

## CALIFORNIA COASTAL COMMISSION

NORTH COAST AREA

45 FREMONT, SUITE 2000

SAN FRANCISCO, CA 94105-2219

(415) 904-5260

Th 17a <sup>15M</sup>

Staff: James Muth  
Staff Report: December 22, 1995  
Hearing Date: January 11, 1996

STAFF REPORT: REVISED FINDINGS

APPLICATION NO.: 1-95-40

APPLICANT: CITY OF PACIFICA

AGENT: Scott Holmes, Environmental Services Director.

PROJECT LOCATION: Within a 117± acre abandoned rock quarry containing the lower reaches of Calera Creek, located north of San Marlo Way, west of Highway One, and south of Mori Point in the Rockaway Beach area of the City of Pacifica. APN's 018-150-040, 018-150-050, 018-150-070, and 018-051-050.

PROJECT DESCRIPTION: Construct a wastewater treatment plant and restore the lower reaches of Calera Creek by: (1) adjusting the boundary line between two parcels owned by City of Pacifica and two parcels owned by Mr. Bottoms, resulting in two larger parcels owned by the City (from 5.0 acres to 17.0 acres and from 0.408 to 17.208 acres) and two remainder parcels owned by Mr. Bottoms (from 36.89 to 48.074 acres and from 79.264 to 39.28 acres), (2) grading about 149,500 cu.yds of balanced cut and fill over 70± acre area, (3) constructing a new 30-million-dollar, 3.8-acre, partially underground, 35-ft.-high, wastewater treatment plant on a 17-acre parcel with a paved access road, parking area, landscaping, and discharge of 3.6 to 4 mgd of tertiary treated effluent into lower Calera Creek, (4) realigning and excavating a new channel and floodplain for lower Calera Creek, including the creation of 8± acres of new wetlands, 4± acres of riparian forest, and 3± acres of coastal prairie and scrub habitat along the creek, (5) filling the old channelized creek the 7± acres of previously damaged and scattered wetlands on site, (6) removing exotic vegetation, (7) constructing a paved, 8-ft.-wide, 3,200-ft.-long public walkway/bikepath along the south side of creek, (8) installing 3 arched culverts in the creek as a bridge for future access to the Bottoms parcel on north side of restored creek, and (9) conducting 5-year monitoring program to measure success of the restored creek.

**REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)**

Page 2

Lot Area:	Existing Lot Size	Proposed Lot Size	APN	Ownership
Lot 1	36.890 acres	48.074 acres	018-150-050	Bottoms
Lot 2	79.264 acres	39.280 acres	018-150-070	Bottoms
Lot 3	5.000 acres	17.000 acres	018-051-050	City of Pacifica
Lot 4	<u>0.408</u> acres	<u>17.208</u> acres	018-150-040	City of Pacifica
total area	121.562 acres	121.562 acres		

Building coverage: 2.0 acres (new wastewater treatment plant, of which a 1-acre area is below ground).

Pavement coverage: 1.3 acres (parking, access road, & walkway/bikepath).

Landscape coverage: 1.8 acres (over and around the treatment plant).

Creek restoration: 15.0 acres (includes the restored creek, 8± acres of wetlands, 4± acres of riparian forest, and 3± acres of upland plants).

Unimproved coverage: 13.9 acres (primarily 5 acres east of Highway One and 8.92 acres west of the treatment plant).

Parking spaces: 20 uncovered parking spaces.

Ht. above finish grade: 35 feet (Sludge Building).

Non-Coastal Zoning: C-3X Service Commercial with a Hillside Preservation District (HPD) overlay zone.

Coastal Plan designation: Not Certified (Area of Deferred Certification)

DATE OF COMMISSION ACTION: November 14, 1995

COMMISSIONERS ON THE PREVAILING SIDE: Areias, Calcagno, Doo, Flemming, Hisserich, Vincent, Rynerson, Rick, Wright, Wolfsheimer, and Chairman Williams.

SUMMARY OF COMMISSION ACTION: The Commission approved the project with 14 special conditions.

LOCAL APPROVALS RECEIVED: City of Pacifica Special Use Permit (UP-761-95) and Project Variance (PV-370-95).

LOCAL APPROVALS NEEDED: City of Pacifica Site Development, Grading, and Minor Administrative Boundary Adjustment Permits.

OTHER APPROVALS RECEIVED: U.S. Army Corps of Engineers Nationwide 26 Permit.

OTHER APPROVALS NEEDED: California Regional Water Quality Control Board approval, California Department of Fish and Game 1601/1603 Streambed Alteration Agreement, California Department of Transportation Encroachment Permit.

SUBSTANTIVE FILE DOCUMENTS: City of Pacifica Local Coastal Program, Coastal Commission Restoration Order No. R09502.

---

## REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)

Page 3

### PROCEDURAL NOTE:

The Commission acted on this project at its November 14, 1995 public hearing in Los Angeles. The Commission's action differed from the written staff recommendation prepared prior to the hearing in that the Commission substituted a requirement that an open space deed restriction be established over an 8.76-acre upland hillside habitat area west of the proposed wastewater treatment plan for a requirement recommended in the staff report that an open space deed restriction be established over a 200-foot-wide, upland habitat area along both sides of the restored creek. Since the Commission's action differed from the written staff recommendation, the following revised findings have been prepared for the Commission's consideration as the needed findings to support its action. The Commission will hold a public hearing and vote on the revised findings at its December 13, 1995 meeting in San Francisco. The purpose of the hearing is to consider the adequacy of the revised findings in supporting the Commission's previous action rather than to reconsider the merits of the project or the appropriateness of the adopted conditions. Public testimony will be limited accordingly.

### STAFF RECOMMENDATION:

The staff recommends that the Commission adopt the revised findings in Section IV below in support of the Commission's action on November 14, 1995, approving the project with conditions. For reference, the adopted resolution of approval and special conditions precede the proposed revised findings.

#### I. Approval with Conditions.

The Commission hereby grants a permit, subject to the conditions below, for the proposed development on the grounds that the development will be in conformity with the provisions of Chapter 3 of the California Coastal Act of 1976, will not prejudice the ability of the local government having jurisdiction over the area to prepare a Local Coastal Program conforming to the provisions of Chapter 3 of the Coastal Act, is located between the sea and the first public road nearest the shoreline and is in conformance with the public access and recreation policies of Chapter 3 of the Coastal Act, and will not have any significant adverse impacts on the environment within the meaning of the California Environmental Quality Act.

#### II. Standard Conditions. See attached.

#### III. Special Conditions.

1. Capture Plan for the San Francisco Garter Snake. PRIOR TO ISSUANCE of the coastal development permit, the permittee shall submit for the review and approval of the Executive Director a plan approved by the U.S. Fish and Wildlife Service to capture any San Francisco Garter Snakes that may have entered into the project area and to protect them from harm during grading and

**REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)**

Page 4

construction operations of the project. The capture plan shall be implemented at least 60 days prior to the start of any grading or construction activity. The plan shall include the mowing of grasslands in strategic areas and/or the use of drift fencing, traps, and any other measures that meet the requirements of the U.S. Fish and Wildlife Service. The plan shall be implemented by the U.S. Fish and Wildlife Service or by a qualified individual(s) that have been approved by the U.S. Fish and Wildlife Service and the permittee.

2. Open Space Deed Restriction on the City-owned Parcel Containing the Restored Creek. PRIOR TO ISSUANCE of the coastal development permit, the landowner(s) shall execute and record a deed restriction, in a form and content acceptable to the Executive Director, over those portions of APN's 018-150-040, 018-150-050, and 018-150-070, as shown in Exhibit No. 6a. The open space restriction shall prohibit all development as defined in Section 30106 of the Coastal Act, including grading, the alteration of landforms, the removal of vegetation, or the erection of structures of any type within the area designated for open space area, except for:

- a. Implementation of the restoration plan for lower Calera Creek as approved under Coastal Development Permits No. 1-95-40 and 1-95-59, and including the construction of a paved walkway/bikepath along the south side of the creek, construction of a paved access road from Highway One to the wastewater treatment plant site, and installation of three arched culverts within the lower reaches of the creek as the base for an up to 75-foot-wide future road/bridge to the property on the north side of the creek, APN 018-150-050;
- b. Management, monitoring, and maintenance activities within the waters of the restored creek, or within the wetlands and riparian areas adjacent to the restored creek, so long as those activities are in accordance with a long-term management plan that has been approved by the Executive Director pursuant to Special Condition No. 7;
- c. Removal of any vegetation required by the California Department of Forestry and Fire Protection for fire safety that is consistent with an approved, long-term management plan by the Executive Director pursuant to Special Condition No. 7 or all other conditions of Permit No. 1-95-40;
- d. Archaeological investigations or excavations approved by the Coastal Commission or its successor agency; and
- e. Any public access or public recreation improvements that are approved by the Coastal Commission or its successor agency.

The deed restriction shall be recorded free and clear of all prior liens and encumbrances except tax liens, which the Executive Director determines to affect said interest, and shall run with the land binding the landowner, and his/her heirs, assignees, and successors in interest to the subject property.

**REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)**

Page 5

3. Written Consent by Mr. Bottoms. PRIOR TO ISSUANCE of the coastal development permit, the permittee shall submit for the review and approval of the Executive Director a copy of a signed acknowledgement from Mr. Bottoms which indicates that Mr. Bottoms, as landowner of a portion of the project site, has read, understands, and consents to all special conditions of permit approval which affect his property, including Special Condition No. 4 of the permit.

4. Deed Restriction on the Parcels Owned by Mr. Bottoms and the City of Pacifica. PRIOR TO ISSUANCE of the coastal development permit, the landowner shall execute and record for the review and approval of the Executive Director deed restrictions on those portions of APN 018-150-050 (City of Pacifica), APN 018-150-070 (Bottoms), and APN 018-150-050 (Bottoms) as shown in Exhibit No. 6a. The deed restriction shall establish: (a) 8.76-acre upland habitat area located along the westerly portion of APN 018-150-050 (City of Pacifica), (b) a surface water runoff and sedimentation control area over APN 018-150-050 (Bottoms) and 018-150-070 (Bottoms), and (c) restrictions governing the entirety of the area in (a) and (b).

(a). The deed restriction for the 8.76-acre upland habitat area located on the westerly portion of APN 018-051-050 (City of Pacifica), shall prohibit all development as defined in Section 30106 of the Coastal Act, including grading, the alteration of landforms, the removal of vegetation, or the erection of structures of any type within the area, except for:

- (1) any restoration and grading activity approved by the Coastal Commission under Permits No. 1-95-40 or No. 1-95-59,
- (2) a reclamation plan for the balance of the quarry area approved by the Coastal Commission,
- (3) the installation of underground utilities,
- (4) archaeological investigations or excavations approved by the Coastal Commission or its successor agency; and
- (5) any public access or public recreation improvements that are approved by the Coastal Commission or its successor agency.

(b). The deed restriction for the surface water runoff and sedimentation control area on APN 018-150-050 (Bottoms) and APN 018-150-070 (Bottoms) shall restrict all development such that surface water runoff on the subject parcels:

- (1) will be directed toward, and contribute to, the base flow of the creek,
- (2) will not result in a rate of runoff that exceeds the carrying capacity of the restored creek,

**REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)**

Page 6

(3) will not result in an increase in the rate of existing runoff as a result of a ten-year, six hour rainstorm, and

(4) will not result in any degradation of the quality of the existing surface water runoff.

(c)(1) The deed restriction for the entirety of the restricted area in (a) and (b) above shall prohibit the discharge of surface water runoff directly into the riparian and wetlands along the creek or into the surface waters of the creek. Instead, the use of sediment traps, grassy swales, detention and/or retention basins shall be used on the subject parcels to clean surface water runoff and to slowly recharge local groundwater supplies that contribute to the base flow of the creek.

(c)(2). The deed restriction for the entirety of the restricted area in (a) and (b) above shall prohibit all grading, reclamation activity, or other development as defined in Section 30106 of the Coastal Act which would result in, or contribute to geologic instability, soil erosion, or sedimentation in the riparian and wetlands along the creek or in the surface waters of the creek.

The document shall be recorded free and clear of prior liens and encumbrances, which the Executive Director determines to affect said interest, and shall run with the land binding all successors and assigns in interest to the subject property.

5. Final Erosion Control/Grading, Landscaping, Creek Restoration, and Building Plans. PRIOR TO ISSUANCE of the coastal development permit, the permittee shall submit for the review and approval of the Executive Director, a copy of a final erosion control/grading plan, landscaping plan, and selected building plans for the project consistent with the corresponding provisions below. The Development shall occur consistent with the final approved plans.

a. Final Erosion Control/Grading Plan. The final erosion control/grading plan shall be prepared by a licensed civil or professional engineer, or by a licensed landscape architect. The plan shall be designed to assure that there will be no increase in the peak rate of surface water runoff from the site during or after construction of the project as a result of a ten-year, six-hour rainstorm. The plan shall include specific measures to control surface water runoff, soil erosion, sedimentation, and the activation of dormant slides. The plan shall show the location, size, and maintenance requirements of all permanent and temporary sedimentation basins, ditches, berms, water diversions, silt fences, mulches, and ground covers. The plan shall show the location of the contractor's yard to park cars and equipment and to stockpile construction materials. The plan shall identify the final disposal site for any debris which will be removed from the site. All erosion control measures shall be in place and fully functional prior to any grading or construction activity taking place during the rainy season.

**REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)**

Page 7

b. Final Landscaping Plan. The landscaping plan for the wastewater treatment plant site shall be prepared by a licensed landscape architect, nurseryperson, or plant ecologist. The 1± acre landscaped area over the roof of the SBR/Equalization Tank portion of the treatment plant shall be planted with a low-maintenance, coastal prairie species that will result in a coastal plant community that is similar to native plant community on the south facing slopes of Mori Point. The landscaped area on the berm on the south side of the treatment plant shall be planted with trees that are native to the San Mateo coastal riparian community and are not less than 6 feet in height at the time of planting. The landscaping on the berm and around the treatment plant shall be sited and designed to soften, and ultimately screen, the treatment plant from public view within 10 years of planting. The plan shall show the location of designated parking area(s) for employees and visitors at the wastewater treatment plant and the location of designated parking for users of the public walkway/bicycle path. The plan shall show the location of all permanent fences or gates within the project area, and shall describe their appearance and purpose. The plan shall be integrated with the final plan for restoration of the creek area where the two plans have a common boundary. The plan shall include: (1) a plan showing the location of each plant, or mixture of plants, to be planted, (2) a plant identification list using both latin and common names, and (3) a narrative description indicating the planting specifications and maintenance techniques to be followed (i.e. the size, total number, and density of each species to be planted, the size and depth of the holes to be dug, any special actions to prepare the soil for planting such as discing, soil amendments to be added, tree staking, wind or shade screening measures, the planting schedule, fertilizing schedule, irrigation method and schedule, the type and location of surface mulches, hydroseeded areas, the method to remove exotic vegetation or weeds, etc.). The planting and maintenance program shall be designed to maximize the chances of survival of the vegetation to be planted. Any planted vegetation that is intended to be permanent that dies shall be replaced at a one-to-one or greater ratio for the life of the project.

c. Final Creek Restoration Plan. The final creek restoration plan shall include any revised schedules or revised planting plans or specifications to bring the level of design from 75 percent to 100 percent of completion, including: (1) any revisions to the sequence of planting, salvage of native plant materials, and water delivery, (2) identification of the selected nurseries for plant procurement, (3) any redesign of the wetlands over the archaeological site after consultation with tribal elders of the Ohlone tribe, and (4) design coordination with the City and any other consultants regarding the final grading/erosion control plans for the entire project and the landscaping plan around the wastewater treatment plant.

The final creek restoration plan shall also include: (1) a plan showing the location of each plant, or mixture of plants, to be planted, 2b) a plant identification list using both latin and common names, and (3) a narrative

## REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)

Page 8

description indicating the planting specifications and maintenance techniques to be followed (i.e. the size, total number, and density of each species to be planted, the size and depth of the holes to be dug, any special actions to prepare the soil for planting such as discing, soil amendments to be added, tree staking, wind or shade screening measures, the planting schedule, fertilizing schedule, irrigation method and schedule, the type and location of mulches, hyrdoseeded areas, the method to remove exotic vegetation or weeds, etc.). The planting program shall be designed to maximize the chances of survival of the vegetation to be planted. Any planted vegetation that dies shall be replaced at a one-to-one or greater ratio for the life of the project.

d. Final Building Plans. The final building plans for the wastewater treatment plant shall include: (1) building elevations that show that the exterior surface and roof areas of the treatment plant will be colored in a neutral gray and/or brown tone which blends well visually with the character of the surrounding landscape, and (2) foundation and retaining wall plans that are consistent with the recommendations of the final geotechnical report that was prepared for the project by Rogers/Pacific, Inc.

6. Revised Monitoring Plan for Creek Restoration. PRIOR TO ISSUANCE of the coastal development permit, the permittee shall submit for the review and approval of the Executive Director, a copy of a revised monitoring plan for the restoration of lower Calera Creek. Monitoring shall occur consistent with the approved plan. The monitoring plan shall be revised to include the following provisions:

- a. The revised plan shall provide specific details on what data will be collected, from where, and how that data will be used to evaluate the success of the project.
- b. The revised plan shall have an integrated statement of its stated goals, objectives, and success standards. The goals, objectives, and success standards shall be designed to accomplish the goals stated in the objectives and approach for each of the four wetland functions to be monitored as prepared by L.C. Lee and Associates in a document entitled: "Report to the City of Pacifica on the 75% Design for Restoring Lower Calera Creek and Adjacent Wetlands Pacifica Wastewater Treatment Plant Project," dated March 6, 1995. There shall be one stated goal to address each of the four major wetland functions identified in the proposed plan (i.e. hydrology, water quality, plant community, and habitat/faunal community). Each of the four goals of the creek restoration effort shall be supported by one or more clearly stated objectives. Each objective shall be supported by one or more clearly stated success standards. Each success standard shall be supported by clearly measureable and quantifiable data that has a rational basis for being used in the success standards.



**REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)**

Page 9

- c. The revised plan shall include a specific reporting schedule during and after the restoration of the creek. During restoration of the creek, the schedule shall specify that a monitoring report will be prepared following the completion of each of the major steps in the creek restoration process and that the report shall be submitted to the Executive Director within 30 days of completion of the step. The schedule shall also specify the annual dates(s) by which annual monitoring reports will be prepared and submitted to the Executive Director for the five or more years following the final step of the creek restoration.
- d. The revised plan shall require that after the final step of physically implementing the creek restoration, the four major wetland functions of the restored creek shall be monitored at least annually by a qualified biologist or botanist for a period of five years, or until the Executive Director determines in writing that the four goals of the creek restoration effort have been achieved, whichever occurs last.
- e. The revised plan shall require that a biologist or botanist shall submit an annual monitoring report to the Executive Director on the status of the creek restoration project. A copy of the annual report(s) shall also be sent to a designated person at the City of Pacifica, the California Department of Fish and Game, and the U.S. Fish and Wildlife Service, and shall include a cover letter asking for comments on the report. Any comments on the report shall be forwarded in writing to the Executive Director within 30 days of receipt of the report by the commenting party.
- f. The revised plan shall include provisions for the reporting of any condition or activity that is detrimental to achieving the success standards for the creek restoration. Upon immediate discovery, the permittee or the preparer of the monitoring report, shall report any activity or condition which is detrimental to achieving the success standards for restoration of the creek, such as the establishment of exotic species, the presence of certain diseases, predation by feral animals, acts of vandalism, etc. The report shall include proposed actions to remediate the detrimental activity or conditions.
- g. The revised plan shall be in substantial conformance with the plan submitted by L.C. Lee and Associates in a document entitled: "Report to the City of Pacifica on the 75% Design for Restoring Lower Calera Creek and Adjacent Wetlands Pacifica Wastewater Treatment Plant Project," dated March 6, 1995 and per an August 3, 1995, addendum to the original document.

## **REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)**

Page 10

The landowner shall be fully responsible for any failure to meet the success standards of the revised monitoring plan. Upon a determination by the Executive Director after review of the required monitoring reports that the success standards have not been achieved, the permittee (or its successor and assigns in interest to the subject property) shall submit a corrective action plan prepared by a qualified biologist or botanist for the review and approval of the Executive Director that prescribes remedial measures that can reasonably be expected to achieve the success standards of permit. The corrective action plan shall also prescribe a new monitoring and remediation program to ensure the success of the remediation measures in achieving the success standards. Upon approval of the corrective action plan by the Executive Director, the permittee shall apply to the Commission for any necessary amendment to this permit to implement the corrective actions and shall immediately implement the plan after any necessary approvals have been obtained. If the permittee does not agree that remediation is necessary or objects to any conditions imposed by the Executive Director for approval of the corrective action plan, the matter may be set for hearing and disposition by the Commission.

7. Design and Implementation of a Long-term Management and Maintenance Plan for the Restored Creek. Within one year after the issuance of the coastal development permit, the permittee shall: (a) prepare a long-term management and maintenance plan with advice from the staff of the Coastal Commission, the California Department of Fish and Game, and the U.S. Fish and Wildlife Service, and (b) submit that plan to the Coastal Commission for their review and approval. The plan must be designed to ensure that the goals of the monitoring plan will continue to be met after the restoration project has been successfully accomplished. The issues to be addressed in the long-term maintenance plan shall include, but are not limited to, fire suppression, prescribed burning, plant succession, habitat enhancement, diversion of treated wastewater, and degree and extent of public access/use.

After the plan has been approved by the Coastal Commission, any additional proposed changes to the plan shall be submitted to the Executive Director for his review. The Executive Director shall determine whether the proposed change is a material or immaterial change to the plan. Immaterial changes may be approved in writing by the Executive Director. Material changes shall be subject to the review and approval of the Coastal Commission.

8. Site Development, Grading, and Minor Boundary Line Adjustment Permits. PRIOR TO ISSUANCE of the coastal development permit, the permittee shall submit a copy of an approved site development permit, grading permit, and an administrative minor boundary line adjustment permit from the City of Pacifica.

