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STAFF REPORT CDP AMENDMENT

Application Number: 2-15-1357-A1

Applicant: San Francisco Public Utilities Commission

Project Location: Seaward of the Great Highway and south of Sloat Boulevard, fronting the City of San Francisco's Oceanside Wastewater Treatment Facility and related infrastructure in the southern portion of San Francisco near Fort Funston in San Francisco City and County.

Project Description: The existing CDP allows for the temporary use of revetments, sand bag structures, and sand berms to help protect the Great Highway and related infrastructure through December 31, 2021. The proposed amendment would: 1) extend such temporary authorization by six months (to July 1, 2022)¹; and 2) allow for an increased area of allowed sand berm coverage and increased thickness of coarse sand grain placement for such sand berms.

Staff Recommendation: Approval with Conditions

SUMMARY OF STAFF RECOMMENDATION

The Applicant, the San Francisco Public Utilities Commission (SFPUC), requests that the Commission's 2015 temporary authorization (for revetments, sand bag structures, and sand berms to help protect the Great Highway and related infrastructure just inland of Ocean Beach south of Sloat Boulevard) be extended by 6 months. Specifically, the

¹ July 1, 2022 reflects an extended authorization of roughly six months from date of original CDP authorization.

base CDP authorized what is referred to as Phase I, and Phase I was designed to be a temporary solution to provide protection while the Applicant developed a long-term solution, referred to as Phase II. For a 6-year term, the base CDP authorized over 1,000 linear feet of rock revetments, emergency sandbag structures placed in 2011, up to 300 linear feet of sandbag structures (and sand stockpiling to fill sand bags), and the yearly movement of sand from North to South Ocean Beach to create up to 900 linear feet of sand berms south of Sloat Boulevard. The CDP requires all of the temporary development to be removed and the beach and bluff restored by the end of 2021. That expiration date was based on allowing SFPUC the time to further develop their proposed Phase II project for Commission consideration.² In other words, the Commission gave the City 6 years to come up with a long-term project for Commission consideration, where that project was intended by the Commission to be the long term solution to address coastal erosion at this location, and it would supersede and replace the temporary measures allowed in the short term as a means of providing the City the time it said it needed to work through the long term solutions.³

Through this amendment, SFPUC proposes to extend the temporary authorization for another six months to allow time for SFPUC to complete CEQA review and related documentation supporting their Phase II project. SFPUC still intends to submit the CDP application for such a Phase II project by the initial deadline established, namely December 31, 2021 but recognizes that that application will not be complete and able to be acted on by the Commission before the authorization expires. The six month extension is intended to allow for SFPUC to complete their CDP application, with a goal of bringing the Phase II application to Commission for action in spring of 2022, and before the temporary authorization again would expire. It is expected that any Commission CDP action at that time would include terms and conditions that addressed the temporary authorization in a way that implemented the Commission's ultimate CDP decision.

In addition, SFPUC also proposes minor modifications to the allowed temporary sand berms. Specifically, the proposed modifications would increase the allowable length of the sand berms from 900 to 1600 feet and would allow for a thicker layer of coarse sand placement to "cap" the berms to protect against windblown sand. No change is proposed to the width, height, or overall quantity or quality of sand.

Phase II of this project has the potential to be one of the keystone shoreline adaptation

² As outlined in the 2012 Ocean Beach Master Plan and associated implementation studies, Phase II is intended to narrow and eventually abandon the Great Highway south of Sloat Boulevard, remove armoring, restore the bluffs and beach area, install various public access amenities and generally improve access to the beach (through a formalized sand ramp, stairway, and multi-use trail, improved parking near Skyline Boulevard (by the stairway), addition of a multi-use trail that improves pedestrian, handicap accessibility, interpretive signage and biking access, improved public restrooms, etc.). As currently envisioned by SFPUC, Phase II would also include a buried seawall and rock system to protect inland infrastructure, including what is known as the Lake Merced Tunnel, which is a large stormwater and wastewater conveyance structure located under the Great Highway.

³ Under the base CDP, the CDP application for Phase II was meant to be submitted for Commission action in 2018, thus allowing ample time for final decisions to be made prior to the end of 2021.

projects in California, potentially creating a template for future projects involving managed retreat and shoreline adaptation in the face of sea level rise. However, given the complexity of the project and the amount of interagency, non-governmental organizations, and public coordination required, SFPUC indicates that it needs a little more time to provide the Commission with a complete Phase II CDP application for action. Staff is supportive of extending the deadline in this way (and the sand berm changes) provided SFPUC firmly commits to doing everything possible to expedite and final supporting application documentation, including a final CEQA document, and to timely completing that application to allow for a Commission hearing before the temporary authorization again expires at the beginning of July. Staff's discussions with SFPUC indicate that that is their intent, but it is also clear to staff that SFPUC will need to prioritize this matter in terms of applying the proper amount of time and resources, especially in terms of completing the CEQA document. In the context of the over two-decades that have passed since armoring was installed without CDPs in the late 1990s, precipitating a number of actions capped by the Commission's 2015 temporary CDP authorization action, six months may not seem like much, but staff is also mindful of the need to bring this matter to final resolution and closure. With the SFPUC's commitment to the Commission here, staff believes that it is feasible to plan for a spring 2022 hearing for just that.

