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Staff: P. Foster/S. Selvaraj - SF
Staff Report: 10/27/2017
Hearing Date: 11/8/2017

STAFF REPORT: CDP HEARING

Application: 2-17-0702

Applicant: San Francisco Recreation and Parks Department

Location: Shoreline and beach area fronting Sharp Park Golf Course in the City of Pacifica, San Mateo County (APN 016-430-020)

Description: Request for after-the-fact authorization of already constructed shoreline armoring adjacent to and seaward of the Sharp Park Golf Course, consisting of an earthen berm approximately 3,200 feet in length, and two sections of rock riprap fronting the berm approximately 1,425 feet in length total.

Recommendation: Approval with conditions

SUMMARY OF STAFF RECOMMENDATION

San Francisco Recreation and Parks Department (SFRPD) seeks after-the-fact authorization of a previously constructed shoreline armoring structure that is located seaward of the Sharp Park Golf Course in Pacifica, consisting of an earthen berm approximately 3,200 feet in total length, including two sections of rock riprap fronting the berm, approximately 1,425 feet in length total. The proposed project includes previous unpermitted expansion and modifications to the armoring, originally constructed in the 1940s to protect Sharp Park Golf Course from coastal flooding.

In response to heavy storms, including a breach of the original berm due to wave action caused by the El Niño winter storms of 1982/83, the Commission approved coastal development permit (CDP) amendments 3-83-172-A4 (in 1984) and 3-83-172-A5 (in 1985) to authorize reconstruction of the berm to protect the Sharp Park Golf Course. In the time since, the berm has

been gradually modified, including through additions of rock and expansion more generally, without the benefit of CDPs, and these changes are being tracked as Coastal Act violations. SFRPD has submitted this after-the-fact CDP application requesting authorization for the unpermitted berm development and expansion. Specifically, in addition to two areas where rock riprap was added to about one-half of the berm,¹ the berm itself has also been augmented and has become both wider and taller over time, more than doubling in size relative to its original permitted dimensions, all without CDPs. In short, SFRPD did not simply repair and/or maintain the berm in its permitted configuration, but instead created a new armoring structure at this location over time. As a result, the expanded and augmented berm is evaluated here as a new replacement structure rather than maintenance and repair of existing permitted development.

The proposed armoring structure is designed to protect the existing Sharp Park Golf Course, as well as wetlands on the golf course site that provide critical habitat for sensitive species, including the California red legged frog and the San Francisco garter snake, and that the Commission has deemed environmentally sensitive habitat areas under the Coastal Act.² The Golf Course provides an affordable, visitor-serving recreational opportunity open to the public at a lower cost than most other golf clubs in the area, many of which are private and require membership fees. In addition, the armoring structure itself currently serves as an important public access resource by providing a heavily used pedestrian path along the top of the berm parallel to the shoreline. This path is an important part of the California Coastal Trail in this area, connecting parking areas and the recreational pathways located near Pacifica Pier to the north to additional hiking trails at Mori Point located just south of Sharp Park.

Staff believes the project meets the armoring need tests of the Coastal Act, and that impacts to coastal resources from the armoring can be appropriately mitigated through conditions of approval requiring public access enhancements (including trail and vertical accessway improvements), continued low-cost public access (including to the Golf Course itself), and measures to continue to assess the need for, and impacts from, the armoring moving forward on a regular basis for Commission consideration. Staff also includes additional conditions designed to address project impacts and issues, including ongoing maintenance, restrictions on future development, and SFRPD assuming all risks and indemnifying the Commission for authorizing the project.

As conditioned, staff recommends that the Commission approve a CDP for the proposed project. The motion to act on this recommendation is found on page 4.

¹ SFRPD placed riprap along some 1,140 linear feet in the northern section of the berm between 1989 and 1991, and along some 285 linear feet along the southern section of the berm between 1997 and 2000, totaling some 1,425 linear feet or almost one-half of the berm's total 3,200-foot length.

² Note that a 2012 U.S. Fish and Wildlife Service Biological Opinion requires SFRPD to maintain a berm to protect this sensitive habitat.

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Exhibit 2: As-Built Project Plans

Exhibit 3: Project History Timeline

Exhibit 4: Aerial Imagery

Exhibit 5: Correspondence with Applicant

Exhibit 6: SFRPD Sharp Park Seawall Evaluation (Arup 2010)

Exhibit 7: SFRPD Alternatives Analysis

Exhibit 8: City of Pacifica Coastal Trail Network Map

CORRESPONDENCE

I. MOTION AND RESOLUTION

Staff recommends a **YES** vote on the following motion. Passage of this motion will result in conditional approval of the permit 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 number 2-17-0702 pursuant to the staff recommendation, and I recommend a **yes** vote.*

***Resolution:** The Commission hereby approves Coastal Development Permit 2-17-0702 for the proposed development and adopts the findings set forth below on grounds that the development as conditioned will be in conformity with the policies of Chapter 3 of the Coastal Act. Approval of the 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.*

II. STANDARD CONDITIONS

This permit is granted subject to the following standard conditions:

- 1. Notice of Receipt and Acknowledgment.** The permit is not valid and development shall not commence until a copy of the permit, signed by the Permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.
- 2. Permit Expiration and Condition Compliance.** Because all of the proposed development has already commenced, this coastal development permit shall be deemed issued upon the Commission's approval and will not expire until one of the events cited in Special Condition 5 occurs. Failure to comply with the special conditions of this permit may result in the institution of an action to enforce those conditions under the provisions of Chapter 9 of the Coastal Act.
- 3. Interpretation.** Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.
- 4. Assignment.** The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.
- 5. Terms and Conditions Run with the Land.** These terms and conditions shall be perpetual, and it is the intention of the Commission and the Permittee to bind all future owners and possessors of the subject property to the terms and conditions.

III. SPECIAL CONDITIONS

This permit is granted subject to the following special conditions:

1. **Condition Compliance.** Unless otherwise specified by a particular Special Condition, WITHIN 180 DAYS OF COMMISSION ACTION ON THIS CDP APPLICATION, or within such additional time as the Executive Director may grant for good cause, the Permittee shall satisfy all requirements specified in these special conditions. Failure to comply with this requirement may result in the institution of enforcement action under the provisions of Chapter 9 of the Coastal Act.
2. **Approved Project.** Subject to these conditions, this CDP authorizes: expansion of the earthen berm in the configuration shown on the plan sheets titled “Topographic Survey of the Sharp Park Berm South of Clarendon Road in Pacifica, CA”, and dated received in the Commission’s North Central Coast District Office on June 20, 2017; public access and related improvements and amenities as identified in the approved Public Access Management Plan (see Special Condition 3); and repair and/or maintenance of the approved berm and the access improvements and amenities (see Special Condition 9).
3. **Public Access Management Plan.** The Permittee shall submit two sets of a Public Access Management Plan (Plan) to the Executive Director for review and approval. The Plan shall clearly describe the manner in which public recreational access along the seaward side of the berm, on the berm, and to the east of the berm adjacent to the golf course is to be improved, provided and managed, with the objective of maximizing public recreational access and utility in this area, including specifically through existing trail maintenance, as well as installation of new trails, new beach access pathways from the top of the berm, new overlooks, new public benches and tables, and new signs. All improvements shall be sited and designed to maximize coastal view protection and minimize visual intrusion, including through use of materials appropriate to the shoreline context that blend with the natural environment and existing improvements in the area. The Permittee shall maintain all such improvements and amenities in their approved state, including replacing any improvements or amenities that are damaged or destroyed for any reason. The Plan shall at a minimum include and provide for all of the following:
 - (a) **Public Access Areas and Amenities.** The Plan shall clearly identify all existing and required public access areas and amenities with hatching and closed polygons, including the coastal trail, stairways, overlooks, parking spaces, and other public access amenities and improvements described herein.
 - (b) **Trail Improvements.** The Plan shall provide for the trail along the top of the earthen berm adjacent to the sandy beach to be regraded and improved so that it extends along the full length of the berm, it is a minimum of ten feet wide, it is surfaced with a mixture of dirt and gravel (or equivalent) to provide a smooth travel way, it is ADA compatible and includes appropriate connections to parking areas on Clarendon Road and Beach Boulevard at the northern end, and it uses a consistent and uniform design that seamlessly integrates into and blends with the surrounding shoreline environment as much as possible. The trail shall be sited and designed to eliminate the need for railings or other such safety barriers as much as possible, including via siting and design away from berm

slopes, as well as use of vegetation as a barrier and through maintenance of gradual slopes on both sides of the berm.

- (c) Vertical Access Improvements.** The Plan shall provide for the installation of at least two new vertical accessways from the top of the berm to the sandy beach, where such accessways may be stairways, or ramps, or similar facilities as long as they provide safe pedestrian access. Such accessways shall be designed to blend as much as possible into the berm and trail aesthetic (including through use of similar materials and design), and shall be sited and designed to eliminate the need for railings or other such safety barriers as much as possible, including via the use of vegetation as a barrier.
- (d) Overlook Improvements.** The Plan shall provide for the installation of at least two overlook areas on top of the berm and seaward of the trail that are integrated with the trail design where such overlooks shall be similarly surfaced as the trail, accompanied by at least one picnic table, along with appropriate trash and recycling bins. All tables shall use wood or wood-like materials sited and designed to maximize public utility and blend into the coastal aesthetic.
- (e) Signage Improvements.** The Plan shall provide for the installation of informational and directional signage at appropriate locations. The signs shall be designed so as to provide clear information without adversely impacting public views and site character. At a minimum, at least two public access interpretive signs (appropriate to City of Pacifica shoreline issues, information, and/or history) shall be located at appropriate locations along the trail or at an overlook location. Sign details showing the location, materials, design, and text of all public access signs shall be provided. Signs shall include the California Coastal Trail and California Coastal Commission emblems and recognition of the Coastal Commission's role in providing public access at this location.
- (f) Landscaping Improvements.** The Plan shall provide for the removal of all non-native and/or invasive plants in the berm area (i.e., on the berm itself and the area within three feet of its base on either side), and for the planting of noninvasive drought-tolerant native shoreline species in the same area capable of providing screening of the berm as well as enhanced viewshed associated with the trail, overlooks, and vertical accessways. The Plan shall also provide regular monitoring and maintenance of all vegetation areas, including provisions for continued elimination of nonnative and/or invasive species and remedial action (such as replanting as necessary) to ensure native landscaping success.
- (g) Other Access Amenities.** In addition to that specified above, the Plan shall provide for an adequate number (i.e., commensurate to the expected level of use) of benches, picnic tables, bicycle racks, drinking fountains, garbage and recycling receptacles, dog mitt stations, and other such public access amenities that are distributed appropriately along the trail on top of the berm, in the berm area, and at either end in a way that maximizes their public access utility and minimizes their impact on public views.
- (h) No Public Access Disruption.** Development and uses within the Plan's public access areas that disrupt and/or degrade public access, including areas set aside for private uses, barriers to public access (such as planters, temporary structures, private use signs, fences,

barriers, ropes, etc.) shall be prohibited. The public use areas shall be maintained consistent with the approved Plan and in a manner that maximizes public use and enjoyment.