9. California Department of Fish and Game Streambed Alteration Agreement. PRIOR TO ISSUANCE of the coastal development permit, the permittee shall submit to the Executive Director a copy of an approved 1601/1603 Streambed Alteration Agreement from the California Department of Fish and Game.

REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)

Page 11

10. Final Geotechnical Report. PRIOR TO ISSUANCE of the coastal development permit, the permittee shall submit for the review and approval of the Executive Director, project plans signed by the geologic consultant indicating that all geotechnical recommendations contained by the draft final geotechnical investigation of the site by Rogers/Pacific, Inc. Professional Engineering Consultants, as updated by the final geotechnical report, have been incorporated into the design and construction plans for the project.

The final plans approved by the geologic consultant shall be in substantial conformance with the plans approved by the Commission. All development shall occur consistent with the approved plans. The applicant shall report any proposed changes in the plans approved by the Commission to the Executive Director. Any changes in the plans approved by the Commission which the Executive Director determines to be substantial shall require an amendment to this permit.

11. California Department of Transportation Encroachment Permit. PRIOR TO COMMENCEMENT OF DEVELOPMENT, the permittee shall submit a copy of an approved encroachment permit from the California Department of Transportation for any grading, access improvements, and/or installation of underground utilities within the Highway One right of way.

12. Protection of Archaeological Resources. PRIOR TO ANY GRADING ACTIVITY OR THE REMOVAL OF ANY DEBRIS WITHIN THE PROJECT'S KNOWN ARCHAEOLOGICAL SITE, the permittee shall enter into a monitoring agreement with a qualified archaeologist. The permittee shall submit a copy of that agreement to the Executive Director for the permit file. The agreement shall provide that the archaeologist shall be on site to monitor any grading activity and the removal of any debris within the project's known archaeological site. Should archaeological resources be discovered within the project's known archaeological site, or elsewhere within the project area during construction authorized by this permit, then all work that could damage or destroy these resources shall be immediately suspended. The permittee shall then have the archaeologist: (a) inspect the site where the archaeological materials were found, (b) determine the nature and significance of the archaeological materials, and if they deem it necessary, (c) develop appropriate mitigation measures using standards of the State Historic Preservation Office and prepared in consultation with tribal elders of the Ohlone tribe.

Should the archaeologist determine that mitigation measures are necessary, the permittee shall apply to the Commission for an amendment to Permit No. 1-95-40, requesting that the permit be amended to include the mitigation plan proposed by the archaeologist. The mitigation plan shall provide for monitoring, evaluation, and protection of archaeological resources on the site, and shall define specific mitigation measures. Should the archaeologist determine that no mitigation measures are necessary, then work on the project may be resumed.

13. Diversion of Treated Wastewater. To maintain the habitat functions and resource values of the wetlands and riparian lands along lower Calera Creek,

## REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)

Page 12

no more than two-thirds of the treated wastewater may be diverted from the creek and used for other beneficial uses.

14. Pedestrian Barrier Between Creek and Public Walkway/Bikepath. To discourage users of the public walkway/bikepath and domestic animals from entering upon the environmentally sensitive habitat areas along the restored creek, a relatively impenetrable barrier of thickly planted willows (*Salix* species) and Blackberry Bramble (*Rubus* species) shall be planted along the creek side of the walkway/bikepath where the planting plan as designed by L.C. Lee and Associates for the restoration of lower Calera Creek shows either a "Palustrine Scrub-Shrub I Riparian Corridor" or a "Palustrine Forest I Riparian Corridor". Otherwise, the barrier shall consist of a 3 to 4-foot-high split rail fence where the planting plan shows either a "Palustrine Emergent I Pickleweed Zone" or a "Palustrine Emergent II Coastal Meadow" located along one or both sides of the walkway/bikepath.

### IV. Findings and Declarations.

The Commission hereby finds and declares the following:

#### 1. Project Location and General Description.

The project site is located within a 117± acre abandoned rock quarry that contains the lower reaches of Calera Creek. The project site is located west of Highway One and is bordered by Mori Point ridge to the north, by San Marlo Way and the Rockaway Beach area to the south, by an old railroad fill bank and Highway One to the east, and by the Pacific Ocean to the west. See locational Exhibits No. 1, 2, and 3.

The project is an integral part of a yet-to-be completed reclamation plan for the entire quarry area. The heart of the proposed project calls for: (1) the construction of a new 30-million dollar, wastewater treatment plant on a 12-acre site located in the northeast corner of the the quarry area with discharge of treated wastewater into lower Calera Creek, and (2) the realignment and restoration of lower Calera Creek within a 16.8-acre area where the restored creek flows along the base of the Mori Point hillside to the coast.

The proposed wastewater treatment plant will be the principal plant for treating the city's wastewater. Access to the site will be via a new road connecting with the Highway One and Renia del Mar intersection. Parking for the facility, including employees and service vehicles, will be provided within the central paved area that is shown in Exhibit No. 10.

The restoration of lower Calera Creek will create a new creek channel, floodplain, wetlands, and riparian lands by excavating the overburden deposits within the previously quarried area. The restoration of the creek will move the existing creek alignment north towards the base of the south facing slopes and fill in that portion of the existing creek which is located within a channelized ditch. The realigned and restored creek will be used as a

## REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)

Page 13

discharge area for up to 3.6 million gallons per day (mgd) average dry weather flow of tertiary effluent from the treatment plant. With the addition of treated wastewater from the SBR, moderate flows of the creek will average 4.8 cubic feet per second (cfs) annually, while high flows will average 33.64 cfs.

The major overall goal of the project is to maximize the environmental, economic, and social benefits of reclaimed wastewater and to minimize the cost of those benefits. The benefits include the use of reclaimed wastewater for use in a restored creek and its adjacent wetlands. Another benefit is the improvement in the near-shore waters of the ocean environment by no longer discharging less-than-tertiary-treated wastewater into the ocean. Lastly, public access to cleaner ocean water and a proposed walkway/bikepath along the restored creek serves to enhance recreational use of those areas.

The primary goal of the restoration of Calera Creek is to improve four wetland ecosystem functions including hydrology, water quality, plant community maintenance and habitat/faunal support systems of the wetlands in lower Calera Creek. The end objective of the creek restoration is to establish a fully functional, site-adapted, and self-maintaining mosaic of forest, scrub-shrub, and emergent wetland vegetation which supports a compositionally and structurally complex ecosystem with important attributes to wildlife.

The nearest homes to the proposed treatment plant are located about 750 feet east of the plant near the Reina Del Mar and Highway One intersection in the Vallemar Neighborhood that is east of Highway One. The next nearest homes are located about 1500 feet north of the proposed treatment plant on the north facing slopes of the Mori Point ridge and west of Highway One.

The City would like to award the construction contract for the treatment plant in February of 1996 and begin the rough grading for the treatment plant in early March of 1996. Grading for the remainder of the project will begin in April of 1996. The City estimates that the wastewater treatment plant will take about 18 to 24 months to build. The service life of the plant is 40 years.

### 3. Site Description and History.

Although the rock quarry operation closed in the 1980's, it was one of the longest running quarry operations within the State of California as it was established in the late 1700's and had been in operation for over 200 years. Over the years, debris from the quarry operation and debris from the construction of Highway One was used to fill the historic floodplain of lower Calera Creek. Drill borings from the geotechnical investigation indicate that the fill is up to 33 feet deep on the slope in the western portion of the quarry property. However, the fill is only about 5 to 10 feet deep along the centerline of the proposed creek restoration area. The original alluvial valley bottom of Calera Creek, had a range in elevation from five feet near the beach to about 60 feet where the creek emerges from a pipe under the old Ocean Shore railroad right of way which is located on the west side of Highway One. The valley trends from northeast to southwest and becomes increasingly

## REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)

Page 14

perturbed near the rock quarry on the western edge of the valley. Slope gradients in the valley floor are between 5% and 10%. The original valley floor cannot be seen adjacent to the quarry, although the general topography of most of the valley floor is still recognizable under two to ten feet of fill. The lower Calera Creek valley was primarily floodplain and low terrace before filling and stream channelization. A copy of an 1853 map is shown in Exhibit No. 4. The map shows the location of the lower Calera Creek Valley and the topography of the area before the construction of Highway One. The shaded area on the map shows the proposed location for the realigned and restored creek. The creek will run along the northerly side of the valley bottom at the base of the south facing slopes of Mori Point ridge.

Calera Creek is an stream that drains a basin of approximately 1,048 acres (1.64 square miles) and discharges into the Pacific Ocean north of Rockaway Beach. Calera Creek is a third to fourth order stream set in a valley characterized by steep coastal hills, transitional footslopes, alluvial terraces and valleys, marine terraces, mudflats, dunes, and ocean beaches. The wetland restoration will occur on a site that has been degraded by quarrying and agricultural activities for over 150 years. Historically, the site supported a natural stream course with riparian vegetation.

Calera Creek is an intermittent, seasonal, or ephemeral stream that goes dry between June and November. The average annual flow of Calera Creek at the project site is 2.33 cubic feet per second (cfs), with a projected two-year peak flow of 200 cfs, and a 100-year peak flow of 463 cfs. The size of the channel and floodplain for the restored creek is based on the 100-year peak flow. The average winter flow in Calera Creek is about 50 to 60 cfs. With average wet weather flow added to this, the wastewater component would be about 10% of the total flow.

During field observations in mid-summer, a very low flow (less than 1 cfs) was noted east of the Highway One culvert, no flow was observed within central portions of the alluvial valley, and very low flows were seen near the creek's outlet to the Pacific Ocean. The lower reach of Calera Creek can occasionally be affected by storm activity, and the creek is impacted by the deposition and/or removal of material at its mouth during high tide events. The creek flows in a relatively "natural" channel for its first 100 feet after emerging from a pipe on the west side of Highway One. This first 100 feet of the creek has a relatively undisturbed riparian forest area on both sides of the creek which got established in the 1960's. This riparian area will be saved and it has been integrated into the creek restoration project. The remaining 2,500± feet of the creek below this area, however, has been straightened as a channelized ditch.

The quarry property has about 7± acres of scattered wetlands which are also seasonal in nature. By most any standard, almost all of the wetlands on the site are in a degraded condition. See California Coastal Conservancy and California Department of Fish and Game comment letters in Exhibits No. 12 and 13. In short, only a major restoration project can restore the habitat values and functional capacity of the lower portion of Calera Creek.

## REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)

Page 15

The quarry property is an undeveloped, open, and severely degraded landscape. Significant portions of the site have no vegetation at all. Those areas that are vegetated tend to be dominated by weedy and invasive plants, particularly fennel. The upland and wetland plant communities of lower Calera Creek are presently dominated by non-native weedy species. Native species are primarily limited to riparian habitats associated with the main channel of Calera Creek. Dominance of non-native species is the result of past quarry operations and fill from the construction of Highway One and other local roads. At one time, the site was used for a horse corral and rodeo grandstand.

Upland plant communities are dominated by a mix of native and non-native shrubs, grasses and herbs. Shrub communities are composed primarily of isolated clumps of Coyote Bush (*Baccharis pillularis*) and California Sagebrush (*Artemisia californica*), while Fennel (*Foeniculum vulgare*), Ox-tongue (*Picris echinoides*) and several species of Thistle (*Carduus pycnocephalus*, *Centaurea solstitialis*, *C. calcitrapa*, *Cirsium vulgare*, *Silybum marianum*) dominate most upland areas. Upland grasses include Wild Oats (*Avena fatua*), Soft Chess (*Bromus mollis*), Ryegrass (*Lolium multiflorum*), and Pampas Grass (*Cortaderia jubata*).

Creekside or "riparian" vegetation is dominated by a mix of native and introduced plant species. Woody riparian vegetation within portions of lower Calera Creek include: Coyote Bush (*Baccharis pillularis*), Arroyo Willow (*Salix lasiolepis*), and other species indigenous to the area. Other native species include Giant Horsetail (*Equisetum telmateia* var. *braunii*), Panciled Bulrush (*Scirpus microcarpus*), Bog Rush (*Juncus effusus* var. *brunneus*), and California Nettle (*Urtica californica*). Emergent vegetation within the stream channel also includes Cattail (*Typha latifolia*), Watercress (*Rorippa nasturtium-aquaticum*), Pacific Oenanthe (*Oenanthe sarmentosa*), and American Brookline (*Veronica americana*). However, most of the riparian zone is typically dominated by non-native weedy species, including Poison Hemlock (*Conium maculatum*), Pampus Grass (*Cortaderia jubata*), Fennel (*Foeniculum vulgare*), Rabbit's Foot Grass (*Polypogon monspeliensis*), Ox-tongue (*Picris echinoides*), German Ivy (*Senecio milkanoides*), and Curly Dock (*Rumex crispus*).

The wastewater treatment plant site is located in the northeast corner of the quarry area at the base of the south facing slopes of the Mori Point ridge. The site is open, grassy, and vacant. The site slopes upward from south to north at an average 18 percent grade. The site is covered with a variety of imported and native low lying grasses and shrubs. Project grading will largely clear the 3.8-acre site of vegetation and create an excavated pad for the plant at about the 80 foot elevation and below the existing grade. The grading will also create a 10-foot-high berm at the southeast corner of the treatment plant site and a rounded berm near the southwest corner of the SBR area. The treatment plant includes a combination of flat and pitched roofs. The surface elevations include textured concrete, concrete block, and corrugated zinc or cement building materials.

Lastly, the property has an archaeological site that is about one-quarter of an acre in size and located on the north and east sides of the access road that goes from Highway One to the proposed wastewater treatment plant.

## REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)

Page 16

### 3. Planning and Permitting Background.

The City of Pacifica currently is under a Cease and Desist Order from the Regional Water Quality Control Board to abate water quality violations caused by overloading the existing wastewater treatment plant. The City discharges effluent to the Pacific Ocean through an outfall line located at the Santa Rosa Pier. Existing wastewater facilities for the incorporated City of Pacifica have experienced many design and operational problems over the last 20 years. In 1981, the State District Court forced the City to make improvements to bring the treatment plant into compliance and to evaluate the plant's actual capacity. The plant is incapable of treating peak flows. Even during normal flows, projected growth in the City of Pacifica cannot be accommodated by the City's current wastewater treatment facilities.

The Regional Water Quality Control Board issued Cease and Desist Order No. 93-112 to the City of Pacifica for violations of the existing NPDES permit and for a deficient ocean outfall. In that order, the Board found that the City's existing wastewater treatment plan has practically no redundancy or backup system, and is therefore extremely unreliable in responding to critical conditions, such as wet weather flows or process unit repairs, without causing violations of effluent limitations. In addition, much of the plant's existing equipment has fallen into a state of disrepair. The Board also found that the discharge outfall has extensive cracks, due to the selection of inappropriate materials for its construction, and that the diffusers often plug with sand in the winter, making the outfall system inoperable. Preliminary findings suggest that expansion of the existing plant and repair of the outfall would be difficult and may not be economically feasible.

The existing wastewater treatment plant is located at Beach Boulevard and the existing outfall line is located by the Santa Rosa Pier. See Exhibit No. 2. The existing treatment plant will largely be deactivated, except for headworks, screening, odor control equipment, a raw sewage pump station, a laboratory, council chambers, maintenance shops, and employee/yard facilities.

In October of 1993, the California Coastal Conservancy granted \$60,000 to the City of Pacifica in an effort to develop a design that would restore historic conditions (i.e. native wetland and upland vegetation) to the lower Calera Creek Valley. In approving funds, the Coastal Conservancy noted that freshwater riparian wetlands are considered to be among the most threatened habitat type on the California coast. The City contracted with L.C. Lee and Associates in Seattle to develop a design for restoring "historic riparian wetlands using low-nutrient, tertiary-treated wastewater" from the expanded municipal treatment plant.

A Notice of Preparation (NOP) for the project's EIR was published in February of 1993. The Draft EIR was completed and sent to the State Clearinghouse for agency comment in March of 1994. A public hearing on the draft EIR was held in April of 1994 and the comment period also closed in April of 1994. The final EIR was completed and mailed to the State Clearinghouse in May of 1994. On June 29, 1994, the City Council certified the Final EIR at a public hearing and adopted a mitigation and monitoring program for the project.



## REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)

Page 17

The City has approved a special use permit and a variance for the wastewater treatment plant at the proposed site. However, the City still needs to approve a final site development permit, grading permit, and a minor administrative boundary adjustment permit for the project.

The project has support from the Coastal Conservancy, the California Department of Fish and Game, the State Water Quality Control Board, and the U.S. Fish and Wildlife Service. The project has received approval from the Corps of Engineers.

The City has approved a number of reclamation plans for the 117-acre quarry site. The most recent reclamation plan was approved by the City in November of 1992. The three-year permit expires in November of 1995. The overall reclamation plan has never submitted to the Coastal Commission for its review and approval, although portions of the plan have been reviewed by the Commission for some minor grading activity and the removal of several small buildings.

The City has reached an agreement with Mr. Bottoms, the owner of the quarry property, for the purchase of the 12-acre site for the wastewater treatment plant for 4.5 million dollars. The agreement also provides that Mr. Bottoms will donate to the City a 17± acre property for the restored creek. Mr. Bottoms has also given permission to the City to temporarily stockpile earth materials, and ultimately grade, portions of his property so that the creek and its local watershed area can be restored.

#### 4. Detailed Project Description.

##### a. Boundary Line Adjustment.

The first part of the project calls for a boundary line adjustment between two parcels owned by Mr. Bottoms and two parcels owned by the City. The ownership and the size of the parcels before and after the boundary line adjustment are illustrated in Exhibit No. 5 and are noted below:

	Existing Lot Size	Proposed Lot Size	APN	Ownership
Lot area:	Lot 1 36.890 acres	48.074 acres	018-150-050	Bottoms
	Lot 2 79.264 acres	39.280 acres	018-150-070	Bottoms
	Lot 3 5.000 acres	17.000 acres	018-051-050	City of Pacifica
	Lot 4 0.408 acres	17.208 acres	018-150-040	City of Pacifica
	total area 121.562 acres	121.562 acres		

The wastewater treatment plant will be located on lot 3. The realigned and restored creek will be located on lot 4. Pursuant to written agreements with Mr. Bottoms, the City would purchase 12 acres for 4.5 million dollars from Mr. Bottoms to expand the size of lot 3 from 5 acres to 17 acres. (The 12-acre area of lot 3 is located on the west side of Highway One, while the 5 remaining acres of lot 3 are located on the east side of Highway One.) In addition, a 16.8-acre area would be donated by Mr. Bottoms to the City to expand lot 4 from 0.408 acres to 17.02 acres.

## REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)

Page 18

### b. Rough Grading.

The next part of the project involves the rough grading of a 70± acre area to realign and restore lower Calera Creek and to create a level building pad for the new wastewater treatment. The rough grading involves 15± acres of cut, 55± acres of fill, and 149,500± cubic yards of balanced cut and fill.

Construction of the wastewater treatment plant requires 40,000 cubic yards of cut over a 3± acre area. The south end of the building pad will be more or less at existing grade (i.e. the 80 foot contour). However, the north end of the building pad requires a cut between 27 and 34 feet in height. The cut for the treatment plant is designed to recess the plant into the ground and hide most of it from public view.

Restoration of the creek requires 109,500± cubic yards of cut over a 12± acre area. The cut for the creek restoration is necessary to remove the debris overburden in a portion of the valley floor to re-establish a new channel and floodplain for realigned creek that is designed to accommodate a 100-year flood. The cut material from the creek area will be placed in a long temporary stockpile, about 10 feet high, on the south side of the restored creek. Together, the 149,500 cubic yards of cut will be used to fill and regrade a 55-acre area, most of which is located over the 39± acres of lot 2.

The final grading activity will result in the filling most of the site's widely scattered and degraded wetlands. It is intended that the final grading activity will not take place until all of the existing wetland plants within the 70± acre area which would be lost by the cutting, filling, and regrading activity, have been salvaged for reuse along the restored creek, and until the new plantings along the restored creek are well on their way to becoming successfully established. Once this has occurred, then water from the existing creek can be diverted into the restored creek with less fear of washing out the new plantings and the old creek can be filled in. Thus, there could easily be a two or three year period between the time of the initial rough and the final grading activity on lands located outside of the creek restoration area.

### c. Construction of the Wastewater Treatment Plant.

The next step in the project is to begin construction of a new 30-million-dollar, waste water treatment plant on the 12-acre area to be purchased by the City from Mr. Bottoms. The City would like to start the rough grading for construction of the treatment plant in February of 1996. The treatment plant requires a 3.8-acre area to site it. The project requires deep excavations, ground water control, and a well landscaped retaining wall. The treatment plant will have a hydraulic capacity of up to 20 mgd to adequately treat peak weather wet flows, with a total of 4 SBR tanks. Each SBR tank will have a capacity of 1.6 million gallons.

The wastewater treatment plant includes grit removal, secondary treatment with Sequencing Batch Reactors (SBRs), tertiary filtration, disinfection, and

## REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)

Page 19

standby generation. The SBRs and equalization tank will be buried below grade, covered with earth, and planted with a prairie plant community that is similar to the existing plant community that is growing on the south facing slopes of Mori Point ridge.

Solids handling includes RAS thickening, digestion and centrifuge dewatering. Biosolids will be trucked from the site. Chemical odor scrubbers will scrub the air from the headworks, SBR's equalization, sludge storage, dewatering, and thickening facilities and digesters (if aerobic). The treatment plant will include offices and operator facilities, laboratory, maintenance building, generator room, electrical room and a solids handling building.

The treatment plant will also include offices, labs, maintenance and parking areas. The treatment plant facility, including new roadways and parking areas around the plant, will occupy approximately 3.5 acres (29%) of the 12-acre site. The remaining 8.52 acres of the 12-acre site will be left open and planted with native plant materials.