Thus, staff recommends that the Commission approve the extension and the temporary sand berm changes, with the understanding that this is a limited-term extension to allow for Commission review of the City's application for Phase II in early 2022. The motion to approve the CDP amendment with conditions is found on page 5 below.

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EXHIBITS

- Exhibit 1 – Vicinity Map
- Exhibit 2 – North Ocean Beach Project Area
- Exhibit 3 – South Ocean Beach Project Area
- Exhibit 4 – Conditions as Amended
- Exhibit 5 – ESA Technical Memorandum
- Exhibit 6 – Sand Berm Construction Diagram
- Exhibit 7 – CCPN vs. CCSF Settlement Agreement

1. MOTION AND RESOLUTION

Staff recommends that the Commission, after public hearing, **approve** a CDP amendment for the proposed development. To implement this recommendation, staff recommends a **yes** vote on the following motion. Passage of this motion will result in approval of the CDP amendment as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

Motion: *I move that the Commission **approve** Coastal Development Permit Amendment Number 2-15-1357-A1 pursuant to the staff recommendation, and I recommend a **yes** vote.*

Resolution to Approve CDP Amendment: *The Commission hereby approves Coastal Development Permit Amendment Number 2-15-1357-A1 and adopts the findings set forth below on grounds that the development, as amended and subject to conditions, will be in conformity with the Chapter 3 policies of the Coastal Act. Approval of the amended permit complies with the California Environmental Quality Act because either 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment, or 2) there are no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the development on the environment.*

2. CONDITIONS

NOTE: **Exhibit 4** shows all CDP 2-15-1357 standard and special conditions as approved by the Commission in its original 2015 action. All such conditions continue to apply in that form unless modified below, where changes are shown in underline and ~~strikeout~~ format (for additions and deletions, respectively) as applicable.

1. Delete Standard Condition 2.

2. Modify Special Condition 1 as follows:

Term of Authorization. This CDP authorizes the shoreline protection system fronting the bluffs south of Sloat Boulevard consisting of: 1) the work proposed in CDP Application No. 2-15-1357 (sandbags and sand relocation), as well as the work proposed in CDP Application No. 2-15-1357-A1 (as depicted in **Exhibit 6** of that authorization); 2) the Emergency Quarrystone Revetment as depicted on **Exhibit 3**; 3) the Emergency Bluff Toe Protection as depicted on **Exhibit 3**; and 4) the Emergency Sandbag Structure as depicted on **Exhibit 3**, until ~~December 31, 2021~~ July 1, 2022, or until the time when the currently existing structures warranting protection are no longer present and/or no longer require such protection, whichever occurs first. ~~If the Permittee intends to keep the existing shoreline protection system or any portion of it in place, including any sand relocation or sand bag activities, after December 31, 2021, the Permittee must submit a complete CDP application (or complete CDP amendment application if deemed appropriate by the Executive~~

Director) prior to ~~December 31, 2024~~. ~~Otherwise,~~ The Permittee shall submit two copies of a removal and restoration plan to the Executive Director for review and approval, where such plan shall provide for the removal of the shoreline protection system and restoration of all affected areas in a manner designed to be most protective of coastal resources, no later than ~~December 31, 2024~~ July 1, 2022, unless the Commission authorizes the shoreline protection system approved by this CDP, or some portion thereof, to remain in place pursuant to a separate CDP or an amendment to this CDP.

3. Add Special Condition 4(a) as follows:

As-Built Plans. Within 30 days of any activities undertaken pursuant to CDP Amendment Number 2-15-1357-A1, or within such additional time as the Executive Director may grant for good cause, the Permittee shall submit two copies of As-Built Plans for Executive Director review and approval showing all such development undertaken as authorized by this CDP Amendment, all nearby public infrastructure (i.e., parking lots, pathways, the Great Highway, the Lake Merced Tunnel), all property lines for the shoreline area affected by the approved project, and all as-built development authorized by CDP Number 2-15-1357. The As-Built Plans shall be substantially consistent with the project as described in CDP Amendment Number 2-15-1357-A1, and shall comply with all applicable provisions of Special Condition 4 otherwise.

4. Modify Special Condition 7 as follows:

Future Maintenance. This CDP requires ongoing monitoring of the overall shoreline protection system at this location and authorizes future maintenance of that system as described in this special condition through ~~December 31, 2024~~ July 1, 2022. ...

3. FINDINGS AND DECLARATIONS

A. Project Location

The project site is located along Ocean Beach west of Highway 1, also referred to as the Great Highway, within the City and County of San Francisco. Ocean Beach is a north-south trending sandy beach that is approximately 3.5 miles long, located on the western side of the City and south of the Golden Gate entrance to the San Francisco Bay. The Great Highway, which is the primary coastal access roadway located within City limits, runs parallel to Ocean Beach immediately to the east. Generally speaking, the land west of the most western edge of the Great Highway is managed by the National Park Service (NPS) as part of the Golden Gate National Recreation Area (GGNRA), and the Great Highway and areas directly east of it in the project area are under City ownership. The proposed project would involve work at both the northern and southern ends of Ocean Beach, on land owned by NPS (**Exhibit 1**).

