,113    |          | Allow    | \$0        |          |          |
| Allow    | \$0        |          | Allow    | \$0        |          |          |
| Allow    | \$0        |          | Allow    | \$0        |          |          |
|          |            | \$4,110  |          |            | \$0      | \$8,280  |
|          |            |          |          |            |          |          |
| Allow    | \$0        |          | Allow    | \$1,493    |          |          |
| Allow    | \$0        |          | Allow    | \$2,268    |          |          |
| Allow    | \$0        |          | Allow    | \$198      |          |          |
| Allow    | \$0        |          | Allow    | \$119      |          |          |
| Allow    | \$0        |          | Allow    | \$68       |          |          |
| Allow    | \$0        |          | Allow    | \$20       |          |          |
| Allow    | \$0        |          | Allow    | \$344      |          |          |
| Allow    | \$0        |          | Allow    | \$284      |          |          |
|          |            | \$0      |          |            | \$4,790  | \$4,790  |
|          |            |          |          |            |          |          |
| Allow    | \$1,000    |          | Allow    | \$0        |          |          |
| Allow    | \$0        |          | Allow    | \$0        |          |          |
| Allow    | \$0        |          | Allow    | \$0        |          |          |
| Allow    | \$1,467    |          | Allow    | \$1,467    |          |          |
|          |            | \$2,470  |          |            | \$1,470  | \$5,630  |
|          |            |          |          |            |          |          |
| 12       | \$1,200    |          | 0        | \$0        |          |          |
| Allow    | \$0        |          | Allow    | \$0        |          |          |
| Allow    | \$5,000    |          | Allow    | \$0        |          |          |
|          |            | \$6,200  |          |            | \$0      | \$9,900  |
|          |            |          |          |            |          |          |
| 0        | \$0        |          | 0        | \$0        |          |          |
| 12       | \$12,000   |          | 0        | \$0        |          |          |
| 0        | \$0        |          | 0        | \$0        |          |          |
| 0        | \$0        |          | 0        | \$0        |          |          |
| Allow    | \$0        |          | Allow    | \$0        |          |          |
| Allow    | \$0        |          | Allow    | \$0        |          |          |
| 0        | \$0        |          | 0        | \$0        |          |          |
| 0        | \$0        |          | 0        | \$0        |          |          |
| Allow    | \$0        |          | Allow    | \$0        |          |          |
| Allow    | \$0        |          | Allow    | \$0        |          |          |
| 12       | \$6,000    |          | 0        | \$0        |          |          |
| Allow    | \$0        |          | 0        | \$0        |          |          |
| 12       | \$6,000    |          | 0        | \$0        |          |          |
| 0        | \$0        |          | 0        | \$0        |          |          |

prepared for the  
City of Menlo Park

| Item #   | Description                                | Cost         | Unit | Phase #1 |            |           |
|----------|--------------------------------------------|--------------|------|----------|------------|-----------|
|          |                                            |              |      | Qty      | Item Total | Subtotal  |
| 15.      | Refill park maps                           | \$ 150.00    | MO   | 12       | \$1,800    |           |
| 16.      | Irrigation system management               | \$ 200.00    | MO   | 0        | \$0        |           |
| 17.      | Animal/pest control                        | \$ 500.00    | LS   | Allow    | \$500      |           |
|          |                                            |              |      |          |            | \$241,300 |
| <b>F</b> | <b>Fixed Assets and Capital Outlay</b>     |              |      |          |            |           |
| 1.       | Construction costs                         | \$5,000.00   | LS   | Allow    | \$5,000    |           |
|          |                                            |              |      |          |            | \$5,000   |
| <b>G</b> | <b>Repairs and Maintenance</b>             |              |      |          |            |           |
| 1.       | Other repairs and maintenance              | \$ 5,000.00  | LS   | Allow    | \$5,000    |           |
| 2.       | AC overlay, roadway                        | \$ 39,000.00 | EA   | 2/65     | \$1,200    |           |
| 3.       | AC overlay, parking                        | \$ 25,000.00 | EA   | 0        | \$0        |           |
| 4.       | AC overlay, Bay Trail                      | \$ 84,000.00 | EA   | 1/20     | \$4,200    |           |
| 5.       | AC sealcoat, roadway                       | \$ 10,000.00 | EA   | 5/39     | \$1,282    |           |
| 6.       | AC sealcoat, parking                       | \$ 7,000.00  | EA   | 0        | \$0        |           |
| 7.       | AC sealcoat, Bay Trail and ADA             | \$ 15,000.00 | EA   | 1/3      | \$5,000    |           |
| 8.       | Parking, gravel                            | \$ 2,000.00  | EA   | 0        | \$0        |           |
| 9.       | Re-striping, parking stalls                | \$ 1,200.00  | EA   | 0        | \$0        |           |
| 10.      | Treated trails                             | \$ 3,000.00  | LS   | Allow    | \$2,000    |           |
| 11.      | Wood steps                                 | \$ 2,000.00  | LS   | Allow    | \$2,000    |           |
| 12.      | Split rail fence                           | \$ 2,000.00  | LS   | Allow    | \$2,000    |           |
| 13.      | Great Spirit Path boulders and signs       | \$ 4,000.00  | LS   | Allow    | \$0        |           |
| 14.      | Concrete plaza, curbs                      | \$ 1,500.00  | LS   | Allow    | \$1,500    |           |
| 15.      | Slough observation platform                | \$ 5,000.00  | EA   | 0        | \$0        |           |
| 16.      | Site furnishings                           | \$ 2,500.00  | LS   | Allow    | \$1,500    |           |
| 17.      | Informational signage                      | \$ 500.00    | LS   | Allow    | \$500      |           |
| 18.      | Gas ventilation system                     | \$ 1,000.00  | LS   | Allow    | \$1,000    |           |
| 19.      | Office electrical system                   | \$ 500.00    | LS   | Allow    | \$500      |           |
| 20.      | Irrigation system                          | \$ 500.00    | LS   | Allow    | \$0        |           |
| 21.      | Treated pavement at overlooks, picnic area | \$ 3,000.00  | LS   | Allow    | \$1,500    |           |
| 22.      | Nature play structure                      | \$ 500.00    | LS   | Allow    | \$0        |           |
| 23.      | Bioretention soil                          | \$ 2,000.00  | LS   | Allow    | \$0        |           |
| 24.      | Import soil                                | \$ 2,000.00  | LS   | Allow    | \$0        |           |
| 25.      | Replace dead/dying landscape plants        | \$ 500.00    | LS   | Allow    | \$0        |           |
|          |                                            |              |      |          |            | \$29,180  |

## Annual Operation and Maintenance Estimate Bedwell Bayfront Park Master Plan

prepared on: 12/20/2017

prepared by: JS

checked by: MM

| Phase #2 |            |          | Phase #3 |            |          | Segments  |
|----------|------------|----------|----------|------------|----------|-----------|
| Qty      | Item Total | Subtotal | Qty      | Item Total | Subtotal | Subtotal  |
| 0        | \$0        |          | 0        | \$0        |          |           |
| 12       | \$2,400    |          | 0        | \$0        |          |           |
| Allow    | \$0        |          | Allow    | \$0        |          |           |
|          |            | \$26,400 |          |            | \$0      | \$267,700 |
| Allow    | \$0        |          | Allow    | \$0        |          |           |
|          |            | \$0      |          |            | \$0      | \$5,000   |
| Allow    | \$0        |          | Allow    | \$0        |          |           |
| 0        | \$0        |          | 1/52     | \$750      |          |           |
| 1/20     | \$1,250    |          | 0        | \$0        |          |           |
| 0        | \$0        |          | 0        | \$0        |          |           |
| 0        | \$0        |          | 8/39     | \$2,051    |          |           |
| 1/3      | \$2,333    |          | 0        | \$0        |          |           |
| 0        | \$0        |          | 0        | \$0        |          |           |
| 1/3      | \$667      |          | 0        | \$0        |          |           |
| 1/3      | \$400      |          | 0        | \$0        |          |           |
| Allow    | \$1,000    |          | Allow    | \$0        |          |           |
| Allow    | \$0        |          | Allow    | \$0        |          |           |
| Allow    | \$500      |          | Allow    | \$0        |          |           |
| Allow    | \$0        |          | Allow    | \$4,000    |          |           |
| Allow    | \$500      |          | Allow    | \$0        |          |           |
| 1        | \$5,000    |          | 0        | \$0        |          |           |
| Allow    | \$1,000    |          | Allow    | \$0        |          |           |
| Allow    | \$0        |          | Allow    | \$0        |          |           |
| Allow    | \$0        |          | Allow    | \$0        |          |           |
| Allow    | \$500      |          | Allow    | \$0        |          |           |
| Allow    | \$1,500    |          | Allow    | \$0        |          |           |
| Allow    | \$0        |          | Allow    | \$0        |          |           |
| Allow    | \$2,000    |          | Allow    | \$0        |          |           |
| Allow    | \$2,000    |          | Allow    | \$0        |          |           |
| Allow    | \$0        |          | Allow    | \$500      |          |           |
|          |            | \$18,650 |          |            | \$7,300  | \$55,130  |

prepared for the  
**City of Menlo Park**

| Item #    | Description                                       | Cost        | Unit | Phase #1 |            |                  |
|-----------|---------------------------------------------------|-------------|------|----------|------------|------------------|
|           |                                                   |             |      | Qty      | Item Total | Subtotal         |
| <b>H.</b> | <b>Special Provisions Expenditures</b>            |             |      |          |            |                  |
| 1.        | Trans to other funds                              | \$14,044.00 | LS   | Allow    | \$14,044   |                  |
|           |                                                   |             |      |          |            | \$14,040         |
| <b>I</b>  | Contingency                                       | Allow       | 10%  | Allow    | \$29,908   | \$29,908         |
| <b>J</b>  | <b>Total Estimated Annual O&amp;M Costs</b>       |             |      |          |            | <b>\$330,000</b> |
|           | Excludes: inflation,(estimated to be 3% per year) |             |      |          |            |                  |
|           |                                                   |             |      |          |            |                  |
|           |                                                   |             |      |          |            |                  |

**Based on drawing titled "Park Master Plan", dated 11/14/17**

The above items, amounts, quantities, and related information are based on Callander Associates' judgment at this level of document preparation and is offered as an estimate. Callander Associates has no control over construction quantities, costs and related factors affecting costs, and advises the client that significant variation may occur between this estimate of probable construction costs and actual costs and related factors affecting costs, and advises the client that significant variation may occur between this estimate of probable construction costs and actual costs.



## Annual Operation and Maintenance Estimate Bedwell Bayfront Park Master Plan

prepared on: 12/20/2017

prepared by: JS

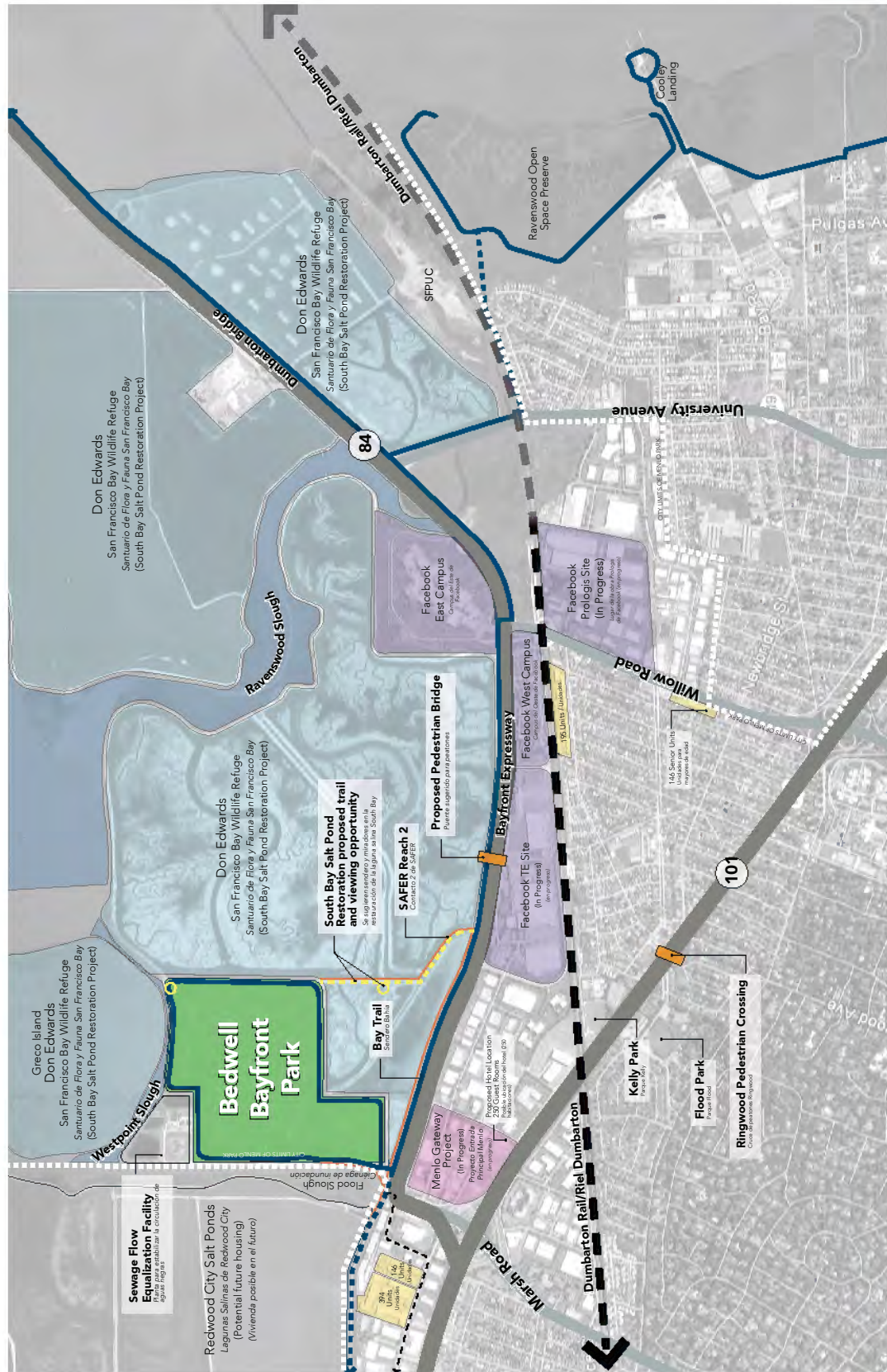
checked by: MM

| Phase #2 |            |           | Phase #3 |            |          | Segments  |
|----------|------------|-----------|----------|------------|----------|-----------|
| Qty      | Item Total | Subtotal  | Qty      | Item Total | Subtotal | Subtotal  |
|          |            |           |          |            |          |           |
| Allow    | \$0        | \$0       | Allow    | 0          | \$1,360  | \$15,400  |
| Allow    | \$5,783    | \$57,830  | Allow    | \$1,356    | \$14,920 | \$109,797 |
|          |            |           |          |            |          |           |
|          |            | \$120,000 |          |            | \$30,000 | \$480,000 |
|          |            |           |          |            |          |           |
|          |            |           |          |            |          |           |
|          |            |           |          |            |          |           |
|          |            |           |          |            |          |           |

only as reference data.  
cur between  
tual construction prices.



## Outreach Materials





## Project Background / Antecedentes del Proyecto

Since its inception, Bedwell Bayfront Park has been the jewel of the Menlo Park parks and open space system. Revered for its various habitats, Bay views, and passive recreation opportunities, this closed landfill site has become even more important with the influx of housing and office developments in the area. The park is at a critical juncture. Improvements are needed to provide access for the growing population. Sustainable funding sources are needed to fund both short term improvements and long term maintenance and operations.

*De su comienzo, el parque Bedwell Bayfront ha sido la joya de los parques y espacios al aire libre de Menlo Park. Admirado por sus diversos hábitats, vistas de la bahía y oportunidades de recreación pasiva, este vertedero cerrado se ha convertido en un sitio importante por la reciente urbanización y complejos de oficinas en la zona. El parque está en un punto crucial. Se necesitan mejoras para proporcionar acceso a la creciente población. Se necesitan fuentes de financiamiento sostenibles para financiar mejoras a corto plazo, mantenimiento y operaciones a largo plazo.*

## Project Goals and Objectives

- GOAL 1. Utilize an open and inclusive community outreach process to refine goals and objectives and develop a roadmap to guide park improvements over the next 25 years.
- GOAL 2. Respect prior decisions (Measure J) made regarding exclusion of active recreation on site.
- GOAL 3. Enhance park's value as a unique community asset by increasing passive recreation and educational opportunities.
- GOAL 4. Protect existing sensitive habitats and landfill systems.
- GOAL 5. Provide Council with research on appropriate uses of non-motorized and radio controlled aircraft at other public sites and public input on issue.
- GOAL 6. Work to identify sustainable funding sources to support short term improvements and long term maintenance and operations.

## Metas y Objetivos del Proyecto

- META 1. Divulgar información e incluir a la comunidad con un fin de perfeccionar las metas y objetivos y crear un plan que guíe las mejoras del parque en los próximos 25 años.
- META 2. Respetar decisiones anteriores (Propuesta J) que excluyen la recreación activa en el parque.
- META 3. Realzar el valor del parque creando más oportunidades educativas y de recreación pasiva.
- META 4. Proteger los hábitats susceptibles y los sistemas del vertedero
- META 5. Presentar al Consejo los resultados de indagaciones sobre el uso debido de aeronaves sin piloto controladas por radio en otros sitios públicos y las reacciones del público sobre este tema.
- META 6. Identificar fuentes de financiamiento sostenibles para cubrir mejoras a corto plazo, mantenimiento y operaciones a largo plazo.



# Park Character/Mood

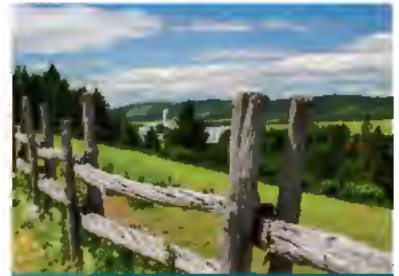
*La Calidad y el Ambiente*



**Secluded**  
*Aislado*



**Refined**  
*Refinado*



**Natural**  
*Natural*



**Comfortable**  
*Cómodo*



**Rugged/Adventurous**  
*Lleno de aventuras*



**Whimsical**  
*Enigmático*



**Ecological/Preserve**  
*Reserva ecológica*



**Ceremonial**  
*Ceremonial*



**Colorful**  
*Colorido*



**Active**  
*Activo*



**Spiritual**  
*Espiritual*



**Others? ¿Otros?**



# Park Amenities

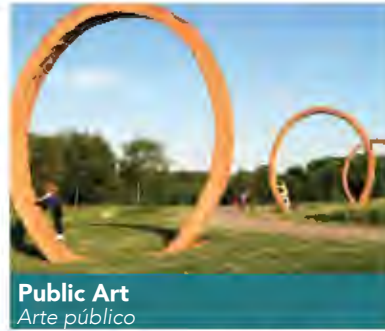
## Servicios



**Non-Reservable Picnic Areas**  
Áreas de picnic sin reservación



**Seating/Viewing Areas**  
Áreas para observar y sentarse



**Public Art**  
Arte público



**Dog Pick-Up Bag Dispensers**  
Dispensadores de bolsitas para perro



**Trash/Recycling Containers**  
Receptáculos de reciclaje y basura



**Enhanced Existing Restrooms**  
Hacer mejoras en los baños



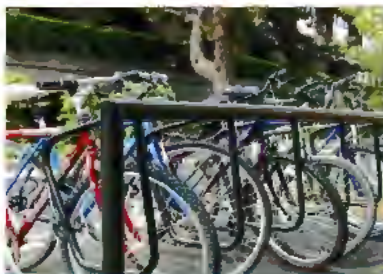
**Drinking Fountain/Station**  
Bebedores/Dispensador de agua



**Outdoor Classroom/Amphitheater**  
Anfiteatro/aulas al aire libre



**Education Center**  
Centro de Educación



**Bike Parking**  
Estacionamiento de bicicletas



**EV Charging Station**  
Áreas de cargar EV (vehículos eléctricos)



**Others? ¿Otros?**

# Park Activities

## Actividades



**Walking/Hiking/Jogging**  
Caminar/senderismo/trotar



**Biking - Paved**  
Montar bicicleta – terreno pavimentado



**Biking - Unpaved**  
Montar bicicleta – terreno no pavimentado



**Dirt Bike Course**  
Recorrido para moto todo terreno



**Kite Flying**  
Volar cometas



**Bird Watching**  
Observar aves



**On-Leash Dog Walking**  
Paseo de mascotas



**Off-Leash Dog Park**  
Área destinada para perros



**Photography**  
Fotografía



**Others? ¿Otros?**





# Park Activities

## Actividades



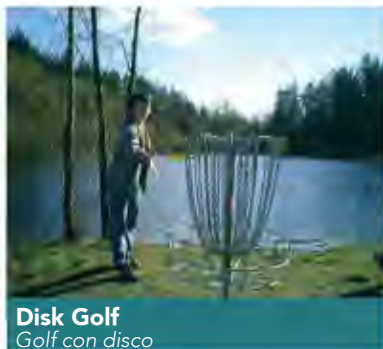
**Hand-Launched Model Gliders**  
Lanzar planeadores



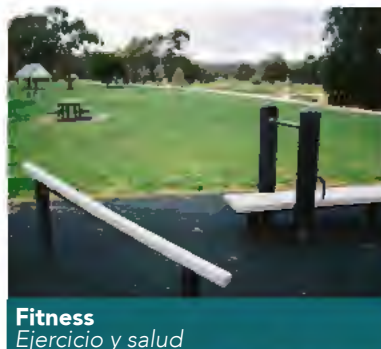
**Electric Motor-Assisted Model Gliders**  
Planeadores controlados por control remoto



**Radio-Controlled Drones**  
Drones controlados por radio



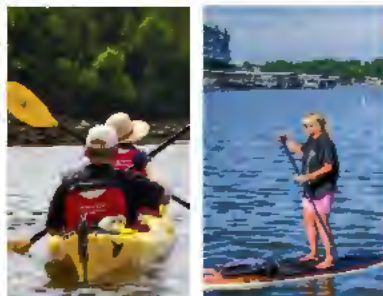
**Disk Golf**  
Golf con disco



**Fitness**  
Ejercicio y salud



**Orienteering/Geocaching**  
Orientación y Geocaching



**Water Activities**  
Actividades de agua



**Group Exercise**  
Ejercicio en grupo



**Nature Play**  
Jugar en la naturaleza



**Others? ¿Otros?**



# Park Services/Programs

## Programas



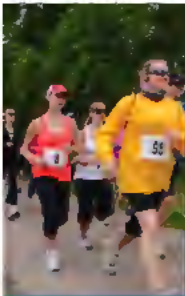
**Ranger Service**  
Servicio de guardabosques



**Classes/Education Programs**  
Clases y programas educativos



**Docent-Led Tours**  
Visitas guiadas por docentes



**Public Events**  
Eventos públicos



**Private Events**  
Eventos privados



**Nature/Summer Camp**  
Campamento de verano



**Concessions/Rentals**  
Quioscos y alquileres



**Material Distribution Center**  
Centro de distribución de materiales



**Bike Repair**  
Quiosco de reparación de bicicletas



**Others? ¿Otros?**







## Options for Revenue Generating Activities

Opciones de actividades que generan Ingresos



**Parking/Entrance Fee**  
Cobrar la entrada/estacionamientos



**Concessions (Food, Rentals)**  
Quioscos (alquiler de equipo y venta de comida)



**Donations/On-Site Recognition**  
Donaciones/reconocimientos en el lugar



**Naming Rights**  
Derechos de denominación (nombres)



**Private/Corporate Events**  
Eventos privados y de corporaciones



**Reservation-Based Picnic Areas**  
Áreas de picnic con reservación



**Methane Capture**  
Captura de metano



**Energy Generation/Net Zero**  
Generación de energía solar/energía neta



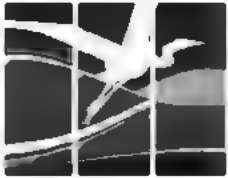
**Others? ¿Otros?**





# How do you define "Passive Recreation"? ¿Cuál es el significado de la "Recreación Pasiva"?





# Open House Packet



## General Information

This open house is structured into five “stations.” Please visit each station and write your input on the attached input sheets. Spend as little or as much time at each station as you like, in any order you prefer. Questions are encouraged!

## STATION 1: Welcome!

**Purpose:** This station provides an orientation of the workshop. Sign in so that we are able to contact you with future project updates. Pick up your open house packet here. Use this packet to record your input and track which stations you’ve visited. Learn about the project background by watching the slideshow. The park timeline, context map, and existing conditions map provide you with information on the park development, site features, and adjacent uses. If there is any element of importance that you feel we should know, please share your thoughts by talking to a project team member or writing comments directly on the documents.

**Input Opportunities:** Provide input on what you think the project goals and objectives should be. Respond to the user survey and let us know how you use the park.

**Goals and Objectives:** Evaluate the Goals and Objectives that we have developed and let us know how much you support each goal.

Y = Yes, I agree with this goal

M = Maybe, I’m unsure if I agree with this goal

N = No, I do not agree with this goal

|                                                                 | Y                     | M                     | N                     |
|-----------------------------------------------------------------|-----------------------|-----------------------|-----------------------|
| Goal 1: Utilize inclusive outreach process to guide decisions.  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Goal 2: Respect prior decisions (Measure J).                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Goal 3: Increase passive recreation, educational opportunities. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Goal 4: Protect existing habitats and systems.                  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Goal 5: Provide Council with research on model aircraft.        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Goal 6: Identify sustainable funding sources.                   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Please write-in any additional goals you support:

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# Open House Packet



**User Survey:** The purpose of this survey is to understand how you currently use the park.

Please provide your answer to each of the questions below and share your ideas on how to make Bedwell Bayfront Park even better.

1. How old are you?
  - ☐ Under 16
  - ☐ 16 to 20
  - ☐ 21 to 30
  - ☐ 31 to 55
  - ☐ 55 +
2. Where do you live?
  - ☐ East of Highway 101, in Menlo Park
  - ☐ West of Highway 101, in Menlo Park
  - ☐ In Redwood City or East Palo Alto
  - ☐ None of the above
3. How far is your home from the park?
  - ☐ 1 mile
  - ☐ 2 to 5 miles
  - ☐ 5 to 10 miles
  - ☐ More than 10 miles
4. How often do you visit the park?
  - ☐ Daily
  - ☐ Weekly
  - ☐ Monthly
  - ☐ Yearly
  - ☐ Rarely/Never
5. When do you primarily visit the park?
  - ☐ Weekends
  - ☐ Weekdays
  - ☐ Both
  - ☐ Never
6. When you visit the park, how often do you stay?
  - ☐ Less than one hour
  - ☐ 1 hour
  - ☐ 2 to 4 hours
  - ☐ More than 4 hours
7. By what means do you get to the park most often?
  - ☐ Auto
  - ☐ Bike
  - ☐ Walk
  - ☐ Transit
  - ☐ Other: \_\_\_\_\_
8. What do you like most about the park? (select up to three)
  - ☐ Scenery/Views
  - ☐ Wildlife/Nature
  - ☐ Location
  - ☐ Solitude
  - ☐ Distance/Convenience
  - ☐ Other: \_\_\_\_\_
9. What is the most important thing to improve at the park?
   
\_\_\_\_\_
   
\_\_\_\_\_
10. Is there anything you definitely do not want to see at the park?
   
\_\_\_\_\_
   
\_\_\_\_\_
11. Do you have a favorite passive recreation park that you visit? What attracts you to that park?
   
\_\_\_\_\_
   
\_\_\_\_\_



# Open House Packet



12. How would you describe the park usage?

- ☐ Too many people use the park
- ☐ About the right number of people use the park
- ☐ Not enough people use the park

13. How safe/comfortable do you feel when you are at the park?

- ☐ Extremely safe
- ☐ Very safe
- ☐ Somewhat safe
- ☐ I don't feel safe

14. What concerns do you have for using the park? (select up to three)

- ☐ Personal safety
- ☐ Car theft
- ☐ Vandalism
- ☐ Park maintenance
- ☐ Accessibility
- ☐ Other: \_\_\_\_\_

15. What activities do you normally participate in when you visit the park?

- ☐ Hiking/walking/jogging
- ☐ Biking
- ☐ Bird watching
- ☐ Dog walking
- ☐ Other: \_\_\_\_\_

16. How did you hear about this project?

(check all that apply)

- ☐ Mailed notice in utility bill
- ☐ E-mail
- ☐ Facebook
- ☐ Public presentation/Farmer's Market
- ☐ On-site poster/brochure
- ☐ Off-site poster
- ☐ Word of mouth
- ☐ Newsletter
- ☐ Other: \_\_\_\_\_

17. Is there anything else you would like to share about Bedwell Bayfront Park?

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# Open House Packet



## STATION 2: Usage

**Purpose:** To show us how you use the park.

**Input Opportunities:** Provide input on the park usage map.

**Park Usage Map:** Writing directly on the map on the table, please show us where you go in the park, areas that cause concern, and opportunities that you see.

**Comments:**

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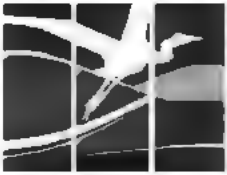
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# Open House Packet



## STATION 3: Inspiration Images

**Purpose:** This station shows several boards with images and words that illustrate a range of potential uses and features at the park to gauge your opinions and level of support. Please contemplate each image and indicate your level of support below. The park elements have been divided into the categories shown. There are several options for each category. If you have a suggested option that is not already listed, see a project team member so that it can be added.

**Input Opportunities:** Provide input on each of the image boards by filling in the circles below.

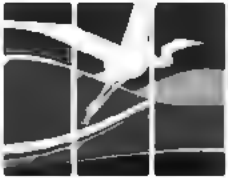
Y = Yes, I support this item

M = Maybe, I'm undecided if I support this item

N = No, I do not support this item

**Park Character/Mood:** The park is located in a unique setting and has many qualities that make it valuable to the community. What unique qualities do you think help contribute or would help contribute to making it a more desirable destination? Please evaluate the board images and let us know how well each image illustrates the ideal mood or character of Bedwell Bayfront Park.

|                     | Y                     | M                     | N                     |
|---------------------|-----------------------|-----------------------|-----------------------|
| Secluded            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Refined             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Natural             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Comfortable         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Rugged/Adventurous  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Whimsical           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Ecological/Preserve | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Ceremonial          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Colorful            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Active              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Spiritual           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Other:              |                       |                       |                       |
| _____               |                       |                       |                       |
| _____               |                       |                       |                       |



# Open House Packet



**Park Amenities:** Evaluate the board images and let us know how much you would like to see each amenity at Bedwell Bayfront Park. Some amenities are currently provided at the park; others have not yet been provided.

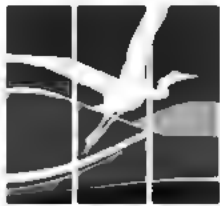
|                                   | Y                     | M                     | N                     |
|-----------------------------------|-----------------------|-----------------------|-----------------------|
| Non-Reservable Picnic Areas       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Seating/Viewing Areas             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Public Art                        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Dog Pick Up Bag Dispensers        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Trash / Recycling Containers      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Enhance Existing Restroom         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Drinking Fountain / Bottle Filler | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Outdoor Classroom/Amphitheater    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Education Center                  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Bike Parking                      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| EV Charging Station               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Other: \_\_\_\_\_

**Park Activities:** Evaluate the board images and let us know how much you would like to see each activity at Bedwell Bayfront Park. Some activities are currently provided at the park; others have not yet been provided.

|                                       | Y                     | M                     | N                     |
|---------------------------------------|-----------------------|-----------------------|-----------------------|
| Walking/Hiking/Jogging                | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Biking – Paved                        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Biking – Unpaved                      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Dirt Bike Course                      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Kite Flying                           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Bird Watching                         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| On-Leash Dog Walking                  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Off-Leash Dog Park                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Photography                           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Hand-Launched Model Gliders           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Electric Motor-Assisted Model Gliders | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Radio-Controlled Drones               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Disk Golf                             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Fitness                               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

(continue to next page for more Park Activities)



# Open House Packet



|                                     | Y                     | M                     | N                     |
|-------------------------------------|-----------------------|-----------------------|-----------------------|
| Orienteering/Geocaching             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Water Activities (slough side only) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Group Exercise                      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Nature Play                         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Other: _____                        |                       |                       |                       |

**Park Services/Programs:** Evaluate the board images and let us know how much you would support each service being provided at Bedwell Bayfront Park. Some services have previously been provided at the park; others have not yet been provided.

|                              | Y                     | M                     | N                     |
|------------------------------|-----------------------|-----------------------|-----------------------|
| Ranger Service               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Classes/Education Programs   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Docent-Led Tours             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Public Events                | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Private Events               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Nature/Summer Camp           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Concession/Rentals           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Material Distribution Center | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Bike Repair Station          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Other: \_\_\_\_\_

**Options for Revenue Generating Activities:** The current park has a funding imbalance, because maintenance expenses continue to be incurred by the City, but the park does not generate any revenue. For the park to become fiscally sustainable, revenue sources must be identified. Evaluate the board images and let us know how much you would support each funding option to pay for improvements at Bedwell Bayfront Park.

|                                       | Y                     | M                     | N                     |
|---------------------------------------|-----------------------|-----------------------|-----------------------|
| Parking/Entrance Fee                  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Concessions (food, equipment rentals) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Donations/On-Site Recognition         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Naming Rights                         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Private/Corporate Events              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Reservation-Based Picnic Areas        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Methane Capture                       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Solar Energy Generation/Net Zero      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Other: _____                          |                       |                       |                       |



# Open House Packet



**How Do You Define "Passive Recreation"?:** "Passive recreation" means different things to different people. Some consider "sedentary or unstructured activities" to be passive recreation. Others consider it to be "minimal development or environmentally sensitive development." Please evaluate the board images and select the number corresponding to the column of images that best encompasses the range of activities that fit your definition of "passive recreation".