- (i) **Public Access Use Hours.** Access to the Plan's public access areas shall be available to the general public free of charge 24 hours per day.
- (j) **Public Access Areas and Amenities Maintained.** All of the public access areas, improvements, and amenities shall be constructed in a structurally sound manner and maintained in their approved state consistent with the terms and conditions of this CDP, including through ongoing repair, maintenance, or relocation (if necessary to respond to shoreline erosion) of all public access improvements. In addition, the lateral trail on the golf course side of the earthen berm shall be maintained in a manner that ensures continuous lateral access, including, if necessary to respond to erosion or other hazards modifying, moving, or replacing access improvements. Prior to any modification, movement, or replacement of access improvements, the Permittee shall obtain an amendment to this CDP to authorize such development, unless the Executive Director determines that an amendment is not legally necessary. Public use areas shall be maintained consistent with the approved Public Access Management Plan and in a manner that maximizes public use and enjoyment.
- (k) **Implementation Timeline.** An implementation schedule shall be included in the Plan that identifies expected installation timelines for the improvements and amenities described above, all of which shall be constructed, installed, operational, and available for general public use as soon as possible, but no later than Memorial Day of 2019.

All requirements above and all requirements of the approved Public Access Management Plan shall be enforceable components of this CDP. The Permittee shall undertake development in accordance with this condition and the approved Public Access Management Plan. Minor adjustments to the above requirements, as well as to the Executive Director-approved Plan, which do not require a CDP amendment or new CDP (as determined by the Executive Director) may be allowed by the Executive Director if such adjustments: (1) are deemed reasonable and necessary; and (2) do not adversely impact coastal resources.

- 4. **Construction Plan.** PRIOR TO CONSTRUCTION ASSOCIATED WITH THE APPROVED PUBLIC ACCESS MANAGEMENT PLAN DESCRIBED IN SPECIAL CONDITION 3, the Permittee shall submit two copies of a Construction Plan to the Executive Director for review and approval. The Construction Plan shall, at a minimum, include and provide for the following:

- (a) **Construction Areas.** The Construction Plan shall identify the specific location of all construction areas, all staging areas, and all construction access corridors in site plan view. All such areas within which construction activities and/or staging are to take place shall be minimized to the fullest extent feasible in order to have the least impact on public access and ocean resources, including by using, as feasible, inland areas for staging and storing construction equipment and materials.

- (b) Construction Methods.** The Construction Plan shall specify the construction methods to be used, including all methods to be used to keep the construction areas separate from public recreational use and habitat areas (including using unobtrusive fencing or equivalent measures to delineate construction areas), and including verification that equipment operation and equipment and material storage will not, to the maximum extent feasible, significantly degrade public views during construction.
- (c) Construction BMPs.** The Construction Plan shall identify the type and location of all erosion control/water quality best management practices that will be implemented during construction to protect coastal water quality, including at a minimum the following: (1) silt fences, straw wattles, or equivalent apparatus, shall be installed at the perimeter of the construction site to prevent construction-related runoff and sediment from discharging to the beach, wetlands, or ocean; (2) equipment washing, refueling, and servicing shall take place at least 50 feet inland from the berm, and preferably on an existing hard surface area (e.g., a road) or an area where collection of materials is facilitated. All construction equipment shall be inspected and maintained at an inland location to prevent leaks and spills of hazardous materials at the project site; (3) the construction site shall maintain good construction housekeeping controls and procedures (e.g., clean up all leaks, drips, and other spills immediately; keep materials covered and out of the rain, including covering exposed piles of soil and wastes; dispose of all wastes properly, place trash receptacles on site for that purpose, and cover open trash receptacles during wet weather; remove all construction debris from the site); and (4) all erosion and sediment controls shall be in place prior to the commencement of construction as well as at the end of each work day.
- (d) Construction Site Documents.** The Construction Plan shall provide that copies of the signed CDP and the approved Construction Plan be maintained in a conspicuous location at the construction job site at all times, and that such copies are available for public review on request. All persons involved with the construction shall be briefed on the content and meaning of the CDP and the approved Construction Plan, and the public review requirements applicable to them, prior to commencement of construction.
- (e) Construction Coordinator.** The Construction Plan shall provide that a construction coordinator be designated to be contacted during construction should questions arise regarding the construction (in case of both regular inquiries and emergencies), and that the construction coordinator's contact information (i.e., address, phone numbers, email, etc.), including, at a minimum, an email address and a telephone number that will be made available 24 hours a day for the duration of construction, is conspicuously posted at the job site where such contact information is readily visible from public viewing areas, along with indication that the construction coordinator should be contacted in the case of questions regarding the construction (in case of both regular inquiries and emergencies). The construction coordinator shall record the name and contact information (i.e., address, email, phone number, etc.) and nature of all complaints received regarding the construction, and shall investigate complaints and take remedial action, if necessary, within 24 hours of receipt of the complaint or inquiry.

All requirements above and all requirements of the approved Construction Plan shall be enforceable components of this CDP. The Permittee shall undertake development in accordance with this condition and the approved Construction Plan. Minor adjustments to the above requirements, as well as to the Executive Director-approved Plan, which do not require a CDP amendment or new CDP (as determined by the Executive Director) may be allowed by the Executive Director if such adjustments: (1) are deemed reasonable and necessary; and (2) do not adversely impact coastal resources.

5. Shoreline Armoring Authorization. This CDP authorizes the approved augmented berm pursuant to the following terms:

(a) Termination. The authorization for the shoreline armoring approved pursuant to this CDP terminates when all or part of Sharp Park Golf Course: (1) is redeveloped as defined in subsection (b) of this Special Condition; (2) is no longer present; or (3) no longer requires shoreline armoring, whichever occurs first. Prior to the anticipated termination of the authorization or in conjunction with redevelopment of the property, the Permittee shall apply for a new CDP or amendment to this CDP to remove the shoreline armoring or to modify the terms of its authorization.

(b) Redevelopment. Development that meets the criteria in sections i or ii below shall be considered redevelopment:

i. Alterations by Type. Development at Sharp Park Golf Course that consists of alterations including (1) additions to the existing (as of November 8, 2017) golf course holes, structures or related development, (2) exterior or interior renovations to the existing holes, structures or related development, (3) improvements or renovations to the pumping infrastructure, or (4) demolition or replacement of the existing holes, structures or related development, or portions thereof, which results in:

a. Alteration (including demolition, renovation or replacement) of 50% or more of major structural components including greens, fairways, and tee areas of the golf course, as well as exterior walls, floors, roof structures or foundations of related facilities (including pumping and irrigation infrastructure), or a 50% increase in gross floor area of such facilities. Alterations are not additive between individual major structural components; however, changes to individual major structural components are cumulative over time from the date of this CDP authorization (i.e., from November 8, 2017). The Permittee shall track all additions in order to evaluate cumulative impacts over time.

b. Alteration (including demolition, renovation or replacement) of less than 50% of a major structural component where the proposed alteration would result in cumulative alterations exceeding 50% or more of a major structural component, taking into consideration previous alterations approved on or after the date of this CDP authorization; or an alteration that constitutes less than 50% increase in floor area where the proposed alteration would result in a cumulative addition of greater than 50% of the floor area, taking into consideration previous additions approved on or after the date of this CDP authorization.

- ii. Alterations by Cost.** Development at Sharp Park Golf Course that consists of any alteration of the existing holes, structures or related development, the cost of which equals or exceeds 50 percent of the market value of the existing golf course before the start of construction, based on the documented construction bid costs and either an appraisal by a professional property appraiser or County assessor data, to be submitted by the Permittee consistent with the time frame in subsection (a) of this Special Condition.
 - iii. Alterations Tracked.** The Permittee shall track all alterations, and shall submit a report on same to the Executive Director annually by January 1st of each year, beginning January 1, 2019.
- 6. No Future Seaward Encroachment.** By acceptance of this CDP, the Permittee acknowledges and agrees, on behalf of itself and all successors and assigns, that no future enhancement, reinforcement, or any other activity affecting the shoreline armoring approved pursuant to this CDP, as described and depicted on approved as-built plans, shall result in any encroachment seaward of the authorized footprint of the shoreline armoring. By acceptance of this CDP, the Permittee waives, on behalf of itself and all successors and assigns, any rights to such activity that may exist under Public Resources Code Section 30235, the Pacifica LCP, or other applicable laws.
- 7. Coastal Resource Impact Mitigation.** The adverse coastal resource impacts of the approved project have been mitigated through the terms and conditions of this CDP for the first 20 years from the date this CDP is approved (i.e., until November 8, 2037). If the Permittee intends to keep the armoring in place after November 8, 2037, the Permittee must submit a complete CDP amendment application prior to that time that analyzes the continued need for armoring and proposes any necessary or desired project modifications. The complete application shall be submitted no later than 6 months prior to the end of the original mitigation period (i.e., no later than May 8, 2037). The application shall include analysis of feasible alternatives to modify the shoreline armoring or the related development it fronts to reduce or eliminate to the maximum extent feasible the shoreline armoring's impacts on coastal resources, and shall propose mitigation for unavoidable coastal resource impacts associated with the retention of the armoring beyond the initial 20-year mitigation period. If the Executive Director determines that the CDP amendment application does not demonstrate that the public access improvements installed under this approval would sufficiently mitigate for the adverse coastal resource impacts associated with the retention of the armoring beyond the preceding 20-year period, additional mitigation may be required.
- 8. Monitoring and Reporting.** The Permittee shall ensure that the condition and performance of the approved as-built project is regularly monitored and maintained. Such monitoring evaluation shall, at a minimum, address whether the earthen berm structure is within its approved footprint and three-dimensional configuration, whether any significant weathering or damage has occurred that would adversely impact future performance, and identify any structural or other damage or wear and tear requiring repair to maintain in a structurally sound manner and in its approved state, including at a minimum:

- (a) **Armoring.** The earthen berm and rock riprap shall be regularly monitored by a licensed civil engineer with experience in coastal structures and processes to ensure structural and cosmetic integrity, including, at a minimum, evaluation of berm competence, cracks, movement, and outflanking.
- (b) **Public Access Improvements and Amenities.** The public access improvements and amenities described in Special Condition 3 shall be regularly monitored to ensure that all required public access elements are appropriately maintained as required, including modifying access improvements as necessary as a result of shoreline erosion, sea level rise, or other shoreline events, in order to ensure continued public use and enjoyment.
- (c) **Reporting.** Monitoring reports regarding the armoring and public access improvements/amenities shall be submitted to the Executive Director for review and approval at three year intervals by December 31st of each third year, with the first report submitted by December 31, 2020, for as long as the approved as-built project exists at this location. The reports shall identify the existing configuration and condition of the armoring and public access improvements/amenities, including vertical and horizontal reference distances from armoring structures to surveyed benchmarks for use in future monitoring efforts, and shall recommend any actions necessary to maintain these project elements in their approved and required state, and shall include photographs (in color hard copy and .jpg or other appropriate electronic format) that clearly show all components of the as-built project. At a minimum, photographs shall be taken from representative viewpoints on the beach directly upcoast, downcoast, and seaward of the approved armoring, with the date and time of the photographs and the location of each photographic viewpoint noted on a site plan. Any proposed actions necessary to maintain the approved as-built project in a structurally sound manner and its approved state shall be implemented within 30 days of Executive Director approval, unless a different time frame for implementation is identified by the Executive Director. In addition to the every three year requirement, separate and additional monitoring reports shall be submitted within 30 days following either (1) an El Niño storm event comparable to a 20-year or larger storm, or (2) an earthquake of magnitude 5.5 or greater with an epicenter in San Mateo County or San Francisco County. Thus, monitoring reports may be submitted more frequently than every 3 years depending on the occurrence of the above events in any given year.

