US Army Corps
of Engineers ®
San Francisco District

Bay Model Master Plan

Sausalito, California

United States Army Corps of Engineers

San Francisco District

Revised January 2020

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APPROVAL

I have reviewed this Master Plan and Environmental Assessment for Bay Model Visitor Center for the guidance of future development for recreation and environmental stewardship efforts within the Bay Model Visitor Center located in the City of Sausalito, Marin County, California.

This Master Plan is technically sound, environmentally acceptable, and is in compliance with ER/EP 1130-2-550, Project Operations, Recreation Operations and Maintenance Policies.

Therefore, I approve this Master Plan for the Bay Model Visitor Center Project, subject to updates as needed for the benefit of flood risk management, public use, and environmental stewardship.

_____ _____

Date

John D Cunningham

Lieutenant Colonel

Commander, San Francisco District

Executive Summary

The Bay Model Visitor Center (BMVC) Master Plan (Master Plan) provides the U.S. Army Corps of Engineers (USACE) a vision and direction to manage the Bay Model Visitor Center. To date, there has not been a published Master Plan for the Bay Model Visitor Center. This Master Plan is the inaugural plan. The Master Plan also outlines developmental needs, analyzes special problems, and provides guidance on public use, water quality, invasive species, natural areas, and historic properties within the USACE project boundaries.

The Master Plan and EA provide a synopsis of the history of the area and recreational development of the Bay Model. This Master Plan presents a comprehensive inventory of natural, cultural, and recreational resources; land use classifications to guide future management; modernization of existing facilities; resource objectives for each management unit; and an evaluation of existing and future needs required to provide a balanced management plan to improve educational and recreation opportunities, as well as USACE organizational uses, public uses, and to sustain natural resources. The Master Plan makes recommendations for future improvements to the Bay Model's facilities based on the land use classifications. It provides guidance to balance recreation opportunities, educational opportunities, USACE organizational uses, public uses, and the preservation of natural and historical and cultural resources for current and future generations.

Public participation is an important aspect of the development of the Master Plan. Public scoping meetings were held at the Bay Model in February of 2019 to begin the process. The purpose of the public meetings was to provide information to the public on the USACE master planning process and to identify the changes and improvements the public would desire to see in the future at the Bay Model Visitor Center. Following internal USACE reviews, the Master Plan and Environmental Assessment (EA) will be made available for a final public review under the National Environmental Policy Act (NEPA), and official NEPA public meetings will be held before the plan is finalized.

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ACRONYMS

ARPA	Archaeological Resources Protection Act
BCDC	San Francisco Bay Conservation and Development Commission
BMVC	Bay Model Visitor Center
CEQA	California Environmental Quality Act
CDFW	CA Department of Fish and Wildlife
CWA	Clean Water Act
DOD	Department of Defense
DOI	Department of the Interior
EA	Environmental Assessment
EIS	Environmental Impact Statement
EOPs	Environmental Operating Principles
EP	Engineer Pamphlet
ER	Engineer Regulation
ESA	Endangered Species Act
FERC	Federal Energy Regulatory Commission
FY	Fiscal Year
FONSI	Finding of No Significant Impact
MU	Management Unit
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
OHP	Office of Historic Preservation
OMP	Operational Management Plan
SHPO	State Historic Preservation Officer
SCORP	Statewide California Outdoor Recreation Plan
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

CHAPTER 1 – INTRODUCTION

1.1 PROJECT AUTHORIZATION

Construction of the Bay Model, for engineering and research was authorized on October 13th, 1949 by Public Law 355, 81st Congress. There was a design memoranda completed on June 5th 1970 and again on November 26th 1973 (amended July 23rd 1974) SF-118. The Bay Model was closed for research and engineering in 2000 but remained open as a visitor center.

1.2 PROJECT PURPOSE

Hydraulic Modeling

The Bay Model was constructed in 1957 to study the circulation and flow characteristics of the water within the San Francisco Bay estuary system and related waterways. The Model was used to reproduce (to the proper scale) the rise and fall of tide, flow and currents of water, mixing of salt and fresh water, and indicates trends in sediment movement. Assessments could be made regarding the impact of human activities such as dredging navigation channels, filling portions of the Bay, diverting water, and introducing wastes and oil spills. The research department of the model was closed in 2000, but the model continues to be a public education center. Prior to 2000, the Bay Model was used to study the Reber Plan, which initially proposed building a massive project to dam the San Francisco Bay to create a series of fresh water lakes. The Bay Model was built and studies conducted brought to light flooding issues that would occur should the Reber Plan go through.

Recreation and Regional Visitor Center

The Bay Model Visitor Center continues to operate as a center for recreation and an important regional visitor center for the United States Army Corps of Engineers (USACE) and non-USACE events. The BMVC hosts important USACE events such as Change of Command Ceremonies and is a key point of visitation during regional and national events within USACE. Additionally, the BMVC is an important venue for USACE organizational meetings, training facilities, other mission related meetings, and public outreach events, as well as for local and regional state and federal agencies and nonprofits.

The model, which ceased operating as a scientific tool in 2000 is a major regional attraction, and the museum provides educational and recreational value to visitors. Additionally, the BMVC leases part of the pier to a recreational kayak company, Sea Trek and the nonprofit, Call of the Sea.

Education

The Bay Model Visitor Center provides educational services such as guided tours of the model, the museum, and the historical tall ships docked at the pier. The site is also home to the native plant garden and is a host site for science fairs. School groups tend to visit the site to learn about and explore the Bay Model's many educational features.

PROJECT LOCATION AND SETTING

The BMVC is located in the City of Sausalito, Marin County, at 2100 Bridgeway Boulevard on USACE's property. The property contains the BMVC complex, the Bay Model pier. The BMVC is a fully

accessible education center that hosts a working hydraulic model of the San Francisco Bay and Sacramento-San Joaquin river delta system. The USACE property covers approximately 10 acres and is bordered northeast by Richardson Bay, a finger of the greater San Francisco Bay, and southwest by Bridgeway Boulevard. Residential and retail properties are located on the opposite side of Bridgeway Boulevard southeast of the USACE property. The property is also bordered by the Marinship Park to the northwest and commercial and industrial properties to the southeast.

The Master Plan is only applicable to the part of the USACE property in Sausalito as indicated by Map 1.

1.4 PURPOSE OF THE MASTER PLAN

The USACE has administrative responsibility for management of natural and historic resources. The Master Plan provides a programmatic approach to the management of all of the lands included within the BMVC boundary. The Master Plan is the basic guiding document outlining the responsibilities of USACE, pursuant to Federal laws to preserve, conserve, restore, maintain, manage, and develop the project lands and associated resources. The Master Plan is a planning document anticipating what could and should happen, with the flexibility to adapt to changing conditions over the life of the plan. Detailed management and administration functions are handled in the Operational Management Plan (OMP), which translates the concepts of the Master Plan into operational terms.

According to Engineer Pamphlet (EP) 1130-2-550, the primary goals of the Master Plan are to prescribe an overall land management plan, resource objectives, and associated management concepts that: (1) provide the best possible combination of responses to regional needs, resource capabilities, suitability, as well as public interests consistent with authorized project purposes; (2) contribute to a high degree of recreation diversity within the region; (3) emphasize the particular qualities, characteristics, and potential of the project; and, (4) exhibit consistency and compatibility with national objectives and other state and regional goals and programs.

The Master Plan identifies recreational opportunities and measures to preserve and protect natural and cultural resources. The Master Plan also outlines development needs, analyzes special problems, and provides guidance on public use, water quality, invasive species, natural areas, and historic properties within USACE project boundaries.

Due to its uniqueness and proximity to an urban population, BMVC is an untraditional USACE project not affiliated with a dam structure or reservoir. The purpose of this Master Plan is to review existing land uses and resources within the BMVC project area, describe the needs and desires of community stakeholders, prescribe land use classifications, and identify resource and land use objectives. The Master Plan is the USACE's guide for management of the Bay Model Visitor Center.

The Master Plan is intended to be a guide for the future development and management of all land and water resources of the project area. In general, the primary goals of this Master Plan are to memorialize a number of activities, uses, partnership and stakeholder collaborations and management responsibilities that have been in place for a number of years to ensure the sustainability of the BMVC and assets into the future.

The existing recreational, ecological, geological, topographic, and water resources have been evaluated for the purpose of the Master Plan. Recommendations for recreational opportunities, educational development and land use, are based upon the best possible use of available resources with respect to recreational demand.

This Master Plan summarizes existing facility development and will serve as a guide for the recreation and resource management of the total project. The plans for future development will serve as a guide for the preparation of additional detailed plans. A concise review of the Master Plan should be conducted every 5 years to assess the need for possible supplementation or revision to accommodate changing conditions of the project or changing recreational interests of the public.

1.5 MASTER PLAN HISTORY AND REVISION

No prior Master Plan for the BMVC has been written. The BMVC has been operating under a functional plan and the goal for this Master Plan is to provide a guiding document for the future use of the BMVC.

Map 1. Bay Model Visitor Center Project Area

1.6 APPLICABLE LAWS AND POLICY GUIDANCE

The following are a few of the major Federal laws and USACE regulations and guidance pertinent to the Master Plan. For a more comprehensive list, see Appendix A. Public Laws.

The Clean Air Act, as amended (42 U.S.C. §§ 7401-7671q), establishes Federal standards for seven toxic air pollutants. It also establishes attainment and maintenance of National Ambient Air Quality Standards (Title I), motor vehicles and reformulation (Title II), hazardous air pollutant (Title III), acid deposition (Title IV), operation permits (Title V), stratospheric ozone protection (Title VI), and enforcement (Title VII).

The Clean Water Act (CWA), as amended (33 U.S.C. §§ 1251-1387) authorizes water quality programs; requires certification from the state water control agencies that a proposed water resource project is in compliance with established effluent limitations and water quality standards (Section 401); establishes conditions and permitting for discharges of pollutants under the National Pollutant Discharge Elimination System (Section 402); and requires that any non-USACE entity acquire a permit from USACE for any discharges of dredged materials into the waters of the United States, including wetlands (Section 404).

The Endangered Species Act of 1973 (ESA), as amended (16 U.S.C. §§ 1531 et seq.), protects threatened and endangered species, as listed by the United States Fish and Wildlife Service (USFWS), from unauthorized take, and directs Federal agencies to ensure that their actions do not jeopardize the continued existence of such species. Section 7 of the Act defines Federal agency responsibilities for consultation with the USFWS. The Archaeological and Historic Preservation Act, as amended (16 USC 469), requires that Federal agencies consider the effect of their undertakings, including any Federally-licensed activity or program, on historic American sites, buildings, objects, and antiquities of national significance when taking actions that include, but are not limited to, flooding, the building of access roads, relocation of railroads or highways, and other alterations of the terrain caused by the construction of a dam.

The Federal Water Project Recreation Act of 1965, as amended (16 U.S.C. §§ 460*l*-12 to 460*l*-21), requires that recreation and fish and wildlife enhancement be given full consideration in Federal water development projects. The Act authorizes the use of Federal water resource project funds for land acquisition in order to establish refuges for migratory waterfowl.

