

SAN FRANCISCO BAY CONSERVATION AND DEVELOPMENT COMMISSION

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April 5, 2013

Application Summary

(For Commission consideration on April 18, 2013)

Number: BCDC Permit Application No. 1994.013.08
Date Filed: March 18, 2013
90th Day: June 16, 2013
Staff Assigned: Ming Yeung (415/352-3616 mingy@bcdc.ca.gov)

Summary

Applicants: Bay Ship and Yacht Company (BSY) and Alameda Gateway, Ltd.

Location: Bay Ship and Yacht's Alameda facility, located near 2900 Main Street on the northwestern shoreline along the Oakland Inner Harbor, west and east of the existing Alameda Point Ferry Terminal, in the City and County of Alameda (Exhibit A).



Making San Francisco Bay Better

Project: The proposed project involves mooring, converting, operating and maintaining an approximately 32,770-square-foot (0.75 acre) barge at BSY's existing dry dock and ship repair facility in Alameda along the Oakland Inner Harbor. The proposed barge is approximately 324 feet in length, 106 feet in width and ranges between 33 and 65 feet in height from the pier deck, depending on whether its retractable telescoping cover is open or closed (Exhibits D and E). Upon arrival, the barge would be converted into a dry dock by installing flooding and crossover valves, de-ballasting pumps and valves, fish screens, and tank venting. Any "in-water" construction work to convert the barge to a dry dock would occur during June 1st and November 30th, thereby limiting potential impacts to steelhead and green sturgeon. However, most of the work would occur on the deck of the barge out of the water and all standard operations and maintenance for the floating dry dock to repair vessels will occur year round.

Once the conversion is complete, the dry dock would be controlled and operated by a ballast system that involves lowering the dry dock by filling four ballast tanks with water, allowing a ship to enter through the dry dock opening, and raising the dry dock by discharging the water from the ballast tanks and allowing them to fill with air. The lowering and raising of the dry dock takes approximately four hours (90 minutes to submerge and 133 minutes to rise). Once in place, the ship would be repaired within the dry confines of the dry dock.

The project will create a net increase of approximately 32,770 square feet (0.75 acre) of floating fill in the Bay. To mitigate for the water volume displacement and shading impacts of the new dry dock, the applicants propose to provide \$75,000 to the California Department of Resources Recycling and Recovery (CalRecycle) Oakland Estuary Clean-Up Project where a specific fill removal project has been identified and to use BSY's facilities, as needed, for the removal of an abandoned dock, two vessels, and marine debris at Union Point Park near Coast Guard Island in Alameda (Exhibits A and F).

The proposed public access includes an approximately 63,838-square-foot (1.56 acre) area with approximately 970 linear feet of new Bay trail along the shoreline west of the Alameda Ferry Terminal. The public access improvements would feature a new 14-foot-wide multi-use public trail paralleling the shoreline with six overlook areas providing direct access to the shoreline, and drought-tolerant,

low maintenance plantings throughout. Interpretive elements salvaged from the shipyard would be repurposed to provide unique seating opportunities, interpretive features, and gateways (Exhibits H and I).

**Issues
Raised:**

The staff believes that the application raises three primary issues: (1) whether the project is consistent with the Commission's fill policies, including safety of fills, climate change and sea level rise; (2) whether the project is consistent with the Commission's public access and scenic views policies; and (3) whether the project is consistent with the Bay Plan policies on natural resources, including fish, other aquatic organisms and wildlife, and water quality.

Background

Bay Ship and Yacht is an approximately 8-acre facility that includes a ship repair site accommodating a 20,000-square-foot (0.46 acre) building with machine, fabrication, joiner and propeller shops, 90-ton and 30-ton mobile cranes, 1,200 feet of pier-side berthing, office buildings for management and support personnel, and a 50,000-square-foot (1.15 acre) fabrication warehouse specifically designed to accommodate marine vessel construction (Exhibit C). The proposed dry dock would be moored adjacent to an existing approximately 32,700-square-foot (0.75 acre) dry dock that is used for ship repair located at Pier 5 within the Oakland Harbor Inner Channel and adjacent to the Inner Harbor Turning Basin. Existing public access at the site consists of an approximately 17,337-square-foot public access area located east of the Alameda Ferry Terminal that includes an entry plaza, an approximately 218-foot-long 8-foot-wide pathway, a viewing platform of the Bay and the shipyard facilities, and seating, landscaping, furnishings and signs (Exhibit G). The facilities and public access at the site were authorized and required by BCDC Permit No. 1994.013.