At North Ocean Beach, sand is collected from the beach from Lincoln Way to just south of the Cliff House and Seal Rocks (**Exhibit 2**). Golden Gate Park is located directly across the Great Highway from this area, and the beach in this area is bordered on its inland side by the iconic O'Shaughnessy Seawall. There is a wide sandy beach in this

area, and the beach has become wider in recent years due to accretion. Public access to the beach is supported by a 600-space public parking lot located to the east of and along the O’Shaughnessy Seawall. Additional parking is available across the Great Highway on the eastern side at the Park’s Beach Chalet site.

At South Ocean Beach, the project area is located on the beach and bluffs between Sloat Boulevard to the north and Fort Funston to the south (**Exhibit 3**). In this area, there are two large (600 linear foot and 440 linear foot) rock revetments along the bluff, installed by the City in 1997 and 2010 (labeled “EQR Reach” and “2010 Emergency Bluff Toe Protection” on **Exhibit 3**), which themselves are mostly covered by sand berms, most recently augmented in September 2021. The backshore in this area transitions from low dunes at Sloat Boulevard to bluffs of about 50 feet above the grade of the beach near Fort Funston. Public access to the beach is supported by two bluff-top parking lots, the Sloat Parking Lot (also referred to as the North Lot) and the South Parking Lot, both of which have both been severely damaged by erosion episodes that occurred between the early 1990s and 2010. The San Francisco Oceanside Wastewater Treatment Plant (WWTP) is located immediately inland of the Great Highway in the southern portion of this project area, and the associated pump station is located inland of the Great Highway nearest Sloat Boulevard. Wastewater infrastructure in the area also includes the Lake Merced Tunnel, a 14-foot-diameter tunnel for combined stormwater/wastewater flows and overflow storage that runs beneath the Great Highway. The Lake Merced Tunnel holds untreated stormwater and wastewater during periods when the WWTP is over capacity and unable to handle the volume of water until it can be treated. If the tunnel fills over its capacity, the untreated stormwater/wastewater is directly released to the ocean via a series of overflow pipes extending onto the beach.

B. Project History

In 2011, the Commission denied the City’s application proposing: (1) after-the-fact authorization for the placement of 600 linear feet of rock revetment originally constructed in 1997 without the benefit of a CDP, and for the placement of 440 linear feet of rock revetment originally constructed in 2010 (under Emergency CDP 2-10-003-G);⁴ and (2) a new revetment and two tangent pile walls at South Ocean Beach (CDP Application No. 2-10-033), citing inadequate consideration of alternatives by the Applicant that would avoid and/or minimize the adverse impacts of the proposed project, encouraging the City to develop a viable alternative for consideration.

Since 2011, the Commission has authorized alternative, relatively “soft” measures in response to erosion episodes, including sand relocation activities and the placement of sandbags. In 2011, the Commission issued Emergency CDP 2-11-042-G, allowing for the temporary placement of sandbags by the Applicant in the vicinity of Reach 3 (**Exhibit 3**). Through its federal consistency review, the Commission issued negative determination (ND-030-12) for the movement of 77,000 cubic yards of sand in 2012, and negative determinations (ND-0036-14) to move 30,000 cubic yards of sand in 2014

⁴ Emergency CDP 2-10-003-G has since expired, and no longer authorizes the revetment.

from North Ocean Beach to South Ocean Beach as conducted by NPS in coordination with the Applicant.

Ultimately, the Commission in 2015 provided temporary authorization for the revetments, sand bag structures, and sand berms to help protect the Great Highway and related infrastructure just inland of Ocean Beach south of Sloat Boulevard (CDP 2-15-1357). Specifically, that CDP authorized what is referred to as Phase I, and Phase I was designed to be a temporary solution to provide protection while the Applicant developed a long-term solution, referred to as Phase II. For a 6-year term, the base CDP authorized over 1,000 linear feet of rock revetments, an emergency sand bag structure placed in 2011, up to 300 linear feet of new sandbag structures (and sand stockpiling to fill sandbags), and the annual movement of sand from North to South Ocean Beach to create up to 900 linear feet of sand berms south of Sloat Boulevard. The CDP requires all of that temporary development to be removed and the beach and bluff restored by the end of 2021, where that expiration date was based on allowing SFPUC the time to further develop their proposed Phase II project for Commission consideration.⁵ In other words, the Commission gave the City 6 years to come up with a long-term project for Commission consideration, where that project was intended by the Commission to be the long term solution to address coastal erosion at this location, and it would supersede and replace the temporary measures allowed in the short term as a means of providing the City the time it said it needed to work through longer term solutions.⁶