The Flood Control Act of 1944, Section 4, as amended (16 U.S.C. 460d) authorizes USACE to construct, maintain and operate public park and recreation amenities at water resource development projects; to permit construction of such amenities by local interests; to permit the operation and maintenance of such amenities by local interests; and to grant leases for public park and recreational purposes on Federally-owned lands controlled by USACE, including structure or amenities thereon. Preference for

use is given to Federal, state, or local governmental agencies. The authority to issue licenses is included under this authorization and may be granted without monetary consideration.

The Migratory Bird Treaty Act, as amended (16 U.S.C. §§ 703-712) prohibits the taking or harming of any migratory bird, living bird, any part of the bird, or bird eggs without an appropriate Federal permit.

The National Environmental Policy Act of 1969 (NEPA), as amended (42 U.S.C. §§ 4321 *et seq*.) provides a framework for Federal agencies to analyze, disclose impacts, and minimize environmental impacts of their proposed actions. Under NEPA, a Federal agency prepares an Environmental Assessment (EA) describing the environmental effects of any proposed action and alternatives to that action to determine if there are significant impacts requiring development of an Environmental Impact Statement (EIS) or if a Finding of No Significant Impact (FONSI) is appropriate. The EA must identify measures necessary to avoid or minimize adverse impacts, and all impacts must be reduced to a level below significance in order to rely upon a FONSI.

The National Historic Preservation Act of 1966 (NHPA), as amended (16 U.S.C. §§ 470 et seq.), requires that Federal agencies consider the effect of their undertakings, including Federally licensed activities or programs, on properties eligible for the National Register of Historic Places. Under Section 106 of the National Historic Preservation Act, a Federal agency establishes an undertaking and determines whether Section 106 review is needed for the proposed undertaking. If it is determined that Section 106 review is needed for the established undertaking, the Federal agency then works to identify potential historic properties by defining the Area of Potential Effects (APE) and working with the State Historic Preservation Office and interested Native American tribes to survey for any potential cultural resources within the APE. The Federal agency then works to assess whether or not the proposed undertaking will result in any adverse effects to historic properties within the APE. If it is determined that the proposed undertaking will result in adverse effects to historic properties, the Federal agency then works to either avoid or minimize those effects through the development of an agreement document.

The Section 106 process will be followed prior to the authorization of any projects that result from the implementation of the BMVC Master Plan. This means that future projects will either be designed in such a way that they do not damage or otherwise impact significant cultural resources; or the damage they may cause will be mitigated. Section 110 requires that Federal agencies be good stewards of the cultural resources located on their lands. This includes a responsibility to maintain and preserve any historic structures, to conduct surveys to identify cultural resources on their lands and evaluate the significance of those resources.

Regulatory Framework

Federal Regulations

The NHPA of 1966 and its implementing regulations require projects conducted by a Federal agency, on Federally owned land, or involving Federal permits, grants or loans to evaluate the effects on historic properties including eligibility or listing on the National Register of Historic Places, and afford the Office of Historic Preservation (OHP) an opportunity to comment on these actions.

The California Historical Resources Information System is the statewide system for managing information on historical resources in California. The Northwest Information Center at California State University, Sonoma is consulted by those with environmental review responsibilities in Mendocino County.

The State's OHP has primary responsibility for the administration of historic preservation programs in California through *California's Comprehensive Statewide Historic Preservation Plan* and other laws and regulations.

The National Register of Historic Places lists districts, sites, buildings, structures, and objects 50 years of age or more with significance in American history at the local, state, or national level, that meet one of the following criteria:

- association with events that made a significant contribution to the broad patterns of history;
- associated with the lives of persons significant to our past;
- embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- yielded or may be likely to yield, information important in prehistory or history.

The American Indian Religious Freedom Act (AIRFA) (42 USC 1996), of 1978, protects the rights of Native American to exercise their traditional religions by ensuring access to sites, use and possession of sacred objects, and the freedom to worship through ceremonial and traditional rites.

The Archaeological Resources Protection Act (ARPA) (16 USC 470 et seq.), of 1979 recognizes the importance of the Nation's heritage of archaeological resources on public and Indian lands, and sets forth a process for permitting the excavation or collection of archaeological resources on public or Indian lands and establishes criminal penalties, including fines and incarceration, for the unauthorized excavation or collection of such resources.

The Native American Graves Protection and Repatriation Act (NAGPRA) (25 USC 3001 et seq.), is a federal law passed in 1990 that provides a process for museums and federal agencies to return certain Native American cultural items – human remains, funerary objects, sacred objects, or objects of cultural patrimony – to lineal descendants, and culturally affiliated Indian tribes and Hawaiian

organizations. NAGPRA includes provisions for unclaimed and culturally unidentifiable Native American cultural items, intentional and inadvertent discovery of Native American cultural items on federal and tribal lands, and penalties for noncompliance and illegal trafficking. In addition, NAGPRA authorizes Federal grants to Indian tribes, Native Hawaiian organizations, and museums to assist with the documentation and repatriation of Native American cultural items, and establishes the Native American Graves Protection and Repatriation Review Committee to monitor the NAGPRA process and facilitate the resolution of disputes that may arise concerning repatriation under NAGPRA.

The Americans with Disabilities Act of 1990, as amended, (42 U.S.C. §§ 126 et seq.), prohibits public entities, defined as any state or local government, or division thereof, from excluding any individual with a disability from participation in or be denying the benefits of the services, programs, or activities of a public entity, or being subjected to discrimination by any such entity. A "qualified individual with a disability" is an individual with a disability who, with or without reasonable modifications to rules, policies, or practices, the removal of architectural, communication, or transportation barriers, or the provision of auxiliary aids and services, meets the essential eligibility requirements for the receipt of services or the participation in programs or activities provided by a public entity.

USACE Regulations

Easements for Rights of Way, as amended (10 U.S.C. §§ 2688), authorizes USACE to issue easements for rights-of-way over, in, and upon Federal land controlled by USACE when such use will not be against the public interest.

Engineer Regulation (ER) 1130-2-550, Recreation Operations and Maintenance Policies, 15 Nov 1996, as amended establishes the policy for management of recreation programs and activities, and for the operation and maintenance of USACE recreation amenities and related structures, at civil works water resource projects. Chapter 3 of this regulation calls for preparation and implementation of project Master Plans and OMPs.

CHAPTER 2 – PROJECT SETTING AND FACTORS INFLUENCING RESOURCE MANAGEMENT AND DEVELOPMENT

2.1 BAY MODEL ACCESS

The Bay Model Visitor Center is readily accessible from U.S. Highway 101, which is located 2 miles to the west. U.S. Highway 101 is the major artery connecting the San Francisco metropolitan area with Northern California. The BMVC itself sits along the beautiful waterfront of Sausalito in Marin County, California (See Figure 1). In addition to access by driving, the BMVC is accessible by regular ferry service from San Francisco to Sausalito, with the BMVC about a mile away from the ferry terminal along the waterfront. Golden Gate Transit route 70 and 30 offers public transportation between Marin County and San Francisco, making stops adjacent to the BMVC several times a day. The BMVC has parking access behind and adjacent to the model itself.

Figure 1: Bay Model Visitor Center Map

2.2 DESCRIPTION OF THE BAY MODEL VISITOR CENTER

The Bay Model

The Bay Model building encompasses approximately 122,500 square feet of floor space and is a wood-framed, two-story warehouse with a series of seven barrel-vaulted roofed bays running east-to-west. Exterior and interior modifications have been made over the past 50 years. In 1954, the building's interior was altered to accommodate the hydraulic model, and in 1980, the eastern façade of the building was remodeled to house the Visitors Center (Gallagher 2011 as cited in Knapp and VerPlanck 2011). The exterior wood siding was replaced with stucco sometime before 1979.

Land Ownership History

The BMVC sits on the former 210 acres of the Marinship yard, a site in Northern Sausalito along Richardson's Bay. In 1946, the War Assets Department transferred Marinship to the U.S. Army Corps of Engineers, although USACE did not obtain final title to the property until 1949. USACE has retained 11.4 acres for operations and in 1957 the Bay Model was constructed to study the water flows in the San Francisco Bay. The model itself stopped scientific research in 2000, but maintained the operations to be used as an educational visitor center. Today, the BMVC is open and staffed by USACE rangers and volunteers offering interpretive and education focusing on water policy, marine life, estuaries, cultural resources, and relevant environmental issues.

Recreational and Facilities Development

In 2012, the Bay Model celebrated the completion of many renovations that were funded by the American Recovery and Reinvestment Act. The BMVC was awarded $15.5 million to accomplish the following:

- Install 2,492 solar panels
- Stabilize the Bay Model itself
- Audio tour upgrade for the visually impaired
- Install new carpeting
- Install new fish tanks
- Install seismic upgrades both in the interior and the exterior of the building
- Install the new deck
- Install new efficient lighting
- Install a new roof
- Painting of the entire building

Pier

There is a pier that extends into Richardson Bay off the Bay Model property. The pier provides access to USACE debris removal vessels that regularly patrol San Francisco Bay to keep clear of hazards. In addition to hosting the debris removal vessels, the pier hosts access to a commercial kayak rental company, SeaTrek, as well as the non-profit Call of the Sea. Both

SeaTrek and Call of the Sea provide recreation to the public and school groups and partner with the BMVC and USACE as a whole.

Native Plant Garden

The Marin County chapter of the California Native Plant Society designed and planted a native plant pollinator garden at the BMVC. The garden is approximately 100 feet long, and is planted with various wildlife habitats suited for songbirds, hummingbirds, butterflies as well as a Monarch butterfly way station. The plants at the garden are also suited to attract honeybees. There is educational signage at the garden to educate visitors and passerby about the important role native plants play in our society.

Parking Lot

There is a triangular parking lot immediately West of the BMVC. The parking lot is often filled by employees, volunteers and regular visitors, and it is especially crowded when the BMVC hosts large events. The roadway that circulates the parking lot is one way and there are trees in the median. Behind the parking lot is a small hillside that divides the parking lot from Bridgeway Road, a main thoroughfare.

2.3 HYDROLOGY (SURFACE WATER, GROUND WATER)

Sausalito and the BMVC are located in the Richardson Bay Watershed at the base of the Marin Headlands and connected to San Francisco Bay. Richardson Bay is the only surface water feature located in the vicinity of the Bay Model, bordering BMVC property to the northeast. There are no known creeks that run through or near the Bay Model property, which is adjacent to the Bay Model.

Any surface water flow across the property falls as rain and runs off into Richardson Bay. Rain flows from the northern tributaries of the watershed and is conveyed along curbs, gutters, culverts, and smaller individual storm drain pipe networks as it makes its way to Richardson Bay (City of Sausalito 2019). Overland flooding on the Bay Model property is not typically a concern, though ponding and localized flooding typically occur on the BMVC parking lot and nearby in the Marinship due to poor drainage.

When high tides occur alongside rain events, stormwater is unable to drain into Richardson Bay and backs up overland. Continued subsidence and sea level rise will increase the frequency at which heavy precipitation events and high tides coincide, causing more frequent flooding along the shoreline (Sausalito Waterfront Marinship Vision 2010).

In the San Francisco Bay area, sea level has been rising by approximately 2.011 mm/year (2006 rate), and is expected to rise at increasing rates in the future. Given that the Bay Model Visitor

Center is next to Richardson Bay, it may, in the future, suffer from erosion and flooding due to sea level rise associated with high storm events (See Figure 2).