○ ☐ 1      ○ ☐ 2      ○ ☐ 3      ○ ☐ 4      ○ ☐ 5

## STATION 4: Packet Drop-off

### You're done!

Your feedback is invaluable as we work to develop the design options for Bedwell Bayfront Park. We will report back to you on the feedback received and will present the preliminary alternatives at our next workshop on June 17. Hope to see you there!

Please leave your comment cards on the table. Food and refreshments are available at Station 5.

## Thank you for providing your input!



# Program Statement

## The Park Master Plan Will:

*El Plan Maestro del Parque va a:*

### Respect the emphasis on “passive recreation” on which the park was founded

*Respetar el énfasis de la “recreación pasiva” con el cual se inició el parque*

- Support existing park uses: bird watching, walking, jogging, bike riding on Bay Trail, kite flying, orienteering, and geocaching

### Acknowledge the need to provide for a growing population and respond to a changing shoreline

*Reconocer las necesidades de la creciente población y responder a los cambios de la costa*

- Evaluate parking capacity and opportunity to accommodate a bike share program from Belle Haven
- Increase and improve general park amenities (drinking fountains, seating, eating areas, bike racks.)
- Plan for a future with sea level rise

### Support, enhance and expand activities that are complementary to passive recreation experiences

*Apoyar, realzar y ampliar actividades que complementen las experiencias de la “recreación pasiva”*

- Allow new uses: water access, hand launched radio controlled model gliders, fitness equipment, nature play, bike riding on unpaved trails, and off-leash dog park
- Support on-site youth work program (on-site job skills, youth development, and learning)
- Evaluate options for providing indoor gathering space for use by: concessions vendor; volunteers/ park ranger/ docents, and as a meeting pavilion
- Enable methane capture for energy generation and photovoltaics to achieve “net zero energy” building
- Improve wayfinding/directional signage. Provide mileage markers along trail.

### Address deferred maintenance and existing facility deficiencies

*Abordar los problemas de mantenimiento aplazado y de deficiencias en las instalaciones*

- Renovate the Great Spirit Path art piece
- Replace steep, eroding paths (ie. 3:1 slope) with stairs
- Replace existing restroom and raise existing infrastructure (ie; entrance road, parking, Bay Trail) to address sea level rise
- Upgrade landfill gas and leachate collection and monitoring systems

### Provide a comfortable, friendly, safe and more accessible user experience

*Proporcionar al usuario una experiencia cómoda, segura, fácil y más accesible*

- Improve the Marsh Rd intersection to make it safer for pedestrians and bicycles to access the park from surrounding neighborhoods. Enhance the park entrance to make it a more pleasant experience.
- Increase public access to summits and points of interest by providing all-weather, accessible trail surfaces.
- Separate uses (bikes/pedestrians/vehicular) to minimize potential conflicts.

### Acknowledge that future stewards of the park start with today’s youth

*Reconocer que en el futuro nuestros jóvenes serán los enlaces del parque*

- Create educational opportunities, particularly for school-age children
- Provide educational trail loops, group seating areas, and support for summer camps
- Emphasize learning about marsh habitats and landfill systems, to reflect the park’s unique history and location
- Use “green” building methods when possible

### Identify and integrate revenue generation mechanisms into the park structure, to ensure the long-term sustainability of the park

*Identificar fuentes de ingresos e integrarlas en la estructura del parque para asegurar la sostenibilidad de éste a largo plazo*

- Consider revenue sources for both short term capital improvements and long-term maintenance requirements
- Create revenue structure that acknowledges park use by both City residents and non-City residents



# RESULTS ARE IN COMMUNITY INPUT FROM APRIL 8

**Main Take-Away:** Based on the input below, there is support for the park plan to explore additional activities and amenities.

## where do you live?



## how would you describe the park?



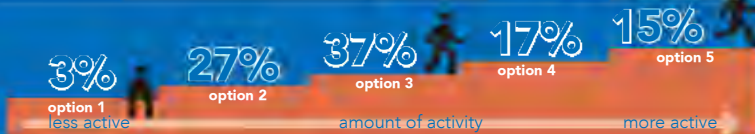
## who participated?

**39** OPEN HOUSE  
**70** ONLINE SURVEY

## how often do you visit the park?

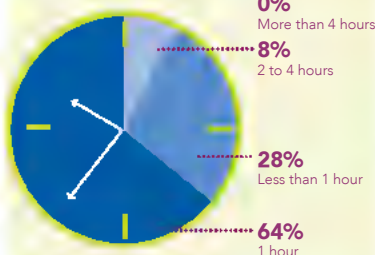


## HOW DO YOU DEFINE PASSIVE RECREATION?

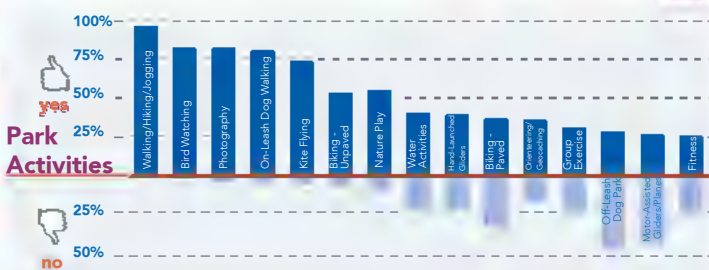
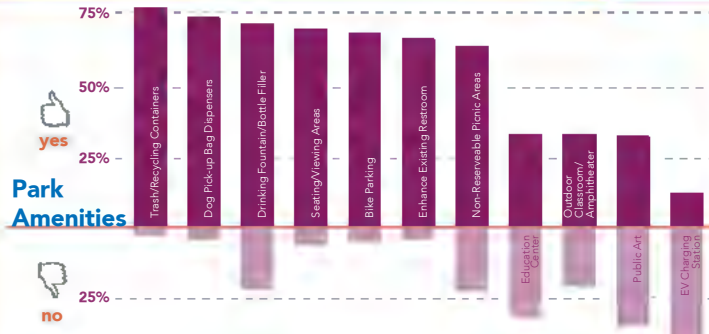


option 4 + option 5 = 32%  
option 1 + option 2 = 30%  
more participants are in favor of more active activities

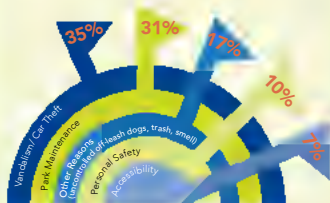
## When you visit the park, how often do you stay?



## Is there anything you definitely do not want to see at the park?



- GOALS AND OBJECTIVES**
- GOAL 6** Sustainable funding
  - GOAL 1** Inclusive outreach process
  - GOAL 4** Protect habitat and landfill
  - GOAL 3** Increase park opportunities
  - GOAL 5** Radio controlled aircraft research
  - GOAL 2** Respect Measure J



## what concerns do you have for using the park?



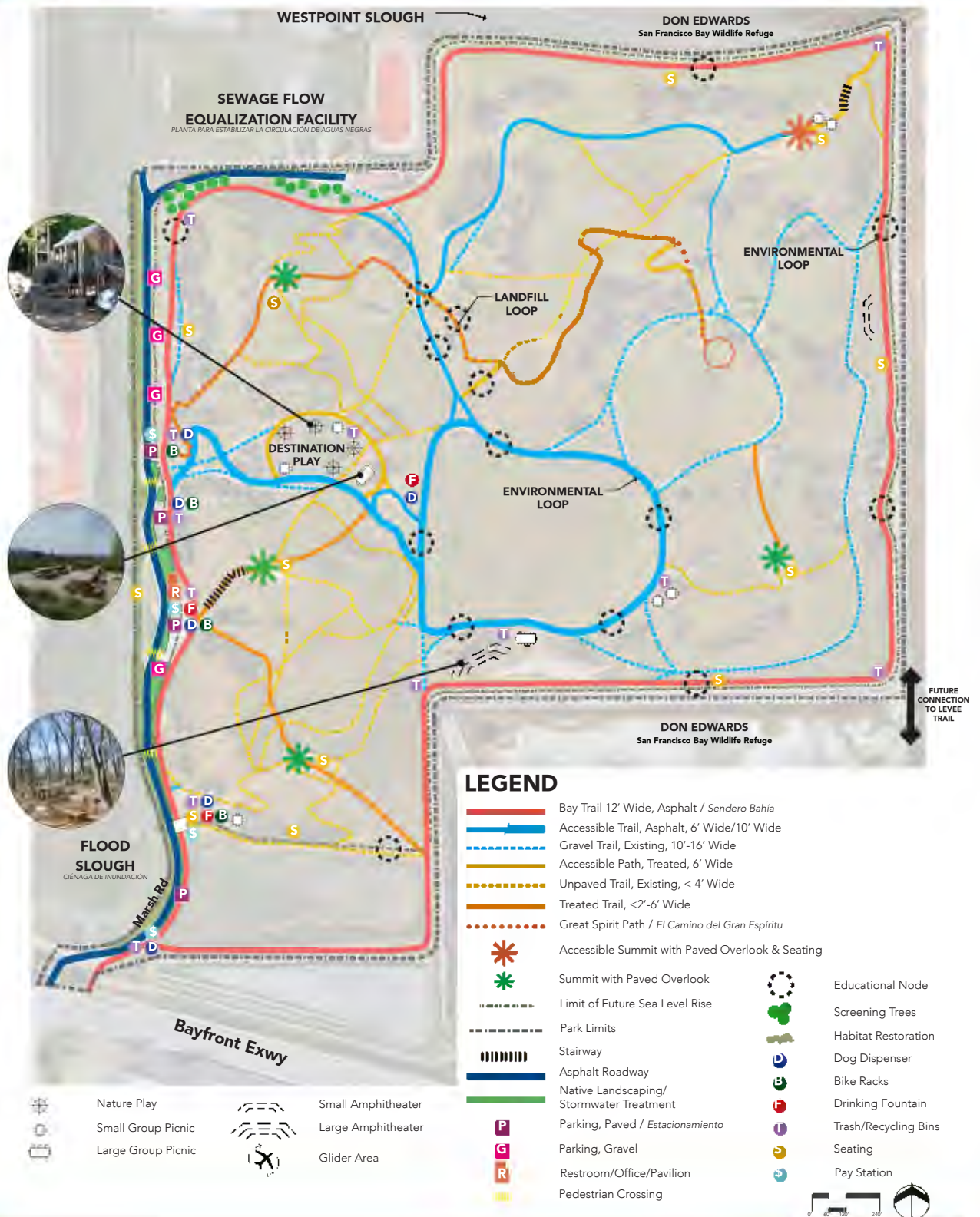


# Concept A





# Concept B



# Concept Plan Comparison Matrix

Red - moderate change from existing

Orange - some change from existing

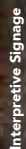
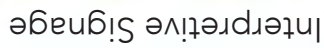
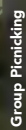
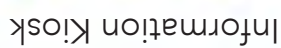
Yellow - no change from existing

|                                                                                                                                               | Existing                                                        | Concept A<br>(access<br>emphasis)                                                                                                                       | Concept B<br>(educational<br>emphasis)                                                                                                                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Walking/hiking/jogging</b> <i>caminar/senderismo/trotar</i>                                                                                | Yes                                                             | Yes                                                                                                                                                     | Yes                                                                                                                                                     |
| <b>Bird watching/kite flying/paved biking</b><br><i>observer aves/volar cometas/montar bicicleta – terreno no<br/>pavimentado/orientación</i> | Yes                                                             | Yes                                                                                                                                                     | Yes                                                                                                                                                     |
| <b>On-leash dog walking</b> <i>paseo de mascotas</i>                                                                                          | Yes                                                             | Yes                                                                                                                                                     | Yes                                                                                                                                                     |
| <b>Restroom</b> <i>baño</i>                                                                                                                   | Yes                                                             | Yes                                                                                                                                                     | Yes                                                                                                                                                     |
| <b>Orienteering/geocaching</b> <i>orientación y geocaching</i>                                                                                | Yes                                                             | No                                                                                                                                                      | Yes                                                                                                                                                     |
| <b>Biking on unpaved trails</b><br><i>montar bicicleta – terreno pavimentado</i>                                                              | No                                                              | Yes                                                                                                                                                     | No                                                                                                                                                      |
| <b>Great Spirit Path</b> <i>El Camino del Gran Espíritu</i>                                                                                   | Yes                                                             | Yes, renovate in place<br><i>Si, renovar sin alteraciones</i>                                                                                           | Yes, renovate in place<br><i>Si, renovar sin alteraciones</i>                                                                                           |
| <b>Bay Trail, asphalt</b> <i>Sendero Bahía, asfalto</i>                                                                                       | 8' - 12' wide gravel                                            | 12' wide asphalt<br><i>Asfalto de 12' de ancho</i>                                                                                                      | 8' - 12' wide asphalt<br><i>Asfalto de 8' - 12' de ancho</i>                                                                                            |
| <b>Accessible paths (6' min. width,<br/>asphalt and treated)</b>                                                                              | 0 miles<br>(gravel and dirt are<br>not accessible)              | 5.3 miles total<br>(4.2 mi asphalt<br>1.1 mi accessible-treated)                                                                                        | 4.4 miles total<br>(3.8 mi asphalt<br>0.6 mi accessible-treated)                                                                                        |
| <b>Accessible summits</b>                                                                                                                     | None<br><i>Ninguna</i>                                          | 2 summits<br><i>2 cimas</i>                                                                                                                             | 1 summit<br><i>1 cima</i>                                                                                                                               |
| <b>Path/trail surfacing</b>                                                                                                                   | Keep as is<br>(22% dirt/ 78% gravel/<br>0% asphalt/ 0% treated) | Repave<br>(10% dirt/ 29% gravel/<br>49% asphalt/<br>12% treated)<br><i>Volver a pavimentar<br/>(10% tierra/29% grava/49% asfalto/12%<br/>procesado)</i> | Repave<br>(12% dirt/ 29% gravel/<br>43% asphalt/<br>16% treated)<br><i>Volver a pavimentar<br/>(12% tierra/29% grava/43% asfalto/16%<br/>procesado)</i> |
| <b>Trees to screen sewage facility</b>                                                                                                        | No                                                              | Yes                                                                                                                                                     | Yes                                                                                                                                                     |
| <b>Habitat restoration</b>                                                                                                                    | No                                                              | Yes                                                                                                                                                     | Yes                                                                                                                                                     |
| <b>Picnic tables</b>                                                                                                                          | No                                                              | Single tables/ small grp<br><i>Mesas individuales/grupos pequeños</i>                                                                                   | Single tables/ sml grp<br>/ lrg grp<br><i>Mesas individuales/grupos pequeños/<br/>grupos grandes</i>                                                    |
| <b>Fitness course</b> <i>ejercicio y salud</i>                                                                                                | No                                                              | Yes, par course along trail                                                                                                                             | No                                                                                                                                                      |
| <b>Educational trail loops</b> <i>centro de educación</i>                                                                                     | No                                                              | Yes                                                                                                                                                     | Yes                                                                                                                                                     |
| <b>Amphitheater/group seating</b><br><i>anfiteatro/aulas al aire libre</i>                                                                    | No                                                              | Yes, small grp<br>(20 ppl)<br><i>Si, grupo pequeño (20 asientos)</i>                                                                                    | Yes, large grp<br>(40-60 ppl)<br><i>Si, grupo grande (40-60 asientos)</i>                                                                               |
| <b>Nature play</b> <i>jugar en la naturaleza</i>                                                                                              | No                                                              | Yes,<br>small dispersed                                                                                                                                 | Yes, large<br>destination                                                                                                                               |
| <b>Off-leash dog park</b> <i>área destinada para perros</i>                                                                                   | No                                                              | Yes, 2 acres                                                                                                                                            | No                                                                                                                                                      |
| <b>Hand-launched radio controlled model glider</b><br><i>lanzar planeadores</i>                                                               | No                                                              | Yes, by meadow area only                                                                                                                                | No                                                                                                                                                      |
| <b>Non-motorized small boat launch</b>                                                                                                        | No                                                              | Yes                                                                                                                                                     | No                                                                                                                                                      |
| <b>Building</b> <i>edificio</i>                                                                                                               | Yes (restroom)                                                  | Yes, (restroom/ranger<br>office)<br><i>Si, (baños/oficina del guardabosques)</i>                                                                        | Yes, (restroom/ranger<br>office/<br>meeting pavilion)<br><i>Si, (baños/oficina del guardabosques/<br/>salón de reuniones)</i>                           |
| <b>Parking, paved</b>                                                                                                                         | 34                                                              | 42                                                                                                                                                      | 42                                                                                                                                                      |
| <b>Parking, gravel</b>                                                                                                                        | 42 (angled)                                                     | 61 (parallel)<br><i>(paralelo)</i>                                                                                                                      | 47 (parallel)<br><i>(paralelo)</i>                                                                                                                      |
| <b>Parking, undesignated</b>                                                                                                                  | 27                                                              | 5                                                                                                                                                       | 3                                                                                                                                                       |
| <b>Total cost to improve</b>                                                                                                                  | N/A                                                             | \$10 - \$15 million<br><i>\$10 - \$15 millones</i>                                                                                                      | \$10 - \$15 million<br><i>\$10 - \$15 millones</i>                                                                                                      |
| <b>Meets project goals<br/>(of expanded use, improved access and<br/>additional educational opportunities)</b>                                | No                                                              | Yes                                                                                                                                                     | Yes                                                                                                                                                     |









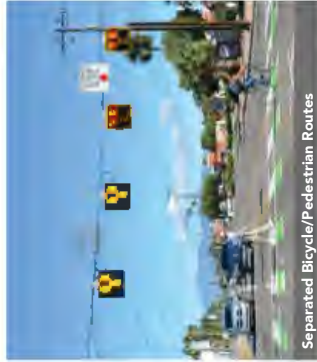


# Concept Image Board

Enhanced Roadway



Pedestrian Refuge



Separated Bicycle/Pedestrian Routes

Park Entrance



Parking Fees



Automatic Access Control



Park Sign



Turn-Around

Surfacing Materials



Existing Gravel Trail



Gravel Parking Areas



Asphalt Trail



Natural-Looking Treated Trail Pavement

Seating



Gabion and Wood Bench



Wood Bench

Group Seating



Small Amphitheater



Large Amphitheater





# Concept Image Board

## Park Amenities



## Nature Play



## Destination Play



## Fitness - Par Course



## Summit Overview



## Trash/Recycling/Compost Containers



## Native Plantings/Stormwater Management



## Drinking Fountain



## Stairway



## Bike Rack



Habitat Restoration



## Great Spirit Path Renovation (Boulder in Treated Pavement)

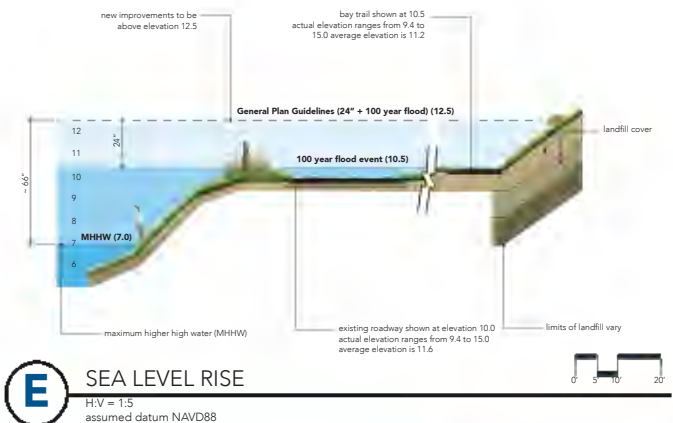
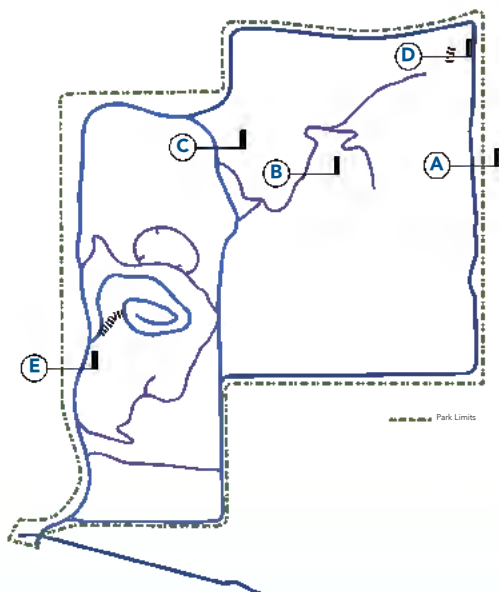
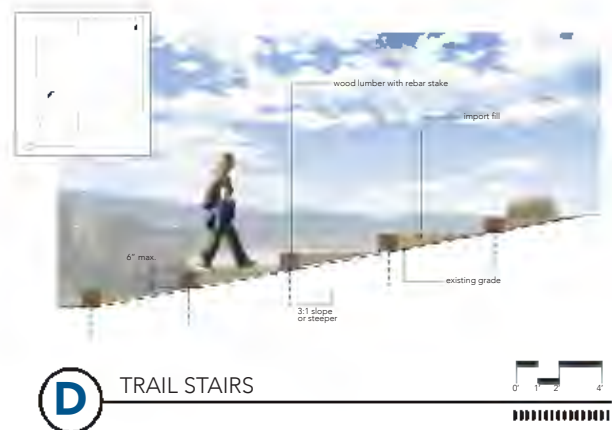
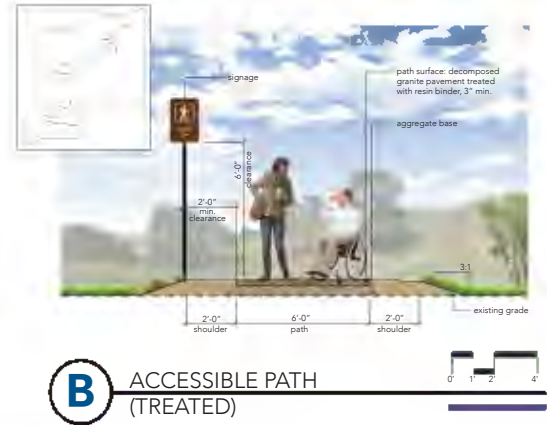
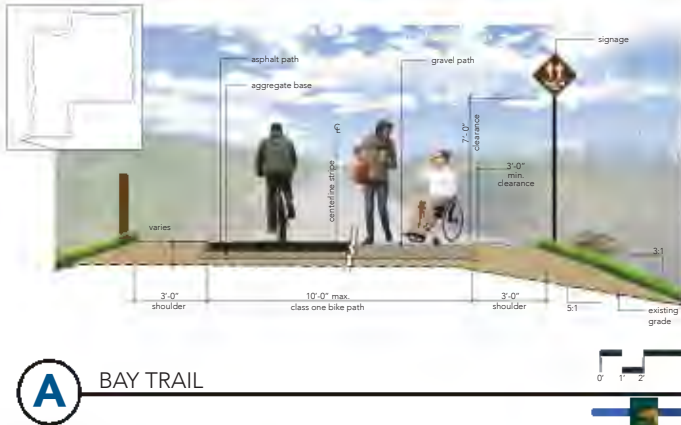


Office/Meeting Pavilion



**New Dispenser/Office**

# Sections





# Open House Packet



## General Information

This open house is structured into five “stations.” Please visit each station and write your input on the attached input sheets. Spend as little or as much time at each station as you like, in any order you prefer. Questions are encouraged!

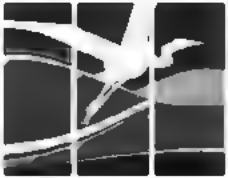
## STATION 1: Welcome!

**Purpose:** This station provides an orientation of the workshop. Sign in so that we are able to contact you with future project updates. Pick up your open house packet here. Use this packet to record your input and track which stations you’ve visited. Learn about background information on the park site and surrounding areas from the park timeline, context map, and existing conditions map. If there is any element of importance that you feel we should know, please share your thoughts by talking to a project team member or writing comments directly on the documents.

**Input Opportunities:** Respond to the user survey below and let us know how you use the park. Please provide your answer to each of the questions below.

1. How old are you?
  - ☐ Under 16
  - ☐ 16 to 20
  - ☐ 21 to 30
  - ☐ 31 to 55
  - ☐ 55 +
2. Where do you live?
  - ☐ East of Highway 101, in Menlo Park
  - ☐ West of Highway 101, in Menlo Park
  - ☐ In Redwood City or East Palo Alto
  - ☐ None of the above
3. How far is your home from the park?
  - ☐ 1 mile
  - ☐ 2 to 5 miles
  - ☐ 5 to 10 miles
  - ☐ More than 10 miles
4. How often do you visit the park?
  - ☐ Daily
  - ☐ Weekly
  - ☐ Monthly
  - ☐ Yearly
  - ☐ Rarely/Never
5. When you visit the park, how often do you stay?
  - ☐ Less than one hour
  - ☐ 1 hour
  - ☐ 2 to 4 hours
  - ☐ More than 4 hours





# Open House Packet



## STATION 2: Program Statement

**Purpose:** Learn about the input we received at the first Open House. Learn where similar facilities are located near the park. See how the input received helped shape the project Program Statement.

**Input Opportunities:** Evaluate the Program Statement that we have developed and let us know how much you support each part.

Y = Yes, I agree with this goal

M = Maybe, I'm unsure if I agree with this goal

N = No, I do not agree with this goal

Y M N

Respect the emphasis on "passive recreation" envisioned when the park was founded

☐ ☐ ☐

Acknowledge the need to provide for a growing population and respond to a changing shoreline

☐ ☐ ☐

Support, enhance and expand activities that are complementary to passive recreation experiences

☐ ☐ ☐

Address deferred maintenance and existing facility deficiencies

☐ ☐ ☐

Provide a comfortable, friendly, safe, and more accessible user experience

☐ ☐ ☐

Acknowledge that future stewards of the park start with today's youth

☐ ☐ ☐

Identify and integrate revenue generation mechanisms into the park structure, to ensure the long-term sustainability of the park

☐ ☐ ☐

**Comments:**

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# Open House Packet



## STATION 3: Plan Alternatives

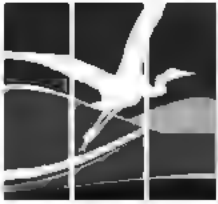
**Purpose:** This station shows two plan options and a comparison matrix of amenities and features at the park. To gauge your opinions and level of support, please let us know which of the two plans you prefer, and what type of modifications, if any, you would like to see made to that plan.

**Input Opportunities:** Please tell us which concept plan you prefer.



**Input Opportunities:** How can the concept that you selected be improved? Please evaluate the list of attributes shown on the comparison matrix column for the concept plan that you selected. Let us know if you would like the attribute to remain as shown on the concept plan, if you would like to remove it from the concept, or if you would like to make modifications (for example, change the location, make it larger, add the activity if it's currently listed as a "no", etc).

|                         | keep as<br>shown on<br>preferred<br>concept | remove<br>it from<br>concept | modify                | tell us below how you<br>would like it modified |
|-------------------------|---------------------------------------------|------------------------------|-----------------------|-------------------------------------------------|
| Restroom                | <input type="radio"/>                       | <input type="radio"/>        | <input type="radio"/> |                                                 |
| Orienteering/Geocaching | <input type="radio"/>                       | <input type="radio"/>        | <input type="radio"/> |                                                 |
| Great Spirit Path       | <input type="radio"/>                       | <input type="radio"/>        | <input type="radio"/> |                                                 |
| Bay Trail               | <input type="radio"/>                       | <input type="radio"/>        | <input type="radio"/> |                                                 |



# Open House Packet



## STATION 3: Plan Alternatives (cont'd)

**Input Opportunities:** How can the concept be improved? Please evaluate the list of attributes below and let us know if you would like to keep it as shown, remove it, or keep it but with modifications.

|                                     | keep as<br>shown on<br>preferred<br>concept | remove<br>it from<br>concept | modify                | tell us below how you<br>would like it modified |
|-------------------------------------|---------------------------------------------|------------------------------|-----------------------|-------------------------------------------------|
| Accessible paths (6' min. width)    | <input type="radio"/>                       | <input type="radio"/>        | <input type="radio"/> |                                                 |
| Accessible summits                  | <input type="radio"/>                       | <input type="radio"/>        | <input type="radio"/> |                                                 |
| Path/trail surfacing                | <input type="radio"/>                       | <input type="radio"/>        | <input type="radio"/> |                                                 |
| Trees to screen sewage facility     | <input type="radio"/>                       | <input type="radio"/>        | <input type="radio"/> |                                                 |
| Habitat restoration (if applicable) | <input type="radio"/>                       | <input type="radio"/>        | <input type="radio"/> |                                                 |
| Picnic tables                       | <input type="radio"/>                       | <input type="radio"/>        | <input type="radio"/> |                                                 |
| Fitness course (if applicable)      | <input type="radio"/>                       | <input type="radio"/>        | <input type="radio"/> |                                                 |
| Educational trail loops             | <input type="radio"/>                       | <input type="radio"/>        | <input type="radio"/> |                                                 |
| Amphitheater/group seating          | <input type="radio"/>                       | <input type="radio"/>        | <input type="radio"/> |                                                 |
| Play area                           | <input type="radio"/>                       | <input type="radio"/>        | <input type="radio"/> |                                                 |
| Off-leash dog park (if applicable)  | <input type="radio"/>                       | <input type="radio"/>        | <input type="radio"/> |                                                 |



# Open House Packet



## STATION 3: Plan Alternatives (cont'd)

**Input Opportunities:** How can the concept be improved? Please evaluate the list of attributes below and let us know if you would like to keep it as shown, remove it, or keep it but with modifications.

|                              | keep as<br>shown on<br>preferred<br>concept | remove<br>it from<br>concept | modify                | tell us below how you<br>would like it modified |
|------------------------------|---------------------------------------------|------------------------------|-----------------------|-------------------------------------------------|
| Model glider (if applicable) | <input type="radio"/>                       | <input type="radio"/>        | <input type="radio"/> |                                                 |
| Boat launch (if applicable)  | <input type="radio"/>                       | <input type="radio"/>        | <input type="radio"/> |                                                 |
| Building                     | <input type="radio"/>                       | <input type="radio"/>        | <input type="radio"/> |                                                 |
| Parking, paved               | <input type="radio"/>                       | <input type="radio"/>        | <input type="radio"/> |                                                 |
| Parking, gravel              | <input type="radio"/>                       | <input type="radio"/>        | <input type="radio"/> |                                                 |
| Parking, undesignated        | <input type="radio"/>                       | <input type="radio"/>        | <input type="radio"/> |                                                 |



# Open House Packet



## STATION 4: Packet Drop-off

### You're done!

Your feedback is invaluable as we work to develop the design options for Bedwell Bayfront Park. We will report back to you on the feedback received and will present the preferred park plan at our next workshop (Park and Recreation Commission Meeting), tentatively scheduled for **October 25, 2017**. Hope to see you there!

Please leave your open house packet on the table. You may keep this last page as a reminder of the future meeting. Visit [www.menlopark.org/BedwellBayfrontPlan](http://www.menlopark.org/BedwellBayfrontPlan) for the latest news on the project.

Food and refreshments are available at Station 5.

## Thank you for providing your input!





## Bedwell Bayfront Park

MASTER PLAN



a 42

**¡Venga a darnos su opinión!**  
Come share your thoughts!



## Bedwell Bayfront Park

MASTER PLAN



a 42

**¡Venga a darnos su opinión!**  
Come share your thoughts!

**La Ciudad de Menlo Park celebrará una reunión  
para escuchar sus opiniones sobre las alterna-  
tivas del plan conceptual que se propone para  
Bedwell Bayfront Park.**

**¡Venga y participe!**

*(Habrá traductores)*

The City of Menlo Park is hosting a public meeting to hear your thoughts on  
the proposed conceptual plan alternatives for Bedwell Bayfront Park.  
Please join us!

**Reunión Comunitaria/Community Meeting  
jueves, 10 de agosto, 2017**

Thursday, August 10, 2017

**6:30 pm to 8:00 pm**

**Menlo Park Senior Center**

*(Refrescos y cuidado de niños disponibles)*

*(Light refreshments and childcare will be provided)*

Para más información visite/For more information visit

**[menlopark.org/bedwellbayfrontplan](http://menlopark.org/bedwellbayfrontplan).**

Comuníquese/Contact Derek Schweigart, Assistant Community Services Director,  
(650) 330-2267 or [dsschweigart@menlopark.org](mailto:dsschweigart@menlopark.org)

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**Come share your thoughts!**  
¡Venga a darnos su opinión!

## Provide your input to shape the vision for Bedwell Bayfront Park's future

Bedwell Bayfront Park is a 160 acre regional park and the City's only park on the Bay. A master planning process is underway to address existing maintenance and capital improvement needs and to establish a park vision guiding improvements for the next 25 years.