Since the 2015 CDP approval, consistent with CDP 2-15-1357, SFPUC has moved sand from North to South Ocean Beach and constructed sand berms as needed from 2016-2019, and constructed two roughly 100-foot long sandbag structures in 2018, one at the north end of Rubble Reach, and the other at North Lot Reach (**Exhibit 3**), before being covered by a subsequent sand berm construction. The most recent action in the project area was a large sand placement of an estimated 265,000 cubic yards of dredged material carried out by the Army Corps of Engineers, using sand dredged from the San Francisco Main Ship Channel maintenance dredging project (reviewed by the Commission through the Coastal Commission's Federal Consistency process (Negative Determination ND-0039-20, Ocean Beach Storm Damage Reduction Beach Nourishment Project). That project allowed for a series of sand berms south of Sloat Boulevard between Sloat and Fort Funston in September 2021. The Corps estimates that the proposed project will have an expected lifespan of up to five years as wave and

⁵ As outlined in the 2012 Ocean Beach Master Plan and associated implementation studies, Phase II is intended to narrow and eventually abandon the Great Highway south of Sloat Boulevard, remove armoring, restore the bluffs and beach area, install various public access amenities and generally improve access to the beach (through a formalized sand ramp, stairway, and multi-use trail, improved parking near Skyline Boulevard (by the stairway), addition of a multi-use trail that improves pedestrian, handicap accessibility, interpretive signage and biking access, improved public restrooms, etc.). As currently envisioned by SFPUC, Phase II would also include a buried seawall and rock system to protect inland infrastructure, including what is known as the Lake Merced Tunnel, which is a large stormwater and wastewater conveyance structure located under the Great Highway.

⁶ Under the base CDP, the CDP application for Phase II was meant to be submitted for Commission action in 2018, thus allowing ample time for final decisions to be made prior to the end of 2021.

storm action continues to result in significant erosive forces, but that, according to the negative determination, the “project may help to reduce the need for current PUC activities that occur to address erosion in the project area, such as the trucking of sand from the northern portion of Ocean Beach southward.” In any case, that project explicitly does not alter the terms and conditions, including the timelines or requirements, associated with CDP 2-15-1357.

D. Project Description

The project currently permitted through CDP 2-15-1357 until December 31, 2021 allows for a series of temporary erosion control measures that include managing erosion threats to the Great Highway and related infrastructure through the use of temporary revetments, sandbag structures (including stockpiling sand for same), and sand berms. Additionally, the base permit authorized other temporary activities such as installation of measures to control wind-blown sand, removal of all rubble and debris seaward of the toe of the bluff in existence before constructing sand berms or placing sandbags, and maintenance of sand berm structures. Specific components and proposed changes through this amendment are discussed below.

Sand Relocation

The project involves the excavation of up to 100,000 cubic yards of sand per year from the northern reach of Ocean Beach, within a zone extending from the northernmost extent of the beach to just north of Lincoln Way and within 150 feet of the edge of the O’Shaughnessy Seawall, which is the eastern back of the beach (**Exhibit 2**). Excavated sand is trucked via the southbound lanes of the Great Highway and placed within an approximately 0.5-mile stretch extending south from Sloat Boulevard and immediately to the west of the bluff edge. Sand placement may occur at any location within this 0.5-mile stretch but is prioritized within the two locations most threatened by erosion (Reach 2 and Reach 3) (**Exhibit 3**). The sand is lowered to the beach from the top of the bluff to create sand berms, the average size of which is approximately 300 feet long, 140 feet wide, and 25 feet high. This amendment would increase the maximum dimension of the sand berms authorized by this temporary project from 900 feet long, 140 feet wide, and 25 feet high to 1600 feet long, 140 feet wide, and 25 feet high. This increase is to match management actions over the life of the original permit through adjustments made through the condition compliance process of the base CDP, as allowed pursuant to Special Condition 3. Measures to control windblown sand after placement of the berms, including spreading a lag surface cover of shell fragments and coarse sand on the surface of the berms, may still be installed as necessary, similar to what the base permit allowed, to prevent sand from collecting on the South Ocean Beach parking lots and the Great Highway, as well as to enhance the longevity and effectiveness of the placed sand berms. This amendment would also increase the previously authorized thickness of the coarse sand on the surface of the sand berm from .25 inches to 18 inches, also in an effort to make the formed sand berms more stable and resilient to the erosive forces present.

Sandbag Structures

Sandbags of permeable geotextile fabrics, filled with up to a total of 1,000 cubic yards of sand are allowed to be installed before or during the storm season if a sufficient erosion

notch develops in the bluff such that it intrudes upon the Great Highway and related public infrastructure. The base CDP allows for the construction of up to three sandbag structures, each of 100 feet in length, 70 feet in width, and 20 feet in height or a single combined sandbag structure of up to 300 linear feet. In 2018, as authorized by the base CDP, two sandbag structures were built in response to pre-defined triggers, each roughly 100 feet in length, one at the north end of Rubble Reach, and the other at North Lot Reach (**Exhibit 3**), before being subsequently covered by sand placement from a subsequent sand berming operation. As such, up to the end of the authorization period, the Applicant could construct one additional 100-foot long sandbag structure pursuant to the terms and allowances of the base CDP.

Sand used in the sandbags comes from North Ocean Beach or from a commercial source that can supply sand of consistent grain size, material, and color to match that at Ocean Beach. SFPUC currently has a stockpile of sandbags at the San Francisco Zoo and does not anticipate needing any new bags at this time. At the end of the authorization, any sand contained within the sandbags at the stockpile location or on the beach would be returned to the beach and the fabric of the sandbags would be removed. Based on recommendations from the latest annual monitoring report, SFPUC does not estimate requiring any new sandbag placement or sandbag modifications at this time, only adding sand to cover the bluff area, which was accomplished through the above-mentioned recent Army Corps sand placement (the Ocean Beach Storm Damage Reduction Beach Nourishment Project).