BSY acquired a floating dry dock (HMB-1) from the federal government to accommodate and service wider barges and vessels within the San Francisco Bay Area. As part of the agreement with the government, BSY had to take possession of the floating dry dock and move it from the Suisun Bay Reserve Fleet on July 13, 2012, due to the movement of adjacent ships within the mothball fleet. BSY has temporarily moored the dry dock at their dock on Treasure Island until all the appropriate permits have been obtained to moor, operate and maintain the dry dock at their Alameda facility. The HMB-1 is a welded steel submersible "construction barge" that was built in 1974.

Project Description

**Project
Details:**

The applicants, Bay Ship & Yacht Company and Alameda Gateway, Ltd., describe the project as follows:

In the Bay:

- a. Moor, convert, operate and maintain, an approximately 32,770-square-foot (0.75 acre) dry dock (HMB-1) at Pier 5 by installing flooding and crossover valves, de-ballasting pumps and valves, tank venting and appropriate and resource-agency approved fish screens.

Within the 100-foot Shoreline Band:

- a. Construct, use and maintain approximately 63,838 square feet (1.46 acres) of public access extending 970 feet along the shoreline and averaging approximately 75 feet wide from the top of bank (top of the riprap) to the inland edge of the public access landscaping, including a ten-foot-wide pathway with a four-foot-wide shoulder, five overlook areas with seating and marine nautical elements, a minimum of two interpretive signs, two Bay trail signs, two trash receptacles, and landscaping on both sides of the pathway.

Bay Fill:

The proposed project would result in a total of 32,770 square feet (0.75 acres) of new floating fill in the Bay.

To mitigate for the impacts of the fill, the project would provide \$75,000 to CalRecycle for the removal of an old abandoned dock, two vessels, and marine debris at Union Point Park within the Oakland Estuary (Exhibits A and F). Because much of the debris is submerged and dilapidated, it is unclear how much fill the debris totals, but it is estimated to be approximately 6,100 square feet in size. The project would increase the amount of floating fill in the Bay but would reduce the amount of pile-supported, solid and floating fill with the funding of the debris removal. In total, the proposed project would result in a net decrease of 26,670 square feet of Bay surface area.

Type of Fill (sf)	Removed (sf)	New (sf)	Total Net Fill (sf)
Floating		32,770	32,770
Marine Debris (All Types)	6,100		(6,100)
Total	6,100	32,770	26,670

**Public
Access:**

The proposed public access for the project would include an approximately 63,838-square-foot (1.56 acre) open space area that would include: (1) a 970-foot-long, ten-foot-wide asphalt trail with a single four-foot-wide, decomposed granite multi-use shoulder; (2) approximately five overlooks with seating, signage, and a minimum of one marine/nautical salvaged item at each overlook; (3) landscaping on both sides of the pathway with native drought tolerant and low-maintenance plantings and at least two Bay Trail/public access signs and two interpretive signs (Exhibit H).

Type of Public Access	Square Feet	Acres	Shoreline Length (miles)
On-Site (new)	63,838	1.56	0.183
	63,838	1.56	0.183

Schedule and Cost:

Bay Ship and Yacht Company proposes to moor the dry dock at its Alameda facility and begin construction to convert it as soon as it receives all needed approvals, estimated for the end of April 2013. BSY estimates the total project cost to be \$2.5 million.