9. Future Maintenance Authorized. This CDP authorizes future maintenance and repair subject to the following:

- (a) **Maintenance.** “Maintenance,” as it is understood in this special condition, means development that would otherwise require a CDP whose purpose is to maintain in the approved state of the earthen berm, rock riprap, and public access improvements and amenities, and that does not qualify as redevelopment per Special Condition 5.
- (b) **Other Agency Approvals.** The Permittee acknowledges that these maintenance stipulations do not obviate the need to obtain permits and/or authorizations from other agencies for any future maintenance or repair.

- (c) Maintenance Notification.** At least two weeks prior to commencing any maintenance activity, the Permittee shall notify, in writing, planning staff of the Coastal Commission's North Central Coast District Office. The notification shall include: (1) a detailed description of the maintenance proposed; (2) any plans, engineering and geology reports describing the event; (3) a construction plan that clearly describes construction areas and methods; (4) other agency authorizations; and (5) any other supporting documentation describing the maintenance event. Maintenance may not commence until the Permittee has been informed by planning staff of the Coastal Commission's North Central Coast District Office that the maintenance proposed complies with this CDP. If the Permittee has not been given a verbal response or sent a written response within 30 days of the notification being received in the North Central Coast District Office, the maintenance shall be authorized as if planning staff affirmatively indicated that the maintenance complies with this CDP. The notification shall clearly indicate that maintenance is proposed pursuant to this CDP, and that the lack of a response to the notification within 30 days constitutes approval of it as specified in the CDP. In the event of an emergency requiring immediate maintenance, the notification of such emergency shall be made as soon as possible, and shall (in addition to the foregoing information) clearly describe the nature of the emergency.
- (d) Maintenance Coordination.** Maintenance activity shall, to the degree feasible, be coordinated with other maintenance activity proposed in the immediate vicinity with the goal being to limit coastal resource impacts, including the length of time that construction occurs in and around the beach and beach access points. As such, the Permittee shall make reasonable efforts to coordinate the Permittee's maintenance activity with other adjacent property maintenance activities, including adjusting the Permittee's maintenance activity scheduling as directed by planning staff of the Coastal Commission's North Central Coast District Office.
- (e) Restoration.** The Permittee shall restore all beach areas impacted by construction activities to their pre-construction condition or better within three days of completion of construction. Any beach sand impacted shall be filtered as necessary to remove all construction debris from the beach. The Permittee shall notify planning staff of the Coastal Commission's North Central Coast District Office upon completion of restoration activities to allow for a site visit to verify that all beach-area restoration activities are complete. If planning staff should identify additional reasonable measures necessary to restore beach areas, such measures shall be implemented as quickly as feasible.
- (f) Noncompliance Provision.** If the Permittee is not in compliance with permitting requirements of the Coastal Act, including the terms and conditions of any Coastal Commission CDPs or other coastal authorizations that apply to the subject property, at the time that a maintenance event is proposed, then maintenance that might otherwise be allowed by the terms of this future maintenance condition shall not be allowed until the Permittee is in full compliance with the permitting requirements of the Coastal Act, including all terms and conditions of any outstanding CDPs and other coastal authorizations that apply to the subject properties.

(g) Emergency. Notwithstanding the emergency notifications set forth in subsection (c) of this Special Condition, nothing in this condition shall affect the emergency authority provided by Coastal Act Section 30611, Coastal Act Section 30624, and Subchapter 4 of Chapter 5 of Title 14, Division 5.5, of the California Code of Regulations (Permits for Approval of Emergency Work).

(h) Duration of Covered Maintenance. Future maintenance under this CDP is allowed subject to the above terms throughout the duration of the armoring authorization (see Special Condition 5). The intent of this permit is to allow for maintenance to occur without the need to obtain additional CDPs throughout the period of development authorization, unless there are changed circumstances that may affect the consistency of this maintenance authorization with the policies of Chapter 3 of the Coastal Act. The Permittee shall maintain the approved armoring structure, public access improvements, and related development in their approved state.

10. Assumption of Risk, Waiver of Liability, and Indemnity Agreement. By acceptance of this CDP, the Permittee acknowledges and agrees (i) that the site may be subject to hazards, including but not limited to waves, storms, flooding, landslide, bluff retreat, erosion, earth movement, and the interaction of all of these, many of which will worsen with future sea level rise; (ii) to assume the risks to the Permittee and the property that is the subject of this CDP of injury and damage from such hazards in connection with this permitted development; (iii) to waive any rights that the Permittee may have under Coastal Act Section 30235, the Pacifica LCP, or other applicable laws, to shoreline armoring beyond what is recognized in this CDP to protect the development authorized by this CDP; (iv) to unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards; (v) to indemnify and hold harmless the Commission, its officers, agents, and employees with respect to the Commission's approval of the CDP against any and all liability, claims, demands, damages, costs (including costs and fees incurred in defense of such claims), expenses, and amounts paid in settlement arising from any injury or damage due to such hazards; and (vi) that any adverse effects to property caused by the permitted project shall be fully the responsibility of the property owner.

11. Liability for Costs and Attorneys' Fees. The Permittee shall reimburse the Coastal Commission in full for all Coastal Commission costs and attorneys' fees (including but not limited to such costs/fees that are: (1) charged by the Office of the Attorney General; and/or (2) required by a court) that the Coastal Commission incurs in connection with the defense of any action brought by a party other than the Permittee against the Coastal Commission and/or its officers, employees, agents, successors and assigns challenging the approval or issuance of this CDP, the interpretation and/or enforcement of the CDP conditions, or any other matter related to this CDP. The Permittee shall reimburse the Coastal Commission within 60 days of being informed by the Executive Director of the amount of such costs/fees. The Coastal Commission retains complete authority to conduct and direct the defense of any such action against the Coastal Commission and/or its officers, employees, agents, successors and assigns.

12. Other Permits and Permission. The Permittee shall provide to the Executive Director verification that the approved project has been authorized by the California State Lands

Commission and the U.S. Army Corp of Engineers, or evidence that no permit or permission is required. The Permittee shall inform the Executive Director of any changes to the project required by any other authorizations. Such changes shall not be incorporated into the project until the Permittee obtains a Commission amendment to this CDP, unless the Executive Director issues a written determination that no amendment is legally required.

IV. FINDINGS AND DECLARATIONS

A. PROJECT LOCATION

Sharp Park Golf Course is located within the City of Pacifica just inland of the Pacific Ocean, south of Pacifica's Municipal Pier and north of Mori Point (see **Exhibit 1** for project location and vicinity maps). The Golden Gate National Recreation Area (GGNRA), which is managed by the National Park Service, borders Sharp Park to the south. The Golf Course is part of the larger Sharp Park complex, a public park physically located in Pacifica but owned by the City and County of San Francisco and operated by the San Francisco Recreation and Parks Department (SFRPD). The Sharp Park complex is approximately 417 acres, and besides the Golf Course, contains an archery range, a remediated former rifle range, a clubhouse, and a parking lot. The Sharp Park complex is bisected by Highway 1.

The 18-hole Sharp Park Golf Course is located mostly on the seaward portions of the Sharp Park complex and is separated from the beach by an earthen berm originally built in 1941 to protect the Golf Course from flooding. Nearby parts of the shoreline in Pacifica are also armored. In the 1980's, a major shoreline protection project initiated by the City of Pacifica resulted in armoring along much of the City's Beach Boulevard shoreline (2,500 linear feet of riprap and a reinforced earth seawall) and the Pacific Skies RV park located at 1300 Palmetto Avenue (850 linear feet of riprap).³

B. PROJECT BACKGROUND

The 3,200 foot earthen berm separating Sharp Park Golf Course from the sandy beach was originally built in 1941 to keep the ocean from flooding the Golf Course. Since its construction, permitted and unpermitted maintenance and augmentation to the earthen berm have occurred. See **Exhibit 3** for a timeline and graphic depiction of work completed on site, which is summarized below.

Permitted work on earthen berm

In November 1984, and in response to El Niño storms of winter 1982/83 that degraded the original berm, the Commission approved CDP Amendment No. 3-83-172-A4 that provided for the use of approximately 7,000 cubic yards of excavated material, including sand and compacted earth, to construct a new earthen berm approximately 560 feet in length beginning at the northern property line, just south of Clarendon Road. The approved design for the replacement berm was

³ Pursuant to CDP 3-83-172, which has numerous amendments (3-83-172-A1 through 3-83-172-A7).

a back slope and fore slope of 2:1 with an 8-foot flattened top width. Further construction of the earthen berm was approved by the Commission in October 1985 through CDP Amendment No. 3-83-172-A5, which permitted the use of approximately 20,000 cubic yards of similar material to extend the berm from the portion of the berm approved pursuant to the prior amendment along the property south towards Mori Point.

In May 1990, the Commission approved CDP Amendment No. 3-83-172-A6 that allowed the placement of 3-5 ton riprap boulders (totaling 11,000 tons) and 30,000 square feet of filter fabric over a bedding layer of 12-inch stone located along 1,000 feet of the mid-section of the earthen berm. However, aerial imagery (**Exhibit 4**) and SFRPD records (**Exhibit 5**)⁴ indicate that the project was never undertaken.

Thus, the permitted baseline for consideration of any additional work is the berm that was approved pursuant to CDP Amendments 3-83-172-A4 and 3-83-172-A5. That berm was trapezoidal and approximately 3,200 feet long, 25 feet above mean sea level, with 2:1 slopes and a flattened area on top 8 feet wide.

Unpermitted work on earthen berm

In March 2013, Commission enforcement staff received reports that SFRPD was adding to the berm without a CDP. At the time, SFRPD described such measures as filling voids and holes in the berm in several locations, and SFRPD submitted an after-the-fact CDP application requesting authorization for such work (CDP Application 2-13-006). Specifically, SFRPD requested after-the-fact authorization for 80 linear feet of repairs, including the placement of 25 tons of large rock and 50 tons of small rock to fill 6 large erosional potholes, as well as compaction and grading of the rocks to create a smooth walking path within the footprint of the existing berm. In researching the permit history at that time, it became clear that there had been additional work done to the berm in the past, beyond what had been permitted, and Commission staff and SFRPD searched records to be able to establish the existing permitted baseline. During that time, SFRPD acknowledged that the berm was fortified with rock riprap on two separate occasions – once in a northern 1,140-foot section and once in a southern 285-foot section to protect against wave action (**Exhibit 5**). Aerial imagery (**Exhibit 4**) indicates that rock in the northern section was placed between June 1989 to July 1991, and rock in the southern section was placed between June 1997 to August 2000.