The plant will discharge 3.6 to 4 million gallons per day of average dry weather flow of tertiary treated effluent into lower Calera Creek. The volume of this discharge will constitute between 10 to 50 percent of the waters in the restored creek during the winter rainy season, which typically runs from the beginning of November through the end of May. During the dry summer and early fall months, from the beginning of June to end of October, the effluent discharge from the plant will constitute 100 percent of the flow the creek. During the dry season, the City estimates that about one-third of the water in the creek will be used directly by the wetland and riparian vegetation that is growing along the restored creek. About 1 to 2 percent of the effluent discharge of the plant (about 50 gallons per minute) will be used to provide a continuous water supply to the reconstructed ponds and habitat for the endangered San Francisco Garter Snake and its prey species. Reconstruction of the ponds and habitat area will be reviewed by the Commission under Permit Application No. 1-95-59. A 20-yard capacity truck will be used to remove the sludge from the plant and take it to the landfill at the Ox Mountain site in Half Moon Bay.

The area in front of the treatment plant will be landscaped. Construction of the treatment plant also includes construction of a paved access road from Highway One to the treatment plant, construction of a unpaved access way and underground water pipeline from the west side of the treatment plant site to re-create two ponds for the endangered San Francisco Garter Snake (SFGS) and Red-legged Frog (RLF) on the north side of the creek. Again, construction of the ponds will be separately reviewed by the Commission under Permit Application No. 1-95-59.

Once the plant is completed, it will be further screened from public view by a berm that is about 10 feet high along its north side that faces the treatment plant and about 20 feet high along its south and downsloping side that faces away from the treatment plant. The berm will be planted with trees to further screen the plant from public view. The westerly half of the plant, a 1.1-acre

## REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)

Page 20

area containing the SBR and equalization tanks, will be completely underground, and covered with a concrete roof and topsoil. This portion of the plant will be re-landscaped with a native coastal prairie plant community that is similar to the native plants on the hillside.

The wastewater will be disinfected by ultraviolet light. This type of disinfection presents no hazard to the public or operators. The back-up system will be sodium hypochlorite (bleach) stored in a contained 6,000 gallon tank. Sodium hypochlorite is a much less hazardous form of chlorine than is the chlorine gas that is currently used at the existing treatment plant.

The wastewater treatment plant is being designed to produce an effluent meeting all permit requirements over the full range of flow conditions, including peak flows where the treatment cycle in the SBR would be reduced to as little as three hours. The effluent will be treated to a level to meet Title 22 requirements for unrestricted reuse. The effluent, after flowing through the wetlands, will discharge naturally into the channel of the restored creek and then flow west towards the north end of Rockaway Beach, and finally discharge across the beach and into the ocean. The treated effluent will be indistinguishable from normal stream flow in terms of taste, odor, and nutrient content.

The highest and most visible portion of the plant will be the 35-foot-high, odor and sludge control/handling building. See Exhibits No. 10 and 11. This building would be the only portion of the treatment plant that will be visible from the upper Vallemar neighborhood on the east side of Highway One and from northbound and downhill traffic on Highway One where the traffic is between 3,000 to 4,800 feet south of the plant. To further screen this building from public view, the City proposes to plant several types of fast-growing trees native to the San Mateo coastal riparian community, such as willows, California sycamore, alder and big leaf maple, on the berm that is on the south side of the treatment plant. These trees are tolerant of summer watering and would grow tall enough to eventually screen this building from public view with a dense canopy of leaves and branches.

### d. Access Improvements.

In addition to vehicular access to the new wastewater treatment plant, the project's access other improvements include: (1) the construction of a paved, 8-foot-wide, 3,200± foot-long, public walkway/bikepath along the south side of the creek, and (2) the installation of three 11.5-foot-wide and 7.3-foot-high arched culverts into the lower reaches of the creek (i.e. zone 4 of the plantings). The arched culverts will serve as a base for a future road to access the Bottoms parcel located on the north side of the realigned creek, APN 018-150-050. The size and location of the three arched culverts are designed for the 100 year flood of the restored creek. The future road to access the parcel on the north side of the creek will be located within a 75-foot-wide easement area.

## REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)

Page 21

### e. Realign and Restore Calera Creek.

In 1993, the City retained L.C. Lee and Associates, Inc. (LCLA) to design and assist in permitting the restoration of lower Calera Creek and its adjacent riparian and wetlands. The Calera Creek site was subject to three site visits by a field biologist with 14 years experience in biological impact assessment. The visits occurred in the spring (March 1993), summer (July 1993), and winter (January 1994). Vegetation and wildlife habitat types were determined during the first visit and observations made of plant and animal species seen. The Calera Creek site was also visited by Dr. Sam McGinnis in 1993 to determine if the habitat for sensitive reptile and amphibian species exists there. He determined that a detailed survey would not be necessary because suitable habitat was no longer present on the site.

The primary goal of the lower Calera Creek restoration effort is to improve the four basic wetland functions of the creek. They are hydrology, water quality, plant community maintenance, and habitat/faunal support. LCLA defined objectives for each of the four wetland functions for the creek restoration effort.

LCLA used a relatively new wetland functional assessment method, hydrogeomorphic assessment (HGM), as the basis for assessing the impact of the proposed project and designing Calera Creek wetland restoration. Using the HGM approval, wetlands in a geographic region are assigned to classes based upon their hydrologic and geomorphic character. A team of wetland scientists collected data on wetlands in the same class as those at Calera Creek. The data from this "reference set" of 56 streams and wetlands focused on hydrology, water quality (biogeochemistry), plant community maintenance, and habitat/faunal community maintenance. These reference streams and wetlands are all located in the coastal areas of San Mateo and Santa Cruz Counties. From this data, LCLA developed profiles of wetland functions that could be used as templates for restoring the wetlands at Calera Creek.

The existing stream channel of lower Calera Creek will be changed from ditched flow to a naturally configured channel that is placed in a relatively wide floodplain. The creek flows through wide meanders that increase the length of the channel on the site by 1,400 feet (44%). The design specifies six distinct reaches for the stream corridor, each with varying channel configurations that respond to grade and substrate. The riparian corridor will be vegetated with a mosaic of native forest, scrub-shrub and emergent wetland plant species found at the reference wetlands. The floodplain has been graded with depression-and-berm configurations to simulate the soil pockets found in reference wetlands as a result of windthrow. At the outlet to the Pacific Ocean, the stream channel passes through a 220-foot-wide, level emergent wetland.

The creek restoration design calls for a creek realignment and structure that more closely approximates a natural stream course and a mosaic of forested, scrub-shrub, and emergent wetlands to flank the creek. There will also be a bike path along the eastern boundary of the creek restoration area will

## REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)

Page 22

connect to the Rockaway Beach area, providing recreational opportunities for residents and visitors.

Approximately 149,500 cubic yards of materials will be placed in the area that is south of the relocated creek, primarily on APN 018-150-070. This fill will raise the existing topography from one to ten feet. The highest area will be immediately south and west of the archaeological site, and then will slope down to the south and west for drainage into the wetlands. The proposed restoration of lower Calera Creek and adjacent wetlands will not preclude the substantial execution of the previously City-approved reclamation plan for the Quarry site. The consolidation of the site's widely scattered wetlands along the newly restored creek will: (a) improve the functional capacity of those recreated wetlands by providing a continuous migratory corridor along the creek for wildlife resources, and (b) improve the ability to develop APN 018-150-070, as adjusted.

There are three key elements to the restoration design. First, the stream channel will be realigned from ditched flow to a naturally configured channel placed in a relatively wide floodplain, resulting in increased residence time and increased water contact within the wetlands to improve the quality of water entering the site. Second, the design calls for restoration of rough surface microtopography, a feature observed at reference sites, that increases the level of many wetland functions. Third, the design re-establishes native plant communities that are appropriate to the regraded site.

The restoration design calls for realigning and lengthening Calera Creek from its present 3,190 feet to 4,616 feet (from the Highway One culvert to entry into the ocean), resulting in a 45% increase in channel length. Approximately 109,500 cubic yards of material will be removed to create a new channel and floodplain for lower Calera Creek. This excavation work will lower the average grade of the lower Calera Creek valley from 1.7 to 1.2%. The stream channel itself will be taken from its incised and straight configuration and reconnected to a floodplain that is as wide as possible within the confines of the 16.8-acre parcel of land that the City of Pacifica will obtain for the creek restoration effort.

The creek is designed for the 100-year storm flow plus the peak flow from the new wastewater treatment plant, with a safety factor of an additional 100 percent to accommodate siltation events. The 100-year storm produces a water flow between 450 to 700 cubic feet per second. The peak flow of the wastewater treatment plant is 30 cubic feet per second. The channel capacity is roughly 1,500 cubic feet per second. Each reach of the stream is designed to be responsive to its grade, substrate and surroundings. The stream depth, bankfull width, and cross-section configuration will vary depending on these conditions.

The creek restoration site will be graded to create opportunities for water to spread and increase contact with the floodplain. Throughout the restoration area where the grades allow, 55-75 micro-depressions will be built. These are depression-and-berm configurations that allow water to pond and slow its

## REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)

Page 23

velocity, transferring from one to the next. The microdepressions will store approximately 3,438 cubic feet of water, simulating the conditions created by windthrow that were observed at the reference wetlands. In areas that are likely to be initially wet, microdepressions will be planted with species requiring wetter conditions. In areas that may be flooded less often, microdepression vegetation reflects drier conditions.

Throughout the stream corridor, plants have been chosen based on attainable reference wetlands sampled along the central California coast. The riparian corridor will be predominately palustrine forested wetland, with areas of scrub-shrub and emergent vegetation. Groups of plants are shown as "polygons" that, based on reference sampling, are found in similar conditions of moisture, topography, and aspect in regional reference wetlands. The plant polygons represent 13 plant community types. Many plant species will be continuous along the restored stream channel. Large woody debris in the form of logs with root wads attached, will be placed in and along the creek to provide structure and refractory wood.

The first 550 feet of creek channel will not be changed. This first 500 foot area runs from the Highway One culvert to the small existing bridge over the creek that will be used for the accessway to the treatment plant. The footings of the bridge will be expanded to accommodate increased road surface for truck access to the treatment plant. Willows will be planted on the outside and downstream banks of each meander in the creek to reinforce the channel. Uplands will be planted with coastal scrub and coastal prairie (hydroseed native mix) to blend with existing vegetation. The design of the Calera Creek wetland restoration has been divided into six zones. A copy of the grading plan for the creek shows the approximate location of these size zones. See Exhibit No. 7.

In Zone 1, two outlets from the treatment plant will be constructed in Zone 1. Primary discharge will occur through a 36-inch-diameter, high-density, polyethylene (HDPE) pipe and energy dispersion structure ("bubble-up") downstream and north of the access road to the treatment plant. The secondary discharge will be located near the northeast corner of the property, again through an 18-inch-diameter HDPE pipe and bubble up. From the secondary outlet, tertiary-treated water would move slowly across an area planted with wetland forest, scrub-shrub and persistent emergent species. Portions of this area are underlain by the archaeological site. Microdepressions will be constructed only where there is adequate soil to protect archaeological middens. At the south and west edge of this relatively flat area, a low berm will be constructed to retain water and a wier will control the outlet at 64'-0". This reach of the stream is very flat as the grade is only 0.1 percent over its 820 feet length.

In Zone 2, the stream channel continues at a very low gradient (0.3 percent) with a high level of sinuosity and meandering. Zone 2 will also contain habitat designed for the San Francisco Garter Snake in the form of two shallow ponds situated on a terrace above the stream channel under Permit No. 1-95-59. The two ponds will receive tertiary treated water from the treatment

## REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)

Page 24

plant via a 6-inch-diameter HDPE pipe buried 18 inches underground which delivers water first to the easternmost pond. Both ponds will have outlet control structures.

In Zone 3, the high gradient zone, the stream channel becomes steep down stream of the snake habitat ponds. In a short high-gradient reach, the new creek channel will be perched on bedrock to the northwest. On the southeast bank the channel will be bioengineered with coir and rocks that will be sized to resist anticipated shear stress of the floodwaters. Rocks from the quarry will be used for armoring the bank. The overall length of the high gradient channel is 570 feet and the average grade is 3.5 percent. At the bottom of the high gradient reach, a vortex wier will be constructed to dissipate the energy of the water before it enters the next reach.

In Zone 4, the forested reach, the grade changes to 1.5 percent. The forested reach will be planted with palustrine forest closest to the stream. Dominant species will be alder (*Alnus rubra*), willow (*Salix lasiolepis*, *S. lucida* ssp. *lasianдра*), box elder (*Acer negundo*), and *Myrica californica*. At the outer edges of the forest, the wetland will be planted with scrub-shrub vegetation. The three arched culverts will be located within this reach of the creek. The culverts will help form the base for a future road/bridge over the creek. The culverts will be located on a hard bottom or sill, providing a further knick point to slow the water velocity.

In Zone 5, the reach below the bridge, will be 508 feet long and with an overall grade of 1.8 percent. Vegetation will be predominantly palustrine forest and scrub-shrub, with emergent species directly along the stream.

In Zone 6, the outlet, the stream enters a broad shallow basin. The stream meanders across a 230-foot-wide floodprone area. The grade here is 0.5 percent, except that the last 140 feet over the beach to the ocean has a 5 percent grade. The outlet wetland, a mesohaline riverine coastal delta, is likely to be salt-influenced. *Salicornia virginica*, *Jaumea carnosa*, and *Distichlis spicata* will be planted at its center. *Scirpus californicus* will be planted along the stream channel. The rock revetment that currently serves as a sea wall will remain in place. Two outlets would be created in the rock revetment; namely, one on the north where the stream will exit up against the rocks, and one on the south, which will have an armored overflow outlet at 11 feet.

### f. Phasing.

The project will be constructed in three phases. The first phase will include the rough earthwork for the treatment plant and the creek, and the procurement of wetland plants from on-site sources and from native plant nurseries. The second phase will include the finish grade for the wetlands and treatment plant, construction of the treatment plant, and the final planting of the wetlands. The final phase will include miscellaneous grading elsewhere on the site and completion of the architectural interiors of the treatment plant.



## REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)

Page 25

The exact sequence of wetlands construction will be coordinated with construction of the wastewater treatment plant. In chronological order, the tasks to implement the creek restoration are: (1) mass grading, initial weed control, and salvage of on-site native plant materials; (2) fine grading and weed control; (3) plant procurement and propagation; (4) weed control; (5) installation of planting and weed control; and (6) maintenance and monitoring and weed control.

The first step in constructing the Calera Creek channel and wetlands restoration will be installation of sediment fences and erosion control around the site to control runoff associated with construction. These fences will be inspected and maintained throughout the life of the project. After sediment and erosion control measures are in place, mass grading and salvage of plant materials (seeds, cuttings, and whole plants) will take place. Seeds, cuttings, and plants taken from the site will be grown on land that has been donated for growing the plants in Pacifica. It is estimated that mass grading will take three months. Most of the grading will be done during the dry season to insure efficiency and to avoid creating sediment-laden runoff and further compacting the soil.

The next step will be construction of the treatment plant and delivery of water to the site. Construction of the treatment plant is estimated to require 12 months, after which an additional 6 months will be necessary to bring the treatment plant on line and be certain that the effluent meets water quality standards. Water will be delivered by two discharge pipes to the upper portion of the stream and by a 6-inch diameter high-density polyethylene pipe buried 18 inches deep to the snake habitat.

Once water from the treatment plant is available on the site, fine grading can occur. Fine grading will begin with construction of coir and rock bank armoring. After fine gradings have been established, the site will be compacted. In order to prepare soils for planting, chisel plowing and disking will be necessary. Planting will take place in several stages to encourage the development of shade.

During the first stage, trees and shrubs that provide a canopy for shade-tolerant plants will be planted. The planting will proceed from the stream channel outward (i.e. wet to dry) in order not to disturb the planted trees, and wet microdepressions will be planted at this stage. This will be followed by placement of woody debris and construction of microdepressions.

After the initial planting, mulch will be used to suppress weeds. Hand-weeding or hoeing will be used for weed control. If necessary, spot applications of EPA-registered herbicides will be used to control weeds after planting has been completed.

The second stage of planting will occur when a canopy from the first planting has been established, probably during the third season after the first planting. The site will be irrigated during the first three seasons after the site has been planted to assure that the vegetation gets established. In

## **REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)**

Page 26

addition, the existing creek will not be filled in and its water diverted to the new creek until the new plants along the new creek have established and show a few years of growth. This action is necessary to protect the new plantings from being washed away before they are established. This action also helps provide assurances that the new riparian and wetland plantings will be established before the old degraded wetlands are filled in.

The strategy for the restoration planting will focus on plants that are legally procured natives that are genetically adapted to the region. Procurement will be a combination of on-site salvage and propagation of species from the existing Calera Creek wetlands and nursery contracting. The City of Pacifica will purchase the majority of the plants, contracting with growers to grow from local seed sources and cuttings. Nurseries will be monitored during the growing period to ensure correct plant identification, plant vigor, and growing to specifications.

Success of the restoration project will hinge in large part on the ability to control weeds on the site. The strategies to be used in the integrated weed management plan, include: (1) mechanical removal by mass grading, (2) application of pre-emergents and EPA-registered herbicides, (3) competitive exclusion by densely planting preferred species, (4) use of mulch, (5) establishment of shade, and (6) control of water levels to exclude weeds.

The City of Pacifica will maintain the Calera Creek wetland restoration site after construction has been completed. Maintenance will consist of, but not be limited to, keeping the public walkway/bicycle trail free of debris, controlling weeds on the site, and controlling feral animals. For feral animals, live traps will be set by the City and checked on a regular basis. Fire will be controlled on the Calera Creek wetland restoration site during the first five to eight years after the project has been built. After the eighth year, fire will be allowed to occur if such management is consistent with the City of Pacifica's fire management plans.

The applicant intends to take every effort to eliminate potential onsite sources of weedy exotic plant species. For example, the entire site will be finished graded within a time frame that corresponds closely to precede the outplanting of the wetland plants. Thus, the wetland acreage will be planted immediately thereafter to circumvent the establishment of an exotic plant cover before planting commences. Those areas graded but not planted with wetland species will be immediately hydroseeded with an upland plant mix, i.e. species that do not readily invade wetland habitats.

### **g. Monitoring.**

#### **(1) Monitoring Nitrate and Dissolved Oxygen Levels.**

It is clear that certain water quality limits for nutrients and dissolved oxygen in both the wastewater discharge to the creek, and the waters of the creek itself, will need to be monitored. The Nationwide 26 permit from the Corps will also require monitoring locations. However, these locations for

## REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)

Page 27

sampling cannot be determined until the final design of the creek restoration plans has been completed. The likely points for these monitoring stations will be prior to the point of discharge, prior to the steep gradient and in the flat section prior to the beach. It should be noted that the discharge requirements are substantially more stringent for the effluent that will be entering the creek, than the quality of the receiving waters that are already within the creek. In short, the water quality in the creek is worse than the allowable water quality of the effluent. For example, the water in Calera Creek has bacterial levels 1,000 times greater than those that will be allowed in the effluent.

It is anticipated that nitrate levels in the wastewater effluent will be high enough to cause some accelerated eutrophication or biostimulation effects (algal growth) in the waters of the creek. As reported by Sam McGinnis, a small amount of eutrophication may actually be beneficial to red-legged frog populations. In fact, the primary species of concern for nutrient levels in the ponds is the red-legged frog, which lives in the ponds, as opposed to inhabiting coastal wetland margins, such as the fork-tailed damselfly, the salt marsh yellowthroat, and the San Francisco Garter Snake.

In addition, the impact of the nutrients would be beneficial if it purely helped to support the growth of riparian and stream bank plants. Notwithstanding, excessive levels of nutrients can lead to algal growth in the water, which up to a point may benefit in-stream species such as the red-legged frog, by providing more food for its prey species. Moreover, if algal growth reaches the point of eutrophication where oxygen levels in the water are lowered, then these levels of nutrients are no longer beneficial.

Excess nitrogen in the wastewater effluent can be mitigated to a level of insignificance. The nitrogen level in effluent can be reduced from 5 mg/l (summer) or 8 mg/l (winter) to less than 2 mg/l at the plant by the addition of methanol in the filters, and by other nitrogen removal processes. Therefore, to avoid excessive nutrient levels leading to algal blooms and reduced oxygen levels in lower Calera Creek, the City proposes to: (a) monitor nutrient levels in the stream as part of the NPDES permit, (b) make observations of algal growth on a monthly or bimonthly basis with periodic inspections by the RWQCB, and if necessary, (c) take additional steps to remove nitrogen and/or phosphorus at the plant if necessary, such as use of a denitrification system as part of downflow filters or the addition of methanol to reduce nitrogen levels in the effluent.

The plants to be used for the wetlands and riparian lands along the creek, are being designed to be tolerant of nitrate levels in the 5 to 7.5 mg/l range. These levels are easily demonstratable and obtainable in the treatment plant denitrification process. As an additional backup, the most nitrogen tolerant species will be planted in the upper reaches of the wetlands.

In addition, the wastewater effluent from the plant will be re-aerated to a dissolved oxygen level of above 6.0 mg/l. Natural re-aeration will occur in the drop section of the stream, and the flow rate and shallow nature of the

stream will contribute to its oxygenation. The effluent will be fully nitrified and have a very low biological oxygen demand (less than 2mg/l). Oxygen levels in the marsh will be monitored on a monthly basis using a dissolved oxygen probe at two locations in the marsh, one location being in the steeper hydraulic section and the other location being at the point where the wetland meets the ocean.

To prevent low levels of dissolved oxygen in the effluent from placing biological stress on aquatic life in the stream, the City proposes to: (a) monitor dissolved oxygen levels in the stream, as part of the NPDES permit, and if necessary, (b) provide re-aeration of the effluent prior to discharge to guarantee an effluent dissolved oxygen level of at least 6.0 mg/l.

(2) Monitoring Wetland Functions.

L.C. Lee and Associates indicate that it will take five to ten years to establish a mosaic of forested, scrub-shrub, and emergent wetlands at the Calera Creek restoration site. The willow-dominated elements of the mosaic will develop and stabilize first. Planting specifications for Calera Creek are similar to attainable reference wetlands with respect to plant communities, tree density and basal area, seedling/sapling density, and the condition of plants.