Staff Analysis

- A. **Issues Raised:** The staff believes that the application raises three primary issues: (1) whether the project is consistent with the Commission's fill policies, including safety of fills, climate change and sea level rise; (2) whether the project is consistent with the Commission's public access and scenic views policies; and (3) whether the project is consistent with the Bay Plan policies on natural resources, including fish, other aquatic organisms and wildlife, and water quality.
1. **Fill.** The Commission may allow fill only when it meets the requirements identified in Section 66605 of the McAtteer-Petris Act, which states, in part, that: (a) fill "should be limited to water-oriented uses or "minor fill for improving shoreline appearance and public access"; (b) fill in the Bay should be approved only when "no alternative upland location" is available; (c) fill should be "the minimum amount necessary to achieve the purpose of the fill"; (d) "the nature, location, and extent of any fill should be such that it will minimize harmful effects to the Bay area, such as, the reduction or impairment of the volume, surface area or circulation of water, water quality, fertility of marshes or fish or wildlife resources, or other conditions impacting the environment..."; and (e) "fill should be authorized when the applicant has such valid title to the properties in question that he or she may fill them in the manner and for the uses to be approved."
 - a. **Water-Oriented Use.** The proposed new dry dock would be used for ship repairs, a maritime and water-oriented use, and would accommodate the repair of larger vessels within the Bay Area, a crucial component of maritime industry activities and operations. The dry dock is expected to result in 20 additional docking projects and \$3 million in additional revenue annually, supporting new local employment.
 - b. **Alternative Upland Location.** Because floating dry dock facilities are operated by submerging the dock, maneuvering ships into the dry dock, and raising the dry dock so that work on the vessel can safely be accomplished in dry conditions, such facilities must be located in the Bay to serve its function, the applicant believes there is no alternative upland location for the uses for which this fill could be placed.
 - c. **Minimum Amount Necessary.** By permanently placing and continually using the dry dock, the project would result in an increase of 32,770-square-foot of new floating fill. This dry dock was purchased by the applicant because it was already constructed and was of sufficient size to accommodate anticipated ships needing repair. For this reason, the applicants believe the proposed dry dock is the minimum amount necessary.
 - d. **Effects on Bay Resources** As discussed more fully in the "**Natural Resources Policies**" section below, best management practices and other conditions have been incorporated into the project to minimize the impacts of the proposed new fill on the Bay. NOAA's National Marine Fisheries Service (NMFS) determined that, with the mitigation measures incorporated into the project, the project would not likely adversely affect threatened CCC steelhead, threatened green sturgeon and their critical habitat. NMFS determined that the project would adversely affect EFH for various federally-managed species within the Pacific Groundfish, Coastal Pelagic, and Pacific Salmonid FMPs through shading and loss of prey resources but that the

project includes measures to avoid, minimize or otherwise offset adverse effects, such that NMFS has no further EFH conservation recommendations to provide. On March 12, 2013, the Regional Water Quality Control Board (RWQCB) issued a water quality certification for the project.

- e. **Valid Title.** The upland portion of Bay Ship & Yacht's ship repair facility is located on land owned by Alameda Gateway, Ltd. and leased to Bay Ship & Yacht Company. Pier 5, where the proposed dry dock would be moored, is on land owned by the City of Alameda and leased to Bay Ship & Yacht Company. The United States Government owns the property where the public access pathway and area is proposed, but this area is part of the land that the City is expecting to be conveyed from the United States government in May 2013 through an Economic Development Conveyance. The City already has a purchase and sale agreement for the property, which was executed in June 2000 and the City has submitted a letter to BCDC supporting the creation of the public access pathway and Bay Trail in this location.
- f. **Safety of Fills / Climate Change / Sea Level Rise.** Policy 4 of the Bay Plan policies on Safety of Fills states, in part, that "adequate measures should be provided to prevent damage from sea level rise and storm activity that may occur on fill or near the shoreline over the expected life of a project," that "new projects on fill or near the shoreline should either be set back from the edge of the shore so that the project will not be subject to dynamic wave energy, be built so the bottom floor level of structures will be above a 100-year flood elevation that takes future sea level rise into account for the expected life of the project, be specifically designed to tolerate periodic flooding, or employ other effective means of addressing the impacts of future sea level rise and storm activity."

Policy 2 of the Bay Plan policies on Climate Change states in part, "when planning shoreline areas or designing larger shoreline projects, a risk assessment should be prepared by a qualified engineer and should be based on the estimated 100-year flood elevation that takes into account the best estimates of future sea level rise", that "a range of sea level rise projections for mid-century and end of century based on the best scientific data available should be used in the risk assessment" and that "the risk assessment should identify all types of potential flooding, degrees of uncertainty, consequences of defense failure, and risks to existing habitat from proposed flood protection devices." Policy 3 requires all projects "other than repairs of existing facilities, small projects that do not increase risks to public safety, interim projects and infill projects within existing urbanized areas" to be "designed to be resilient to a mid-century sea level rise projection".

In addition, Policy 5 of the Bay Plan policies on Public Access state, "public access should be sited, designed, managed and maintained to avoid significant adverse impacts from sea level rise and shoreline flooding."