**Please join us!**

## OPEN HOUSE #1

**Saturday, April 8, 10 am to 2 pm**

Menlo Park Senior Center  
110 Terminal Ave., Menlo Park, CA 94025

## Reunión de Puertas Abiertas # 1

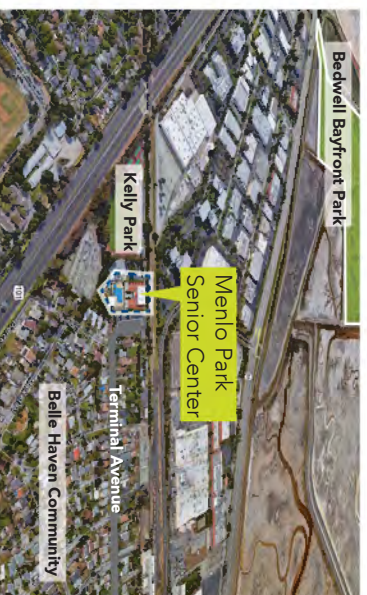
**Sábado 8 de Abril, 10 am a 2 pm**

Centro de Menlo Park para Mayores  
110 Terminal Ave., Menlo Park, CA 94025

## Oportunidad de aportar sus comentarios para el futuro de Bedwell Bayfront Park

Bedwell Bayfront Park es un parque regional de 160 acres y el único parque de la ciudad en la Bahía. Se está poniendo en marcha un plan maestro para abordar las deficiencias de mantenimiento y mejoras de capital y a su vez crear una visión que guíe el futuro desarrollo del parque durante los próximos 25 años.

**¡Por favor únete a nosotros!**





## input opportunities

Oportunidad de aportar sus comentarios

### Open House #2 / Reunión de Puertas Abiertas # 2

**Saturday, June 17, 10 am to 2 pm / Sábado 17 de Junio**

Bedwell Bayfront Park parking lot / Bedwell Bayfront Park - lote de estacionamiento

### Workshop / Taller Comunitario

**Wednesday, October 25, Evening / Miércoles 25 de Octubre, de noche**

Menlo Park Senior Center / Centro de Menlo Park para Mayores  
110 Terminal Ave, Menlo Park, CA 94025

### City Council / Ayuntamiento

**Tuesday, November 21 (tentative date) / Martes 21 de Noviembre (fecha tentativa)**

City Hall Council Chambers / Cámaras del Consejo del Ayuntamiento  
701 Laurel St., Menlo Park, CA 94025

## project area

área del proyecto



For more information about the project, scan the QR code or go to the project website at [menlopark.org/bedwellbayfrontplan](http://menlopark.org/bedwellbayfrontplan), or contact

Derek Schweigart, Assistant Community Services Director, (650) 330-2267 or email: [dsschweigart@menlopark.org](mailto:dsschweigart@menlopark.org)

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Derek Schweigart, Director Auxiliar de Servicios Comunitarios al (650) 330-2267 o por correo electrónico: [dsschweigart@menlopark.org](mailto:dsschweigart@menlopark.org)



**Come share  
your thoughts!**  
*¡Venga a darnos su opinión!*



**Project by:**





**Come share your thoughts!**  
**¡Venga a darnos su opinión!**

**Input Opportunities**  
Oportunidad de aportar sus comentarios

**Open House #1** / Reunión de Puertas Abiertas # 1

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110 Terminal Ave, Menlo Park, CA 94025, Ballroom

**Sábado 8 de Abril**  
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110 Terminal Ave, Menlo Park, CA 94025

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**Bedwell Bayfront Park parking lot**

**Sábado 17 de Junio**  
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**Bedwell Bayfront Park Master Plan**

Bedwell Bayfront Park is a 160 acre regional park and the City's only park on the Bay. A master planning process is underway to address existing maintenance and capital improvement needs and to establish a park vision guiding improvements for the next 25 years. **Please join us!**

Bedwell Bayfront Park es un parque regional de 160 acres y el único parque de la ciudad en la Bahía. Se está poniendo en marcha un plan maestro para abordar las deficiencias de mantenimiento y mejoras de capital y a su vez crear una visión que guíe el futuro desarrollo del parque durante los próximos 25 años. **¡Por favor únete a nosotros!**



**Project by:**

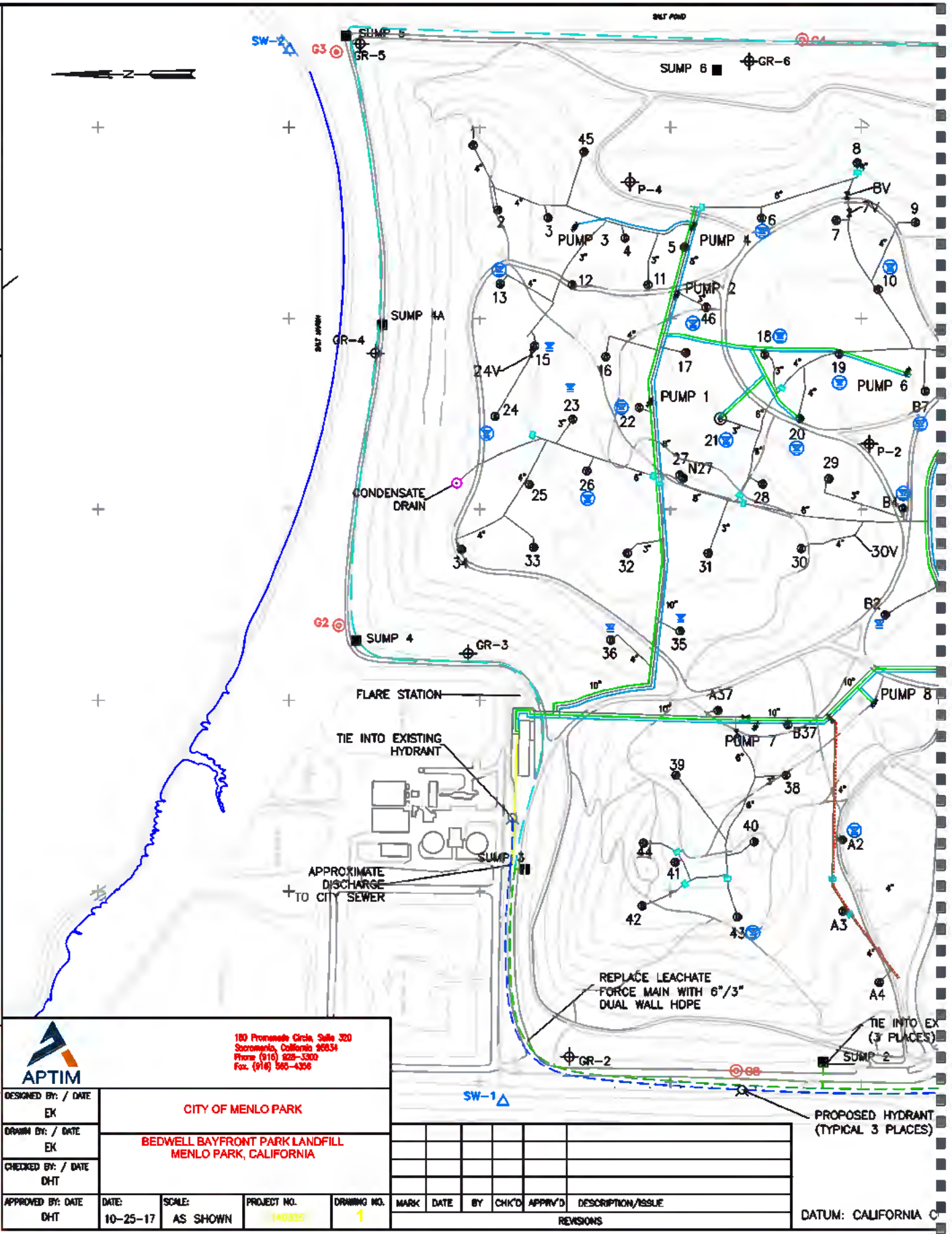


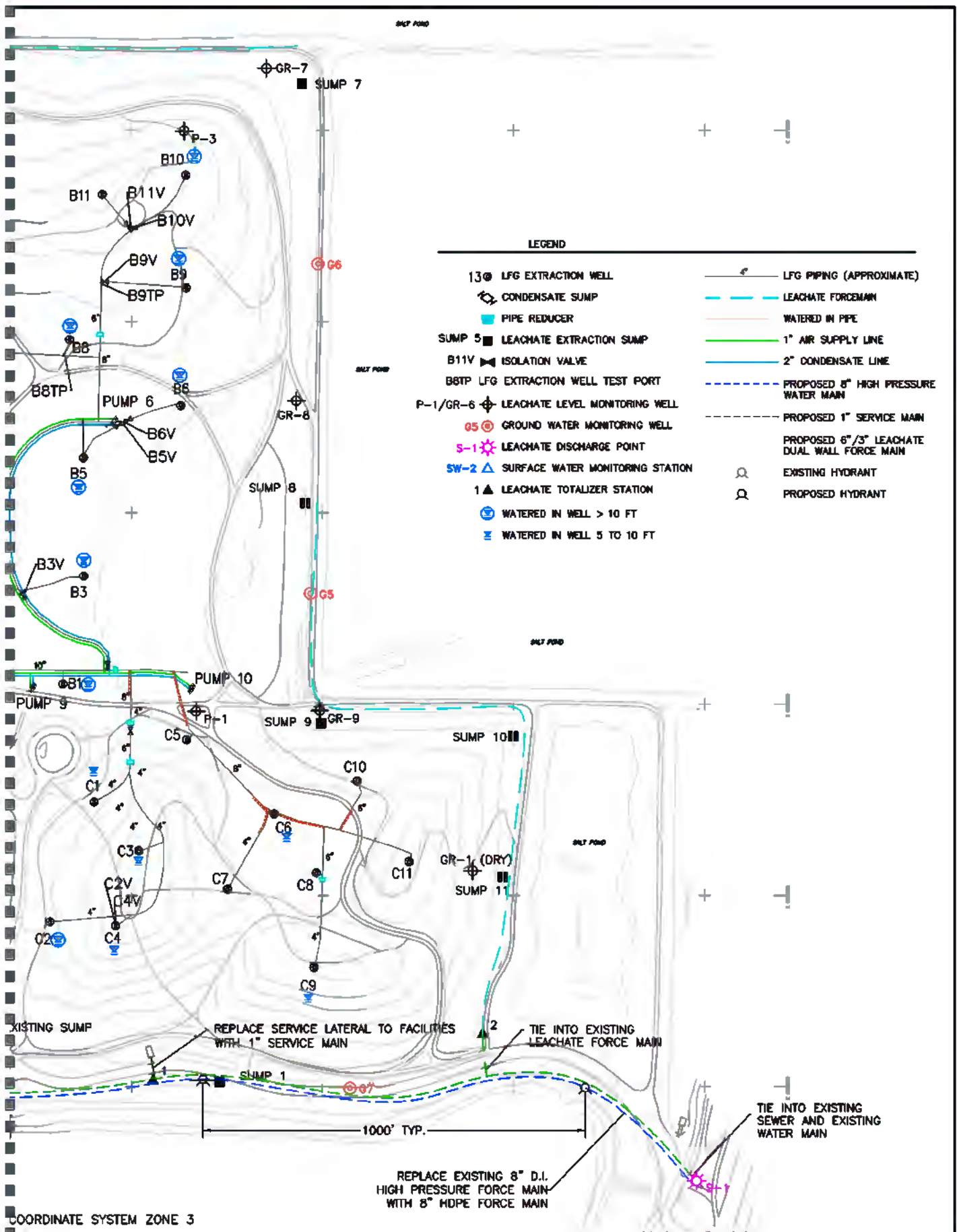
## Maps From Other Plans



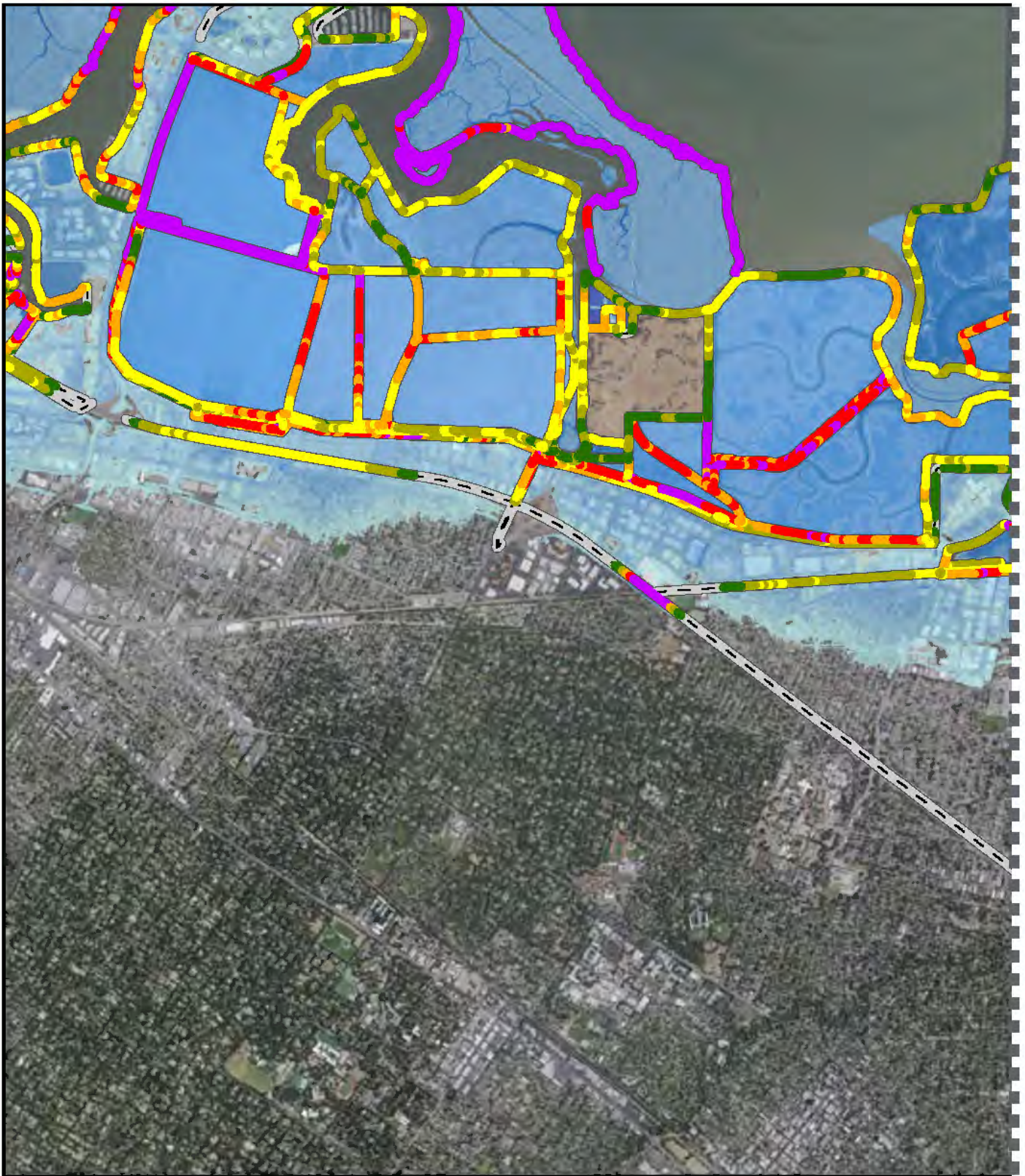
OFFICE PROJECT  
Sacramento, CA NUMBER  
77500226-1

File: C:\Users\terrona.schofield\Documents\Menlo Park\GDCS and LEACHATE GDCS REV8 2017 102517.dwg Layout: 11x17 Recommendations  
User: terron.schofield Oct 25, 2017 - 1:11pm









The inundation maps and the associated analyses provide a regional-scale illustration of inundation and coastal flooding due to specific sea level rise and storm surge preparedness. The maps are not detailed to the parcel-scale and should not be used for navigation, permitting, regulatory, or other legal uses. Flooding due to sea level rise is shown on these maps, and the maps do not guarantee the safety of an individual or structure. Nor do the maps model flooding from other sources, such as riverine or surface runoff (this product does not assume liability for any injury, death, property damage, or other effects of flooding. The maps relied on a 1-meter digital elevation model created for this project (although care was taken to capture all relevant topographic features and coastal structures that may impact coastal inundation, it is possible that structures not shown on the 1-meter horizontal map scale). The maps are based on model outputs and do not account for all of the complex and dynamic San Francisco Bay processes or future changes to the bay, protection upgrades, or other changes to San Francisco Bay or the region that may occur in response to sea level rise. More context about the maps and analyses, in the Sea Level Rise and Overtopping Analysis for San Mateo County's Bayshore Report (May 2016).



## SAN MATEO COUNTY Inundation Mapping

### MHHW + 66" SEA LEVEL RISE

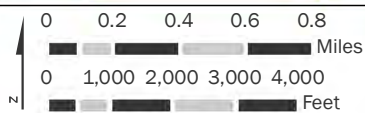
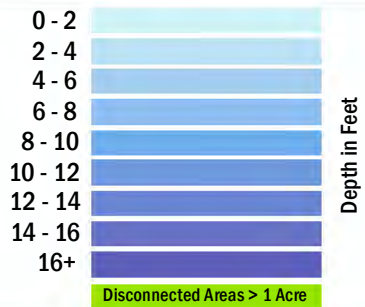
SLR + STORM SURGE SCENARIOS LISTED BELOW COULD BE APPROXIMATED BY THE INUNDATION SHOWN ON THIS MAP.

- 24" SLR + 100-YEAR STORM SURGE
- 30" SLR + 50-YEAR STORM SURGE
- 36" SLR + 25-YEAR STORM SURGE
- 42" SLR + 10-YEAR STORM SURGE
- 48" SLR + 2-YEAR STORM SURGE
- 54" SLR + 1-YEAR STORM SURGE

### Shoreline Overtopping Potential



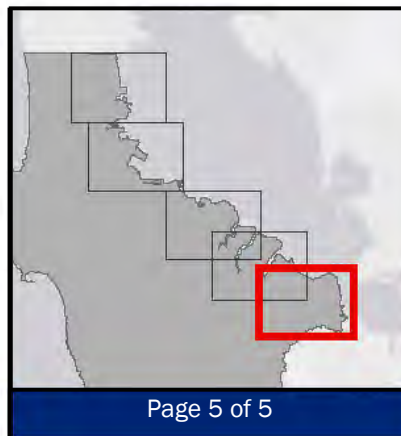
### Sea Level Rise Inundation



Projection:  
Universal Transverse Mercator NAD83 Zone 10N

**AECOM**

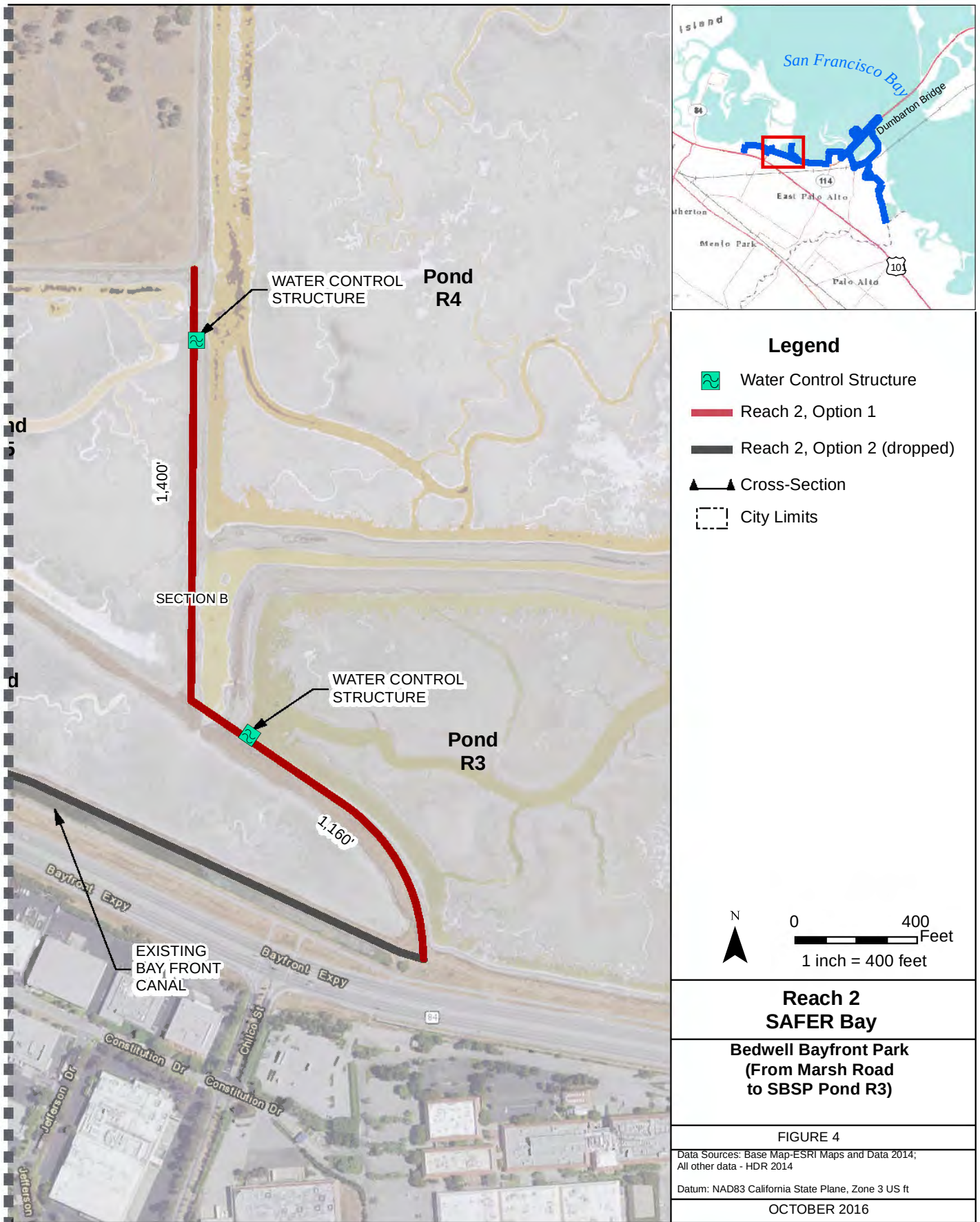
May, 2016

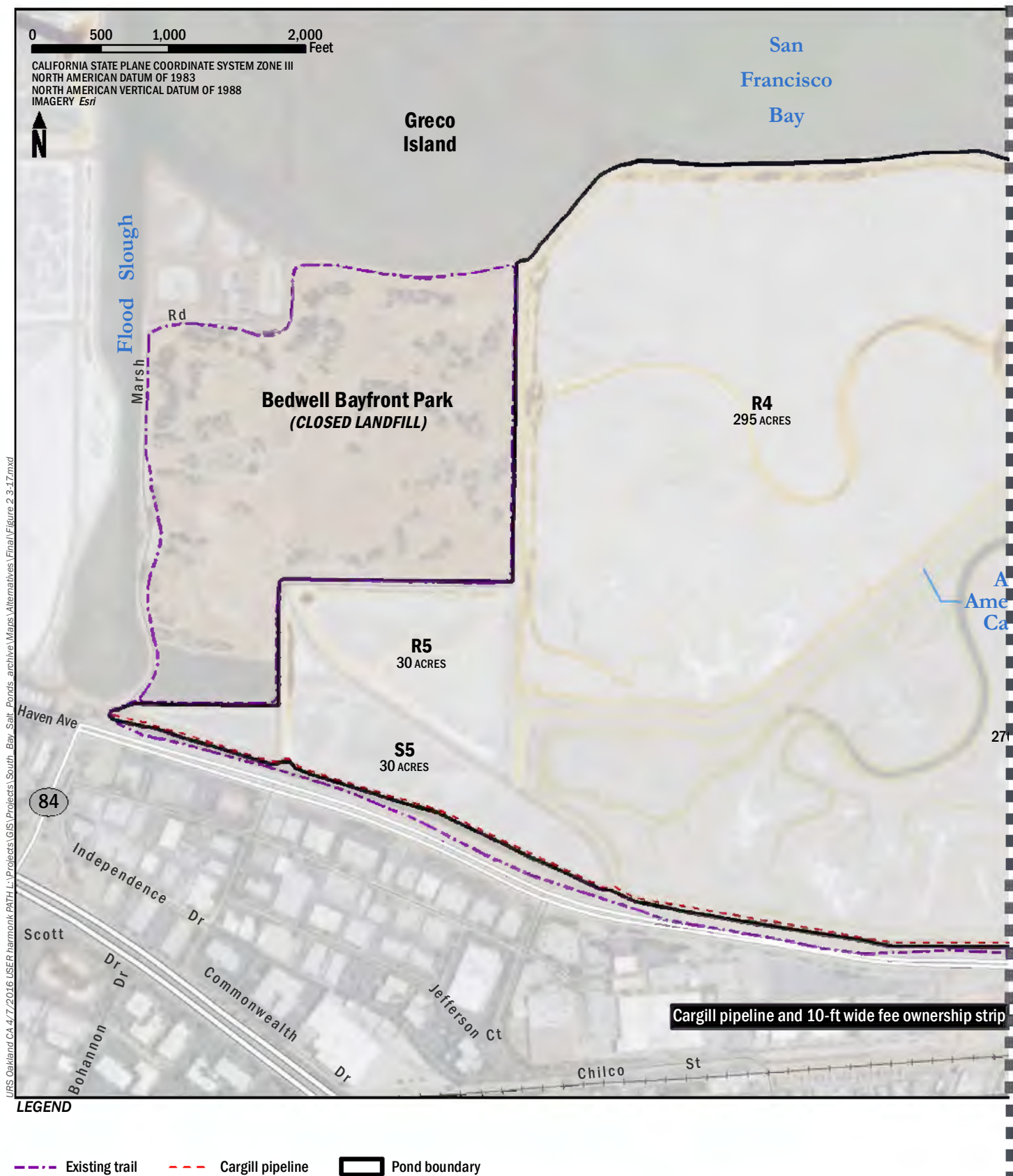














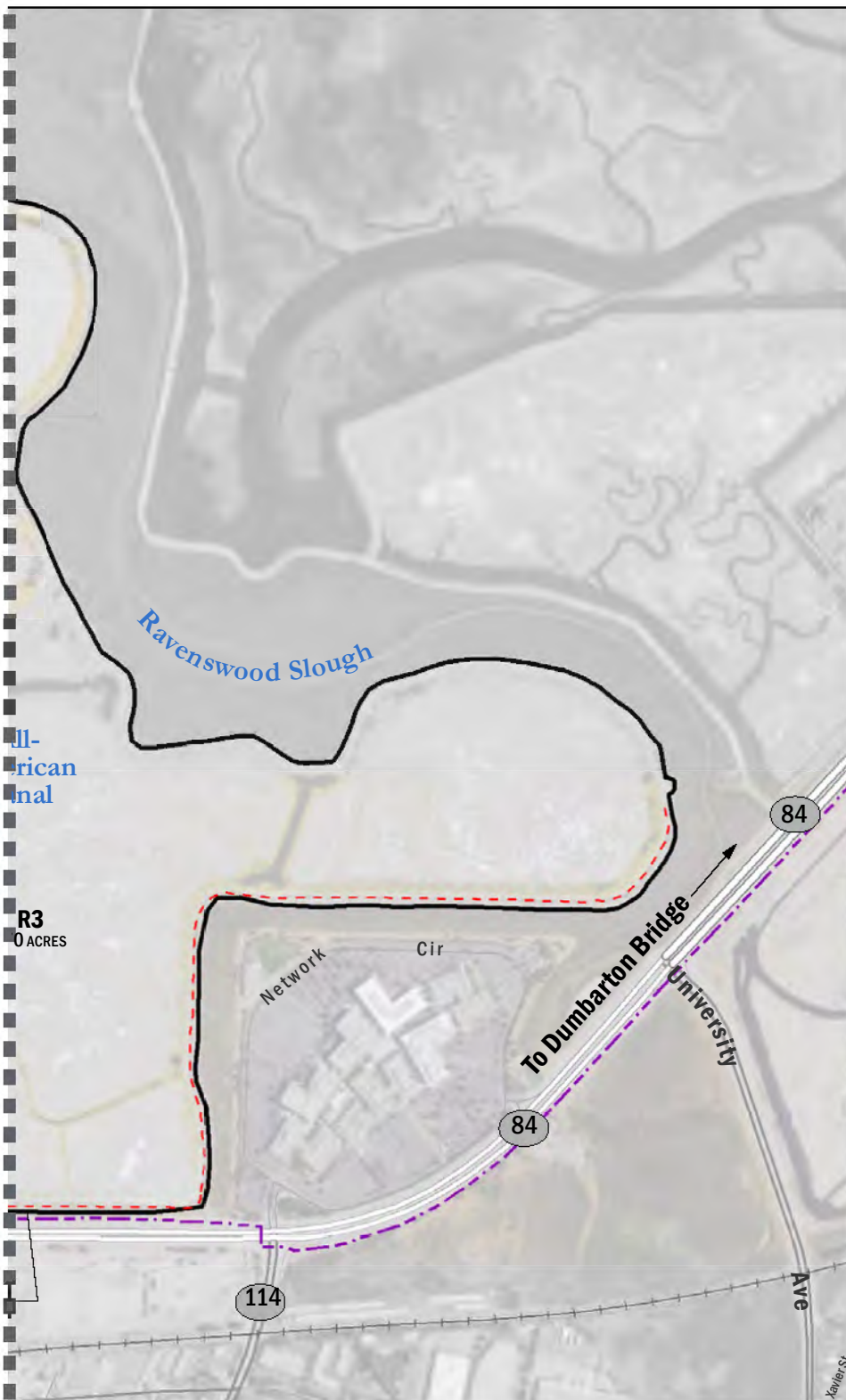
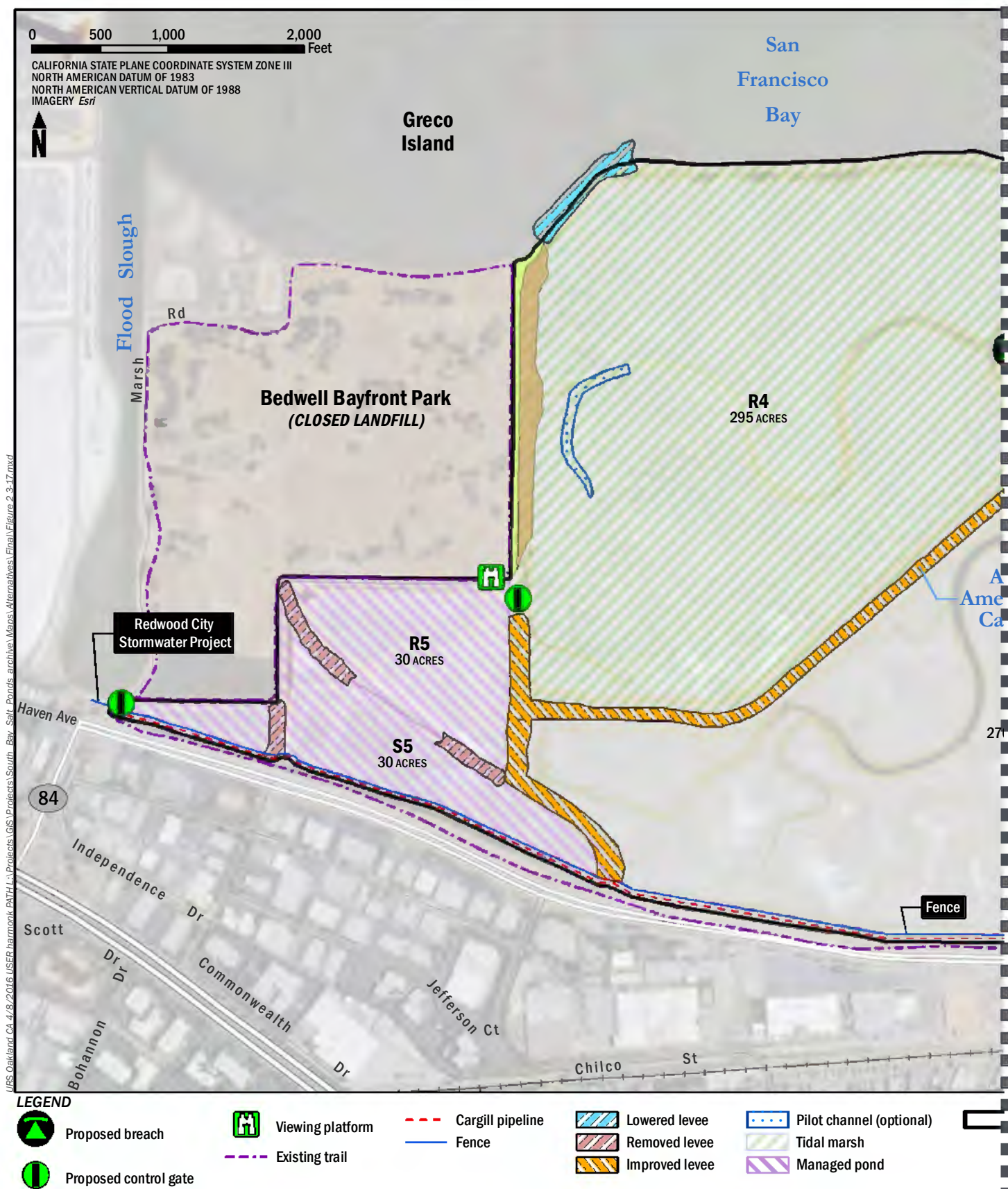