Shoreline Armoring

There are five separate shoreline armoring structures that are temporally authorized by the base permit: a 600 linear foot rock revetment constructed in 1997, a 440 linear foot rock revetment originally constructed in 2010, the emergency sandbag structure placed in 2011, and the two sandbag structures placed in 2018. The Applicant does not propose any changes at this time to these structures.

Proposed Temporary Authorization Extension

Through this amendment, the Applicant/Permittee proposes to extend the temporary authorization for another six months to allow time for SFPUC to complete CEQA review and related documentation supporting their Phase II project. SFPUC still intends to submit the CDP application for such a Phase II project by the initial deadline established, namely December 31, 2021, but recognizes that that application will not be complete and able to be acted on by the Commission before the authorization expires. The six month extension is intended to allow for SFPUC to complete their CDP application, with a goal of bringing the Phase II application to Commission for action in spring of 2022, and before the temporary authorization again would expire. It is expected that any Commission CDP action at that time would include terms and conditions that address the temporary authorization in a way that implements the Commission's ultimate CDP decision.

E. Standard of Review

The proposed project involves development both in the Commission's retained permit jurisdiction and in the City and County of San Francisco's permit jurisdiction, as

delegated by the Commission through certification of the City and County's Local Coastal Program (LCP). Coastal Act Section 30601.3 authorizes the Commission to process a consolidated CDP application in such cases when the local government, the applicant, and the Executive Director all agree to such consolidation. Here, such was the case for the original CDP application, and the Commission here remains the decision-making body for any changes to that CDP. The standard of review for a consolidated CDP application and any amendments to it is the Coastal Act Chapter 3 policies, with the City's certified LCP providing non-binding guidance.

F. CDP Amendment Determination

1. Coastal Hazards

Applicable Policies

Coastal Act Section 30235 addresses the use of shoreline protective devices:

Section 30235. *Revetments, breakwaters, groins, harbor channels, seawalls, cliff retaining walls, and other such construction that alters natural shoreline processes shall be permitted when required to serve coastal-dependent uses or to protect existing structures or public beaches in danger from erosion, and when designed to eliminate or mitigate adverse impacts on local shoreline sand supply. Existing marine structures causing water stagnation contributing to pollution problems and fish kills should be phased out or upgraded where feasible.*

Coastal Act Section 30253 addresses the need to ensure long-term structural integrity, minimize future risk, and to avoid landform altering protective measures in the future. Section 30253 provides, in applicable part:

Section 30253. *New development shall do all of the following: (1) Minimize risks to life and property in areas of high geologic, flood, and fire hazard. (2) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs. ...*

Coastal Act Sections 30235 and 30253 acknowledge that seawalls, revetments, retaining walls, groins, and other such structural or "hard" methods designed to forestall erosion also alter natural landforms and natural shoreline processes. Accordingly, except for coastal-dependent uses, Section 30235 only allows shoreline protective devices when required to protect existing structures or public beaches in danger from erosion. The Coastal Act provides these limitations because, as recognized by the Commission in numerous LCP and permit actions, shoreline structures can have a variety of negative impacts on coastal resources including adverse effects on sand supply, public access, coastal views, natural landforms, and overall shoreline beach dynamics on and off-site.

Analysis

Existing Structure

The Great Highway was constructed more than a century ago, predating the Coastal Act. Partial reconstruction efforts to the roadway occurred in the 1980's and 90's, but the roadway was never completely redeveloped, and as such is considered an existing structure for the purposes of Section 30235. Other pre-Coastal Act existing structures involved in this project include the parking lots located between the Great Highway and the beach, also partially reconstructed at the same time as the Great Highway but not redeveloped, and the electric infrastructure located beneath the road.

Danger from Erosion

The Commission found in the base CDP determination that the Great Highway and associated infrastructure at South Ocean Beach were in danger from erosion, or threatened within the next two to three storm cycles, and thus qualified for shoreline protection under Section 30235, based on a technical memorandum submitted by the Applicant examining the geologic and coastal processes at South Ocean Beach (Environmental Science Associates (ESA), August 28, 2015).

Over the last 6 years, SFPUC has submitted annual monitoring reports (also prepared by ESA) as part of condition compliance. These reports have recorded significant continued erosion to unarmored sections of the bluff, rainfall-runoff induced gully formation and expansion, significant erosion of the sacrificial sand berms, lower beach elevations due to higher water levels, and reductions in toe elevations at armored sections of the beach. Amounts of erosion and damage to the protective structures have varied year-to-year depending on the amount of sand placed in preceding years, amount of wave energy, non-tidal levels, and amounts of precipitation and wind, among other factors. As such, the data provided by ESA indicates that the danger to the existing Great Highway and its associated infrastructure persists today and that erosion management, in the form of the temporary Phase I measures, is still appropriate. SFPUC anticipates that large-scale interventions will not be needed in Spring 2022, with a high (approximately 90%) likelihood that the existing measures will be adequate if storms of 2010 magnitude (1 in 30-year return) or larger do not occur.