L.C. Lee and Associates also indicate that use of the hydrogeomorphic (HGM) assessment method makes it possible to compare the changes in wetland functions before and after the creek restoration. LCLA further indicates that the hydrologic functions of the creek will improve as a result of the creek restoration. Wetland hydrology functions will be key to restoration of the other three groups of wetland functions. As hydrologic functions develop, so will water quality (biogeochemical) functions, the plant community functions, and the habitat/faunal community support functions.

The objectives for the hydrology function are to create a relatively natural flow regime in lower Calera Creek that is appropriate to the site and which will accommodate the addition of 5.97 million gallons (8.64 cfs) of flow from the wastewater treatment plant. Naturally functioning wetlands attenuate flood peaks by slowing and distributing flows. This reduces sediment transport and results in maximized water residence time. Increased contact and residence time increases groundwater recharge and storage, and augments baseflows. Naturally functioning wetlands provide surface and subsurface water storage and dissipation of the energy of water.

In this case, the restoration design calls for the Calera Creek channel to be removed from its incised channel and placed in a broad floodplain. The channel is designed to move in wide meander loops that act to dissipate stream energy through each turn. The channel has been sized so that, with the addition of water from the treatment plant, water will overflow the banks on a regular basis and enter the floodplain in Zones 1, 2, 4, 5, 6.

## REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)

Page 29

The objectives for water quality function include creating the longest possible path for water to travel through the site to maximize wetland contact and retention opportunities, and to encourage the development of anaerobic conditions in the soil. Many of the features that contribute to increased hydrologic functions will increase water quality functions.

The objectives for plant community maintenance function are to establish a fully functional, site-adapted, and self-maintaining mosaic of forested, scrub-shrub, and emergent wetland vegetation. The component plants vary from reach to reach. Riparian forest dominates the upper part of the stream in zones 1-5, while at its outlet at zone 6, the wetland will be characterized by mesohaline riverine coastal delta vegetation. Drought-prone parts of the site will be planted with a suite of coastal scrub and grass species that are adapted to mesic conditions.

Finally, the objectives for habitat and faunal community support functions are to establish a compositionally and structurally complete ecosystem with the attributes important to wildlife. Specifically, the wetland should have increased vertical stratification (i.e. plant communities with tree, sapling, shrub, and herb layers), and a large detrital pool of dead standing trees (i.e. snags), woody debris and leaf litter. It should have frequent and uninterrupted interspersions of vegetation communities with cover, forage, and nesting sites and sources of organic carbon for a wide variety of vertebrates and invertebrates. It should have interspersions and connectivity of aquatic and terrestrial habitats.

### 5. New Development.

Section 30250 of the Coastal Act states in applicable part that new development be located within, contiguous with, or in close proximity to, existing developed areas that have adequate public services to accommodate the new development and where the new development it will not have significant adverse effects, either individually or cumulatively, on coastal resources.

The proposed boundary line adjustment does not increase the number of parcels in the area. There will be four parcels before and after the boundary line adjustment. By itself, the boundary line adjustment will not result in any significant adverse effects to coastal resources as these changes only occur on paper and not on the land. Notwithstanding, approval of the boundary line adjustment makes the balance of the project possible, and it is really the other development aspects of this project which should be reviewed under Section 30250 of the Coastal Act.

With respect to the restoration of lower Calera Creek, the restoration is being designed to accept treated effluent from the wastewater treatment plant. As a result, the wetland functions and habitat values of the restored creek and its adjacent riparian and wetland resources will be dependent, in part, upon the continued flow of treated wastewater to the creek. In this sense then, it can be said that the restored creek will have adequate wastewater services to accommodate it. Otherwise, creek restoration will not

## REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)

Page 30

result in any significant adverse effects, either individually or cumulatively, on coastal resources, including public access.

With respect to the new wastewater treatment plant, the plant will be located in close proximity to an existing developed area of the City of Pacifica where adequate public services, such as City-water, sewer, electricity, and vehicular access, are able to accommodate the new development. In addition, as mitigated herein by the special conditions of permit approval and as more fully discussed in the findings below, the construction and operation of the treatment plant will not result in significant adverse effects, either individually or cumulatively, on coastal resources, including public access. The Commission therefore finds that the project is consistent with Section 30250 of the Coastal Act.

### 6. New Public Works.

Section 30254 of the Coastal Act states in applicable part that new or expanded public works facilities be designed and limited to accommodate needs generated by existing development or permitted uses that are consistent with the Coastal Act and that those facilities not induce new development that is inconsistent with the Coastal Act.

The proposed wastewater treatment plant is a major public works facility that is subject to the provisions of Section 30254 of the Coastal Act. The proposed treatment plant will serve the entire City, which includes areas that are within and outside of the Coastal Zone. The construction of the treatment plant is designed and limited to accommodate the needs generated by existing development within the City and by the yet-to-be-built, permitted uses in the City's Local Coastal Program and the City's General Plan. By the same reason, the construction of the treatment plant will not induce new development that is inconsistent with the Coastal Act.

The primary problem with the City's existing treatment plant is that it has very little "redundancy" or back up capacity during major storm events. Otherwise, the design capacity of both the existing and proposed wastewater treatment plants are based on the same population holding capacity that is identified in the City's 1980 General Plan. The existing plant has a design capacity of 3.3 to 3.6 mgd for a service population of 46,800. The proposed plant has a design capacity of 3.6 mgd for a service population of 46,800. The Commission therefore finds that the project is consistent with Section 30254 of the Coastal Act.

### 7. Wetland Fill and Restoration.

Section 30233(a) of the Coastal Act provides in applicable part that the diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes be permitted where there is no feasible less environmentally damaging alternative, where feasible mitigation measures have been provided to minimize adverse environmental effects, and where limited to the following:...

(7) Restoration purposes.

a. Permissible Use of Dredge and Fill Materials to Restore a Creek and Wetland.

Restoration of wetlands and environmentally sensitive habitat areas is strongly encouraged in the Coastal Act. The Legislature found that the protection, maintenance, and, where feasible, enhancement and restoration of natural resources is a basic goal of the Act (Section 30001.5). Section 30233(a)(7) of the Coastal Act indicates that it is permissible to place fill in a wetland, and permissible to dredge a wetland, if the purpose of that filling and dredging activity is to restore the wetland.

The applicants propose to leave much of the filled wetland area as suitable sites for unspecified future development. That future development would include non-water/coastal dependent uses that are not permissible purposes for the placement of fill under 30233(a). Proposing fill as fill for "restoration purposes" should not be used as a means to circumvent the strict limits in Section 30233(a) on the purposes for which fill may be placed. The Commission finds that it is not enough for an otherwise impermissible use of proposed fill to be allowed as fill for restoration purposes simply because an applicant may provide a substantial amount of mitigation that results in a net enhancement of habitat values. Otherwise, the limits of Section 30233(a) on the uses of fill would have little meaning and the limited amount of wetland acreage that remains in the coastal zone would be viewed as developable for any use so long as mitigation is provided. The result would likely be the rapid diminishment of the remaining wetlands in the coastal zone. The Commission finds that to allow the ultimate conversion of the site's existing wetlands to other uses by approving the fill as fill for restoration purposes, then it must be: (1) physically necessary to place the proposed fill to accomplish the wetlands restoration goals and objectives of the project, and (2) the proposed wetland restoration project will result in substantially greater wetland habitat values than exist at present. As discussed below, the project's proposed fill meets the first test.

In this case, some of the wetlands on the site will be disturbed during the regrading activity because they physically occupy the same area where the new creek alignment and wetlands will be established. The primary effect here is the site of the new creek and wetlands will be located at a lower elevation than the previous wetlands because it will be necessary to remove 5 to 10 feet of overburden from the valley floor to create a new channel and floodplain for the creek. Although there will be a significant amount of grading activity to re-create and restore lower Calera Creek, the restored creek will still be located within the same watershed as the original creek and the restored creek will still occupy a portion of same historic floodplain as the original creek.

Except for the riparian area near the archaeological site, the existing channelized ditch containing the lower portion of Calera Creek and the remaining scattered wetlands on APN 018-150-070 that are adjacent to the near creek will also be filled in before the project is completed. There is not

## REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)

Page 32

enough water on the site to serve both the newly created wetlands located along the restored creek and the degraded wetlands along the existing channelized creek. In addition, unless the scattered wetlands adjacent to the creek are subject to filling activity, surface water runoff will not flow toward the restored creek in its new alignment.

Consequently, it is necessary to fill the existing creek and the scattered wetlands near the existing creek to re-establish appropriate contours of the land so that surface water runoff will flow toward, and contribute to, the base flow of the restored creek in its new alignment. This filling and grading activity is necessary to re-establish appropriate contours of the land because the creek has a fundamental hydrological connection to its watershed. Without its watershed, the creek cannot function at all because there would be no physical mechanism to collect water. Thus, the effort to restore the creek and its adjacent wetlands is undermined to the extent that the creek is disassociated or separated from its watershed.

In its existing condition, the contours over the land and wetland area to be filled and regraded do not allow surface water runoff to flow toward, and contribute to, the base flow of the creek. The hydrologic functions along the lower portion of Calera Creek are very low because the creek has been ditched and channelized to the point that it has very little surface water storage capacity, very little groundwater recharge ability, and very little ability to moderate flood waters. In fact, the present channelized condition of lower Calera Creek is designed to remove water from the site as quickly as possible.

If successful, the proposed creek restoration effort will result in increased wetland functions and greater habitat values. While these wetland functions and values are clearly important benefits, such benefits cannot be achieved if certain assurances are missing in the creek restoration effort. As a result, the Commission finds that it is necessary for the project to include: (1) assurances that the new watershed area of the restored creek will continue to serve as a groundwater recharge area for the creek, and (2) assurances that an open space deed restriction will be placed over an 8± acre, upland hillside habitat located west of the wastewater treatment plant and north of the restored creek on APN 018-051-050 (City of Pacifica).

The proposed project does not substantially increase the wetland habitat acreage on the property. The project would only increase the size of the wetland habitat area by 1± acre. More importantly, the proposed project does not establish a meaningful riparian corridor along the restored creek. A riparian corridor includes not only the creek and its adjacent wetland and riparian resources, but also a buffer area/migratory corridor area for wildlife. Many of the animals that are dependent upon the creek and its wetland resources also require an upland habitat area as well. In this case, placing an open space deed restriction over an 8± acre, upland hillside habitat area located west of the wastewater treatment plant and north of the restored creek on APN 018-051-050 (City of Pacifica) would accomplish the twin goals of establishing a buffer area and a migratory corridor for wildlife.



REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)

Page 33

The upland hillside habitat area acts as a buffer area to prevent harm to the creek. The native hillside vegetation serves to slow and spread out surface water runoff from the hillside to the creek. This slowing action of the surface water runoff prevents soil erosion of the hillside, prevents sedimentation of the creek, and prevents habitat destruction of both the hillside and the creek. In addition, the buffer area serves to enhance the wetland functions along the creek. Surface water runoff that slowly percolates into the creek is available for the plants to use because of the longer detention time; whereas, rapid surface water runoff provides very little enhancement of wetland functions along the creek because of its short detention time.

The upland hillside habitat area also acts as a migratory corridor for wildlife. In this case, the most important wildlife species to be considered is the endangered San Francisco Garter Snake. The snake spends its spring and summer months feeding near ponds and creeks. However, the snake migrates up the hillside during the fall and winter months. The herpatologists who have studied the quarry area believe that the snake may migrate through the "saddle area" of Mori Point ridge where it may make contact with other San Francisco Garter Snakes that are believed to migrate up from the Laguna Salada on the north side of Mori Point. The upland hillside habitat area includes a significant portion of the "saddle area" along the Mori Point ridge.

As discussed above, the Commission finds that these additional assurances and additional project elements must be incorporated into the project as special conditions of permit approval to make the project consistent with Section 30233(a) of the Coastal Act. The Commission further finds requiring an open space deed restriction over a buffer area/migratory corridor area along the creek and over APN's 018-150-050 (Bottoms) and 018-150-070 (Bottoms) as adjusted, is not essential at this time. These two parcels are currently in an undeveloped state, and the more appropriate time to consider such a buffer area/migratory corridor area would be when the property is proposed for development when the particular impacts of such development on the creek habitat can be assessed.

In summary, the hydrologic connection of the creek to its watershed is so integral to the successful restoration of Calera Creek, that the Commission attaches Special Condition No. 4. Special Condition No. 4 is a deed restriction that applies to the two parcels that are owned by Mr. Bottoms and are adjacent to the City-owned creek restoration parcel. The deed restriction is designed, in part, to ensure that surface water runoff from the two parcels that are adjacent to the creek is directed toward, and contributes to, the base flow of the restored creek. In addition, Special Condition No. 4 establishes an open space deed restriction over an 8± acre, upland hillside habitat area located west of the wastewater treatment plant and north of the restored creek on APN 018-051-050 (City of Pacifica). Again, the upland hillside habitat area is an integral part of a riparian corridor area for the restoration of lower Calera Creek and for the protection of the habitat area for the endangered San Francisco Garter Snake.

## REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)

Page 34

Lastly, the Commission attaches Special Condition No. 5c, which requires the applicants to submit a final creek restoration plan for the review and approval of the Executive Director, and prior to issuance of the permit. Although the existing plan is substantially complete, the plan still must incorporate the following before it can be implemented: planting specifications, coordination with the Ohlone tribe regarding plantings in and around the archaeological site, and design coordination with the final grading/erosion control plan for the entire area and the final landscaping plan for the wastewater treatment plant.

It is only with Special Conditions No. 4 and 5a that the Commission finds that the project is consistent with Section 30233(a)(7) of the Coastal Act. These conditions ensure that the dredging and filling activity of the site's creek and adjacent wetlands to restore the creek is a substantial benefit to lower Calera Creek and has the intended restorative effect.

b. There are No Feasible Less Environmentally Damaging Alternatives to the Proposed Dredging and Filling Activity of the Site's Wetlands.

(1) The No Project Alternative.

The no project alternative is a feasible less environmentally damaging alternative to the proposed dredging and filling activity of the site's wetlands. At the same time, however, the no project alternative should be rejected because it would not accomplish the primary goal of the creek restoration effort, which is to restore the functional capacity of the creek and its adjacent wetlands.

(2) Other Alternatives.

It is possible to avoid diverting the waters of the existing channelized creek to the restored creek. It is also possible to avoid filling in the existing creek and its scattered wetlands. However, both of these inactions would seriously jepordize the success of the creek restoration effort. Again, the restored creek and its wetlands are dependent upon the receiving waters of the existing creek. In addition, the restored creek and its wetlands are dependent upon the surface water runoff of the creek's entire watershed to contribute to the base flow of the creek. As a result, this alternative should be rejected because it would seriously jepordize the success of the creek restoration effort.

c. Provision of Feasible Mitigation Measures to Minimize Adverse Environmental Effects.

(1) Capture Plan for the San Francisco Garter Snake.

Staff from the U.S. Fish and Wildlife Service and Dr. Sam McGinnis confirmed that the former habitat of the endangered San Francisco Garter Snake was lost when two washing ponds in the quarry area, which were previously used by the snakes, were filled in. The ponds will be recreated on the north side of the restored creek under coastal development permit application No. 1-95-59.

## REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)

Page 35

In the meantime, although the former habitat area of the snake is gone from the site, staff from the U.S. Fish and Wildlife Service and Mr. Sam McGinnis both believe that the snake may have migrated back into the area. This is quite possible since the snakes are believed to migrate back and forth through the "saddle area" of the Mori Point ridge from the Laguana Salada area on the north side of the Mori Point ridge. Therefore, to minimize adverse impacts to any snakes which may have migrated back into the project area, the Commission attaches Special Condition No. 1 which requires the applicant to submit a capture plan for the San Francisco Garter Snake for the review and approval of the Executive Director, prior to issuance of the coastal development permit. The capture plan shall be prepared by the U.S. Fish and Wildlife Service to capture any San Francisco Garter Snakes that may have entered into the project area. The capture plan shall be implemented at least 60 days prior to the start of any grading or construction activity. The plan shall include the mowing of grasslands in strategic areas and/or the use of drift fencing, traps, and any other measures that meet the requirements of the U.S. Fish and Wildlife Service. The plan shall be implemented by the U.S. Fish and Wildlife Service or by a qualified individual(s) that have been approved by the U.S. Fish and Wildlife Service and the permittee.

### (2) Method and Manner to Obtain Wetland Plant Materials.

The proposed plan for the creek restoration effort indicates that plant materials will come from a variety of sources. Some of the plant materials to be used will be gathered in the field by taking seeds and cuttings from other plants in the vicinity of the project area, and by not by removing the plants by the roots. This kind of collection is intended to be done without having an adverse impact on the donor population.

Other wetland plants will be purchased from commercial sources as long as the plants are from the same genetic stock which would naturally occur in this portion of the central California coastal wetlands. This proviso is a good mitigation measure to ensure that wetland plant materials that are native to the area are not lost. The applicant has contacted several nurseries who are capable of growing these native wetland plants.

Lastly, the plan indicates that some of the wetland vegetation along the existing creek can, and will be, salvaged. Salvaging of wetland plant materials which would otherwise be lost due to dredging and filling activity is a good mitigation measure. By procuring and planting appropriate species in observed associations, and by providing environmental conditions conducive to their survival (i.e. channel and floodplain modifications), plant associations and detrital biomass characteristic of reference conditions may be established and maintained on the Calera Creek site, given adequate time and the absence of catastrophes, such as floods and fire prior to plant establishment.

### (3) Establish new wetland before old wetland areas are filled.

One concern raised by staff from the California Department of Fish and Game in the letter that is shown in Exhibit No. 14, is the following:

## REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)

Page 36

"However, the timing of the fill in relationship to the creation of wetlands is very important. The Department recommends that the adjacent wetland project be completed and functioning prior to the placement of any fill in Calera Creek. This may require delaying fill operations a minimum of two to five years.

The concern by the California Department of Fish and Game has already been accounted for in the proposed creek restoration plan. The wetland plant materials in the scattered wetlands on the site will not be lost to fill. Rather, these plants will be salvaged from these areas and moved to the new wetlands along the restored creek. In addition, the existing creek will not be filled in, and its waters not diverted to the new creek, until the new plants along the new creek have established and show a few years of good growth. This delaying action is necessary to ensure that the new plantings are not washed away before they are established in their new location. At the same time, this delaying action helps provide assurances that the new riparian and wetland plantings will be established before the old degraded wetlands are filled and regraded.

### (4) Create a Pedestrian Barrier Between the Restored Creek and the Public Walkway/Bikeway.

Restoration of the creek will encourage people to use the proposed public walkway/bikeway that will be constructed along the south side of the restored creek, from Highway One to the beach. Uncontrolled public use in or near wetland and riparian areas can result in adverse impacts to the functional capacity and habitat values of those resource areas. Similarly, domestic animals that are not on a leash can also create problems with native wildlife that use these resource areas. Therefore, to mitigate the potential for creating adverse impacts to the functional capacity and habitat values of the wetland and riparian areas along the creek, the Commission attaches Special Condition No. 14, which requires the use of a pedestrian barrier between the proposed walkway and the resource areas. The condition requires that a relatively impenetrable barrier of thickly planted willows (*Salix* species) and Blackberry Bramble (*Rubus* species) be planted along the creek side of the walkway/bikepath where the planting plan as designed by LCLA for the restoration of lower Calera Creek shows either a "Palustrine Scrub-Shrub I Riparian Corridor" or a "Palustrine Forest I Riparian Corridor". The proposed willows and blackberry bramble plantings to be used for a barrier are a significant part of the proposed plantings for these two riparian corridor areas in the planting plan. Thus, the barrier should be relatively natural looking and it will not require any other species than those recommended for the area in the proposed planting plans. The only difference is a slight adjustment as to how those plantings will be located relative to the public walkway. In addition, some people will use the vegetative barrier along the walkway to pick blackberries, which is a low-cost form of public recreation.

Otherwise, Special Condition No. 14, requires that the barrier shall consist of a 3 to 4-foot-high split rail fence where the planting plan shows either a "Palustrine Emergent I Pickleweed Zone" or a "Palustrine Emergent II Coastal

## REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)

Page 37

Meadow" located along one or both sides of the walkway/bikepath. These wetland areas along the walkway contain low-growing plant materials which will be at the mouth of the creek near the beach. In this case, the open air quality of the split rail fence will not significantly impair views of the marsh or the sea. Moreover, although the fence will not stop someone from deliberately entering upon and trampling the sensitive plants in a fresh water marsh, the fence will provide psychological barrier to such actions. The Commission therefore finds that the fence in Special Condition No. 14 is necessary to minimize potential adverse impacts from the public upon the functional capacity and habitat values of the wetland and riparian areas along the restored creek.

### (5) Submission of a Revised Monitoring Plan.

The proposed monitoring plan has a number of good features which should, and can be, retained in a revised plan. As discussed below, however, there are three general areas where the plan should be revised to ensure a more objective and comprehensive evaluation process of the creek restoration effort. The revisions discussed below are to be incorporated into Special Condition No. 6, which requires the applicant to submit a revised monitoring plan for the review and approval of the Executive Director, prior to issuance of the coastal development permit.

#### (a) The revised monitoring plan needs to have measureable field data and provide a rational basis as to how that data will be used to evaluate the success of the project.

The proposed monitoring plan indicates in applicable part that: "Baseline data will be collected for hydrology, microtopography, water quality, vegetation, soils, and wildlife use of the site." However, the proposed plan does not describe how this baseline data will be collected or how it will be used to evaluate the success of the restoration project.

As previously discussed, the proposed creek restoration plan to uses the hydrogeomorphic (HGM) assessment method as the basis for the design of the creek restoration. HGM is a rapid assessment method used to determine the functional level of a wetland, relative to other "reference" wetlands. HGM assessments rely on qualitative and quantitative information, which is used to generate a specific numerical rating for the existing level of a specific wetland function. These numerical ratings range from 0 (no function) to 1 (functioning) at the highest attainable level.