**Figure ES-12**  
Alternative Ravenswood A





**AECOM**

South Bay Salt Pond Restoration Project

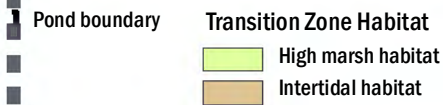
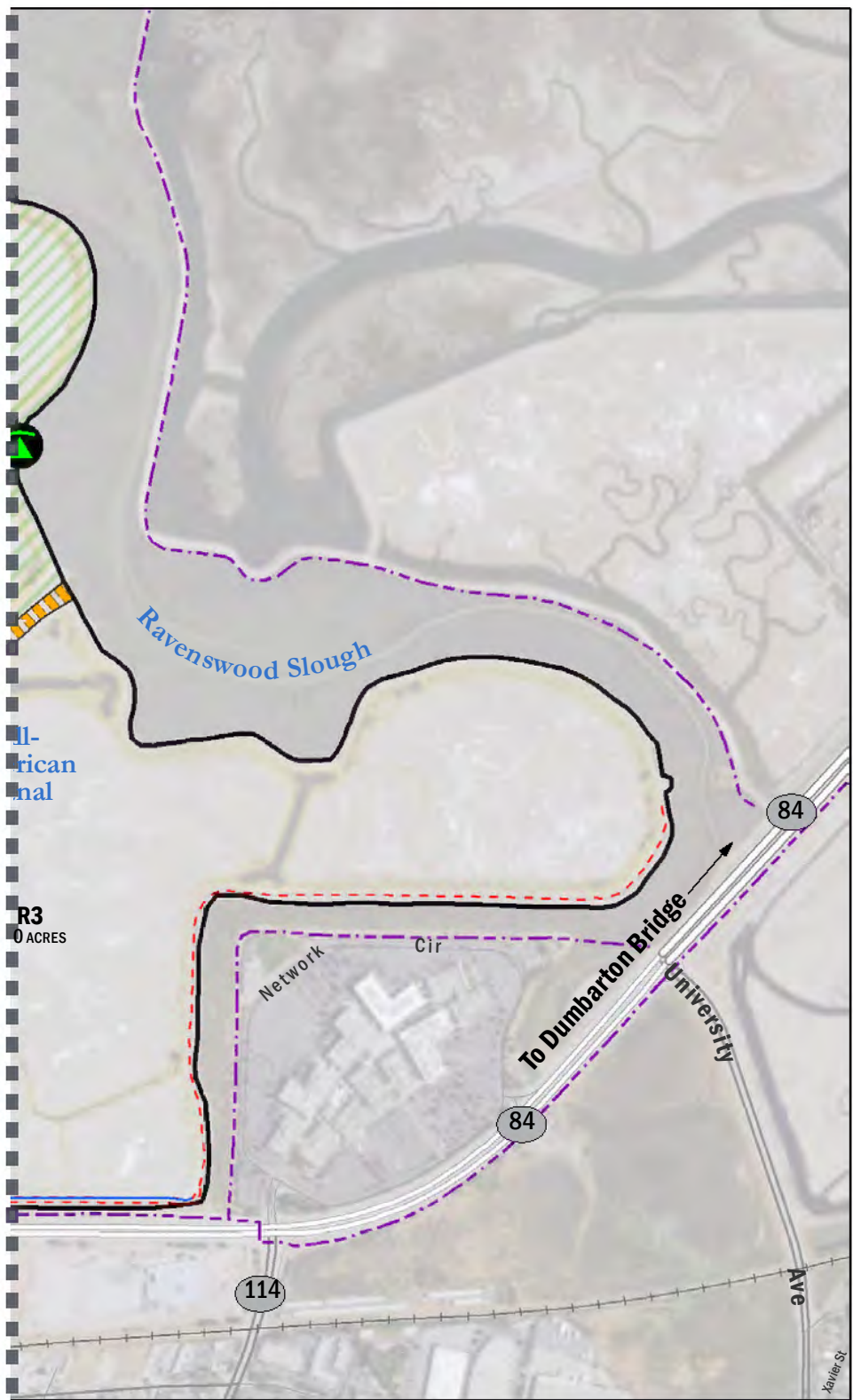
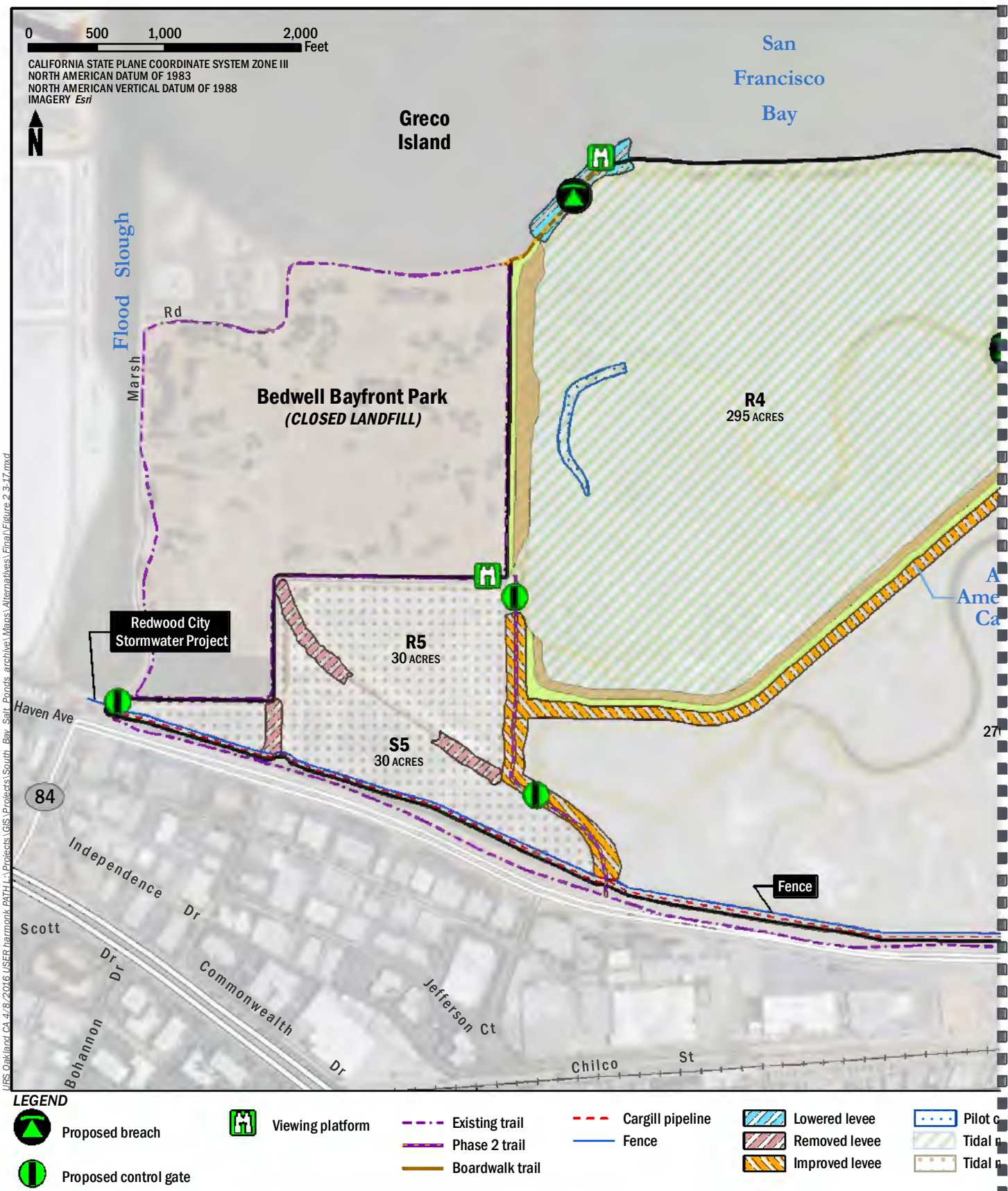


**Figure ES-13**  
*Alternative Ravenswood B*





**AECOM**

South Bay Salt Pond Restoration Project

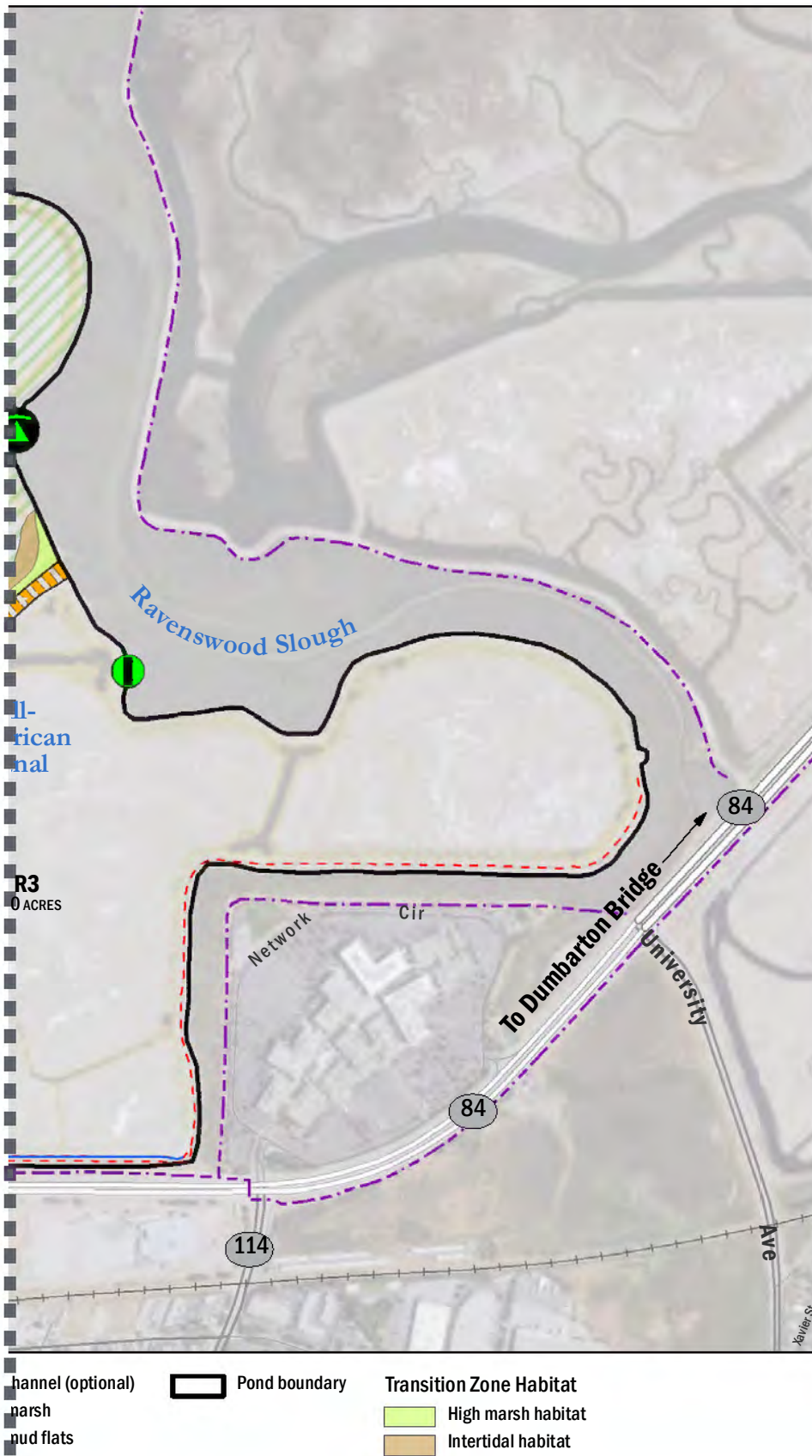
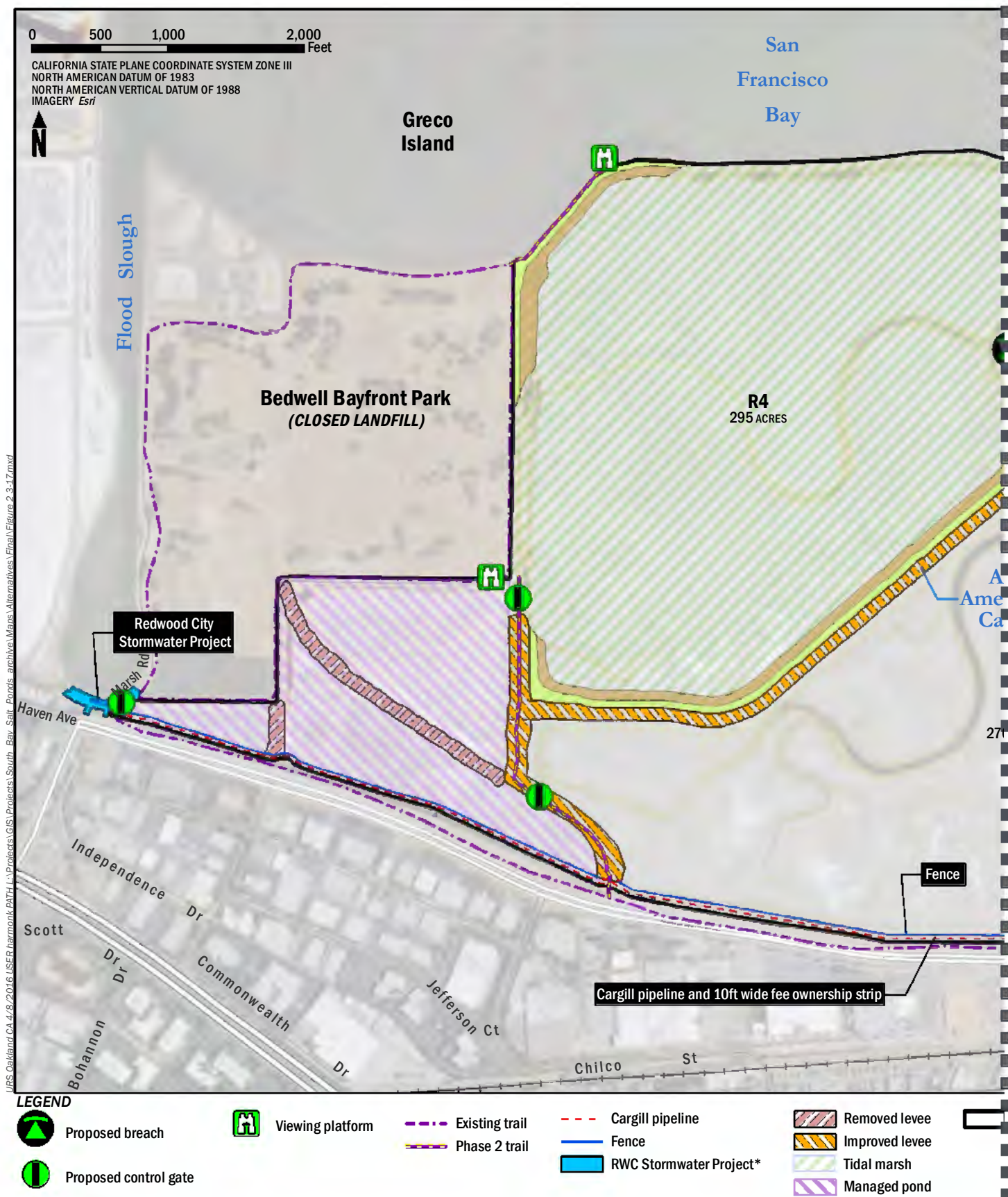


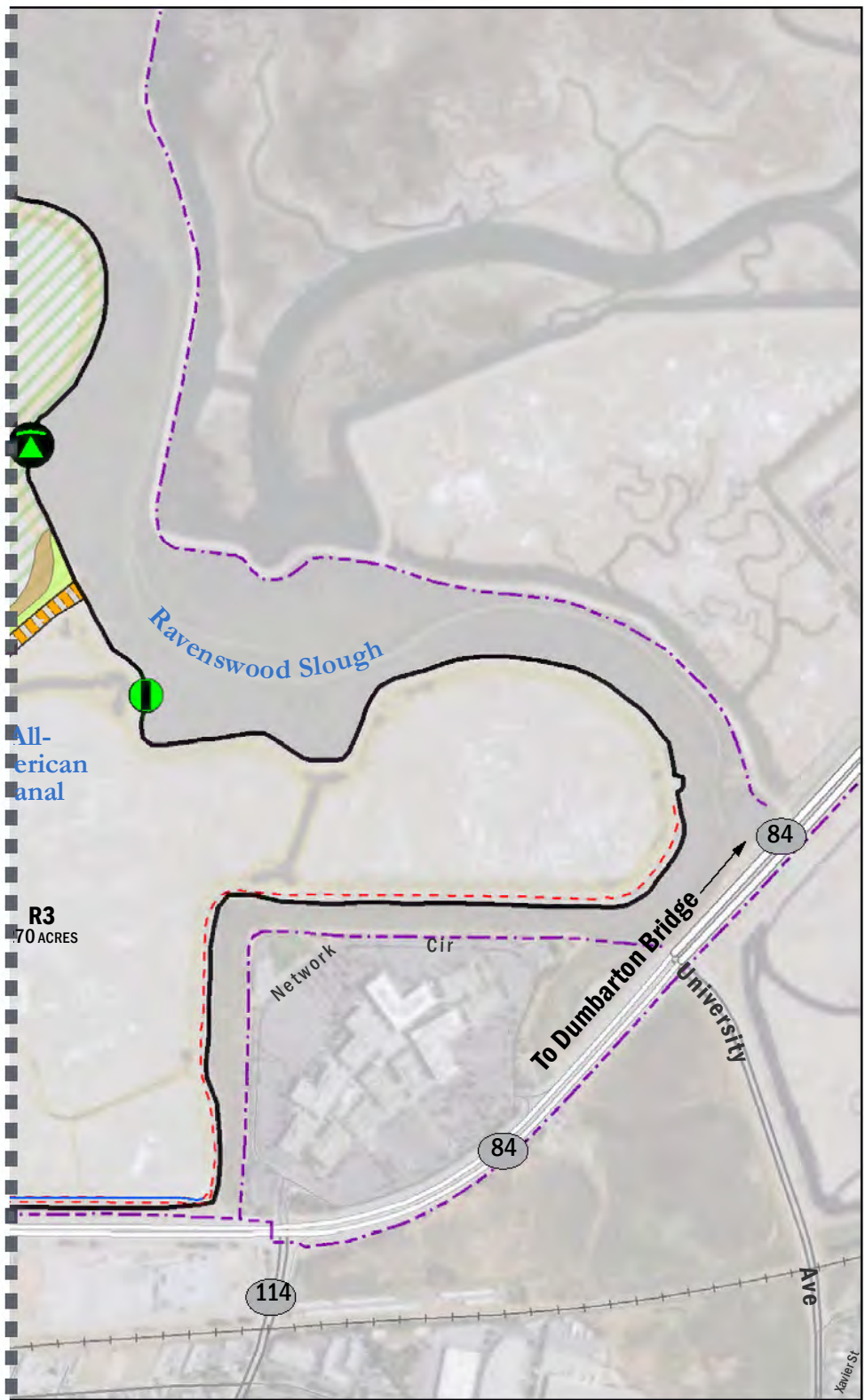
**Figure ES-14**  
Alternative Ravenswood C





**AECOM**

South Bay Salt Pond Restoration Project

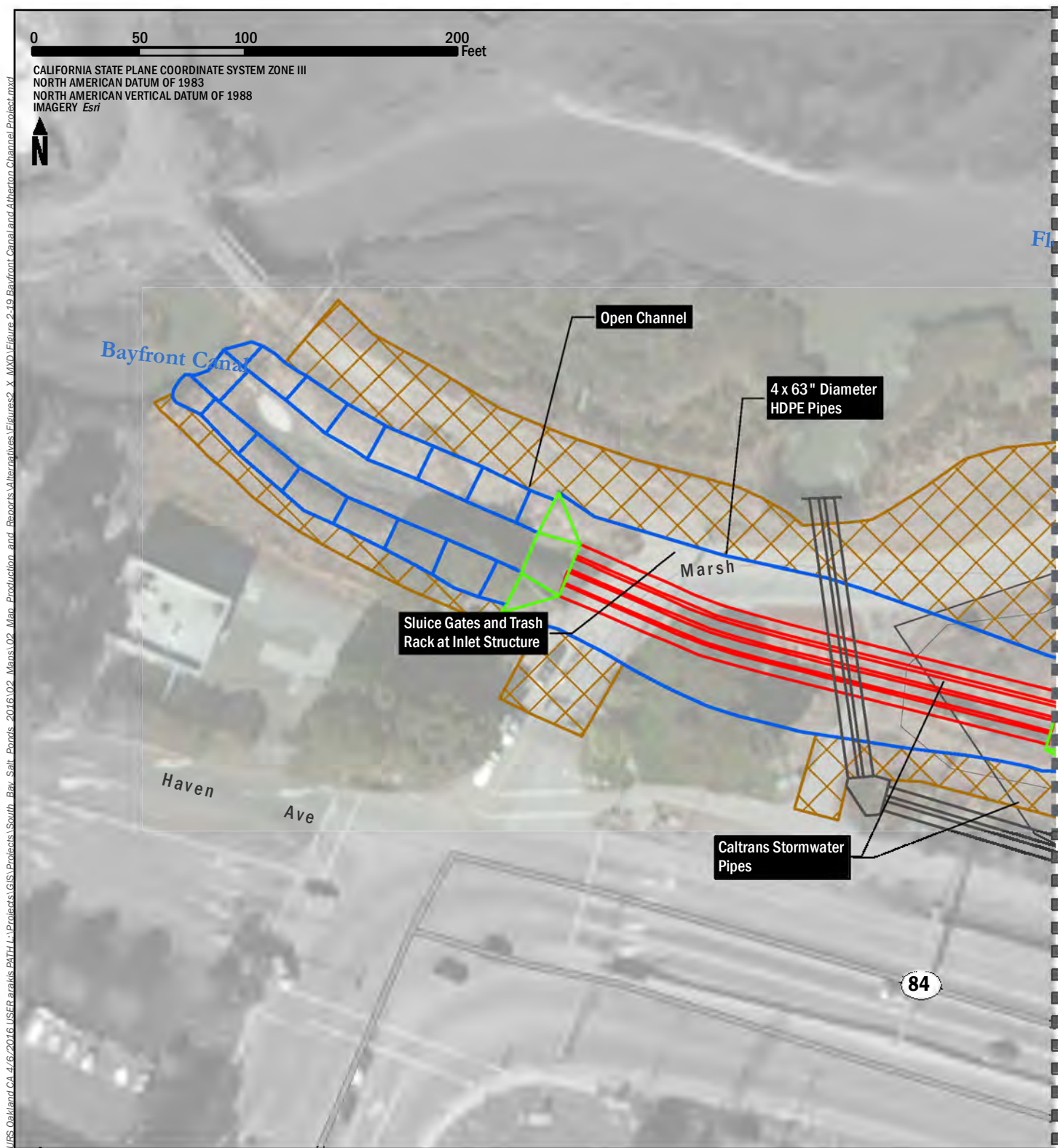


- Pond boundary
- Transition Zone Habitat
- High marsh habitat
  - Intertidal habitat

\*Pending property rights/easements

**Figure ES-15**  
*Alternative Ravenswood D*





LEGEND

- Proposed new pipes
- Proposed grading boundary
- Caltrans culvert
- Staging areas
- Proposed concrete structures

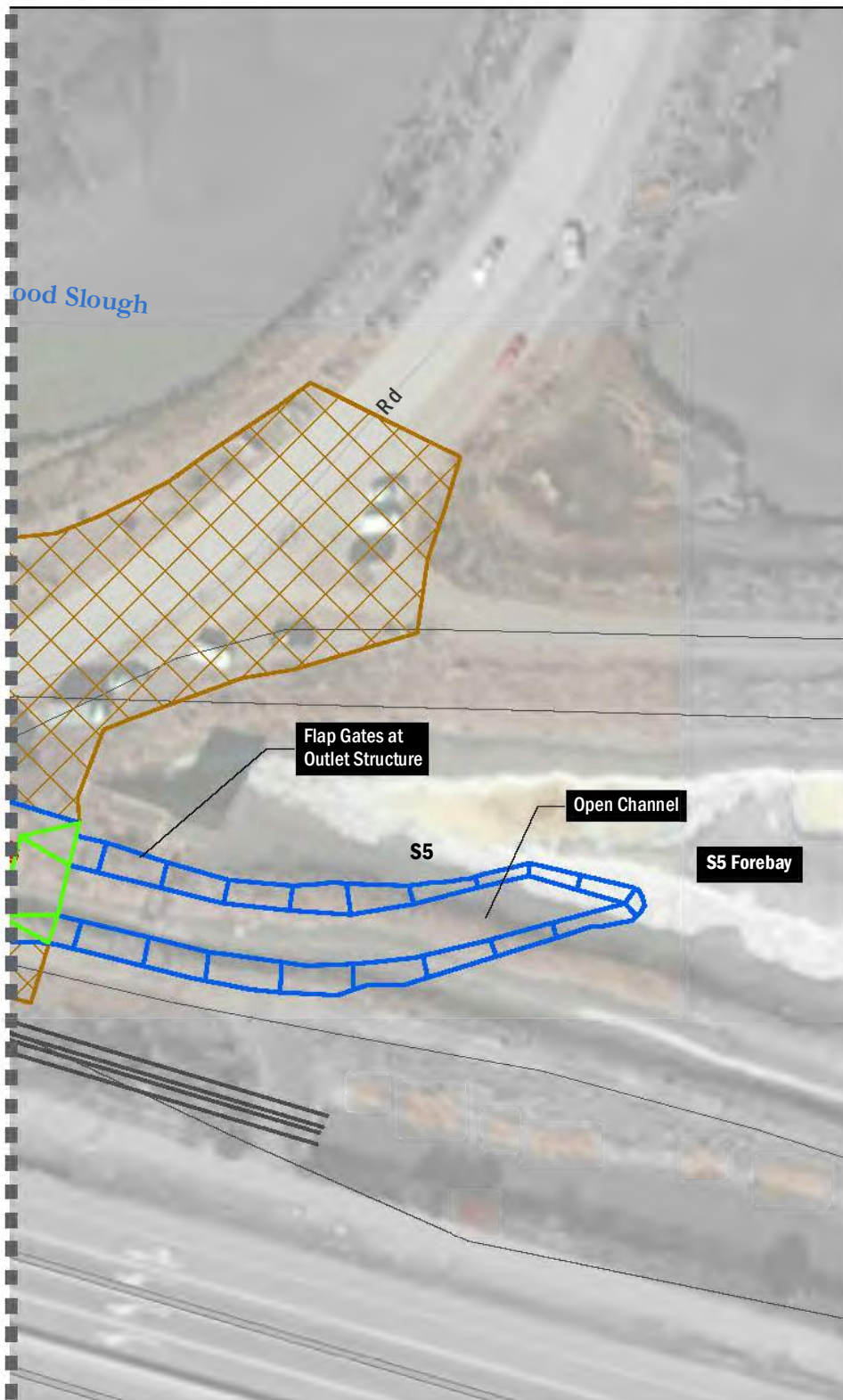


**Figure ES-16**  
*Bayfront Canal and Atherton Channel Project*



## Meeting Summaries



### Callander Associates Landscape Architecture

#### *Via E-mail Only*

March 24, 2017 (revised April 4, 2017)

#### **Meeting Summary**

##### **Bedwell Bayfront Park Master Plan**

**RE: Oversight and Outreach Group Meeting #1**

Date: March 23, 2017

Time: 6:30 p.m. to 8:00 p.m.

3 pages

#### **Attendees:** *City of Menlo Park:*

Derek Schweigart (DS), Community Services, [dsschweigart@menlopark.org](mailto:dsschweigart@menlopark.org)

Azalea Mitch (AM), Public Works, [aamitch@menlopark.org](mailto:aamitch@menlopark.org)

David Mooney (DM), Parks, [damooney@menlopark.org](mailto:damooney@menlopark.org)

#### *Oversight and Outreach Group:*

Allan Bedwell (AB), Friends of Bedwell Bayfront Park, [allan.bedwell@gmail.com](mailto:allan.bedwell@gmail.com)

Eileen McLaughlin (EM), Citizens Committee to Complete the Refuge, [wildlifestewards@aol.com](mailto:wildlifestewards@aol.com)

Janelle London (JL), Environmental Quality Commission, [jlondon@stanfordalumni.org](mailto:jlondon@stanfordalumni.org)

Marianne Palefsky (MP), Parks and Recreation Commission, [mwpalefsky@gmail.com](mailto:mwpalefsky@gmail.com)

#### *Callander Associates (CA):*

Brian Fletcher (CA), [bfletcher@callanderassociates.com](mailto:bfletcher@callanderassociates.com)

Marie Mai (CA), [mmai@callanderassociates.com](mailto:mmai@callanderassociates.com)

Jana Schwartz (CA), [jschwartz@callanderassociates.com](mailto:jschwartz@callanderassociates.com)

The purpose of this meeting was for the Oversight and Outreach Group to review and provide comments on draft presentation materials that will be presented at the upcoming community Open House meeting on April 8, 2017. The following information was discussed and/or decided upon in our meeting. Comments with an action noted have been incorporated into the presentation materials to be shared with the public. Comments received that were not incorporated are shown in the matrix at the end of the document. *(Text in italics represents our responses as to why the comment was not incorporated).*

#### **Item**

#### **Action to take**

##### **General**

1. Each member introduced themselves and the organization/perspectives that they represent. They provided a brief statement of their vision for Bedwell Bayfront Park. This ranged from a hope for retaining the passive use designation, to educating the public as to the net positives that the park brings, to wanting to see opportunities for kids and education.

# Meeting Summary

## Bedwell Bayfront Park Master Plan

RE: Oversight and Outreach Group Meeting #1

March 23, 2017 (revised April 4, 2017)

Page 2 of 5

### Item

### Action to take

2. The two main purposes for the Oversight and Outreach Group are: (a) to be an advisory committee to the planning team in reviewing and vetting project materials before they are presented to the public at large, and (b) to engage their constituents to participate in the public meetings.

3. How do we get people excited about the park, especially for those who may not have been yet?

CA to set up an 'ILOVEBEDWELL' hashtag for participants to post photos and thoughts to it.

## Project Goals and Objectives

### 1. Project Mission Statement

- a. Ideas for the park will be evaluated against their adherence to and support of the Mission Statement and Goals. What is missing?
- b. Provide basic information about the park before delving into the mission statement (ie. acreage, it's a landfill, its passive use open space, there are trails, etc.)
- c. Explain the 'need for improvements'. Provide concrete examples (ie. photo of rutting parking area). Define 'improvements' to minimize conflicts with passive recreation.
- d. Many city residents have never been to or heard of the park. Consider this process as an opportunity to educate people about the park and incentivize them to visit. Consider utilizing Facebook or similar social media platform in a park awareness campaign.
- e. Reduce the amount of text. "Unbold" and give equal weight to text by utilizing a bulletized list.
- f. Consider reframing this item by asking questions that we want the community to answer.

CA by 4/8

CA by 4/8

CA by 4/8

CA by 4/8

CA by 4/8

### 2. Project Goals

- a. Goals are clear and it is good that they do not appear to prioritize one goal over another. Consider clarifying or defining some language (i.e. 'sustainable funding').

CA by 4/8

**Meeting Summary**

**Bedwell Bayfront Park Master Plan**

**RE: Oversight and Outreach Group Meeting #1**

March 23, 2017 (revised April 4, 2017)

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| <b>Item</b>                                                                                                                                                                                     | <b>Action to take</b> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| b. What are the park's connections to neighboring development/projects and how does the park fit into the region? Better explain park features and why the park is unique/important to protect. | CA by 4/8             |
| c. Revisit Council directive on drones and see if goal can be less focused on drones, specifically.                                                                                             | CA by 4/8             |

**Draft Presentation Materials**

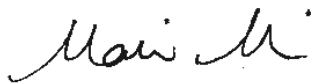
- |                                                                                                                                                                                                                                                                                                                                  |                                 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| 1. Feedback was written directly on the boards                                                                                                                                                                                                                                                                                   | CA to review and respond by 4/4 |
| 2. Research adjacent projects that may impact the site (ie. salt pond restoration construction, SAFER levee, Redwood City salt pond development projects, sea level rise). Incorporate information into Open House materials. Restoration project to begin tentatively in May; could impact June 17 <sup>th</sup> Open House #2. | CA by 4/8                       |

**Next Steps**

- |                                              |                                        |
|----------------------------------------------|----------------------------------------|
| 1. Confirm next Oversight Group meeting date | CA to send out Doodle for availability |
| 2. Open House #1 on April 8th                | All are encouraged to attend           |

The information above is Callander Associates' understanding of items discussed and decisions reached at the meeting. Callander Associates is proceeding with the project based on this understanding.