There is no groundwater basin in or near the project area (DWR Bulletin 118 2019) although the depth to the water table is quite shallow in areas developed on fill. This means that as sea levels change around Richardson and San Francisco Bay, so will the water table along with it

2.4 WATER QUALITY

The open-water estuarine community of Richardson Bay offers a diversity of aquatic and bird habitat, as well as other beneficial uses of surface waters. The San Francisco Bay Regional Water Quality Control Board identified beneficial uses of surface waters in Richardson Bay to inform the local water quality objectives standards. These uses are: industrial service supply, commercial and sport fishing, shellfish harvesting, estuarine habitat, fish migration, preservation of rare and endangered species, fish spawning, wildlife habitat, water contact recreation, noncontact water recreation, and navigation (Waterboard 2017).

The BMVC does not manage any water resources, however it is adjacent to Richardson Bay so activities on site could affect water quality in the bay. The mechanisms for these effects would likely be from surface water runoff from the Bay Model (i.e., the parking lot) into Richardson Bay, or from use of the main pier. BCDC (1983) found that because of its enclosed shape, shallowness, and minimal tidal flushing action, Richardson Bay has poor pollutant dispersion capability and low assimilative capacity which makes it susceptible to pollutant concentration. The Sausalito General Plan update (2019) notes that the most recent Marin County Stormwater Pollution Prevention Program Annual Report identified Richardson bay as exceeding coliform bacteria water quality standards (Appendix G-2)), and BCDC found that stormwater runoff is the principal source of pollution entering surface and ground waters in the San Francisco Bay region (BCDC 2003).

Tidal flooding poses additional risk to local water quality because high waters from Richardson Bay spill onto roadways and adjacent properties. Receding waters then transport the contaminants collected from those surfaces to the waters of San Francisco Bay. In the Marinship area, for example, flood waters may have nitrogen, herbicides, and insecticides that come from residential areas and city parks; or toxic chemicals and oil from urban runoff or US Highway 101 (City of Sausalito 2019).

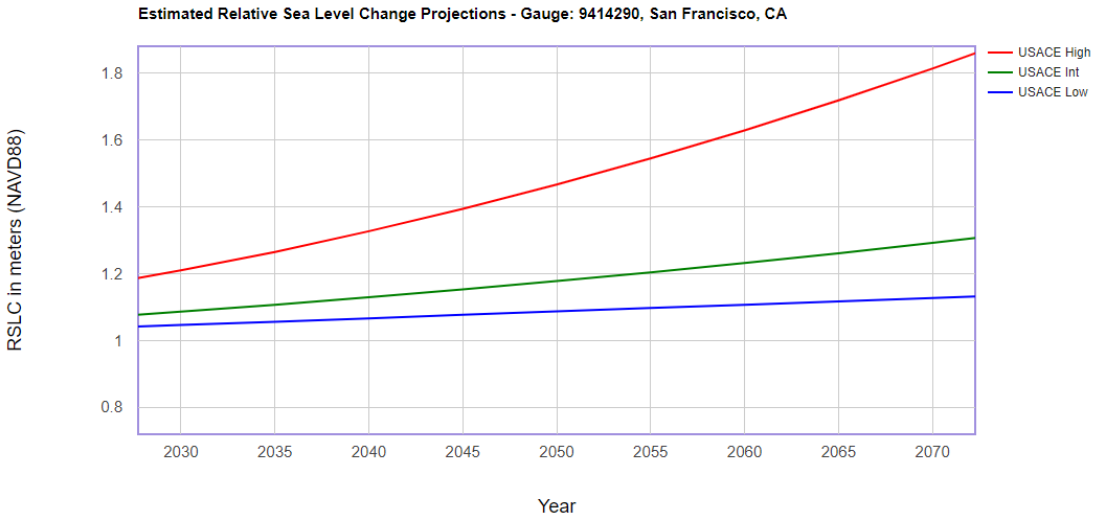

Figure 2: Projected Sea Level Change, USACE Sea Level Calculator

2.5 TOPOGRAPHY, GEOLOGY, SOILS, AND SEISMICITY

Topography

BMVC sits within the central portion of the Coast Range Geomorphic Province of California, at the base of the foothills and southeast of Mount Tamalpais. This area is home to valleys and mountain ranges parallel to the San Andreas Fault systems (City of Sausalito 2019). Elevations above mean sea level in southern Marin County range from 2580 feet in the Marin Headlands (Northern California Coast Range), to mean sea level along the Richardson Bay shoreline. The BMVC property sits at roughly 11.5 feet above mean lower low water and is relatively flat.

Geology, Soils, and Seismicity

Local geology is comprised of underlying bedrock of the Franciscan Assemblage unit of the upper Jurassic to Cretaceous age (140 to 65 million years old). Colluvium soil is found in the hillside swales and valleys, while the low-lying areas adjacent Richardson Bay, including the BMVC, overly natural bay mud and man-made fill (See Figure 3).

The BMVC is vulnerable to a number of natural hazards as it sits in in a seismically active region (mainly the San Andreas Fault system 6.5 miles southwest) and adjacent Richardson Bay (See Figure 4) The last recorded ground rupture in the county was in 1906 (Marin County Open Space District 2013) and studies suggest a 62 percent probability of a fault rupture with a magnitude of 6.7 or greater by the year 2032 that could affect the Bay Area. Because the BMVC was built on fill overtop of bay mud, it is particularly susceptible to ground shaking, increasing the potential and severity of damage to the BMVC.

According to the ABAG Resilience Program (ABAG 2006), the USACE property is very highly susceptible to liquefaction (dark brown in Figure 5 below). Large earthquakes has caused liquefaction regionally, although nothing documented on site of the BMVC.

Though the surrounding areas have been vulnerable to landslides during heavy precipitation, reports from the USGS suggest few have occurred in the area of the BMVC (USGS 1997 cited in MCOSD 2008). Landslides were primarily concentrated in the northwestern part of Sausalito near the hillside terrain. However, in February 2017, a landslide occurred south of the BMVC on San Carlos Avenue near Bridgeway Boulevard which caused power outage. Furthermore, debris flows caused during landslides and heavy rains could come to rest at the BMVC and its vicinity. (City of Sausalio)

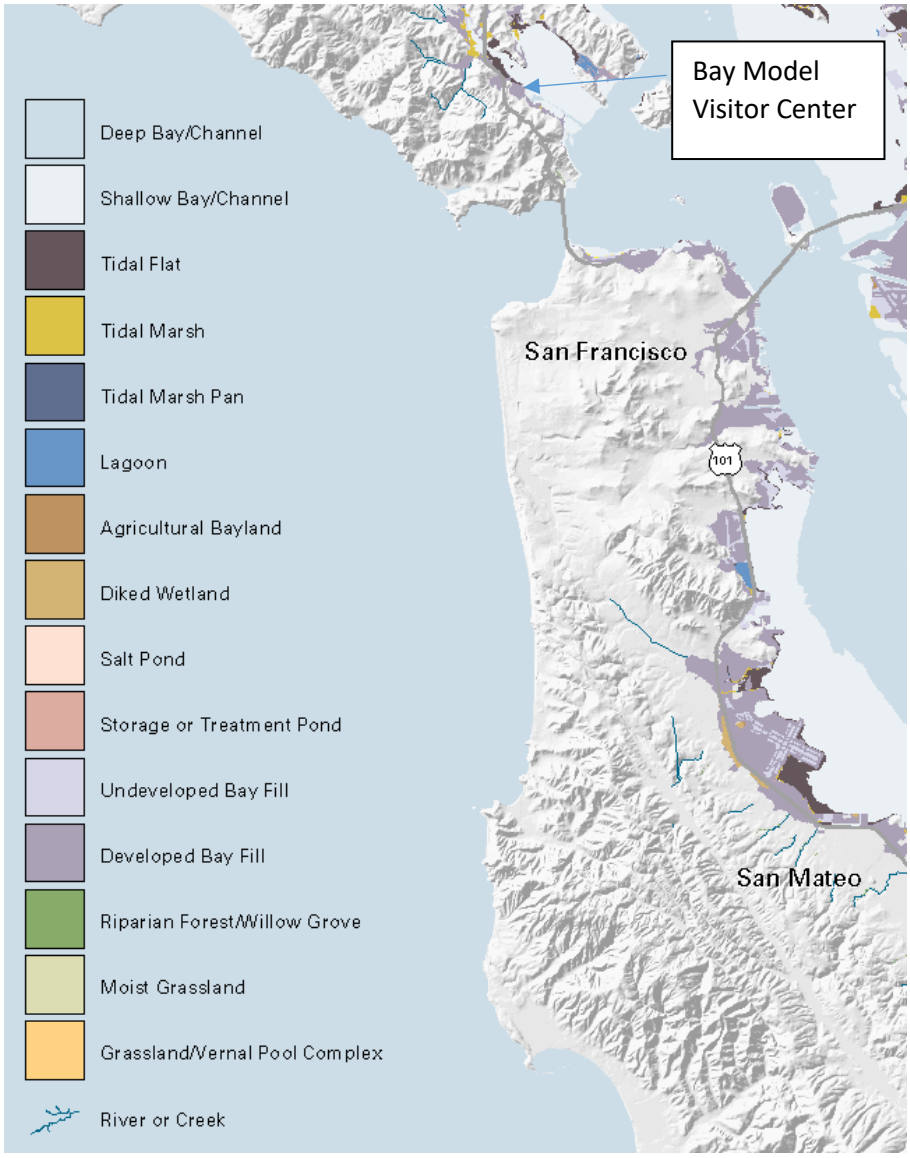

Figure 3: Fill and Habitat in the BMVC region; map courtesy of the San Francisco Estuary Institute (SFEI)