Ultimately, SFRPD prepared an as-built plan showing the berm as it exists today, which shows that the earthen berm is currently 3,200 feet long parallel to the shoreline, and the top of the berm ranges in width from a high of 81.4 feet to a low of 12.5 feet. An average of the cross-sections provided in the as-built plans indicates an average width of the berm along its entire length of approximately 26.2 feet, which represents a significant increase relative to the 8-foot wide top originally authorized by the Commission in CDP Amendments 3-83-172-A4 and A5. In short, the berm was significantly expanded, roughly doubling its size, without any CDP authorization. After discussions with Commission staff regarding this issue, SFRPD withdrew the previous more-focused application, and instead submitted a new application requesting after-the-fact

⁴ See SFRPD May 10, 2016 letter to Commission: “Re: Coastal Development Permit (CDP) Application Number 2-13-006 (Sharp Park Golf Course Seawall) at Sharp Park Golf Course in the City of Pacifica”.

authorization for work that led to the earthen berm and rock riprap as it currently exists, including all unpermitted armoring and earthen work previously conducted on site. Due to the nature of the significant changes to the berm, it is considered a replacement structure, and is evaluated herein as a new berm in the existing configuration for the purposes of this report.⁵

C. PROJECT DESCRIPTION

Therefore, SFRPD seeks after-the-fact CDP authorization of constructed shoreline armoring seaward of the Sharp Park Golf Course, consisting of an earthen berm approximately 3,200 feet in length, and two sections of rock riprap fronting the berm, approximately 1,425 lateral feet in total (or almost half of the length of the berm). Based on current as-built plans, the approximate footprint of the entire armoring structure, including the earthen berm and the riprap fronting the berm is 170,500 square feet. As-built surveys of the armoring indicate that the earthen berm has been substantially expanded over the years from a permitted top width of 8 feet to an average top width of approximately 26.2 feet (and a max of over 80 feet wide). Additionally, the berm currently exists above the original design height of 25 feet above mean sea level, fluctuating in elevation from 29 to 30 feet along nearly its entire length aside from the very northern portion of the berm. Essentially, the berm has become both significantly wider and taller over time, more than doubling in size relative to original permitted dimensions.⁶ Thus the proposed project is for after-the-fact approval of the berm as constructed, and this report evaluates the impacts of the proposed development as if it is not already present, even though the armoring is currently physically in place.

See **Exhibit 1** for location maps and **Exhibit 2** for as-built project plans.

D. STANDARD OF REVIEW

The proposed project is located along the seaward boundary of a public golf course along the shoreline in the City of Pacifica, which has a certified Local Coastal Program (LCP). However, the proposed project involves development within an area of the Commission's retained permitting jurisdiction because development is proposed in an area that is defined as former tidelands, submerged land or land subject to the public trust (i.e., Sharp Park is an area that was historically filled prior to the Coastal Act, but is still considered former tidelands for CDP permitting purposes). In addition, the violation and the proposed project to rectify it are specifically associated with Commission CDPs and amendments. Therefore, the standard of review for this CDP application is the Chapter 3 policies of the Coastal Act, with the City's LCP providing non-binding guidance, and the appropriate permitting entity is the Coastal Commission.

⁵ Including because the Commission's regulations consider replacement of more than 50% of the materials of such a structure to be a replacement structure requiring a new CDP analysis (CCR Section 13252(b)), and because the SFRPD activities not only replaced more than 50%, but actually enlarged the berm essentially by 100% to create a new augmented berm structure.

⁶ CDPs 3-83-172-A4 and 3-83-172-A5 authorized construction of a 3,200-foot long earthen berm with a back slope and fore slope of 2:1, with a flattened top 8 feet wide, at an approximate height of 25 feet above mean sea level.

E. GEOLOGIC CONDITIONS AND HAZARDS

Applicable Policies

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

Section 30235 Construction altering natural shoreline. *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. Section 30253 provides, in applicable part:

Section 30253 Minimization of adverse impacts. *New development shall do all of the following:*

- (a) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.*
- (b) 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. ...*

Together, 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, with the exception of new coastal dependent uses, Section 30235 limits the construction of shoreline protective works to those required to protect existing permitted structures or public beaches in danger from erosion. Furthermore, Section 30253 requires that new development be sited, designed, and built in a manner to not require construction of shoreline protective devices that would substantially alter natural landforms along the shoreline. The Coastal Act provides these limitations because 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 and beach dynamics on and off site, including ultimately resulting in the loss of sandy beach.

In addition, the Commission has typically interpreted Section 30235 to allow shoreline protective works only to protect existing primary structures. The Commission has at times historically permitted at-grade structures proposed to be located within required geologic setback areas, if such structures are expendable and capable of being removed or relocated rather than requiring a protective device that would alter natural landforms and processes along bluffs, cliffs, and beaches.

Under Coastal Act Section 30235, shoreline protective structures shall be permitted if: (1) there is an existing structure; (2) the existing structure is in danger from erosion; (3) shoreline altering construction is required to protect the existing threatened structure; and (4) the required protection is designed to eliminate or mitigate the adverse impacts on shoreline sand supply. The first three questions pertaining to Section 30235 relate to whether the proposed armoring is necessary, while the fourth question applies to mitigation for some of the impacts of armoring. Additional Coastal Act policies protect against other types of coastal resource problems, and here the questions presented are not in terms of those policies per se, but the Coastal Act Section 30235 analysis for allowing armoring in the first place. For example, even where a shoreline protective device is determined to be necessary and is designed in a manner to be protective of shoreline sand supply, the structure will often result in significant adverse impacts to other protected resources, such as beach access and recreation and public views. There can often be considerable overlap, such as the ways in which shoreline sand supply issues translate into beach access issues, and this finding explores those overlaps as well.

Analysis

Existing Structure to be Protected

The first Section 30235 test is whether or not the structure for which a shoreline protective device is proposed is considered “existing”. The Coastal Act distinguishes between development that is allowed the protection offered by a shoreline protective device and development that is not. Under Coastal Act Section 30235, existing development (meaning development existing prior to the effective date of the Coastal Act on January 1, 1977) is potentially allowed a shoreline protective device if the remaining three criteria identified above are satisfied. Under Section 30253, new development (i.e., all development built on or after January 1, 1977) is to be sited, designed, and built in a manner safe from coastal hazards without creating a need for a shoreline protective device and therefore is not entitled to such shoreline protection. Coastal zone development approved and constructed prior to the Coastal Act going into effect is not subject to Section 30253 requirements. Although some local hazard policies may have been in effect prior to the Coastal Act, these pre-Coastal Act structures have not necessarily been built in such a way as to avoid the future need for shoreline protection.

In this case, Sharp Park Golf Course was constructed and completed in 1932, predating the passage of 1972’s Proposition 20 (The Coastal Initiative)⁷ and the subsequent enactment of the 1976 Coastal Act. The Commission has determined the Golf Course to be pre-Coastal Act permitted development in previously approved CDPs for armoring construction (i.e., CDP 3-83-172, as amended). Thus, Sharp Park Golf Course is in this case eligible for consideration of shoreline protection, and the project meets the first test of Section 30235 of the Coastal Act.

Danger from Erosion

The second Section 30235 test is whether the existing structure is in danger from erosion. The Coastal Act allows shoreline armoring to be installed to protect existing structures that are in danger from erosion, but it does not define the phrase “in danger.” There is a certain amount of risk involved in maintaining any development along the actively eroding California coastline that

⁷ Proposition 20 introduced coastal permitting requirements in February 1973.

also can be directly subject to violent storms, wave attack, flooding, earthquakes, and other hazards. These risks can be exacerbated by such factors as sea level rise and localized geography that can focus storm energy at particular stretches of coastline. The Commission evaluates the immediacy of any threat in order to make a determination as to whether an existing structure is in danger. While each case is evaluated based upon its own particular set of facts, the Commission has previously interpreted “in danger” to mean that an existing structure would be unsafe to use or otherwise occupy within the next two or three storm season cycles (generally, the next few years) if nothing were to be done (i.e., in the “no project” alternative).⁸

More recent geotechnical data pertaining to the Sharp Park earthen berm generally comes from two past reports, which are summarized in the 2010 Seawall Evaluation provided by the Applicant (see Section 4.1 of **Exhibit 6**). A 1984 geotechnical study conducted by Woodward-Clyde Consultants collected soil samples at eight borings drilled along the berm. Six of the eight borings show loose to dense beach sand over the entire depth of 14.5 to 20.5 feet below the bottom of the berm. The samples from the remaining two borings, closer to the southern portion of the berm, also contained silty clay beneath the beach sand. In a different geotechnical study conducted by the same consultants for the Beach Boulevard Seawall, located north of Sharp Park, subsurface information collected from sample sites within 400 feet of the Sharp Park berm show loose to medium dense, fine-grained sand at the ground surface and stiff or sandy clay below the sand. Given the soils at the project site are topped by substantial amounts of sand subject to wave action, erosion would be expected to occur over time in the absence of armoring at this location at rates typical of the area.

The berm was originally built between 1941 and 1952 to protect the Golf Course from waves and flooding (**Exhibit 6**). According to the SFRPD’s Seawall Evaluation, between 1931 and 2010, approximately 200 to 300 feet of beach was lost due to shoreline erosion, including 16 acres of the golf course, some of which would have occurred before the berm was installed, and mostly as a result of major winter storms. The most noteworthy storm events occurred in 1958, when most of the Golf Course was submerged due to wave overflow and storm inflows, and January 1983, when a large portion of the berm was breached and large amounts of sand were carried onto the Golf Course during the 1982/83 winter El Niño storms (**Exhibit 6**). Those winter storms of 1982/83 resulted in losses of 40 to 50 feet of bluff and dunes in this section of the shoreline in Pacifica.⁹

In addition to the Golf Course, the Sharp Park complex includes a 27-acre wetland and buffer area, including Laguna Salada and Horse Stable ponds, which provide habitat for California Red-Legged Frog (CRLF), a federally-listed threatened species and a state Species of Special Concern, and San Francisco Garter Snake (SFGS), which is both federally and state listed as endangered. According to a U.S. Fish and Wildlife Service (USFWS) Biological Opinion (BO) issued on October 2, 2012, significant saltwater intrusion has occurred on site from seawater overtopping dunes and breaching the earthen berm during winter storm events in the 1970’s and 1980’s, including in 1983 when vital habitat for the CRLF and SFGS at Laguna Salada was

⁸ See, for example, CDP 3-07-019 (Pleasure Point seawall); CDP 3-09-025 (Pebble Beach Company Beach Club seawall); CDP 3-09-042 (O’Neill seawall); CDP 2-10-039 (Lands End seawall); and 3-14-0488 (Iceplant LLC seawall).

⁹ As noted in findings for CDP Amendment Number 3-83-172-A6.

compromised because of increased salinity beyond the tolerance of CRLF, effectively eliminating the population of the CRLF species at Laguna Salada during that time period.

Thus, as indicated by the loose sandy soils present, by the low lying nature of the course (essentially at beach level), by the effects of past storm events, and by the site's overall vulnerability to regular coastal flooding, it is clear that the Golf Course is in danger from erosion as that term is understood in a Coastal Act context.

Alternatives Analysis

Given that Sharp Park Golf Course is an "existing structure" that is "in danger from erosion," the third test of Section 30235 that must be met is that the proposed armoring must be "required" to protect the existing in-danger structure. In other words, shoreline armoring is only permitted if it is the only feasible alternative capable of protecting the existing threatened structures.¹⁰ Other alternatives to shoreline protective devices typically considered include: the "no project" alternative; managed retreat (including abandonment and demolition of threatened structures); relocation of threatened structures; beach and sand replenishment programs; foundation underpinning; drainage and vegetation measures; and combinations of each. Additionally, if shoreline armoring is determined to be the only feasible alternative, this test also requires that the chosen structural design of the shoreline protective device be the least environmentally damaging option, including being the minimum necessary to protect the endangered principal structure.

In this case, both non-armoring and armoring alternatives are analyzed in order to determine whether the proposed project is the least environmentally damaging feasible alternative.