Submitted by:



Callander Associates

cc: All attendees

Brian Henry, Parks, [bphenry@menlopark.org](mailto:bphenry@menlopark.org)

Lauren Swezey, Facebook, [laurens@fb.com](mailto:laurens@fb.com)

Michele Tate, Belle Haven, [lmichele.tate@gmail.com](mailto:lmichele.tate@gmail.com)

## Meeting Summary

## Bedwell Bayfront Park Master Plan

RE: Oversight and Outreach Group Meeting #1

March 23, 2017 (revised April 4, 2017)

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| Image Board and Comment                                                                                                                                                                                                           | Reason for Not Incorporating                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Park character/mood: <ul style="list-style-type: none"> <li>- “Active” uses are inappropriate – remove</li> </ul>                                                                                                                 | <ul style="list-style-type: none"> <li>- <i>We are trying to probe the limits of acceptable uses and confirm if the public supports ‘active’ passive recreation such as jogging/biking. Ballfields/golf courses are off the table.</i></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Park amenities: <ul style="list-style-type: none"> <li>- Compost</li> <li>- Overnight camping</li> <li>- Nighttime lighting</li> <li>- Bee hives</li> <li>- In-ground trampolines</li> <li>- Wildlife habitat creation</li> </ul> | <ul style="list-style-type: none"> <li>- <i>Compost is a type of trash/debris removal and is addressed by the original photo</i></li> <li>- <i>It requires an overnight camp host and promotes activities such as fire burning that are incompatible with the presence of landfill gas.</i></li> <li>- <i>Not required since park closes at night</i></li> <li>- <i>Potential stings and conflict with the public, lacks bee-supportive planting</i></li> <li>- <i>Prohibitive due to landfill cap and is a high-liability/injury activity. May be too ‘active’</i></li> <li>- <i>Landfill soil is not conducive to plant restoration since the type of plants would be limited by the available (shallow) soil depth. Annual mowing and fire management would impact any habitat that could be created</i></li> </ul> |
| Funding options: <ul style="list-style-type: none"> <li>- Naming rights: remove, keep “Bedwell”</li> <li>- Offshore wind farm</li> <li>- Include average income per option</li> </ul>                                             | <ul style="list-style-type: none"> <li>- <i>Park name would not change; naming rights could be provided for smaller areas/structures</i></li> <li>- <i>Wind would impact birds</i></li> <li>- <i>Cost/benefit analysis to be completed later in the process</i></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Define passive recreation: <ul style="list-style-type: none"> <li>- Define ‘passive,’ provide context</li> </ul>                                                                                                                  | <ul style="list-style-type: none"> <li>- <i>Definition/context provided in packets</i></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Park services/programs: <ul style="list-style-type: none"> <li>- Material distribution center doesn’t fit/is not suitable use in the park</li> <li>- Include range of cost for each activity</li> </ul>                           | <ul style="list-style-type: none"> <li>- <i>The City is looking for locations where residents could get materials</i></li> <li>- <i>Cost/benefit analysis to be completed later in the process</i></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Park activities: <ul style="list-style-type: none"> <li>- Drones – avoid motors</li> <li>- Windsurfing/sailing/fishing</li> </ul>                                                                                                 | <ul style="list-style-type: none"> <li>- <i>Council direction was to use this process to explore whether this should be an activity or not</i></li> <li>- <i>These seem too large/impactful to the slough; kayaking/canoeing is included to allow water access</i></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |



**Meeting Summary****Bedwell Bayfront Park Master Plan****RE: Oversight and Outreach Group Meeting #1**

March 23, 2017 (revised April 4, 2017)

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| <b>Image Board and Comment</b>                                                                                                                                                                                                                        | <b>Reason for Not Incorporating</b>                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>- Methane/landfill education</li> <li>- Biking unpaved is inconsistent with passive use</li> <li>- Dogs and wildlife not a good combo</li> <li>- Stargazing</li> <li>- Cooking plants found in park</li> </ul> | <ul style="list-style-type: none"> <li>- <i>Addressed by education center under park amenities</i></li> <li>- <i>Biking is similar to walking, but at higher speeds; park is not just passive 'use' but passive 'recreation'</i></li> <li>- <i>Dogs on-leash are allowed so dogs enclosed is similar</i></li> <li>- <i>Proximity to City lights makes this a poor site for stargazing</i></li> <li>- <i>Addressed by camping/education</i></li> </ul> |
| <ul style="list-style-type: none"> <li>- Add a board showing surrounding parks with activities and amenities noted</li> </ul>                                                                                                                         | <ul style="list-style-type: none"> <li>- <i>This will be done at a later date, when we are sharing the park plan alternatives</i></li> </ul>                                                                                                                                                                                                                                                                                                          |

- END -



## ***Open House #1/On-line Survey #1 Input Summary***

### **Bedwell Bayfront Park Master Plan**

April 17, 2017

#### **Responses**

Total Returned Open House Packets: 39

Total Online Survey Responses: 86

#### **Goals and Objectives**

Evaluate the Goals and Objectives that we have developed and let us know how much you support each goal.

| <i>Goal</i> | <i>Open House #1</i> |       |    | <i>Online Survey</i> |       |    | <i>Total</i> |       |    |
|-------------|----------------------|-------|----|----------------------|-------|----|--------------|-------|----|
|             | Yes                  | Maybe | No | Yes                  | Maybe | No | Yes          | Maybe | No |
| Goal 5      | 14                   | 10    | 11 | 58                   | 16    | 8  | 72           | 26    | 19 |
| Goal 2      | 24                   | 10    | 3  | 38                   | 27    | 20 | 62           | 37    | 23 |
| Goal 6      | 30                   | 4     | 3  | 76                   | 6     | 1  | 106          | 10    | 4  |
| Goal 3      | 33                   | 5     | 0  | 63                   | 18    | 3  | 96           | 23    | 3  |
| Goal 1      | 34                   | 4     | 0  | 71                   | 14    | 0  | 105          | 4     | 0  |
| Goal 4      | 38                   | 1     | 0  | 64                   | 15    | 5  | 102          | 6     | 5  |

**Total: 125**

#### **Park Usage Map**

Writing directly on the map on the table, please show us where you go in the park, areas that cause concern, and opportunities that you see.

#### **Park Usage Map – Comments from Survey**

|   |                                                                                                                                                                                                                                |
|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | I'd like to see kayak, canoe, paddleboard access to the sloughs, especially as the wetlands are restored around Bedwell. It would be a great way to disperse users, low/no impact, and integrate park with wetlands and nature |
| 2 |                                                                                                                                                                                                                                |
| 3 | I marked up the plan                                                                                                                                                                                                           |
| 4 | We have the hills for aerobic interval training 3 times a week                                                                                                                                                                 |
| 5 |                                                                                                                                                                                                                                |
| 6 |                                                                                                                                                                                                                                |
| 7 |                                                                                                                                                                                                                                |
| 8 |                                                                                                                                                                                                                                |
| 9 | I've been in the main entrance many dozens of times and had no idea the park connected to the Bay Trail. Signage would help!                                                                                                   |

**Written, On-Line and Other Survey Responses**

**Bedwell Bayfront Park Master Plan**

April 17, 2017

Page 2 of 24

|    |                                                                                                                                                                                                                                                                                                  |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 10 | naming of trail and better mapping would be helpful                                                                                                                                                                                                                                              |
| 11 |                                                                                                                                                                                                                                                                                                  |
| 12 |                                                                                                                                                                                                                                                                                                  |
| 13 | Safety issues pointed out to marie mai who marked up the park map                                                                                                                                                                                                                                |
| 14 | Include some kind of park security so the families feel safe in this kind of unsafe neighborhood                                                                                                                                                                                                 |
| 15 | Defined parking/biking issues (prevent pollution from cars); more benches on vistas (seating); more native plants where possible                                                                                                                                                                 |
| 16 |                                                                                                                                                                                                                                                                                                  |
| 17 |                                                                                                                                                                                                                                                                                                  |
| 18 |                                                                                                                                                                                                                                                                                                  |
| 19 | Boat access needed (dock or pier and access for loading from car)                                                                                                                                                                                                                                |
| 20 | I would love to see 15-20 acres for mixed disc golf and hiking/jogging use                                                                                                                                                                                                                       |
| 21 |                                                                                                                                                                                                                                                                                                  |
| 22 | Map is great idea, but hard to read comments. Always need more benches                                                                                                                                                                                                                           |
| 23 | I feel that the park needs improvements but not all the things proposed by the master plan. If we approve master plan we are going to lose the sense of nature. As it is Bedwell park is already providing the community and amazing natural landscape.                                          |
| 24 |                                                                                                                                                                                                                                                                                                  |
| 25 | I tend to stick to outside trail, gotta get those steps. However, there were great ideas for benches or look-out sites along the different trails                                                                                                                                                |
| 26 |                                                                                                                                                                                                                                                                                                  |
| 27 |                                                                                                                                                                                                                                                                                                  |
| 28 |                                                                                                                                                                                                                                                                                                  |
| 29 | Let's figure out funding to maintain park as-is. These funding ideas are too small in scope                                                                                                                                                                                                      |
| 30 |                                                                                                                                                                                                                                                                                                  |
| 31 |                                                                                                                                                                                                                                                                                                  |
| 32 | On map                                                                                                                                                                                                                                                                                           |
| 33 |                                                                                                                                                                                                                                                                                                  |
| 34 | Some fixing of paths that flood or get super muddy. All the rest is great!                                                                                                                                                                                                                       |
| 35 | I use the park as a place to walk the dog, get some exercise, and clear my head. It is peaceful, "raw", organic nature is what makes this place special; Love that the community all get along (in my experience)                                                                                |
| 36 | I like walking around on the hills for more exercise; I'm reluctant to say 'yes' to any development because things get damaged, vandalized, not maintained, and it looks bad and reflects negatively on the area. Damaged picnic tables, graffitied benches, work fencing - view area structures |
| 37 |                                                                                                                                                                                                                                                                                                  |
| 38 | Walking dog, talking with friends, being alone                                                                                                                                                                                                                                                   |
| 39 | I use the park in two ways: running - 1) all over the park, once a month, 2) orienteering (organized event) all over the park once a year                                                                                                                                                        |

## Written, On-Line and Other Survey Responses

## Bedwell Bayfront Park Master Plan

April 17, 2017

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## Park Usage Map – Comments From Map

| Location on Map                   | Public Comment                                                               | Reaction to Comment                               |
|-----------------------------------|------------------------------------------------------------------------------|---------------------------------------------------|
| Sewage Flow Equalization Facility | Maybe visitor center here?                                                   |                                                   |
|                                   | Smelly, noisy                                                                |                                                   |
|                                   | Native trees to block the sewage                                             | ✓                                                 |
|                                   | Some (homeless) camping                                                      |                                                   |
| Redwood City Salt Ponds           | More people this western edge of park                                        |                                                   |
|                                   | Loop, 2 mi loop                                                              | ✓✓                                                |
|                                   | Bench/seating                                                                |                                                   |
|                                   | It often smells in this area                                                 |                                                   |
|                                   | Super muddy                                                                  |                                                   |
|                                   | More native trees in general                                                 |                                                   |
| Flood slough                      | Water bird watching                                                          | ✓                                                 |
|                                   | walk                                                                         | ✓✓✓✓✓✓                                            |
|                                   | run                                                                          | ✓✓✓                                               |
|                                   | bike                                                                         | ✓✓✓✓                                              |
|                                   | dog walk                                                                     | ✓✓✓✓✓                                             |
|                                   | up & down hills interval training                                            | ✓✓✓                                               |
|                                   | I like the lack of signage because it makes the walk a bit of an exploration |                                                   |
|                                   | navigational challenge - signs would be good                                 | ✓✓                                                |
|                                   | permanent orienteering posts (4X4 post)                                      | ✓                                                 |
|                                   | bus, passenger vans use park waiting area                                    |                                                   |
| Marsh Rd/Bayfront expwy           | traffic congestion                                                           |                                                   |
|                                   | support native shrub garden (like Ulistac)                                   |                                                   |
|                                   | bird watching - everywhere                                                   | yes! ✓✓                                           |
|                                   | "happy w/ park as is"                                                        | yes! Yes! Challenge would be not to mess it up ✓✓ |
|                                   | off leash dog area (certain times) would be nice (disagree)                  | I vote yes!                                       |
| Don Edwards Wildlife Refuge       | views good                                                                   | ✓                                                 |
|                                   | would like gazebo in this corner                                             |                                                   |
|                                   | maybe a little less visited                                                  |                                                   |



**Written, On-Line and Other Survey Responses**
**Bedwell Bayfront Park Master Plan**

April 17, 2017

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|                          |                                                             |                                                                              |
|--------------------------|-------------------------------------------------------------|------------------------------------------------------------------------------|
|                          | use/good traffic in this area                               |                                                                              |
|                          | art in disrepair                                            |                                                                              |
|                          | boulders moved/overgrown, needs work                        |                                                                              |
|                          | need bench here                                             |                                                                              |
|                          | main glider field                                           |                                                                              |
|                          | land birds field                                            |                                                                              |
|                          | burrowing owl habitat                                       |                                                                              |
|                          | floods                                                      |                                                                              |
|                          | amphitheater effect                                         |                                                                              |
|                          | use/good traffic on path, good for bike                     |                                                                              |
|                          | opportunity for educational signage for restoration project |                                                                              |
|                          | separate mountain biking for peds                           |                                                                              |
|                          | trails need improvement                                     |                                                                              |
|                          | need more paths                                             |                                                                              |
|                          | benches for view                                            |                                                                              |
|                          | support trail connection                                    | this would be nice                                                           |
|                          | keep grass low for visibility                               | keep tall while still green and not fire hazard, tall grass for bird habitat |
|                          | path narrowed - hard to see                                 | these are a nice change from a wider path                                    |
|                          | potential links                                             |                                                                              |
|                          | birders/Audubon                                             |                                                                              |
|                          | would like better trail maps to help locate birdsighting    | yes!                                                                         |
| 3 - bay trail connection | user conflict w/ cars                                       | don't make this a parking area                                               |
| 4 - information kiosk    | wall to prevent oil/fluids leaking to bay                   | can this be managed without walls?                                           |
|                          | block to prevent pollution/erosion into water               |                                                                              |
|                          | need separate path for vehicles                             |                                                                              |
|                          | safety issue in peds/bikes going behind cars backing out    |                                                                              |
|                          | gate and secure perimeters to make room for families        | no! no! no! disagree - keep it open and as is - not fenced in ✓✓             |
|                          | add dog poop bag/trash can stations                         | yes!!                                                                        |
|                          | lighting?                                                   | no                                                                           |
|                          | "name" trails                                               | agree :) ✓✓                                                                  |
|                          | trees could use trimming                                    |                                                                              |
|                          | regional park use, not just a city/community park           |                                                                              |

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|  |                                                             |  |
|--|-------------------------------------------------------------|--|
|  | Bair Island - restored and allows paddle boarding - refuge! |  |
|--|-------------------------------------------------------------|--|

**User Survey**

Question #1: How old are you?

| <i>Options</i> | <i>Open House #1</i> | <i>Online Survey</i> | <i>Total</i> |
|----------------|----------------------|----------------------|--------------|
| Under 16       | 0                    | 1                    | 1            |
| 16 to 20       | 0                    | 0                    | 0            |
| 21 to 30       | 4                    | 1                    | 5            |
| 31 to 55       | 13                   | 34                   | 47           |
| 55+            | 21                   | 36                   | 57           |

**Total: 111**

Question #2: Where do you live?

| <i>Options</i>                     | <i>Open House #1</i> | <i>Online Survey</i> | <i>Total</i> |
|------------------------------------|----------------------|----------------------|--------------|
| None of the above                  | 3                    | 12                   | 15           |
| In Redwood City or East Palo Alto  | 8                    | 16                   | 24           |
| East of Highway 101, in Menlo Park | 11                   | 6                    | 17           |
| West of Highway 101, in Menlo Park | 16                   | 38                   | 54           |

**Total: 111**

Question #3: How far is your home from the park?

| <i>Options</i>     | <i>Open House #1</i> | <i>Online Survey</i> | <i>Total</i> |
|--------------------|----------------------|----------------------|--------------|
| More than 10 miles | 2                    | 5                    | 7            |
| 5 to 10 miles      | 3                    | 11                   | 14           |
| 1 mile             | 9                    | 9                    | 18           |
| 2 to 5 miles       | 24                   | 47                   | 71           |

**Total: 111**

Question #4: How often do you visit the park?

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| <i>Options</i> | <i>Open House #1</i> | <i>Online Survey</i> | <i>Total</i> |
|----------------|----------------------|----------------------|--------------|
| Rarely/Never   | 0                    | 3                    | 3            |
| Yearly         | 2                    | 11                   | 13           |
| Daily          | 6                    | 2                    | 8            |
| Monthly        | 9                    | 26                   | 35           |
| Weekly         | 21                   | 29                   | 50           |

**Total: 110**

Question #5: When do you primarily visit the park?

| <i>Options</i> | <i>Open House #1</i> | <i>Online Survey</i> | <i>Total</i> |
|----------------|----------------------|----------------------|--------------|
| Never          | 0                    | 2                    | 2            |
| Weekends       | 8                    | 20                   | 28           |
| Weekdays       | 9                    | 12                   | 21           |
| Both           | 21                   | 38                   | 59           |

**Total: 111**

Question #6: When you visit the park, how long do you stay?

| <i>Options</i>    | <i>Open House #1</i> | <i>Online Survey</i> | <i>Total</i> |
|-------------------|----------------------|----------------------|--------------|
| More than 4 hours | 0                    | 0                    | 0            |
| Less than 1 hour  | 4                    | 5                    | 9            |
| 2 to 4 hours      | 8                    | 22                   | 30           |
| 1 hour            | 26                   | 45                   | 71           |

**Total: 111**

Question #7: By what means do you get to the park most often?

| <i>Options</i> | <i>Open House #1</i> | <i>Online Survey</i> | <i>Total</i> |
|----------------|----------------------|----------------------|--------------|
| Other          | 0                    | 2                    | 2            |
| Transit        | 0                    | 2                    | 2            |
| Bike           | 6                    | 4                    | 10           |
| Walk           | 7                    | 4                    | 11           |
| Auto           | 35                   | 60                   | 95           |

**Total: 111**

Question #8: What do you like most about the park? (select up to three)

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| <i>Options</i>       | <i>Open House #1</i> | <i>Online Survey</i> | <i>Total</i> |
|----------------------|----------------------|----------------------|--------------|
| Other                | 5                    | 10                   | 15           |
| Location             | 15                   | 39                   | 54           |
| Distance/Convenience | 16                   | 29                   | 45           |
| Solitude             | 21                   | 22                   | 43           |
| Wildlife/Nature      | 29                   | 40                   | 69           |
| Scenery/Views        | 31                   | 58                   | 89           |

**Total: 114**

Question #9: What is the most important thing to improve at the park?

|    |                                                                                                          |
|----|----------------------------------------------------------------------------------------------------------|
| 1  |                                                                                                          |
| 2  | Paved parking                                                                                            |
| 3  | Protection of surrounding wildlife preserves                                                             |
| 4  | Passive, low cost, OSE (?)                                                                               |
| 5  | Protect the Bay from the sea level rise erosion of the landfill                                          |
| 6  | Improve the trails                                                                                       |
| 7  | Trails; basic maintenance                                                                                |
| 8  | Safety, nature awareness                                                                                 |
| 9  | Would love to see a few benches, more education, native plants                                           |
| 10 | Habitat protection                                                                                       |
| 11 | Get native vegetation for habitat                                                                        |
| 12 | Security                                                                                                 |
| 13 | Safety                                                                                                   |
| 14 | Block sewage area with natural trees, add more native trees, add more walkable trails                    |
| 15 | Parking/trails. Years of use/rain has left need for repairs. Pollution from cars goes straight into soil |
| 16 | maintain wildlife/nature; more native trees                                                              |
| 17 | Entrance poor; increase safety                                                                           |
| 18 | Security; enforcement of rules - need ranger                                                             |
| 19 | Boat access to water and pier                                                                            |
| 20 | Disc golf                                                                                                |
| 22 |                                                                                                          |



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|   |                                                                                                                                                                                |
|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 |                                                                                                                                                                                |
| 2 |                                                                                                                                                                                |
| 2 | Repairs to parking, roadways, fencing, bathrooms so they are always functioning                                                                                                |
| 2 |                                                                                                                                                                                |
| 3 | Trails                                                                                                                                                                         |
| 2 |                                                                                                                                                                                |
| 4 | Keep dogs on leash                                                                                                                                                             |
| 2 |                                                                                                                                                                                |
| 5 | Trails and upgrading                                                                                                                                                           |
| 2 |                                                                                                                                                                                |
| 6 |                                                                                                                                                                                |
| 2 |                                                                                                                                                                                |
| 7 | Parking, trails, garbage containers, dogs on leash                                                                                                                             |
| 2 |                                                                                                                                                                                |
| 8 |                                                                                                                                                                                |
| 2 |                                                                                                                                                                                |
| 9 | Muddy areas                                                                                                                                                                    |
| 3 |                                                                                                                                                                                |
| 0 |                                                                                                                                                                                |
| 3 |                                                                                                                                                                                |
| 1 | Paths, restore wildlife                                                                                                                                                        |
| 3 |                                                                                                                                                                                |
| 2 | Lighting, parking, trails                                                                                                                                                      |
| 3 |                                                                                                                                                                                |
| 3 | Safety, more benches                                                                                                                                                           |
| 3 |                                                                                                                                                                                |
| 4 | The paths (get too muddy after rain)                                                                                                                                           |
| 3 |                                                                                                                                                                                |
| 5 | Safe primary trails; safe parking areas                                                                                                                                        |
| 3 |                                                                                                                                                                                |
| 6 | The sewage treatment facility                                                                                                                                                  |
| 3 |                                                                                                                                                                                |
| 7 |                                                                                                                                                                                |
| 3 |                                                                                                                                                                                |
| 8 | Add off-leash dog park; paved paths                                                                                                                                            |
| 3 |                                                                                                                                                                                |
| 9 | Signs                                                                                                                                                                          |
| 4 | Trash. Restrooms. Recology mess when they pick up garbage. More trash receptacles. Better and less muddy parking.                                                              |
| 0 |                                                                                                                                                                                |
| 4 |                                                                                                                                                                                |
| 1 | On-site Ranger presence is the most important improvement necessary.                                                                                                           |
| 4 | Bring back the ranger on patrol, as the park used to have, to enforce rules (e.g. dogs to be on leash), deter littering and vandalism, and offer a sense of security to users. |
| 2 |                                                                                                                                                                                |
| 4 |                                                                                                                                                                                |
| 3 | parking                                                                                                                                                                        |
| 4 | Encourage and support wildlife. Put up some education bulletins to inform people about what nature has to offer and how to respect and treat the environment.                  |
| 4 |                                                                                                                                                                                |
| 4 |                                                                                                                                                                                |
| 5 | The proximity to the waste station.                                                                                                                                            |

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|   |                                                                                                                                                                                                              |
|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4 |                                                                                                                                                                                                              |
| 6 | Bay Trail Connection                                                                                                                                                                                         |
| 4 |                                                                                                                                                                                                              |
| 7 | some benches to rest                                                                                                                                                                                         |
| 4 |                                                                                                                                                                                                              |
| 8 | A more balanced, native ecosystem.                                                                                                                                                                           |
| 4 |                                                                                                                                                                                                              |
| 9 | Making it more attractive and user friendly                                                                                                                                                                  |
| 5 | Parking areas and potential methane recapture. Perhaps some wildflower seeds. I love the daisies, but can't figure out why poppies haven't taken hold.                                                       |
| 0 |                                                                                                                                                                                                              |
| 5 | 1) Create/extend bike trail, 2) rest room on other side of park                                                                                                                                              |
| 5 |                                                                                                                                                                                                              |
| 2 | Add more trees if possible                                                                                                                                                                                   |
| 5 |                                                                                                                                                                                                              |
| 3 | hiking trails                                                                                                                                                                                                |
| 5 |                                                                                                                                                                                                              |
| 4 | Protect from graffiti/vandalism. Restore Spirit Path.                                                                                                                                                        |
| 5 |                                                                                                                                                                                                              |
| 5 | A few benches or seating areas at parking lots would be nice. Maintaining the orienteering course.                                                                                                           |
| 5 |                                                                                                                                                                                                              |
| 6 | safe parking and restrooms                                                                                                                                                                                   |
| 5 | Stop the increase of geese and the poop they leave all over. More trails that will stay passable - i.e. no large pools of water - when it rains.                                                             |
| 7 |                                                                                                                                                                                                              |
| 5 |                                                                                                                                                                                                              |
| 8 | Picnic areas, recreational fields                                                                                                                                                                            |
| 5 |                                                                                                                                                                                                              |
| 9 | More support of the primary city demographics -- family use                                                                                                                                                  |
| 6 |                                                                                                                                                                                                              |
| 0 | I haven't been so I don't know. How's the parking?                                                                                                                                                           |
| 6 |                                                                                                                                                                                                              |
| 1 | garbage                                                                                                                                                                                                      |
| 6 |                                                                                                                                                                                                              |
| 2 | dog shit                                                                                                                                                                                                     |
| 6 | I think that the city should leave one area unmowed so that meadow larks can nest, ditto for burrowing owls (both seem gone now, though they were plentiful in the past). We need not mow every single inch! |
| 3 |                                                                                                                                                                                                              |
| 6 | access                                                                                                                                                                                                       |
| 4 | smell                                                                                                                                                                                                        |
| 6 | Allow diversity of interests, including scheduled and/or regulated sUAV (drones and fixed-wing aircraft) flying, in strictly defined areas of the park.                                                      |
| 5 |                                                                                                                                                                                                              |
| 6 |                                                                                                                                                                                                              |
| 6 | Water. Maybe more places to sit.                                                                                                                                                                             |
| 6 |                                                                                                                                                                                                              |
| 7 | restore habitats, wetlands                                                                                                                                                                                   |
| 6 |                                                                                                                                                                                                              |
| 8 | maintain trails                                                                                                                                                                                              |
| 6 |                                                                                                                                                                                                              |
| 9 | parking, awareness,                                                                                                                                                                                          |
| 7 | I would like to see an off leash dog area, more trash bins.                                                                                                                                                  |

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|   |                                                                                                                                                                                                                                          |
|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0 |                                                                                                                                                                                                                                          |
| 7 |                                                                                                                                                                                                                                          |
| 1 | I think the old rock art installation is past its prime and should be removed                                                                                                                                                            |
| 7 | Make it a place where there is something to do other than walk or jog. Such as an outdoor amphitheater where there can be music festivals now and again.                                                                                 |
| 2 |                                                                                                                                                                                                                                          |
| 7 |                                                                                                                                                                                                                                          |
| 3 | I would love to see an off-leash area for dogs or to make the entire park off leash.                                                                                                                                                     |
| 7 |                                                                                                                                                                                                                                          |
| 4 | Improve some trails that get eroded or muddy in winter                                                                                                                                                                                   |
| 7 | trails, public art like wind chimes. the public park trail in Belmont on the water has the same characteristics.                                                                                                                         |
| 5 |                                                                                                                                                                                                                                          |
| 7 |                                                                                                                                                                                                                                          |
| 6 | Off-leash dog areas.                                                                                                                                                                                                                     |
| 7 |                                                                                                                                                                                                                                          |
| 7 | Facilities, including educational areas to learn about the wildlife, and bathrooms.                                                                                                                                                      |
| 7 |                                                                                                                                                                                                                                          |
| 8 | I'd love to see a dog park                                                                                                                                                                                                               |
| 7 |                                                                                                                                                                                                                                          |
| 9 | ADD public use grass playing fields for anytime public use                                                                                                                                                                               |
| 8 |                                                                                                                                                                                                                                          |
| 0 | parking areas and it would be ideal to have safe bike routes into the park from Marsh Road.                                                                                                                                              |
| 8 |                                                                                                                                                                                                                                          |
| 1 | Parking                                                                                                                                                                                                                                  |
| 8 |                                                                                                                                                                                                                                          |
| 2 | Sense of place: improved signage, wayfinding                                                                                                                                                                                             |
| 8 | Signs to discourage littering                                                                                                                                                                                                            |
| 3 | Programs for school age kids to learn about bay ecology                                                                                                                                                                                  |
| 8 |                                                                                                                                                                                                                                          |
| 4 | more benches and picnic tables would be nice                                                                                                                                                                                             |
| 8 |                                                                                                                                                                                                                                          |
| 5 | Parking                                                                                                                                                                                                                                  |
| 8 |                                                                                                                                                                                                                                          |
| 6 | Restore non-motorized sailplane soaring. "Free the gliders" and allow them again like.                                                                                                                                                   |
| 8 |                                                                                                                                                                                                                                          |
| 7 | Walkways, roadways that are used for walking.                                                                                                                                                                                            |
| 8 | More garbage cans would be helpful. Also paving along the roads so we can park on pavement instead of mud.                                                                                                                               |
| 8 |                                                                                                                                                                                                                                          |
| 9 | communication/compassion                                                                                                                                                                                                                 |
| 9 | Preservation of beauty. Removal of large drone(quads, hex, powered toys: trucks, cars dune buggies) usage.                                                                                                                               |
| 0 | Inclusive use of low noise RC recreation to isolated areas nonintrusive of hikers.                                                                                                                                                       |
| 9 | I rather like it the way it is. It has a nice "less developed" feel to it. (But it shouldn't be allowed to deteriorate, either.) Hmm. Perhaps more trash cans - I've been there when most of the provided bins were full or nearly full. |
| 2 |                                                                                                                                                                                                                                          |
| 9 |                                                                                                                                                                                                                                          |
| 3 | Clear rules posted and proper enforcement                                                                                                                                                                                                |

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|        |                                                                                                              |
|--------|--------------------------------------------------------------------------------------------------------------|
| 9<br>4 | Parking in area A. The shoulders of the access driveway.<br>Making people walking dogs keep them on leashes! |
| 9<br>5 | allow model airplane to be flown                                                                             |
| 9<br>6 | Safety to pedestrians.                                                                                       |

Question #10: Is there anything you definitely do not want to see at the park?

|    |                                                                                           |
|----|-------------------------------------------------------------------------------------------|
| 1  | Developed sports fields, fences, etc.                                                     |
| 2  | Anything un-natural: no visual distractions except birds and quiet people enjoying nature |
| 3  | A lot of change                                                                           |
| 4  |                                                                                           |
| 5  | Do not prohibit dogs                                                                      |
| 6  |                                                                                           |
| 7  | All-terrain vehicles; motorized activities (e.g. drones)                                  |
| 8  | Drones, Gliders, Dog park                                                                 |
| 9  | Motorized vehicles or equipment that would disturb wildlife or serenity                   |
| 10 | Active recreation, instructive structures                                                 |
| 11 | Concerts, loud gatherings                                                                 |
| 12 | Thefts, broken car windows                                                                |
| 13 |                                                                                           |
| 14 | Too many people/animals, no trash                                                         |
| 15 | Development of major structures or fields (large changes)                                 |
| 16 | Increased pollution                                                                       |
| 17 | Drones; anything motorized                                                                |
| 18 | More development; use by drones/mechanical                                                |
| 19 | No dirt bike courses for races or skateboards                                             |
| 20 |                                                                                           |
| 21 | Drones, permanent sports fields                                                           |
| 22 | Anything motorized (other than actual cars) that frightens wildlife                       |
| 23 | Most of the things on the Master Plan will destroy what we enjoy at the park              |
| 24 | Drones, RC aircrafts/gliders, anything motorized                                          |
| 25 | Sports fields! Possibly dog parks, undecided                                              |
| 26 | Art or sports fields                                                                      |
| 27 | Increased noise                                                                           |
| 28 |                                                                                           |
| 29 | Dog park enclosure, drones                                                                |



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|    |                                                   |
|----|---------------------------------------------------|
| 30 |                                                   |
| 31 | No food trucks                                    |
| 32 | Pay to enter                                      |
| 33 |                                                   |
| 34 | I don't want too much added                       |
| 35 | active' recreation facilities (ball fields, golf) |
| 36 | Sports fields, commercial uses (rentals, food)    |
| 37 | Everything                                        |
| 38 | Golf course, soccer fields, concessions           |
| 39 | developed' recreation - play fields, bbq, etc.    |

Question #11: Do you have a favorite passive recreation park that you visit? What attracts you to that park?

|    |                                                                                                                                            |
|----|--------------------------------------------------------------------------------------------------------------------------------------------|
| 1  |                                                                                                                                            |
| 2  | Not a park; we hike with Mid-Pen and the Sierra Club                                                                                       |
| 3  | Edgewood park, very simple                                                                                                                 |
| 4  |                                                                                                                                            |
| 5  | I generally go to areas closer to skyline, now that I live in West Menlo. I used to go to Bedwell almost daily when I lived near Marsh Rd. |
| 6  |                                                                                                                                            |
| 7  | The Stanford dish; love the solitude, scenery, trails                                                                                      |
| 8  | Observe wildlife, walk                                                                                                                     |
| 9  | Bedwell Bayfront and Windy Hills - opportunity for exercise and views                                                                      |
| 10 | Bird-watching                                                                                                                              |
| 11 | Kite flying                                                                                                                                |
| 12 | Its large size                                                                                                                             |
| 13 | The only 'flat land' large open area on the peninsula for thermal gliders                                                                  |
| 14 | Edgewood, tons of trees/high quality center/parking                                                                                        |
| 15 | this is my favorite park/ the space has many reasons to attract visitors                                                                   |
| 16 | Edgewood - wildlife/nature                                                                                                                 |
| 17 | Walk behind Facebook is my morning walk - it's quiet!                                                                                      |
| 18 | This one - solitude/views/birds                                                                                                            |
| 19 | Bike path at Palo Alto shoreline                                                                                                           |
| 20 | Views                                                                                                                                      |
| 21 | Flood park/oak trees                                                                                                                       |
| 22 | BBP is the only quiet park within my range                                                                                                 |
| 23 | Silence, nature, and open space                                                                                                            |
| 24 | Peace and quiet, views of the Bay                                                                                                          |