On March 18, 2013, the applicants' consultants provided: (1) a memorandum on how the proposed public access and dry dock would be used and constructed to avoid significant impacts from sea level rise and shoreline flooding; and (2) a March 20, 2013 report prepared by Moffat & Nichols, Engineers dated March 20, 2013, that analyzed tidal data and provided recommendations to manage the impact of sea level rise specifically on the public access area of the project.

According to the applicants, dry docks are maintained to function for many years. The applicants anticipate that with their typical maintenance standards, the proposed new dry dock would continue to be utilized through 2050. The elevation of the dry dock when moored will rise and fall with tidal action. Therefore, the dry

dock itself will not be impacted by sea level rise and is constructed with materials that withstand periodic flooding and submerging for its expected life. However, the pier structure (Pier 5) to which the dry dock is moored, as well as the public access areas could be impacted by sea level rise.

The following table includes the tidal datum elevations for the long-term station at Alameda obtained from the National Oceanic and Atmospheric Administration (NOAA), including the 100-year extreme high water levels for the project vicinity (also known as FEMA’s Base Flood Elevation (BFE)) or “100-year flood elevation”), based on long term data from the Alameda tide gauge, as well as work completed by the U.S. Army Corps of Engineers (1984). The 100-year BFE is defined by the Federal Emergency Management Agency (FEMA) as the “flood elevation having a 1% chance of being exceeded in a given year.”

Tidal Datum	Elevation (feet)			
	MLLW	NAVD88	NGVD29	City Datum
100-year flood elevation	9.70	9.47	6.78	3.37
Highest Observed Water Level (HOWL) (12-3-83)	9.65	9.42	6.73	3.32
Mean Higher High Water (MHHW)	6.59	6.36	3.67	0.26
Mean High Water (MHW)	5.97	5.74	3.05	-0.36

Current estimates of the future rate of sea level rise vary widely, from the historic trend measured over the last century of about 8 inches per century, to as much as 55 inches per century put forth by Stefan Rahmstorf based on his empirical studies of sea level rise and global temperature rise. The following table includes sea level rise projections (in feet) for the coast of California provided in the October 2010 *State of California Sea-Level Rise Interim Guidance Document*, and the 2012 National Research Council (NRC) report titled *Sea-Level Rise for the Coasts of California, Oregon and Washington: Past, Present and Future*.

Year	CA Interim Strategy (2010)		National Research Council NRC (2012)
	Average	Range	
2030	0.6	0.4 – 0.7	0.1 – 1.0
2050	1.2	0.9 – 1.4	0.4 – 2.0
2070	2.0	1.4 – 2.7	N/A
2100	4.0	2.6 – 5.8	1.4 – 5.5

According to the October 2010 *State of California Sea-Level Rise Interim Guidance Document*, sea level is expected to rise at a high estimate of 1.4 feet (16 inches) by mid-century or 2050. The applicants have calculated that by 2065-2075, sea level is expected to rise by approximately 30 inches at the project site.

The existing Pier 5 structure is at elevation 11.90 feet (NAVD88), several feet above the existing mean high water elevation but just slightly over the 100-year flood elevation. Using a 16-inch sea level rise projection for 2050, the Pier 5 structure would be just slightly inches above the 100-year flood elevation, however, by 2075, the pier structure would be vulnerable to inundation in extreme tide events. The pier structure provides access to other ship repair facilities, including another existing dry dock. The applicants will need to consider raising or reconstructing the pier deck if continued access to these facilities is required in the future during all tides, or if the structure becomes vulnerable or weakened by regular inundation. It is unclear at this time, how much longer the dry dock would be used past 2050, whether the normal course of aging will require significant future modifications to Pier 5, and what the demand for Pier 5 and the associated dry docks will be in the future. In addition, by its nature, the dry dock can be easily moved and relocated to another location with pier decks above tidal influence if this is needed in the future. The applicants plan to monitor and assess the need for a variety of adaptive management solutions for the dry dock and Pier 5 in the future, based on changing conditions.

The proposed public access area ranges in elevation between 9.4 feet to 11.7 feet (NAVD88). According to the applicants and using FEMA's 100-year flood projections, a portion of the public access area is currently within the 100-year flood elevation. With projected sea level rise, potential flooding along the low points of the shoreline will likely increase in frequency and extent. With 16 inches of sea level rise, a majority of the site would be below the 100-year flood elevation by 2050 (Exhibit J).