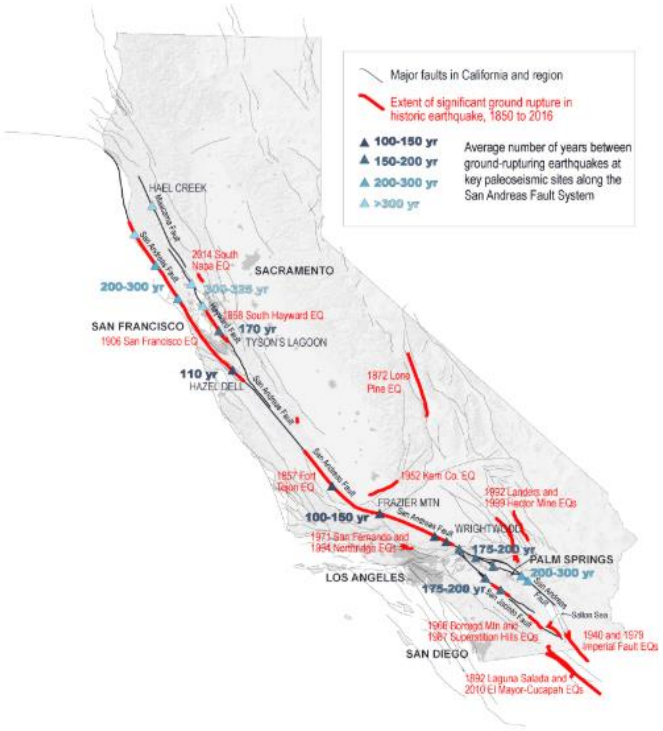

Figure 4: San Andreas Fault and historic ruptures; Map courtesy of usgs.gov

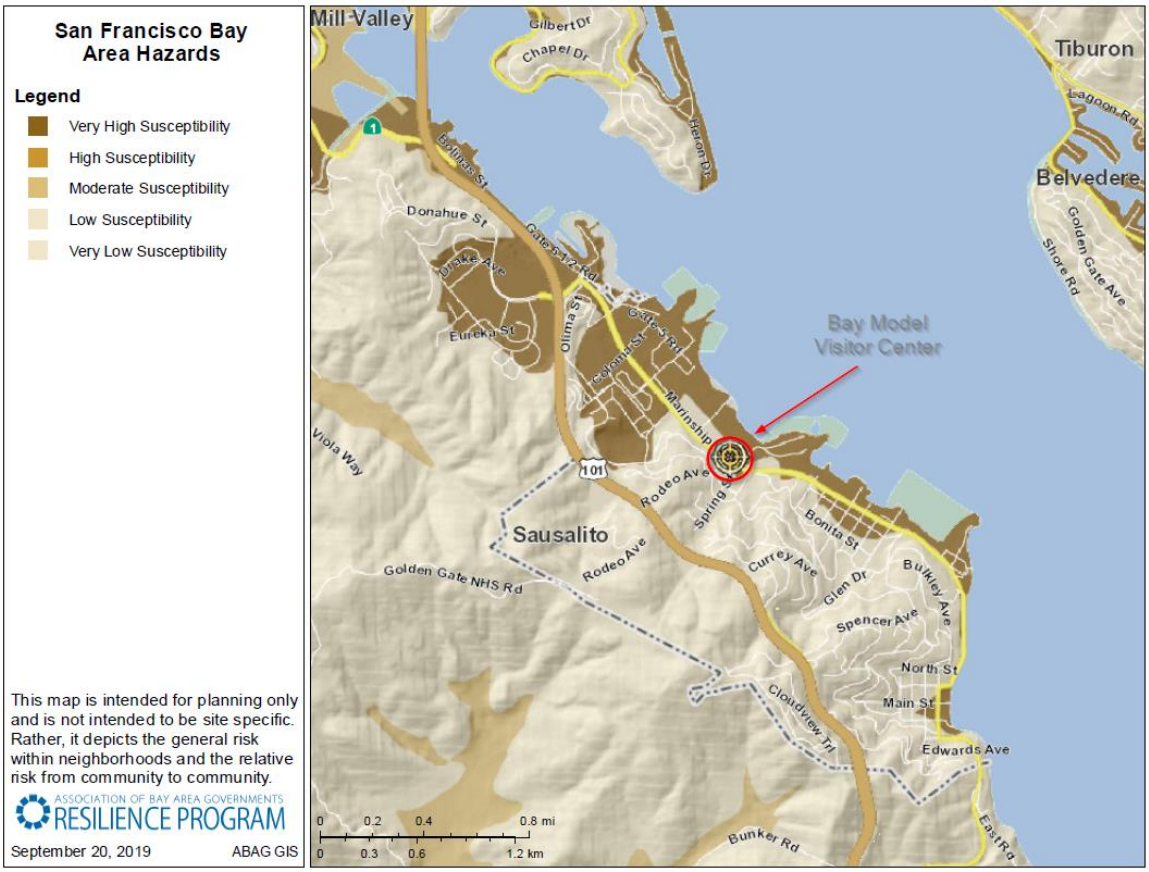

Figure 5: San Francisco Bay Area Hazards

2.6 CLIMATE

Sausalito experiences a climate classified as CSC, or “cold-summer Mediterranean climate” by the Koppen climate classification system. Sitting on the Bay and very near the Pacific Ocean, Sausalito has a high incidence of maritime air, with heavier winds occurring in the summer time (City of Sausalito 2019). In the winter, the ocean keeps the temperatures relatively mild (roughly 50 F) with little fluctuation in temperatures throughout the year, reaching the low 60s in the summer. Average annual precipitation at the nearest monitoring location (San Rafael Civic Center) is 35.59 inches. Most precipitation falls between November and April, with the rainiest month being January (See Figure 6).

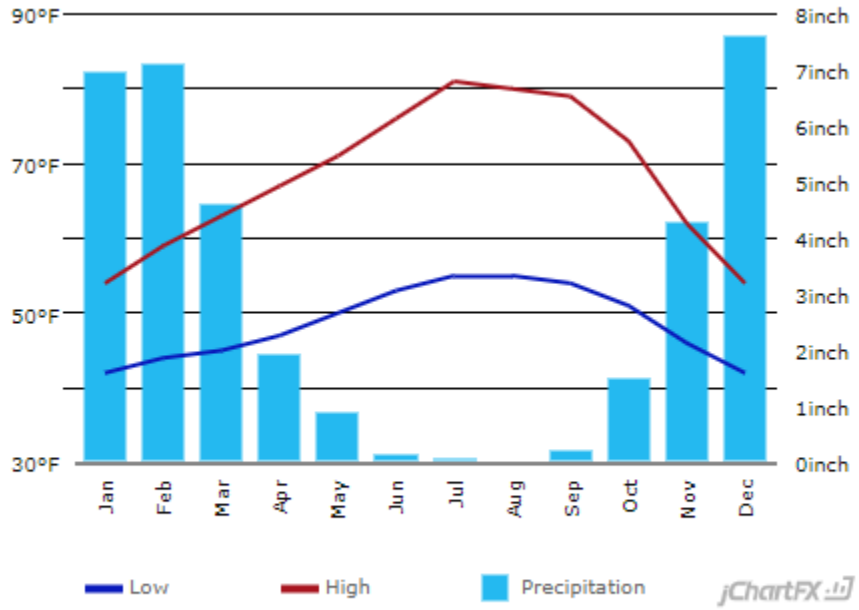

Figure 6 Climate Data, Sausalito, California

2.7 FISH AND WILDLIFE RESOURCES

Fisheries

The Marin Watersheds Program (2019) identified a number of fish species present in Richardson Bay, including Bay pipefish, bat ray, black surfperch, northern anchovy, Pacific herring, striped bass, and threespine stickleback. Pacific herring in particular are an important commercial fish, attaching their eggs to the eelgrass during the spawning season (City of Sausalito 2019). The General Plan Update notes that over 100 marine fish species utilize the Sausalito coastline on their way from San Francisco Bay to the Pacific Ocean.

Wildlife

The project site and proposed action area consist primarily of asphalt and ornamental vegetation, providing minimal and poor quality terrestrial habitat for biological resources. However, there are several marine mammals that frequent the waters next to the BMVC area in Richardson Bay that are protected under the Marine Mammal Protection Act if 1972. These include the Harbor seal (*Phoca vitulina)*, the California sea lion (*Zalophus californianus),* the Harbor porpoise (*Phocoena phocoena),* and the Southern Sea Otter (*Enhydra lutris nereis*).

The latest General Plan update also notes that the substrate along the coastline may house marine works and clams and the rip rap along the shore may support mussels and barnacles.

Richardson Bay supports numerous waterbirds, shorebirds, and waterfowl (Marin Watersheds Program 2019) including Great blue heron and great egret nesting colonies, cormorants, brown pelicans, grebes, and diving ducks (Audubon Society, 2018). In addition, the BMVC is located on the Pacific Flyway, which is an important migratory bird corridor. Several migratory bird species may occur within the project area, including the Bald eagle (*Haliaeetus leucocephalus),* the Black oystercatcher *(Haematopus bachmani),* and the Burrowing owl *(Athene cunicularia).*

Threatened and Endangered Species

There are no threatened or endangered species expected to be present on site. However, the endangered California least tern (Sterna antillarum browni) may forage at the site ((U.S. Fish and Wildlife Service , 2006)

Critical habitat

There is no critical habitat as defined in the Endangered Species Act as indicated by an inquiry from the USFWS IPAC tool. However, Richardson Bay is a critical estuarine habitat for Winter-

run Chinook salmon and the least tern, according to the National Marine Fisheries Service (NMFS).

2.8 VEGETATION

The BMVC is in an urban area and the project site is mostly paved. As a result, the project footprint encompasses relatively low-quality habitat for robust vegetation communities. The upland areas of the facility are mostly landscaped with ornamental trees and little to no natural habitat. On site, the Marin Chapter of the California Native Plant Society designed and built a native plant garden in front of the visitor building. The garden is over 100 ft. long and contains more than 75 species of native plants, including *Salvia mellifera* (Black Sage), *Arctostaphylos glandulosa f. repen* (Manzanita), and *Ceanothus thyrsiflorus repens* (California Liliac) among others.

Richardson Bay includes several aquatic species including eelgrass (the second largest eelgrass bed in the Bay is found near Sausalito (Marin Watersheds 2019). Eeelgrass is given special status under the 1972 amended Clean Water Act as a Special Aquatic Site (Merkel and Associates 2004). *Zostera marina* in Richardson Bay along the shoreline is the only sea grass found in San Francisco Bay (Marinship Vision 2010). Eelgrass provides essential food, shelter, and spawning habitat for local birds, like the California least tern, fish (like the Pacific herring, who spawn heavily in Richardson Bay), and invertebrates (City of Sausalito, 2010). The eelgrass offers a haven for crabs and scallops (GPU 2019). A 1989 survey indicated that at that time, eelgrass populations in San Francisco Bay were “patchy” and “stressed” (Marinship Vision 2010).

Wetlands

The BMVC property is primarily terrestrial, but the pier is located in an area classified as estuarine and marine deep water habitat type (United States Fish and Wildlife Service). Subsystems include the subtidal zone, where habitats are continuously covered with tidal water (U.S. Fish & Wildlife Service).

Invasive Species.

Invasive species that may occur in Richardson Bay include the Gemme gemma clam, a prominent member of Bay mudflat clam communities, Atlantic oyster drills, and Grateloupia lanceolata, or Kawaguchi, a red alga has also recently been found in Richardson Bay.

2.9 CULTURAL RESOURCES

This section is written to assist the USACE with its continued interests and responsibility in preserving and managing the cultural and historical resources around the BMVC. The cultural

and historical resources at the BMVC, primarily through the preservation of the museum and hydraulic model, play an important role in the future management of the BMVC.

BMVC Cultural Chronology

Sausalito was occupied for more than 3000 years by the Coastal Miwok tribe (Sausalito Chamber of Commerce 2019) prior to arrival of Europeans in the late 1700s and early 1800s. The original village along the present day Sausalito shoreline was called, Livaneglua. William Richardson for whom Richardson Bay was named arrived to Sausalito in the early 1800s and acquired Rancho Sausalito. The land was subsequently sold to the Sausalito Land and Ferry Company, which proceeded to develop the land, laying down streets and subdividing the waterfront into several lots. In 1875 a railway line was extended from the north, bringing tracks to the center of town and transforming Sausalito into a transportation hub. Over the next century Sausalito and the nearby region became an economic hub with Portuguese shipbuilders, dairy ranchers, Italian and German merchants, boarding house operators, and Chinese railroad workers. (Sausalito Historical Society , 2015).