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|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 25 | Shoreline                                                                                                                                                                                                                                                                                          |
| 26 | Shoreline park - the water activities, the house/museum, and the café                                                                                                                                                                                                                              |
| 27 | Dish, close                                                                                                                                                                                                                                                                                        |
| 28 |                                                                                                                                                                                                                                                                                                    |
| 29 | Bedwell                                                                                                                                                                                                                                                                                            |
| 30 | The trees and view                                                                                                                                                                                                                                                                                 |
| 31 | PA - by duck pond. Rock paving keeps mud off                                                                                                                                                                                                                                                       |
| 32 |                                                                                                                                                                                                                                                                                                    |
| 33 | Views, solitude                                                                                                                                                                                                                                                                                    |
| 34 | Bayfront is my favorite, walking my dog                                                                                                                                                                                                                                                            |
| 35 | Bedwell; location, community                                                                                                                                                                                                                                                                       |
| 36 | Yes, bedwell - the openness and the idea that it is close to what the area would look like if it wasn't developed                                                                                                                                                                                  |
| 37 | Peace                                                                                                                                                                                                                                                                                              |
| 38 | Huddart park; hiking, solitude                                                                                                                                                                                                                                                                     |
| 39 | Arastradero open space preserve (PA); nature, solitude, trails                                                                                                                                                                                                                                     |
| 40 | Wunderlick, Edgewood Park. Good hiking, pretty, quiet.                                                                                                                                                                                                                                             |
| 41 | ?                                                                                                                                                                                                                                                                                                  |
| 42 | openness and quiet and birds                                                                                                                                                                                                                                                                       |
| 43 | The hill on Valaparaíso to walk up and around it - Called Sharon Park (I think)                                                                                                                                                                                                                    |
| 44 | Solitude, exercise - saltlands, views                                                                                                                                                                                                                                                              |
| 45 | Bixbee park, land art                                                                                                                                                                                                                                                                              |
| 46 | San Antonio Regional Park. Electric gliders are allowed there.                                                                                                                                                                                                                                     |
| 47 | Rancho San Antonio. Beautiful scenery, lots of wild life, family friendly, safe, great hiking trails for various levels, decent parking. The little farm is great for education and an attraction for kids too. It's a great place to go alone or meet up with people! Picnic areas are great too. |
| 48 | Bayfront park. I like that I can take the dog for a walk, ride my mountain bike, and get there without driving (especially once Facebook builds that extra pedestrian bridge across).                                                                                                              |
| 49 | This is it                                                                                                                                                                                                                                                                                         |
| 50 | Wunderlich, beautiful trees and trails                                                                                                                                                                                                                                                             |
| 51 | Arastradero in Palo Alto. Hiking, biking and dog friendly trails, nature and habitat                                                                                                                                                                                                               |
| 52 | This park. The location is convenient although a better/safer bike route would be great.                                                                                                                                                                                                           |
| 53 | Hiking                                                                                                                                                                                                                                                                                             |
| 54 | greenery, views, solitude I enjoy Edgewood (great trails and views), and open space preserves like Pulgas Ridge because I can bring my dog.                                                                                                                                                        |
| 55 | Cuesta Park (Mountain View)                                                                                                                                                                                                                                                                        |
| 56 | Los Altos Open Space Preserve, San Antonio. The working farm and the Wildcat Loop.                                                                                                                                                                                                                 |
| 57 | birds                                                                                                                                                                                                                                                                                              |
| 58 | love seeing kites, hobby airplanes                                                                                                                                                                                                                                                                 |
| 59 | Huddart Park; hiking and nature                                                                                                                                                                                                                                                                    |
| 60 | hiking                                                                                                                                                                                                                                                                                             |

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|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | dog walking                                                                                                                                                    |
| 61 | Baylands Park, Sunnyvale. This park allows sUAV flying. Most weekends there are from 25-50 ticket-buying hobbyists flying there.                               |
| 62 | The Bay Area has many fine passive recreation parks where you can hear the animals and wind blowing.                                                           |
| 63 | just walking with the dog on leash                                                                                                                             |
| 64 | Rancho San Antonio - miles of trails, flora and fauna                                                                                                          |
| 65 | beaches on the coastside                                                                                                                                       |
| 66 | Wunderlich, hiking, nature, peace                                                                                                                              |
| 67 | Windy hill. Beautiful views                                                                                                                                    |
| 68 | Coyote Hills. Higher Hills - better views                                                                                                                      |
| 69 | no                                                                                                                                                             |
| 70 | Bedwell is my favorite. I like having hills, nature to walk through and trees for shade, plus available parking and very convenient location.                  |
| 71 | I have enjoyed bring my kids to fly kites when they were little. I have enjoyed walking the trails with my dog, too                                            |
| 72 | more wildflowers and landscaping                                                                                                                               |
| 73 | Stulzsaft. Off-leash areas, trees, and stream.                                                                                                                 |
| 74 | running or riding bikes, open area and views of the bay.                                                                                                       |
| 75 | running                                                                                                                                                        |
| 76 | Windy Hill (MROSD) - also relatively close, access to nature, good rigorous hiking, and great views                                                            |
| 77 | coyote Hills<br><br>walking near bay<br><br>nature<br><br>expansive, peaceful views                                                                            |
| 78 | RC glider flying                                                                                                                                               |
| 79 | It was Bedwell Bayfront Park until last year (2016) when flying gliders was banned :-)                                                                         |
| 80 | the large flying areas                                                                                                                                         |
| 81 | Russian Ridge. Views, nature.                                                                                                                                  |
| 82 | Bidwell. Mussel rock                                                                                                                                           |
| 83 | Baylands park in Sunnyvale is a great place to hike and fly small electric R/C. It has a small play field and many picnic table / party areas with bbq grills. |
| 84 | Rancho San Antonio, allow model airplane flight.                                                                                                               |
| 85 | Milagra Ridge in San Bruno. Closest scenic dog walking from my house.                                                                                          |

**Question #12: How would you describe the park usage?**

| <i>Options</i> | <i>Open House</i> | <i>Online Survey</i> | <i>Total</i> |
|----------------|-------------------|----------------------|--------------|
|----------------|-------------------|----------------------|--------------|

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|                                               | #1 |    |    |
|-----------------------------------------------|----|----|----|
| Too many people use the park                  | 3  | 0  | 3  |
| Not enough people use the park                | 5  | 16 | 21 |
| About the right amount of people use the park | 30 | 53 | 83 |

**Total: 108**

Question #13: How safe/comfortable do you feel when you are at the park?

| <i>Options</i>     | <i>Open House #1</i> | <i>Online Survey</i> | <i>Total</i> |
|--------------------|----------------------|----------------------|--------------|
| I do not feel safe | 2                    | 1                    | 3            |
| Somewhat safe      | 3                    | 20                   | 23           |
| Very safe          | 15                   | 38                   | 53           |
| Extremely safe     | 18                   | 12                   | 30           |

**Total: 110**

Question #14: What concerns do you have for using the park? (select up to three)

| <i>Options</i>   | <i>Open House #1</i> | <i>Online Survey</i> | <i>Total</i> |
|------------------|----------------------|----------------------|--------------|
| Accessibility    | 2                    | 12                   | 14           |
| Personal safety  | 3                    | 16                   | 19           |
| Other            | 8                    | 26                   | 34           |
| Vandalism        | 11                   | 28                   | 39           |
| Car theft        | 13                   | 18                   | 31           |
| Park maintenance | 22                   | 39                   | 61           |

**Total: 114**

Question #15: What activities do you normally participate in when you visit the park?



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| <i>Options</i>         | <i>Open House #1</i> | <i>Online Survey</i> | <i>Total</i> |
|------------------------|----------------------|----------------------|--------------|
| Biking                 | 6                    | 4                    | 10           |
| Other                  | 7                    | 12                   | 19           |
| Dog walking            | 12                   | 12                   | 24           |
| Bird watching          | 21                   | 7                    | 28           |
| Hiking/walking/jogging | 35                   | 34                   | 69           |

**Total: 110**

Question #16: How did you hear about the project? (check all that apply)

| <i>Options</i>                      | <i>Open House #1</i> | <i>Online Survey</i> | <i>Total</i> |
|-------------------------------------|----------------------|----------------------|--------------|
| Mailed notice in utility bill       | 1                    | 3                    | 4            |
| Newsletter                          | 1                    | 6                    | 7            |
| Off-site poster                     | 1                    | 1                    | 2            |
| Facebook                            | 1                    | 4                    | 5            |
| Word of mouth                       | 3                    | 22                   | 25           |
| Public Presentation/Farmer's Market | 4                    | 6                    | 10           |
| Other                               | 9                    | 8                    | 17           |
| On-site poster/brochure             | 13                   | 8                    | 21           |
| E-mail                              | 13                   | 48                   | 61           |

**Total: 110**

Question #17: Is there anything else you'd like to share about Bedwell Bayfront Park?

I have been coming for over 20 years to get out by the Bay and walk with friends and family

I love this special park!!

I would like the burrowing owls to return

A rare treasure preserve what makes it special while raising awareness of wildlife and uniqueness

Maintenance is quite poor, the park is overgrown, signage is in disrepair. I think the assumption that the park must generate its own income is faulty. As with other public amenities, this should be funded through the general fund

This park is a major migration stop for birds and falls within an Audubon-designated IBA (Important Bird Area). Bird-watchers consider this park to be one of the gems in San Mateo County.

If they have an area similar to Ulistac in Santa Clara, it would be a neat attraction to the park

Construction of an area for children

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Safety issue to pedestrians at the last parking lot

Add more native greenery! Needs more trees/security wall near entrance because scary people in park sometimes  
The park has had years of neglect, the trees need some trimming and trails/roads need repair. For a wildlife refuge, oil and car fluids drip into soil and into the Bay

Could enhance signage; improve entrance; enforce dogs on leash; have regular bird walks - increase educational opportunities; offer kayak ramp at back pier  
A treasure of undeveloped space for walking/bird watching - we need unstructured areas for children to explore/run/play

It is very special in large part because it is unique in MP and surrounded by refuge

Is the best park with 160 acres for the community; I know the park needs improvements, but not all the improvements by Master Plan

Don't develop it!

It would be nice to see upgrades to the park but somehow keep it as peaceful as it is now. It isn't over crowded and it is serene!

It would be wonderful to have a ranger or some supervision at the park

It's perfect as-is; remember the population using the park. Let's keep park available to all. No exclusive uses. Need more creative fund raising ideas.

Please engage low-income people in Belle Haven area (door knocking, univision announcement)

If the park is developed to have more 'active' uses, it would be nice to keep them near the front of the park along Bayfront Expy., that way we can maintain more of the natureal habitats and the solitude that currently exists

This is a remarkable community asset and a great success story. Less will be more as you seek to 'improve' this facility

I love the diversity I see in the park. Different ethnicities use it at different times of day. Lota

I love bedwell and use it a lot. I know it needs freshening but basically it is very good. I like the diverse nature of people using it

|                                                                                                                                                                                                                                    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                    |
| As the building continues in Menlo Park, especially around this Park, we need, even more, a place to get away and restore ourselves. This is the <b>ONLY</b> place to go to hike, to see the beauty that exists around us.         |
| Again, the Park is a quiet gem and should remain that way.                                                                                                                                                                         |
| no                                                                                                                                                                                                                                 |
| Please patrol more often- especially to control unleashes dogs. It is getting worse because of lack of enforcement. Today there were four unleashed dogs and one was disturbing nesting birds which I believe is a federal offense |
| Friends of Bedwell Bayfront Park is a by invitation only special interest group. It is not open to the general public.                                                                                                             |
| I love this park. It might be nice to have fitness classes out there once in awhile, but I would err on the side of not changing existing access to passive recreation.                                                            |

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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| It is great park, we should make it better.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| It's a nice place for plein-air painting as well                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| great central meeting spot for friends along the peninsula, from San Carlos to Sunnyvale. Quick easy access during the week and on weekends. Never too crowded. Great for quick dog walk or bike ride                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Many people seem to come during the day to just sit in their cars and talk by phone or enjoy a view from their car. This is also an important function.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| To many loose dogs                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| I love the diversity of park users -- many Latino folks who live on the east side of 101. And the diversity of age groups.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| I think if a fee were charged for the right to fly sUAV devices (drones or fixed-wing aircraft), usage would increase significantly, and the money could be used for park improvements, to the benefit of all.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Great place!                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| it would be nice if there were a bigger exhibit on original inhabitants                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| I love this park!!                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| I like the park but am also aware of the pressure on open space especially with all the new apartments being built in Redwood City. This will have an impact on Menlo Park                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| it is very underutilized                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| It's a great park.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| It deserves our care and protection from commercial activity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| no                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| I fear that this public process is setting up the public to expect IMPROVEMENT at the park, when in fact the City does not have funds to continue the existing low level of maintenance that is currently funded. I'd like to see an honest discussion about funding the park through the general fund.                                                                                                                                                                                                                                                                                                                                                                                            |
| I like the diversity of people it attracts.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| I also enjoy seeing folks walking their dogs. Some dogs are very cute and comical.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| It's good exercise, fun, and lowers stress.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Please re-allow gliders to soar there again. As was done without incident for 20+ years until some drone operators caused trouble. Please do not lump sailplane gliders together with drones.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| I would like it to remain mostly undeveloped and natural as possible.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| It use to be waste disposal site.. We've been flying gliders there for years with out a problem. When the motorized planes and drones showed up. The problems began                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| The park should be for the use of many people with                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| different activities. NOT a singular type of use.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| I have participated in Kite day. Are Kite flying and electric RC aircraft considered "active" or "passive" activities? I am in favor of allowing both, largely because neither requires the construction of facilities or fields that I think would disrupt the feel of the park.                                                                                                                                                                                                                                                                                                                                                                                                                  |
| (Shouldn't question 27 have allowed multiple answers?)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Bedwell has been a great place to hike, fly kites and until recently, fly small electric R/C. When I would fly I would get pleasant questions about what I was flying and how I got started in the hobby. I never saw misuse of R/C at the park and the R/C community that would gather pretty much knew who was there and what their R/C interests were. Surrounding the park is designated wildlife refuge and I would never do anything to harm that . While the park has many dangers associated with it, being landfill and I understand poisons have been used to keep a rodent problem under control. I would be more concerned about us humans than the wildlife that may inhabit parts of |

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the park. I would gladly pay a parking fee or seasonal fee to enjoy the park with proper enforcement of rules if I could also enjoy my hobby of small electric R/C (line of site I designated areas only). I do not believe this should be a destination for R/C, but rather a gathering place for a few enthusiasts at any given time.

The use of the term "passive activities" is incorrect. The original meaning of a "passive park" was one where there was little or no park infrastructure other than trails and open spaces--e.g. baseball diamonds, tennis courts, soccer fields.....

allow model airplane flight

**Inspiration Boards****Park Character/Mood**

| <i>Options</i>      | <i>Open House #1</i> |    |    | <i>Online Survey</i> |    |    | <i>Total</i> |    |    |
|---------------------|----------------------|----|----|----------------------|----|----|--------------|----|----|
|                     | Y                    | M  | N  | Y                    | M  | N  | Y            | M  | N  |
| Ceremonial          | 6                    | 6  | 19 | 6                    | 15 | 34 | 12           | 21 | 53 |
| Refined             | 9                    | 2  | 20 | 8                    | 13 | 36 | 17           | 15 | 56 |
| Whimsical           | 11                   | 12 | 9  | 10                   | 19 | 27 | 21           | 31 | 36 |
| Active              | 14                   | 10 | 7  | 31                   | 15 | 11 | 45           | 25 | 18 |
| Spiritual           | 14                   | 13 | 5  | 25                   | 20 | 10 | 39           | 33 | 15 |
| Rugged/Adventurous  | 17                   | 7  | 7  | 25                   | 17 | 14 | 42           | 24 | 21 |
| Colorful            | 19                   | 8  | 5  | 31                   | 21 | 4  | 50           | 29 | 9  |
| Comfortable         | 20                   | 7  | 1  | 36                   | 17 | 2  | 56           | 24 | 3  |
| Secluded            | 23                   | 9  | 1  | 33                   | 18 | 9  | 56           | 27 | 10 |
| Natural             | 31                   | 1  | 0  | 58                   | 4  | 0  | 89           | 5  | 0  |
| Ecological/Preserve | 32                   | 3  | 0  | 42                   | 12 | 5  | 74           | 15 | 5  |

**Total: 102****Park Amenities**

| <i>Options</i>                 | <i>Open House #1</i> |    |    | <i>Online Survey</i> |    |    | <i>Total</i> |    |    |
|--------------------------------|----------------------|----|----|----------------------|----|----|--------------|----|----|
|                                | Y                    | M  | N  | Y                    | M  | N  | Y            | M  | N  |
| EV Charging Station            | 8                    | 11 | 16 | 5                    | 26 | 29 | 13           | 37 | 45 |
| Public Art                     | 14                   | 10 | 12 | 15                   | 21 | 24 | 29           | 31 | 36 |
| Outdoor Classroom/Amphitheater | 14                   | 11 | 9  | 16                   | 26 | 19 | 30           | 37 | 28 |
| Education Center               | 17                   | 10 | 9  | 13                   | 21 | 24 | 30           | 31 | 33 |
| Non-Reservable Picnic Areas    | 19                   | 8  | 7  | 38                   | 11 | 13 | 57           | 19 | 20 |
| Enhance Existing Restroom      | 25                   | 9  | 1  | 38                   | 19 | 4  | 63           | 28 | 5  |
| Bike Parking                   | 27                   | 10 | 1  | 39                   | 18 | 5  | 66           | 28 | 6  |
| Seating/Viewing areas          | 29                   | 8  | 1  | 39                   | 17 | 6  | 68           | 25 | 7  |



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|                                 |    |   |   |    |    |   |    |    |   |
|---------------------------------|----|---|---|----|----|---|----|----|---|
| Drinking Fountain/Bottle Filler | 31 | 5 | 2 | 40 | 17 | 2 | 71 | 22 | 4 |
| Dog Pick-up Bag Dispensers      | 31 | 4 | 0 | 47 | 11 | 5 | 78 | 15 | 5 |
| Trash/Recycling Containers      | 34 | 4 | 0 | 54 | 4  | 2 | 88 | 8  | 2 |

**Total: 104**

**Park Activities**

| Options                             | Open House #1 |    |    | Online Survey |    |    | Total |    |    |
|-------------------------------------|---------------|----|----|---------------|----|----|-------|----|----|
|                                     | Y             | M  | N  | Y             | M  | N  | Y     | M  | N  |
| Disc Golf                           | 1             | 12 | 24 | 10            | 20 | 33 | 11    | 32 | 57 |
| Radio-Controlled Drones             | 5             | 6  | 28 | 11            | 11 | 42 | 16    | 17 | 70 |
| Dirt Bike Course                    | 5             | 6  | 27 | 7             | 12 | 41 | 12    | 18 | 68 |
| Off-Leash Dog Park                  | 8             | 6  | 23 | 22            | 13 | 28 | 30    | 19 | 51 |
| Electric Motor-Assisted Gliders     | 10            | 7  | 21 | 19            | 16 | 28 | 29    | 23 | 49 |
| Biking - Paved                      | 12            | 9  | 15 | 24            | 25 | 14 | 36    | 34 | 29 |
| Fitness                             | 14            | 9  | 14 | 24            | 25 | 14 | 38    | 34 | 28 |
| Hand-Launched Gliders               | 14            | 14 | 10 | 29            | 18 | 16 | 43    | 32 | 26 |
| Group Exercise                      | 15            | 10 | 12 | 18            | 28 | 16 | 33    | 38 | 28 |
| Orienteering/Geocaching             | 18            | 14 | 5  | 23            | 21 | 15 | 41    | 35 | 20 |
| Water Activities (slough side only) | 18            | 10 | 10 | 26            | 20 | 17 | 44    | 30 | 27 |
| Nature Play                         | 21            | 12 | 2  | 39            | 17 | 5  | 60    | 29 | 7  |
| Biking - Unpaved                    | 29            | 6  | 3  | 28            | 22 | 11 | 57    | 28 | 14 |
| Kite Flying                         | 30            | 4  | 2  | 51            | 8  | 3  | 81    | 12 | 5  |
| Photography                         | 33            | 2  | 2  | 57            | 5  | 1  | 90    | 7  | 3  |
| On-Leash Dog walking                | 33            | 4  | 1  | 56            | 5  | 3  | 89    | 9  | 4  |
| Bird Watching                       | 37            | 1  | 0  | 53            | 7  | 1  | 90    | 8  | 1  |
| Walking/Hiking/Jogging              | 39            | 0  | 0  | 63            | 0  | 0  | 102   | 0  | 0  |

**Total: 104**

**Park Services/Programs**

| Options                      | Open House #1 |    |    | Online Survey |    |    | Total |    |    |
|------------------------------|---------------|----|----|---------------|----|----|-------|----|----|
|                              | Y             | M  | N  | Y             | M  | N  | Y     | M  | N  |
| Private Events               | 7             | 10 | 18 | 13            | 16 | 33 | 20    | 26 | 51 |
| Bike Repair Station          | 7             | 11 | 19 | 8             | 26 | 28 | 15    | 37 | 47 |
| Material Distribution Center | 8             | 11 | 17 | 4             | 20 | 37 | 12    | 31 | 54 |
| Concessions/Rentals          | 9             | 6  | 23 | 7             | 15 | 40 | 16    | 21 | 63 |
| Nature/Summer Camp           | 11            | 20 | 4  | 17            | 31 | 14 | 28    | 51 | 18 |

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|----------------------------|----|----|---|----|----|----|----|----|----|
| Public Events              | 17 | 15 | 6 | 13 | 16 | 33 | 30 | 31 | 39 |
| Docent-Led Tours           | 20 | 13 | 4 | 26 | 20 | 14 | 46 | 33 | 18 |
| Classes/Education Programs | 24 | 9  | 3 | 18 | 29 | 13 | 42 | 38 | 16 |
| Ranger Service             | 27 | 5  | 5 | 29 | 24 | 8  | 56 | 29 | 13 |

**Total: 103****Options for Revenue Generating Activities**

| Options                               | Open House #1 |    |    | Online Survey |    |    | Total |    |    |
|---------------------------------------|---------------|----|----|---------------|----|----|-------|----|----|
|                                       | Y             | M  | N  | Y             | M  | N  | Y     | M  | N  |
| Parking/Entrance Fee                  | 5             | 9  | 25 | 7             | 17 | 38 | 12    | 26 | 63 |
| Concessions (food, equipment rentals) | 10            | 6  | 21 | 13            | 12 | 36 | 23    | 18 | 57 |
| Reservation-Based Picnic Areas        | 10            | 11 | 17 | 18            | 15 | 28 | 28    | 26 | 45 |
| Naming Rights                         | 18            | 8  | 12 | 25            | 20 | 16 | 43    | 28 | 28 |
| Solar Generation/Net Zero             | 23            | 5  | 7  | 34            | 17 | 12 | 57    | 22 | 19 |
| Donations/On-Site Recognition         | 24            | 11 | 3  | 33            | 20 | 9  | 57    | 31 | 12 |
| Methane Capture                       | 32            | 5  | 1  | 35            | 19 | 7  | 67    | 24 | 8  |

**Total: 103****How do you define "Passive Recreation?"**

| Options  | Open House #1 | Online Survey | Total |
|----------|---------------|---------------|-------|
| Option 1 | 0             | 2             | 2     |
| Option 5 | 3             | 12            | 15    |
| Option 4 | 6             | 11            | 17    |
| Option 2 | 9             | 17            | 26    |
| Option 3 | 13            | 23            | 36    |

**Total: 104****Inspiration Boards - Comments**

| Location on Map | Public Comment             | Reaction to Comment                                                            |
|-----------------|----------------------------|--------------------------------------------------------------------------------|
| Park Amenities  | Seating/viewing areas      | ★                                                                              |
|                 | Public art                 | ★                                                                              |
|                 | Dog pick up bag dispensers | ★ ★ ★                                                                          |
|                 | Drinking fountain/station  | ★                                                                              |
|                 | Others?                    | Maintain restrooms, trash receptacles (yes! ★), Partner with local schools for |

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|                     |                             |                                                                                                                              |
|---------------------|-----------------------------|------------------------------------------------------------------------------------------------------------------------------|
|                     |                             | art, place around park ex. Stones painted on can be used for a wall or other (good idea), all of them except art             |
|                     |                             | educational signage                                                                                                          |
|                     |                             |                                                                                                                              |
| Park Character/Mood | Others?                     | keep bedwell natural except for paved parking (yes! Yes! Yes!)                                                               |
|                     |                             | keep it open space/natural, habitat, passive use- open views (yes!)                                                          |
|                     |                             | boating access!                                                                                                              |
|                     |                             | 2 paths - 1 for biking, 1 walking                                                                                            |
|                     |                             | no more buildings                                                                                                            |
|                     |                             | keep it natural or secluded                                                                                                  |
|                     |                             | invite artists to create throughout the park (short term art installations                                                   |
|                     |                             | disagree. Classes ok                                                                                                         |
|                     |                             | quiet Extremely important                                                                                                    |
| Park activities     | Walking/hiking/jogging      | yes, yes, yes!, don't care                                                                                                   |
|                     | Biking - paved              | no, no, no!                                                                                                                  |
|                     | Biking - unpaved            | yes please! On outer perimeter track only, don't care                                                                        |
|                     | Dirt-bike course            | no! no! absolutely not!                                                                                                      |
|                     | Kite flying                 | don't care, yes, yes, yes                                                                                                    |
|                     | Bird watching               | yes :) yes!                                                                                                                  |
|                     | On-leash dog walking        | yes! Sure!                                                                                                                   |
|                     | Off leash dog park          | no!                                                                                                                          |
|                     | Photography                 | yes! Sure!                                                                                                                   |
|                     | Others?                     | dirt bike course sounds good - need separation between bikes and walkers - there have been incidents                         |
|                     |                             | no - keep bikes on existing trails                                                                                           |
|                     |                             | yes on-leash dogs                                                                                                            |
|                     |                             | off-leash dog area with signage directing people to use leashes in the rest of the park & why (wildlife) (yes! No off leash) |
|                     |                             | no dog park! Yes dog park! Yes dog park!                                                                                     |
|                     |                             | allow mountain biking throughout! We can peacefully coexist                                                                  |
|                     | Hand-launched model gliders | no! yes!                                                                                                                     |
|                     | Motor-assisted plane        | no! yes!!! Yes yes                                                                                                           |
|                     | Radio-controlled drones     | no no yes no yes, we come here to see birds not drones                                                                       |

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|                                           |                               |                                                                                                                              |
|-------------------------------------------|-------------------------------|------------------------------------------------------------------------------------------------------------------------------|
|                                           | Disc golf                     | no no yes, yes for my dad                                                                                                    |
|                                           | Fitness                       | no no                                                                                                                        |
|                                           | Orienteering/geocaching       | no no yes yes                                                                                                                |
|                                           | Water activities              | no no yes yes no                                                                                                             |
|                                           | Group exercise                | meh, don't care                                                                                                              |
|                                           | Nature play                   | yes! Meh, don't care                                                                                                         |
|                                           | Others?                       | yes, a place to put s.m. paddleboards and kayaks, yes, disrupts shore birds, yes sup/kayak non-motorized                     |
|                                           |                               | sailing                                                                                                                      |
|                                           |                               | yes w/ low income pricing and community resident discount                                                                    |
|                                           |                               | fitness pan canoe                                                                                                            |
|                                           |                               | would it be possible to designate hours or a day per week of month for drones/aircraft? (no drones, rc airplanes or gliders) |
|                                           |                               | fishing pier (ban regulations?)                                                                                              |
| Park services/programs                    | Ranger service                | definitely! Yes please! Meh, don't care                                                                                      |
|                                           | Class/education programs      | yes! Yes ✓                                                                                                                   |
|                                           | Docent-led tours              | yes! Yes ✓✓✓✓                                                                                                                |
|                                           | Public events                 | NO no no no, I will have to go, so no                                                                                        |
|                                           | Private events                | no no no maybe, if they pay for maint of the park, no, leaves marks, residue, chain leg hacks, etc, no                       |
|                                           | Concessions/rentals           | no yes no yes yes                                                                                                            |
|                                           | Material distribution center  | no no no no                                                                                                                  |
|                                           | Bike repair                   | no no, bike repair station                                                                                                   |
|                                           | Others?                       | concessions w/ locally run vendor - rotate every 6 months with a new vendor                                                  |
|                                           |                               | permit food trucks during weekdays (?) what would problems be? Increase trash food garbage                                   |
| Options for revenue generating activities | Parking entrance fee          | perhaps/no - low income people can't afford no, agree no                                                                     |
|                                           | Concessions (food, rentals)   | no no no, yes yes yes                                                                                                        |
|                                           | Donations/on site recognition | possibly - need more info                                                                                                    |
|                                           | Naming rights                 | !! It's been named - Bedwell Bayfront Park                                                                                   |
|                                           | Private/corporate events      | no no no, no - keep open access to quiet                                                                                     |

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**Written, On-Line and Other Survey Responses**

**Bedwell Bayfront Park Master Plan**

April 17, 2017

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|  |                                |                                                     |
|--|--------------------------------|-----------------------------------------------------|
|  |                                | contemplation!!                                     |
|  | Reservation-based picnic areas | too formal? No, this would be okay in "quarry" area |
|  | Methane capture                | yes yes yes!                                        |
|  | Energy generation/net zero     | yes please yes                                      |
|  | Others?                        | annual parking pass - designated parking area       |
|  |                                | food concession/sn                                  |
|  |                                | put solar panels on building and city roofs         |
|  |                                | no corporate events that limit access.              |

**Flip Chart Notes**

| Public Comment                                                         | Reaction to Comment                      |
|------------------------------------------------------------------------|------------------------------------------|
| Mobile interpretive center                                             |                                          |
| Cell phone app for educational purposes instead of physical building.  |                                          |
| Very concerned about the encroachment of ANY form of active recreation |                                          |
| increase passive recreation and educational opportunities              | I agree with above, also agree, I agree! |

-END-

**Via E-mail Only**

June 14, 2017

**Meeting Summary****Bedwell Bayfront Park Master Plan****RE: Oversight and Outreach Group Meeting #2**

Date: June 8, 2017

Time: 6:00 p.m. to 8:00 p.m.

3 pages

**Attendees:** *City of Menlo Park:*Derek Schweigart (DS), Community Services, [dsschweigart@menlopark.org](mailto:dsschweigart@menlopark.org)Azalea Mitch (AM), Public Works, [aamitch@menlopark.org](mailto:aamitch@menlopark.org)Brian Henry (BH), Parks, [bphenry@menlopark.org](mailto:bphenry@menlopark.org)*Oversight and Outreach Group:*Allan Bedwell (AB), Friends of Bedwell Bayfront Park, [allan.bedwell@gmail.com](mailto:allan.bedwell@gmail.com)Eileen McLaughlin (EM), Citizens Committee to Complete the Refuge, [wildlifestewards@aol.com](mailto:wildlifestewards@aol.com)Janelle London (JL), Environmental Quality Commission, [jlondon@stanfordalumni.org](mailto:jlondon@stanfordalumni.org)Marianne Palefsky (MP), Parks and Recreation Commission, [mwpalefsky@gmail.com](mailto:mwpalefsky@gmail.com)Lauren Swezey (LS), Facebook, [laurens@fb.com](mailto:laurens@fb.com)Michele Tate (MT), Belle Haven resident, [lmichele.tate@gmail.com](mailto:lmichele.tate@gmail.com)Nancy Borgeson (NB), Community Member/Friends Group, [nborgeson@pacbell.net](mailto:nborgeson@pacbell.net)*Callander Associates (CA):*Brian Fletcher (CA), [bfletcher@callanderassociates.com](mailto:bfletcher@callanderassociates.com)Marie Mai (CA), [mmai@callanderassociates.com](mailto:mmai@callanderassociates.com)Jana Schwartz (CA), [jschwartz@callanderassociates.com](mailto:jschwartz@callanderassociates.com)

The purpose of this meeting was for the Oversight and Outreach Group to review and provide comments on draft presentation materials that will be presented at the upcoming community Open House meeting on June 17, 2017. The following information was discussed and/or decided upon in our meeting. Comments with an action noted have been incorporated into the presentation materials to be shared with the public. Comments received from the input exercise are shown in the matrix at the end of the document. (*Text in italics represents our responses as to why the comments were not incorporated*).

**Item****Action to take**

## 1. New Survey and Public Outreach

- a. New survey will be open will be from June 19 to July 10.