To address future coastal flooding related to sea level rise in San Francisco Bay, recent development projects have used a combination of raising development grades, setting the development footprint back from the shoreline; and improving shoreline protection systems, among other approaches. The applicants for the dry dock project have studied various alternatives and have proposed an incremental approach that provides flexibility to adapt to changing conditions. The final strategy chosen to address sea level rise by 2050 includes: (1) locating the trail where it can be elevated in the future without impacting adjacent land uses; (2) creating a 20-foot-wide crest between the trail and the top of bank; (3) consulting with a geotechnical engineer for the appropriate treatment of existing soils and design of pavements that will withstand periodic flooding and can be easily replaced; (4) re-grading the existing site and setting the trail and overlooks at 10.9 feet (NAVD88) that places them 0.10 feet above the estimated 100-year flood elevation in 2050; (5) constructing the trail with asphalt paving and overlooks with concrete paving on structural base rock; and (6) specifying native shoreline plant species that are can tolerate occasional salt water inundation.

Given mid-range sea level rise projections for the end of century, the majority of the site would be well below the 100-year flood elevation by 2100 (Exhibit J). Due to the physical constraints of the site including existing utilities, adjacent land uses and the proximity of the shoreline, the applicants determined that it is not feasible or cost effective at this time to raise the public access areas to 14.05 feet (NAVD88) (the estimated 100-year flood elevation in 2100). According to the applicants, for the length of access trail that is being proposed, a planning horizon of 50 years is adequate and would provide for the flexibility to adapt and incorporate new strategies and techniques to address sea level rise in the future. The applicants have set back the trail at least 20 feet from the top of bank and the north edge of the trail to provide

the necessary space for the City of Alameda to address island-wide flood protection in the future when the adjacent parcels of land experience flooding. In addition, the site has been re-graded to 10.9 feet (NAVD88) placing them at the estimated Mean High Water line in 2100 and could be further graded and raised, as necessary in the future.

The Commission should determine whether the project is consistent with its law and policies regarding Bay fill, safety of fills, climate change and sea level rise.

2. **Public Access.** Section 66602 of the McAteer-Petris Act states that "...maximum feasible public access, consistent with a proposed project, should be provided." Policy 1 and Policy 6 of the Bay Plan policies on Public Access state that "a proposed fill project should increase public access to the Bay to the maximum extent feasible" and that the public access improvements "...should be designed and built to encourage diverse Bay-related activities and movement to and along the shoreline, should permit barrier free access for the physically handicapped to the maximum extent feasible, should include an ongoing maintenance program, and should be identified with appropriate signs." Policy 8 states "access to and along the waterfront should be provided by walkways, trails, or other appropriate means to connect the nearest public thoroughfare where convenient parking or public transportation may be available" and Policy 11 states that, "the Design Review Board should advise the Commission regarding the adequacy of the public access proposed." Policy 2 of the Bay Plan's Appearance, Design and Scenic Views section states that "all bayfront development should be designed to enhance the pleasure of the user or viewer of the Bay" and that "maximum efforts should be made to provide, enhance, or preserve views of the Bay and shoreline, especially from public areas, from the Bay itself, and from the opposite shore."

BCDC Permit No. 1994.013, last amended on February 15, 2008 (Amendment No. 7), was issued to Alameda Gateway, Ltd. and Bay Ship & Yacht Company for their existing ship repair facility, offices, and the mooring of an existing 32,700-square-foot dry dock at Pier 5. The permit requires an approximately 17,337-square-foot (0.40 acre) public access area extending 270 feet along the shoreline east of the Alameda Point Ferry Terminal, that includes a 947-square-foot entry plaza, an eight-foot-wide pathway, a twenty-foot-in-diameter circular viewing area, a two benches and two trash receptacles, and landscaping on both sides of the pathway (Exhibit G). The current view from this public access area is of Pier 5, the existing dry dock, BSY's ship repair facility, and of the Schnitzer Steel Company's recycling yard across the estuary in Oakland. The placement of the new HMB-1 dry dock at Pier 5 would obstruct views of the Bay from this existing public access area (Exhibit I). The proposed new dry dock has a retractable telescoping cover. When closed, the dry dock would be approximately 65 feet high from pier deck to the top of the cover. When opened the dry dock would be approximately 33 feet high from pier deck to the top of the dry dock (Exhibit E).