Marinship, the WWII Effort and the BMVC

The BVMC building is a former warehouse for the Marinship shipyard (the yard), a massive World War II era industrial development for ship building constructed by the Bechtel Corporation in 1941-1942. The shipyard was built to expedite shipbuilding during World War II (USACE 2009) and the Base Yard building, adjacent to the Bay Model, served as the shipyard's outfitting shop (Knapp & VerPlanck Preservation Architects, 2011). Marinship shipyard was constructed in 3 months, and employed around 20,000 workers, including women and African Americans. The shipyard significantly contributed to the war effort by facilitating the construction of ninety-three ships during World War II, including fifteen liberty ships, sixty-two tankers, and sixteen oilers. Today the BMVC includes a Marinship museum dedicated to this extraordinary local effort and was opened to the public in 1990.

After a prolific shipbuilding period, the General Services Administration transferred a portion of the shipyard to the USACE San Francisco District in 1949 (1946 is one reported date) for their post-war Pacific Island Reconstruction project. Approximately 67.5 acres of the 210–acre Marinship Park was transferred to the San Francisco District in the 20th century (Finnie 1947). This reduced Corps real estate holdings in 1979-1980 to 11.4 acres— and is now referred to as the Base Yard facility (Gallagher 2011 as cited in Knapp & VerPlanck 2011). Marinship Vision 2010 suggests the USACE now holds only 6 acres.

At that time, the facility included the Bay Model building, two other warehouse buildings (a shop and a materials-testing laboratory), a storage building, and one pier used by the District to unload and process debris collected in the Bay by its specialized boats. The pier is one of the original "outfitting pier" of Marinship used to finish ships that were moved down the shipways. The Base Yard building was then used to house USACE's Navigation Department.

Following passage of the Rivers and Harbors Act of 1950, the USACE constructed the San Francisco Bay Model in 1957 to conduct a preliminary examination and survey for the

development of San Francisco Bay and testing of the Reber Plan. Housed in in Building 29 of the former shipyard, the Bay Model is a three-dimensional hydraulic scale model of the San Francisco Bay and Delta areas and is capable of simulating tides and currents. It is over 1.5 acres in size and represents an area from the Pacific Ocean to Sacramento and Stockton, including: the San Francisco, San Pablo, and Suisun Bays and a portion of the Sacramento - San Joaquin Delta. Following the Corps findings in 1963, scientific study of the Bay continued as the focal point for the model. Public interest in the model attracted tourists, school children, university students and local residents to visit the project in great numbers. The Delta portion of the model was added from 1966 to 1969 to provide information for studies concerning the impacts of deepening navigation channels, realignment of Delta channels (the "peripheral canal") and various flow arrangements on water quality.

By 2000, advanced computer software programs replaced the Corps' hydraulic modeling efforts in San Francisco Bay and the physical model was no longer needed for such efforts.

Today, the Bay Model is still an important resource for the community and the BMVC continues to retain its maritime feel. It was identified in the Marinship Vision process (2010) as providing maritime public benefits. Though no longer used for hydraulic analysis, the BMVC serves as a conference and educational center, a site for occasional congressional visits, and for educational programming. The BMVC and interpretive staff provide public programs focusing on water policy, marine life, estuaries, cultural resources and environmental issues relevant to the San Francisco Bay and Delta regions.

Cultural resources management and preservation

The Bay Model building has demonstrated historical importance as one of the surviving industrial properties of the Marinship area, and is associated with events (shipbuilding) that have made a significant contribution to the broad patterns of United States history. Making it potentially even more unique, the Marinship area is the only remaining industrial area along the Sausalito waterfront (Marinship Vision 2010). The BMVC building also represents a significant contribution to the war effort and is associated with the Bechtel Corporation executives, particularly W. E. Waste and K. K. Bechtel, pioneer builders in California and the West. Such industrial buildings are important architectural elements of the Sausalito working waterfront and, thus, are defining characteristics unique to the area.

To date, the BMVC has not been identified under the NHPA as a cultural or historical resource. However, a recent assessment suggests that the building meets two of the National Register criteria: its association with the shipbuilding effort of World War II and the Bechtel Corporation, and as a surviving example of wartime construction. The building embodies the distinctive characteristics of wartime buildings, and the 50-foot wide "areaways" have been retained between the buildings of the Base Yard, illustrating the way in which wartime shipyards were laid out. Despite the interior and exterior modifications, the building retains to various extents several measures of integrity: location, materials, design, workmanship, feeling, setting, and association.

2.10 DEMOGRAPHICS AND ECONOMICS

As of the 2010 Census, the City of Sausalito had a total population of 7,061 people. The population estimate for 2018 was 7,100. In 2010, the median age was 54.4 years and the average household size was 1.74 persons. The median household income in 2016 was $110,385. The majority of residents in Sausalito identified as white, with Hispanic being the largest minority group in 2010.

Table 1 compares the population in 2018 for several counties, including Marin County, to their corresponding growth rates between 2010 and 2018. Marin County experienced nominal population growth in this period. A forecast of population growth by county done by the California Department of Finance shows that the population of Marin County will have grown by about 10,795 between 2010 and 2020. The projected population for Marin County by 2060 is approximately 264,739.

County	2018 Population	Average Growth Rate (2010 to 2018)
Marin	259,666	2.9%
Solano	446,610	8.1%
Sonoma	499,942	3.3%
Napa	139,417	2.1%
Alameda	1,666,753	10.4%
San Francisco	883,305	9.7%
Contra Costa	1,150,215	9.6%
San Mateo	769,545	7.1%

Table 1. Current Population by County and Average Growth Rate.

The majority of the population that utilizes the BMVC resides in or near Marin County. The per capita income in Marin County is $66,748 in the year 2017.

An economic and demographic profile of Marin County was completed by Data USA. The study revealed a comprehensive analysis of the Marin County economy. “Other Management Occupations” comprise the largest percentage of jobs (10%). Figure 7, shown below, shows the distribution of jobs in Marin County.

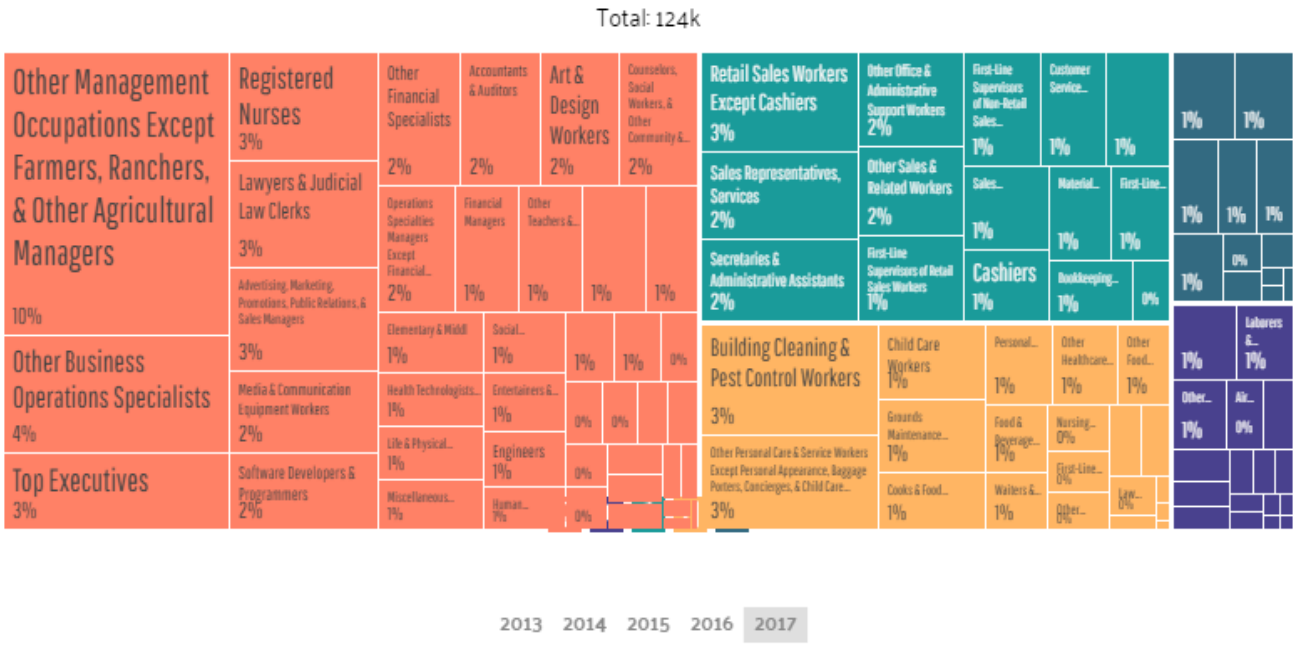

Figure 7. Distribution of jobs by industry in Marin County

2.9 REGIONAL ACCESS AND TRANSPORTATION

2.9.1 Road Access

The Bay Model Visitor Center is readily accessible from U.S. Highway 101, which is located 2 miles to the west. U.S. Highway 101 is the major artery connecting the San Francisco metropolitan area with Northern California. The BMVC itself sits along the beautiful waterfront of Sausalito, California. Driving to the BMVC from the South (San Francisco), visitors can exit from Alexander Avenue, Rodeo Avenue or North Bridge Blvd. Driving from the North (from Marin and Sonoma Counties), visitors can exit Highway 101 on North Bridge Blvd. The BMVC has parking access behind and adjacent to the model itself. The parking lot, however, is prone to localized flooding due to poor drainage systems. It could also benefit from signage improvements and other recommendations, as mentioned in Management Unit (MU) 2 in the later part of this document.

2.9.3 Non-motorized Transportation

Cycle routes are incredibly popular in Sausalito. In San Francisco, there are many companies that offer bike rental with specific bike routes over the Golden Gate Bridge and then offer riders a ride back to San Francisco on the ferry from Sausalito. Bike tourism is popular in Sausalito and many tourists stop by the BMVC.

2.9.2 Public Transportation

Golden Gate Transit route 70 and 30 make stops adjacent to the BMVC several times a day between Marin County and San Francisco. In addition to access by driving, the BMVC is accessible by regular ferry service from San Francisco to Sausalito, with the BMVC about a mile away from the ferry terminal along the waterfront.

2.10 REAL ESTATE

2.10.1 Real Estate Acquisition Policy

The property that the BMVC sits on was authorized originally in Public Law 355, 81st Congress, approved on 13 October 1949. Following this original authorization, there was a design memoranda on 5 June 1970 and again on 26 November 1973 (amended 23 July 1974). SF -118.

2.10.2 Real Estate Management

Since 2000, there has been no Congressional land use authorizations. Real Estate Management actions have occurred several times, however. The next section provides a succinct documentation of the latest real estate management.

2.10.3 Outgrant Register

Please see appendix D for the full outgrant documentation. Table 2, below succinctly describes the outgrant register at the Bay Model.