Non-armoring alternatives

The "no project" alternative in this case would involve the absence of all armoring development proposed by the Applicant. If the berm were to be removed, it would be expected that the Golf Course and its attendant development would be damaged and lost to storms and erosion in the very short term, as soon as winter storms this year. In addition, such an alternative would also result in significant risk to Sharp Park's biological resources and loss of access to infrastructure at the pumphouse, which is needed to control floodwaters in Sharp Park and in turn maintain playable greens and golfing infrastructure. In fact, the USFWS BO requires the Applicant to maintain a berm because the only vehicle access to the pumphouse infrastructure, which is used to manage floodwaters in the Golf Course, is via the top of the berm along the publicly used accessway.¹¹ The 2012 BO also reports that absent a functioning shoreline protective device at the project site, the SFGS and CRLF habitat in Laguna Salada and Horse Stable Pond wetlands will be compromised. This was the case several times in the 1970s and 1980s when breaching of the berm resulted in seawater inundation at the Golf Course and salinity increased beyond the tolerance of the frog, leading to the elimination of the CRLF population there at that time.

Additionally, the non-armoring alternative would necessitate the removal of the existing installed armoring, eliminating an existing portion of the California Coastal Trail currently located on the

¹⁰ Coastal Act Section 30108 defines feasibility as follows: "Feasible" means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors.

¹¹ BO page 10 and Conservation Measure 31.

berm surface and removing the primary emergency vehicular access for Mori Point, part of the Golden Gate National Recreation Area (GGNRA), which lies directly to the south of Sharp Park. Other recreational assets at risk from removal of the berm include the Golf Course itself, which serves as an important public, low-cost recreational asset to a diverse set of golfers from the region (see also Public Access and Recreation findings).

Another non-armoring alternative often considered is planned or managed retreat, which refers to the intentional abandonment and demolition or relocation of the threatened structures. This concept suggests that the shoreline should be allowed to retreat absent the installation of armoring, once the existing structures have been moved or removed. Beach formation can be assisted by the sand-generating material in coastal bluffs and shoreline as it erodes, but more importantly, natural erosion provides space for the natural equilibrium between the shoreline and the ocean to establish itself and for beaches to form naturally. Over the longer run, a more comprehensive strategy to address shoreline erosion and the impacts of armoring may be developed (e.g., planned or managed retreat, relocation of structures inland, abandonment of structures, etc.).

The “managed retreat alternative” would, like the “no project” alternative, result in removal of the berm in its entirety and would eventually return the area currently occupied by the berm footprint to its natural topography. In addition, this option would result in opportunities for relocation of threatened resources including: infrastructure and development, including the California Coastal Trail and vehicular access route; Sharp Park’s recreational/architectural resources; stormwater and sewer infrastructure; and threatened biological resources and endangered species habitat. This alternative also requires identifying possible alternative locations for existing resources and development (when possible) and would allow the shoreline to retreat without the installation of any shoreline armoring. This alternative in this instance would likely include possible relocation of the California Coastal Trail in the following locations: (a) along the Sharp Park beach; (b) along a boardwalk overtop of Laguna Salada (potentially using the boardwalk at Mori Point as a model); (c) inland of the Laguna Salada wetland complex somewhere along the Sharp Park Golf Course; or (d) inland of the Sharp Park Golf Course closer to Highway One in order to not impede golf play. Finally, this alternative would also include possible relocation of the existing endangered species habitat further inland, reconfiguration of the Sharp Park Golf Course, and relocation of sewer and other infrastructure structures further inland or to the north of Sharp Park.

Although the “managed retreat” alternative provides the opportunity for evaluation and possible long-term relocation of existing structures at the Sharp Park complex that are at risk of coastal hazards, this alternative is currently infeasible because it would be extremely costly (estimated in the tens of millions of dollars) and it is unclear if a golf course could even be relocated inland at this location. In addition, it is infeasible due to the mandates the Applicant is under to protect existing habitat for the CRLF and the SFGS. The Applicant notes in its alternatives analysis (**Exhibit 7**) that even if other portions of Sharp Park or other inland areas were designated as sites for relocation of these sensitive habitats and other biological resources, relocation of endangered species habitat and CRLF and SFGS individuals themselves as part of a managed retreat strategy would be infeasible. Challenges with such relocation are due to the lack of availability of a similarly-sized wetland environment anywhere on the Sharp Park property or on adjacent land, the possible risk of mortality to the species during capture, removal, and release,

and the risk of failure of artificially-created replacement habitat areas. It is possible that further future analyses of options for reconfiguring the Sharp Park complex could provide more information on managed retreat options, but these types of analyses are not yet complete.¹² It is possible that this question can be revisited during that process, and this CDP can subsequently be modified if warranted and supported by evidence at that time.

Other alternatives typically considered, such as better drainage and landscaping designed to increase the effective life of setbacks, are not generally applicable in this case given the physical characteristics of the site where the Golf Course is on former tidelands and not on a bluff above the beach. Similarly, beach nourishment, while a viable option in many cases, has not been thoroughly evaluated here, including because there doesn't exist a regional sand management entity in this area that might be able to coordinate and manage such an effort for maximum public utility.¹³

Therefore, the non-armoring solutions in this case are not currently feasible alternatives at this time.

Armoring alternatives

In terms of armoring alternatives, there are a variety of different armoring measures that could be employed, ranging from the existing earthen berm to more substantial rock and/or concrete structures in similar, or even larger, configurations. Oftentimes there are choices to be made between different styles of armoring structures (e.g., a rock riprap revetment versus a more vertical concrete seawall). In this case, it is clear that all such armoring structures would have similar impacts on coastal resources at this location given site characteristics, particularly any structure that retains a public access area on top of it (i.e., a vertical flood wall would have less footprint, but would trade-off elevated access for beach access). Given that the existing proposed earthen berm is already in place, already includes some access components (including those that can help form the basis of an appropriate mitigation package), and would cause an enormous expenditure of resources to replace it with something else, it appears to be the best option among the armoring alternatives at this point in time provided its impacts can be appropriately offset (see also below). Thus, subject to impact mitigation, the proposed project meets the third analytic test of Section 30235.

Sand Supply Impacts

The fourth test of Section 30235 that must be met in order to allow Commission approval of a shoreline protection project is that such projects must be designed to eliminate or mitigate adverse impacts to local shoreline sand supply.

¹² SFRPD has expressed intentions to develop long-term management solutions and potential course reconfigurations in order to remedy the ongoing flooding and habitat issues at the course, especially regarding the most frequently flooded golf holes, including holes 9, 12, 13, 14, 15, and 17. This long-term management approach was considered in the version of SFRPD's Significant Natural Resource Areas Management Plan that was adopted by the San Francisco Board of Supervisors in 2016. Restoration alternatives such as reconfiguring to a nine-hole layout or removal of the golf course entirely were considered but ultimately rejected because "they are not compatible with the existing and planned continued 18-hole layout of the historic golf course."

¹³ Such as SANDAG in San Diego County.

Shoreline Processes

Some of the effects of engineered armoring structures on the beach (such as scour, end effects and modification to the beach profile) are temporary or are difficult to distinguish from all the other actions that modify the shoreline. In addition, there are effects that are more qualitative (e.g., impacts to the character of the shoreline and visual quality), and that are difficult proxies for understanding the total impact of an armoring structure to the coastline. However, some of the effects that a shoreline structure may have on natural shoreline processes can be quantified, including: (1) the loss of the beach area on which the structure is located; (2) the long-term loss of beach that will result when the back-beach location is fixed on an eroding shoreline; and (3) the amount of material that would have been supplied to the beach if the back-beach were to erode naturally. The first two calculations affect beach and shoreline use areas, and the third is related to shoreline sand supply impacts, but all three impact public beach access.

Encroachment area

Shoreline protective devices, regardless of their configuration, are all physical structures that occupy space that would otherwise be unencumbered. When a shoreline protective device is placed on a beach area, the underlying beach area cannot be used by the public as beach. This generally results in a loss of public access and recreational opportunity as well as a loss of sand and areas from which sand generating materials can be derived. The area where the structure is placed will be altered from the time the protective device is constructed, and the extent or area occupied by the device will remain the same over time, until the structure is removed or moved from its initial location, or in the case of a revetment, as it spreads seaward over time. The beach area located beneath a shoreline protective device, referred to as the encroachment area, is the area of the structure's footprint.

The proposed project would cover an area of beach that would otherwise be occupied by unencumbered sand. In this case, at the project site, the proposed berm structure occupies approximately 170,500 square feet of sandy area (or almost 4 acres) that cannot be used as beach.

Fixing the Back Beach

On an eroding shoreline, a beach will exist between the waterline and the bluff as long as there is space to form a beach between the bluff and the ocean. As bluff erosion proceeds, the profile of the beach also retreats and the beach area migrates inland with the bluff. This process stops, however, when the backshore is fronted by a hardened, protective structure such as a seawall or berm. Experts generally agree that where the shoreline is eroding and armoring is installed, the armoring will eventually define the boundary between the sea and the upland.¹⁴ While the shoreline up and downcoast of the armoring continues to retreat and reform beach areas, shoreline in front of the armoring eventually stops at the armoring. This effect is also known as passive erosion, or coastal squeeze. The sandy beach area will narrow, being 'squeezed' between the moving shoreline and the fixed backshore and this impact represents the loss of a beach as a direct result of the installed armoring.

¹⁴ See, for example: Kraus, Nicholas (1988) "Effects of Seawalls on the Beach: An Extended Literature Review", *Journal of Coastal Research*, Special Issue No. 4: 1 – 28; Kraus, Nicholas (1996) "Effects of Seawalls on the Beach: Part I An Updated Literature Review", *Journal of Coastal Research*, Vol.12: 691 – 701., pg. 1 – 28; and Tait and Griggs (1990) "Beach Response to the Presence of a Seawall", *Shore and Beach*, 58, 11-28.

In addition, coastal squeeze is being exacerbated by sea level rise. Specifically, the level of the Pacific Ocean has been rising slightly for many years. There is a growing body of evidence that there has been an increase in global temperature and that acceleration in the rate of sea level rise can be expected to accompany this increase in temperature (some shoreline experts have indicated that sea level could rise 4.5 to 6 feet by the year 2100).¹⁵ Mean sea levels affect shoreline erosion in several ways, and an increase in the average sea level will exacerbate all of these conditions. On the California coast the effect of a rise in sea level will be the landward migration of the intersection of the ocean with the shore. This, too, leads to loss of the beach as a direct result of the installed armoring. Specifically, beach areas are diminished as the beach is compressed between the ocean migrating landward and the fixed backshore. Such passive erosion impacts can be calculated over the time the proposed armoring is expected to be in place. Consistent with past practice, including due to the Commission's experience that shoreline armoring often needs to be reinforced, augmented, replaced, or substantially changed within twenty years of its original installation, and to provide for re-review on a regular basis to allow for consideration of possible changes in policy and law associated with armoring, the Commission generally evaluates this impact for an initial twenty year period. In this case, the 20 years is added to the 27 years that the new berm has been in place since it was augmented to its current form roughly in the early 1990s.