The proposed monitoring plan also includes a HGM comparison chart that provides a specific numerical rating for each wetland function to be measured on the site before and after the creek is restored, and including a specific rating as to the anticipated positive change in wetland functions after the creek is restored. See Table 8 in Exhibit No. 12. However, the numerical ratings in Table 8 are derived on a relative basis. That is, both the current and anticipated levels of each wetland function in the project area are determined relative to the level of the same function at various "reference"

## REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)

Page 38

wetlands. Thus, it is questionable whether the specific numerical ratings that are assigned for each wetland function in Table 8 can be used as direct measures of success.

For example, under the Water Quality (Biogeochemistry) Function, the retention of particulate matter (item 8 in Table 8) is projected to increase from 0.20 to 0.70 as a result of the creek restoration. The monitoring program would measure the actual concentrations of particulate matter. Yet the numerical rating values do not tell us how much particulate matter must be retained to quality for a functional level of 0.7. What is missing is some basis for the conversion between the numerical ratings derived through the HGM assessment and the direct measurements collected in the field under the monitoring program. In short, the monitoring plan should be revised to provide specific details on what measureable or quantifiable data will be collected in the field, from where and when, and how that data will be used to permit an evaluation of the project's success. Without this kind of information, an objective evaluation of the project's success cannot be made.

The applicant may use the HSM method of assessment and the numerical rating values in Table 8 as part of the monitoring plan so long as there is some rational basis for the conversion between the numerical ratings derived through the HGM assessment and the direct measurements of data collected in the field under the monitoring program. If this basis cannot be achieved, then the information that is in Table 8 should be disregarded. The applicant will then need to propose another monitoring methodology which will provide a rational basis between the data that is collected in the field and the project's goals, objectives, and success standards to evaluate the success of the project.

- (b) The revised monitoring plan needs to establish specific success standards based on measureable field data and provide an integrated statement of the monitoring plan's goals, objectives, and success standards.

The proposed monitoring plan indicates that: "the goal of the monitoring program will be to document the success of the wetland functional restoration and to implement contingency measures, should the need arise." The plan identifies four wetland functions to be monitored. Those functions are: hydrology, water quality, plant community, and habitat/faunal community. The plan also identifies one or more objectives to implement each of these four wetland functions. However, the proposed monitoring plan does not provide a fully integrated statement of the plan's goal(s), objectives, and success standards. In particular, the plan does not indicate what the specific success standards or performance criteria will be used to determine whether each objective (and therefore each goal) of the project is being met.

An example of a more fully integrated statement of the project's goals, objectives, and success standards for monitoring the hydrologic function of the wetlands is illustrated below. The example uses the same objectives and five year monitoring period that are proposed in the plan. However, the plan

REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)

Page 39

becomes more integrated by incorporating into the plan a specific goal for each wetland function and specific success standards or performance criteria to implement each objective.

Goal 1: Significantly improve the hydrologic functions of Calera Creek.

Objective 1: Create the longest possible route for water to travel through the site.

Success Standard 1.1: Over five years the average length of the primary channel will be at least 4,616 feet.

Success Standard 1.2: Over five years the annual average grade of the primary channel will not exceed 1.2 percent based on the average combined slope of each reach.

Objective 2: Provide increased contact between water and wetland by removing the stream from its incised channel and allowing it to flood its banks on a regular basis.

Success Standard 2.1: Over five years the total average monthly flows on an annual basis shall be equivalent to those estimated in Table 2 of the proposed plan, except where differences between estimated and actual total flows occur due to total precipitation and natural runoff.

Success Standard 2.2: Over five years annual average channel specifications for each reach of Calera Creek shall be equivalent to those described in Table 5 of the proposed plan.

Objective 3: Increase surface roughness on the site, both through surface topography and through roughness provided by vegetation.

Success Standard 3.1: Over five years the average annual number of microdepressions shall be at least 55.

Success Standard 3.2: Over five years the average vegetative roughness shall increase each year.

Success Standard 3.3: At the end of five years the vegetative roughness shall be at least 80 percent of that measured at comparable reference sites.

Objective 4: Increase the soils's capacity to store water.

Success Standard 4.1: Over five years the average annual subsurface storage of water within the restoration area shall exhibit an increasing trend.

Success Standard 4.2: At the end of five years the subsurface storage of water shall be at least 60 percent of that measured at comparable reference sites.

## REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)

Page 40

As illustrated above, the process for providing a more fully integrated statement of the monitoring plan's goals, objectives, and success standards is relatively straightforward. The information in the success standards primarily relies on information that is already provided in the construction plans for the creek. Again, the use of measurable or quantifiable field data to establish specific success standards for each objective and goal of the project is crucial to ensuring a comprehensive and objective evaluation process.

In addition, to monitoring the hydrologic function, specific success standards or specific performance criteria will also need to be established to monitor the plan's other three wetland functions; namely, Water Quality (Biogeochemistry), Plant Community Maintenance, and Habitat/Faunal Community Support.

Establishing the specific success standards to monitor the water quality functions of the project can come from a variety of sources. These sources include: (a) the water quality parameters that are found in the healthy and fully-functioning "reference" wetlands, (b) the water quality standards that are recommended for monitoring in the project's EIR, (c) the water quality standards that are required to be monitored by the Regional Water Quality Control Board or the California Department of Fish and Game, or (d) some combination of all of the above.

Establishing the specific success standards to monitor the plant community maintenance functions is fairly simple. Since the planting plan and the mix of species to be planted within each "reach" of the creek is based on healthy and fully-functioning reference wetlands, then the initial success standards of the project will be met as long as each plant is planted where it is supposed to go, and planted at the density that it is supposed to be, and the plants are helped along with some maintenance until those plants or plantings are "established". It is clear that artificial measures of support will be necessary to establish some of the plants, such as use of summertime irrigation, fertilizer, pesticides, and herbicides/traps for the removal of exotic plants or animals. However, the final success criteria for the monitoring of plant community maintenance functions cannot be to be met if artificial measures are needed on a continuing basis to maintain the health and functional capacity of the plant community. Therefore, a plant or plant community would be considered to be "established" if it: (a) continues to grow, thrive, and reproduce on its own at not less than (a rate to be specified), (b) for not less than (a number of years to be specified) after all artificial means of support have ended, and (c) there is no serious threat of invasion or predation by exotic plant materials or feral animals.

Establishing the specific success standards to monitor habitat/faunal community support is also fairly simple. The primary thing is to see an increase in the number and diversity of invertibrate and vertibrate species over time.



## REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)

Page 41

- (c) The revised monitoring plan needs an implementation and evaluation process, such as submission of an annual monitoring report, a specific reporting schedule, process to take corrective actions, etc.

The proposed monitoring plan is not self-implementing because it does not provide a specific process to review and evaluate the creek restoration. Therefore, the proposed plan needs to be revised to include such a process.

The proposed monitoring plan does indicate that the restored creek will be monitored for a period of five years. This amount of time seems reasonable. However, there is no guarantee that the success standards of the project will be met in 5 years. Moreover, if the success standards of the project have not been met within 5 years, then the legal basis to fill the former wetland areas on the property will not have been met because only the restoration of the creek and its adjacent wetland habitat areas are a permissible use for fill in a wetland under Section 30233(a). Therefore, the proposed monitoring plan needs to be revised so that it will be monitored for a period of five years, or until the Executive Director determines in writing that the goal for each of the four wetland functions of the project have been met, whichever occurs last.

In summary, it is only by developing a more objective and comprehensive evaluation process that the monitoring plan can be considered to be a feasible mitigation measure for purposes of Section 30233(a) of the Coastal Act. Based on the above findings, the Commission attaches Special Condition No. 6 which requires the permittee to submit a copy of a revised monitoring plan for the restoration of lower Calera Creek for the review and approval of the Executive Director, prior to issuance of the coastal development permit.

8. Filling Activity Must Maintain or Enhance the Functional Capacity of the Site's Wetlands.

Section 30233(c) of the Coastal Act provides in applicable part that the diking, filling, or dredging in existing estuaries and wetlands shall maintain or enhance the functional capacity of the wetland or estuary.

There will be no net loss of wetland area or function as a result of the restoration of lower Calera Creek. Although 7.1± acres wetlands will be lost in the grading and filling activity of the project, the completed restoration effort of the creek will result in the creation of 8.01 acres of wetlands, resulting in a net gain of approximately 0.91± acres of wetlands.

The location of the wetlands on the site are shown in Exhibit No. 8. Except for the riparian area near the archaeological site, which will be saved and incorporated in the creek restoration plan, the functional capacity of the other scattered wetlands on the site is quite low. These scattered wetlands are so severely degraded, and its natural processes are so substantially impaired, that neither the channelized creek nor its scattered wetlands are capable of recovering and maintaining a high level of functional capacity without a major restoration effort. By almost any measure, the channelized

## REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)

Page 42

creek and the scattered wetlands on the site are considered to be significantly degraded. See comment letters by the California Department of Fish and Game and the Coastal Conservancy in Exhibits No. 13 and 14.

L.C. Lee and Associates estimate that there will be at least a three-fold increase over the existing wetland functions of the creek within five years after the creek has been restored. This estimate appears reasonable, given the very low functional capacity of the existing creek and wetlands on the site. See Exhibit No. 12 and the numerical values of the existing wetland functions in Table 8 of the submitted plan. To ensure an objective documentation of the anticipated increases in wetland functions that are expected by LCLA, and for reasons which are discussed more fully in the mitigation findings for Section 8 c (5) of the staff report, the Commission attaches Special Condition No. 6 which requires the applicant to submit a revised and more comprehensive monitoring plan for the restored creek. It is only through the submission of a revised and more comprehensive monitoring plan that the Commission can find the project to be consistent with Section 30233(c) of the Coastal Act.

### 9. Alteration of Creeks.

Section 30236 of the Coastal Act provides in applicable part that substantial alterations of rivers and streams incorporate the best mitigation measures feasible, and be limited to...

- (3) Developments where the primary function is the improvement of fish and wildlife habitat.

The Commission finds the project is consistent with Section 30236 of the Coastal Act because the restoration of lower Calera Creek is a substantial alteration of the creek where a primary function of the restoration effort is to improve the fish and wildlife habitat areas along the creek, and because the best feasible mitigation measures have been incorporated into the project as special conditions of permit approval.

### 10. Maintaining Biological Productivity and Water Quality in Coastal Waters and Protecting Environmentally Sensitive Habitat Areas.

Section 30230 of the Coastal Act provides in applicable part that marine resources be maintained, enhanced, and where feasible, restored, and that uses of the marine environment be carried out in a manner that will sustain the biological productivity of coastal waters and will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.

Section 30231 of the Coastal Act provides in applicable part that the biological productivity and the quality of coastal waters, streams, wetlands, estuaries be maintained and, where feasible, restored by minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference

**REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)**

Page 43

with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

Section 30240 of the Coastal Act provides in applicable part that: (a) environmentally sensitive habitat areas be protected against any significant disruption of habitat values, (b) only uses dependent on those resources shall be allowed within those areas, and (c) development in areas adjacent to environmentally sensitive habitat areas be sited and designed to prevent impacts which would significantly degrade those areas.

The applicant has indicated that they wish to start the rough grading for the wastewater treatment plant in March of 1996, which is before the end of the winter rainy season. Without an erosion control/sedimentation plan firmly in place before the rough grading activity occurs, a major late winter storm could wash a lot of sediment into areas where it could cause significant environmental damage, such as sedimentation of existing wetlands on the site and the premature loss of wetland plants that could be salvaged, and sedimentation of open coastal waters and the loss of biological productivity of the marine environment. To minimize these potential environmental risks in a manner that is consistent with Sections 30230, 30231, and 30240, the Commission attaches Special Condition No. 5a which requires the applicant to submit a final erosion control/grading plan for the review and approval of the Executive Director, prior to issuance of the permit. Among other things, Special Condition No. 5a requires that all erosion control measures shall be in place and fully functional prior to any grading or construction activity taking place during the rainy season.

Having restored the lower portion of Calera Creek on a 17± acre parcel to be owned by the City of Pacifica, Sections 30230, 30231, and 30240 of the Coastal Act collectively require that the biological productivity and the water quality of the creek and its adjacent riparian and wetlands be maintained, and that the habitat values of those same environmentally sensitive, coastal resources be protected against any significant disruption of habitat values. To comply with these requirements of the Coastal Act, the Commission attaches Special Conditions No. 2, 4, and 7 as special conditions of permit approval.

Special Condition No. 2 requires the landowner of APN 018-051-040 to record an open space deed restriction over the 17± acre creek restoration parcel. The open space deed restriction must be reviewed and approved by the Executive Director prior to issuance of the permit. The open space deed restriction prohibits all grading and development activity on the subject parcel, but makes five limited exceptions which are not inconsistent with Sections 30230, 30231, and 30240 of the Coastal Act. In summary, those exceptions are: (a) implementation of the restoration plan for the creek as approved by the Commission under Permits No. 1-95-40 and 1-95-59, (b) any activity that is consistent with a long-term management and maintenance plan for the creek which has been approved by the Commission, (c) the removal of any vegetation by the California Department of Forestry and Fire Protection if necessary for fire safety and if not inconsistent with an approved, long-term management and

**REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)**

Page 44

maintenance plant for the creek, (d) archaeological investigations where site restoration is assured and applicable consultations and approvals have been obtained, and (e) any future public access or public recreation improvements that are approved by the Commission or its successor agency.

Special Condition No. 4 requires, in part, that the landowner of APN's 018-150-050 and 018-150-070 to record a deed restriction on those two parcels as shown on Exhibit No. 6a on those parcels. The deed restriction shall establish a surface water runoff/sedimentation control area over the entirety of APN's 018-150-050 and 018-150-070.

Special Condition No. 4 also requires the placement of an open space deed restriction over an 8± acre, upland hillside habitat area west of the wastewater treatment plant and north of the creek on APN 018-051-050 (City of Pacifica). As previously mentioned, the purpose of this open space habitat area is to serve as a buffer area to the creek and as a migratory corridor for wildlife, particularly the San Francisco Garter Snake. This open space deed restriction prohibits all grading activity, the alteration of landforms, the removal of vegetation, or the erection of structures of any type within the area except for several specific exceptions. The deed restriction for the surface water runoff/sedimentation control area on APN's 018-150-050 and 018-150-070, as adjusted, provides certain assurances regarding surface water runoff and sedimentation.

As previously mentioned, the Commission finds that requiring an open space deed restriction over a buffer area/migratory corridor area along the creek and over APN's 018-150-050 (Bottoms) and 018-150-070 (Bottoms) as adjusted, is not essential at this time. These two parcels are currently in an undeveloped state, and the more appropriate time to consider such a buffer area/migratory corridor area would be when the property is proposed for development. In anticipation of the future development of these two parcels, the reader should note that the Commission has typically used a 100-foot-wide buffer area to protect wetlands and other environmentally sensitive habitat areas. The buffer area provides essential open space between the future development on the two parcels owned by Mr. Bottoms and the creek parcel to be owned by the City. The buffer area is not a part of the environmentally sensitive habitat area, but a "buffer" or "screen" that protects the habitat area from adverse environmental impacts caused by adjacent development. In some cases, the width of the buffer area has been less than 100 feet, however, this typically occurs where pre-existing development does not allow the establishment of a 100-foot-wide buffer area. In this case, there is no pre-existing development. The grading and reclamation activity in the quarry area will result in a clean slate with no pre-existing development to complicate the width and location of an appropriate buffer area.

This permit does not place any restrictions on the future use or development on APN's 018-150-050 (Bottoms) and 018-150-070 (Bottoms) as adjusted. However, the deed restriction in Special Condition No. 4 does place requirements regarding the control of surface water runoff. While the creek is dependent upon the surface water runoff from these remaining areas of its

## REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)

Page 45

watershed, the rate and quality of that runoff as a result of future development must be carefully regulated to protect the creek.

Special Condition No. 7 requires requires that the permittee design and implement a long-term management and maintenance plan. Within 16 months after the Executive Director determines in writing that the goals of the creek restoration effort have been met, the permittee shall: (a) prepare a long-term management and maintenance plan for the creek with advice from the staff of the Coastal Commission, the California Department of Fish and Game, and the U.S. Fish and Wildlife Service, and (b) submit the plan to the Coastal Commission for their review and approval. The creek restoration effort cannot be considered to be complete without the implementation of a long-term maintenance plan that is designed to protect and enhance the wetland functions and habitat values of the creek. Clearly, some of the information that is gained in the annual monitoring reports may prove useful in developing a long-term maintenance plan for the creek area. The issues to be addressed in the long-term maintenance plan include, but are not limited to, the issues of fire suppression, prescribed burning, plant succession, habitat enhancement, diversion of treated wastewater from the creek, and the degree and extent of public access/use.

### 11. Public Access.

Section 30210 of the Coastal Act requires in applicable part that maximum public access and recreational opportunities be provided when consistent with public safety, private property rights, and natural resource protection. Section 30211 of the Coastal Act requires in applicable part that development not interfere with the public's right of access to the sea where acquired through use. Section 30212 of the Coastal Act requires in applicable part that public access from the nearest public roadway to the shoreline and along the coast be provided in new development projects, except in certain instances, as when adequate access exists nearby. In applying Sections 30210, 30211, and 30212, the Commission is limited by the need to show that any denial of a permit application based on those sections, or any decision to grant a permit subject to special conditions requiring public access, is necessary to avoid or offset a project's adverse impact on existing or potential public access.

The project site has an unimproved gravel way that begins behind a locked gate and fence at Highway One and heads westerly towards the ocean. A staff site inspection did not reveal any evidence of public use in this area. In addition, no one has come forward to claim that they have used the project site on a continuous basis for either blufftop viewing or for vertical access to the sea. The Commission therefore finds that the project is consistent with Section 30211 as the project will not interfere with the public's right of access where acquired through use, as no such rights apparently exist within or immediately adjacent to the project area.

The project calls for the construction of a paved, 8-foot-wide, 3,200-foot-long, public pedestrian walkway/bicycle trail on the 17± acre creek

## REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)

Page 46

restoration parcel to be owned by the City of Pacifica. The trail will begin near Highway One and the entrance to access road that will serve the wastewater treatment plant and run in a westerly direction along the south side of the restored creek to the beach. Display signs for interpretative material will be placed at several locations along the trail. The signs will include a description of the natural history of the site, such as information about the San Francisco Garter Snake, an explanation of the early Ohlone settlements in the area, and a description of the wetland restoration.

Although the restoration area for lower Calera Creek stops at the mean high tide line, the 17± acre creek restoration parcel to be owned by the City extends across the beach to the sea. Although no development is proposed on the beach, the beach will still be in public ownership by the City of Pacifica. Since the beach will be in public ownership, the applicant is not required to make an offer to dedicate lateral public access along the beach. In addition, the applicant is not required to make an offer to dedicate vertical public access from Highway One to the ocean because the proposed trail along the creek will serve this purpose. The Commission therefore finds that the project is consistent with Section 30212 as access from Highway One, the first public road, to and along the sea will be available to the public.

### 12. Public Recreation.

Section 30213 of the Coastal Act requires that lower cost visitor and recreational facilities be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred.

Although the outfall line from the existing wastewater treatment plant will be abandoned, the Santa Rosa/Beach Boulevard Pier that is over the existing outfall line will not be abandoned. Rather, the pier will continue to be maintained to provide public access. This pier is a popular fishing pier and it is a low cost recreational facility for the public.

The quality of the secondary effluent from the existing wastewater treatment plant is not safe for human contact. The existing effluent poses a risk to the health of surfers and other beach users who come in contact with this effluent. However, the new wastewater treatment plant will no longer discharge secondary effluent into the Ocean from the Santa Rosa/Beach Boulevard Pier. Rather, the new wastewater treatment plant will discharge tertiary treated effluent into a restored portion of lower Calera Creek. The quality of that tertiary treated effluent is required to meet the State of California Title 22 standards for unlimited reclamation/reuse, including human recreational contact with the effluent. Consequently, low cost recreational activities that come in contact with the water will be protected.

The 3,200-foot-long public walkway/bicycle trail will provide a low-cost form of public recreation. In addition, some people will also enjoy picking season blackberries that will be planted along the trail. As a result, a new low cost recreational opportunity to the public will be provided. The Commission

REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)

Page 47

therefore finds that the project is consistent with Section 30213 of the Coastal Act.

13. Archaeological Resources.

Section 30244 of the Coastal Act requires that reasonable mitigation measures be provided where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer.

A cultural resources survey of the Calera Creek site was completed by California Archaeological Consultants, Inc in 1994 by Orlins and Schwaderer. They verified the presence of a significant pre-historic site, listed by the State of California as CA-SMA-268. The site is located within a one-quarter acre area that is approximately 150 feet long and 70 feet wide area, and located on the north and east sides of the proposed access road to the new wastewater treatment plant. The pre-historic site contains shell, bone fragments, and other evidence of habitation. The date and nature of habitation was not verified. However, it is known that this area of the coast was occupied by Ohlone tribelet groups when European explorers made contact with local Native American people during the time of the Portola expedition in 1769.

The pre-historic site has suffered from repeated episodes of dumping and filling activity. A portion of the site is overlain by concrete and asphalt debris which will be removed. The site is also extensively covered with fennel, a weedy and invasive species which will also be removed.

The applicant has designed the creek restoration project in such a way as to avoid disturbing the archaeological resources on the site. Once the fennel and the asphalt and concrete debris have been removed, a six-inch-deep to 4-foot-deep layer of clean fill will be placed over the top of the archaeological site to recontour the surface area so that surface water runoff is directed toward the creek. Adding a layer of clean fill over the surface area of the archaeological site will allow the land to be recontoured without disturbing the archaeological resources under the site. The outlet of secondary discharge line from the treatment plant will be located over the upslope portion of the archaeological site nearest the treatment plant. Treated effluent will then drain towards the creek. The placement of coarse woody debris and the creation of micro-depressions will serve to slow the rate of runoff. The surface area will be planted with riparian plants.