OUTGRANT REGISTER

MAP ID	CONTRACT NO.	CONTRACTEE	Area (Acres)			NOTES\REMARKS
			EASM'T	PERMIT	LICENSE	
1	DACW05-2-85-557A	FRANK ANNICELLI				EASEMENT DTD 24 MAY 1985 FOR 30 FOOT RIGHT-OF-WAY FOR JOINT USE OF NAVIGABLE WATERS ON THE NORTH SIDE OF THE SOUTH DOCK. NO AREA LISTED.
2	DACW05-2-86-555A	MARINA PLAZA, A PARTNERSHIP	0.14			EASEMENT DTD 29 DEC 1986 FOR ROAD RIGHT-OF-WAY.
3	DACW05-2-86-582	UNITED STATES POSTAL SERVICE	0.63			EASEMENT DTD 23 JUL 1986 FOR ROAD RIGHT-OF-WAY.
4	DACW05-2-04-552	SAUSALITO-MARIN SANITARY DISTRICT	0.11			EASEMENT DTD 19 OCT 2004 FOR SEWER PIPELINE; EXPIRES 18 OCT 2054.
5	DACW05-2-11-539	SAUSALITO-MARIN SANITARY DISTRICT			0.08	LICENSE DTD 18 FEB 2011 FOR THE INSTALLATION OF 2 UNDERGROUND PRE-CAST CONCRETE VAULTS AND PIPING (SEWER OVERFLOW MITIGATION IMPROVEMENTS); EXPIRES 31 JAN 2021.
6	DACW05-3-99-601	RICHARDSON BAY REGIONAL AGENCY				LICENSE DTD 27 OCT 1999 FOR HAUL OUT AND DISPOSAL OF WRECKS; EXPIRES 31 OCT 2019. NO AREA LISTED.
7	DACW05-3-00-524	AMERICAN RED CROSS, BAY AREA CHAPTER				LICENSE DTD 16 OCT 2000 DISASTER RESPONSE; AMENDMENT NO. 1 DTD 09 MAR 2004; AMENDMENT NO. 2 DTD 09 SEP 2010; AMENDMENT NO. 3 DTD 31 MAR 2014; EXPIRES 01 APR 2019. NO AREA LISTED.
8	DACW05-3-14-559	BAY MODEL ALLIANCE			0.20	LICENSE DTD 13 NOV 2014 TO OPERATE VISITOR CENTER BOOKSTORE, 1,000 SQ. FOOT OFFICE SPACE, 700 SQ. FOOT PARKING AND UTILIZING DOCK; EXPIRES 31 OCT 2019.
		TOTAL	0.88		0.28	

Table 2 Outgrant Register

CHAPTER 3 – RESOURCE OBJECTIVES

3.1 GOALS AND OBJECTIVES

The terms “goal” and “objective” are often defined as synonymous, but in the context of this Master Plan, goals express the overall desired end state of the Master Plan whereas objectives are the specific task-oriented actions necessary to achieve the overall Master Plan goals.

The following are the goals for the Bay Model Visitor Center Master Plan based on EP 1130-2-550, Chapter 3:

GOAL A. Provide the best management practices to respond to regional needs, resource capabilities and suitability, and expressed public interests consistent with authorized project purposes.

GOAL B. Protect and manage project natural and cultural resources through sustainable environmental stewardship programs.

GOAL C. Provide public outdoor recreation opportunities that support project purposes and public demands created by the project itself, while also sustaining project natural resources.

GOAL D. Recognize the particular qualities, characteristics, and potentials of the project.

GOAL E. Provide consistency and compatibility with national objectives and other Federal, state, and local laws and regulations.

Objectives are clearly written statements that respond to identified issues and that specify measurable and attainable activities for resource development and/or management of the lands and waters under the jurisdiction of the San Francisco District Bay Model Visitor Center Office. The objectives stated support the goals of the Master Plan, Environmental Operating Principles (EOPs), and applicable national performance measures.

The resource objectives are consistent with authorized project purposes, Federal laws and directives, regional needs, resource capabilities, and take public input into consideration. Recreational and natural resources carrying capacities are also accounted for during development of the objectives found in this Master Plan. The objectives in this Master Plan, to the best extent possible, aim to maximize project benefits, meet public needs, and foster environmental sustainability for the Bay Model Visitor Center. The objectives were reviewed and screened by the Master Plan Project Delivery Team, including USACE staff located at the Bay Model Visitor Center.

Table 3 below outlines the five main categories of resource objectives: recreational, natural resource management, environmental compliance, general management, and cultural resources. The table shows how the five Master Plan goals are fulfilled by each of the resource objectives using the grey highlighting. The shaded areas in the table indicate that the objective meets the goal.

Table 3. Goals and objectives for Bay Model Visitor Center Master Plan.

Recreational Objectives	**GOAL A.** Provide best management practices	**GOAL B.** Protect and manage natural and cultural resources	**GOAL C.** Provide recreation and educational opportunities	**GOAL D.** Recognize qualities, characteristics, and potentials of the project	**GOAL E.** Provide consistency with and enforcement of laws and regulations
Evaluate need for improved recreation facilities (i.e. restrooms, picnic facilities,) and increased public access on USACE-managed public lands and water for recreational activities (i.e. kayaking, etc.)					
Optimize recreational development within project boundary while maintaining or improving environmental sustainability of resources					
Regularly monitor resources to ensure recreational experience, environmental quality, and public safety are maintained					
Increase educational facilities, signage relating to climate, sea level rise and the bay					
Increase accessible facilities, including ADA accessibility					
Evaluate need for visitor center facilities					
Evaluate flooding to address potential impact to recreational facilities					

(i.e. parking lot and pier). Note that water level management is not within scope of this Master Plan					
Ensure consistency with USACE Recreation Strategic Plan and seek out partnership opportunities					

CHAPTER 4 – LAND ALLOCATION, LAND CLASSIFICATION, WATER SURFACE, AND PROJECT EASEMENT LANDS

4.1 LAND ALLOCATION.

Lands are allocated by their congressionally authorized purposes for which the project lands were acquired. According to EP 1130-2-550, there are four land allocation categories applicable to USACE projects, which determine the land use classification.

1. *Operations*. These are the lands acquired for the congressionally authorized purpose of constructing and operating the project. Lands in this allocation can only be given a land classification of "Project Operations".

2. *Recreation*. These lands were acquired specifically for the congressionally authorized purpose of recreation. These lands are referred to as separable recreation lands. Lands in this allocation can only be given a land classification of "Recreation".

3. *Fish and Wildlife*. These lands were acquired specifically for the congressionally authorized purpose of fish and wildlife management. These lands are referred to as separable fish and wildlife lands. Lands in this allocation can only be given a land classification of "Wildlife Management".

4. *Mitigation*. These lands were acquired specifically for the congressionally authorized purpose of offsetting losses associated with development of the project. These lands are referred to as separable mitigation lands. Lands in this allocation can only be given a land classification of "Mitigation".

The land acquired by USACE for the Bay Model was originally acquired for operations for the purpose of engineering research. It has now been dually used for operations and a focus on education and recreation now that the Bay Model itself has been transformed to a visitor center.

4.2 LAND CLASSIFICATION.

Land classification designates the primary use for which project lands are managed. Project lands are zoned for development and resource management consistent with authorized project purposes and

the provisions of the NEPA and other Federal laws. Since there has been no prior Master Plan written for the BMVC, the following land use classifications will be used. The following land use classifications have been used by USACE for other Master Plans.

Land use classifications used by USACE in previous Master Plan Projects:

- Class I: High density recreation areas
- Class II: General outdoor recreation areas, including lands reserved for visitor accommodations, administrative facilities, campgrounds, and water surface areas
- Class III: Natural environment areas that provide a transition between general outdoor recreation areas to primitive wilderness areas, such as trails, outlooks, and picnic sites
- Class IV: Outstanding natural or scientific areas that represent the most fragile natural areas
- Class V: Wildlife management areas
- Class VI: Historic or cultural areas including historic structures of historic or cultural significance
- Class VII: Nonpublic use project areas that can be altered from their natural conditions for project use, such as control towers, the spillway and the dam

4.2 LAND CLASSIFICATION.

Due to a lack of an existing Master Plan, there are no current land classifications for the BMVC.

CHAPTER 5 – RESOURCE PLAN

5.0 RESOURCE PLAN

This chapter describes in broad terms how project lands and resources will be managed. For BMVC, the management by area approach, as set forth in EP 1130-2-550, was chosen as the method for developing the resource plan for the Bay Model Visitor Center Master Plan. This approach divides all USACE owned lands and waters within the BMVC project area into management units and includes more detailed information that would typically be found in an OMP. The management by area approach was chosen due to the high level of stakeholder interest in BMVC and the master planning process, in addition to a variety of special topics and considerations that could influence management of the BMVC project. The following sections describe how project lands and resources are currently managed and recommendations for future management of BMVC and surrounding project lands.

A wide variety of factors must be considered when developing the BMVC project lands and resources. These factors include physical characteristics, land and water access, compatibility with adjacent land uses, existing and projected visitation levels and visitor-use pattern, the economics of operation and maintenance, and Federal, state and local initiatives. It is vital that any future recreation development maintain the features of the BMVC project that visitors come to enjoy. BMVC is a highly visible staple in the community. New and emerging recreation uses would be analyzed on a case by case basis for appropriate land use classifications. Therefore, the overall objective in development at the BMVC project is to maximize the educational and recreation benefits while preserving the natural resources and scenic qualities.

The purpose of the Master Plan is to provide a long-range view of the project area development. As such, it is important to (1) examine the various segments of the project and their potential for development and (2) determine how each MU can be developed to fit with the overall goals of the BMVC project.

This chapter identifies the MUs and resource objectives established for the Bay Model Visitor Center. The resource objectives for each MU reflect site-specific application. Implementation of these objectives will help to satisfy identified regional needs and desires of other agencies and the public within the limits and capabilities of the BMVC property.

Management Unit Name: The name of the MU is derived from the primary facility/recreation area being managed.

Land Use Classification: This is the land use identified while consulting current management of the BMVC. Since there was no prior Master Plan for the BMVC, these classifications come from how the area is operated currently.

Recommended Future Land Use and Rationale: The land classification is how the project land will be managed and updates the use to the current terminology. This provides a brief description of how the land classification was determined based on resources, required use, and constraints.

Location: This provides a brief description of the location of the MU, including access to the area.

Description: This section provides a brief description of the MU, including information on facilities, recreational opportunities, current conditions of the MU, and important historical information relevant to the MU.

Resource Objectives: This section provides a brief list of the objectives for each MU. Each unit has more than one resource objective, and these objectives are not prioritized. In some areas, the resource objectives may not be implemented for some time.

Development Needs: This section provides a brief summary description of the techniques that could be undertaken to implement the area resource objectives. The concepts discussed under this component are not all-inclusive; rather, they convey an understanding of the range of development and management strategies that could be used to implement the resource objectives. The development needs will be further refined and detailed in subsequent planning and design documents, including OMPs and future Design Memorandums. The ultimate decisions regarding the methods that are actually implemented will result from coordination between USACE, state, local agencies, non-governmental organizations, and the public where appropriate and as opportunities arise. Any applicable environmental analysis associated with these decisions would be completed at the time of consideration for implementing any development activities.

Special Conditions: This optional component is used when there are very specific issues that apply to the MU that may affect the overall management outcome.

MANAGEMENT UNITS

5.1 MANAGEMENT UNIT #1 –VISITOR CENTER

Land Use Classification: General Recreation

Recommended Future Land Use and Rationale:
Recreation and Education, as well as some USACE office space.

Figure 8. Bay Model Visitor Center

Location: The visitor center itself is located in the city of Sausalito in Marin County, about a 20 minute drive north of San Francisco.