In addition, the recent Army Corps sand placement event that occurred in September 2021 is expected by the Corps to last for some five years, and that sand may help reduce threats here. While this sand does give some additional protection against erosion, many sand placements have occurred at South Ocean Beach over the years that have not persisted, especially during periods of high wave and storm action. For example, two placements of 77,000 cubic yards and 30,000 cubic yards occurred in 2012 and 2014, respectively, and ultimately were fairly quickly eroded. SFPUC also reports that despite the large volume of sand placed by the Army Corps in September 2021, the waves are already impacting the beach contour created by the placement, and nearly 30-foot near-vertical slopes are forming in the seaward most areas of the placement footprint, causing a public safety issue, and requiring recontouring. So, it is clear that despite the sand replenishment that has occurred in the area, the short-term and temporary erosion control strategies approved by the base permit are still necessary at this time to avoid the impacts to the environment and coastal water quality that could occur if inland structures were to be damaged. Accordingly, the Commission agrees that the Great Highway and associated infrastructure present at South Ocean

Beach are in continued danger from erosion and thus qualify for continued shoreline protection consideration under Section 30235.

Alternatives

In the base CDP, the Commission considered a range of project alternatives proposed by the Applicant including a toe wall, rock toe stabilization, consolidated rubble, as well as the proposed project, to temporarily protect the infrastructure. The Commission ultimately determined that the project approved by the base permit using “softer” solutions and temporary erosion control measures, until the Phase II long-term project could be constructed, was the least environmentally damaging feasible alternative. The proposed amendment to the permit at this juncture will afford 6 more months to SFPUC to develop materials necessary to support its CDP application for Phase II, including in terms of finalizing its CEQA process. The goal of the proposed amendment is to continue to reduce risk to the infrastructure at South Ocean Beach during a limited 6-month extension of management activities that have been conducted on an ongoing basis for the last six years as previously authorized by the Commission. This will allow time for Phase II of the project to be submitted to, and reviewed by, the Commission.

Beach and Sand Supply Impacts

In terms of beach and sand supply impacts, changes are being proposed that alter the Commission’s determinations in the base CDP: (1) an additional up to 6 months of impacts associated with the approved project; (2) an increase in the authorized length of sand berms from 900 feet to 1600 feet; and (3) an increase in the thickness of the coarse sand placed on top of the berms. With respect to the first change, extending the life of the permit will temporarily continue quantifiable beach and sand supply impacts outlined in the base CDP, including encroachment on the beach by the revetment and sandbag structures, fixing of the back beach, and retention of potential beach material. In the base permit determination, the Commission found that the benefits of sand relocation to South Ocean Beach pursuant to the Phase I activities directly accrued to public access and recreation resources and that such activities were in part self-mitigating for the impacts to sand supply and the beach. Sand relocation has the dual effect of erosion control and mitigation of some of the adverse impacts of the existing and proposed armoring on the beach and public access to South Ocean Beach. The berms created by the relocated sand nourish the beach and delay the impacts of artificially fixing the back beach as they are worn away by wind and waves. In addition, both sand back passing and sand covered berms have the effect of creating more publicly accessible beach and vertical access areas.

In addition, the Commission also viewed impacts and mitigations in the base CDP in relation to potential offsetting improvements to be had through Phase II of the permit. In other words, some of the mitigations were deferred to that action. The long-term solution envisions narrowing and ultimately abandoning the Great Highway south of Sloat, removing armoring, and managing shoreline retreat in this area differently, all as called out in the Ocean Beach Master Plan, and intends to evaluate a series of managed retreat measures designed to avoid hard armoring as much as possible in favor of instead managing the shoreline more naturally (for example, with sand dunes). Such a project would be expected to have significant positive impacts on the beach

environment, including in terms of sand supply processes and benefits to the beach.⁷ The 6-month additional continuation of these impacts is allowable given the mitigating effects of the sand placement and constructed sand berms, the limited time frame of the proposed extension, and the impending submittal of Phase II of this project in the near-term.

In terms of the increased sand berm length (from 900 feet long to 1600 feet long), the total length of the built sand berms has varied year-to-year depending on the amount of erosion, rainfall, and stormwater runoff that occurred during the winter months at South Ocean Beach. In general, sand berms were extended in length to cover the exposed sandbag structures and rubble as needed, to not adversely affect public access, safety, and visual resources. Given that the total amount of sand placed for these sacrificial sand berms (100,000 cubic yards), the height, and the width of the berms will remain as originally authorized, allowing an additional 700 feet in increased berm length will increase the impacts to beach and sand supply. However, the additional impact consideration is not significant in that these sand placements, even at the increased length, will continue to be mitigated by the benefits to the beach and public access similar to what Commission determined in the base permit, in particular as it helps to facilitate public access and safety on South Ocean Beach by covering rubble and sandbag structures exposed by winter storm activity.