The Commission has established a methodology for calculating passive erosion, or the long-term loss of beach due to fixing the back beach. The area of beach lost due to long-term erosion is equal to the long-term average annual erosion rate multiplied by the number of years that the back beach or bluff will be fixed, multiplied by the width of the property that will be protected. As indicated above, annual erosion rates have been estimated to be between 1 to 3 feet per year in the LCP, and between 2.5 to 3.8 feet per year in SFRPD analyses.¹⁶ Thus, estimated erosion rates at the site range from 1 to 3.8 feet per year.¹⁷ Given the uncertainty and wide range in estimated erosion rates, the Commission here averages the high and low rate identified and uses 2.4 feet per year (i.e., the average of 1 and 3.8 is 2.4). Applying the 2.4 feet per year average

¹⁵ See, for example: Sea Level Rise, Adopted Policy Guidance, <https://www.coastal.ca.gov/climate/slrguidance.html>. In 2010, the California Climate Action Team evaluated possible sea level rise for the California coast and, based on several of the Intergovernmental Panel on Climate Change (IPCC) scenarios, projected sea level rise up to 1.4 meters (4.5 feet) by 2100. In 2011, the Ocean Protection Council adopted interim guidance on sea level rise that recommends state agencies consider similar amounts of sea level rise for deliberations on coastal projects (http://opc.ca.gov/webmaster/ftp/pdf/agenda_items/20110311/12.SLR_Resolution/SLR-Guidance-Documents.pdf, last consulted April 15, 2012). A 2012 analysis by a National Research Council committee (http://www.nap.edu/catalog.php?record_id=13389) projects sea level for the central California coast could rise up to 5.5 feet from 2000 to 2100. A 2012 NOAA Technical Report (NOAA Tech Memo OAR CPO-1) projects, with high confidence, that global sea level will rise at least 0.6 feet (0.2 meters) and no more than 6.6 feet (2.0 meters) from 1992 to 2100.

¹⁶ According to the Applicant's 2010 Seawall Evaluation (see Exhibit 6), between 200 to 300 feet of beach fronting Sharp Park was lost due to shoreline erosion between 1931 and 2010, equating to between 2.5 and 3.8 feet when averaged annually.

¹⁷ While this is an average annualized rate to date, actual erosion in the City of Pacifica has been demonstrated to be more episodic, associated with large storm or wave uprush events. There can be periods of wave quiescence during which the bluffs and shoreline will be fairly stable and retreat will be slight. These quiet periods will be interrupted by more stormy years, during which time several years of "annual average" erosion can occur during a single storm event. The annualized rate is intended to take into account both types of periods and to thus to 'annualize' what are typically more episodic events.

annual rate, the long-term loss of beach due to passive erosion associated with the proposed project is 207,360 square feet for the last 27 years that the augmented berm has been in place and 153,600 square feet for the next 20 years, or a total of 360,960 square feet (or just over 8 acres).

Retention of Potential Beach Material

The final impact calculation pertains to the loss of sand in the larger sand supply system. Beach sand material comes to the shoreline from inland areas, carried by rivers and streams; from offshore deposits, carried by waves; and from coastal dunes and bluffs feeding the beach. Bluff retreat/shoreline erosion is one of several ways that sand is added to the shoreline. Bluff retreat and erosion is a natural process resulting from many different factors such as erosion by wave action causing cave formation, enlargement and eventual collapse of caves, saturation of the bluff soil from groundwater causing the bluff to slough off, and natural bluff deterioration. For coastal dunes, the contribution to the system is typically more direct, with sand becoming part of the shoreline system during and as a result of climatic events, including wind, rain, and storms. When the bluff/shoreline is protected by a shoreline protective device, the natural exchange of sand material from the bluff and the shoreline to the beach can be interrupted, and if the bluff and shoreline is eroding, may result in a measurable loss of material that would normally become a part of the beach.

In bluff areas, if natural erosion were allowed to continue (absent of any shoreline armoring), bluff sediment would be added to the beach, as well as to the larger littoral cell sand supply system fronting the bluffs. The volume of total material that would have gone into the sand supply system over the lifetime of the shoreline structure would be the volume of material between (a) the likely future bluff face location with shoreline protection; and (b) the likely future bluff face location without shoreline protection. The same general principal can apply in shoreline areas like that found at Sharp Park, albeit the mechanism is slightly different. In a case like Sharp Park, the issue is not materials ‘held in’ by armoring fronting a bluff, but rather the materials ‘held back’ from becoming a part of the shoreline sand supply system as discussed above. Such an impact in the latter case, though, is much more difficult to quantify, including as the standard bluff calculations are not applicable. In this case, the Commission’s Senior Coastal Engineer, Dr. Lesley Ewing, determined there would not be any significant contribution to the beach from inland shoreline materials at this location given the site’s relatively flat profile and lack of eroding bluffs behind the armoring structure. Thus, for the purposes of this analysis the retention of potential beach material is considered negligible.

Beach/Shoreline Loss

The proposed project would result in quantifiable shoreline sand supply impacts. There would be beach sand loss due to: 1) placement of an earthen berm and riprap onto approximately 170,500 square feet of sandy area, and 2) fixing of the back beach location, resulting in the loss of 360,960 square feet of sandy beach in the time since the berm was installed and over the next twenty years, for a total of 531,460 square feet (or over 12 acres) of beach. This represents a significant public recreational access impact, including a loss of the social-economic value of beach and shoreline recreational access, for which the Coastal Act requires mitigation.

There are a variety of ways to approach mitigation for such sandy beach impacts. Perhaps most obvious analytically would be to identify a nearby area that could be used to create a new 12-acre beach. In other words, by locating and acquiring such a property to allow it to become

beach. While in concept this would be the most direct mitigation approach, in reality, finding an area that can be turned into a beach and ensuring it does so appropriately over time is very difficult in practice. At the same time, measurements of the affected area provide comparisons for evaluating alternative mitigations. Historically, the Commission has looked at several ways to value such beach and shoreline areas in order to determine appropriate in-lieu mitigation fees, including evaluating the recreational value of the beach in terms of the larger economy, as well as the real estate value of the land that would have to be acquired to create a beach.

In terms of the recreational beach value, the Commission has recognized that in addition to the more qualitative social benefits of beaches and shoreline areas (recreational, aesthetic, habitat values, etc.), such areas provide significant direct and indirect revenues to local economies, the state, and the nation. The ocean and the coastline of California contribute substantially to the California economy through revenue-producing activities such as tourism, fishing, recreation, and other commercial activities.¹⁸ There is also value in passive recreation activities, simply relaxing or recreating at the beach with the benefit of sandy areas, clean water, and abundant wildlife. However, these recreational impacts are in many cases difficult to quantify on a project-specific basis, including at the subject site where such data are lacking.

Approvable Mitigation Package

While requiring a mitigation fee could commensurately mitigate for these sand supply impacts, the Commission has also required the provision of public recreational access improvements to offset such impacts, particularly when a public agency, such as SFRPD, is the applicant for a shoreline armoring project. Such mitigation strategies can allow for bona fide improvements to public recreational access infrastructure and utility so that mitigation benefits can be realized in the near term, and in the area of the impacts. Additionally, as described previously, the proposed project here offers an important opportunity to improve the area's existing heavily used public access and recreational infrastructure, including enhancing the California Coastal Trail (CCT) in this location by addressing its existing inadequacies and providing additional amenities to maximize lateral and vertical public access and recreational use. Further, in this case, the golf course itself that is being protected is a lower-cost public access amenity, and its preservation provides some offsetting public access value, albeit difficult to quantify. Thus, in this case, the Commission finds that the best way to mitigate for the above sand supply impacts of the armoring, as well as to enhance and maximize public access and recreational opportunities in the project area as required by the Coastal Act, is to require that the City prepare and implement a Public Access Management Plan (Access Plan) with the objective of maximizing and enhancing public recreational access and utility in this area, including specifically through continuous trail and linear park improvements along the earthen berm.

The primary focus of the Access Plan is to offset the impact of the armoring via the creation of an improved lateral public access path on top of the earthen berm, with overlooks, landscaping and access vertically to the beach below. In many ways, the intent is that the Access Plan provides for lateral park improvements atop the earthen berm, and that it preserve and enhance CCT connections between parking areas and recreational trails located to the north of the

¹⁸ Sea Level Rise, Adopted Policy Guidance, <https://www.coastal.ca.gov/climate/slrguidance.html>, "Just over 21 million people lived in California's coastal counties as of July 2014 (CDF 2014), and the state supports a \$40 billion coastal and ocean economy (NOEP 2010)."

proposed project through the project site to additional hiking paths at Mori Point located south of Sharp Park. In this case, maintaining and further enhancing this significant public accessway is an appropriate way to offset impacts due to the proposed project. Such a lateral park accessway would also provide, at a minimum, enhanced recreational amenities to mitigate for the beach and shoreline area that was lost due to construction of the berm and riprap, and will be lost over time due to their continued presence. **Special Condition 3** therefore requires SFRPD to preserve and enhance a continuous lateral trail and related amenities in the vicinity of the berm.¹⁹

The earthen berm is already a very popular destination for visitors and forms a significant and integral part of the California Coastal Trail in Pacifica. The Applicant's Seawall Evaluation identifies existing pedestrian traffic on top of the berm as a source of increased erosion at specific locations along the berm because pedestrians and their pets often use eroded locations of the structure to exit the berm and reach the beach (**Exhibit 6**, Section 6.3.2). Installation of vertical accessways to the beach in the form of stairs or ramps would enhance public access at the project location and would also reduce erosion possibilities from foot traffic along the berm, likely decreasing the need for future strengthening of the shoreline projection device. Therefore, **Special Condition 3(c)** requires the Applicant to provide a plan for creation of at least two vertical public pathways down to the beach from the top of the earthen berm, whether stairs, ramps, or other like facilities, including requiring submittal of site plans illustrating the design and proposed locations of such accessway points.

To address amenity deficiencies in the area, **Special Condition 3(g)** requires an adequate number of benches, picnic tables, bicycle racks, garbage and recycling receptacles, doggie mitt stations, and other such public access amenities to be distributed appropriately along the entire lateral trail in a way that maximizes and enhances existing public access utility and minimizes their impact on public views.

To accommodate the SFRPD's budget cycles and allow time to fully fund the improvements, implementation of the Access Plan can be phased over a period of two years, provided the improvements are in place by summer of 2019 (i.e., no later than Memorial Day of 2019). Therefore, this CDP is conditioned for recreational and public access offsets (e.g., public access improvements) as the most appropriate mitigation method, given the above-described factors. Accordingly, as conditioned, the project can offset impacts to public access and sand supply through the enhancement and maximization of existing recreational resource benefits. Therefore, as conditioned, the Commission finds the project satisfies Coastal Act requirements regarding mitigation for seawall impacts.

The mitigation has been assessed for the first twenty years (i.e., through 2037), and will need to

¹⁹ Such a mitigation package is similar to other mitigation packages the Commission has required of other local governments when they proposed armoring – see, for example, recent CDPs 2-11-009 (City of Pacifica Stormdrain Revetment), CDPs A-3-SCO-07-015 and A-3-SCO-07-019 (Santa Cruz County's Pleasure Point seawall), and CDPs A-3-PSB-12-042 and A-3-PSB-12-043 (Capistrano and Vista Del Mar seawalls). This case is similar to the Pleasure Point seawall case in Santa Cruz County. In that case the Commission had previously denied an Army Corps seawall at that location, but then ultimately approved a seawall provided its impacts were mitigated via enhancing the blufftop area on the seaward side of the road with a continuous lateral trail and public recreational access amenities. That project is now fully constructed and has proven to be an extremely successful public recreational access enhancement, including in terms of the California Coastal Trail.

be reassessed at that time, including whether or not additional mitigation for project impacts moving forward is required and appropriate. In addition, this armoring is allowed only to protect the existing Golf Course, and redevelopment of the Golf Course portion of the site is limited by **Special Condition 5**, which recognizes that the proposed seawall is being approved under Section 30235 to protect the existing golf course structures in danger from erosion. The intent of **Special Condition 5** is to limit future impacts to public resources by restricting expansion of new development on site, and to allow for potential removal of the approved device when it is no longer necessary to protect the existing development requiring shoreline protection. In other words, if the site is redeveloped, then it must be redeveloped in a manner that does not require armoring, including requiring that the existing armoring needs to be removed. The special condition also puts the Permittee on notice that redevelopment cannot rely on existing or new shoreline protective works for stability, and assures alternatives will be considered in order to avoid the need for shoreline protective devices in this hazardous area. Such alternatives include removing seaward portion(s) of any proposed redeveloped structure, relocation inland, or reduction in size. Such options look to be feasible for new construction or redevelopment and would prevent development from continually being sited in hazardous locations that would lead to long-term adverse impacts to the adjacent public beach and State tidelands. Any future redevelopment of the affected property will require re-evaluation of current conditions and must position development safely on site, independent of any shoreline protection.