Description: The Visitor Center is an approximate 3 acres in size sitting on the 10 acre site containing a to-scale model of the San Francisco Bay. Included in the Visitor Center is a museum displaying the Marinship history of the region, providing a vital connection to the cultural and historical resources of the region. Within the center, there is a gift shop, multipurpose rooms, meeting rooms, a large foyer used for public gatherings, restrooms, and many educational demonstrations and exhibits. Outside of the visitor center is ample room for visitors to enjoy the weather and adjacent shoreline. Picnic benches and educational signage outdoors complete the experience.

Resource Objectives:

This MU meets the following resource objectives for the Bay Model Visitor Center Master Plan:

1. Visitor Information, Education and Outreach:
    a. Implement additional educational outreach programs to educate the public on the natural resources that the San Francisco Bay provides.
    b. Develop partnerships with local and regional school districts and teachers to build upon existing educational programs.
    c. Develop educational and outreach partnerships with other regional partners with interests in climate science, sea level rise, and the San Francisco Bay.
    d. Maintain current infrastructure and improvements that allow the Visitor Center to host important guests, meetings, and conferences.
2. Recreational Objectives
    a. Provide space for the public to have access to view and be adjacent to the adjacent shoreline of the Bay.
    b. Space for recreation such as picnic tables.
3. Economic Objectives:
    a. Continue to work and build partnerships within the region, especially with the County of Marin, City of Sausalito, local business, and partners to promote tourism.

Development Needs:

1. Refurbish the oral history phone pod exhibit to ensure that all the listening devices work properly.
2. Refurbish and renovate the Marinship history exhibit. Provide better protection for the photographs, and models to protect from light and other damage.
3. Maintain and improve space for educational events.
4. Develop and install sea level rise, climate change and bay educational materials, signage, and demonstrations to support the educational mission of the BMVC.
5. Place recycle and compost bins where appropriate throughout the BMVC.
6. Solar panels, carpets, restrooms, maintenance as needed.
7. Evaluate the model itself for historical designation for engineering.

5.2 MANAGEMENT UNIT #2 – BMVC PARKING LOT

Land Use Classification: Operations

Recommended Future Land Use and Rationale: *Operations*

Location: The visitor center parking lot is located in the city of Sausalito in Marin County, about a 20 minute drive north of San Francisco. The parking lot is on the West side of the building.

Figure 9. Bay Model Parking Lot

Description: The parking lot is a small parking lot immediately behind the BMVC on the West side of the parcel.

Resource Objectives:

This MU meets the following resource objectives for the Bay Model Visitor Center Master Plan:

1. Recreational Objectives:
    a. Increase access by vehicles to the BMVC, the adjacent waterfront, and parks.
    b. Increase capacity and ease of access to the BMVC.
2. Economic Objectives:
    a. Increasing amount of visitors at the BMVC; the venue is becoming a regional economic asset for Sausalito and Marin County

Development Needs:

1. Traffic circulation improvement. Better signage needs to be installed to alert drivers of one way roads and directions to the BMVC.
2. Pedestrian safety improvements.
3. Improve existing signage and directions from the parking lot to the BMVC, Sea Trek Kayaking, and Call of the Sea.
4. Repaint parking lot lines to better indicate divisions between parking spots.
5. Design and construct a drainage system in the parking lot which can puddle up and flood during heavy rain events.
6. Construct a “rain garden” to capture and filter stormwater runoff from the parking lot. The raingarden can also be an educational experience and help with the situational puddling and flooding that occurs in the parking lot.

5.3 MANAGEMENT UNIT #3 – NATIVE PLANT GARDEN

Figure 10. Native Plant Garden

Land Use Classification: Recreation

Recommended Future Land Use and Rationale: *Recreation*

Location: The Native Plant Garden is located adjacent to the entry way of the BMVC on the Western side of the building.

Description: The Native Plant Garden is hosted by the Marin Chapter of the California Native Plant Society. The Garden is over FAFA100 feet long, and is planted with different wildlife habitat that is supportive of songbirds, hummingbirds, butterflies, especially Monarch's.

Resource Objectives:

This MU meets the following resource objectives for the BMVC Master Plan:

1. Recreational Objectives:
    a. Provide a valuable location for the public to sit, enjoy, and eat lunch amongst the native plants with picturesque views of Richardson Bay.
    b. Opportunities to volunteer with the organization that maintains the garden during regular garden maintenance days.
2. Visitor Information, Education, and Outreach:
    a. Implement additional educational and outreach programs at the BMVC. Topics may include: water quality, history, cultural resources, recreation, nature, and ecology.
    b. Implement better signage and plan for signage updates as needed.
3. Economic Objectives:
    a. Work with local tourism officials, the Native Plant Society and BMVC staff to increase visits to view the garden and generate economic development.
4. Environmental Resources:
    a. Increase public awareness of native plants.
    b. Work with the Native Plant Society and local residents to promote native plantings in the region.
    c. Host public planting events at the garden.
    d. These native plants save water, lower maintenance, reduce pesticides and invite wildlife into this key spot.

Development Needs:

Currently, the native plant garden is maintained by the Marin Chapter of the California Native Plant Society. An agreement between USACE and CNPS Marin Chapter is needed to clarify and formalize the partnership, ensuring ensure the longevity of the garden as BMVC evolves over time. Presently, the signage is current, but future signs may be necessary to maintain the educational mission of the garden. Additionally, future needs might include irrigation, soil, fertilizer, replacement plants,

and gardening tools. If any change to the garden in the future requires the use of pesticides, USACE will consult with the United States Fish and Wildlife Service to ensure compliance with all applicable laws and policies.

1. Regularly host public events to learn about the garden, volunteer, maintain, and planting days.
2. Partner with local schools to host site visits to the garden at various stages to educate local children about the natural cycles of native plants.
3. Increase the partnership between the BMVC staff, the Native Plant Society as well as other groups such as SeaTrek and Call of the Sea in order to promote each other and provide visitors to the BMVC a holistic experience.
4. Better connect native plants to climate change and improve signage about how native plant gardens can help mitigate environmental consequences.

5.4 MANAGEMENT UNIT #4 – PIER

Land Use Classification: Operations and Recreation

Recommended Future Land Use and Rationale: *Operations and Recreation*

Figure 11. The Pier

Location: The pier at the BMVC is located at the far East end of the BMVC property. The pier jets out into Richardson Bay.

Description: The pier, which is approximately 174.63 meters long and 9.04 meters wide, currently has dual purpose for operations and recreation. On one side of the pier there is access to navigation safety boats such as the scavenger boats, the Dillard, and the Raccoon, though these are not within the project area, which ends at the north side of the pier. On the other side of the pier there is access to the SeaTrek Kayaking and the Call of the Sea. In addition, the Sausalito Police Departments boats have utilized the USACE pier at the BMVC.

Resource Objectives:

This MU meets the following resource objectives for the Bay Model Master Plan

1. Recreational Objectives:
    a. Optimize recreational development on the pier, allowing safe, public access to the water.
    b. Safe access to Sea Trek kayaks and Call of the Sea.
2. Natural Resources Management:
    a. Minimize activities that disturb the scenic beauty of Richardson Bay.
    b. Identify and protect unique or sensitive habitat areas such as eelgrass.
    c. Identify and protect endangered species that frequent the water around the pier such as the California Sea Lion.
3. Environmental Compliance:
    a. Comply with all applicable laws and policies to ensure a healthy ecosystem surrounding the pier.
4. Visitor Information, Education and Outreach:
    a. Increase visitor awareness of impacts caused by resource degradation through improved public participation programs, media information programs, and interpretive activities. Specifically, signage related to the San Francisco Bay ecosystem, sea level rise and climate change should be emphasized.
    b. Ensure visitor safety on the water.

Development Needs: It is recommended that USACE continue working with the public, stakeholders and partners to manage the pier and implement any development. USACE will actively monitor and

plan for sea level change and adjust the pier and adjacent sea wall as needed. All development must comply with NEPA analysis resource.

1. Renovate and repair the pier as needed, including the development of higher safety barrier on the pier, given the current and projected increased access on the pier from groups of the public, especially children.
2. Increase access for kayak launching by allowing another floating platform to be docked off of the pier.
3. Development of a ferry terminal to allow access for transportation to the region by ferry or water taxi.
4. Develop and allow space for recreational, temporary docking of boats.
5. Improve and maintain the vitality of the pier to help serve the region in the event of an emergency (i.e. space for boats to bring people, supplies).
6. Plan for sea level rise for future updates on the pier to be able to accommodate changing water levels.

MANAGEMENT UNIT #5 – THE MODEL

Land Use Classification: n/a

Recommended Future Land Use and Rationale: *Multiple resource use.*
Location: BMVC property

Description: The BMVC is extremely important to the public as location that has helped facilitate excellent educational opportunities. From hosting school groups, science fairs, guided tours, public meetings the BMVC provides an excellent setting. The model itself, the history that the BMVC explains as well as the location immediately adjacent to the Bay, allow for unparalleled visual representations of the state of the Bay and for visualizing future conditions associated with climate change and sea level change.

Figure 12. Educational Demonstration at the BMVC

Resource Objectives:

This MU meets the following resource objectives for the BMVC Master Plan:

1. Recreational Objectives:
    a. Regularly monitor recreational resources to ensure the recreational experience, environmental quality, and public safety are maintained.
2. Natural Resource Management:
    a. Minimize activities which disturb the scenic beauty of the area.
    b. Increase visitor awareness of impacts caused by misuse of natural resources through improved public participation programs, media information programs, and interpretive activities.
3. Climate and Educational Resources:
    a. Increase public awareness of regional history with the Bay Model.
    b. Educational resources regarding the Marinship history of the region.
    c. Climate educational and educational programs about local environment.

Development Needs:

Development needs largely correspond with building on established relationships and partnerships as well as forging new educational partnerships.

1. More information and new exhibits relating to the Reber Plan to spread the information about how the Bay Model changed the course of history for the entire region.
2. Walking tour of the waterfront to better explain the Marinship history of Sausalito.
3. Further build partnerships with stakeholder groups and other regional entities that have similar programs as USACE for regional plans for education.
4. Partner with school districts in the region to develop a curriculum about bay science and education.

5. Continue partnering with Sausalito's sister city, Sakaide, Japan, to develop a cross culture teaching program at the Bay Model.
6. Educational and rotating signage supporting the aquarium in the foyer of the BMVC.
7. Update exhibits in Central Portions of the Bay Model that focuses on South Pacific Division and missions of USACE.

CHAPTER 6 – SPECIAL TOPICS/CHALLENGES/CONSIDERATIONS

This chapter discusses the special topics, challenges, and considerations that will be critical to the future management of BMVC, as identified by USACE staff and through public involvement. Special topics, issues, and considerations are defined in this context as any problems, concerns, and/or needs that could affect or are affecting the stewardship and management potential of the lands and waters under the jurisdiction of the San Francisco District, BMVC Project Office Area of Responsibility. For simplicity, the topics are discussed below under generalized headings.

Public Safety

- Continue partnership with the Police and Fire Departments by allowing the departments to dock their emergency boat at the BMVC as needed. Providing mutual aid and help when appropriate for training.
- Continue the partnership with companies for emergency use and shelter. The Bay Model, especially with the solar panels, now is a great facility for local residents to come to in the event of an emergency such as mudslides or wild fires.
- Continue the USACE mission about educating the public on the importance of water safety by promoting lifejacket use.