CA to remind Group of survey closure date by 7/3

**Meeting Summary**

**Bedwell Bayfront Park Master Plan**

**RE: Oversight and Outreach Group Meeting #2**

June 14, 2017

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| <i><b>Item</b></i>                                                                                                                                                                                                                                                                                                                                                    | <i><b>Action to take</b></i>                             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|
| b. One commenter felt the survey was flawed in how the questions were structured. Specifically, segmentation of the park usage map could make it look like the park is not reviewed comprehensively.                                                                                                                                                                  | CA to send out existing survey by 6/9                    |
| c. It is confusing to have cross link to materials on City website from the online survey.                                                                                                                                                                                                                                                                            | CA to review survey format by 6/12                       |
| d. One commenter indicated that the survey was closed before Belle Haven residents could contribute, however, the City provided email blasts, NextDoor notification, and placed an ad in the Belle Haven Newsletter to direct recipients to attend project events. Additional events/info booths should be identified within the Belle Haven area to promote project. | City to review by 6/12                                   |
| e. Provide outreach at CDC graduation event in Belle Haven.                                                                                                                                                                                                                                                                                                           |                                                          |
| f. Facebook festival on June 24 <sup>th</sup> .                                                                                                                                                                                                                                                                                                                       | LS to provide booth for event and work with City by 6/19 |
| g. Oversight group members were asked to send notices to their NextDoor groups                                                                                                                                                                                                                                                                                        | CA to provide NextDoor language to group by 6/9          |

**1. Sea Level Rise**

- |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>a. The park concepts reflect the anticipated Sea Level Rise (SLR) standards outlined in the City's General Plan. The anticipated change is 24" of SLR above the 100 year flood event (66" change total above MHHW).</li> <li>b. How does SLR impact the landfill? This explanation should be included in the SLR graphic.</li> <li>c. Are retractable levees feasible for this site? AM commented that it would not be a permanent fix and would not be used in this scenario.</li> <li>d. What is the impact of the usable park space with the roads moved in to accommodate SLR? Little impact would result to the interior space of the park; changes would occur along the periphery of the site due to the inward 'shift' of the Bay Trail and facilities like the restroom, parking lot, and road.</li> <li>e. Is there an impact to the tidal pond? The ponds would be subject to inundation. Since there are no park facilities or structures that need to be accessible by people, no</li> </ul> | <ul style="list-style-type: none"> <li>CA to provide graphic for SLR by 6/17</li> <li>CA to include by 6/17</li> </ul> |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|

**Meeting Summary****Bedwell Bayfront Park Master Plan****RE: Oversight and Outreach Group Meeting #2**

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improvements are proposed to the pond.

**Item****Action to take****Draft Presentation Materials**

*(See the end of the meeting summary)*

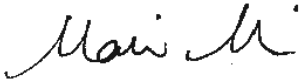
**Next Steps**

1. Open House #2 on June 17<sup>th</sup>
2. Interagency Meeting on July 12<sup>th</sup>
3. Community Meeting #3 on October 25<sup>th</sup> (tentative)

All are encouraged to attend

The information above is Callander Associates' understanding of items discussed and decisions reached at the meeting. Callander Associates is proceeding with the project based on this understanding.

Submitted by:



Callander Associates

cc: All attendees

**Meeting Summary**

**Bedwell Bayfront Park Master Plan**

**RE: Oversight and Outreach Group Meeting #2**

June 14, 2017

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| Existing Conditions Boards Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Reason for Incorporating/Not Incorporating                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Project Area Map:<br>- Why the green box?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | - <i>Callander to edit</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Concept Boards                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Reason for Incorporating/Not Incorporating                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <p>Concept Image Boards:</p> <ul style="list-style-type: none"> <li>- Add compost to trash/recycling</li> <li>- Use a picture with drink and bottle refill</li> <li>- Don't use this drinking fountain</li> <li>- Office/meeting pavilion image makes the structure look giant and is too big for the park</li> <li>- Show image of pavilion and restroom with rooftop PV</li> <li>- Pedestrian refuge – use an image that emphasizes what you are talking about.</li> <li>- I wish there was a contest for the community to design/build benches from neglected materials to make our benches unique and community based and recycled. Same for the amphitheater seating</li> <li>- Boat launch is not likely to get regulatory approval</li> </ul> | <ul style="list-style-type: none"> <li>- <i>Compost is a type of trash/debris removal and is addressed by the original photo</i></li> <li>- <i>Image shows this suggestion with traditional drinking fountain option and the middle feature, where bottles can be refilled</i></li> <li>- <i>Image shows use, not specific design</i></li> <li>- <i>This image will be replaced with one of a smaller footprint</i></li> <li>- <i>PV usage on the buildings will be provided. Language in the Master Plan will also address this</i></li> <li>- <i>The image selected shows a space for pedestrians to take a break as they cross a busy intersection, such as Bayfront Expy.</i></li> <li>- <i>This suggestion can be incorporated into the master plan report. This will have to be an organized project with an agency willing to take this on</i></li> <li>- <i>An interagency meeting will be held on 7/12 and use will be confirmed</i></li> </ul> |
| <p>Popular parks with similar uses:</p> <ul style="list-style-type: none"> <li>- Include acreage for every park and miles to drive there</li> <li>- Pearson-Arastradero is for Palo Alto residents only</li> <li>- It would be interesting to know the exact \$ amount for each park that has park fees/concessions</li> <li>- Add refuge headquarters and visitor center with trails (noted on map)</li> <li>- Remind people BBP is 160 acres. If space permits, just list the words (not symbol) for each amenity, hard to look back at icon)</li> </ul>                                                                                                                                                                                           | <ul style="list-style-type: none"> <li>- <i>Map compares use, not size. Mileage is graphically implied</i></li> <li>- <i>Noted</i></li> <li>- <i>Funding information is separate effort</i></li> <li>- <i>Callander to add</i></li> <li>- <i>Callander to add BBP's acreage. The symbol is used to help communicate a concept without relying on English. A minimal use of symbols is used to help</i></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |



**Meeting Summary****Bedwell Bayfront Park Master Plan****RE: Oversight and Outreach Group Meeting #2**

June 14, 2017

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|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>- Add birding to Lucy Evans</li> <li>- Does BBP have to be “everything to everybody?” This map indicates that some of the uses proposed under options A&amp;B are offered at nearby parks</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <ul style="list-style-type: none"> <li><i>- minimize confusion for symbol meaning</i></li> <li><i>- Callander to add birding</i></li> <li><i>- The area’s population will be increasing, and the park needs to meet their needs. Many desired uses supported by the community are not offered in the City of Menlo Park, and BBP provides the space and environment to provide some of these desired amenities within the City’s limits</i></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <p>Infographic:</p> <ul style="list-style-type: none"> <li>- Dots are confusing, looks like most people voted for ‘too many people’</li> <li>- Running/walking icons are confusing – can’t be prevented from running or walking</li> <li>- Any way to describe this further (passive recreation)? No idea what it means</li> <li>- Park amenities graphic – make bolder and easier to read</li> <li>- Change trash/recycling containers to “waste sorting” and include composting</li> <li>- Park activities – consider trail maintenance issues for unpaved biking options</li> <li>- Need to educate what the limits of access are for water activities</li> <li>- Add number to all graphics (is there anything you definitely do not want to see at the park?)</li> <li>- Funding graphic – don’t use kayak image if it is illegal to do watersports there</li> <li>- How would net zero generate funds</li> </ul> | <ul style="list-style-type: none"> <li><i>- Callander to adjust graphic to make voting selection more clear</i></li> <li><i>- The icons are depictions for showing the level of activity in the park, from stationary to a higher level of movement/activity</i></li> <li><i>- Defining passive recreation was done in the 1<sup>st</sup> meeting. This is a summary of findings</i></li> <li><i>- Callander will edit graphic</i></li> <li><i>- The name of the amenity matched the image/title we asked the public to respond to. This change will be considered for new materials.</i></li> <li><i>- Callander to review; existing use on-site</i></li> <li><i>- Noted, water access is for non-motorized small boats like kayaks and canoe</i></li> <li><i>- This was an open-ended question and these were the most repeated comments</i></li> <li><i>- It is not illegal for the public to navigate the slough unless the underlying property owner (City) prohibits it. This would be a proposed use, and if adopted, the park rules would need to be revised to reflect this and other new uses</i></li> <li><i>- Net zero would help mitigate maintenance costs for the restroom and the proposed pavilion; excess generation will go back into the grid and produce funding.</i></li> </ul> |
| <p>Enlargement details:</p> <ul style="list-style-type: none"> <li>- Image should be jogger/walker; bikes damage unpaved trails</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <ul style="list-style-type: none"> <li><i>- Biking on trails is a desired use and would need to be maintained like other uses</i></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

**Meeting Summary**

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|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Program statement:</p> <ul style="list-style-type: none"> <li>- Overall, very wordy and lots seem duplicated</li> <li>- Bullet 1 – you couldn’t really prevent jogging, could you?</li> <li>- Bullet 1 – add that bike riding is on Bay Trail, paved</li> <li>- Bullet 1 – list what is not considered passive</li> <li>- Bullet 1 and Bullet 3 sub-bullets seem the same; condense into one?</li> <li>- Bullet 2 – add to end of blue text: “and changing shoreline due to climate change”</li> <li>- Bullet 2 – add sub-bullet: “plan for a future with sea level rise”</li> <li>- Bullet 2 – potential opportunity to do a bike share program from Belle Haven to BBP? Would have space for extra racks.</li> <li>- Bullet 3 – is water access allowed at the park?</li> <li>- Bullet 3 – the model aircrafts, does it consider wildlife issues and the impact to other park users?</li> <li>- Bullet 3 – maybe delete bullet about methane capture and PV (seconded by other member) because it is a broad term and not well-defined</li> <li>- Bullet 3 – add distances to signage so you can do a 5 mile hike, if desired</li> <li>- Bullet 4 – what is the Great Spirit Path? Maybe add plaque explaining what it is.</li> <li>- Bullet 4 – add “to” after “Bay Trail)” in sub-bullet 5</li> <li>- Bullet 6 – what are “nodes”? Are these signs?</li> <li>- Bullet 6 – maybe don’t limit the number</li> </ul> | <ul style="list-style-type: none"> <li>- <i>Callander to review</i></li> <li>- <i>Jogging is an existing use and cannot be prevented</i></li> <li>- <i>The public showed a desire for unpaved trail biking, too</i></li> <li>- <i>Callander to review</i></li> <li>- <i>Bullet 1 is for existing uses and Bullet 3 is for proposed uses</i></li> <li>- <i>Callander to review</i></li> <li>- <i>Callander to review and discuss changing region</i></li> <li>- <i>Callander to review with City</i></li> <li>- <i>To be reviewed with agencies. Uses are proposed, not existing</i></li> <li>- <i>Regarding impact to other users, more survey respondents were in favor of model gliders than were against. Research is being conducted and a summary will be provided at June 17<sup>th</sup> event. The issue will ultimately be decided by Council. The plan seeks to balance public access and conservation, noting that the site is a park and not a refuge.</i></li> <li>- <i>Callander to review with City</i></li> <li>- <i>Callander to detail to master plan</i></li> <li>- <i>Informational signage and brochures are provided at the park. Materials will be updated to reflect master plan changes.</i></li> <li>- <i>Callander to edit</i></li> <li>- <i>Callander to better define meaning and purpose of nodes</i></li> <li>- <i>Limitation to balance crowd, noise, and</i></li> </ul> |
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## Meeting Summary

## Bedwell Bayfront Park Master Plan

RE: Oversight and Outreach Group Meeting #2

June 14, 2017

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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>for school children to accommodate?</p> <ul style="list-style-type: none"> <li>- Bullet 6 – reword sub-bullet 5; adjacent to what?</li> <li>- Bullet 6 – reword sub-bullet 6; “Use ‘green’ building methods”</li> </ul>                                                                                                                                                                                                                                                                                                                          | <p><i>park impacts</i></p> <ul style="list-style-type: none"> <li>- <i>Callander to review and edit, as needed</i></li> <li>- <i>Cost and support of educational goals is important consideration</i></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <p>Concept A:</p> <ul style="list-style-type: none"> <li>- Maybe use each letter of the alphabet only once, or use icons instead of letters</li> <li>- Change add “estimated to “limit of future sea level rise”</li> <li>- Add compost to trash/recycling bins</li> <li>- Maybe add topo/elevation information</li> <li>- Add “Don Edwards Refuge” to right side of map</li> <li>- Adjust distance of dog park from trail. Noise impacts?</li> <li>- Trail type layers – use clear, liftable sheets to compare differences for A &amp;B</li> </ul> | <ul style="list-style-type: none"> <li>- <i>Callander to review and edit</i></li> <li>- <i>Callander to review and edit</i></li> <li>- <i>Callander to review with City whether this is feasible</i></li> <li>- <i>Topo was removed for graphic clarity; summit symbols show park high points</i></li> <li>- <i>Callander to add</i></li> <li>- <i>Dog park is surrounded by summits, reducing noise output, and trails allow for access</i></li> <li>- <i>Callander to review</i></li> </ul>                                                                                                                                                                                                                                                                                                                                                |
| <p>Concept B:</p> <ul style="list-style-type: none"> <li>- Why 2 amphitheaters? Other member agreed and suggested only 1 amphitheater needed.</li> <li>- Dog park is too internal to park</li> <li>- Fitness clusters are at other parks</li> <li>- Destination play is too internal to the park and they are at other parks. Why here?</li> <li>- How do you enforce gliders only?</li> <li>- Burrowing owl habitat in meadow area</li> <li>- Make all water blue</li> </ul>                                                                       | <ul style="list-style-type: none"> <li>- <i>It accommodates multiple groups and educational settings (marsh vs. pond)</i></li> <li>- <i>There are few flat areas for dog park. This area is near parking and away from ponds</i></li> <li>- <i>Called out as a desired amenity for the park</i></li> <li>- <i>Called out as a desired amenity for the park</i></li> <li>- <i>Regulations will be written and posted as signs in the area of glider usage. A proposed ranger will help enforce this and other activities</i></li> <li>- <i>Project biologist did not identify this area as a current habitat for the burrowing owl. Callander will add.</i></li> <li>- <i>Water areas are outside of project area. The aerial helps denote the areas of water and helps lessen the amount of graphics for the public to digest</i></li> </ul> |
| <p>Concept comparison matrix</p> <ul style="list-style-type: none"> <li>- Add compost/recycling/trash</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                    | <ul style="list-style-type: none"> <li>- <i>Focus of matrix is on higher impact issues</i></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

**Meeting Summary**

**Bedwell Bayfront Park Master Plan**

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|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>- Where is the ranger listed?</li> <li>- Addition: woodchip and compost depot; another member suggested this be at another location due to concern for safety and run-off</li> <li>- Is there orienteering there now? Not aware of it</li> <li>- Great Spirit Path – make concept A &amp; B yellow?</li> <li>- Bay Trail – make Concept B yellow because it's the same as original</li> <li>- Educational trail loops – for both concepts, how many nodes in each? Mixture of perimeter and internal nodes</li> <li>- Geocaching – how many geocaches?</li> <li>- Off-Leash dog park – make Concept A &amp; B orange, not red</li> <li>- Amphitheater – larger size better (Concept B)</li> <li>- Hand-launched gliders and boat launch – Why don't we have a "no" option</li> <li>- Building – what building is existing?</li> <li>- Parking, paved – Make Concept B orange</li> <li>- Entry/parking fee – add range for Concept A &amp; B</li> <li>- Meets project goals – Make Existing yellow</li> <li>- Colors are confusing</li> </ul> | <ul style="list-style-type: none"> <li>- <i>Ranger is included in building use</i></li> <li>- <i>The materials area did not receive public support and site lacks space to accommodate</i></li> <li>- <i>Yes, this is an existing use at the park</i></li> <li>- <i>Yellow would mean no changes are being applied. Since the path is being gently renovated, it has the orange designation</i></li> <li>- <i>Callander to revise</i></li> <li>- <i>Callander to provide the number of nodes for each concept.</i></li> <li>- <i>Number cannot be identified, Callander to move to top of list and preserve as existing use</i></li> <li>- <i>Callander recognizes this use as a controversial amenity and wanted to call attention to it using a red coloration</i></li> <li>- <i>Noted. Accommodates different size groups</i></li> <li>- <i>Based on community input, there is more support to include than exclude</i></li> <li>- <i>The restroom is a current building on-site</i></li> <li>- <i>Callander to change</i></li> <li>- <i>Callander to change</i></li> <li>- <i>Callander to review</i></li> <li>- <i>Callander to review</i></li> </ul> |
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- END -



**Combined Open House #2/Open House #3/Online Survey Input Summary**  
**Bedwell Bayfront Park Master Plan**  
 September 15, 2017

**Responses**

Open House #2 total returned packets: 56  
 Open House #3 total returned packets: 19  
 Total Online Survey responses: 151  
 Total Spanish responses: 4  
 Potential duplicate responses: 16  
 Total responses: 226

**User Survey**

Question #1: How old are you?

| <i>Options</i> | <i>Open House #2</i> | <i>Open House #3</i> | <i>Online Survey</i> | <i>Total</i> |
|----------------|----------------------|----------------------|----------------------|--------------|
| Under 16       | 0                    | 0                    | 0                    | 0            |
| 16 to 20       | 0                    | 0                    | 2                    | 2            |
| 21 to 30       | 1                    | 1                    | 14                   | 16           |
| 31 to 55       | 19                   | 8                    | 64                   | 91           |
| 55+            | 35                   | 10                   | 65                   | 110          |

**Total: 219**

Question #2: Where do you live?

| <i>Options</i>                     | <i>Open House #2</i> | <i>Open House #3</i> | <i>Online Survey</i> | <i>Total</i> |
|------------------------------------|----------------------|----------------------|----------------------|--------------|
| None of the above                  | 8                    | 1                    | 19                   | 28           |
| In Redwood City or East Palo Alto  | 14                   | 4                    | 19                   | 37           |
| East of Highway 101, in Menlo Park | 7                    | 11                   | 21                   | 39           |
| West of Highway 101, in Menlo Park | 2                    | 2                    | 86                   | 113          |

**Total: 217**

Question #3: How far is your home from the park?

| <i>Options</i>     | <i>Open House #2</i> | <i>Open House #3</i> | <i>Online Survey</i> | <i>Total</i> |
|--------------------|----------------------|----------------------|----------------------|--------------|
| More than 10 miles | 1                    | 0                    | 9                    | 10           |
| 5 to 10 miles      | 14                   | 7                    | 6                    | 27           |
| 1 mile             | 8                    | 8                    | 33                   | 49           |



**Written, On-Line and Other Survey Responses**

**Bedwell Bayfront Park Master Plan**

September 15, 2017

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|              |    |   |    |     |
|--------------|----|---|----|-----|
| 2 to 5 miles | 32 | 9 | 97 | 138 |
|--------------|----|---|----|-----|

**Total: 224**

Question #4: How often do you visit the park?

| <i>Options</i> | <i>Open House #2</i> | <i>Open House #3</i> | <i>Online Survey</i> | <i>Total</i> |
|----------------|----------------------|----------------------|----------------------|--------------|
| Rarely/Never   | 2                    | 0                    | 12                   | 14           |
| Yearly         | 12                   | 4                    | 29                   | 45           |
| Daily          | 13                   | 2                    | 9                    | 24           |
| Monthly        | 12                   | 5                    | 46                   | 63           |
| Weekly         | 24                   | 7                    | 49                   | 80           |

**Total: 226**

Question #5: When you visit the park, how long do you stay?

| <i>Options</i>    | <i>Open House #2</i> | <i>Open House #3</i> | <i>Online Survey</i> | <i>Total</i> |
|-------------------|----------------------|----------------------|----------------------|--------------|
| More than 4 hours | 0                    | 0                    | 0                    | 0            |
| Less than 1 hour  | 4                    | 0                    | 18                   | 22           |
| 2 to 4 hours      | 8                    | 6                    | 46                   | 60           |
| 1 hour            | 26                   | 11                   | 81                   | 118          |

**Total: 200**

Evaluate the Program Statement that we have developed and let us know how much you support each part.

| <i>Statement</i>          | <i>Open House #2</i> |   |   | <i>Open House #3</i> |    |    | <i>Online Survey</i> |    |    | <i>Total</i> |    |    |
|---------------------------|----------------------|---|---|----------------------|----|----|----------------------|----|----|--------------|----|----|
|                           | Y                    | M | N | Y                    | M  | N  | Y                    | M  | N  | Y            | M  | N  |
| Statement 1 - Respect     | 13                   | 2 | 0 | 48                   | 3  | 1  | 110                  | 12 | 9  | 171          | 17 | 10 |
| Statement 2 - Acknowledge | 11                   | 5 | 2 | 34                   | 10 | 8  | 88                   | 32 | 11 | 133          | 47 | 21 |
| Statement 3 - Support     | 13                   | 2 | 2 | 24                   | 15 | 12 | 69                   | 33 | 29 | 106          | 50 | 43 |
| Statement 4 - Address     | 15                   | 2 | 0 | 40                   | 11 | 2  | 99                   | 23 | 9  | 154          | 36 | 11 |
| Statement 5 - Provide     | 12                   | 5 | 1 | 31                   | 13 | 7  | 74                   | 36 | 21 | 117          | 54 | 29 |
| Statement 6 – Future      | 11                   | 5 | 1 | 33                   | 13 | 4  | 76                   | 36 | 19 | 120          | 54 | 24 |
| Statement 7 - Funding     | 5                    | 7 | 6 | 28                   | 8  | 15 | 49                   | 46 | 36 | 82           | 61 | 57 |

**Written, On-Line and Other Survey Responses****Bedwell Bayfront Park Master Plan**

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**Comments**

|                                                                                                                                                                                                                                                       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| support through taxes not money generating activities; park not really suitable for picnics, parties etc - there is Flood Park and others in City for that; ranger needed - or better patrol of off lead dogs                                         |
|                                                                                                                                                                                                                                                       |
| asphalt paths need maintenance, spirit path is not kept up, major puddles 4 months a year need to be filled, this is a dog poop park worst in the area, dogs off leads the majority of the time, need ranger                                          |
| next generation: best if provide outdoor/nature experiences only - no picnics, playgrounds, etc.; small amphitheater in trees ok                                                                                                                      |
| community garden - perhaps with addition of organic practices                                                                                                                                                                                         |
| I support the focus on next generation education in strategic                                                                                                                                                                                         |
|                                                                                                                                                                                                                                                       |
| leave the park as it is, maintenance and tactful improvements (benches etc.) but don't turn it into PA Baylands                                                                                                                                       |
| my overall preference is to keep the park as it is, with only necessary modifications                                                                                                                                                                 |
|                                                                                                                                                                                                                                                       |
| find funds without creating mechanisms in the park "???" city bite the bullet and fund it                                                                                                                                                             |
|                                                                                                                                                                                                                                                       |
|                                                                                                                                                                                                                                                       |
| let's not add more to this quiet escape! No drones, playgrounds, fitness equip (go to downtown manicured parks)                                                                                                                                       |
|                                                                                                                                                                                                                                                       |
|                                                                                                                                                                                                                                                       |
| consider separate issue from shoreline issue, should have a simple parks master plan for all Menlo Park, not a separate one that takes Bedwell in isolation                                                                                           |
|                                                                                                                                                                                                                                                       |
| Menlo Park residents need a master plan for all it's parks                                                                                                                                                                                            |
| Support model gliders as there are no other locations to do this                                                                                                                                                                                      |
|                                                                                                                                                                                                                                                       |
| I would like to see Bedwell Park remain. First of all an open space, wild, natural where nature is the main attraction. People like it because it has a wild feel about it. Hopefully apart from trail improvements and more trash bins, nothing much |

**Written, On-Line and Other Survey Responses**

**Bedwell Bayfront Park Master Plan**

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|                                                                                                                                                                                                                                                                              |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| needs to be done. It's a great place to meditate and enjoy nature and relax. Do not turn it into a "city" park. Thanks                                                                                                                                                       |
|                                                                                                                                                                                                                                                                              |
|                                                                                                                                                                                                                                                                              |
| Statement 7: In way that is aligned with promoting nature, stillness and reflection                                                                                                                                                                                          |
|                                                                                                                                                                                                                                                                              |
|                                                                                                                                                                                                                                                                              |
|                                                                                                                                                                                                                                                                              |
| Identify key values perhaps 1) native preservation = light of environment/population changes, 2/ enhance user experience of "the place", 3) family focused, more kids accessible areas/play zone, 4) beyond food r ???, a spiritual retreat for native meditation, yoga etc. |
| City should support like it does all other city parks, stafford park 7.0 mi, stuesaftt park 10.6 mi                                                                                                                                                                          |
| trails need to be fixed/winter time paths are full of water, more police patrols because cars are broken into, restrooms need to add on some trails                                                                                                                          |
| mas cuidado con los perros y la popo, necesitamos un bano mas y felicidades en el nuevo proyecto (being more mindful of dog poop, an additional bathroom, congratulations on the new project)                                                                                |
|                                                                                                                                                                                                                                                                              |
|                                                                                                                                                                                                                                                                              |
|                                                                                                                                                                                                                                                                              |
|                                                                                                                                                                                                                                                                              |
|                                                                                                                                                                                                                                                                              |
|                                                                                                                                                                                                                                                                              |
| maybe a donation box; request volunteer maintenance groups                                                                                                                                                                                                                   |
| Statement 5: not sure what this means, they will be stuvairs what we leave - create                                                                                                                                                                                          |
| would not use if there was a charge to the park                                                                                                                                                                                                                              |
| please do not allow tractor trailers; at night when there's no surveillance people dump garbage and furniture; more police patrol - especially at night                                                                                                                      |
| I am more than glad and feel fortunate by having this park close to my home, and that it was left as passive recreational place and "not" turned into a "golf park". For only a small group of people that might not leave in the area.                                      |
| poner un bano o dos por el parque (put 1 or 2 bathrooms in the park)                                                                                                                                                                                                         |
| poner other bano 1 o 2 en diferented lugarer del parque (put another bathroom 1                                                                                                                                                                                              |

**Written, On-Line and Other Survey Responses****Bedwell Bayfront Park Master Plan**

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|                                                                                                                                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| or 2 in different parts of the park)                                                                                                                                  |
| leave it alone & bring back burrowing owls                                                                                                                            |
| use existing soil mixed with risen binder                                                                                                                             |
| the park should be funded by the general fund, as are other parks; maintain what's here. Don't make this a bust, noisy urban park - it is our only urban open space.  |
|                                                                                                                                                                       |
|                                                                                                                                                                       |
| no cobrar la entrada al parque y poner mas banos en el parque...levantar popo de los perros (do not charge to enter the park, more bathrooms, pick up after your dog) |
|                                                                                                                                                                       |
|                                                                                                                                                                       |
|                                                                                                                                                                       |
|                                                                                                                                                                       |
|                                                                                                                                                                       |

Please tell us which concept plan you prefer.

|                   | <i>Open House #2</i> | <i>Open House #3</i> | <i>Online Survey</i> | <i>Total</i> |     |                         |
|-------------------|----------------------|----------------------|----------------------|--------------|-----|-------------------------|
| A                 | 21                   | 4                    | 63                   | 88           | 42% | slight preference for A |
| B                 | 17                   | 3                    | 50                   | 70           | 32% | ¼ "do nothing"          |
| Neither           | 10                   | 11                   | 38                   | 59           | 27% |                         |
| <b>Total: 217</b> |                      |                      |                      |              |     |                         |

How can the concept be improved? Please evaluate the list of attributes below and let us know if you would like to keep it as shown, remove it, or keep it but with modifications.

| <i>Alternative</i>      | <i>Open House #2</i> |        |        | <i>Open House #3</i> |   |   | <i>Online Survey</i> |    |    | <i>Total</i> |    |    |
|-------------------------|----------------------|--------|--------|----------------------|---|---|----------------------|----|----|--------------|----|----|
|                         | keep                 | remove | modify | k                    | r | m | k                    | r  | m  | k            | r  | m  |
| Restroom                | 6                    | 1      | 4      | 38                   | 2 | 5 | 107                  | 1  | 5  | 151          | 4  | 14 |
| Orienteering/Geocaching | 4                    | 3      | 3      | 29                   | 8 | 4 | 77                   | 23 | 13 | 110          | 34 | 20 |
| Great Spirit Path       | 5                    | 2      | 3      | 37                   | 8 | 3 | 92                   | 14 | 7  | 134          | 24 | 13 |
| Bay Trail               | 5                    | 0      | 3      | 38                   | 3 | 5 | 69                   | 27 | 17 | 112          | 30 | 25 |
| Accessible paths        | 7                    | 1      | 3      | 36                   | 4 | 4 | 76                   | 18 | 19 | 119          | 23 | 26 |

**Written, On-Line and Other Survey Responses**

**Bedwell Bayfront Park Master Plan**

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|                                 |    |   |   |    |    |    |    |    |    |     |    |    |
|---------------------------------|----|---|---|----|----|----|----|----|----|-----|----|----|
| Accessible summit               | 6  | 3 | 3 | 34 | 9  | 1  | 84 | 16 | 13 | 124 | 28 | 17 |
| Path/trail surfacing            | 8  | 1 | 2 | 32 | 4  | 7  | 65 | 23 | 25 | 105 | 28 | 34 |
| Trees to screen sewage facility | 8  | 0 | 3 | 35 | 7  | 2  | 96 | 8  | 9  | 139 | 15 | 14 |
| Habitat restoration             | 11 | 1 | 0 | 36 | 3  | 3  | 98 | 7  | 8  | 145 | 11 | 11 |
| Picnic tables                   | 8  | 3 | 2 | 23 | 15 | 17 | 68 | 24 | 21 | 99  | 42 | 40 |
| Fitness course                  | 4  | 7 | 1 | 20 | 21 | 1  | 56 | 48 | 9  | 80  | 76 | 11 |
| Educational trail loops         | 5  | 3 | 2 | 27 | 12 | 2  | 84 | 18 | 11 | 116 | 33 | 15 |
| Amphitheater/group seating      | 2  | 7 | 4 | 16 | 24 | 6  | 49 | 46 | 18 | 67  | 77 | 28 |
| Play Area                       | 2  | 8 | 2 | 14 | 22 | 8  | 72 | 30 | 11 | 88  | 60 | 21 |
| Off-leash dog-park              | 5  | 8 | 1 | 12 | 27 | 6  | 50 | 50 | 13 | 67  | 85 | 20 |
| Model glider                    | 5  | 4 | 3 | 22 | 17 | 3  | 48 | 58 | 17 | 75  | 79 | 13 |
| Boat launch                     | 3  | 8 | 2 | 22 | 23 | 2  | 63 | 41 | 9  | 88  | 72 | 13 |
| Building                        | 3  | 6 | 2 | 16 | 16 | 7  | 59 | 36 | 18 | 78  | 58 | 27 |
| Parking, paved                  | 6  | 2 | 2 | 31 | 10 | 1  | 74 | 30 | 9  | 111 | 42 | 12 |
| Parking, gravel                 | 4  | 4 | 3 | 38 | 5  | 2  | 87 | 11 | 15 | 129 | 20 | 20 |
| Parking, undesignated           | 4  | 4 | 2 | 29 | 7  | 4  | 80 | 20 | 13 | 113 | 31 | 19 |

**Total: 169**

| Comments                                                                                                                                                      |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| too developed; improve existing, path needs to be improved so can use in winter; trees if have \$                                                             |
|                                                                                                                                                               |
| lower cost to not need fees; improve, get rid of puddles                                                                                                      |
| reinstate great spirit path; restroom building only                                                                                                           |
| orienteering not wanted;                                                                                                                                      |
| small amphitheater, make sure play area fits with rustic nature of park                                                                                       |
| prefer minimum maintenance on existing trail; keep path as is as much as possible; a few small tables with wide trees; parking as existing as far as possible |
| modify as little as possible; a few picnic tables; no dog park                                                                                                |
| orienteering is already here; what habitat?; just a few picnic tables                                                                                         |
|                                                                                                                                                               |



**Written, On-Line and Other Survey Responses****Bedwell Bayfront Park Master Plan**

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|                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| minimize summits; picnic tables should be close to parking; perimeter focused educational trail loops, no pay stations                                                                                                           |
| keep path trail surfacing as natural as possible                                                                                                                                                                                 |
|                                                                                                                                                                                                                                  |
|                                                                                                                                                                                                                                  |
| no motorized model glider; no more parking than current; keep everything as is                                                                                                                                                   |
|                                                                                                                                                                                                                                  |
|                                                                                                                                                                                                                                  |
|                                                                                                                                                                                                                                  |
| keep as is                                                                                                                                                                                                                       |
| keep as is, continue to allow bikes                                                                                                                                                                                              |
| keep it wild, just keep park available to dogs                                                                                                                                                                                   |
| picnic tables would cause a lot of trash; small and not obtrusive amphitheater; a small ramp for kayaks or canoes would be ok, no motor boats                                                                                    |
| remove all parking along slough                                                                                                                                                                                                  |
|                                                                                                                                                                                                                                  |
| building sponsored by an organisation that is aligned with supporting passive recreation                                                                                                                                         |
|                                                                                                                                                                                                                                  |
|                                                                                                                                                                                                                                  |
|                                                                                                                                                                                                                                  |
| add upgrades; add trees for shade; add shade for sun and rain; need a sponsoring arts or theatre group; LEED certified, multi-use; for nonprofit meetings, education seminars, "pay to rent" model; do not do pay parking please |
| too much stuff and not enough pure open space                                                                                                                                                                                    |
| no tables people leave garbage behind; dogs must be on leash                                                                                                                                                                     |
|                                                                                                                                                                                                                                  |
|                                                                                                                                                                                                                                  |
|                                                                                                                                                                                                                                  |
| don't know what this is; don't care; 9-10 is ok                                                                                                                                                                                  |
| not sure                                                                                                                                                                                                                         |
|                                                                                                                                                                                                                                  |
| please consider at least an emergency response boat launch/water access. Menlo park fire has response to water emergencies on the bay for the safety of the public. Thank you.                                                   |

**Written, On-Line and Other Survey Responses**

**Bedwell Bayfront Park Master Plan**

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|                                                                                                                                    |
|------------------------------------------------------------------------------------------------------------------------------------|
| maintain high degree of informal parking; more                                                                                     |
|                                                                                                                                    |
| less asphalt, path B; don't take away parking; add large amphitheater; add destination play                                        |
| charge the parking (problem: people park here & then go to work/ride sharing); please no charge to people who just come for a walk |
| model glider allowed                                                                                                               |

**Additional pasteboard comments**

|                                                                                                                                                                                                                                                                         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Shaded vista areas, conducive reflection (a destination to walk to and then linger)                                                                                                                                                                                     |
| people feed skunks, feral cats, is problematic                                                                                                                                                                                                                          |
| 2nd restroom on east side would be good - people relieving themselves because it's too far to walk back to parking lot                                                                                                                                                  |
| a lot of people do not pick up after their dogs                                                                                                                                                                                                                         |
| should build soccer fields, could put 16 or so out by the burrowing owls habitat, fewer trails, less pavement                                                                                                                                                           |
| less development                                                                                                                                                                                                                                                        |
| for walkers                                                                                                                                                                                                                                                             |
| no buildings, no dog park, keep as natural open space, no admission fee, keep open to people of all incomes                                                                                                                                                             |
| bicycles - create a route that's marked if pedestrians and cyclists are then cyclist need to give alert and slow down                                                                                                                                                   |
| bicycles will change the character of this park to the detriment of this open space. Bike elsewhere - there are many other places to bike!                                                                                                                              |
| keep the bike's access                                                                                                                                                                                                                                                  |
| no entrance fee or parking fee                                                                                                                                                                                                                                          |
| like that bedwell is different - don't need every amenity                                                                                                                                                                                                               |
| plant more trees and create shaded areas                                                                                                                                                                                                                                |
| not much vehicle access in park                                                                                                                                                                                                                                         |
| slope restoration signs to keep new footprints from being formed                                                                                                                                                                                                        |
| keep native                                                                                                                                                                                                                                                             |
| better traffic mgmt                                                                                                                                                                                                                                                     |
| water bottle fountain                                                                                                                                                                                                                                                   |
| minimize paved trails                                                                                                                                                                                                                                                   |
| it seems like the proposed, unnecessary changes, are mostly designed to justify the city staff's jobs rather than support the broad environmental needs to preserve habitat and the environment. The proposals just duplicate what is available in other MP city parks. |
| love the notion to expand and deepen user's experiences while respecting the land and account for surrounding changes (ps disagree with comments above)                                                                                                                 |
| emphasize local fauna and flora; maintain natural beauty for nature walks, education children, no softball, badminton, etc. yes to picnic tables & benches, passive activities only, no fee!                                                                            |
| no drones                                                                                                                                                                                                                                                               |

**Written, On-Line and Other Survey Responses****Bedwell Bayfront Park Master Plan**

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|                                                                                                                                                             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| love the park as is. Children need to appreciate nature and parks as it without forcing activities. I see families enjoying the park and exercise together. |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                       |
|-----------------------------------------------------------------------|
| this is the only quiet natural open space we have. Keep as is. (yes!) |
|-----------------------------------------------------------------------|

|                                                            |
|------------------------------------------------------------|
| this park has least amount of shade and picnic/break areas |
|------------------------------------------------------------|

|                                                  |
|--------------------------------------------------|
| park is lovely as is, hot paths need maintenance |
|--------------------------------------------------|

|                                                                  |
|------------------------------------------------------------------|
| leave as is. City pay for maintenance as it does its other parks |
|------------------------------------------------------------------|

|                                                                                                                                                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------|
| parking: need easy parking, turn around areas, parking safety concern- cars getting broken into, unobstructed views, shoulder parking needed... |
|-------------------------------------------------------------------------------------------------------------------------------------------------|

-END-



## Callander Associates Landscape Architecture

### *Via E-mail Only*

September 15, 2017

### **Meeting Summary**

#### **Bedwell Bayfront Park Master Plan**

**RE: Oversight and Outreach Group Meeting #3**

Date: September 13, 2017

Time: 6:00 p.m. to 8:00 p.m.