Finally, while the base CDP authorized 0.25 inches of coarse sand placement on the top of the sand berms as an erosion control technique, through condition compliance SFPUC has been placing up to 18 inches of coarse sand. While it is unclear at this point why the original thickness was set at 0.25 inches, ESA monitoring reports and ESA Memorandum *Implementation Guidance of Wind-blown Sand Mitigation Measures South Ocean Beach Short-Term Erosion Protection Measures Project* (ESA Ref. #D120925.00) (Sand Stabilization Measure Section 3.5) (**Exhibit 4**) recommend placing up to 2 feet of medium-coarse sand as an erosion management technique. Although coarse sand placement has the potential to impact beach and sand supply, the impact should not be greater than the management actions approved in the original permit.

As such, although this CDP amendment will result in continued loss of beach area due to the presence of the existing rock revetments as well as the sandbag structures placed since CDP authorization, fixing of the back beach location, and retention of potential beach material by continuing to prevent natural erosion at the project site, the sand relocation component provides partial mitigation for these sand supply impacts, and results in continued significant public access improvements. Allowing the Applicant to continue to place sand as needed, continue other temporary activities, and ultimately protect the Great Highway and its associated infrastructure, including the blufftop parking lots, will allow the public to continue to use the beach and assure public safety until Phase II can be acted upon by the Commission. As such, amended **Special Condition 1** extends the duration of approval by six months through July 1, 2022, and requires removal of the revetments and sandbags and discontinued use of sand

⁷ To be clear, however, and as currently envisioned by SFPUC, Phase II would also include a buried seawall and rock system to protect inland infrastructure, including the Lake Merced Tunnel.

relocation activities after July 1, 2022, unless the Commission authorizes some or all of the structures as part of a CDP for Phase II. In addition, amendments to **Special Conditions 4 and 7** require that new as-built plans are required to be submitted consistent with the berm configurations authorized by the CDP amendment and that future maintenance of the implemented erosion control measures can also continue through July 1, 2022. In this case, the proposed amendment can be found consistent with the Coastal Act policies relating to coastal hazards.

2. Public Access and Recreation

Applicable Policies

Coastal Act Section 30604(c) requires that every CDP issued for any development between the nearest public road and the sea “shall include a specific finding that the development is in conformity with the public access and public recreational policies of [Coastal Act] Chapter 3.” The proposed project includes and is located seaward of the first public road, the Great Highway, and thus this finding needs to be made in this case. Coastal Act Sections 30210 through 30224 specifically protect public access and recreation. In particular:

Section 30210. *In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.*

Section 30211. *Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.*

Section 30212.5. *Wherever appropriate and feasible, public facilities, including parking areas or facilities, shall be distributed throughout an area so as to mitigate against the impacts, social and otherwise, of overcrowding or overuse by the public of any single area.*

Section 30213. *Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred....*

Section 30221. *Oceanfront land suitable for recreational use shall be protected for recreational use and development unless present and foreseeable future demand for public or commercial recreational activities that could be accommodated on the property is already adequately provided for in the area.*

Section 30223. *Upland areas necessary to support coastal recreational uses shall be reserved for such uses, where feasible.*

In addition, Coastal Act Section 30240(b) also protects parks and recreation areas, such as the adjacent beach area within GGNRA. Section 30240(b) states:

Section 30240(b). *Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.*

The City's LCP Section on Ocean Beach, Page 10 states in part:

Policy 1: *Continue Ocean Beach as a natural beach area for public recreation.*

...

Policy 3: *Keep the natural appearance of the beach and maximize its usefulness by maintaining the beach in a state free of litter and debris.*

Analysis

The project site is located at Ocean Beach within the Golden Gate National Recreation Area (GGNRA), which is heavily used for recreation by local residents and visitors from outside the area, and includes the Great Highway and adjacent parking lots. The base CDP was analyzed for Coastal Act consistency and determined to be consistent with Coastal Act public access and recreation requirements, and this proposed amendment does not modify the terms and conditions of that permit that limit any potential public access impacts of the temporary erosion control measures.

In the area of South Ocean Beach, where sand and sandbag placement is proposed to continue through this amendment's additional six month authorization, coastal access is served by two parking lots (the Sloat Boulevard Parking Lot and the South Parking Lot) and informal roadside parking. Beach access is provided by informal footpaths such as in front of the parking lot at Sloat Boulevard, and lateral beach access exists along the entire beach shoreline from Sloat Boulevard to Skyline Boulevard. The proposed amendment will continue to provide short-term protection for the public access infrastructure that exists at South Ocean Beach, including the parking lots and lateral and vertical access points, which must be maintained (and enhanced in the case of the vertical access points) while the long-term management solution is developed and finalized. Previous erosion events have caused severe damage to both parking lots in this area, and have resulted in the loss of area available for public parking. Without erosion control measures in place, storm damage could result in the loss of further parking spaces and might require temporary or permanent closure.

The berms created by sand placement activities impede onto the beach area and reduce usable beach space, but create enhanced lateral access opportunities along the bluff top and oftentimes provide the only means of safe vertical access to the beach in the area south of Sloat Boulevard. Construction activities can also impact public access, but the base CDP is conditioned to minimize impacts to the public by limiting the timing of construction to weekdays (with exceptions for emergency placement of sandbags), and by avoiding peak visitation times such as summer months. The amendment would

be required to comply with all such conditions. Therefore, as conditioned, the project will not significantly interfere with public access or recreation and as such can be found consistent with the public access requirements of the Coastal Act.