One area of remaining concern is the type of riparian plants to be planted over the archaeological site. There is a need to prevent the planted vegetation from disrupting the integrity of sub-surface cultural remains. For example, trees that are subject to windthrow during storms and result in up-ended root wads would not be appropriate. As a result, the applicant is agreeable to replanting the surface of the archaeological site only plant species approved by the State Historic Preservation Office.

**REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)**

Page 48

However, to ensure that all reasonable mitigation measures will be provided where the proposed development could adversely impact archaeological resources as identified by the State Historic Preservation, the Commission attaches Special Conditions No. 2, 5c, and 12.

Special Condition No. 2 requires the recordation of an open space deed restriction over the 17± acre creek restoration parcel to protect the creek and its wetland resources from inappropriate future development. However, the cultural, scientific, and educational resources at the archaeological site would not be available for future investigation and academic study if such activities were totally prohibited by the deed restriction. Therefore, to allow for such investigations to occur in a manner that is both responsible and protective of the resources involved, the deed restriction specifically exempts:

- d. "Archaeological investigations or excavations approved by the Coastal Commission or its successor agency;..."

Special Condition No. 5c requires that the applicant prepare a final creek restoration plan for the review and approval of the Executive Director, prior to issuance of the permit. LCLA, the consultant for the creek restoration project, prepared an August 3, 1995 addendum to their creek restoration plan. Among other things, the addendum indicates that the City has been contacted by tribal elders of the Ohlone tribe regarding the current wetland design for the archaeological site. The tribe has requested the opportunity to provide counsel for the wetland design at the archaeological site. Therefore, to make sure that the tribe has this opportunity, Special Condition No. 5c requires in applicable part that:

"The applicant submit any redesign of the wetlands over the archaeological site after consultation with tribal elders of the Ohlone tribe."

Lastly, Special Condition No. 12 requires that a qualified archaeologist be on the subject property to monitor development activity so that archaeological resources are not disturbed. Special Condition No. 12 requires the permittee to enter into a monitoring agreement with a qualified archaeologist. The permittee must submit a copy of that agreement to the Executive Director for the permit file. The agreement must provide that the archaeologist be on site to monitor any grading activity and the removal of any debris within the project's known archaeological site. Should archaeological resources be discovered within the project's known archaeological site, or elsewhere within the project area during construction authorized by this permit, then all work that could damage or destroy these resources must be immediately suspended. The permittee shall then have the archaeologist: (a) inspect the site where the archaeological materials were found, (b) determine the nature and significance of the archaeological materials, and if they deem it necessary, (c) develop appropriate mitigation measures using standards of the State Historic Preservation Office.



Should the archaeologist determine that mitigation measures are necessary, then the permittee must apply to the Commission for an amendment to Permit No. 1-95-40, requesting that the permit be amended to include the mitigation plan proposed by the archaeologist and the consultant. The mitigation plan must provide for monitoring, evaluation, and protection of archaeological resources on the site, and must define specific mitigation measures. Should the archaeologist determine that no mitigation measures are necessary, then work on the project may be resumed.

As discussed above, the Commission finds that Special Conditions No. 2d, 5c, and 12 are all reasonable mitigation measures that are consistent with Section 30244 of the Coastal Act.

14. Visual Resources.

Section 30251 of the Coastal Act requires in applicable part that permitted development: (a) be sited and designed to protect views to and along the ocean and scenic coastal areas, (b) minimize the alteration of natural land forms, (c) be visually compatible with the character of surrounding areas, and, where feasible, (d) restore and enhance visual quality in visually degraded areas.

Section 30412 of the Coastal Act also provides in applicable part that the State Water Resources Control Board and the California regional water quality control boards are the state agencies with primary responsibility for the coordination and control of water quality. In addition, the Coastal Commission shall not take any action in conflict with any determination by the State Water Resources Control Board or any California regional water quality control board in matters relating to water quality or the administration of water rights. Lastly, any development within the coastal zone or outside the coastal zone which provides service to any area within the coastal zone that constitutes a treatment work shall be reviewed by the Coastal Commission, and any permit it issues, if any, be determinative only with respect to the following aspects of such development:

- (1) The siting and visual appearance of treatment works within the coastal zone....

In large measure, the proposed project will restore and enhance the visual quality of this visually degraded area. The most immediate visual impact will be the amount and extent of the rough grading activity that is necessary to site the plant, excavate a new channel and floodplain for the creek, and regrade all of that material to create an area with drainage characteristics that will enhance the base flow of the creek and its adjacent wetland and riparian resources. This visual disruption is only temporary, however, and the disruption can be mitigated with the use of temporary cover crops, hydroseeding, and/or mulching until the more permanent plantings are established. To ensure that such measures will take place, the Commission attaches Special Condition No. 5a which requires the permittee to submit final erosion control and grading plans for the review and approval of the Executive Director, prior to issuance of the permit.

## REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)

Page 50

In its present condition, the quarry area cannot be considered to be a natural landscape or a natural landform. Thus, the requirement in Section 30251 that development minimize the alteration of natural landforms is not applicable to the creek restoration portion of the project which is located in the heart of the quarry area. The creek restoration portion of the project involves the greatest amount of grading activity, both in the size of the area to be graded and the amount of material to be moved to reshape the contours of the land.

However, the requirement in Section 30251 that development minimize the alteration of natural landforms is applicable to the construction of the wastewater treatment plant portion of the project. The plant will be located at the base of the south facing slopes of the Mori Point ridgeline, which is still a natural landform. In siting the plant at this location, the 3.8± acre cut area has been kept to the minimum amount necessary to site the plant. In addition, the western half of the plant will be totally buried underground and replanted with a native plant community that is similar to the plant community that grows on the Mori Point ridgeline. As a result, the Commission finds that the project is consistent with Section 30251 to the extent that it has been sited and designed to minimize the alteration of natural landforms.

With respect to the protection of public views to and along the coast, the westerly half of the wastewater treatment plant, a 1.1-acre area containing the SBR and equalization tanks, will be buried completely underground, covered with a concrete roof and topsoil, and planted with a native coastal prairie plant community that is similar to the native plants on the hillside. The easterly half of the plant will be partially subject to public view, depending on the location of the viewer. For example, except for the Highway One entrance of the access road to the treatment plant, an existing berm on the west side of the Highway One will screen the plant from public view for those who are driving by the plant on Highway One.

In short, the highest and most visible portion of the plant will be the 35-foot-high, odor and sludge control/handling building. See Exhibits No. 10 and 11. Immediately after construction, the sludge control building will be most visible from: (1) the mid-to-upper slopes of Vallemar neighborhood on the east side of Highway One, where that neighborhood is about 1,000 to 2,000 feet southeast of the treatment plant, and from (2) northbound traffic on Highway One that is 3,000 and 4,800 feet south of the plant and descending a long downhill slope towards the Frassler Avenue stop light and intersection with Highway One at Rockaway Beach.

To further screen the sludge control building from public view, the applicant proposes to install a 10-foot-high berm on the south or front side of the treatment plant and plant the berm with several types of fast-growing trees that are native to the San Mateo coastal riparian community. Such trees include: red alder (*Aldus rubra*), western sycamore (*Platanus racemosa*) and big leaf maple (*Acer macrophyllum*). These trees are tolerant of summer watering and would grow tall enough to eventually screen this building from public view with a dense canopy of leaves and branches. The trees would be tall enough to effectively screen this building from all public view within 10

## REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)

Page 51

years after planting, depending on the height of the trees when they are planted and how well they are maintained. In summary, the siting and design of the treatment plant will minimize adverse impacts to public views if it is constructed and landscaped as intended.

Therefore, to ensure that the landscape plan is implemented and maintained as intended, the Commission attaches Special Condition No. 5b, which requires the permittee to submit a final landscaping plan for the review and approval of the Executive Director, prior to issuance of the permit. Among other things, Special Condition No. 5b requires that: (1) the landscaped area on the berm on the south side of the treatment plant must be planted with trees that are native to the San Mateo coastal riparian community and are not less than 6 feet in height at the time of planting, (2) the landscaping on the berm and around the treatment plant must be sited and designed to soften, and ultimately screen, the treatment plant from public view within 10 years of planting, and (3) the planting and maintenance program must be designed to maximize the chances of survival of the vegetation to be planted, and (4) any planted vegetation that is intended to be permanent that dies must be replaced at a one-to-one or greater ratio for the life of the project. The Commission therefore finds that the project is consistent with Sections 30251 and 30412 to the extent that it has been sited and designed to protect public views to and along the coast.

As previously mentioned, the treatment plant includes a combination of flat and pitched roofs. The surface elevations include textured concrete, concrete block, and corrugated zinc or cement building materials. To ensure that the treatment will be visually compatible with the character of the surrounding area, the Commission attaches Special Condition No. 5d, which requires in applicable part, that the final building plans for the wastewater treatment plant include building elevations that show that the exterior surface and roof areas of the treatment plant will be colored in a neutral gray and/or brown tone which blends well visually with the character of the surrounding landscape. To ensure that what is on the approved plans is what gets built, the introductory portion of Special Condition No. 5 requires that the development must be constructed in a manner that is consistent with the approved final plans. The Commission therefore finds that the project is consistent with Section 30251 to the extent that it will be visually compatible with the character of the surrounding area.

### 15. Geologic and Flood Hazards.

Section 30253 of the Coastal Act requires in applicable part that new development: (a) minimize risks to life and property in areas of high geologic and flood hazards, (b) assure stability and structural integrity of the proposed development, and (c) neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area.

To minimize the risk to an old landslide that is adjacent to the wastewater treatment plant from becoming unstable during grading and excavation activity, the draft final geotechnical investigation of the site by Rogers/Pacific ,

## REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)

Page 52

Inc. recommends that the applicant: (a) use temporary and permanent support of the sides of the planned excavation, (b) stabilize the toe of the adjacent landslide if required using closely spaced below grade drilled piers or soldier beams, (c) dewater the excavation area with shallow trenches or sumps, and (d) design against bouyant forces for the filter building, and if necessary, make the structure water tight.

Therefore, to find the project consistent with Section 30254, the Commission attaches Special Conditions No. 10 and 5d. Special Condition 5d requires in applicable part that the permittee submit a final building plans for the review and approval of the Executive Director, prior to issuance of the permit. The final building plans for the wastewater treatment plant shall include foundation and retaining wall plans that are consistent with the recommendations of the final geotechnical report that was prepared for the project by Rogers/Pacific, Inc.

In addition, Special Condition No. 10 requires that the permittee submit a final geotechnical report for the review and approval of the Executive Director, prior to issuance of the permit. The final geotechnical report by Rogers/Pacific, Inc. Professional Engineering Consultants, must: (1) evaluate the geotechnical conditions of the project site relative to the proposed development and provide appropriate remedial and design recommendations; and (2) ensure that all final engineered foundation, retaining wall, and grading plans will be prepared in accordance with the recommendations contained in the geotechnical report. Evidence of approval of the final foundation, retaining wall, and grading plans by a geotechnical or civil engineer shall accompany the plans to be submitted, and development shall occur consistent with the approved plans.

### 16. Project Review by Other Agencies.

#### a. City of Pacifica.

The City of Pacifica has approved a special use permit (UP-761-95) and a variance (PV-370-95) for the project. However, the City still needs to approve site development permit, a grading permit, and a minor administrative boundary adjustment to finalize local approval of the project. Therefore, to ensure that the permittee has the legal ability to implement the project, the Commission attaches Special Condition No. 8, which requires that the permittee submit a copy of an approved site development permit, a grading permit, and an minor administrative boundary line adjustment to the Executive Director, prior to issuance of the coastal development permit.

#### b. California Department of Fish and Game.

The creek restoration portion of the project will require a 1601/1603 Streambed Alteration Agreement from the California Department of Fish and Game. Therefore, to ensure that the permittee has the legal ability to implement this portion of the project, the Commission attaches Special Condition No. 9, which requires that an approved Streambed Alteration

REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)

Page 53

Agreement be submitted to the Executive Director, prior to issuance of the coastal development permit.

c. California Department of Transportation.

The wastewater treatment portion of the project and its access road to Highway One will require an encroachment permit from the California Department of Transportation. Therefore, to ensure that the permittee has the legal ability to implement this portion of the project, the Commission attaches Special Condition No. 9, which requires that an approved encroachment permit be submitted to the Executive Director, prior to awardance of the construction contract.

d. U.S. Army Corps of Engineers.

Under a Nationwide 26 Permit, the U.S. Army Corps of Engineers (USCOE) has authorized the filling of approximately 7.1 acres of waster of the United States in conjunction with the construction of the proposed wastewater treatment facility near Calera Creek and the relocation of Calera Creek. The USCOE has stipulated that its authorization will not be effective until Section 410 water quality certification or a waiver of certification has been obtained from the State Regional Water Quality Control Board and a coastal zone consistency concurrence from the California Coastal Commission. The authorization is valid until January 22, 1997.

The USCOE requests that a copy of the water quality certification for the project be submitted to the Corps to verify compliance. To ensure compliance with the nationwide permit, the USCOE requests that the following special conditions shall be implemented:

The U.S. Fish and Wildlife Service, Sacramento Office, has Federal jurisdiction in San Mateo County for issues involving endangered species. The San Francisco Garter snake (Thamnophis sirtalis tetrataenia), a listed Federal Endangered Species, was documented on site in 1989. The California Red-Legged frog (Rana aurora draytonii), a proposed Federal endangered species, is know to inhabit ponds in or near Calera Creek on site. The Corps of Engineers has initiated a formal consultation, pursuant to Section 7 of the Endangered Species Act of 1973 (as amended), for the San Francisco Garter snake and a concurrent formal conference for the California Red-Legged frog. Therefore, no work of any type is to commence in areas of Corps jurisdiction until concerns regarding these two species have been resolved.

The applicant and LCLA, the applicant's consultant for the creek restoration, have met several times with staff from the U.S. Fish and Wildlife Service to address this issue. A plan to restore the former snake ponds and their habitat area has been submitted to the Coastal Commission under Permit Application No. 1-95-59. It is presently anticipated that the permit application will soon be filed as complete and scheduled for the Commission's January meeting in Los Angeles. The City has agreed that it will not

## REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)

Page 54

undertake any development that is approved by the Commission under Permits No. 1-95-40 and 1-95-59 until both permits have been issued to the City.

### 17. City of Pacifica LUP/Prejudice to LCP.

The subject property is designated as a Special Area in the city's Coastal Land Use Plan (LUP). This portion of the City's coastal zone was not certified by the Coastal Commission during the summer of 1994, and it remains as "an area of deferred certification". The City's LUP indicates that the site is "to be developed as a unit, and to include commercial, residential, City Hall, and Marina Uses". The plan emphasizes that the property is one of the few remaining large vacant sites suitable for commercial development and that a substantial portion of the commercial uses should be coastally oriented visitor destinations.

In approving the special use permit for the wastewater treatment plant, the City of Pacifica found that the proposed use was not be inconsistent with the existing land use in the area. The City found that the treatment plant location provides adequate separation from existing residential uses east of Highway One and that adequate separation is available from future commercial and residential development in the surrounding quarry area.

The certified EIR for the project states that use of a portion of the quarry site for the wastewater treatment plant and its associated creek and wetlands would conform to the Coastal Plan narrative provided that the rest of the property remains available for development. The project could also be considered as a municipal facility that is not inconsistent with the City Hall uses described in the LUP. In addition, the project will increase the site's developability through the consolidation of wetlands currently scattered throughout the quarry site.

The Coastal Commission concurs with the above findings, except to point out that future visitor-serving commercial development in the quarry area will have a higher priority of use under the Coastal Act than private residential and general commercial development. The Commission finds that approval of the project, as conditioned, will not prejudice local government's ability to implement a certifiable LCP for the quarry area.

### 18. California Environmental Quality Act (CEQA).

An important feature of CEQA is the consideration of less environmentally damaging alternatives to the proposed project. The consideration of less damaging alternatives also includes looking at the proposed project, but in a different and less environmentally damaging location.

The No Project Alternative would result in continued maintenance of the City's existing treatment plant. The No Project Alternative should be rejected as it fails to meet the project's objective of improving plant performance to allow the plant to continuously meet effluent discharge requirements, according to State law, and to allow a Cease and Desist Order imposed by the Regional Water Quality Control Board (RWQCB) to be lifted.

## REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)

Page 55

The project's EIR considered several locations to site the proposed wastewater treatment plant. Among other things, potential plant sites were identified according to engineering feasibility to install necessary process components. The criteria used to evaluate the plant sites were the factors pertaining to acquisition feasibility and cost, zoning, location upwind or downwind of a residential area, and whether the site was large enough to accommodate all of the facilities. The ultimate selection narrowed down to three sites which were subject to detailed study in the EIR, and which were supported by a Value Engineering Review that was conducted in November of 1993.

Those three sites were:

1. The Existing Plant Site. The existing plant site is on city-owned land between Palmetto Avenue and Beach Boulevard at their intersection with Montecito Avenue.
2. Below Sharp Park Road Site. East of Highway 1 (and outside of the coastal zone), on the lower hill slope that is south of and below the portion of Sharp Park Road near Lundy Way and Highway 1. The land is part of the part of the park lands under the ownership of the City and County of San Francisco.
3. North Quarry Site (the preferred option). On the hillside south of Mori Point Ridge, west of Highway 1, on private lands under the ownership of the Rockaway Beach Quarry property owner (Bottoms). The land is located within the coastal zone and within an area of deferred certification.

The existing plant site was rejected in the final selection for the following reasons: the site is in a residential neighborhood where there are homes as close as 15 feet away from the plant boundary. Even if the plant were completely rebuilt into a similar type of plant to those proposed for the alternative sites, several significant, unavoidable adverse impacts would remain. They are:

- a. Land Use. Proximity of a wastewater plant to the residential neighborhood is unavoidable at this location. There are 16 structures within 100 feet of the plant, 45 within 200 feet, and 253 within 500 feet. Land use conflicts cannot be entirely eliminated due to the basic incompatibility of a wastewater plant and an immediately adjacent residential community.
- b. Air Quality: Although the odor-producing components of the wastewater treatment plant would be covered or enclosed within buildings, the proximity of the residential neighborhood in a primarily downwind direction makes it impossible to eliminate the possibility of odor impacts. The closeness of the existing residential neighborhood, and the frequency of odor-conducive wind conditions all contribute to an ongoing potential for an odor impact.

## REVISED FINDINGS - 1-95-40 (CITY OF PACIFICA)

Page 56

- c. Construction Noise: During the 15 months of grading, foundation work and yard construction, up to 250 residences within 500 feet of the plant would be subjected to daily noise levels in excess of City noise standards.
- d. Conformance with Plans/Zoning. The proposal would conflict with Caltrans regarding widening of Highway One. The new SBR at the existing plant site would require a new effluent pipeline from the plant to Calera Creek to run down the west side of Highway 1. The construction of the effluent pipeline could conflict with Caltrans future plans to widen the highway.

The Below Sharp Park Road Site was also rejected in the final selection for reasons of project feasibility. For example, construction of the plant would require a negotiated agreement between the City of Pacifica and the City and County of San Francisco. If San Francisco were to find that the project is inconsistent with its use for the rest of the park lands for any reason, then the project would be infeasible to build at this location. The site is also within the legislative boundary of the Golden Gate National Recreational Area (GGNRA). The GGNRA has gone on record stating that the project is inconsistent with the land use designation of these park lands. In addition, the new SBR at this site would also require an effluent line between the plant and Calera Creek. Construction of this pipeline on either the west or east side of Highway 1 may conflict with Caltrans future plans to widen the highway.

Lastly, the North Quarry Site was selected on the basis that it had fewer physical and political constraints, and it offered the real possibility of environmental enhancement. The proposed project has the potential to reclaim a seriously degraded landscape, both in visual terms and natural resource terms, and turn it around to provide a new and less polluting wastewater treatment plant, along with public access trail, and a restored creek with wetland and riparian habitats that have a greater value to wildlife and recreation. The Commission finds that the selected site is consistent with the provisions of CEQA.

Another important feature of CEQA is the consideration of feasible mitigation measures to lessen the project's impacts to the environment. The project, as conditioned, does not have a significant adverse effect on the environment, within the meaning of CEQA. As discussed above, the Commission finds that approval of the project has been mitigated to ensure consistency with the Coastal Act.