3 pages

#### *Attendees: City of Menlo Park:*

Derek Schweigart (DS), Community Services, [dsschweigart@menlopark.org](mailto:dsschweigart@menlopark.org)

David Mooney (DM), [damooney@menlopark.org](mailto:damooney@menlopark.org)

Azalea Mitch (AM), Public Works, [aamitch@menlopark.org](mailto:aamitch@menlopark.org)

#### *Oversight and Outreach Group:*

Allan Bedwell (AB), Friends of Bedwell Bayfront Park, [allan.bedwell@gmail.com](mailto:allan.bedwell@gmail.com)

Eileen McLaughlin (EM), Citizens Committee to Complete the Refuge, [wildlifestewards@aol.com](mailto:wildlifestewards@aol.com)

Marianne Palefsky (MP), Parks and Recreation Commission, [mwpalefsky@gmail.com](mailto:mwpalefsky@gmail.com)

Lauren Swezey (LS), Facebook, [laurens@fb.com](https://www.facebook.com/laurens@fb.com)

Michele Tate (MT), Belle Haven resident, [lmichele.tate@gmail.com](mailto:lmichele.tate@gmail.com)

#### *Callander Associates (CA):*

Brian Fletcher (CA), [bfletcher@callanderassociates.com](mailto:bfletcher@callanderassociates.com)

Marie Mai (CA), [mmai@callanderassociates.com](mailto:mmai@callanderassociates.com)

Jana Schwartz (CA), [jschwartz@callanderassociates.com](mailto:jschwartz@callanderassociates.com)

The purpose of this meeting was for the Oversight and Outreach Group to review and provide comments on draft presentation materials that will be presented at the upcoming Parks and Recreation Commission Meeting on September 27, 2017. The following information was discussed and/or decided upon in out meeting. Comments with an action noted have been incorporated into the presentation materials to be shared with the public.

#### ***Item***

#### ***Action to take***

#### **Kayak Launch**

1. Kayaker stewards (John w/ Salt Pond Restoration) supported boat launch at proposed location.
2. EM provided document in response to kayak launch. CA to review
3. Kayak launch is feasible, but requires additional studies such as permitting and cost assessments. CA to include in master plan

**Meeting Summary****Bedwell Bayfront Park Master Plan****RE: Oversight and Outreach Group Meeting #3**

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report

**Item****Action to take****Dog Park**

- |                                                                                                                     |                                   |
|---------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| 1. Several commenters felt the dog park will not solve the off-leash dog issue.                                     | CA to review                      |
| 2. Don Edwards commented on support for the dog park to keep dogs out of refuge after interagency meeting.          |                                   |
| 3. CA/City heard support from the public for a dog park, saying it would be a better solution than doing nothing.   |                                   |
| 4. There are enforcement benefits to be able to point someone to an off-leash area.                                 |                                   |
| 5. All new communities near the park have dog parks planned.                                                        | CA to review                      |
| 6. Move dog park to end of slideshow with more controversial items, and make a consideration for Council to review. | CA to move to end of presentation |

**Gliders**

- |                                                                                                            |                                   |
|------------------------------------------------------------------------------------------------------------|-----------------------------------|
| 1. Add ranger as a method for enforcement to the slideshow.                                                |                                   |
| 2. One commenter believes gliders present conflict to proposed area of the park.                           |                                   |
| 3. Like dog park, move gliders to the end of the slideshow and make a consideration for council to review. | CA to move to end of presentation |

**Parking**

- |                                                                                                          |                                   |
|----------------------------------------------------------------------------------------------------------|-----------------------------------|
| 1. A parking fee is still considered because of revenue generation. Council to consider.                 | CA to move to end of presentation |
| 2. Facebook has possible development agreement funds for revenue.                                        |                                   |
| 3. 25 year master plan; Council wants phased approach for revenue generation (5yr, 7 yr, ~15yr, onward). |                                   |



**Meeting Summary**

**Bedwell Bayfront Park Master Plan**

**RE: Oversight and Outreach Group Meeting #3**

September 15, 2017

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**Item**

**Action to take**

**Presentation Layout Feedback**

- |                                                                                                                                                                                                                           |                           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| 1. Show what the community supported first in the order of presented concepts.                                                                                                                                            |                           |
| 2. Remove controversial items from plan, or present it differently in presentation.                                                                                                                                       | CA/City to review         |
| 3. Show how the breakdown of voting led to how amenities were included; add input results to slide (Y M N). Add slide that shows voter breakdown and which items were community supported vs. community split.            | CA to add to presentation |
| 4. One commenter showed concern for the number of participants in input process and suggested the project team should have been in the park more. City did on-site outreach 6 times with English and Spanish interpreter. |                           |

**General Comments**

- |                                                                                                                                    |                               |
|------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| 1. Plan Comments                                                                                                                   |                               |
| a. Specify size and regulations of gliders.                                                                                        | CA to include in report       |
| b. One commenter voiced they would be more comfortable showing work from the community-supported concepts.                         |                               |
| c. What is effectiveness of compliance at other parks?                                                                             | CA to research                |
| d. Explain SLR in presentation narrative.                                                                                          | CA to include in presentation |
| e. Show in enlargement plan of how road has shifted (dashed line) due to SLR.                                                      | CA to include in presentation |
| f. Funding memo will be presented at PRC in October; describe financing improvements, methane costs, phasing of plan, SLR impacts. | CA to include in report       |
| g. BCDC – West Point Marina – permit involved deals with similar issues to Bedwell                                                 | EM to send to CA to review    |

END

**Meeting Summary**

**Bedwell Bayfront Park Master Plan**

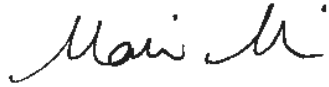
**RE: Oversight and Outreach Group Meeting #3**

September 15, 2017

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The information above is Callander Associates' understanding of items discussed and decisions reached at the meeting. Callander Associates is proceeding with the project based on this understanding.

Submitted by:

A handwritten signature in black ink, appearing to read "Mark M.", is positioned below the "Submitted by:" text.

Callander Associates

cc: All attendees

## Parks & Recreation Commission



### REGULAR MEETING MINUTES

**Date:** 10/11/2017  
**Time:** 6:30 p.m.  
**Arrillaga Family Recreation Center**  
**Cypress Room**  
**700 Alma St., Menlo Park, CA 94025**

#### A. Call To Order

Chair Stanwood called the meeting to order at 6:33 p.m.

#### B. Roll Call

Present: Chair Stanwood, Vice Chair Johnson, Commissioner Harris, Commissioner Lane (arrived at 6:37 p.m.) Commissioner Staley and Commissioner Palefsky

Absent: Commissioner Baskin

Staff: Assistant Community Services Director, Derek Schweigart

#### C. Public Comment

There was no Public Comment

#### D. Study Session

##### D1. Review and provide feedback on the draft park master plan for Bedwell Bayfront Park ([Staff Report # 17-022-PRC](#))

Brian Fletcher, Principal at Callander Associates gave the Commission a presentation on the draft park master plan for Bedwell Bayfront Park. He mentioned that the draft master plan includes accessibility improvements, enhanced educational opportunities, environmental protection considerations and passive recreation enhancements. Additional items for consideration that are not included in the draft park master plan are an off-leash dog park, a group seating area and a model glider area.

##### Public Comments

- Mitch Brenner (donated time from Richard Bright and Frank Dickinson) spoke in regards to the draft master plan for Bedwell Bayfront Park.
- Haoyang Wang spoke in regards to the draft master plan for Bedwell Bayfront Park.
- JoAnn Tyson spoke in regards to the draft master plan for Bedwell Bayfront Park.
- Eileen McLaughlin spoke in regards to the draft master plan for Bedwell Bayfront Park.

- Allan Bedwell spoke in regards to the draft master plan for Bedwell Bayfront Park.
- Vicky Roble spoke in regards to the draft master plan for Bedwell Bayfront Park.
- Nancy Borgeson spoke in regards to the draft master plan for Bedwell Bayfront Park.
- Chris Macintosh spoke in regards to the draft master plan for Bedwell Bayfront Park.
- Tate Snyder spoke in regards to the draft master plan for Bedwell Bayfront Park.
- Curtis Snyder spoke in regards to the draft master plan for Bedwell Bayfront Park.
- Helen Wolter spoke in regards to the draft master plan for Bedwell Bayfront Park.
- Christopher Turner spoke in regards to the draft master plan for Bedwell Bayfront Park.
- Claudia Lopez spoke in regards to the draft master plan for Bedwell Bayfront Park.

After discussion, the Commission requested information from Staff and Callander Associates regarding the boat launch and studies that show the effect of hand held gliders to wildlife. The Commission directed staff to bring back this item to a future Commission meeting with the requested information.

## **E. Regular Business**

- E1. Accept Commission minutes for the meeting of July 26, 2017 ([attachment](#))

**ACTION:** Motion and second (Johnson/Palefsky) to accept the Parks and Recreation Commission meeting minutes of July 26, 2017 with the following change: Commissioner Palefsky was not absent, arrived at 6:30 p.m.; passes 6-0-1 (Commissioner Baskin absent)

- E2. Nominate a Commissioner to monitor the updates related to the San Mateo County's Re-Imagine Flood Park Project, and report back to the Commission

**ACTION:** Motion and second (Johnson/Lane) to nominate Commissioner Staley to monitor the updates related to the San Mateo County's Re-Imagine Flood Park Project, and report back to the Commission; passes 6-0-1 (Commissioner Baskin absent)

- E3. Make a recommendation to the City Council on the next steps for the Burgess Park Snack Shack Expansion project ([Staff Report # 17-023-PRC](#))

Councilmember Ray Mueller gave a presentation on the next steps for the Burgess Park Snack Shack Expansion project and answered the questions and concerns of the Commission.

### Public Comments

- Marc Bryman spoke to the Commission in regards to the Burgess Park Snack Shack Expansion project.

After discussion; the following action was taken:

**ACTION:** Motion and second (Staley/Harris) that the Parks and Recreation Commission conditionally supports and recommends that City Council move forward with the Burgess Park

Snack Shack remodel and expansion project; passes 6-0-1 (Commissioner Baskin absent)

**F. Reports and Announcements**

**F1. Commissioner Reports**

There was no Commissioner Report

**F2. Community Services Director's update and announcements ([Staff Report #17-024-PRC](#))**

Assistant Community Services Director, Derek Schweigart, gave the Community Services Director's update and announcements

**G. Adjournment**

Chair Stanwood adjourned the meeting at 10:02 p.m.

Minutes prepared by Linda Munguia, Senior Office Assistant

These minutes were approved at the Parks and Recreation Commission meeting of October 25, 2017



## Parks & Recreation Commission



### REGULAR MEETING MINUTES

**Date:** 10/25/2017  
**Time:** 6:30 p.m.  
**Arrillaga Family Recreation Center**  
**Cypress Room**  
**700 Alma St., Menlo Park, CA 94025**

#### A. Call To Order

Chair Stanwood called the meeting to order at 6:36 p.m.

#### B. Roll Call

Present: Chair Stanwood, Vice Chair Johnson, Commissioner Baskin, Commissioner Harris, Commissioner Lane (arrived at 6:44 p.m.) Commissioner Staley and Commissioner Palefsky  
Absent: None  
Staff: Assistant Community Services Director, Derek Schweigart

#### C. Public Comment

Jacqui Cebrian (donated time from Lynne Bramlett) with the Library Commission spoke to the Commission regarding the Little Free Library pilot project.

#### D. Study Session

##### D1. Update on the Menlo Atherton Performing Arts Center

Recreation Coordinator, Matt Milde gave the Commission an update on the Menlo Atherton Performing Arts Center. He mentioned the history of the Performing Arts Center, the current programming, Menlo Park Grant for the Arts and the current challenges of the Performing Arts Center.

#### E. Regular Business

##### E1. Accept Commission minutes for the meeting of September 18, 2017 and October 11, 2017 ([attachment](#)) ([attachment](#))

**ACTION:** Motion and second (Palefsky/Baskin) to accept the Parks and Recreation Commission meeting minutes of September 18, 2017 passes unanimously

**ACTION:** Motion and second (Staley/Johnson) to accept the Parks and Recreation Commission meeting minutes of October 11, 2017 passes unanimously

- E2. Consider a recommendation to the City Council to rename Market Place Park after Mr. Karl Clark, Menlo Park resident and WWII veteran ([Staff Report # 17-025-PRC](#))

Cecilia Taylor and Julie Shanson with Belle Haven Action Group spoke to the Commission regarding renaming Market Place Park after Mr. Karl Clark, Menlo Park resident and WWII veteran. They presented to the Commission a petition with 115 neighborhood resident signatures.

#### Public Comments

- Lynn Bramlett spoke in support of renaming Market Place Park after Mr. Karl Clark.
- Robert Corpus spoke in support of renaming Market Place Park after Mr. Karl Clark.
- Joe Rutherford spoke in support of renaming Market Place Park after Mr. Karl Clark.
- Donna Rutherford spoke in support of renaming Market Place Park after Mr. Karl Clark.
- LJ Anderson spoke in support of renaming Market Place Park after Mr. Karl Clark.
- Vicky Robledo spoke in support of renaming Market Place Park after Mr. Karl Clark.
- Greg Goodwin spoke in support of renaming Market Place Park after Mr. Karl Clark.
- Stewart Hyland spoke in support of renaming Market Place Park after Mr. Karl Clark.
- Keisha Evans spoke in support of renaming Market Place Park after Mr. Karl Clark.

After discussion, the following action was taken by the Commission:

**ACTION:** Motion and second (Harris/Baskin) to recommend to the City Council to rename Market Place Park after Mr. Karl Clark, Menlo Park resident and WWII veteran passes unanimously

- E3. Review and consider the results of a safety analysis of crumb rubber infill material on the artificial turf field at Hillview School and recommend next steps, if any ([Staff Report # 17-026-PRC](#))

David Teter with Millennium Consulting Associates gave the Commission the results on the safety analysis of crumb rubber infill collected from the synthetic turf athletic field located at Hillview Middle School and Kelly Park. Ahmad Sheikholeslami with the Menlo Park City School District was also present to respond to Commission questions.

- E4. Adopt a recommendation to City Council to approve the Bedwell Bayfront Park Master Plan ([Staff Report #17-027-PRC](#))

Project Manager, Marie Mai with Callander Associates and the Commission reviewed the Bedwell Bayfront Park Master Plan. City staff recommended that the Commission approve a

recommendation to the City Council in support of the Bedwell Bayfront Park Master Plan including whether or not the plan should include an outdoor classroom/ seating area, off-leash Dog Park and a model glider area.

Public Comment:

- Harry Ackley spoke in support of a model glider area at Bedwell Bayfront Park
- Mitch Brenner passed on his public comment
- Eileen McLaughlin spoke regarding opposition to a kayak launch at Bedwell Bayfront Park
- Allan Bedwell with Friends of Bedwell Bayfront Park spoke regarding opposition to an off-leash Dog Park and a model glider area at Bedwell Bayfront Park
- Christine Couch spoke regarding opposition to an off-leash Dog Park at Bedwell Bayfront Park
- Chris Macintosh spoke regarding opposition to a kayak launch, an off-leash Dog Park and a model glider area at Bedwell Bayfront Park
- Davena Gentry with Friends of Bedwell Bayfront Park spoke regarding opposition to a kayak launch at Bedwell Bayfront Park
- Helen Wolter spoke regarding opposition to a kayak launch and an off-leash Dog Park

After discussion, the following action was taken by the Commission:

**ACTION:** Motion and second (Lane/Palefsky) to recommend to City Council to approve the Bedwell Bayfront Park Master Plan passes unanimously

**ACTION:** Motion and second (Palefsky/Lane) to exclude the kayak launch from the Bedwell Bayfront Park Master Plan passes (6-1-0 Stanwood aye)

**ACTION:** Motion and second (Lane/Baskin) to include an off-leash Dog Park to the Bedwell Bayfront Park Master Plan fails (2-5-0 Lane, Baskin aye)

**ACTION:** Motion and second (Palefsky/Harris) to include an outdoor classroom/seating area to the Bedwell Bayfront Park Master plan passes unanimously

**ACTION:** Motion and second (Johnson/Lane) to include a model glider area to the Bedwell Bayfront park fails (3-4-0 Lane, Johnson and Stanwood aye)

## F. Reports and Annoucements

### F1. Commissioner Reports

There was no Commissioner Report

F2. Community Services Director's update and announcements ([Staff Report #17-024-PRC](#))

The Community Services Director's update and announcements were not given.

**G. Adjournment**

Chair Stanwood adjourned the meeting at 10:02 p.m.

Minutes prepared by Linda Munguia, Senior Office Assistant

These minutes were approved at the Parks and Recreation Commission meeting of November 15, 2017

## City Council



## REGULAR MEETING MINUTES

Date: 11/14/2017  
Time: 7:00 p.m.  
City Council Chambers  
701 Laurel St., Menlo Park, CA 94025

**A. Call To Order**

Mayor Keith called Regular Session to order at 7:07 p.m.

**B. Roll Call**

Present: Carlton, Cline, Keith, Ohtaki, Mueller

Staff: City Manager Alex McIntyre, City Attorney Bill McClure, Deputy City Clerk Jelena Harada

**C. Pledge of Allegiance**

Mayor Keith led the Pledge of Allegiance.

**D. Public Comment**

- Jim Lewis, Menlo Park Historical Association, spoke about the group's upcoming annual meeting.
- Robert Mancuso spoke against installing speedbumps.
- Pamela Jones spoke about district elections.

**E. Consent Calendar**

- E1. Waive the reading and adopt an ordinance approving the Amendment to the Development Agreement for the Facebook Campus Expansion Project (Staff Report #17-277-CC)
- E2. Approve a comment letter on the Draft Environmental Impact Report for Flood County Park Landscape Plan (Staff Report #17-283-CC)
- E3. Authorize the City Manager to accept a grant for fiscal year 2017-18 of up to \$179,260 from Silicon Valley Community Foundation to implement The Big Lift at the Belle Haven Child Development Center, to execute a contract to enhance services to complete the scope of work and to allocate matching funds of \$13,790 from the General Fund (Staff Report #17-282-CC)
- E4. Adopt a resolution supporting the Bayfront Expressway, Willow Road, and Marsh Road adaptive signal timing project, submit an application to the Measure A Highway Program and authorize the City Manager to execute the funding agreement (Staff Report #17-274-CC)
- E5. Waive the second reading and adopt an ordinance to update backflow prevention and cross-connection control requirements, and amend the Master Fee Schedule to include City backflow testing fees (Staff Report #17-281-CC)



- E6. Adopt an ordinance amending Chapter 5.69 of the Menlo Park Municipal Code to reauthorize Public, Education, and Government (PEG) access fees that apply to AT&T and Comcast under their respective State video franchises (Staff Report #17-280-CC)
- E7. Accept the City Council meeting minutes for October 4, October 10, October 30 and November 7, 2017 (Attachment)

City Attorney McClure clarified that item E6 is being introduced tonight and will return on a future agenda for adoption. Assistant Public Works Director Nikki Nagaya clarified the timeline for Bayfront Expressway, Willow Road and Marsh Road signal timing project.

**ACTION:** Motion and second (Ohtaki/Cline) to approve all items on the Consent Calendar, except E1 and E7, passed unanimously.

**ACTION:** Motion and second (Ohtaki/Cline) to approve item E1, passed 4-0-1 (Carlton abstained).

**ACTION:** Motion and second (Ohtaki/Cline) to approve item E7 with October 30 as amended, except for the minutes of October 10, 2017, passed unanimously.

**ACTION:** Motion and second (Keith/Cline) to approve the minutes of October 10, 2017, passed 4-0-1 (Carlton abstained).

At this time, Mayor Keith took the Regular Business items out of order to accommodate members of the public wishing to speak on these items.

## **G. Regular Business**

- G1. Review and approve comment letter on Stanford University, Center for Academic Medicine Project traffic impacts review (Staff Report #17-284-CC)

Senior Traffic Engineer Angela Obeso made a presentation. Assistant Public Works Director Nikki Nagaya responded to questions.

Whitney McNair, Stanford Director for Land Use Planning, and Barbara Schussman, outside legal counsel for Stanford, spoke about the project and responded to questions.

**ACTION:** Motion and second (Cline/Ohtaki) to authorize a subcommittee of Mayor Keith and Councilmember Mueller to finalize and submit a comment letter to the Santa Clara County Planning Commission on the Stanford University, Center for Academic Medicine Project traffic impacts review, incorporating additional analysis to be completed by the City's Transportation Division staff, passed unanimously.

- G2. Reconsider the City Council's October 17, 2017 decision to waive the reading and adopt ordinances rezoning and rezoning the property located at 2111-2121 Sand Hill Road ("2131 Sand Hill Road") (Staff Report #17-285-CC)

Associate Planner Tom Smith made a presentation.

- Avi Haksar, Rosewood Hotel, spoke in support of the project.
- Hank Lawrence spoke in opposition to the project.
- Jean McCown, Stanford University, spoke in support of the project.

**ACTION:** Motion and second (Carlton/Mueller) to reverse the approval of the ordinances rezoning and rezoning the property located at 2111-2121 Sand Hill Road ("2131 Sand Hill Road"), without prejudice, at the suggestion of the applicant, passed unanimously.

- G3. Consider a request to rename Market Place Park after Mr. Karl Clark, Menlo Park resident and WWII veteran (Staff Report #17-270-CC)

Interim Community Services Director Derek Schweigart made a presentation.

- Gregory Goodwin spoke in support of renaming the park after Mr. Karl Clark.
- Hank Lawrence spoke in support of renaming the park after Mr. Karl Clark.
- William Casper spoke in support of renaming the park after Mr. Karl Clark.
- Sarah Staley Shenk spoke in support of renaming the park after Mr. Karl Clark.
- Jennifer Johnson spoke in support of renaming the park after Mr. Karl Clark.
- Cecilia Taylor spoke in support of renaming the park after Mr. Karl Clark.
- Julie Shanson spoke in support of renaming the park after Mr. Karl Clark.

**ACTION:** Motion and second (Ohtaki/Carlton) to rename Market Place Park after Mr. Karl Clark, passed unanimously.

- G4. Accept the Bedwell Bayfront Park Master Plan and consider the Parks and Recreation Commission's recommendations on certain park amenities and approve proposed next steps (Staff Report #17-272-CC)

Interim Community Services Director Derek Schweigart introduced the item. Brian Fletcher of Callander Associates made a presentation.

- Jo Killen spoke against inclusion of a dog park.
- Frank Dickinson spoke in support of non-motorized gliders in the park.
- Mitch Brenner spoke in support of allowing model gliders.
- Silas Kwok spoke in support of allowing model glider.
- Richard Bright spoke against non-motorized hand-held gliders in the park.
- Sam Niece spoke in support of allowing radio-control gliders.
- Harry Ackley spoke in support of allowing radio control gliders.
- Ed Canty spoke in support of allowing radio control gliders.
- Robert Stephenson spoke in support of allowing radio control gliders.
- Sarah Staley Shenk spoke about considerations reviewed by the Parks and Recreation Commission.
- Allan Bedwell, Friends of Bedwell Bayfront Park, spoke against including gliders or dog parks.
- Marshall Dinowitz asked the City Council to support the habitat for numerous birds and animals.
- Jennifer Johnson spoke about considerations reviewed by the Parks and Recreation

Commission.

- Christine Pine Couch spoke in support of maintaining park open space and against including a dog park.
- Chris MacIntosh spoke in support of the educational area in the park and against the dog park, gliders and against a boat launch.
- Davena Gentry spoke against including a kayak/boat launch at Flood Slough.
- Eileen McLaughlin spoke in support of the Parks and Recreation Commission recommendations and against including a kayak/boat launch at Flood Slough.
- Helen Wolter spoke in support of the educational space and against the dog park.
- Pamela Jones spoke against dog parks, against gliders, and against a slough kayak/boat launch.

**ACTION:** Motion and second (Keith/Cline) to accept the Bedwell Bayfront Park Master Plan and support the Parks and Recreation Commission's recommendations with the bicycle racks moved up to phase 1, passed unanimously.

- G5. Update on the Caltrans' traffic signals at Willow/US 101; consideration of the installation of "No through traffic" signs within or adjacent to the Willows neighborhood; and provide direction on other traffic management features (No staff report)

Assistant City Manager Chip Taylor introduced the item. Senior Transportation Engineer Angela Obeso made a presentation. Police Commander Dave Bertini and Caltrans Engineer Min Yin Lee responded to questions.

- Chris Andrews spoke about traffic impacts.
- Tom Caldecott spoke about traffic impacts.
- Lawrence Bernstein spoke about traffic impacts.
- Rene Revueltas spoke about traffic impacts.
- Ana Uribe Ruiz spoke about traffic impacts.
- Sandra Barron spoke about traffic impacts.
- Bill Barron spoke about traffic impacts.

Mayor Keith left the meeting at 11:37 p.m. Mayor Pro Tem Ohtaki proceeded with public comment.

- Amar Marugan spoke about traffic impacts.
- Amy Roleder spoke about traffic impacts.
- Brian Gilmer spoke about traffic impacts.
- Robert Mancuso spoke about traffic impacts.
- Penelope Huang spoke about traffic impacts.

**ACTION:** Motion and second (Cline/Ohtaki) to approve the installation of regulatory "No Through Traffic" signs and changeable message signs, at locations to be identified by staff at their discretion, passed 4-0-1 (Keith absent).

At this time, Mayor Pro Tem Ohtaki took item F2 out of order.

## **F. Public Hearing**

### **F2. Adoption of proposed 2018-2022 solid waste collection rates (Staff Report #17-286-CC)**

Sustainability Manager Rebecca Lucky made a presentation and introduced Garth Schultz, Principal at R3 Consulting Group, who answered questions.

Mayor Pro Tem Ohtaki opened the public hearing at 12:54 a.m.

- Robert Mancuso spoke about the impact of the proposed rate increase.
- Stephen Kerman spoke about the frequency and efficiency of service.

**ACTION:** Motion and second (Cline/Carlton) to close the public hearing at 1:00 a.m. By acclamation, Mayor Pro Tem Ohtaki closed the public hearing.

**ACTION:** Motion and second (Cline/Ohtaki) to adopt the proposed 2018-2022 solid waste collection rates, with direction to explore an income based discount program and municipal code changes that would allow shared disposal, passed 3-1-1 (Carlton dissents, Keith absent).

### **F1. Extending the moratorium ordinance on the establishment of commercial cannabis land uses and outdoor personal cannabis cultivation (Staff Report #17-273-CC)**

Assistant Community Development Director Mark Muenzer introduced the item.

Mayor Pro Tem opened the public hearing at 1:20 a.m.

- Stella Chau, San Mateo County Health System, shared countywide survey data on marijuana use.

**ACTION:** Motion and second (Cline/Ohtaki) to close the public hearing at 1:24 a.m. By acclamation, Mayor Pro Tem Ohtaki closed the public hearing.

**ACTION:** Motion and second (Cline/Carlton) to extend the moratorium ordinance on the establishment of commercial cannabis land uses and outdoor personal cannabis cultivation, passed 4-0 (Keith absent).

## **H. Informational Items**

### **H1. Overview of proposed modifications to loading zones for Draeger's Market located at 1010 University Drive (Staff Report #17-278-CC)**

### **H2. Quarterly financial review of General Fund operations as of September 30, 2017 (Staff Report #17-276-CC)**

### **H3. Quarterly review of the City's investment portfolio as of September 30, 2017 (Staff Report #17-279-CC)**

H4. Update on bus shelter installation in Belle Haven (Staff Report #17-275-CC)

**I. City Manager's Report**

There was no report.

**J. Councilmember Reports**

Mayor Pro Tem Ohtaki announced that the Santa Clara County Planning Department is hosting a community meeting in the Menlo Park City Council Chambers on November 15, 2017, at 6:30 p.m., regarding the Stanford University General Use Permit Draft Environmental Impact Report.

**K. Adjournment**

Mayor Pro Tem Ohtaki adjourned the meeting at 1:26 a.m. on November 15, 2017.

Clay J. Curtin, Assistant to the City Manager

These minutes were accepted at the City Council meeting of December 5, 2017.



## References

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- Bedwell Bayfront Park Funding Strategy Report, Economic & Planning Systems, Inc., November 6, 2017
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- Menlo Gateway Project – Bohannon, Bohannon Development Company, 2013
- Menlo Gateway Project - Hydrology and Water Quality
- Menlo Park Municipal Code Section 8.28.130(5), City of Menlo Park, 2016
- Menlo Park Waterfront Plan, Kelly D. Main, 2013
- Model Aircraft at Bedwell-Bayfront Park: Advisory Report for the Bedwell-Bayfront Park Master Plan, Mitchell C. Brenner, February 2017
- Public Draft Feasibility Report SAFER Bay: Strategy to Advance Flood protection, Ecosystems and Recreation along San Francisco Bay, San Francisquito Creek Joint Powers Authority, October 2016
- RE: City Council Agenda of 11/14/2017, Master Plan for Bedwell Bayfront Park, Citizens Committee To Complete The Refuge, November 9, 2017
- Sea Level Rise & Overtopping Analysis for San Mateo County's Bayshore, BCDC / San Mateo County, May 2016
- Should a Small Craft Boat Ramp be Included in Master Plan Proposal for Bedwell Bayfront Park and What Kind of Ramp Would it be?, Citizens Committee To Complete The Refuge, September 13, 2017
- South Bay Salt Pond Restoration Project Final Environmental Impact Statement/ Report, Phase 2, U.S. Fish and Wildlife Service / California State Coastal Conservancy / AECOM, April 2016
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