The proposed public access associated with the new dry dock project includes the construction of 970 feet of new Bay trail along the shoreline west of the Alameda Point Ferry Terminal and an approximately 63,838-square-foot (1.56 acre) open space area to mitigate for the view impacts from the new dry dock and to provide additional public access (Exhibits H and I). The public access area is bounded by the Ferry Terminal facility to the east, a dog park and parking lot for the Alameda ferry to the south, the Oakland Inner Harbor shoreline to the north, and an unimproved gravel parking area to the west. The public access improvements would feature a new 10-foot-wide asphalt trail with a single four-foot-wide decomposed granite multi-use shoulder, five overlook areas with seating and signage, and landscaping on both sides of the pathway with native drought tolerant plantings. Similar to the existing public access area adjacent to Bay Ship & Yacht's facilities, interpretive elements salvaged from the shipyard would be repurposed to provide unique marine/nautical themes. The trail would extend the Bay

Trail west from the Alameda Ferry Terminal to the edge of an unimproved gravel parking area, and would connect south to Main Street along the edge of the Ferry Terminal parking. The views from the public access area would include views of the San Francisco skyline, the Bay Bridge, and unique vistas of the Port of Oakland shipping terminals. The trail would be accessible by persons with disabilities and barrier-free.

On October 8, 2012, the Design Review Board (DRB) reviewed the project's proposed public access and overall, supported the project and the proposed public access. The initial design included an approximately 8-foot-wide pathway that was aligned differently along the shoreline, and had six overlook areas and different landscaping treatment. In response to comments by the Board and the Bay Trail representatives, the applicants have widened the proposed pathway to 14 feet, have re-aligned the pathway and included five relocated overlooks, have provided a connection from the pathway to Main Street, and have further developed their landscaping, seating and interpretive elements plan (see "**Design Review Board**" below for more details on the discussion at the October 8, 2012, meeting).

The Commission should determine whether the applicants' proposed public access improvements are the maximum feasible consistent with the project and consistent with its policies on Public Access and Appearance, Design and Scenic Views.

3. **Natural Resources Policies.** Policy 1 of the Bay Plan policies on Water Surface Area and Volume state, in part: "The surface area of the Bay and the total volume of water should be kept as large as possible in order to maximize active oxygen interchange, vigorous circulation, and effective tidal action." Policy 2 of the Bay Plan policies on Fish, Other Aquatic Organisms, and Wildlife state, in part: "Specific habitats that are needed to conserve, increase, or prevent the extinction of any native species, species threatened or endangered...should be protected..." Policy 4 states that the Commission should "...consult with the California Department of Fish and Wildlife [CDFW] and the U.S. Fish and Wildlife Service or [NMFS] whenever a proposed project may adversely affect an endangered or threatened...species" and "...Give appropriate consideration to the recommendations of the [state and federal resource agencies] in order to avoid possible adverse effects of a proposed project on fish, other aquatic organisms and wildlife habitat." Policy 1 of the Bay Plan policies on Water Quality states, "Bay water pollution should be prevented to the greatest extent feasible..." and policy 2 states that, "...the policies, recommendations, decisions, advice and authority of the State Water Resources Control Board and the Regional Board, should be the basis for carrying out the Commission's water quality responsibilities."

The dry dock would cover 32,770 square feet (0.75 acre) of Bay surface area and displace a varying amount of Bay volume, depending on the size of the ship being serviced and whether the dry dock is being lowered or is empty. The project also has the potential for the entrainment of longfin smelt, Chinook salmon, steelhead trout, and green sturgeon into ballast tanks during dry dock operations.

The dry dock will be lowered by filling four ballast tanks with ambient water. The water intakes for the ballast tanks will be equipped with screens to prevent the entrainment of fish into the tanks, as required by CDFW, NMFS and the RWQCB (Exhibit K). Ships to be repaired within the dry dock will enter and exit the facility via the aft opening. The stern of the dry dock has a large opening which allows water to fill into the center of the dry dock. There are no doors on the stern when it is open. Once the dry dock is flooded, the ship is positioned and secured within the center of the dry dock by a dive team. There are two, 3-foot diameter scuppers located on the bow which allow water to fill into the center of the dry dock as well. During the filling and operation of the dry dock, the facility will always be positioned at least six feet above the San Francisco Bay floor (Exhibit D). Once the ship is secured, the dry dock will be raised by discharging water

from the ballast tanks and allowing them to fill with air. Water within the center of the dry dock will flow out through the stern and through the scupper on either side of the bow. The deck of the dry dock will be slightly sloped to encourage water to drain towards the stern. The lowering and raising of the dry dock will take approximately four hours (90 minutes to submerge and 133 minutes to rise). There will be no pumping system to move water in or out of the center of the dry dock nor are there any weirs or obstructions along the perimeter of the dry dock that would impede draining or create ponding.