Under **Special Condition 5**, redevelopment is defined to include additions and expansions, or any demolition, renovation or replacement that would result in alteration or reconstruction of 50 percent or more of the Golf Course, including existing structures. The condition indicates that the preferred alternative to shoreline protective devices includes such options as relocating all or portions of the structures inland. The Applicant has chosen to construct an earthen berm with rock riprap, rather than revise the existing development to decrease the risks over the remaining life of these structures. However, redevelopment of this property that would rely on the existing approved armoring for protection would not be consistent with Section 30253. The condition acknowledges that future development on the site beyond repair and maintenance to the existing structures must meet the requirements of Section 30253 and not require shoreline protective devices that alter the natural landforms. The condition also defines redevelopment to include additions and expansions, or any demolition, renovation or replacement which would result, cumulatively, in alteration or reconstruction of 50 percent or more of the Golf Course, including existing structures. Thus, this condition requires that if an applicant submits an application to replace 30% of an existing primary structure, then, for example, 5 years later seeks approval of an application to replace an additional 30% of the structure, this would constitute redevelopment, triggering the requirement to ensure that the redeveloped structure is sited safely, independent of any shoreline protection.

In addition, the first twenty-year period allows the Applicant to explore longer-term solutions for the existing development at the Sharp Park complex and considers possible relocation of existing structures at risk from coastal hazards. This ties in with their current planning efforts to develop long-term management solutions and potential course reconfigurations in order to remedy ongoing flooding and habitat issues on site.

Long-Term Stability, Maintenance, and Risk

The proposed development must comply with all applicable Coastal Act requirements, including Section 30253. The subject property is located just inland from the Pacific Ocean and parts of it are situated in the mapped FEMA 100-year flood plain. Sharp Park Golf Course is located within an 845-acre watershed. The Golf Course also receives additional runoff from residential streets in Pacifica, the Pacific Coast Highway, undeveloped areas managed by the GGNRA, and surrounding subdivisions constructed after the Golf Course.

In addition to runoff and floodwaters from the watershed, in past storms, water has also breached the berm and contributed to flooding and saltwater intrusion of sensitive habitat at the project site.²⁰ Sharp Park is also at risk of flooding due to a 50-foot wide gap between the Sharp Park berm at its northern end closer to Clarendon Road and the adjacent edge of the City of Pacifica's Beach Boulevard Sea Wall. The Beach Boulevard Sea Wall is at elevation of +24 feet (NAVD88) which is 3.6 feet lower than the northern-most point of the Sharp Park Sea Wall and 5.7 feet below the Base Flood Elevation reported by FEMA in the 100-year floodplain (FEMA Maps, 1987). Thus, SFRPD consultants conclude in the analysis that under 100-year flood conditions, the northern portion of Sharp Park will be inundated with seawater (**Exhibit 6**).

The Applicant's Seawall Evaluation also concludes that the projected climate pattern around San Francisco associated with climate change will be a drying climate that may result in less frequent but more intense rainfall events (**Exhibit 6**). Additionally, larger and longer winter period waves have already been observed and might be part of a trend in this area. These possible changes suggest the long-term consequences of increased coastal erosion and beach loss rates that can threaten the armoring structure as well as existing development at the project site. Given the location of the property just inland from the Pacific Ocean, there is inherent uncertainty associated with coastal hazards, including in relation to sea level rise and its projections at this site. Rising sea levels and its associated consequences will tend to further limit the project life. There is a growing body of evidence demonstrating that acceleration in the rate of sea level rise can be expected to accompany increases in global temperatures (as described earlier, some shoreline experts have indicated that sea level could rise by as much as 4.5 feet to over 6 feet by the year 2100). On the California coast the effect of a rise in sea level will be the landward migration of the intersection of the ocean with the shore, leading to a faster loss of the beach as the beach is squeezed between the landward migrating ocean and the fixed backshore. This will expose the berm to more frequent wave attack and increased risk of erosion in its seaward aspect.

Coastal Act Section 30253 requires the project to assure long-term stability and structural integrity, minimize future risk, and avoid additional, more substantial protective measures in the future. For the proposed project, the main concern of Section 30253 is assuring long-term stability due to the existing, and potentially exacerbated future coastal hazards described above. This is particularly critical given the dynamic shoreline environment within which the proposed project is situated. Also critical to the task of ensuring long-term stability, as required by Section 30253, is a formal long-term monitoring and maintenance program. If the armoring project is damaged in the future (e.g. as a result of flooding, landsliding, wave action, storms, etc.) it would lead to a degraded public access condition and harm to environmentally sensitive habitat at the project site. In addition, such damages could adversely affect nearby beaches by resulting in

²⁰ USFWS BO page 34.

debris on the beaches and/or creating a hazard to the public using the beaches. Therefore, in order to find the proposed project consistent with Coastal Act Section 30253, the proposed project must be maintained in its approved state. Further, in order to ensure that the Applicant and the Commission know when repairs or maintenance are required, the Applicant must regularly monitor the condition of the subject armoring, particularly after major storm events. Such monitoring will ensure that the Permittee and the Commission are aware of any damage to, or weathering of, the armoring and can determine whether repairs or other actions are necessary to maintain the seawall structure in its approved state before such repairs or actions are undertaken. To assist in such an effort, monitoring plans should provide vertical and horizontal reference distances from armoring structures to surveyed benchmarks for use in future monitoring efforts.

To ensure that the proposed project is properly maintained to ensure its long-term structural stability, **Special Condition 8** requires the submission of regular monitoring reports every three years. This will provide for evaluation of the condition and performance of the proposed project and overall armoring stability, and will indicate the need for maintenance, repair, changes or modifications to the structure. **Special Condition 9** allows the Applicant to maintain the project in its approved state, subject to the terms and conditions identified by the special conditions. Such future monitoring and maintenance activities will be understood in relation to clear as-built plans that were already submitted by the Applicant (**Exhibit 2**).

In terms of recognizing and assuming the hazard risks for shoreline development, the Commission's experience in evaluating proposed development in areas subject to hazards has been that development has continued to occur despite periodic episodes of heavy storm damage and similar occurrences. Development in such dynamic environments is susceptible to damage due to such long-term and episodic processes. Past occurrences statewide have resulted in public costs (through low interest loans, grants, subsidies, direct assistance, etc.) in the billions of dollars. As a means of allowing continued development in areas subject to these hazards while avoiding placing the economic burden for damages onto the people of the State of California, applicants are regularly required to acknowledge site hazards. Accordingly, **Special Condition 10** requires the Applicant to assume all risks for developing at this location and indemnify the Commission from any claims arising from construction or operation of the development.

To ensure that this project does not prejudice future shoreline planning options, including removal of shoreline protection or managed retreat, this approval is conditioned for a twenty-year mitigation period. It has been the Commission's experience that shoreline armoring, particularly in such a high hazard area as this project, needs to be augmented, replaced, or substantially changed within about twenty years. The intent of the twenty-year mitigation period is to allow for an appropriate reassessment of continued armoring at that time given the uncertainties of climate change, sea level rise, and the volatile history of the Pacifica shoreline. If the baseline context for considering armoring is different in twenty years – much as the Commission's direction on armoring has changed over the past twenty years as more information and better understanding has been gained regarding such projects – the twenty-year mitigation period will allow the Commission to assess possible available alternatives to the armoring at the end of this period. Accordingly, the adverse coastal resource impacts of the approved project have been mitigated for the first twenty years from the date this CDP is approved (i.e., until

November 8, 2037) through **Special Condition 7** of this CDP and the associated requirement for public access improvements.

Conclusion

With regard to this specific site and fact set, the Commission finds that the proposed project, as conditioned, can be found consistent with Coastal Act Sections 30235 and 30253 because it is required to protect an existing structure in danger from erosion, is the least damaging feasible alternative viable for protection at this time, will be reevaluated in twenty years, and is designed to mitigate impacts on shoreline sand supply through enhancement and ongoing maintenance of the Coastal Trail and public access improvements at the project site.

F. PUBLIC ACCESS AND RECREATION

Applicable Policies

Coastal Act Section 30604(c) requires that every coastal development permit 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 recreation policies of [Coastal Act] Chapter 3.” The proposed project is located seaward of the first through public road. The Coastal Act grants a high priority to public recreational access uses and activities to and along the coast. The Act protects and encourages lower-cost visitor and recreational facilities where feasible and states a preference for developments providing public recreational opportunities. In addition, the Coastal Act requires that oceanfront land and upland areas suitable for recreational use be protected for recreational uses. Applicable policies include:

***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.*

***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.*

***30212.** Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where: (1) it is inconsistent with public safety, military security needs, or the protection of fragile coastal resources, (2) adequate access exists nearby, or, (3) agriculture would be adversely affected....*

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

***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.*

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

Coastal Act Section 30240(b) protects sensitive habitat, as well as parks and recreation areas, such as the adjacent beach, golf course, and wetland areas:

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.

These overlapping Coastal Act policies clearly protect the sandy beach (and access to and along it), offshore waters, and park land for public access and recreation purposes, particularly free and low cost forms.

Analysis

Shoreline protective devices have significant adverse impacts to public access and recreation. Section 30210 of the Coastal Act requires the Commission to provide the general public maximum access and recreational opportunities, while respecting the rights of private property owners. Section 30211 prohibits development from interfering with the public's right of access to the sea. In approving new development, Section 30212 requires new development to provide access from the nearest public roadway to the shoreline and along the coast, save certain limited exceptions, such as existing adequate nearby access. Finally, the Coastal Act Section 30210 direction to maximize access represents a different threshold than to simply provide or protect such access, and is fundamentally different from other like provisions in this respect. In other words, it is not enough to simply provide access to and along the coast, and not enough to simply protect access; rather such access must also be maximized. This terminology distinguishes the Coastal Act in certain respects, and provides fundamental direction with respect to projects along the California coast that raise public access issues, like this one. In addition, the mean high tide line will move landward over time depending on the beach profile, seasonal tidal activity, and continued sea level rise. Therefore, it is also critically important that the Commission assess whether the project, which stands to mitigate for coastal resource impacts through November 8, 2037, would impact public access and recreation over this time period, and, if so, provide measures to avoid or appropriately mitigate such impacts.

The Sharp Park complex is a popular public park that provides recreational opportunities for people interested in various outdoor activities. In addition to the Golf Course, it offers access to coastal trails and coastal views to hikers, runners, cyclists, and visitors who may only have a short time available to see the ocean due to the easy access by car and on foot. The Park contains public pathways serving as part of the City of Pacifica Coastal Trail Network (see **Exhibit 8**), including a heavily used pedestrian trail which exists on top of the existing armoring structure, the subject of this report. Thus, altogether, the Sharp Park complex provides significant public recreational access of a variety of forms, many of which are zero or low-cost options.