OCEAN

PACIFIC

Existing outfall line  
and wastewater treatment plant

Proposed wastewater  
treatment plant and  
restoration of lower  
Calera Creek

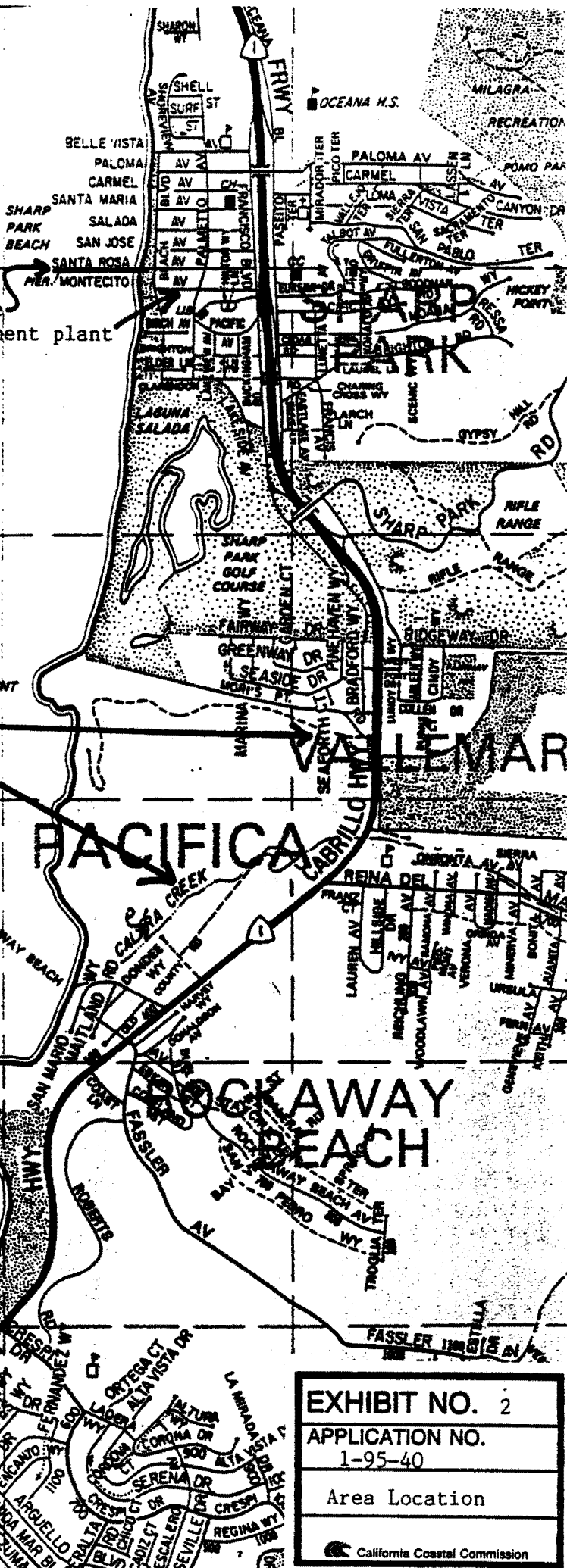


EXHIBIT NO. 2
APPLICATION NO. 1-95-40
Area Location
California Coastal Commission

Figure 1. Location of Calera Creek Restoration Site in Pacifica, California (U.S.G.S. Montara Mtn. Quad 1980)

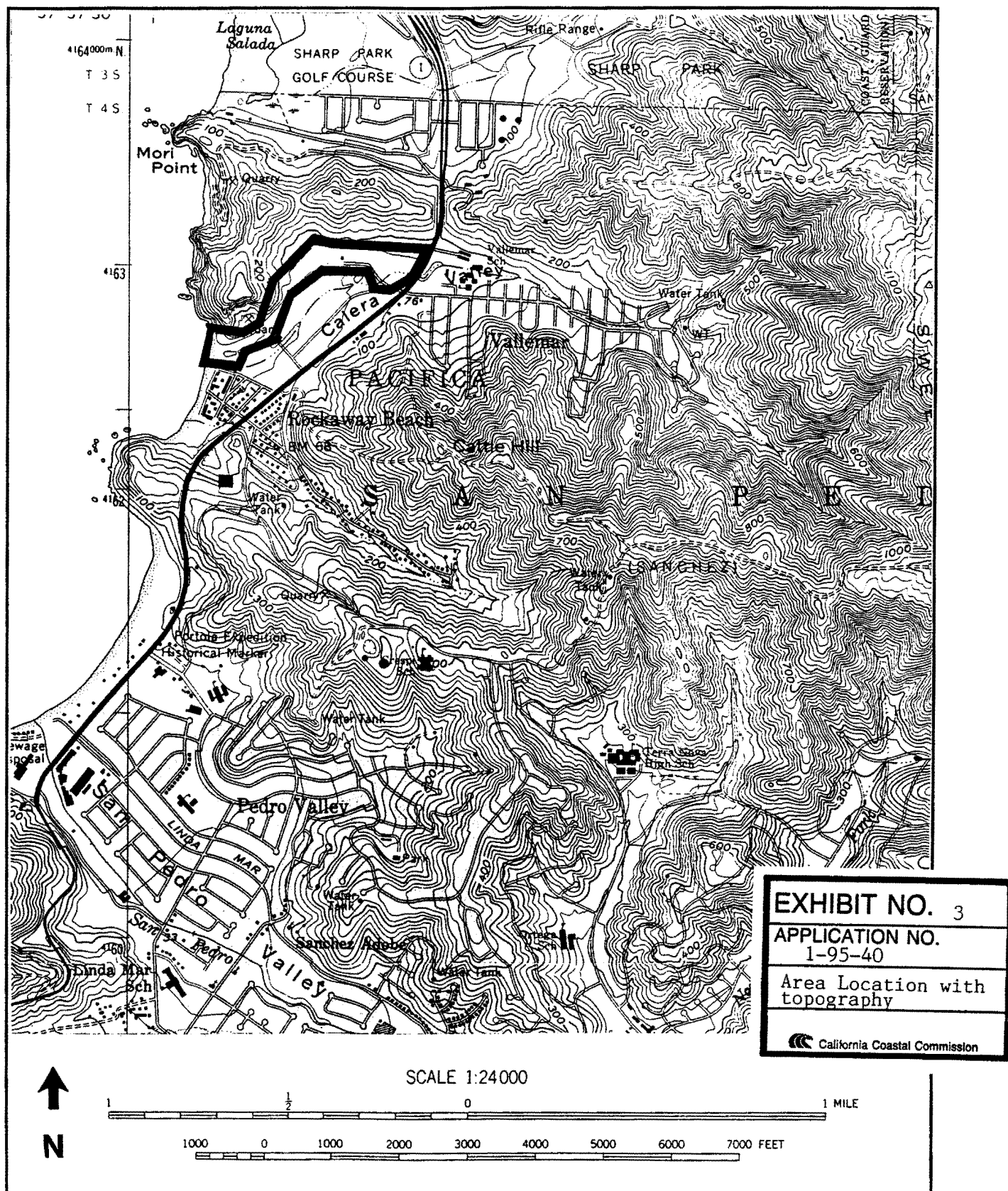
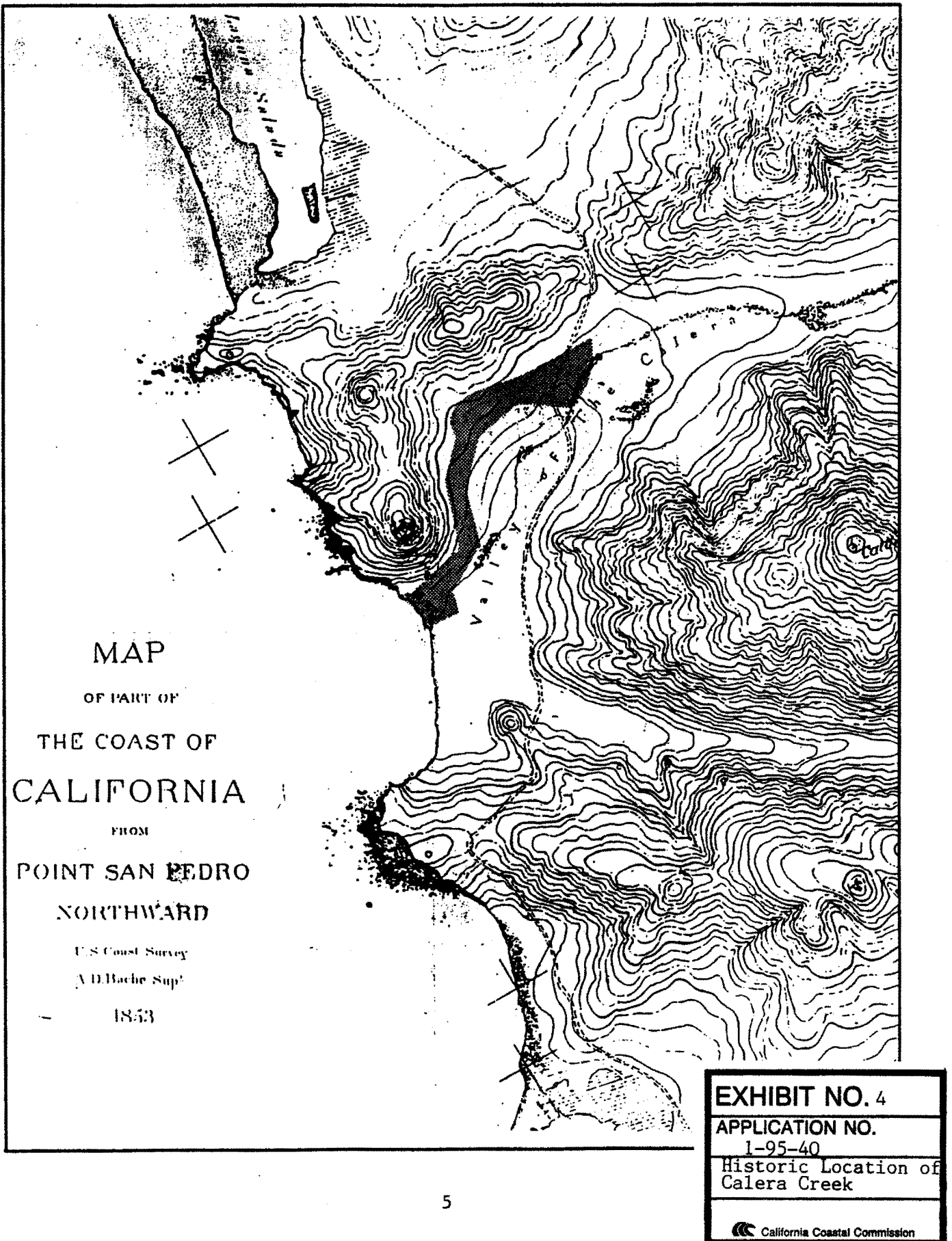
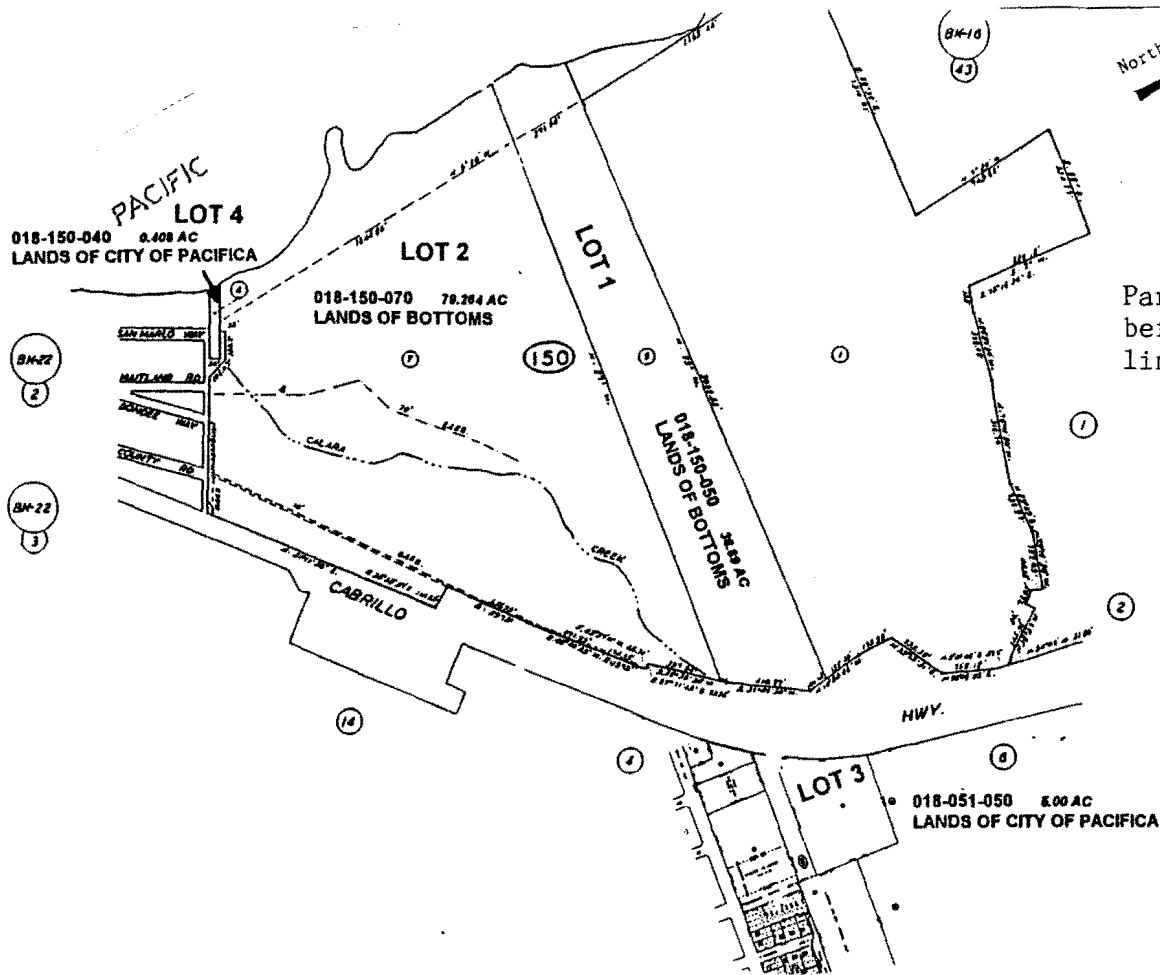
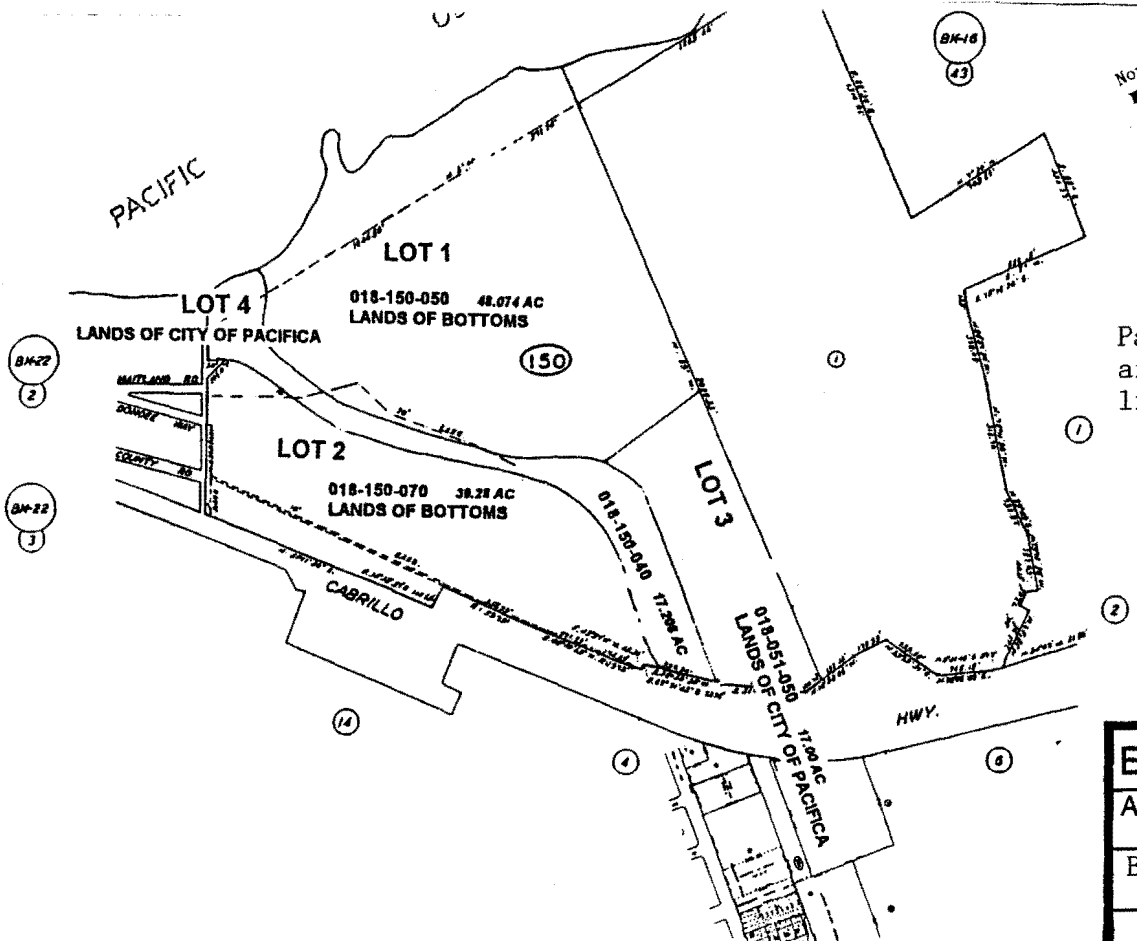


Figure 2. Historic Conditions at Calera Creek in 1853 (U.S. Coast Survey)





Parcel configuration  
before the boundary  
line adjustment.



Parcel configuration  
after the boundary  
line adjustment.

**EXHIBIT NO. 5**  
**APPLICATION NO.**  
1-95-40  
**Boundary line  
adjustment**





Scale: 1 inch = 400 feet.

North

8.76-acre deed restricted area per Special Condition No. 4.

Wastewater Treatment Plant Parcel

17± acre Creek and Wetland Restoration Parcel.

Deed restricted area includes the whole parcel, except the beach per Special Condition No. 2.

Surface water runoff and sedimentation control deed restriction per Special Condition No. 4.

Highway One

Mean High Tide Line  
Beach

Pacific Ocean

Rockaway Beach Area.

EXHIBIT NO. 6a

APPLICATION NO.  
1-95-40

Deed restricted areas

Figure 17. Proposed Grading Plan, Calera Creek Wetland Restoration

Zone 2: Middle Reach  
with Snake Habitat

Zone 1: Outlet at SBR

Zone 3: High  
Gradient Reach

Zone 4: Forested Reach

Zone 5: Reach  
below New Bridge

Zone 6: Outlet

PACIFIC OCEAN

LEGEND

- Stream Channel
- 16.8-Acre Parcel Property Line
- Existing Contours
- Proposed Contours
- Bike Path
- Coarse Woody Debris
- Microdepression
- North

SCALE	1" = 100'
DATE	
BY	
CHECKED BY	
APPROVED BY	

42



Project	Calera Creek Wetland Restoration	Sheet	Grading Plan	SHEET 1
---------	----------------------------------	-------	--------------	------------