According to the applicants, floating dry docks have minimal adverse impacts on the circulation of water and float at all stages of the tide, although they always occupy a varying amount of water. On September 19, 2012, the U.S. Army Corps of Engineers initiated consultation with NMFS pursuant to Section 7 of the Endangered Species Act and the Essential Fish Habitat (EFH) provisions of the Magnuson Stevens Fishery Conservation and Management Act. On February 5, 2013, NMFS found that, with the mitigation measures incorporated into the project, the project is not likely to adversely affect threatened CCC steelhead, threatened green sturgeon and their critical habitat. NMFS determined that the project would adversely affect EFH for various federally-managed species within the Pacific Groundfish, Coastal Pelagic, and Pacific Salmonid FMPs through shading and loss of prey resources, but that the project includes measures to avoid, minimize or otherwise offset adverse effects, such that NMFS has no further EFH conservation recommendations to provide.

All construction work to convert the barge into a dry dock (including installing flooding and crossover valves, de-ballasting pumps and valves, and tank venting) will be performed between June 1 and November 30 and thus, will not affect CCC steelhead or green sturgeon. Most of the work would also occur on the deck of the barge in the dry, with the exception of the installation of the fish screens. The future operations of the dry dock after conversion may affect listed fish when ballast tanks are filled with water and when ships are entering or exiting the dry dock. NMFS concluded, however, that although the Oakland Inner Harbor is connected to the greater San Francisco Bay, the channel is an unlikely migration route for steelhead and green sturgeon. The Inner Harbor is frequently dredged and the shoreline is comprised of riprap, bulkheads, concrete walls, piers, docks and wharves. To minimize potential impacts to CCC steelhead and green sturgeon which infrequently occur in the Oakland Inner Harbor, the project will install fish screens on the ballast tank water intakes to prevent entrainment and/or impingement of fish (Exhibit K). The screens are required to be designed to protect the smallest life stages of steelhead and green sturgeon that may occur in the Bay. In addition, to deter fish from entering the dock with ships, deterrent bubble curtains located along the aft opening and under the scuppers are required to be operated during ship docking procedures. According to NMFS, bubble curtains have been used effectively to deter fish from entering the Allied Defense Recycling dry dock facility at Mare Island near Vallejo, California. The proposed fish screens and bubble curtain deterrent systems are anticipated to effectively prevent the entrainment, impingement and stranding of steelhead and green sturgeon in the dry dock. In the unlikely event that anadromous CCC steelhead or green sturgeon do enter the dry dock during ship docking operations, they are expected to exit the area free of injury during the slow dock raising procedure because of the draining dock slope design.

According to NMFS, shading from the dry dock could affect the growth of submerged aquatic vegetation under the barge, and alter the invertebrate assemblages on the Bay floor. However, these effects are anticipated to be insignificant at the project site because water depths range from 25 feet to 35 feet Mean Lower Low Water, which is beyond the

maximum depth for eelgrass and other submerged aquatic vegetation. NMFS also states that the area's benthic invertebrate population is frequently disturbed by regular dredging operations at the Port of Oakland so the impacts associated with shading is expected to be insignificant.

BSY proposes to mitigate the impacts from the shading and occupying a portion of the Bay's water column by providing \$75,000 in funds to CalRecycle's Oakland Estuary Cleanup Project to specifically remove an old abandoned dock, two vessels, and marine debris at Union Point Park (Exhibits A and F). CalRecycle staff would use the funds to remove the dock and debris and assist with the salvaging of two abandoned vessels. In addition to funding, BSY would make its facilities available for the salvaging and dismantling of two 55-foot vessels that are submerged offshore of Union Point Park. CalRecycle would obtain any required approvals or prepare any required environmental review needed for the removal prior to the work. The removal of the marine debris would increase Bay water circulation and volume, improve water quality, eliminate navigational hazards in the Bay, and create new and clean substrate material for species.