The Sharp Park Golf Course is a highly used public course enjoyed by golfers from all over the Bay area who appreciate its historic architecture, dramatic views, and inexpensive rates. SFRPD

reports an average of 37,546 18-hole rounds were played each year over the last five years.²¹ According to the San Francisco Public Golf Alliance, the Golf Course is considered the “poor man’s Pebble Beach,” and is a favorite among youth, senior, and ethnic minority golf associations.

The Golf Course offers relatively inexpensive opportunities for the public to enjoy the sport, especially compared to private golf courses in the area. The current rate for senior residents of San Francisco and Pacifica is \$18 on weekdays and \$26 on weekends, with junior (youth) rates less than that. Other users from San Francisco and Pacifica may play for \$28 on weekdays and \$33 on weekends. Nonresidents play for less than \$50. By contrast, private courses range from \$44-\$75 for senior adult San Francisco residents at the Presidio Golf Course in San Francisco, to as high as \$63-\$150 at the Half Moon Bay Golf Links Ocean Course. The other public course in San Mateo County, Poplar Creek, offers a weekday rate that runs about \$9 higher for senior residents, and Poplar Creek restricts the residency discount to residents of the City of San Mateo.²²

Despite the public access and recreation benefits to the public at the project site, and those that come from the trail atop the actual berm itself, the berm has measurable public access impacts. Such impacts include those detailed in the coastal hazard findings above which demonstrate that the footprint of the structure occupies nearly 4 acres of shoreline beach area, and has resulted in, and will result in over the next 20 years, over 8 additional acres of beach loss. However, the proposed project will allow for continued lower cost recreation provided by Sharp Park Golf Course through the protection of existing structures, including the course and related facilities, from flooding hazards. Additionally, the armoring will allow for continued public access to, and along the shoreline, by preserving the portion of the Coastal Trail on the top of the earthen berm. However, those factors alone are not enough to commensurately offset project public access and recreation impacts. Fortunately, these project area characteristics can form the basis for an appropriate mitigation package. As detailed earlier, **Special Condition 3** requires the Applicant to make access improvements to enhance public use of the area to and along the shoreline, including improvements to the Coastal Trail and additional amenities, including providing for vertical accessways, landscaping, and enhanced signage by summer of 2019.

Coastal Act Section 30211 prohibits development from interfering with the public’s access to the sea. To ensure that the proposed developments adequately mitigate for their adverse impacts to public access, **Special Condition 3(h)** prohibits future development and uses that may disrupt public access, and **Special Condition 3(i)** requires access amenities to be open to the public 24 hours a day free of charge. Thus, as conditioned, the projects ensure that development will not interfere with the public’s access to the sea, as required by Coastal Act Section 30211.

²¹ See “Sharp Park golf rounds data” from Spencer Potter, SFRPD, October 13, 2017.

²² Rates were obtained from golf course websites with the exception of Half Moon Bay Golf Links Ocean Course, where Commission staff called the course to get a range of the lowest prices offered on weekends and weekdays. The lowest rates at Golf Links Ocean Golf Course are during twilight hours, which is \$63 on weekdays and \$75 on weekends. The lowest non-twilight hour rates range from \$150-200 depending on the day. There are no senior discounts offered at the Golf Links Course.

Finally, with respect to construction impacts associated with implementation of the Public Access Management Plan, these projects will temporarily do the following: require the movement of equipment, workers, materials, and supplies at the project location between Sharp Park Golf Course and the adjacent beach area; result in the loss of recreational beach and other public access use areas to a construction zone (at the immediate project areas); and generally intrude and negatively impact the aesthetics, ambiance, serenity, and safety of the recreational experience at these locations. These public recreational use impacts can be minimized through construction parameters that limit the area of construction, clearly fence off the minimum construction area necessary, require inland equipment and material storage during non-construction times, clearly delineate and avoid to the maximum extent feasible public use areas, and restore all affected public access areas at the conclusion of construction. A detailed construction plan is required for this purpose (see **Special Conditions 4(a) and 4(b)**). In addition, to provide maximum information to the beach-going public during all construction, the Applicant must maintain copies of the CDP and approved construction plans available for public review at the construction sites, as well as provide a construction coordinator whose contact information is posted at the site to respond to any problems and/or inquiries that might arise (see **Special Conditions 4(d) and 4(e)**).

The construction activities necessary to implement the components of the required Access Plan could also have impacts to water quality and coastal resources if construction debris and other materials entered ocean waters. **Special Condition 4(c)** requires the Permittee to submit a construction plan that limits impacts to public access and provides for appropriate Best Management Practices to protect coastal resources during construction.

Conclusion

In short, the proposed project results in significant public recreational access impacts. However, these impacts are offset in this case by protecting and maintaining an existing visitor-serving, low-cost recreational activity on public park land and by requirements to improve and enhance public recreational trail and related accessways associated with the berm itself, including by adding additional public access improvements such as benches, informational signage, bicycle racks, and designated beach accessways. As conditioned, the project can be found consistent with the public access and coastal resource protection policies of the Coastal Act.

G. BIOLOGICAL RESOURCES

Applicable Policies

Environmentally Sensitive Habitat Areas (ESHAs) are defined in Section 30107.5 of the Coastal Act as areas in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem, and which could be easily disturbed or degraded by human activities and developments. Section 30240 of the Coastal Act states that ESHAs shall be protected against disruption of habitat values and that only uses dependent on the resources shall be allowed within an ESHA. Section 30240 also requires that development adjacent to such areas be sited and designed to prevent impacts that would significantly degrade those areas, and to be compatible with the continuance of the ESHA. Coastal Act Section 30240 states:

(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.

(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.

Analysis

As discussed above, Sharp Park contains two species of particular concern: the California Red-Legged Frog (CRLF), which is federally listed as threatened and a state Species of Special Concern, and the San Francisco Garter Snake (SFGS) which is federally and state listed as endangered. Areas within the Sharp Park complex and within the confines of the Golf Course, including Sanchez Creek, Laguna Salada Pond and Horse Stable Pond, are significant foraging areas for SFGS because these wetland areas are freshwater breeding habitat for CRLF and other species upon which the SFGS feed. According to the 2012 USFWS BO, CRLF egg masses were observed at Sharp Park Golf Course every year from 2004-2011 and the California Natural Diversity Database also reports known occurrences of CRLF at Sharp Park.²³

Given that these threatened and endangered species use the wetlands and wetland buffer areas on site as both breeding and foraging habitat, and the upland areas on site to aestivate or burrow, the wetlands and adjacent upland areas of Laguna Salada and Horse Stable Pond are considered ESHA under Section 30240. Section 30240(b) applies to development adjacent to these wetland buffer areas, including the now proposed earthen berm and riprap at this location. This development will not result in adverse impacts to the ESHA. To the contrary, the proposed armoring structure will in fact allow for continued protection of wetland areas from saltwater intrusion, and in turn serve to protect the CRLF and SFGS on site from harmful salinity levels and flooding impacts.²⁴ Given that habitat in Laguna Salada and Horse Stable Pond would be compromised absent a functioning shoreline protective device, the USFWS 2012 BO requires SFRPD to maintain the armoring in its currently proposed state.²⁵

Conclusion

The proposed project is sited outside of ESHA, will not significantly degrade such habitats, and will be compatible with the continuance of such habitat areas as required by Section 30240(b). Therefore, this project as proposed is consistent with the ESHA protections laid out in Coastal Act Section 30240.

²³ BO page 29.

²⁴ BO page 28.

²⁵ Conservation Measure 31 of the 2012 BO requires SFRPD to maintain the armoring, including the path on top, which is used as the only vehicle access for maintenance of the pumphouse infrastructure essential to managing floodwaters in the Golf Course. It also states that SFRPD does not anticipate hardening or further armoring the sides of the current berm.

H. OTHER AGENCY APPROVALS

The California State Lands Commission (CSLC) may require a lease or some other type of approval for the underlying armoring, as will potentially the U.S. Army Corps of Engineers, and thus **Special Condition 12** requires written evidence of CSLC and Army Corps approval of the project or evidence that such approval is not required.

I. VIOLATION

Violations of the Coastal Act exist on the subject property including, but not limited to, the unpermitted augmentation and repair work on the subject property discussed above, including the placement of rock riprap, additional materials, and grading of material on top of the armoring. The approval of the at-issue project pursuant to the special conditions required, after the project is completed, will resolve the violations. Issuance of the CDP, compliance with all of the terms and conditions of the permit, and actual completion of the approved project will result in resolution of the aforementioned violations of the Coastal Act on the subject property.

Although development has taken place prior to submission of this permit application, consideration of this application by the Commission has been based solely upon the Chapter 3 policies of the Coastal Act. Commission review and action on this permit does not constitute a waiver of any legal action with regard to the alleged violations, nor does it constitute an implied statement of the Commission's position regarding the legality of development, other than the development addressed herein, undertaken on the subject site without a coastal permit. In fact, approval of this permit is possible only because of the conditions included herein and failure to comply with these conditions would also constitute a violation of this permit and of the Coastal Act. Accordingly, the Applicant remains subject to enforcement action just as it was prior to this permit approval for engaging in unpermitted development, unless and until the conditions of approval included in this permit are satisfied and the approved project completed, fully implementing all required mitigation.

J. OTHER

Coastal Act Section 30620(c)(1) authorizes the Commission to require applicants to reimburse the Commission for expenses incurred in processing CDP applications. Thus, the Commission is authorized to require reimbursement for expenses incurred in defending its action on the pending CDP application in the event that the Commission's action is challenged by a party other than the Applicant. In this case, the Commission has already been sued (by Wild Equity) for its efforts to date in Sharp Park permitting. Therefore, consistent with Section 30620(c), the Commission imposes a condition requiring reimbursement for any costs and attorneys' fees that the Commission incurs in connection with the defense of any action brought by a party other than the Applicant challenging the approval or issuance of this permit (**Special Condition 11**).

K. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

Section 13096 of the California Code of Regulations requires that a specific finding be made in

conjunction with CDP applications showing the application to be consistent with any applicable requirements of CEQA. Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse effect that the activity may have on the environment.

The City of San Francisco, acting as the CEQA lead agency, exempted this project from CEQA based on Section 15301 of the California Code of Regulations (as a repair to an existing public structure). The Coastal Commission's review and analysis of land use proposals has been certified by the Secretary of the Natural Resources Agency as being the functional equivalent of environmental review under CEQA. The preceding findings in this report have discussed the relevant coastal resource issues with the proposal, and the CDP terms and conditions identify appropriate mitigations to avoid and/or lessen any potential for adverse impacts to said resources. The Commission incorporates these findings as set forth here in full. Further, all public comments received to date have been addressed in the findings, which are incorporated herein in their entirety by reference.

As such, there are no additional feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse environmental effects which approval of the proposed project, as conditioned, would have on the environment within the meaning of CEQA. Thus, if so conditioned, the proposed project will not result in any significant environmental effects for which feasible mitigation measures have not been employed consistent with CEQA Section 21080.5(d)(2)(A).

APPENDIX A – SUBSTANTIVE FILE DOCUMENTS

1. CDP 2-12-014
2. Biological Opinion – Sharp Park Safety, Infrastructure, Improvement, and Habitat Enhancement Project, U.S. Fish and Wildlife Service (October 2, 2012)

APPENDIX B – STAFF CONTACT WITH AGENCIES AND GROUPS

1. San Francisco Recreation and Parks Department (Applicant)
2. City of Pacifica
3. U.S. Fish and Wildlife Service
4. Surfrider Foundation
5. Wild Equity
6. San Francisco Public Golf Alliance