3. Other Coastal Resources

CDP 2-15-1357 analyzed the proposed project for consistency with Coastal Act policies related to Marine Resources and Water Quality (Coastal Act Sections 30230 and 30231); Environmentally Sensitive Habitat Areas (ESHA) (Coastal Act Sections 30240); Visual Resources (Coastal Act Section 30251); and Archaeological Resources (Coastal Act Sections 30244) and found the project to be consistent with the Coastal Act on these points. The proposed changes to the authorized development in this permit amendment do not alter that analysis or consistency determination and will not impact these coastal resources beyond what has already been analyzed and conditioned to assure Coastal Act consistency in the base permit, and as such the proposed permit amendment can be found consistent with the applicable Coastal Act provisions.

4. CEQA

Section 13906 of Title 14 of the California Code of Regulations requires Coastal Commission approval of CDP applications to be supported by a finding showing the application, as modified by any conditions of approval, is consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are any feasible alternatives or feasible mitigation measures available, which would substantially lessen any significant adverse effect the proposed development may have on the environment. The Coastal Commission's review and analysis of land use proposals has been certified by the Secretary of Resources as the functional equivalent of environmental review under CEQA (14 CCR Section 15251(c)).

The City and County of San Francisco, acting as lead agency, found Phase I of the project, originally approved by the Commission in the 2015 base permit, to be categorically exempt under CEQA, and issued a "no substantial modification" approval in June of 2021 for the extension of Phase I activities. In addition, the Commission incorporates its findings on Coastal Act consistency above at this point as if set forth in full. The findings address and respond to all public comments regarding potential significant adverse environmental effects of the project that were received prior to preparation of this report. As specifically discussed in these above findings, mitigation measures that would minimize or avoid all significant adverse environmental impacts have been required. As conditioned, there are no other feasible mitigation measures available which would substantially lessen any significant adverse impacts, either individually or cumulatively, that the activity may have on the environment.

Therefore, the Commission finds that the proposed project, as conditioned to mitigate the identified impacts, can be found consistent with the requirements of the Coastal Act to conform to CEQA.

5. Conclusion

The base CDP from 2015 authorized a temporary revetment, sandbag structure, and sand berm solution to provide protection for the Great Highway and related infrastructure while the Applicant developed a long-term solution to coastal erosion in South Ocean Beach. The CDP requires all of that temporary development to be removed and the beach and bluff restored by the end of 2021, where that expiration date was based on allowing SFPUC the time to further develop their proposed long-term solution for Commission consideration. In other words, the Commission gave the City 6 years to come up with a long-term project for Commission consideration, where that project was intended by the Commission to be the long term solution to address coastal erosion at this location, and it would supersede and replace the temporary measures allowed in the short term as a means of providing the City the time it said it needed to work through longer term solutions.

Through this amendment, SFPUC proposes to extend the temporary authorization for another six months to allow time for SFPUC to complete CEQA review and related documentation supporting their Phase II project. SFPUC indicates that it still intends to submit the CDP application for such a Phase II project by the initial deadline established, namely December 31, 2021, but recognizes that that application will not be complete and able to be acted on by the Commission before the authorization expires. The six month extension is intended to allow for SFPUC to complete their CDP application, with a goal of bringing the Phase II application to Commission for action in spring of 2022, and before the temporary authorization again would expire. It is expected that any Commission CDP action at that time would include terms and conditions that addressed the temporary authorization in a way that implemented the Commission's ultimate CDP decision.

Phase II of this project has the potential to be one of the keystone shoreline adaptation projects in California, potentially creating a template for future projects involving managed retreat and shoreline adaptation in the face of sea level rise. However, given the complexity of the project and the amount of interagency, non-governmental organizations and public coordination required, SFPUC indicates that it needs a little more time to provide the Commission a complete Phase II CDP application for action. The Commission is supportive of extending the deadline in this way (and the sand berm changes) provided SFPUC firmly commits to doing everything possible to expedite and final supporting application documentation, including a final CEQA document, and to timely completing that application in time to allow for a Commission hearing before the temporary authorization again expires at the beginning of July 2022. In doing so, it is clear to the Commission that SFPUC will need to prioritize this matter in terms of applying the proper amount of time and resources to it, especially in terms of completing the CEQA document. In the context of the over two-decades that have passed since armoring was installed without CDPs in the late 1990s, precipitating a number of actions capped by the Commission's 2015 temporary CDP authorization action, six months may not seem like much, but the Commission is also mindful of the need to bring this matter to final resolution and closure. In granting this CDP amendment and time extension, the Commission does so in part based on SFPUC's commitment to doing everything within

its power to complete the required CDP application process in time to allow a Commission decision on the long term solution before the extended deadline.

G. Appendices

A. Substantive File Documents

- Staff Report th14b-11-2015
- CEQA Categorical Exemption Determination 2015-013754ENV

B. Staff Contacts with Agencies and Groups

- San Francisco Public Utilities Commission
- Surfrider Foundation