Partnership

- USACE will seek out future partnerships and collaboration with other Federal, Tribal, state and local agencies to support the management and operation of BMVC, as needed.
- USACE will continue with its existing partnerships that aid in the operation of various facilities at the BMVC.
- USACE will continue to build educational programming such as science fairs, school field trips, and overnight sleep overs for school groups.
- USACE will continue to partner with local art community groups by continuing to allow the BMVC foyer to be used for art displays and exhibits.
- USACE will continue to partner with the Sausalito Historical Society to allow a rotating historical collection the foyer of the BMVC as requested.

Public Outreach

- Educate the public on issues relating to the Bay, natural resources, historical and cultural resources, climate change, sea level rise and Marinship history.
- Educate the public regarding cultural and historic landscapes.

Marinship Coordination

- From 2018-2020, the City of Sausalito undertook a General Plan Update. A significant focus during the process was the Marinship Specific Plan due to the special historical context of the region. The shipbuilding history of the region, paired with historical firsts such as the legal right for African Americans to join unions, a high percentage of women ship builders and a large amount of Chinese workers in the area, all contributed to a rich history. The City of Sausalito has recognized this importance in their General Plan, and the BMVC has a special opportunity to support this effort. The BMVC currently offers historical displays telling the Marinship story and this Master Plan recommends that the BMVC continue to do this, and to partner with the City as needed to continue to educate the public. The BMVC can accomplish this by offering

walking tours of the area, update and maintain current exhibits, and allow for presentations and gatherings honoring this history at the BMVC.

CHAPTER 7 – AGENCY AND PUBLIC COORDINATION

Figure 13. Public Meeting at the BMVC

In 2018, USACE initiated the BMVC Master Plan process. This is the first time a Master Plan has been drafted for the BMVC. In February 2019, USACE held two public meetings to "kick off" the master planning process. The purpose of these meetings was to seek public input regarding (1) the long-range goals for the BMVC Master Plan and (2) the management and development of project lands and facilities. Additional coordination with BMVC staff, City of Sausalito staff and partnership staff was conducted.

The Draft Master Plan and Draft EA will be released for a 30-day public comment period from February 3rd to March 3rd 2020. A public meeting will be held on February 12th 2020 at the Bay Model Visitor Center in Sausalito. The Final Master Plan and a Final EA will take into consideration public input and comments received during the comment period.

During and after the initial kickoff public meetings for the Master Plan process, comments were received both in person, in writing, email and on an online comment tracking system: CrowdSource Reporter. Crowdsource reporter allowed the public to electronically submit comments in specific locations around the Bay Model so the public could specify the exact locations of their ideas. The link could be shared with friends and family to allow for a wider distribution of the ability to comment on this process. Comments received and draft responses to comments are attached in Appendix C. It is important to note that the members of the public who shared these comments allowed for them to be shared, some comments were marked as private, and USACE respected those.

CHAPTER 8 – SUMMARY AND RECOMMENDATIONS

8.1 SUMMARY OVERVIEW

The proposals made in previous chapters of this Master Plan are for the courses of action necessary to manage the BMVC. Actions set forth in this plan can promote the future of the BMVC. The factors considered cover a broad spectrum of issues including, but not limited to, public use, education, recreation, the environment, socioeconomic considerations, and staffing levels. Information on each topic was thoroughly researched and discussed by the Project Delivery Team prior to master plan development.

This Master Plan is a living document that establishes the basic direction for development and management of the BMVC consistent with the capacity of the resources present and public needs. The Master Plan is also flexible in that supplements may be achieved through a formal process to address unforeseen needs, and evaluations of future actions can tier off and utilize the information in the Master Plan and NEPA document (Appendix B EA) as needed. The Master Plan will be periodically reviewed to facilitate the evaluation and utilization of new information as it becomes available, subject to funding.

The overall Master Plan provides guidelines for land use activities, educational development, improvement of environmental quality, and protection of historical and cultural resources. Additionally, the Master Plan provides management with critical information necessary to determine funding levels for operations, maintenance, and staffing needs.

8.2 LAND CLASSIFICATIONS

As described in detail in Chapter 5, the PDT strived to achieve a 'balanced' approach in making the land classification decisions. The team took environmental constraints, regulations, ordinances, opportunities, and public concerns into consideration when determining land classification for this BMVC Master Plan, which included but were not limited to:

- How lands are utilized
- Land allocations
- Environmental and cultural considerations
- Existing Federal, state, and local laws and regulations
- Development or land management adjacent to USACE-managed property
- Activities adjacent to USACE-managed property
- Recreational and visitation trends
- Public and agency input
- Educational development
- Funding and staffing constraints

8.3 RECOMMENDATION

This Master Plan shall be followed in managing the resources at the BMVC. The policies and objectives within this Master Plan are consistent with authorized project purposes, land allocations, resource capabilities, and applicable Federal, state, local and partner resources. These policies and objectives represent sound stewardship of resources and potential increased opportunities for public enjoyment of the visitor center and educational opportunities. It is recommended that this Master Plan be approved as the basis for future development and management of the Bay Model Visitor Center.

Table 4. Summary of development recommendations for the BMVC management units.

Management Unit	Recommended Land Use	Recommendations
1.	Visitor Center	1. Refurbish the oral history phone pods exhibit to ensure that all the listening devices work properly. 2. Marinship history exhibit renovation and revamp. 3. Space for educational events maximized. 4. Sea level rise, climate change, education. 5. Solar panels, carpets, restrooms, maintenance as needed. 6. Evaluate the model itself for historical designation for engineering. 7. Installation of compost and recycling bins. 8. Educational signage for the aquarium in the foyer.
2.	Parking Lot	1. Traffic circulation improvement as needed once funding is available to improve the flow of traffic, especially during high capacity events at the BMVC or adjacent properties. 2. Improve existing signage and directions from the parking lot to the BMVC, Sea Trek Kayaking, and Call of the Sea. 3. Design and construct a drainage system in the parking lot which can puddle up and flood during heavy rain events. 4. Repaint parking lot lines to clearly indicate parking spots. 5. Implement an educational rain garden to purify stormwater runoff from the parking lot.

3.	Native Plant Garden	1. Regularly host public events to learn about the garden, volunteer, maintain, and planting days. 2. Partner with local schools to host site visits to the garden at various stages to educate local children about the natural cycles of native plants. 3. Increase the partnership between the BMVC staff, the Native Plant Society as well as other groups such as SeaTrek and Call of the Sea in order to promote each other and provide visitors to the BMVC a holistic experience. 4. Better connect native plants to climate change and improve signage about how native plant gardens can help mitigate environmental consequences. 5. If any change to use of the garden, consult with United States Fish and Wildlife to ensure no harmful pesticides enter Richardson Bay. 6. Future tools, soils, crops, and irrigation may be needed to continue the Native Plant Garden
4.	Pier	1. Renovate and repair the pier as needed, including the development of higher safety barrier on the pier, given the current and projected increased access on the pier from groups of the public, especially children. 2. Increase access for visiting day use vessels by allowing another floating platform to be docked off of the pier. 3. Development of a ferry terminal to allow access for transportation to the region by ferry or water taxi. 4. Improve and maintain the vitality of the pier to help serve the region in the event of an emergency (i.e. space for boats to bring people, supplies).
5.	General Education	1. More information and new exhibits relating to the Reber Plan to spread the information about how the Bay Model changed the course of history for the entire region. 2. Walking tour of the waterfront to better explain the Marinship history of Sausalito. 3. Update displays from the Sausalito Historical Society as needed. 4. Signage for the aquarium in the Foyer. 5. Climate Change, sea level rise educational signage.

6.	Special Issues/ Considerations	1. Continue partnering with the Police Department by allowing boats to be docked, training, mutual aid on an as needed basis. 2. Continue the partnership with the American Red Cross for emergency and disaster management. 3. Continue the USACE mission about educating the public on the importance of water safety by promoting lifejacket use. 4. Continue to develop and maintain educational and regional partnerships with school groups, science groups, non-profits. 5. Work as a valued partner with the City of Sausalito to incorporate Marinship education and historical documentation.

8.4 USING THE MASTER PLAN

This Master Plan serves two primary purposes that are equal in importance. First, it is the primary management document for the project and provides direction for many of the other plans that guide the management of the BMVC. This Master Plan sets the stage for the update of many of the USACE resource management plans. The Resource Objectives approved in this plan can serve as a basis for developing more specific management plans at the project. The accompanying EA includes additional information on the environmental effects of the recommended Master Plan update including the land use and management unit classifications. Regular supplements or updates to the Master Plan will allow the project to maintain updated resource management plans, as needed.

The document also serves as a land and facility use tool, since this Master Plan provides USACE, other management partners, and the public with the Land Allocations and the current Land Classifications, Recommended Future Use, and Resource Objectives applied to project lands. The current classification of project lands allows USACE, other management partners, and the public to evaluate the distribution of uses for project lands. Supplementing and/or updating the Master Plan will allow USACE to respond effectively to development plans made internally or by outside parties.

8.5 UPDATING THE MASTER PLAN

This policy-based Master Plan, along with the accompanying EA, provides USACE, other management partners, and the public with a "living" management document. This living document sets goals and objectives but does not establish detailed development plans. Stand-alone NEPA documents will be developed when projects, presented as Development Recommendations in this Master Plan or otherwise identified, are determined required, funded, and feasible to develop or execute.

Maintaining a current and updated Master Plan is accomplished through the following steps:

- Regular review of project needs and priorities
- Regular review of updates to the reports used to inform this plan

- Regular consultation and coordination with local, State, Tribal and Federal agencies
- Review of annual visitation statistics.
- Review of partnerships.
- Review objectives yearly to ensure that they are still appropriate.

The annual reviews will help prepare for a general revision or significant update to the Master Plan. Any revision or update will include appropriate NEPA documentation. The five-year revision may be as simple as updating the Resource Objectives; however, it may be as complex as changing Land Classifications presented in this Master Plan. The process through which the plan is updated should follow standard USACE approval protocols.

The information obtained during regular revisions of this Master Plan also benefit other activities at the project. Data may be used to update a specific resource management plan, improve educational programs, or inform project staff about relevant issues.

A review of the Master Plan should include the following:

- Identify resource conditions that have changed and require documentation in Section 2.0
- Review the issues described in Section 3.0 and note changes in the manner in which these issues are addressed or other issues that have arisen over the last year
- Review the Resource Objectives and Development Needs to identify priorities or changes in management strategy.

8.6 INCLUDING OTHERS IN THE MASTER PLANNING PROCESS

This Master Plan emphasizes the need for consultation and coordination with regulatory agencies prior to implementing elements of the Master Plan. Coordination also may occur in updating the Master Plan and obtaining additional data sources to inform the plan.

In some cases, coordination with other government agencies is required by regulation. In all cases, coordination with the appropriate groups and agencies prior to implementing an action will ensure a well-informed plan that avoids unnecessary impacts to project resources. Such an approach also streamlines the review and approval process with regulatory agencies. The accompanying EA to this Master Plan lists the Federal and state agencies that would be included in the consultation process for a proposed project at the BMVC. It should be noted that similar agencies and groups exist at the local level and should be included in the planning process. These efforts shall be consistent with local planning documents and efforts, as well as with the city's policies and regulations. Further agency consultation and coordination is critical to the success of this policy-based, programmatic document and associated EA.

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