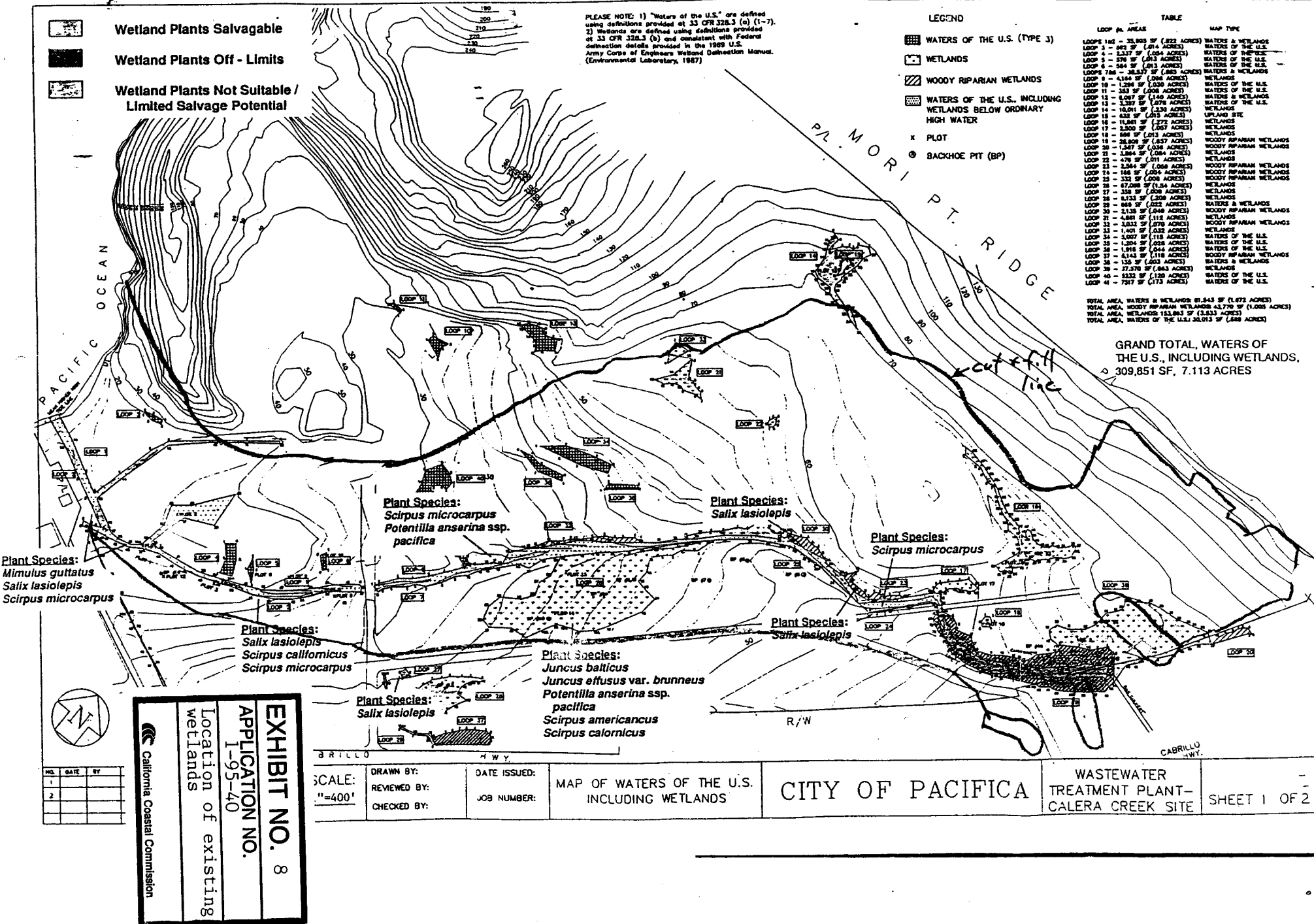
**EXHIBIT NO. 7**

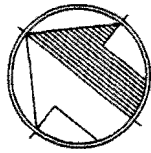
**APPLICATION NO.**  
1-95-40

Grading Plan/Six  
Vegetative Zones  
along the creek

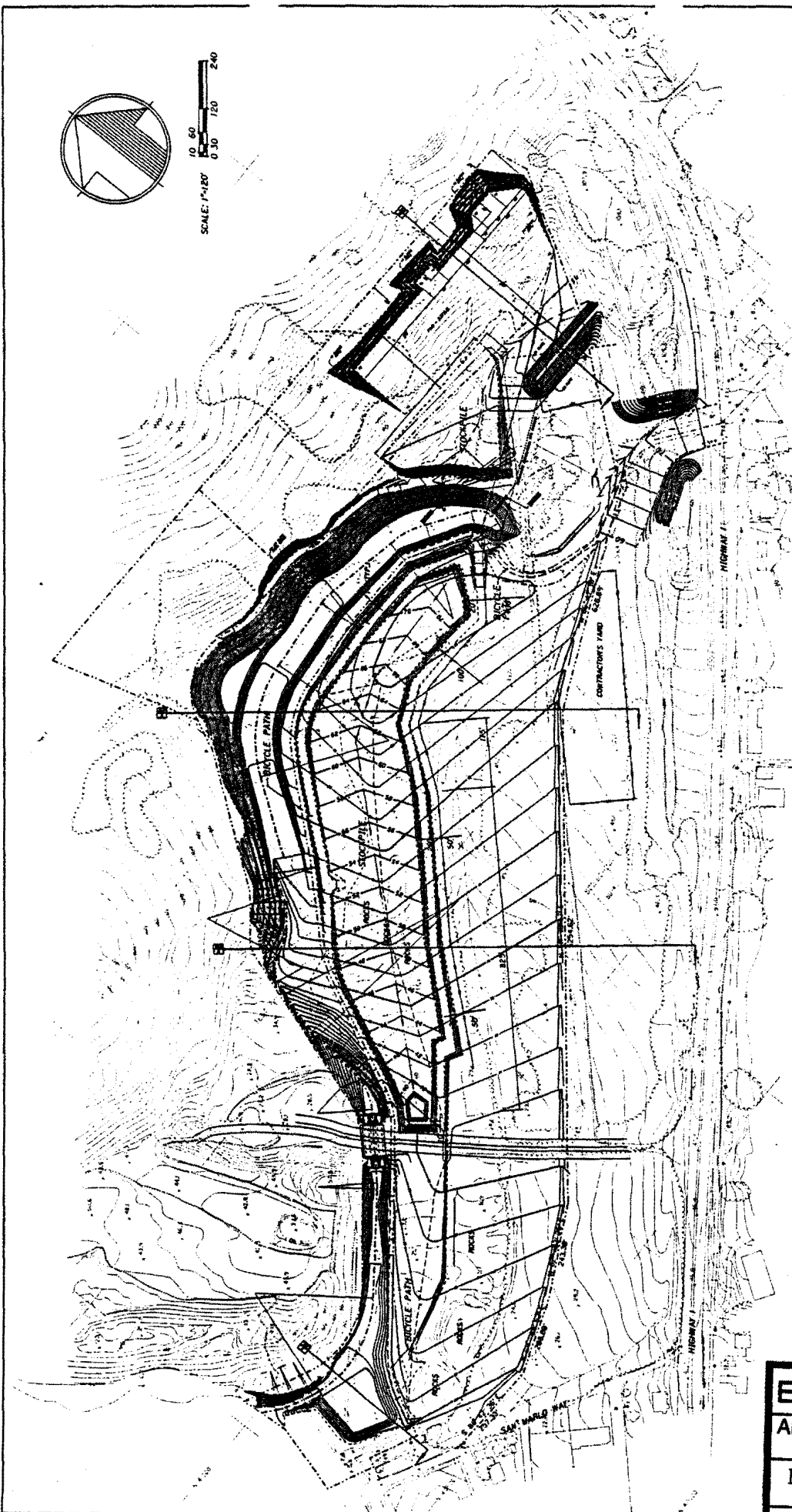
California Coastal Commission







SCALE: 1"=120'  
0 30 60 120 240



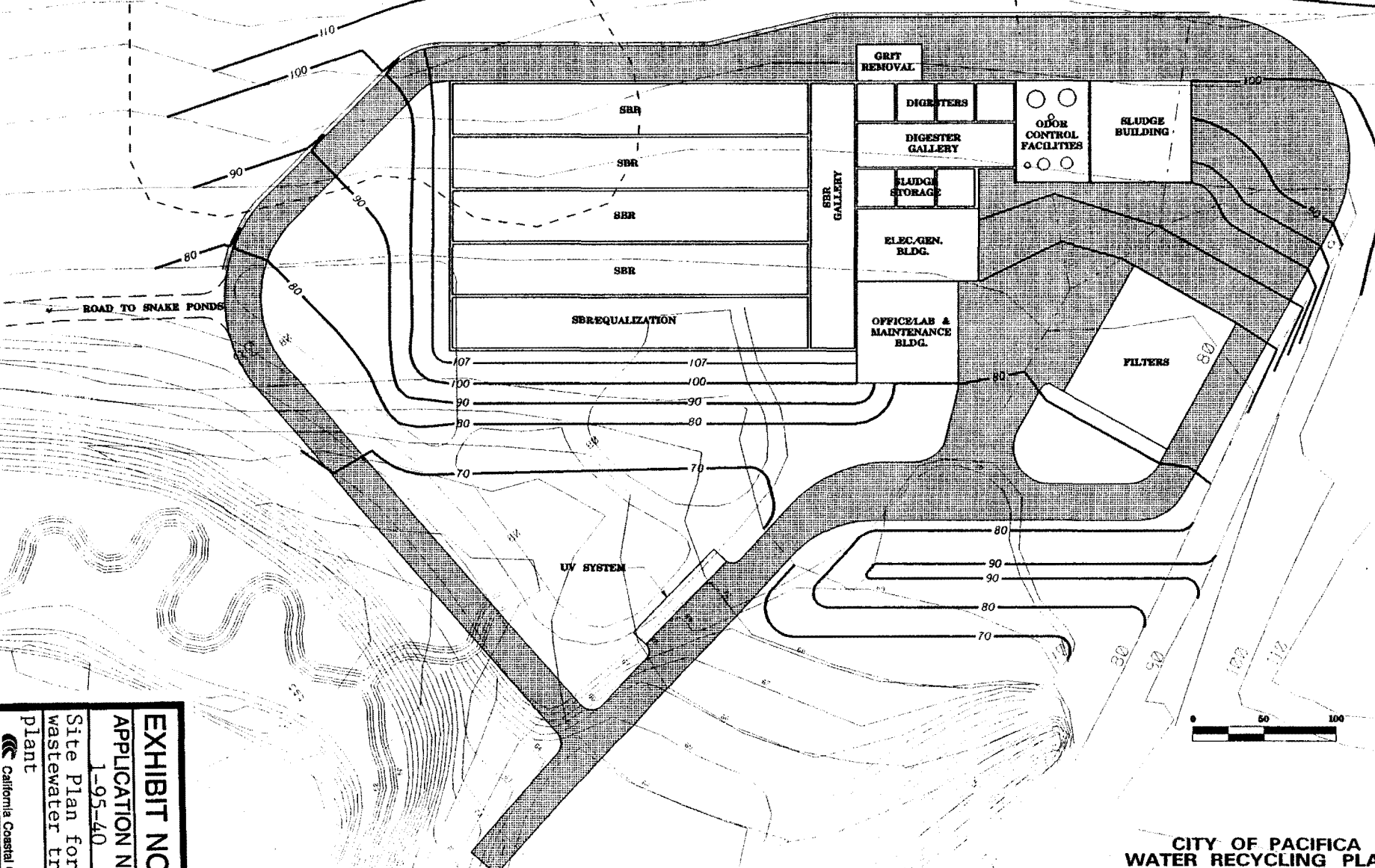
SHEET 1 OF 1	CITY OF PACIFICA CALERA CREEK WETLAND RESTORATION & WATER RECYCLING PLANT COSTAL COMMISSION COMPOSITE EXHIBIT	
	DATE	DATE
APPROVED	MONTGOMERY WATSON Pasadena, California	
DESIGNED	RECORDED	INDEXED
DATE	DATE	DATE
SCALE 1"=120'	SUBMITTED PROJECT NUMBER SUBMITTER DATE	

**EXHIBIT NO. 9**  
**APPLICATION NO.**  
 1-95-40  
**Rough Grading Plan**

North ↑



**CITY OF PACIFICA  
WATER RECYCLING PLANT  
PROPOSED SITE PLAN**



**EXHIBIT NO. 10**

**APPLICATION NO.**

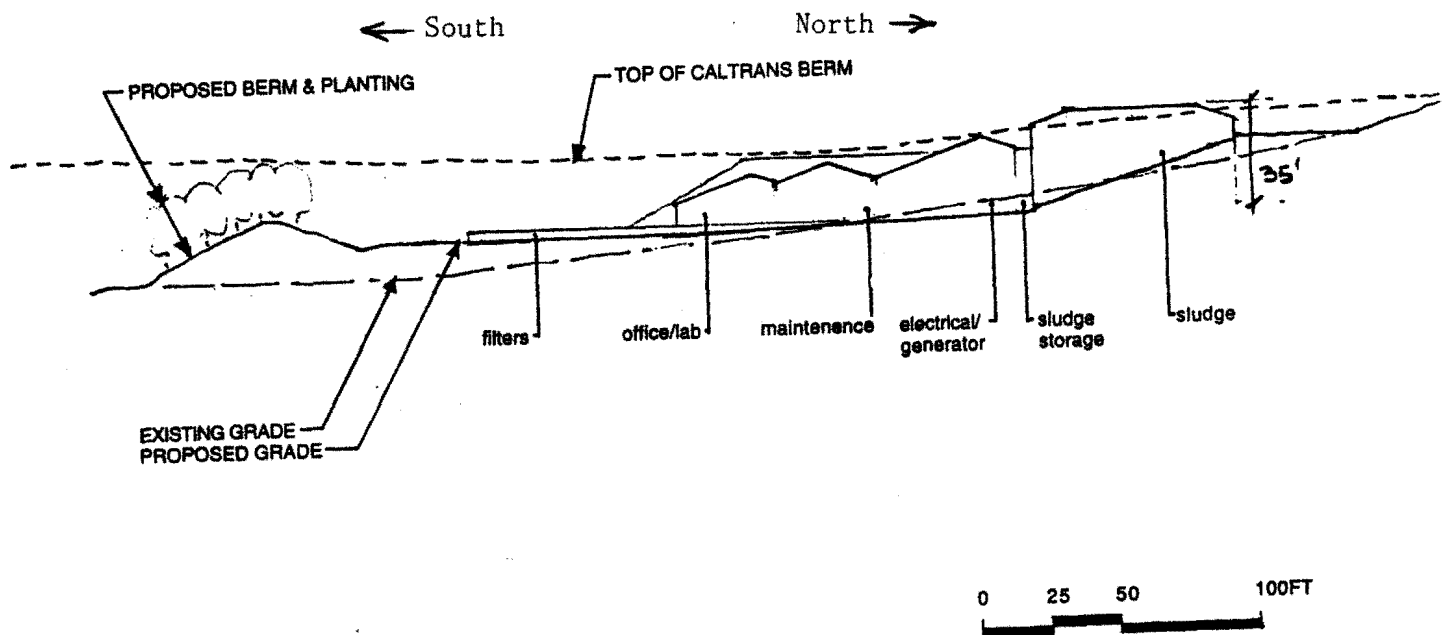
1-95-40

Site Plan for the  
wastewater treatment  
plant

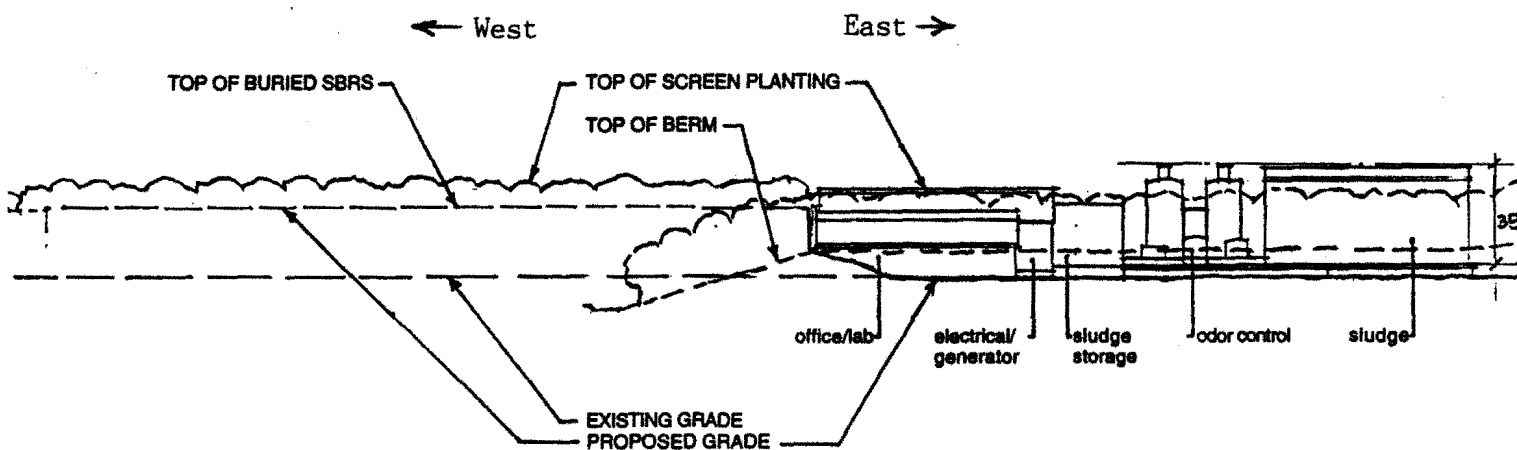


California Coastal Commission

**CITY OF PACIFICA  
WATER RECYCLING PLANT  
PROPOSED NORTH/SOUTH SECTION-ELEVATION**



**CITY OF PACIFICA  
WATER RECYCLING PLANT  
PROPOSED EAST/WEST SECTION-ELEVATION**



**EXHIBIT NO. 11**

**APPLICATION NO.  
1-95-40**

**Site Plan Elevations**



California Coastal Commission

0 25 50 100FT

Table 8. Comparison of Wetland Functions Pre and Post-Restoration at Calera Creek Wetland Restoration

Wetland Function	EXISTING CONDITIONS			RESTORED CONDITIONS			CHANGE IN WETLAND FUNCTION		
	Existing Level of Wetland Function at Calera Creek Wetlands (by comparison with attainable reference wetlands)	Area of Existing Wetlands (acres)	Area of Existing Wetlands multiplied by level of wetland function = Functional Capacity Units (FCU)	Post Project Level of Wetland Function at Calera Creek Wetlands (by comparison with attainable reference wetlands)	Area of Restored Wetlands (acres)	Area of Restored Wetlands multiplied by level of wetland function = Functional Capacity Units (FCU)	Change in Level of Wetland Function as a Result of Restoration	Change in Area of Wetlands (acres)	Change in Functional Capacity Units
<b>Hydrology</b>									
1. Dynamic Surface Water Storage	0.00	7.10	0.00	0.80	8.01	6.41	+0.80	+0.91	+6.41
2. Long-term Surface Water Storage	0.00	7.10	0.00	1.00	8.01	8.01	+1.00	+0.91	+8.01
3. Energy Dissipation	0.00	7.10	0.00	0.80	8.01	6.41	+0.80	+0.91	+6.41
4. Subsurface Water Storage	0.00	7.10	0.00	1.00	8.01	8.01	+1.00	+0.91	+8.01
5. Moderation of Groundwater Flow and Discharge	0.00	7.10	0.00	0.30	8.01	2.40	+0.30	+0.91	+2.40
<b>Biogeochemistry (Water Quality)</b>									
6. Nutrient Cycling	0.50	7.10	3.55	0.50	8.01	4.01	=	+0.91	+0.46
7. Removal of Elements and Compounds	0.20	7.10	1.42	0.60	8.01	4.81	+0.40	+0.91	+3.39
8. Retention of Particulates	0.20	7.10	1.42	0.70	8.01	5.61	+0.50	+0.91	+4.19
9. Organic Carbon Export	0.30	7.10	2.13	0.60	8.01	4.81	+0.30	+0.91	+2.68
<b>Plant Community Maintenance</b>									
10. Maintain Characteristic Plant Communities	0.10	7.10	0.71	0.60	8.01	4.81	+0.50	+0.91	+4.10
11. Maintain Characteristic Detrital Biomass	0.10	7.10	0.71	0.30	8.01	2.40	+0.20	+0.91	+1.69
<b>Habitat/Faunal Community Support</b>									
12. Maintain Spatial Habitat Structure	0.20	7.10	1.42	0.20	8.01	1.60	=	+0.91	+0.18
13. Maintain Interspersion and Connectivity	0.10	7.10	0.71	0.80	8.01	6.41	+0.70	+0.91	+5.70
14. Maintain Distribution and Abundance of Invertebrates	0.50	7.10	3.55	0.70	8.01	5.61	+0.20	+0.91	+2.06
15. Maintain Distribution and Abundance of Vertebrates	0.40	7.10	2.84	0.60	8.01	4.81	+0.20	+0.91	+1.97

**CALIFORNIA STATE COASTAL CONSERVANCY**

1330 BROADWAY, SUITE 1100  
OAKLAND, CA 94612-2530  
ATSS 541-1015  
TELEPHONE 510/286-1015  
FAX 510/286-0470



RECEIVED  
SEP 21 1995  
CALIFORNIA  
COASTAL COMMISSION

September 19, 1995

Jim Muth  
California Coastal Commission  
45 Fremont Street, Suite 2000  
San Francisco, California 94105-2219

RE: Calera Creek Wetland Restoration

Dear Mr. Muth:

Enclosed please find the Coastal Conservancy staff recommendation for the Calera Creek wetland restoration project. As I told you when we spoke on the telephone yesterday, the Coastal Conservancy fully supports the City of Pacifica's plans for restoring a freshwater marsh at Calera Creek. The proposed marsh construction represents an innovative and environmentally beneficial use of treated wastewater and is the type of project that the Coastal Conservancy is most interested in supporting.

Although the initial phase of the project involves the placement of fill in the existing entrenched stream channel, the completed project will restore over eight acres of freshwater marsh and create a wide variety of associated habitat types to an abandoned rock quarry, an area that currently has very low environmental productivity. It is the Conservancy's opinion that the very extensive environmental enhancements that will result from this project overall will more than offset the loss of habitat that would result from the filling of the ditch that currently serves as the stream channel.

I hope that the enclosed information is helpful to you. Please let me know if you have any additional questions or if I can be of any further assistance.

Very truly yours,


  
Prentiss F. Williams  
Project Manager

EXHIBIT NO.	13
APPLICATION NO.	1-95-40
Coastal Conservancy support letter	

STATE OF CALIFORNIA—THE RESOURCES AGENCY

PETE WILSON, Governor

## DEPARTMENT OF FISH AND GAME



September 25, 1995

Mr. Jim Muth  
California Coastal Commission  
45 Fremont Street, Suite 2000  
San Francisco, CA 94105-2219

Pacifica Wastewater Treatment Plant Project and  
Restoration of Lower Calera Creek and Adjacent Wetlands

Dear Mr. Muth,

This letter clarifies the Department's position regarding the Pacifica Wastewater Treatment Plant Project. Attached is a copy of Department comments (letter dated April 20, 1994) on the DEIR for this project. Our only concern at that time was adequate protection of the San Francisco Garter Snake (SFGS) and associated habitat requirements. This concern has been addressed through cooperative efforts of the Department, City of Pacifica staff, L.C. Lee and Associates, and the U.S. Fish and Wildlife Service.

This project supports the Department's mandate to protect, maintain, and enhance habitat values. The degraded nature of Calera Creek requires a major restoration project, which results in a temporary loss of low quality habitat values, to attain a higher quality of creek, riparian, and wetland habitat values. However, the timing of the fill in relationship to the creation of wetlands is very important. The Department recommends that the adjacent wetlands project be completed and functioning prior to the placement of any fill in Calero Creek. This may require delaying fill operations a minimum of two to five years.

Please feel free to call me (408-724-7130) or write (P.O. Box 4008, Aromas, CA 95004) if you have any questions or concerns.

Sincerely,

Patricia Anderson  
Area Fishery Biologist

cc: Ms. Alyson Wiley, USFWS  
Mr. John Brode, CDFG  
Ms. Jeannine Dewald, CDFG

EXHIBIT NO. 14
APPLICATION NO. 1-95-40
California Dept. of Fish & Game support/ comment letters
California Coastal Commission

## DEPARTMENT OF FISH AND GAME

POST OFFICE BOX 47  
YOUNTVILLE, CALIFORNIA 94599  
(707) 944-5500



April 20, 1994



Mr. Scott Holmes  
City of Pacifica  
170 Santa Maria Avenue  
Pacifica, California 94044

Dear Mr. Holmes:

City of Pacifica Wastewater Facilities Plan  
Draft Environmental Impact Report (DEIR)

Department of Fish and Game personnel have reviewed the DEIR for the proposed Wastewater Facilities Plan. The plan involves replacement of the existing facility with a higher-capacity tertiary treatment plant and restoration of degraded wetlands and riparian habitat at Calera Creek. Based on our field review of the project, we believe that it will provide significant benefits to wildlife species and an improvement in the human environment. The Department appreciates your innovative and environmentally sensitive approach to solving the City's wastewater treatment needs.

The Department is concerned that the project could have potential impacts to the State- and Federally-listed endangered San Francisco garter snake which is known to occur along Calero Creek in the project area. We recommend consultation with the Department and U. S. Fish and Wildlife Service to assure compliance with the California and Federal Endangered Species acts.

Thank you for the opportunity to review and comment on this project. If you have any questions, contact Jeannine M. DeWald, Associate Wildlife Biologist, at (408) 429-9252, or Carl Wilcox, Environmental Services Supervisor, at (707) 944-5525.

Sincerely,

*Ken Casen*  
for

Brian Hunter  
Regional Manager  
Region 3

cc: See Attached List