On March 12, 2013, the RWQCB issued a water quality certification for the project. The water quality certification included conditions based on NMFS's recommendations including: (1) limiting any in-water construction work on the floating dry dock from June 1 and November 30; (2) requiring fish screens to minimize the potential for fish entrainment and impingement and raising the screens to an elevated position when not in use for safety concerns, to prevent damage to the pier or fender structures, as a "self-cleaning" mechanism to prevent clogging from marine life, and to limit the effects of galvanic corrosion to the dry dock; (3) requiring deterrent bubble curtains to minimize fish entry into the dry dock and two scupper ports during dock submersion; and (4) providing funding to CalRecycle's Oakland Estuary Clean-Up Project (as discussed above). Additional best management practices conditions are required including conditions regarding construction debris and construction and operation activities.

The Commission should determine whether the proposed project, with the incorporation of NMFS's and the RWQCB's recommendations, would be consistent with the Bay Plan policies regarding fish, other aquatic organisms, and wildlife, and water quality.

B. Review Boards

1. **Design Review Board.** On October 8, 2012, the Commission's Design Review Board (DRB) reviewed the project's original public access proposal that included an 8-foot-wide pathway in a different location and configuration than the present proposal, six overlook areas also located in different locations, and a different landscaping design and plant species. The Board recommended that the shoreline path be placed in a more graceful manner, be wider and that public safety should be carefully considered and dense shrubbery should not be used in order to ensure clear visibility of the area from Main Street. In addition, the Board recommended that the placement of salvaged nautical/marine elements be carefully considered and interpretive signage be placed to describe these pieces as well as the turning basin and the dry dock operations. Finally, the Board warned that it is very difficult to establish native grasslands and there will need to be careful management of the landscaping treatment in order for establishment to be successful. At the meeting, comments from the Bay Trail were presented via a letter that was read into the record. The Bay Trail requested that the trail be widened to typical Bay Trail standards of 14 – 16 feet, that a better connection be made in front of the ferry terminal between the existing and proposed trail segments and also that the existing Bay Trail segment be widened and improved. In response, the applicants have widened the proposed pathway to 14 feet, have re-aligned the pathway and relocated the proposed overlooks, have provided a connection from the pathway to Main Street, and have further developed their landscaping, seating and interpretive elements plan.

C. **Environmental Review.** On November 25, 1996, the City of Alameda approved a Mitigated Negative Declaration in accordance with the California Environmental Quality Act (CEQA) and a planned development permit to allow the use of Pier 5 for dry dock facilities, although this proposed dry dock was not proposed or analyzed. On September 10, 2012, the City of Alameda issued a Zoning Compliance Determination, determining that the proposal to add a second dry dock to Pier 5 is consistent with these prior local approvals and would not result in any new environmental impacts that had not been previously identified and analyzed, nor would the additional dry dock increase the severity of any previously identified environmental impact. On March 12, 2013, the RWQCB issued a water quality certification for the project and found that the project is categorically exempt from the requirements of CEQA, pursuant to Section 15301(d), for the *Restoration or Reconstruction of Existing Structures*. It also stated that, on April 22, 2011, the Port of Oakland, acting as the CEQA lead agency, adopted a Notice of Exemption for the project.

D. **Relevant Portions of the McAteer-Petris Act**

1. Section 66605
2. Section 66602

E. **Relevant Portions of the San Francisco Bay Plan**

1. Bay Plan Map 5
2. Bay Plan Policies on Fish, Other Aquatic Organisms, and Wildlife (page 16)
3. Bay Plan Policies on Water Quality (page 19)
4. Bay Plan Policies on Water Surface Area and Volume (page 20)
5. Bay Plan Policies on Climate Change (pages 36-39)
6. Bay Plan Policies on Safety of Fills (pages 40-41)
7. Bay Plan Policies on Public Access (pages 67-69)
8. Bay Plan Policies on Appearance, Design, and Scenic Views (pages 70-72)

Exhibits

- A. **Vicinity Map**
- B. **Bay Ship & Yacht Regional and Local Vicinity Map**
- C. **Bay Ship & Yacht Facility Site Plan**
- D. **HMB-1 Dry Dock Dimensions**
- E. **HMB-1 Dry Dock Panorama View**
- F. **Proposed Bay Fill Removal**
- G. **Existing Public Access Site Plan**
- H. **Proposed Public Access Site Plan**
- I. **Proposed Public Access Improvements View Sheds**
- J. **Proposed Public Access and Sea Level Rise Elevations**
- K. **Required HMB-1 Dry Dock Fish Screens**